

SMCS - 1901, 1927, 1948, 3168, 4348, 4802, 4808, 4810, 5511, 5701, 7490, 7494, 7601, 7602, 7610

i10264607

Articulated Truck

All

Asphalt Paver

All

Backhoe Loader

All

Cold Planer

All

Compact Wheel Loader

All

Earthmoving Compactor

All

Excavator

All

Forest Products

All

Integrated Toolcarrier

All

Landfill Compactor

All

Load Haul Dump

All

Mini Hydraulic Excavator

All

Motor Grader

All

Off-Highway Truck/Tractor

All

Paving Compactor

All

Pipelayer

All

Road Reclaimer/Soil Stabilizer

All

Skid Steer Loader

All

Soil Compactor

All

Telehandler

All

Track-Type Loader

All

Track-Type Skidder

All

Track-Type Tractor

All

Underground Articulated Truck

All

Wheel Dozer

All

Wheel Loader

All

Wheel Skidder

All

Wheel Tractor-Scraper

All

Revision History:

Table 1

Revision	Summary of Changes
33	Added additional event codes
32	Updated title of document.
31	Update MID, EID, CID, and SPN codes
30	Update the MID codes
29	Update the MID codes

Introduction

The following diagnostic code information is used with Cat[®] machines that are equipped with electronic controls over a standard Cat[®] data link (CDL).

Module (MID), Component (CID), and Failure Mode (FMI), are information identifiers that help service personnel diagnose the system problems of a Cat[®] machine.

A Component Identifier (CID) is a diagnostic code that informs the service personnel of the specific circuit or system within which a problem was detected.

Failure Mode Identifiers (FMI) are diagnostic codes that inform service personnel of the type of problem that has been detected within a circuit or system.

A Module Identifier (MID) identifies the Electronic Control Module (ECM) or Electronic Control Unit (ECU) that has diagnosed a fault.

An Event Code or Event Identifier (EID) identifies significant events that occur to the systems of the machine. The ECM / ECU may store (log) data from these events. This function allows tracking the performance history of the machine. The data is used as an aid for Managers, Service, and Maintenance personnel.

Module Identifiers (MID)

Table 2

MID	Description	Data Link
9	Handheld Service Tool	CDL
10	Digital Diagnostic Tool	CDL
11	Communication Adapter	CDL
12	Electronic Control Analyzer Programmer	CDL
13	Cat [®] Electronic Technician	CDL
14	Electronic Ignition System	CDL
15	Spark Ignited Engine Timing Control	CDL
17	34XX SI Engine Control	CDL
18	35XX SI Engine Control	CDL
19	36XX SI Engine Control	CDL
20	Torsional Control	CDL
21	G3600 I/O Module	CDL
22	G3600 Pressure Module	CDL
23	Detonation Module	CDL
25	Ether Aid Control	CDL
26	CMS	CDL
27	Transmission/Chassis Control	CDL

28	Traction Aid Control	CDL
29	Computerized Profiler Control	CDL
30	Caterpillar Monitoring System	CDL
31	Electronic Scraper Transmission Control	CDL
33	Engine Control #2	CDL
34	Engine Control #3	CDL
35	Engine Control #4	CDL
36	Engine Control #1	CDL
37	Engine Control #5	CDL
38	Engine Control #6	CDL
39	Machine Control Module	CDL
40	Engine Control #7	CDL
41	Engine Control #8	CDL
42	Engine Control #9 - Mar #2 Backup	CDL
43	Engine Control #10 -Mar #3 Backup	CDL
47	Backup Engine Control	CDL
49	VIMS Main Module	CDL
50	VIMS Analysis Module	CDL
51	VIDS Main Module	CDL
52	Graphical Display Module #2	CDL
53	Graphical Display Module	CDL
54	Caterpillar Monitoring System #2	CDL
55	Analysis Module	CDL
57	VIMS/VIDS I/Module #1	CDL
58	VIMS/VIDS I/Module #2	CDL
59	VIMS/VIDS I/Module #3	CDL
60	VIMS/VIDS I/Module #4	CDL
61	Data Acquisition Module	CDL
63	Fuel Measurement Module	CDL
65	Input/Output Module #1	CDL
66	Input/Output Module #2	CDL
67	Input/Output Module #3	CDL
68	Input/Output Module #4	CDL
73	Auto Ride	CDL
74	Payload Control	CDL
75	All Wheel Drive (AWD)	CDL
76	DeNOx Control	CDL
77	DeNOx Display	CDL
78	Ag Hitch	CDL
79	Hydrostatic Transmission Control	CDL
81	Transmission Control	CDL
82	Implement	CDL
83	Automatic Retarder Control	CDL
84	Paver Burner Control	CDL
85	Engine Fan Control	CDL
86	Global Positioning System Interface Module	CDL
87	Chassis Control Module	CDL
88	Generator Set Control #1	CDL
89	Generator Set Control #2	CDL
90	Generator Set Control #3	CDL
91	Generator Set Control #4	CDL

92	Generator Set Control #5	CDL
93	Generator Set Control #6	CDL
94	Generator Set Control #7	CDL
95	Generator Set Control #8	CDL
97	Customer Communication Module	CDL
98	Customer Communication Module Special	CDL
99	Programmable Relay Control Module	CDL
100	Engine Vision Display	CDL
101	Engine Vision Interface Module	CDL
102	Customer Communication Module #2	CDL
103	Remote Display #2	CDL
104	Group MID for ICSM	CDL
105	Main Pump Control	CDL
106	Auxiliary Hydraulic Control	CDL
107	Integrated Temperature Sensing Module #2	CDL
108	Versatile Control Module	CDL
109	Integrated Combustion Sensing Module #1	CDL
110	Integrated Combustion Sensing Module #2	CDL
111	Integrated Temperature Sensing Module/Engine Sensing Module	CDL
113	Track Type Tractor (TTT) Transmission Control	CDL
114	Grade Slope Control	CDL
115	Slope Sensor Module	CDL
116	Integrated Brake Control	CDL
117	Transmission Shift Lever Module	CDL
118	Paver Burner Control #3	CDL
119	Paver Burner Control #2	CDL
121	Computer Aided Earthmoving System (CAES)	CDL
122	Product Link Module	CDL
123	Data Link Translation Module	CDL
124	Theft Deterrent Module (MSS)	CDL
125	Caterpillar Monitoring System #3	CDL
126	System Master Control Module	CDL
127	Data Link Translation Module #2	CDL
129	Training Aid #1	CDL
130	Training Aid #2	CDL
131	Test Cell Computer	CDL
132	Wireless Transceiver	CDL
133	Security System Key Reader	CDL
134	Object Detection System Control Module	CDL
135	Cat [®] Proximity Detection	CDL
137	Grade Slope Display #1	CDL
138	Grade Slope Display #2	CDL
139	Grade Slope Display #3	CDL
140	Grade Slope Display #4	CDL
141	Grade Slope Display #5	CDL
142	Grade Slope Display #6	CDL
145	Electronic Implement Control #2	CDL
146	Transmission Control #2	CDL
147	Electronic Implement Control #3	CDL
148	Particulate Matter Control	CDL
149	Engine Aftertreatment Control #1	CDL

150	Steering Control Module	CDL
151	Engine Aftertreatment Control #2	CDL
153	Alarm Control #1	CDL
154	Alarm Control #2	CDL
155	Alarm Control #3	CDL
156	Operator Station 1 Module	CDL
157	Operator Station 2 Module	CDL
161	Communication Gateway #1	CDL
162	Communication Gateway #2	CDL
163	Communication Gateway #3	CDL
164	Communication Gateway #4	CDL
165	Communication Gateway #5	CDL
166	Information Gateway	CDL
169	Motor Control #1	CDL
170	Motor Control #2	CDL
177	Engine Aftertreatment Ctrl 3	CDL
178	Engine Aftertreatment Ctrl 4	CDL
179	Engine Aftertreatment Ctrl 5	CDL
180	Gaseous Fuel Actuation #1	CDL
181	Gaseous Fuel Actuation #2	CDL
182	In-Cylinder Pressure Sensing Module #1	CDL
183	In-Cylinder Pressure Sensing Module #2	CDL
193	V2X Radio #1	CDL
194	V2X Radio #2	CDL
198	Machine Monitoring Module	CDL
209	Engine #1 Aftertreatment Control #1	CDL
210	Engine #2 Aftertreatment Control #1	CDL
211	Engine #3 Aftertreatment Control #1	CDL
212	Engine #4 Aftertreatment Control #1	CDL
213	Engine #5 Aftertreatment Control #1	CDL
214	Engine #1 Aftertreatment Control #2	CDL
215	Engine #2 Aftertreatment Control #2	CDL
217	Engine #3 Aftertreatment Control #2	CDL
218	Engine #4 Aftertreatment Control #2	CDL
219	Engine #5 Aftertreatment Control #2	CDL
220	Steering Control #2	CDL
221	Drivetrain Condition Monitor	CDL
222	Data Link Analyzer	CDL
254	Flash ECM	CDL
255	Blank ECM	CDL
256	Monitoring System	J1939
257	Bridge Display System	J1939
258	Port Wing Station Display System	J1939
259	Starboard Wing Station Display System	J1939
260	Tower Display System	J1939
261	Engine Room Display System	J1939
262	Aft Station Display System	J1939
263	Engine Control	J1939
264	Power Train Control	J1939
265	Operator Input Module	J1939
266	Fly Bridge Display System	J1939

267	Bow Station Display System	J1939
268	Left Laser Receiver	J1939
269	Right Laser Receiver	J1939
270	Left Electronic Mast	J1939
271	Right Electronic Mast	J1939
272	Implement Control Valve Module	J1939
273	Power Management Module	J1939
274	Position Display System	J1939
275	Genset Control #1	J1939
276	Genset Control #2	J1939
277	Genset Control #3	J1939
278	Genset Control #4	J1939
279	Alarm Module #1	J1939
280	Alarm Module #2	J1939
281	Alarm Module #3	J1939
282	Digital Voltage Regulator	J1939
283	Temperature Sensing Module #1	J1939
284	Temperature Sensing Module #2	J1939
285	Temperature Sensing Module #3	J1939
286	Discrete I/O Module #1	J1939
287	Power Electronics Module	J1939
288	Discrete I/O Module #2	J1939
289	Discrete I/O Module #3	J1939
290	Discrete I/O Module #4	J1939
291	Left Sonic Receiver	J1939
292	Right Sonic Receiver	J1939
293	Machine Inclination Sensing Module	J1939
294	Blade Inclination Sensing Module	J1939
295	Blade Rotation Sensing Module	J1939
296	Diagnostic Module	J1939
297	Transmission	J1939
298	Electro-hydraulic Control Module	J1939
299	Machine Control Module	J1939
300	Operator Station #1 Module	J1939
301	Operator Station #2 Module	J1939
302	Generator Power Inverter Controller	J1939
303	Motor Power Inverter Controller	J1939
304	Graphical Display Module #1	J1939
305	Graphical Display Module #2	J1939
306	Graphical Display Module #3	J1939
307	Graphical Display Module #4	J1939
308	Graphical Display Module #5	J1939
309	Graphical Display Module #6	J1939
310	Graphical Display Module #7	J1939
311	Graphical Display Module #8	J1939
312	Operator Control Panel (OCP)	J1939
313	Heating Element Control	J1939
314	Seat Control	J1939
315	Suspension System Control	J1939
316	Seat Belt Control	J1939
317	Payload Control Module	J1939

318	Tire Monitoring Control	J1939
319	Fuel Consumption Monitor	J1939
320	Alarm Module #4	J1939
321	Alarm Module #5	J1939
322	Alarm Module #6	J1939
323	Alarm Module #7	J1939
324	Alarm Module #8	J1939
325	Genset Control #5	J1939
326	Temperature Sensing Module #4	J1939
327	Temperature Sensing Module #5	J1939
328	Temperature Sensing Module #6	J1939
329	Temperature Sensing Module #7	J1939
330	Temperature Sensing Module #8	J1939
331	All-Wheel Drive Control	J1939
336	Active Noise Reduction Module	J1939
339	Aftertreatment Diesel Exhaust Fluid Controller #1	J1939
340	Aftertreatment Diesel Exhaust Fluid Controller #2	J1939
341	Engine Aftertreatment Control #1	J1939
342	Engine Control #2	J1939
343	Engine Control #3	J1939
344	Engine Control #4	J1939
345	Engine Control #5	J1939
346	Engine Control #6	J1939
347	Engine Control #7	J1939
348	Engine Control #8	J1939
349	Engine Control #9	J1939
350	Engine Control #10	J1939
352	Coolant Temperature Control Module	J1939
353	Aftercooler Coolant Temperature Control Module	J1939
357	Aftertreatment Diesel Exhaust Fluid Controller #3	J1939
358	Aftertreatment Diesel Exhaust Fluid Controller #4	J1939
359	Aftertreatment Diesel Exhaust Fluid Controller #5	J1939
368	Machine Target Tracking Sensor	J1939
369	Object Detection System Control Module	J1939
373	Position Display System #2	J1939
374	Engine Aftertreatment Control #2	J1939
375	Engine Aftertreatment Control #3	J1939
376	Engine Aftertreatment Control #4	J1939
377	Engine Aftertreatment Control #5	J1939
384	Motor Control #1	J1939
385	Motor Control #2	J1939
389	Transmission/Chassis Control	J1939
390	Chassis Control Module	J1939
391	Steering Control Module	J1939
392	Brake Control	J1939
400	Communication Gateway #1	J1939
401	Communication Gateway #2	J1939
403	Communication Gateway #4	J1939
405	Predictive Analysis System (PAS) Module	J1939
416	Instrument Cluster	J1939
421	Input/Output Module	J1939

432	Electronic Implement Control #2	J1939
433	Electronic Implement Control #3	J1939
434	Electronic Implement Control #1	J1939
435	Electronic Implement Control #4	J1939
436	Security System	J1939
437	ARD Air Valve Controller	J1939
438	Accessory Power Converter	J1939
439	Water Pump Control Module	J1939
440	Air Conditioner Compressor Communication Gateway	J1939
441	Power Converter Interface Module	J1939
442	Engine Sensing Module #1	J1939
443	Engine Sensing Module #2	J1939
444	EGR Valve Controller	J1939
445	Particulate Matter Control	J1939
446	Engine Back Pressure Valve Controller	J1939
448	Motor Control #3	J1939
449	Motor Control #4	J1939
450	Motor Control #5	J1939
451	Motor Control #6	J1939
452	Motor Control #7	J1939
453	Motor Control #8	J1939
464	Grade Slope Control	J1939
465	Grade Control	J1939
512	Shaft Slip Control Module	J1939
544	Blank Third-Party Control Module	J1939
768	Machine Control #2	J1939
816	System Master Control Module	J1939
1024	Security System Keypad	J1939

Component Identifiers (CID)

Table 3

CID	Description
1	Cylinder #1 Injector
2	Cylinder #2 Injector
3	Cylinder #3 Injector
4	Cylinder #4 Injector
5	Cylinder #5 Injector
6	Cylinder #6 Injector
7	Cylinder #7 Injector
8	Cylinder #8 Injector
9	Cylinder #9 Injector
10	Cylinder #10 Injector
11	Cylinder #11 Injector
12	Cylinder #12 Injector
13	Cylinder #13 Injector
14	Cylinder #14 Injector
15	Cylinder #15 Injector
16	Cylinder #16 Injector
17	Fuel Shutoff Valve
18	Fuel Control Valve

19	Throttle Bypass Valve
20	Timing Actuator
21	Engine Position Sensor
22	Timing Sensor
23	Rack Actuator
24	Rack Position Sensor
27	Variable Geometry Turbocharger Actuator #1
28	Variable Geometry Turbocharger Actuator #2
41	8 Volt DC Supply
42	Injector Actuation Valve
70	Parking Brake Switch
71	Idle Shutdown Timer
75	Steering Oil Temperature Sensor
81	DPF Intake Pressure Sensor
82	Air Start Pressure Sensor
84	Ground Speed Sensor
91	Throttle Position Sensor
94	Fuel Delivery Pressure Sensor
95	Fuel Filter Differential Pressure Sensor
96	Fuel Level Sensor
98	Engine Oil Level Sensor
99	Engine Oil Filter Differential Pressure Sensor
100	Engine Oil Pressure Sensor
101	Crankcase Air Pressure Sensor
102	Boost Pressure Sensor
104	Turbo Oil Pressure Sensor
105	Inlet Manifold Temperature Sensor
106	Air Inlet Pressure Sensor
109	Engine Coolant Outlet Pressure Sensor
110	Engine Coolant Temperature Sensor
111	Engine Coolant Level Sensor
112	Engine Coolant Filter Differential Pressure Sensor
124	Transmission Oil Level
126	Transmission Oil Filter Differential Pressure Sensor
127	Transmission Oil Pressure Sensor
132	Transmission Pilot Pressure Supply Sensor
133	Transmission Pilot Pressure Supply Solenoid
134	Right Side Steering Manifold Solenoid
135	Left Side Steering Manifold Solenoid
136	Right Motor Pilot Pressure Sensor
137	Left Motor Pilot Pressure Sensor
138	Reduced Rimpull Selection Switch
139	Tip Backward Solenoid
140	Tip Forward Solenoid
141	Economy Mode Switch
142	Radiator Cleanout Door Position Switch
143	Neutralizer Pressure Switch
144	Backup Alarm Relay
145	12 Volt DC Power Supply
146	Hitch Mode Switch
147	Lockup Clutch Pressure Sensor

148	Travel Pressure Sensor
149	Ride Control 3-Way Solenoid
150	Tamper Bar Speed Sensor
151	Tamper Bar Solenoid
152	Propulsion Control Diagnostic Lamp
153	Right Drive Motor Speed Sensor
154	Left Drive Motor Speed Sensor
155	Propel Enable Solenoid
156	Right Reverse EDC Solenoid
157	Left Reverse EDC Solenoid
158	Right Forward EDC Solenoid
159	Left Forward EDC Solenoid
160	Paver Implement Relay
161	Brake (Travel) Pedal Sensor
162	Steering Wheel Sensor
163	Steering Angle Sensor
164	Injector Actuation Pressure
167	Alternator Charging Voltage Sensor
168	Electrical System Voltage
171	Ambient Air Temperature Sensor
172	Intake Manifold Air Temperature Sensor
174	Fuel Temperature Sensor
175	Engine Oil Temperature Sensor
177	Transmission Oil Temperature Sensor
190	Engine Speed Sensor
191	Transmission Output Speed Sensor
246	Proprietary CAN Data Link
247	SAE J1939 Data Link
248	CAT Data Link
249	SAE J1922 Data Link
250	SAE J1708/J1587 Data Link
252	Calibration Module
253	Personality Module
254	Electronic Control Module
256	Engine Rating Map
257	Detonation Level
258	Crank Angle Sensor
259	Programmed Engine Timing
260	Exhaust Oxygen Sensor
261	Engine Timing Calibration
262	5 Volt Sensor DC Power Supply
263	Digital Sensor Power Supply (8V Or 12V)
264	Deceleration Throttle
265	User-Defined Shutdown Input
266	Crank Without Injection Input
267	Remote Shutdown Input
268	Programmed Parameter Fault
269	Sensor Power Supply
270	CMS Harness Code
271	Action Alarm
272	Turbocharger Outlet Overboost Pressure Sensor

273	Turbocharger Outlet Pressure Sensor
274	Atmospheric Pressure Sensor
275	Right Turbocharger Inlet Pressure Sensor
276	Left Turbocharger Inlet Pressure Sensor
277	Timing Calibration Sensor
278	AESC Enable Lamp
279	Aftercooler Coolant Temperature Sensor (Front)
280	Gear Box Temperature Sensor
281	Check Engine Lamp
282	Engine Overspeed Lamp
283	Air Filter Restriction Lamp
284	EMS System Enable (Engine Running Signal)
285	High Coolant Temperature Lamp
286	Low Oil Pressure Lamp
287	Low Current Digital Output #7
288	Low Current Digital Output #8
289	Fuel Pressure Sensor - Before Fuel Filter
290	Engine Cooling Fan Pump Pressure Sensor
291	Engine Cooling Fan Solenoid
292	Hydraulic Oil Cooling Fan Solenoid
293	High Current Analog Output #3
294	High Current Analog Output #4
295	Large Hydraulic Excavator Control Module
296	Transmission Control
297	All Wheel Drive Control
298	Service Brake Pedal Switch
299	Transmission Lever Position Sensor
300	Transformers Primaries
301	Ignition Transformer Primary #1
302	Ignition Transformer Primary #2
303	Ignition Transformer Primary #3
304	Ignition Transformer Primary #4
305	Ignition Transformer Primary #5
306	Ignition Transformer Primary #6
307	Ignition Transformer Primary #7
308	Ignition Transformer Primary #8
309	Ignition Transformer Primary #9
310	Ignition Transformer Primary #10
311	Ignition Transformer Primary #11
312	Ignition Transformer Primary #12
313	Ignition Transformer Primary #13
314	Ignition Transformer Primary #14
315	Ignition Transformer Primary #15
316	Ignition Transformer Primary #16
317	Load Sensor
318	Right Detonation Sensor
319	Left Detonation Sensor
320	Speed/Timing Sensor
321	Diagnostic Reset/Acknowledge Switch
322	Engine Shutdown Relay
323	Engine Shutdown Lamp

324	Warning Lamp (Action)
325	Ignition Detonation
326	Detonation System
327	Incorrect Number of Detonation Sensors
328	Incorrect Number of Engine Cylinders
329	Communication Fault
330	Propane Switch Input
331	Ignition Shutdown Switch
332	Keypad Switch
333	Annunciator Switch
334	Spare Output
335	Scraper Bowl Auger Solenoid
336	Engine Control Switch
337	Remote Emergency Stop Switch
338	Engine Pre-Lube Pump Relay
339	Engine Pre-Lube Pressure Switch
340	Air Shutoff Solenoid
341	Hydraulic Control Valve Warm Up Solenoid #4
342	Secondary Engine Speed Sensor
343	DeNOx Hydrocarbon Injector
344	DeNOx Hydrocarbon Pump Relay
345	DeNOx Hydrocarbon System Pressure Sensor
346	Ride Control Relay
347	Hydrostatic Trans Motor Displacement Solenoid
348	Transmission Lockout Switch
349	Transmission Sync Solenoid
350	Lift Linkage Position Sensor
351	Tilt Linkage Position Sensor
352	Lift Lever Sensor
353	Tilt Lever Sensor
354	Raise Solenoid #1
355	Lower Solenoid #1
356	Dump Solenoid #1
357	Rackback Solenoid #1
358	Implement Pilot Pressure Supply Solenoid
359	Raise Detent Electromagnet
360	Lower Detent Electromagnet
361	Rackback Detent Electromagnet
362	Engine Fan Speed Control Solenoid
363	Machine Ride Control Actuator
364	Lift Cylinder Head End Pressure Sensor
365	Kickout Set Switch
366	Semi-Auto Dig Switch
367	Ride Control Switch
368	Transmission Auto/Manual Switch
369	Transmission Gear Indicator Input
370	Boom Float Solenoid
371	Operator Horn Solenoid
372	Bucket/Shovel Open Solenoid
373	Bucket/Shovel Close Solenoid
374	Swing Brake Solenoid

375	Swing Hydraulics Inhibit Solenoid
376	Travel Alarm
377	Travel Brake Solenoid
378	Machine Auto Lube Solenoid
379	Machine Auto Lube Pressure Sensor
380	Transmission Modulation Supply Pressure Switch
381	Lift Lever Neutral Position Switch
382	Rear Hitch Lever Position Sensor
383	Rear Hitch Lift Position Sensor
384	Draft Switch
385	Tilt Lever Neutral Position Switch
386	Rear Hitch Raise Solenoid
387	Rear Hitch Lower Solenoid
388	Hitch Solenoid Return Line
389	Auxiliary Lever Neutral Position Switch
390	Forward Drive Displacement Solenoid
391	Reverse Drive Displacement Solenoid
392	Charge Oil Solenoid
393	Front Wheel Drive Solenoid
394	Wheel Motor Displacement Solenoid
395	Front Wheel Drive Pressure Selector Solenoid
396	All Wheel Drive (AWD) Lamp
397	Charge Pump Pressure Switch
398	Front Wheel Drive Pressure Sensor
399	All Wheel Drive (AWD) Aggressiveness Control Lever Sensor
400	Ignition Transformers Secondaries
401	Ignition Transformer Secondary #1
402	Ignition Transformer Secondary #2
403	Ignition Transformer Secondary #3
404	Ignition Transformer Secondary #4
405	Ignition Transformer Secondary #5
406	Ignition Transformer Secondary #6
407	Ignition Transformer Secondary #7
408	Ignition Transformer Secondary #8
409	Ignition Transformer Secondary #9
410	Ignition Transformer Secondary #10
411	Ignition Transformer Secondary #11
412	Ignition Transformer Secondary #12
413	Ignition Transformer Secondary #13
414	Ignition Transformer Secondary #14
415	Ignition Transformer Secondary #15
416	Ignition Transformer Secondary #16
417	Solenoid Return Interrupt Relay
418	Primary Steering Flow Lamp/Relay
419	Reverse Motor Relay
420	Secondary Steering Relay
421	Load Check Relay
422	Drive Shaft Speed Sensor
423	Front Brake Accumulator Pressure Switch
424	Rear Brake Accumulator Pressure Switch
425	Front Brake Oil Pressure Sensor

426	Rear Brake Oil Pressure Sensor
427	Front Axle Oil Temperature Sensor
428	Rear Axle Oil Temperature Sensor
429	Steering Pump Oil Pressure Sensor
430	Steering Pilot Oil Pressure Sensor
431	Steering Oil Level Switch
432	Steering Oil Filter Differential Pressure Switch
433	Hydraulic Oil Filter Differential Pressure Switch
434	Hydraulic Pilot Oil Pressure Sensor
435	Hydraulic Oil Level Sensor
436	Torque Converter Oil Outlet Pressure Sensor
437	Power Train Filter Pressure Switch
438	Hydraulic Control Valve Warm Up Solenoid #1
439	Hydraulic Control Valve Warm Up Solenoid #2
440	Hydraulic Control Valve Warm Up Solenoid #3
441	Electronic Governor Relay
442	Generator Fault Relay
443	Crank Terminate Relay
444	Starter Motor Relay
445	Run Relay
446	Air Shutdown Relay
447	Fuel Control Relay
448	Spare Relay
449	Operator Grapple Rotate Switch
450	Operator Tong Open/Close Switch
451	Grapple Rotate CW Solenoid
452	Grapple Rotate CCW Solenoid
453	Tong Open Solenoid
454	Tong Close Solenoid
455	Tong Close Pressure Sensor
456	Hydrax Oil Pressure Switch
457	Brake Oil Temperature Sensor
458	Tilt Cylinder Rod End Pressure Sensor
459	Torque Converter Control Module
460	Fuel Pressure Sensor - After Fuel Filter
461	Another Secondary Brake Solenoid
462	Engine Coolant Inlet Pressure Switch
463	Implement Dual Pressure Relief Solenoid
464	Bucket Tilt Lever Rack Back Position Switch
465	Throttle Lever High Idle Position Switch
466	Left Track Steering Pedal Position Sensor
467	Right Track Steering Pedal Position Sensor
468	Service Brake Pedal Position Sensor
469	Left Track Forward Direction Solenoid
470	Left Track Reverse Direction Solenoid
471	Right Track Forward Direction Solenoid
472	Right Track Reverse Direction Solenoid
473	Charge Pressure Sensor
474	Programmable Relay Control Module
475	Customer Interface Module #1
476	Customer Interface Module #2

477	Spare Relay #1
478	Spare Relay #2
479	Spare Relay #3
480	Spare Relay #4
481	Spare Relay #5
482	Spare Relay #6
483	Spare Relay #7
484	Spare Relay #8
485	Engine Fan Reversing Solenoid
486	Engine Fan Reverse Switch
487	3rd Lever Position Sensor
488	4th Lever Position Sensor
489	Implement Function Select Switch
490	Implement Lockout Switch
491	3rd Function Forward Solenoid
492	3rd Function Rearward Solenoid
493	4th Function Forward Solenoid
494	4th Function Rearward Solenoid
495	5th Function Forward Solenoid
496	5th Function Rearward Solenoid
497	Tilt Right Solenoid
498	Tilt Left Solenoid
499	Implement Variable Hydraulic Oil Pump Solenoid
500	Electronic Control Module
501	Cylinder #1 Prechamber
502	Cylinder #2 Prechamber
503	Cylinder #3 Prechamber
504	Cylinder #4 Prechamber
505	Cylinder #5 Prechamber
506	Cylinder #6 Prechamber
507	Cylinder #7 Prechamber
508	Cylinder #8 Prechamber
509	Cylinder #9 Prechamber
510	Cylinder #10 Prechamber
511	Cylinder #11 Prechamber
512	Cylinder #12 Prechamber
513	Cylinder #13 Prechamber
514	Cylinder #14 Prechamber
515	Cylinder #15 Prechamber
516	Cylinder #16 Prechamber
517	All Wheel Drive Switch
518	Pressure Module
519	Crank Case Pressure
520	Transmission Configuration Code
521	Fuel Temperature Sensor
522	Fuel Energy Content Sender
523	Actual Engine Speed Sensor
524	Desired Engine Speed Sensor
525	Choke Actuator
526	Turbo Wastegate Drive
527	Droop Input Pot

528	High Idle Input Pot
529	Fuel Correction Factor
530	Ion Probe
531	Idle/Rated Switch
532	Engine Shutdown Input
533	Brake Control
534	Utility Parallel/On-Grid Input
535	Exhaust Temperature Sensor
536	Engine Oil Level Switch
537	Engine Coolant Level Switch
538	Right Air Restriction Sensor
539	Left Air Restriction Sensor
540	Driven Equipment Input
541	Differential (Axle) Oil Pressure Sensor
542	Engine Oil Pressure Sensor - Before Oil Filter
543	Engine Oil Pressure Sensor - After Oil Filter
544	Engine Cooling Fan Speed Sensor
545	Ether Injection Control Relay
546	Ether Injection Current Limit Relay
547	Ether Injection Lamp
548	Throttle Lock Lamp
549	Throttle Lock Enable Switch
550	Oxygen Signal to ECM
551	Oxygen Sensor/Oxygen Buffer Connection
552	Oxygen Sensor Calibration/Engine Speed Present
553	Oxygen Sensor Calibration/Oxygen Signal Present
554	Oxygen Sensor Calibration/Oxygen Signal Missing
555	Oxygen Sensor Calibration/Oxygen Signal Noisy
556	Oxygen Sensor Gain
557	Oxygen Sensor Offset
558	Auto Lube Relay
559	Boom Float Relay
560	Data Link Fault
561	Rear Engine Throttle Lock Solenoid
562	Caterpillar Monitor System
563	Desired Speed Signal Missing
564	Desired Speed Signal Noisy
565	Shutdown Imminent Due to Missing Desired Speed Signal
566	Invalid Engine Shutdown
567	Backup ECM Ready Lamp
568	Backup ECM In Control Lamp
569	Oil Injection Solenoid
570	Temperature Sensor Out of Range
571	Elevator Forward Solenoid
572	Elevator Reverse Solenoid
573	Inching Pedal Position Sensor
574	Grapple Detent Solenoid
575	Elevator Lever Position Sensor
576	Heinzmann Actuator
577	Heinzmann Actuator Gain
578	Heinzmann Actuator offset

579	Primary ECM Heartbeat Signal
580	Power Shift Pressure Sensor
581	Power Shift Solenoid
582	Air Filter Differential Pressure Switch
583	Boom Raise Solenoid
584	Engine Oil Pressure Switch
585	Transmission Output Speed Sensor #1
586	Engine Speed Dial Switch
587	Engine Governor Position Sensor
588	Monitor System Display
589	Roading/Earthmoving Switch
590	Engine Control Module
591	EEPROM
592	Raise Solenoid #2
593	Lower Solenoid #2
594	Rackback Solenoid #2
595	Dump Solenoid #2
596	Implement Control
597	Main Hydraulic Pump Discharge Pressure Sensor
598	Travel Speed Solenoid
599	CMS Monitor System
600	Hydraulic Oil Temperature Sensor
601	Brake Air Pressure Sensor
602	Transmission P2 Pressure Switch
603	Torque Converter Impeller Clutch Pressure Sensor
604	Autoshift, Lockup Enable Switch
605	Wheel Speed Sensor #1
606	Wheel Speed Sensor #2
607	Wheel Speed Sensor #3
608	Wheel Speed Sensor #4
609	Wheel Brake Solenoid #1
610	Wheel Brake Solenoid #2
611	Wheel Brake Solenoid #3
612	Wheel Brake Solenoid #4
613	Front Brakes Pilot Solenoid
614	Rear Brakes Pilot Solenoid
615	Machine Articulation Angle Sensor
616	System Test Switch
617	Inlet Air Heater Relay
618	Left Secondary Brake Switch
619	Right Secondary Brake Switch
620	Tow Mode Switch
621	Downshift Switch
622	Upshift Switch
623	Directional Switch
624	Transmission Neutral Switch
626	Steering/Transmission Lock Switch
627	Parking Brake Pressure Switch
628	Quickshift Switch
629	Neutralizer Switch
631	Transmission Clutch 1 Solenoid

632	Transmission Clutch 2 Solenoid
633	Transmission Clutch 3 Solenoid
634	Transmission Clutch 4 Solenoid
635	Transmission Clutch 5 Solenoid
636	Transmission Clutch 6 Solenoid
637	Backup Alarm
638	Starter Solenoid
639	1st Gear Indicator Lamp
641	Transmission Solenoid 1
642	Transmission Solenoid 2
643	Transmission Solenoid 3
644	Transmission Solenoid 4
645	Transmission Solenoid 5
646	Transmission Solenoid 6
647	Transmission Solenoid 7
648	Transmission Solenoid 8
650	Harness Code
653	Electronic Control Module
654	Trailer Right Brake Oil Temperature Sensor
655	Trailer Left Brake Oil Temperature Sensor
656	Trailer Brake Cooler Inlet Temperature Sensor
657	Trailer Brake Cooler Outlet Temperature Sensor
658	Trailer Right Strut Pressure Sensor
659	Trailer Left Strut Pressure Sensor
660	Shift Lever Input Line 12
661	Shift Lever Input Line 13
662	Shift Lever Input Line 14
663	Shift Lever Input Line 15
664	Shift Lever Input Line 16
665	Shift Lever Input Line 17
666	Shift Lever Input Line 18
667	Shift Lever Input Line 19
668	Transmission Shift Lever
669	Transmission Input Speed Sensor
670	Left Pedal Position Sensor
671	Transmission Output Speed Sensor
672	Torque Converter Output Speed Sensor
673	Transmission Output Speed Sensor #2
674	Transmission Intermediate Speed Sensor #1
675	Transmission Intermediate Speed Sensor #2
676	Left Track Steering Lever Position Sensor
677	Right Track Steering Lever Position Sensor
678	Torque Converter Impeller Clutch Solenoid
679	Torque Converter Lockup Clutch Solenoid
680	Auto/On Ride Control Switch
681	Parking Brake Solenoid
682	Parking Brake Lamp
683	Parking Brake Alarm
684	Operator Transmission Reverse Switch
685	Service ID Code
686	Shift ID Code

687	Options ID Code
688	Variable Horsepower Solenoid
689	Left Brake Solenoid
690	Right Brake Solenoid
691	Transmission Solenoid 1
692	Transmission Solenoid 2
693	Transmission Solenoid 3
694	Transmission Solenoid 4
695	Transmission Solenoid 5
696	Transmission Solenoid 6
697	Priority Valve Solenoid
698	Left Steering Clutch Solenoid
699	Right Steering Clutch Solenoid
700	Transmission Gear Sensor
701	Transmission Output Speed Sensor
702	Transmission Gear Lever Selector Sensor (Switch)
703	Trailer Door Position Sensor
704	Service Brake Pressure Switch
705	Body Raise Sensor (Switch)
706	Body Up Sensor
707	Transmission Gear Actuator Up Solenoid
708	Transmission Gear Actuator Down Solenoid
709	Transmission Lockup Clutch Solenoid
710	ARC Supply Solenoid
711	ARC Control Solenoid
712	Retarder Control Lamp
713	Auto Retarder On/Off Switch
714	Auto Retarder Pressure Switch
715	Retarder Pressure Switch
716	Watt Transducer
717	Remote Throttle Switch
718	Transmission System
719	TCS Proportional Solenoid
720	Steering Resolver
721	Primary Brake Solenoid
722	Secondary Brake Solenoid
723	Auto Mode Strobe Lights Relay
724	Hoist Raise Solenoid
725	Hoist Lower Solenoid
726	Right Steering Solenoid
727	Left Steering Solenoid
728	Auto/Manual Control Signal
729	Auto/Manual Ground Level Switch
730	Auto/Manual Cab Switch
731	RPM Duty Cycle Signal
732	Fine Swing Solenoid
733	Hydraulic Oil Coolant Blocker Solenoid
734	Auto Lube Diverter Solenoid
735	Heavy Lift Solenoid
736	AESC Control Line
737	Neutralizer Pedal Position Sensor

738	Ripper Position Sensor
739	Differential Lock Lamp
740	Differential Lock Solenoid
741	Converter Drive Indicator Lamp
742	Service Brake Lamp/Relay
743	Front Track Steering Sensor (PWM)
744	Rear Track Steering Sensor (PWM)
745	Propulsion Speed Lever Sensor (PWM)
746	Rotor Control Switch (PWM)
747	Steering Mode Switch (PWM)
748	Rotor Door Switch
749	Kickback Switch
750	Rear Steering Manual Switch
751	Water Spray Switch
752	Rotor Brake/Belt Tension Solenoid
753	Rotor Service Brake Solenoid
754	Rotor Clutch Solenoid
755	Water Spray Relay
756	Rotor Clutch Oil Temperature Sensor (PWM)
757	Rotor Clutch Oil Pressure Sensor (PWM)
758	Propel Oil Pressure Sensor (PWM)
759	Engine Oil Level Lamp
760	Engine Oil Filter Lamp
761	Fuel Filter Lamp
762	Transmission Oil Temperature Switch
763	Trenching Solenoid
764	Transmission Indicator Lamp
765	Tilt Cylinder Head End Pressure Sensor
766	Differential (Axle) Lube Pressure Sensor
767	Fixed Implement Pump Oil Pressure Sensor
768	RS-485 Data Link
769	Lift Cylinder Rod End Pressure Sensor
770	Cat Data Link #2
771	Shutter Relay
772	Detonation Mixing Control Module
773	Hoist Lever Sensor
774	Secondary Throttle Position Sensor
775	Hydraulic Control Valve Warm Up Relay
776	Navigator Control Module
777	Secondary Steering Angle Sensor
778	Secondary Air Pressure Sensor
779	Cab Air Temperature Sensor
780	Autonomous Key Switch Relay
781	Lighting Relay
782	Ground Level Shutdown Lamp
783	Cruise Control Lamp
784	Engine Vibration Sensor
785	Jacket Water Temperature Sensor
786	Jacket Water Pressure Sensor
787	Jacket Water Level Sensor
788	Engine Retarder Selector Switch

789	Main Pilot Pressure Sensor
790	Swing Pump (Outlet) Pressure Sensor
791	Compression Brake Low/High Solenoid
792	Compression Brake Medium/High Solenoid
793	Primary Steering Pressure Switch
794	Secondary Steering Pressure Switch
795	Secondary Steering Intermediate Relay
796	Differential (Axle) High Speed Fan Solenoid
798	General Alarm Output
799	Service Tool
800	VIMS Main Module
801	VIMS Interface Module #1
802	VIMS Interface Module #2
803	VIMS Interface Module #3
804	VIMS Interface Module #4
805	VIMS Interface Module #5
806	VIMS Interface Module #6
807	VIMS Interface Module #7
808	VIMS Interface Module #8
809	Speedometer/Tachometer #1
810	Speedometer/Tachometer #2
811	Gauge Cluster #1
812	Gauge Cluster #2
813	Gauge Cluster #3
814	Gauge Cluster #4
815	Message Center #1
816	Message Center #2
817	ECM Internal Backup Battery
818	Power Mode Switch
819	Display Data Link
820	Keypad Data Link
821	Display Power Supply
822	LCD Back Light Power Supply
823	Service Lamp
824	TPMS Lamp #1 (Green)
825	TPMS Lamp #2 (Red)
826	Torque Converter Oil Temperature Sensor
827	Left Exhaust Temperature Sensor
828	Right Exhaust Temperature Sensor
829	Rear Aftercooler Coolant Temperature Sensor
830	Front Brake Oil Temperature Sensor
831	Left Final Drive Chip Detector
832	Right Final Drive Chip Detector
833	Rear Brake Oil Temperature Sensor
834	Differential (Axle) Chip Detector
835	Differential (Axle) Oil Temperature Sensor
836	Left Final Drive Oil Temperature Sensor
837	Right Final Drive Oil Temperature Sensor
838	Left Front Strut Pressure Sensor
839	Right Front Strut Pressure Sensor
840	Left Rear Strut Pressure Sensor

841	Right Rear Strut Pressure Sensor
842	Left Front Implement Chip Detector
843	Right Front Implement Chip Detector
844	Left Swing Pump Housing Chip Detector
845	Left Swing Motor Chip Detector
846	Right Swing Motor Chip Detector
847	Left Rear Implement Chip Detector
848	Right Rear Implement Chip Detector
849	System Air Pressure Sensor
850	Gear Box Chip Detector
851	Gear Box Pressure Sensor
852	Brake Oil Temperature Sensor (Right Front)
853	Brake Oil Temperature Sensor (Left Front)
854	Brake Oil Temperature Sensor (Right Rear)
855	Brake Oil Temperature Sensor (Left Rear)
856	Slope Sensor Module #1
857	Slope Sensor Module #2
858	Generator Close Breaker
859	Generator Kilowatt Relay
860	Front Pump Drive Oil Temperature Sensor
861	Service Engine Lamp
862	Transmission P1 Pressure Sensor
863	Transmission P2 Pressure Sensor
864	Variable Implement Pump Oil Pressure Sensor
865	Engine Exhaust Temperature Lamp
866	Load Proportional Output
867	Hydraulic Engine Retarder Valve Solenoid
868	Transmission Autoshift Lamp
869	Right Lift Cylinder Position Sensor
870	Left Lift Cylinder Position Sensor
871	Inclination Sensor
872	Pitch Rate Sensor
873	Tilt Hydraulic Pump Pressure Sensor
874	Mode Select Switch
875	Manual Select Switch
876	Pitch Forward Trigger Switch
877	Pitch Back Switch
878	Desired Blade Load Selector Dial
879	Ripper Shank In/Out Lever Position Sensor
880	Ripper Raise/Lower Lever Position Sensor
881	Ripper AutoStow Switch
882	Implement Lockout Solenoid
883	Pitch Regenerate Solenoid
884	Blade Pitch Solenoid
885	Pressure Compensation Override Solenoid
886	Ripper Shank In Solenoid
887	Ripper Shank Out Solenoid
888	Ripper Shank Lower Solenoid
889	Ripper Shank Raise Solenoid
890	Telemetry Data Link
900	Left Raise Solenoid

901	Left Lower Solenoid
902	Right Raise Solenoid
903	Right Lower Solenoid
904	Rear Raise Solenoid
905	Rear Lower Solenoid
906	Left Grade Sensor
907	Right Grade Sensor
908	Blade Rotation Position Sensor
909	Grade Slope Display #1
910	Grade Slope Display #2
911	Grade Slope Display #3
912	Grade Slope Display #4
913	Grade Slope Display #5
914	Grade Slope Display #6
915	Left Grade Sensor Arrow Indicator Lamps
916	Left Grade Sensor On Grade Indicator Lamp
917	Right Grade Sensor Arrow Indicator Lamps
918	Right Grade Sensor On Grade Indicator Lamp
919	Left Grade Slope Horn
920	Right Grade Slope Horn
921	Grade Slope Horn
922	Auto Stop Proximity Switch
923	Service Height Proximity Switch
924	Burner Control Electronic Control Module
925	Burner Control Diagnostic Lamp
926	Burner Selector Switch
927	Burner Fuel Pump Relay
928	Left Extender Glow Plug Relay
929	Left Extender Blower Motor
930	Left Extender Fuel Valve Solenoid
931	Left Extender Burner Override Switch
932	Left Main Glow Plug Relay
933	Left Main Blower Motor
934	Left Main Fuel Valve
935	Left Main Burner Override Switch
936	Right Extender Glow Plug Relay
937	Right Extender Blower Motor
938	Right Extender Fuel Valve
939	Right Extender Burner Override Switch
940	Right Main Glow Plug Relay
941	Right Main Blower Motor
942	Right Main Fuel Valve
943	Right Main Burner Override Switch
944	Conveyor Speed Switch
945	Conveyor Mode Switch
946	Conveyor Speed Solenoid
947	High Gear Solenoid
948	Propel Gear Switch
949	Propel Motor Displacement Solenoid
950	Propel Speed Dial Sensor
951	Rotor Clutch Oil Pressure Sensor

952	Rotor Depth Mode Switch
953	Rotor Depth Manual Switch
954	Rotor Lift Lock Switch
955	Rotor Depth Sensor
956	Rotor Raise Solenoid
957	Rotor Lower Solenoid
958	Rotor Gear Switch
959	Rotor Speed Sensor
960	Rotor Clutch 1st Gear Solenoid
961	Rotor Clutch 2nd Gear Solenoid
962	Rotor Clutch 3rd Gear Solenoid
963	Grade Slope Control
964	Dual Horsepower Selection Output
965	Autodig Dig Mode Switch
966	TCS Dash Lamp
967	Machine Application
968	Transmission Hold Lamp
969	Front Cross Axle Lock Solenoid
970	Center/Rear Cross Axle Lock Solenoid
971	Interaxle Differential Lock Solenoid
972	Left Station Left Auger Mode Switch
973	Left Station Left Conveyor Mode Switch
974	Left Feeder Mode Switch
975	Left Station Left Conveyor Speed Dial
976	Left Material Height Paddle Sensor
977	Left Material Height Sonic Sensor
978	Left Material Height Dial
979	Left Material Control Pump Solenoid
980	Left Conveyor Bypass Solenoid
981	Left Auger Reverse Solenoid
982	Left Auger Bypass Solenoid
983	Left Station Auger Rotation Switch
984	Material Control Diagnostic Lamp
985	Paver Material Feed Control Module
986	Left Station Right Auger Mode Switch
987	Left Station Right Conveyor Mode Switch
988	Right Feeder Mode Switch
989	Left Station Right Conveyor Speed Dial
990	Right Material Height Paddle Sensor
991	Right Material Height Sonic Sensor
992	Right Material Height Dial
993	Right Material Control Pump Solenoid
994	Right Conveyor Bypass Solenoid
995	Right Auger Reverse Solenoid
996	Right Auger Bypass Solenoid
997	Right Station Auger Rotation Switch
998	Traction Assist Solenoid
999	Maximum Propulsion Speed Dial
1000	Engine Oil Refill Relay
1001	Fuel Filter Heater Relay
1002	Alternator Actuation Enable Relay

1003	Alternator Pump Hydraulic Oil Pressure Sensor
1004	Boom Position Sensor
1005	Boom Swing Position Sensor
1006	Steering Wheel Stowed Switch
1007	Joystick Mapping Switch
1008	Rear Facing Position Seat Switch
1009	Front Facing Position Seat Switch
1010	Multi-Position Mode Activation Switch
1011	Differential (Axle) Low Speed Fan Solenoid
1012	Front Brake Solenoid
1013	Front Brake Proportional Solenoid
1014	Front Brake Supply Solenoid
1015	Rear Brake Solenoid
1016	Rear Brake Proportional Solenoid
1017	Rear Brake Supply Solenoid
1018	Steering Resolver Angle Sensor
1019	Secondary Steering Resolver Angle Sensor
1020	Front Brake Cooling Filter Sensor
1021	Rear Brake Cooling Filter Sensor
1022	Auto Lube Grease Level Sensor
1023	Hydraulic System Pressure Sensor
1024	Right Steering Pump Pressure Sensor
1025	Left Steering Pump Pressure Sensor
1026	Steering Return to Tank Filter Sensor
1027	Power Supply Control 5
1028	Power Supply Control 1
1029	Power Supply Control 2
1030	Power Supply Control 3
1031	14 VDC Radio Power
1032	14 VDC Main Power
1033	5 VDC Keyboard Power
1034	Pitch Forward Switch
1035	GPS Receiver
1036	Function Keys
1037	Display Module
1038	Governor Adjust Analog Output
1039	Governor Adjust PWM Output
1040	ICSM #1
1041	ICSM #2
1042	ITSM
1043	Cylinder #1 Firing Signal
1044	All Cylinders Firing Signal
1045	Powertrain Oil Temperature Sensor
1046	Powertrain Oil Filter Bypass Switch
1047	Blade Single Tilt Solenoid
1048	Sourcing Driver Output 1
1049	Sourcing Driver Output 2
1050	Power Supply Control 4
1051	14 VDC Auxiliary Power
1052	Backlight Lamp Assembly
1053	Left Hydraulic Pump Case Drain Temperature Sensor

1054	Center Hydraulic Pump Case Drain Temperature Sensor
1055	Right Hydraulic Pump Case Drain Temperature Sensor
1056	Theft Deterrent Key Exciter
1057	Transmission/Grapple Control
1059	Implement Lift Pilot Pressure Switch
1060	Implement Lower Pilot Pressure Switch
1061	Bucket Rackback Pilot Pressure Switch
1062	Bucket Dump Pilot Pressure Switch
1063	Autodig Enable Switch
1064	Autodig Enabled Lamp
1065	Remote Powered Input
1066	Autodig Active Lamp
1067	Autodig Horn
1068	Autodig Beacon
1069	Implement Lift Signal
1070	Implement Lower Signal
1071	Bucket Rackback Signal
1072	Bucket Dump Signal
1073	VIDS Display Module
1074	Oil Regeneration Valve Solenoid
1075	Oil Charge Valve Solenoid
1076	Engine Cooling Fan Bypass Solenoid
1077	Reverse Steering Solenoid
1078	Blade Control Handle Lift Position Sensor
1079	Blade Control Handle Tilt Position Sensor
1080	Swing Pressure Solenoid
1086	Oxygen Sensor Element
1087	Oxygen Sensor Buffer Module
1088	Oxygen Sensor Power Supply
1089	VIMS Analysis Control Module
1100	Cross Axle Lock Solenoid
1101	Cylinder #1 Combustion Probe
1102	Cylinder #2 Combustion Probe
1103	Cylinder #3 Combustion Probe
1104	Cylinder #4 Combustion Probe
1105	Cylinder #5 Combustion Probe
1106	Cylinder #6 Combustion Probe
1107	Cylinder #7 Combustion Probe
1108	Cylinder #8 Combustion Probe
1109	Cylinder #9 Combustion Probe
1110	Cylinder #10 Combustion Probe
1111	Cylinder #11 Combustion Probe
1112	Cylinder #12 Combustion Probe
1113	Cylinder #13 Combustion Probe
1114	Cylinder #14 Combustion Probe
1115	Cylinder #15 Combustion Probe
1116	Cylinder #16 Combustion Probe
1117	Separator Solenoid
1118	Neutral Flow Bypass Solenoid
1119	Boom Anti Drift Solenoid
1120	Stick Anti Drift Solenoid

1121	Front System High Pressure Solenoid
1122	Rear System High Pressure Solenoid
1123	Hammer Speed Select Solenoid
1124	Anti-theft Solenoid
1125	Left Hand Lever Forward/Backward Position Sensor
1126	Left Hand Lever Left/Right Position Sensor
1127	Right Hand Lever Forward/Backward Position Sensor
1128	Right Hand Lever Left/Right Position Sensor
1129	Right Side Attachment Pedal Sensor
1130	Left Side Attachment Pedal Sensor
1131	Joystick Switch #1
1132	Joystick Switch #4
1133	Front Main Pump Load Sense Pressure Sensor
1134	Rear Main Pump Load Sense Pressure Sensor
1135	Front Pump Case Drain Oil Pressure Sensor
1136	Rear Pump Case Drain Oil Pressure Sensor
1137	Swing Pump Case Drain Oil Pressure Sensor
1138	Boom Cylinder Retract Solenoid
1139	Stick Cylinder Extend Solenoid
1140	Stick Cylinder Retract Solenoid
1141	Bucket Cylinder Extend Solenoid
1142	Bucket Cylinder Retract Solenoid
1143	Swing Right Solenoid
1144	Swing Left Solenoid
1145	Attachment Extend/CW Solenoid
1146	Attachment Retract/CCW Solenoid
1147	Medium Pressure Circuit #1-A Solenoid
1148	Medium Pressure Circuit #1-B Solenoid
1149	Boom Lowering Check/Modulation Valve Solenoid
1150	Swing Pump Swash Plate Angle Solenoid
1151	Front Pump Power Shift Pressure Sensor
1152	Rear Pump Power Shift Pressure Sensor
1153	Front Pump Margin Pressure Sensor
1154	Rear Pump Margin Pressure Sensor
1155	Front Pump Power Shift Pressure Solenoid
1156	Rear Pump Power Shift Pressure Solenoid
1157	Front Pump Margin Pressure Solenoid
1158	Rear Pump Margin Pressure Solenoid
1159	Stick Lowering Check/Modulation Valve Solenoid
1160	Hydraulic Lock Solenoid
1161	Front Hydraulic Pump Pressure Sensor
1162	Rear Hydraulic Pump Pressure Sensor
1163	Left Travel Backward Solenoid
1164	Right Travel Backward Solenoid
1165	Right Travel Forward Solenoid
1166	Left Travel Forward Solenoid
1167	EPG Circuit Breaker
1168	Dead Bus Sensor
1169	ATB (A/C Transformer Box) Sensor
1170	BTB (Bus Transformer Box) Sensor
1171	Variable Implement Pump Selector Switch

1172	Variable Implement Pump Enable Switch
1173	Swing Brake Pilot Pressure Sensor
1174	Swing Motor Speed Sensor
1175	Body Position Sensor
1176	Shutdown Output
1177	Fuel Position Multiplier Sensor
1178	Machine Overload Warning Pressure Sensor
1179	ES2000 Translator Module
1180	Auxiliary Hydraulic Solenoid #1
1181	Auxiliary Hydraulic Solenoid #2
1182	High Flow Solenoid #1
1183	High Flow Solenoid #2
1184	Auxiliary Hydraulic Solenoids Supply
1185	High Flow Solenoids Supply
1186	High Flow Select Switch
1187	Continuous Flow Switch
1188	Operator Interlock Override Switch
1189	Auxiliary Hydraulics Lever
1190	Armrest/Seat Switches
1191	Main Swing Valve
1192	Main Implement Valve
1193	Boom Cylinder Extend Solenoid
1194	MIDS Main Module
1195	Hydraulic Filter Bypass Switch
1196	Fan Return Filter Bypass Switch
1197	Blade Lower Solenoid
1198	Blade Raise Solenoid
1199	VIDS Main Module
1200	Filtration Attachment System
1201	Thermocouple #1
1202	Thermocouple #2
1203	Thermocouple #3
1204	Thermocouple #4
1205	Thermocouple #5
1206	Thermocouple #6
1207	Thermocouple #7
1208	Thermocouple #8
1209	Thermocouple #9
1210	Thermocouple #10
1211	Thermocouple #11
1212	Thermocouple #12
1213	Thermocouple #13
1214	Thermocouple #14
1215	Thermocouple #15
1216	Thermocouple #16
1217	Thermocouple #17
1218	Thermocouple #18
1219	Thermocouple #19
1220	Thermocouple #20
1221	Thermocouple #21
1222	Thermocouple #22

1223	Thermocouple #23
1224	Thermocouple #24
1225	Left Rear Parking Brake Oil Pressure Sensor
1226	Right Rear Parking Brake Oil Pressure Sensor
1227	Retarder Lever
1228	Auxiliary Hydraulics System Enable Switch
1229	Brake Cooling Pump Speed Sensor
1230	Brake Cooling Pump Drive Solenoid
1231	Brake Oil Diverter Solenoid
1232	Final Drive Oil Bypass Solenoid
1233	Transmission Latching Pressure Sensor 1
1234	Transmission Latching Pressure Sensor 2
1235	Transmission Latching Solenoid
1236	Body Up Lamp
1237	Hoist Pump Bypass #1 Solenoid
1238	Hoist Pump Bypass #2 Solenoid
1239	Hoist Control to Tank Head Solenoid
1240	Hoist Control to Tank Rod Solenoid
1241	Hoist Pump to Control Head Solenoid
1242	Hoist Pump to Control Rod Solenoid
1243	Hoist Pilot System Enable Solenoid
1244	Transmission Second Stage Relief Solenoid
1245	Accumulator Bleed Relay
1246	Hoist Cylinder Head End Pressure Sensor
1247	Hoist Cylinder Rod End Pressure Sensor
1248	Retarder Solenoid
1250	Remote Communication Module
1251	Alternator R-Terminal Signal
1266	Diagnostic Lamp
1267	Low Coolant Level Lamp
1268	Maintenance Indicator Lamp
1269	Operator Service Brake Pressure Switch
1270	Turbo Inlet Temperature Sensor
1271	Final Drive Lube Pressure Sensor
1272	Brake Oil Accumulator Pressure Switch
1273	Chassis Control Module
1274	Machine Operation Signal
1275	Bowl Up Solenoid
1276	Bowl Down Solenoid
1277	Apron Raise Solenoid
1278	Apron Lower Solenoid
1279	Ejector Forward Solenoid
1280	Ejector Reverse Solenoid
1281	Bowl Lever Position Sensor
1282	Apron Lever Position Sensor
1283	Ejector Lever Position Sensor
1284	Elevator Speed Lever Position Sensor
1285	Auger Forward Solenoid
1286	Auger Reverse Solenoid
1287	Elevator Speed Solenoid
1288	Bail Solenoid

1289	Cushion Hitch Solenoid
1290	Apron Float Switch
1291	Bail Switch
1292	Gear Hold Switch
1293	Cushion Hitch Switch
1294	Ejector Return Lamp
1295	Apron Float Lamp
1296	Tractor Mode Select Lamp
1297	Scraper Mode Select Lamp
1298	All Implement Solenoids
1299	Elevator Enable Solenoid
1300	Elevator Direction Solenoid
1301	Cylinder #1 Gas Admission Valve (GAV) Solenoid
1302	Cylinder #2 Gas Admission Valve (GAV) Solenoid
1303	Cylinder #3 Gas Admission Valve (GAV) Solenoid
1304	Cylinder #4 Gas Admission Valve (GAV) Solenoid
1305	Cylinder #5 Gas Admission Valve (GAV) Solenoid
1306	Cylinder #6 Gas Admission Valve (GAV) Solenoid
1307	Cylinder #7 Gas Admission Valve (GAV) Solenoid
1308	Cylinder #8 Gas Admission Valve (GAV) Solenoid
1309	Cylinder #9 Gas Admission Valve (GAV) Solenoid
1310	Cylinder #10 Gas Admission Valve (GAV) Solenoid
1311	Cylinder #11 Gas Admission Valve (GAV) Solenoid
1312	Cylinder #12 Gas Admission Valve (GAV) Solenoid
1313	Cylinder #13 Gas Admission Valve (GAV) Solenoid
1314	Cylinder #14 Gas Admission Valve (GAV) Solenoid
1315	Cylinder #15 Gas Admission Valve (GAV) Solenoid
1316	Cylinder #16 Gas Admission Valve (GAV) Solenoid
1317	Cylinder #17 Gas Admission Valve (GAV) Solenoid
1318	Cylinder #18 Gas Admission Valve (GAV) Solenoid
1319	Cylinder #19 Gas Admission Valve (GAV) Solenoid
1320	Cylinder #20 Gas Admission Valve (GAV) Solenoid
1321	Auger Slip Limit Switch
1322	Auger Reverse Switch
1323	Auger Slip Limit Solenoid
1324	Autodig Operation Mode Switch
1325	Autodig Trigger Switch
1326	ECM Location Code
1327	Left Brake Pedal Position Sensor
1328	Right Brake Pedal Position Sensor
1329	Left Brake Pedal Switch
1330	Right Brake Pedal Switch
1331	Left Down Force Enable Solenoid
1332	Right Down Force Enable Solenoid
1333	Left Down Force Proportional Solenoid
1334	Right Down Force Proportional Solenoid
1391	Theft Deterrent Output Driver #1
1392	Theft Deterrent Output Driver #2
1393	Output Driver Enable Line
1394	Exhaust Diverter Solenoid
1395	Engine Overspeed Signal

1396	Implement Solenoid Protection Relay
1397	Drivetrain System
1398	Hydraulic System
1399	Remote Autodig Enable Switch
1400	Axle Oil Cooler Fan Bypass Solenoid
1401	Transmission Solenoid 1
1402	Transmission Solenoid 2
1403	Transmission Solenoid 3
1404	Transmission Solenoid 4
1405	Transmission Solenoid 5
1406	Transmission Solenoid 6
1407	Transmission Solenoid 7
1408	Transmission Solenoid 8
1409	Transmission Solenoid 9
1410	Transmission Solenoid 10
1411	Transmission Solenoid 11
1412	Transmission Solenoid 12
1413	Transmission Solenoid 13
1414	Transmission Solenoid 14
1415	Transmission Solenoid 15
1416	Transmission Solenoid 16
1417	Transmission Solenoid 17
1418	Transmission Solenoid 18
1419	Transmission Solenoid 19
1420	Transmission Solenoid 20
1421	(Slave) Rear Engine Control Module
1422	(Slave) Front Engine Control Module
1423	Elevator Setpoint Switch
1424	Auger Forward Switch
1425	Implement Oil Temperature
1426	Rear Warning Lamp
1427	Machine Lockout Lamp
1428	Requested Gear Command Signal
1429	Tractor System Air Pressure Sensor
1430	Scraper Air Pressure Sensor
1431	Pilot Air Pressure Sensor
1432	Tractor Parking Brake Solenoid
1433	Scraper Parking Brake Solenoid
1434	Reel Lube Switch
1435	System Master Control Module
1436	Interaxle Lock Differential Oil Pressure Supply Solenoid
1437	Rear Axle Pump Drive Oil Divert Solenoid
1438	Engine Cooling Fan Solenoid #2
1439	Hydraulic Oil Cooling Fan Solenoid #2
1440	Throttle Actuator
1441	ITSM #2
1442	Fuel Actuator #1
1443	Fuel Actuator #2
1444	Fuel High Range Differential Pressure Sensor
1445	Fuel Low Range Differential Pressure Sensor
1446	Fuel Metering Module

1447	Fuel Metering Sensor Module
1448	Torque Converter Output Speed Signal Line
1449	Secondary Fuel Command Signal
1450	Main Hydraulic Pump Oil Pressure Sensor
1451	Implement Lever #1 Position Sensor
1452	Implement Lever #2 Position Sensor
1453	Implement Lever #3 Position Sensor
1454	Implement Lever #4 Position Sensor
1455	Implement Lever #5 Position Sensor
1456	Implement Lever #6 Position Sensor
1457	Implement Valve #1 Extend Solenoid
1458	Implement Valve #2 Extend Solenoid
1459	Implement Valve #3 Extend Solenoid
1460	Implement Valve #4 Extend Solenoid
1461	Implement Valve #5 Extend Solenoid
1462	Implement Valve #6 Extend Solenoid
1463	Implement Valve #1 Retract Solenoid
1464	Implement Valve #2 Retract Solenoid
1465	Implement Valve #3 Retract Solenoid
1466	Implement Valve #4 Retract Solenoid
1467	Implement Valve #5 Retract Solenoid
1468	Implement Valve #6 Retract Solenoid
1469	Steering Motor Speed Sensor #1
1470	Steering Motor Speed Sensor #2
1471	Steering Control Position Sensor #1
1472	Steering Control Position Sensor #2
1473	Steering Control Position Sensor #3
1474	Rear Hitch Raise/Work Switch
1475	Rear Hitch Raise/Lower Switch
1476	Rear Hitch Steering Position Sensor
1477	Rear Hitch Right Steering Solenoid
1478	Rear Hitch Left Steering Solenoid
1479	Rear PTO (Power Takeoff) Switch
1480	Remote Rear PTO (Power Takeoff) Switch
1481	Rear PTO (Power Takeoff) Solenoid
1482	10 Volt Sensor DC Power Supply
1483	Power Management Switch
1484	Inching Pedal Switch
1485	Transmission Creeper Gear Switch
1486	Transmission Creeper Gear Solenoid
1487	Rear Hitch Ride Control Solenoid
1488	Implement Lever Float Detent Electromagnet
1489	Left Turbo Turbine Outlet Temperature Sensor
1490	Right Turbo Turbine Outlet Temperature Sensor
1491	Right Turbo Turbine Inlet Temperature Sensor
1492	Left Turbo Turbine Inlet Temperature Sensor
1493	Steering Accumulator Charging Solenoid
1494	Steering Accumulator Oil Pressure Sensor
1495	Injector Codes
1496	Front Service Brake Pressure Switch
1497	Implement Lift Head End to Tank Solenoid #1

1498	Implement Lift Head End to Tank Solenoid #2
1499	Implement Lift Head End to Tank Solenoid #3
1500	Implement Lift Head End to Tank Solenoid #4
1501	Cylinder #1 Detonation Sensor
1502	Cylinder #2 Detonation Sensor
1503	Cylinder #3 Detonation Sensor
1504	Cylinder #4 Detonation Sensor
1505	Cylinder #5 Detonation Sensor
1506	Cylinder #6 Detonation Sensor
1507	Cylinder #7 Detonation Sensor
1508	Cylinder #8 Detonation Sensor
1509	Cylinder #9 Detonation Sensor
1510	Cylinder #10 Detonation Sensor
1511	Cylinder #11 Detonation Sensor
1512	Cylinder #12 Detonation Sensor
1513	Cylinder #13 Detonation Sensor
1514	Cylinder #14 Detonation Sensor
1515	Cylinder #15 Detonation Sensor
1516	Cylinder #16 Detonation Sensor
1517	Cylinder #17 Detonation Sensor
1518	Cylinder #18 Detonation Sensor
1519	Cylinder #19 Detonation Sensor
1520	Cylinder #20 Detonation Sensor
1521	Variable Shift Control Selector Switch
1522	Relief Valve #2 Check Valve Solenoid
1523	Relief Valve #1 Check Valve Solenoid
1524	Flow Control Valve Solenoid
1525	Straight Travel Solenoid
1526	Swing Brake Pilot Pressure Switch
1527	Travel Brake Pilot Pressure Switch
1528	Turbo Turbine Inlet Temperature Sensor
1529	Quick Coupler Switch
1530	Quick Coupler Solenoid
1531	Engine Cylinder #1 Exhaust Port Temperature Sensor
1532	Engine Cylinder #2 Exhaust Port Temperature Sensor
1533	Engine Cylinder #3 Exhaust Port Temperature Sensor
1534	Engine Cylinder #4 Exhaust Port Temperature Sensor
1535	Engine Cylinder #5 Exhaust Port Temperature Sensor
1536	Engine Cylinder #6 Exhaust Port Temperature Sensor
1537	Engine Cylinder #7 Exhaust Port Temperature Sensor
1538	Engine Cylinder #8 Exhaust Port Temperature Sensor
1539	Engine Cylinder #9 Exhaust Port Temperature Sensor
1540	Engine Cylinder #10 Exhaust Port Temperature Sensor
1541	Engine Cylinder #11 Exhaust Port Temperature Sensor
1542	Engine Cylinder #12 Exhaust Port Temperature Sensor
1543	Engine Cylinder #13 Exhaust Port Temperature Sensor
1544	Engine Cylinder #14 Exhaust Port Temperature Sensor
1545	Engine Cylinder #15 Exhaust Port Temperature Sensor
1546	Engine Cylinder #16 Exhaust Port Temperature Sensor
1547	Engine Cylinder #17 Exhaust Port Temperature Sensor
1548	Engine Cylinder #18 Exhaust Port Temperature Sensor

1549	Engine Cylinder #19 Exhaust Port Temperature Sensor
1550	Engine Cylinder #20 Exhaust Port Temperature Sensor
1551	Engine Demand Fan System
1552	Implement Lift Rod End to Tank Solenoid #1
1553	Implement Lift Rod End to Tank Solenoid #2
1554	Implement Tilt Rod End to Tank Solenoid #1
1555	Implement Tilt Rod End to Tank Solenoid #2
1556	Implement Tilt Head End to Tank Solenoid #1
1557	Implement Tilt Head End to Tank Solenoid #2
1558	Electronic Implement Control #2
1559	Implement Pump to Implement Lift Head End Solenoid #1
1560	Implement Pump to Implement Lift Head End Solenoid #2
1561	Implement Pump to Implement Lift Rod End Solenoid #1
1562	Implement Pump to Implement Lift Rod End Solenoid #2
1563	Implement Pump to Implement Tilt Rod End Solenoid #1
1564	Implement Pump to Implement Tilt Rod End Solenoid #2
1565	Implement Pump to Implement Tilt Head End Solenoid #1
1566	Implement Pump to Implement Tilt Head End Solenoid #2
1567	Implement Pump to Tank Bypass Solenoid #1
1568	Implement Pump to Tank Bypass Solenoid #2
1569	Left Front Implement Pump Solenoid
1570	Left Rear Implement Pump Solenoid
1571	Right Rear Implement Pump Solenoid
1572	Right Front Implement Pump Solenoid
1573	Left Main Flame Detector
1574	Right Main Flame Detector
1575	Left Extender Flame Detector
1576	Right Extender Flame Detector
1577	Left Track Accumulator Pressure Sensor
1578	Right Track Accumulator Pressure Sensor
1579	Transmission Lube Flow Valve Solenoid
1580	Powertrain Filter Bypass Lamp
1581	Monitoring System Configuration Code
1582	Transmission Lube Oil Temperature Sensor
1583	Lamp Gear Display Module #1
1584	Rear Axle Oil Cooler Bypass Solenoid
1585	Front Axle Oil Cooler Bypass Solenoid
1586	Retarder Lamp
1587	Autodig Lockout Switch
1588	Autodig Dig Mode Switch #2
1589	Turbocharger Inlet Air Pressure Sensor
1590	Main Pump Flow Limitation Pressure Solenoid
1591	Negative Flow Control Stabilizer Pressure Solenoid
1592	Autodig Kickout Set Switch
1593	Attachment Valve #1 Extend Pressure Solenoid
1594	Attachment Valve #2 Extend Pressure Solenoid
1595	Attachment Valve #3 Extend Pressure Solenoid
1596	Attachment Valve #1 Retract Pressure Solenoid
1597	Attachment Valve #2 Retract Pressure Solenoid
1598	Attachment Valve #3 Retract Pressure Solenoid
1599	Engine Fan Blade Position Pull Solenoid

1600	Engine Fan Blade Position Push Solenoid
1601	Engine Cooling Fan #2 Speed Sensor
1602	Engine Cooling Fan Drive Oil Temperature Sensor
1603	Machine Control Module
1604	Rear Hitch Control Module
1605	Front ARC Supply Solenoid
1606	Rear ARC Supply Solenoid
1607	Front ARC Control Solenoid
1608	Rear ARC Control Solenoid
1609	F2 Type Valve Load Sense Pressure Sensor
1610	Parking Brake Solenoid #2
1611	F1 Type Tool Rod End Pressure Sensor
1612	Brake Oil Accumulator Automatic Brake Application (ABA) Pressure Switch
1613	Attachment Pedal Back Pressure Switch
1614	Attachment Pedal Front Pressure Switch
1615	1-Way / 2-Way Valve Solenoid
1616	Stabilizer High Pressure Solenoid
1617	Oscillating Axle Solenoid
1618	Main Pump Swash Plate Angle Sensor
1619	Main Pump Pressure Switch
1620	Steering Oil Flow Switch
1621	Generator Valve Solenoid
1622	Travel Pedal Lock Electromagnet
1623	Brake Lights
1624	Travel Enable Solenoid
1625	Forward Travel Pressure Switch
1626	Reverse Travel Pressure Switch
1627	Fuel Pump Relay
1628	Armrest Position Switch
1629	Main Pump Power Shift Pressure Solenoid
1630	Swing Pump Power Shift Pressure Solenoid
1631	Brake Air Supply Solenoid
1632	Backup Engine Control Module
1633	Tilt Hydraulic Pump
1634	Idle Validation Switch #1
1635	Idle Validation Switch #2
1636	(Slave) Engine #2 Electronic Control Module
1637	Seawater Outlet Pressure Sensor
1638	Exhaust Stack Temperature Sensor
1639	Machine Security System Module
1640	Rear Service Brake Pressure Switch
1641	Compression Brake Solenoid #1
1642	Compression Brake Solenoid #2
1643	Compression Brake Solenoid #3
1644	Compression Brake Solenoid #4
1645	Compression Brake Solenoid #5
1646	Compression Brake Solenoid #6
1647	Compression Brake Solenoid #7
1648	Compression Brake Solenoid #8
1649	Compression Brake Solenoid #9
1650	Compression Brake Solenoid #10

1651	Compression Brake Solenoid #11
1652	Compression Brake Solenoid #12
1653	Compression Brake Solenoid #13
1654	Compression Brake Solenoid #14
1655	Compression Brake Solenoid #15
1656	Compression Brake Solenoid #16
1657	Left Joystick Thumbwheel
1658	Right Joystick Thumbwheel
1659	F1 Type Valve Load Sense Pressure Sensor
1660	Left Pump Negative Flow Control Pressure Reducer Pressure Solenoid
1661	Right Pump Negative Flow Control Pressure Reducer Pressure Solenoid
1662	F1 Type Valve Flow Command Solenoid
1663	Attachment Valve #4 Extend Pressure Solenoid
1664	Attachment Valve #4 Retract Pressure Solenoid
1665	Variable Relief Valve #1 Pressure Solenoid
1666	Variable Relief Valve #2 Pressure Solenoid
1667	Loose Material Switch
1668	Machine Configuration Code
1669	Fan Pump Pressure Switch
1670	Forward Travel Pedal Limit Switch
1671	Right Turbo Turbine Speed Sensor
1672	Left Turbo Turbine Speed Sensor
1673	Prechamber Fuel Pressure Sensor
1674	Solenoid Return #1
1675	Solenoid Return #2
1676	Solenoid Return #3
1677	Solenoid Return #4
1678	Solenoid Return #5
1679	Transmission Main Relief Spool Position Sensor
1680	Right Main Pump to Tank Bypass Solenoid
1681	Lighting Shutdown Timer Relay
1682	Idle Shutdown Timer Switch
1683	Refueling Pump Relay
1684	Fuel Injection Pump
1685	Rated Speed Selector Switch
1686	Engine Oil Temperature Sensor #2
1687	F1 Type Valve Load Sense Pressure Sensor
1688	Left Pump Negative Flow Control Pressure Reducer Pressure Sensor
1689	Right Pump Negative Flow Control Pressure Reducer Pressure Sensor
1690	Throttle #2 Position Sensor
1691	Tachometer Signal Line
1692	Aftercooler Fan Bypass Solenoid
1693	Decelerator Pedal Sensor
1694	Travel Speed Solenoids Supply
1695	Travel Speed Switch
1696	Last Crankshaft Bearing Oil Pressure Sensor
1697	Injector Actuation Solenoid #2
1698	High Temperature Cooler Inlet Jacket Water Pressure Sensor
1699	Joystick Forward/Reverse Position Sensor
1700	Joystick Left/Right Position Sensor
1701	Machine Acceleration Switch

1702	Machine Deceleration Switch
1703	Left Drive Pump Forward Control Solenoid
1704	Left Drive Pump Reverse Control Solenoid
1705	Right Drive Pump Forward Control Solenoid
1706	Right Drive Pump Reverse Control Solenoid
1707	Left Drive Motor Solenoid
1708	Right Drive Motor Solenoid
1709	Implement Oil Diverter Valve Solenoid
1710	Prechamber Fuel Pressure Sensor
1711	Upshift/Downshift Switch
1712	Torque Converter Pedal Position Sensor
1713	Dump Detent Electromagnet
1714	Injector Actuation Solenoid #2
1715	Engine Oil Temperature Sensor #2
1716	Raise/Lower Detent Electromagnet
1717	Parallel Lift Switch
1718	Fine Modulation Mode Switch
1719	Generator Output Power Sensor
1720	Turbocharger Compressor Bypass Valve Actuator
1721	Rackback/Dump Detent Electromagnet
1722	Parking Brake Switch #2
1723	Left Station Propel Speed Dial Sensor
1724	Right Station Propel Speed Dial Sensor
1725	Left Station Decelerator Pedal Sensor
1726	Right Station Decelerator Pedal Sensor
1727	Left Station Steering Wheel Sensor
1728	Right Station Steering Wheel Sensor
1729	Left Station Propel Lever Position Sensor
1730	Right Station Propel Lever Position Sensor
1731	Left Station Propel Mode Selector Switch
1732	Right Station Propel Mode Selector Switch
1733	Propel Mode Shift Solenoid
1735	Left Auger Forward Direction Solenoid
1736	Right Auger Forward Direction Solenoid
1737	Left Conveyor Forward Solenoid
1738	Right Conveyor Forward Solenoid
1739	Hammer Enable Solenoid
1740	Crab Steering Solenoid
1741	Circle Steering Solenoid
1742	Transmission Hydrostatic Oil Outlet Temperature Sensor
1743	Engine Operation Mode Selector Switch
1744	Operator Sequence Record/Playback Switch
1745	Hydrostatic Motor Speed Sensor #1
1746	Hydrostatic Motor Speed Sensor #2
1747	Secondary Hydrostatic Motor Speed Sensor
1748	Ignition Transformer Secondary #17
1749	Ignition Transformer Secondary #18
1750	Ignition Transformer Secondary #19
1751	Ignition Transformer Secondary #20
1752	Ignition Transformer Primary #17
1753	Ignition Transformer Primary #18

1754	Ignition Transformer Primary #19
1755	Ignition Transformer Primary #20
1756	Start Aid Indicator
1757	Engine Deceleration Enable Switch
1758	Specific Humidity Sensor
1759	Exhaust Back Pressure Sensor
1760	Secondary Steering Solenoid
1761	Hydrostatic Pump Solenoid #1
1762	Hydrostatic Pump Solenoid #2
1763	Operator Station Selector Switch
1764	Operator Station Relay
1765	Vibratory System Enable Relay
1766	Grade Slope Enable Relay
1767	Tamper Bar Switch
1768	Tamper Bar Speed Dial
1769	Right Station Left Conveyor Speed Dial
1770	Right Station Right Conveyor Speed Dial
1771	Right Station Left Auger Mode Switch
1772	Remote Operator Station Lockout Switch
1773	Axle Suspension Lock Switch
1774	Suspension Lock Solenoid
1775	Implement Pump Pressure Switch
1776	Elevator Speed Switch
1777	Apron Control Switch
1778	Elevator Control Switch
1779	Fuel Rail #1 Pressure Valve Solenoid
1780	Fuel Rail #2 Pressure Valve Solenoid
1781	Air Conditioning Operator Control Switch
1782	Right Station Right Auger Mode Switch
1783	Right Station Left Conveyor Mode Switch
1784	Right Station Right Conveyor Mode Switch
1785	Intake Manifold Pressure Sensor
1786	Auto Guide System Setup Switch
1787	Auto Guide System Control Switch
1788	Right Stabilizer Operator Switch
1789	Left Stabilizer Operator Switch
1790	Frame Leveling System Enable Relay
1791	Saw Pressure Sensor
1792	Compression Brake Oil Pressure Sensor - Bank 1
1793	Compression Brake Oil Pressure Sensor - Bank 2
1794	Engine Retarder Enable Relay
1795	Turbo #2 Outlet Pressure Sensor
1796	Intake Manifold #2 Air Temperature Sensor
1797	Fuel Rail Pressure Sensor
1798	Fuel Rail #2 Pressure Sensor
1799	Shear/Hammer Selector Switch
1800	Shear/Hammer Lever Position Switch
1801	Shear Counterclockwise Rotation Relay
1802	Shear Clockwise Rotation Relay
1803	Shear Open Solenoid
1804	Shear Close Solenoid

1805	Hammer Cooling Oil Solenoid
1806	Work Tool/Magnet Selector Switch
1807	Work Tool Counterclockwise Rotation Relay
1808	Work Tool Clockwise Rotation Relay
1809	Work Tool Open Solenoid
1810	Work Tool Close Solenoid
1811	Bucket Thumb Open Solenoid
1812	Bucket Thumb Close Solenoid
1813	Hammer Low Rated Solenoid
1814	Hammer High Rated Solenoid
1815	Marine Powertrain Control Module
1816	Multi-Station Control Module
1817	Troll Mode Control Module
1818	Implement Oil Filter Differential Pressure Switch
1819	Roading Lock Switch
1820	Auxiliary Implement Diverter Relay
1821	Master Control Station Data Link
1822	Control Station Data Link
1823	Shift Rail #1 Position Sensor
1824	Shift Rail #2 Position Sensor
1825	Shift Rail #3 Position Sensor
1826	Longitudinal Stability Indicator Sensor
1827	Longitudinal Stability System
1828	Boom Angle Switch
1829	Boom Position Switch
1830	Boom Telescope Position Sensor
1831	Rear Axle Lock Solenoid Switch
1832	Right Stabilizer Pressure Sensor
1833	Left Stabilizer Pressure Sensor
1834	Ignition Key Switch
1835	Auxiliary Pressure Sensor
1836	Auxiliary Temperature Sensor
1837	Clear Switch
1838	Service Switch
1839	Mode Switch
1840	Tractor Parking Brake Pressure Switch
1841	Scraper Parking Brake Pressure Switch
1842	Auxiliary Valve Pressure Solenoid
1843	Auxiliary Valve Flow Solenoid
1844	Fuel Actuator
1845	Programmable Hydraulic System Pilot Module ECM #1
1846	Programmable Hydraulic System Pilot Module ECM #2
1847	Programmable Hydraulic System Pilot Module ECM #3
1848	Programmable Hydraulic System Pilot Module ECM #4
1849	Engine Fan Reversing Relay
1850	Tandem Engine Coupling Oil Pressure Sensor
1851	Transfer Case Switch
1852	Air Conditioning Relay
1853	Multi-Position Mode Enable Switch
1854	Implement ECM Power Relay
1855	Implement Power Relay

1856	Implement Left Turn Lights
1857	Implement Right Turn Lights
1858	Implement Left Stop Lights
1859	Implement Right Stop Lights
1860	Implement Center Stop Lights
1861	Implement Marker Lights
1862	Implement OEM Option 1 Lights
1863	Implement OEM Option 2 Lights
1864	Implement Work Lights
1865	Implement Clearance Lights
1866	Implement Back-Up Lights
1867	Transmission Gear Select Switches
1868	Speed And Direction Lever Park Position Switch
1869	Speed And Direction Lever Position Sensor
1870	Blade Control Handle Thumb Rocker Position Sensor
1871	Blade Quick Drop Solenoid
1872	Auto Blade Assist Switch
1873	AutoCarry Switch
1874	Winch Lockout Switch
1875	Hydraulic Case Drain Filter Bypass Switch
1876	Hydraulic Pilot Supply Filter Bypass Switch
1877	Apron Float Solenoid
1878	Elevator Oil Filter Switch
1879	Center Lever Forward/Backward Position Sensor
1880	Center Lever Left/Right Position Sensor
1881	Winch Control Handle Spool In/Out Position Sensor
1882	Winch Control Handle Drum Release Position Sensor
1883	Winch Low Speed Lock Switch
1884	Winch Spool In Solenoid
1885	Winch Spool Out Solenoid
1886	Winch Drum Release Solenoid
1887	Winch Low Speed Lock Solenoid
1888	Local GPS Antenna
1889	Base (Remote) GPS System Receiver
1890	Base (Remote) GPS Antenna
1891	Theft Deterrent Module
1892	Feature Mismatch With ECM Swap
1893	Inertial Measurement Sensor
1894	Cruise Control Disengage Switch
1895	Cruise Control Speed Toggle Switch
1896	Throttle Service Lamp
1897	Operator Horn Relay
1898	Data Link Translation Module
1899	Retarder Pedal
1900	Engine Coolant Diverter Solenoid
1901	Intake Valve Actuator #1
1902	Intake Valve Actuator #2
1903	Intake Valve Actuator #3
1904	Intake Valve Actuator #4
1905	Intake Valve Actuator #5
1906	Intake Valve Actuator #6

1907	Intake Valve Actuator #7
1908	Intake Valve Actuator #8
1909	Intake Valve Actuator #9
1910	Intake Valve Actuator #10
1911	Intake Valve Actuator #11
1912	Intake Valve Actuator #12
1913	Intake Valve Actuator #13
1914	Intake Valve Actuator #14
1915	Intake Valve Actuator #15
1916	Intake Valve Actuator #16
1917	Intake Valve Actuator #17
1918	Intake Valve Actuator #18
1919	Intake Valve Actuator #19
1920	Intake Valve Actuator #20
1921	Auger Oil Filter Switch
1922	Intake Valve Actuation System Oil Pressure Solenoid
1923	Remote Throttle Position Sensor
1924	Intake Valve Actuation System Oil Pressure Sensor
1925	Parking Brake Solenoid #3
1926	Remote Parking Brake Warning Indicator
1927	Remote Parking Brake Switch
1928	Remote Service Brake Switch
1929	Fuel Return Temperature Sensor
1930	Quick Coupler Diverter Relay
1931	Auxiliary Circuit Flow Combining Solenoid
1932	Crankcase Monitoring Module
1933	Blade Angle Left Solenoid
1934	Blade Angle Right Solenoid
1935	Auxiliary Hydraulic Flow Selector Switch
1936	Hydraulic System High Pressure Solenoid
1937	Engine Coolant Flow Switch
1938	Auxiliary Hydraulic Boost Flow Diverter Relay
1939	Auxiliary Hydraulic Boost Flow Supply Solenoid
1940	Auxiliary Hydraulic Boost Flow Diverter Solenoid
1941	Auto Tong Switch
1942	High Pressure Tool Detection Switch
1943	Center Laser Receiver
1944	Right Laser Receiver
1945	Left GPS Receiver
1946	Right GPS Receiver
1947	Left Electric Mast
1948	Right Electric Mast
1949	Grade Control Lift Valve Module
1950	Grade Control Tilt Valve Module
1951	Implement Angle Sensor
1952	Chassis Angle Sensor
1953	Grade Control System Display
1954	Left Grade Control System Indicator
1955	Right Grade Control System Indicator
1956	Bucket Cylinder Position Sensor
1957	Stick Cylinder Position Sensor

1958	Extendable Stick Cylinder Position Sensor
1959	Boom Cylinder Position Sensor
1960	Ignition Key Reader
1961	Service Brake Accumulator Pressure Sensor
1962	Brake Pump Pressure Sensor
1963	Brake Pump Unloader Solenoid
1964	Lift Cylinder Position Sensor
1965	Tilt Cylinder Position Sensor
1966	Hydraulic System CAN Data Link #1
1967	Hydraulic System CAN Data Link #2
1968	Boom Cylinder Rod End Pressure Sensor
1969	Boom Cylinder Head End Pressure Sensor
1970	Bucket Cylinder Rod End Pressure Sensor
1971	Bucket Cylinder Head End Pressure Sensor
1972	Stick Cylinder Rod End Pressure Sensor
1973	Stick Cylinder Head End Pressure Sensor
1974	Left Swing Pressure Sensor
1975	Right Swing Pressure Sensor
1976	Right Travel Forward Pressure Sensor
1977	Right Travel Backward Pressure Sensor
1978	Left Travel Forward Pressure Sensor
1979	Left Travel Backward Pressure Sensor
1980	Attachment #1 Cylinder Rod End Pressure Sensor
1981	Attachment #1 Cylinder Head End Pressure Sensor
1982	Attachment #2 Cylinder Rod End Pressure Sensor
1983	Attachment #2 Cylinder Head End Pressure Sensor
1984	Attachment #3 Cylinder Rod End Pressure Sensor
1985	Attachment #3 Cylinder Head End Pressure Sensor
1986	Pump to Bucket Rod End Solenoid
1987	Pump to Bucket Head End Solenoid
1988	Pump to Boom Rod End Solenoid
1989	Pump to Boom Head End Solenoid
2000	Pump to Stick Rod End Solenoid
2001	Pump to Stick Head End Solenoid
2002	Pump to Swing Motor Left Solenoid
2003	Pump to Swing Motor Right Solenoid
2004	Pump to Right Travel Forward Motor Solenoid
2005	Pump to Right Travel Backward Motor Solenoid
2006	Pump to Left Travel Forward Motor Solenoid
2007	Pump to Left Travel Backward Motor Solenoid
2008	Pump to Attachment #1 Rod End Solenoid
2009	Pump to Attachment #1 Head End Solenoid
2010	Pump to Attachment #2 Rod End Solenoid
2011	Pump to Attachment #2 Head End Solenoid
2012	Pump to Attachment #3 Rod End Solenoid
2013	Pump to Attachment #3 Head End Solenoid
2014	Bucket Rod End to Tank Solenoid
2015	Bucket Head End to Tank Solenoid
2016	Boom Rod End to Tank Solenoid
2017	Boom Head End to Tank Solenoid
2018	Stick Rod End to Tank Solenoid

2019	Stick Head End to Tank Solenoid
2020	Swing Motor Left to Tank Solenoid
2021	Swing Motor Right to Tank Solenoid
2022	Right Travel Forward Motor to Tank Solenoid
2023	Right Travel Backward Motor to Tank Solenoid
2024	Left Travel Forward Motor to Tank Solenoid
2025	Left Travel Backward Motor to Tank Solenoid
2026	Attachment #1 Rod End to Tank Solenoid
2027	Attachment #1 Head End to Tank Solenoid
2028	Attachment #2 Rod End to Tank Solenoid
2029	Attachment #2 Head End to Tank Solenoid
2030	Attachment #3 Rod End to Tank Solenoid
2031	Attachment #3 Head End to Tank Solenoid
2032	Pump to Bucket Rod End Spool Displacement Sensor
2033	Pump to Bucket Head End Spool Displacement Sensor
2034	Pump to Boom Rod End Spool Displacement Sensor
2035	Pump to Boom Head End Spool Displacement Sensor
2036	Pump to Stick Rod End Spool Displacement Sensor
2037	Pump to Stick Head End Spool Displacement Sensor
2038	Pump to Swing Motor Left Spool Displacement Sensor
2039	Pump to Swing Motor Right Spool Displacement Sensor
2040	Pump to Right Travel Forward Spool Displacement Sensor
2041	Pump to Right Travel Backward Spool Displacement Sensor
2042	Pump to Left Travel Forward Spool Displacement Sensor
2043	Pump to Left Travel Backward Spool Displacement Sensor
2044	Pump to Attachment #1 Rod End Spool Displacement Sensor
2045	Pump to Attachment #1 Head End Spool Displacement Sensor
2046	Pump to Attachment #2 Rod End Spool Displacement Sensor
2047	Pump to Attachment #2 Head End Spool Displacement Sensor
2048	Pump to Attachment #3 Rod End Spool Displacement Sensor
2049	Pump to Attachment #3 Head End Spool Displacement Sensor
2050	Bucket Rod End to Tank Spool Displacement Sensor
2051	Bucket Head End to Tank Spool Displacement Sensor
2052	Boom Rod End to Tank Spool Displacement Sensor
2053	Boom Head End to Tank Spool Displacement Sensor
2054	Stick Rod End to Tank Spool Displacement Sensor
2055	Stick Head End to Tank Spool Displacement Sensor
2056	Swing Motor Left to Tank Spool Displacement Sensor
2057	Swing Motor Right to Tank Spool Displacement Sensor
2058	Right Travel Forward to Tank Spool Displacement Sensor
2059	Right Travel Backward to Tank Spool Displacement Sensor
2060	Left Travel Forward to Tank Spool Displacement Sensor
2061	Left Travel Backward to Tank Spool Displacement Sensor
2062	Attachment #1 Rod End to Tank Spool Displacement Sensor
2063	Attachment #1 Head End to Tank Spool Displacement Sensor
2064	Attachment #2 Rod End to Tank Spool Displacement Sensor
2065	Attachment #2 Head End to Tank Spool Displacement Sensor
2066	Attachment #3 Rod End to Tank Spool Displacement Sensor
2067	Attachment #3 Head End to Tank Spool Displacement Sensor
2068	Pump #1 Control Spool Solenoid
2069	Pump #2 Control Spool Solenoid

2070	Pump #1 Combining Solenoid
2071	Pump #2 Combining Solenoid
2072	Pump #1 Swash Plate Control Spool Displacement Sensor
2073	Pump #2 Swash Plate Control Spool Displacement Sensor
2074	Hydraulic System Master ECM CAN Data Link #1
2075	Hydraulic System Valve ECM #1 CAN Data Link #1
2076	Hydraulic System Valve ECM #2 CAN Data Link #1
2077	Hydraulic System Valve ECM #3 CAN Data Link #1
2078	Hydraulic System Valve ECM #4 CAN Data Link #1
2079	Hydraulic System Valve ECM #5 CAN Data Link #1
2080	Hydraulic System Valve ECM #6 CAN Data Link #1
2081	Hydraulic System Master ECM CAN Data Link #2
2082	Hydraulic System Valve ECM #1 CAN Data Link #2
2083	Hydraulic System Valve ECM #2 CAN Data Link #2
2084	Hydraulic System Valve ECM #3 CAN Data Link #2
2085	Hydraulic System Valve ECM #4 CAN Data Link #2
2086	Hydraulic System Valve ECM #5 CAN Data Link #2
2087	Hydraulic System Valve ECM #6 CAN Data Link #2
2088	Programmable Hydraulic System Pilot Module ECM #5
2089	Programmable Hydraulic System Pilot Module ECM #6
2090	Boom Head End Line Relief Valve
2091	Swing Left Line Relief Valve
2092	Swing Right Line Relief Valve
2093	Attachment #1 Rod End Line Relief Valve Pressure Sensor
2094	Attachment #1 Head End Line Relief Valve Pressure Sensor
2095	Attachment #2 Rod End Line Relief Valve Pressure Sensor
2096	Attachment #2 Head End Line Relief Valve Pressure Sensor
2097	Attachment #3 Rod End Line Relief Valve Pressure Sensor
2098	Attachment #3 Head End Line Relief Valve Pressure Sensor
2099	Hydraulic Pump #1 Line Relief Valve
2100	Pump #2 Line Relief Valve
2101	Valve ECM Initialization Input Line
2102	Dump Lever Position Sensor
2103	Boom Circuit Regeneration Solenoid
2104	Travel Motor Swash Plate Angle Limit Solenoid
2105	Travel Motor Control Valve Spool Displacement Sensor
2106	Return to Trench Set Switch
2107	Hydraulic Oil Heat Exchange Solenoid
2108	Hoe Swing Angle Sensor
2110	Machine Pitch Sensor
2111	Machine Roll Sensor
2112	Stabilizer Raise Detent Electromagnet
2113	Operator In Seat Switch
2114	Blade Control Handle Trigger Switch
2115	Powertrain Oil Cooler Bypass Solenoid
2116	Hydraulic Oil Cooler Bypass Solenoid
2117	Intake Valve Actuation System Oil Temperature Sensor
2118	3rd Function Implement Lockout Switch
2119	Automatic Blade Positioning System Enable Switch
2120	Engine Oil Refill Tank Level Switch
2121	Transmission Selector Forward Direction Switch

2122	Transmission Selector Reverse Direction Switch
2123	Left Station Paving Rate Gauge
2124	Right Station Paving Rate Gauge
2125	Auger Indicator
2126	Bail Indicator
2127	Left Joystick Thumbwheel Position Sensor
2128	Right Joystick Thumbwheel Position Sensor
2129	Ride Control Solenoid
2131	5 Volt Sensor DC Power Supply #2
2132	Lift Arm Claw Open Solenoid
2133	Lift Arm Claw Close Solenoid
2134	Lift Arm Raise Solenoid
2135	Lift Arm Lower Solenoid
2136	Lift Arm Slide Extend Solenoid
2137	Lift Arm Slide Retract Solenoid
2138	Packing Blade Extend Solenoid #1
2139	Packing Blade Extend Solenoid #2
2140	Packing Blade Retract Solenoid #1
2141	Packing Blade Retract Solenoid #2
2142	Straight Travel Pedal Position Sensor
2143	Electronic Implement Control #3
2146	Articulation Lever Position Sensor
2147	Automatic Neutral Articulation Switch
2148	Hydraulic Lock Solenoid Relay
2149	Travel Pilot Solenoid
2150	Blade Left Lift Lever Position Sensor
2151	Blade Right Lift Lever Position Sensor
2152	Wheel Lean Control Position Sensor
2153	Blade Pitch Control Position Sensor
2154	Blade Sideshift Lever Position Sensor
2155	Circle Drive Lever Position Sensor
2156	Circle Sideshift Control Position Sensor
2157	Travel Motor Hydraulic Brake Select Switch
2158	Oscillating Axle Lock Switch
2159	Action Alarm Relay
2160	Blade Left Raise Solenoid
2161	Blade Right Raise Solenoid
2162	Blade Left Lower Solenoid
2163	Blade Right Lower Solenoid
2164	Platform Load Sensor
2165	Blade Sideshift Left Solenoid
2166	Blade Sideshift Right Solenoid
2167	Circle Left Solenoid
2168	Circle Right Solenoid
2169	Circle Sideshift Left Solenoid
2170	Circle Sideshift Right Solenoid
2171	Articulate Left Solenoid
2172	Articulate Right Solenoid
2173	Wheel Lean Left Solenoid
2174	Wheel Lean Right Solenoid
2175	Secondary Steering System Steer Left Solenoid

2176	Secondary Steering System Steer Right Solenoid
2177	Primary Steering Disable Solenoid
2178	Secondary Steering Test Switch
2179	Secondary Steering Pump Pressure Sensor
2180	Aftercooler Coolant Level Sensor
2181	Blade Pitch Forward Solenoid
2182	Blade Pitch Backward Solenoid
2183	Payload Monitoring System
2184	Medium Pressure Hydraulic Circuit Port B Solenoid
2185	Medium Pressure Hydraulic Circuit Port A Solenoid
2186	Left All Wheel Drive (AWD) Clutch Pressure Sensor
2187	Right All Wheel Drive (AWD) Clutch Pressure Sensor
2188	Left All Wheel Drive (AWD) Clutch Forward Solenoid
2189	Left All Wheel Drive (AWD) Clutch Reverse Solenoid
2190	Right All Wheel Drive (AWD) Clutch Forward Solenoid
2191	Right All Wheel Drive (AWD) Clutch Reverse Solenoid
2192	Implement Lever Auxiliary/Float Detent Electromagnet
2193	Lift/Tilt Kickout Switches Enable Circuit
2194	All Wheel Drive (AWD) Control Dial Position Sensor
2195	Turbocharger #1 Boost Pressure Sensor
2196	Turbocharger #2 Boost Pressure Sensor
2197	Boom Extend Limit Switch
2198	Medium Pressure Hydraulic Circuit Selector Switch
2199	Secondary Steering Request Signal Line
2200	Left Steering Cylinder Position Sensor
2201	Right Steering Cylinder Position Sensor
2202	Primary Steering Valve Control Module
2203	Primary Steering Valve Spool Displacement Signal Line
2204	Auxiliary Lever #1 Position Sensor
2205	Auxiliary Lever #2 Position Sensor
2206	Auxiliary Lever #3 Position Sensor
2207	Auxiliary Lever #4 Position Sensor
2208	Auxiliary Lever #5 Position Sensor
2209	Auxiliary Lever #6 Position Sensor
2210	Auxiliary Lever #7 Position Sensor
2211	Auxiliary Valve #1 Port B Solenoid
2212	Auxiliary Valve #1 Port A Solenoid
2213	Auxiliary Valve #2 Port B Solenoid
2214	Auxiliary Valve #2 Port A Solenoid
2215	Auxiliary Valve #3 Port B Solenoid
2216	Auxiliary Valve #3 Port A Solenoid
2217	Auxiliary Valve #4 Port B Solenoid
2218	Auxiliary Valve #4 Port A Solenoid
2219	Auxiliary Valve #5 Port B Solenoid
2220	Auxiliary Valve #5 Port A Solenoid
2221	Auxiliary Valve #6 Port B Solenoid
2222	Auxiliary Valve #6 Port A Solenoid
2223	Auxiliary Valve #7 Port B Solenoid
2224	Auxiliary Valve #7 Port A Solenoid
2225	Hydraulic System Master ECM Address Input Line
2226	Hydraulic System Valve ECM #1 Address Input Line

2227	Hydraulic System Valve ECM #2 Address Input Line
2228	Hydraulic System Valve ECM #3 Address Input Line
2229	Hydraulic System Valve ECM #4 Address Input Line
2230	Hydraulic System Valve ECM #5 Address Input Line
2231	Hydraulic System Valve ECM #6 Address Input Line
2232	Engine Retarder Solenoid
2233	Blade Lower Pilot Pressure Sensor
2234	Hydraulic Pump Boost Pressure Solenoid
2235	Counterbalance Valve Bypass Solenoid
2236	Hoe Auxiliary Valve #1 Port A Solenoid
2237	Hoe Auxiliary Valve #1 Port B Solenoid
2238	Loader Lift Cylinder Extend Solenoid
2239	Loader Lift Cylinder Retract Solenoid
2240	Tilt Cylinder Extend Solenoid
2241	Tilt Cylinder Retract Solenoid
2242	Loader Auxiliary Valve Port A Solenoid
2243	Loader Auxiliary Valve Port B Solenoid
2244	Hoe Auxiliary Valve #2 Port A Solenoid
2245	Hoe Auxiliary Valve #2 Port B Solenoid
2246	Glow Plug Start Aid Relay
2247	Fuel Transfer Pump Intake Pressure Sensor
2248	Steering Hydraulic Metering Unit Pressure Sensor
2249	Steering Accumulator Bleed Solenoid
2250	Brake Accumulator Bleed Solenoid
2251	Automatic Idle Kickdown Enable Switch
2252	Machine Articulation Angle Sensor #2
2253	Headland Autoshift Gear Limit Set Switch
2254	Left Lift Cylinder Head End Pressure Sensor
2255	Right Lift Cylinder Head End Pressure Sensor
2256	Hydraulic Modulation Solenoid
2257	Steering Hydraulic Metering Unit Pressure Sensor #2
2258	Left Blade Control Mode Switch
2259	Right Blade Control Mode Switch
2260	Side Shift Blade Control Mode Switch
2261	Left Desired Grade Offset Switch
2262	Right Desired Grade Offset Switch
2263	Right Travel Pressure Sensor
2264	Left Travel Pressure Sensor
2265	Hydraulic Pump #1 Outlet Pressure Sensor
2266	Hydraulic Pump #2 Outlet Pressure Sensor
2267	Winch Control Handle Position Sensor
2268	Winch Free Spool Solenoid
2269	Stick Circuit Regeneration Solenoid
2270	Swing Spool Displacement Sensor
2271	Engine Oil Renewal System Actuation Solenoid
2272	Combining Valve Solenoid
2273	Side Rear View Mirror Heater Switch
2274	Transmission Direction Switch #2
2275	Hammer Return To Tank Solenoid
2276	Combining Spool Displacement Sensor
2277	Right Travel Spool Stem Displacement Sensor

2278	Left Travel Spool Stem Displacement Sensor
2279	Shovel Crane Indicator Relay
2280	Travel Alarm Relay
2281	Boom Telescope Cylinder Extend Solenoid
2282	Boom Telescope Cylinder Retract Solenoid
2283	Left Joystick Left Thumbwheel Sensor
2284	Left Joystick Right Thumbwheel Sensor
2285	Right Joystick Right Thumbwheel Sensor
2286	Right Joystick Left Thumbwheel Sensor
2287	Left Stabilizer Cylinder Extend Solenoid
2288	Left Stabilizer Cylinder Retract Solenoid
2289	Right Stabilizer Cylinder Extend Solenoid
2290	Right Stabilizer Cylinder Retract Solenoid
2291	Hydraulic System Warning Indicator
2292	Quick Steering Solenoid
2293	Left Front Drive Motor Solenoid
2294	Right Front Drive Motor Solenoid
2295	Left Front Drive Pump Forward Control Solenoid
2296	Left Front Drive Pump Reverse Control Solenoid
2297	Right Front Drive Pump Forward Control Solenoid
2298	Right Front Drive Pump Reverse Control Solenoid
2299	Secondary Engine Control Module
2300	Switch Panel
2301	Aftercooler Coolant Pump Outlet Pressure Sensor
2302	Engine Coolant Pump Outlet Pressure Sensor
2303	Engine Block Coolant Outlet Pressure Sensor
2304	Differential Lock Relay
2305	Brake/Decelerator Pedal Position Sensor
2306	Feature Alarm
2307	Hydraulic System Valve ECM #1 8 Volt Supply
2308	Hydraulic System Valve ECM #2 8 Volt Supply
2309	Hydraulic System Valve ECM #3 8 Volt Supply
2310	Hydraulic System Valve ECM #4 8 Volt Supply
2311	Hydraulic System Valve ECM #1 10 Volt Supply
2312	Hydraulic System Valve ECM #2 10 Volt Supply
2313	Hydraulic System Valve ECM #3 10 Volt Supply
2314	Hydraulic System Valve ECM #4 10 Volt Supply
2315	Hydraulic System Valve ECM #1 24 Volt Supply
2316	Hydraulic System Valve ECM #2 24 Volt Supply
2317	Hydraulic System Valve ECM #3 24 Volt Supply
2318	Hydraulic System Valve ECM #4 24 Volt Supply
2319	Left Front Drive Motor Speed Sensor #1
2320	Left Front Drive Motor Speed Sensor #2
2321	Right Front Drive Motor Speed Sensor #1
2322	Right Front Drive Motor Speed Sensor #2
2323	Fuel Rail Temperature Sensor
2324	Counterbalance Valve #2 Bypass Solenoid
2325	Raise Anti Drift Solenoid
2326	Lower Anti Drift Solenoid
2327	Rackback Anti Drift Solenoid
2328	Dump Anti Drift Solenoid

2329	Lift Lever Lower Detent Position Switch
2330	Raise Limit Solenoid
2331	Lower Kickout Cushioning Solenoid
2332	Implement Pump Solenoid
2333	Transmission Lock Indicator
2334	Right Steering Pump Oil Filter Switch
2335	Left Steering Pump Oil Filter Switch
2336	Right Implement Pump Case Drain Filter Switch
2337	Left Implement Pump Case Drain Filter Switch
2338	Front Implement Pump Case Drain Filter Switch
2339	Rear Implement Pump Case Drain Filter Switch
2340	Steering Cooling Oil Filter Switch
2341	Brake Cooling Oil Tank Temperature Sensor
2342	Right Horn Solenoid
2343	Left Horn Solenoid
2344	Brake Cooling Oil Tank Level Switch
2345	Alternator #1 R-Terminal Signal
2346	Alternator #2 R-Terminal Signal
2347	Ride Control Solenoid #2
2348	SAE J1939 Data Link #2
2349	Engine Coolant Pump Outlet Temperature Sensor
2350	Left Exhaust #2 Temperature
2351	Right Exhaust #2 Temperature
2352	Front Brake Lube Oil Pressure Switch
2353	Rear Brake Lube Oil Pressure Switch
2354	Engine Compression Brake Pedal Switch
2355	Air Conditioner Condenser Coil Temperature Sensor
2356	Air Conditioner Compressor Outlet Temperature Sensor
2357	Air Conditioner Evaporator Coil Temperature Sensor
2358	Side Rear View Mirrors Heater Relay
2359	Lift Float Solenoid
2360	Lift Kickout Set Switch
2361	Service Display Module
2362	Boom Lower Solenoid
2363	Front Hoist Raise Solenoid
2364	Front Hoist Lower Solenoid
2365	Rear Hoist Raise Solenoid
2366	Rear Hoist Lower Solenoid
2367	Discharge Door Unlock Solenoid
2368	Discharge Door Lock Solenoid
2369	Discharge Door Open Solenoid
2370	Discharge Door Close Solenoid
2371	Vacuum Air Filter #1 Isolate Solenoid
2372	Vacuum Air Filter #2 Isolate Solenoid
2373	Vacuum Air Filter #1 Reverse Solenoid
2374	Vacuum Air Filter #2 Reverse Solenoid
2375	Front Hoist Position Sensor
2376	Rear Hoist Position Sensor
2377	Vacuum System Blower Temperature Sensor
2378	Vacuum System Control Air Pressure Sensor
2379	Debris Body Air Pressure Sensor

2380	Hydraulic Oil Cooling Fan Relay
2381	Lift Arm Cycle Relay
2382	Lift Arm Slide Lock Solenoid
2383	Loader Arm Fork Raise Solenoid
2384	Loader Arm Fork Lower Solenoid
2385	Loader Arm Raise Solenoid
2386	Loader Arm Lower Solenoid
2387	Loader Arm Lift Arm Raise Solenoid
2388	Loader Arm Lift Arm Lower Solenoid
2389	Loader Arm Lift Arm Slide Extend Solenoid
2390	Loader Arm Lift Arm Slide Retract Solenoid
2391	Loader Arm Lift Arm Claw Open Solenoid
2392	Loader Arm Lift Arm Claw Close Solenoid
2393	Loader Arm Fork Cylinder Position Sensor
2394	Auxiliary Joystick Forward/Reverse Position Sensor
2395	Auxiliary Joystick Left/Right Position Sensor
2396	Joystick Thumbwheel Position Sensor
2397	Auxiliary Joystick Thumbwheel Position Sensor
2398	Packing Blade Position Sensor
2399	Discharge Door Position Sensor
2400	Debris Body Top Doors Open Solenoid
2401	Debris Body Top Doors Close Solenoid
2402	Laser Receiver
2403	Laser Mast
2404	Power Electronics Module Cooling Fan Relay
2405	Center Implement Pump Solenoid
2408	Left Lift Float Solenoid
2409	Right Lift Float Solenoid
2410	Auger Raise Solenoid
2411	Auger Lower Solenoid
2412	Vacuum Relief Solenoid
2413	Left Steering Pump Oil Pressure Sensor
2414	Center Steering Pump Oil Pressure Sensor
2415	Implement Left Main Valve Supply Pressure Sensor
2416	Implement Right Main Valve Supply Pressure Sensor
2417	Ether Injection Control Solenoid
2418	Ejector Blade Position Sensor
2419	Retarder System
2420	Boom Cylinder Extend Limit Solenoid
2421	Boom Cylinder Retract Limit Solenoid
2422	Stick Cylinder Extend Limit Solenoid
2423	Stick Cylinder Retract Limit Solenoid
2424	Bucket Cylinder Retract Limit Solenoid
2425	Boom Angle Sensor
2426	Stick Angle Sensor
2427	Offset Boom Offset Left Limit Solenoid
2428	Offset Boom Offset Right Limit Solenoid
2429	Boom Cylinder Extend Pilot Pressure Sensor
2430	Offset Boom Angle Sensor
2431	Urea Flow Sensor
2432	Urea Injection System Air Pressure Sensor

2433	Urea Tank Level Switch
2434	Engine Load Signal
2435	Catalytic Converter Temperature Sensor
2436	Catalytic Converter Differential Pressure Sensor
2437	Remote Winch Spool In Switch
2438	Winch Free Spool Switch
2439	Remote Winch Free Spool Switch
2440	Winch Brake Solenoid
2441	Winch Motor Pressure Sensor
2442	Front Axle Differential Lock Solenoid
2443	Rear Axle Differential Lock Solenoid
2444	Differential Lock Pressure Solenoid
2445	Differential Lock Switch
2446	Lockup Clutch Enable Switch
2447	Travel Motor Bypass Solenoid
2448	Graphical Display Module
2449	Fuel Quality Sensor
2450	Power Isolation Relay
2451	Starter Lockout Lamp
2452	DPF #1 Intake Temperature Sensor
2453	DPF #1 Intermediate Temperature Sensor
2454	DPF #1 Outlet Temperature Sensor
2455	DPF #2 Intake Temperature Sensor
2456	DPF #2 Intermediate Temperature Sensor
2457	DPF #2 Outlet Temperature Sensor
2458	DPF #1 Differential Pressure Sensor
2459	DPF #2 Differential Pressure Sensor
2460	ARD Fuel Pressure #1 Sensor
2461	ARD Fuel Pressure #1 Control
2462	ARD Fuel Enable Actuator
2464	ARD Air System Relay
2465	Aftertreatment #1 Ignition Transformer Primary
2466	Engine Aftertreatment Control #1
2467	Grapple Enable Relay
2468	Blade Enable Relay
2469	Winch Enable Relay
2470	Primary Steering Pressure Sensor
2471	Cab Door Position Switch
2472	Selective Catalytic Reduction Control Module
2473	Hydraulic Bleed Switch
2474	Left Joystick Forward/Reverse Position Sensor
2475	Right Joystick Forward/Reverse Position Sensor
2476	Left Joystick Left/Right Position Sensor
2477	Right Joystick Left/Right Position Sensor
2478	ARD Intake Temperature Sensor
2479	ARD Intermediate Temperature Sensor
2480	ARD Outlet Temperature Sensor
2481	Winch Drive Away Switch
2482	Winch Drive Away Solenoid
2483	Steering Hydraulic Metering Unit Pressure Switch
2484	Steering Hydraulic Metering Unit Pressure Switch #2

2485	ARD Air Enable Actuator
2486	ARD Atomization Air Actuator
2487	ARD Purge Air Actuator
2488	ARD Supply Air Actuator
2489	ARD Air Pressure Control Actuator
2490	ARD Air Pressure Control Actuator Position Sensor
2491	Turbocharger #1 Compressor Inlet Temperature Sensor
2492	Turbocharger #2 Compressor Inlet Temperature Sensor
2493	Cylinder #17 Injector
2494	Cylinder #18 Injector
2495	Cylinder #19 Injector
2496	Cylinder #20 Injector
2497	ARD Fuel Pressure #2 Sensor
2498	ARD Supply Air Pressure Sensor
2499	Elevator Solenoid Enable Relay
2500	Powertrain Speed Range Control Position Sensor
2501	Intake Valve Actuator Pressure Sensor #1
2502	Intake Valve Actuator Pressure Sensor #2
2503	Intake Valve Actuator Pressure Sensor #3
2504	Intake Valve Actuator Pressure Sensor #4
2505	Intake Valve Actuator Pressure Sensor #5
2506	Intake Valve Actuator Pressure Sensor #6
2507	Intake Valve Actuator Pressure Sensor #7
2508	Intake Valve Actuator Pressure Sensor #8
2509	Intake Valve Actuator Pressure Sensor #9
2510	Intake Valve Actuator Pressure Sensor #10
2511	Intake Valve Actuator Pressure Sensor #11
2512	Intake Valve Actuator Pressure Sensor #12
2513	Intake Valve Actuator Pressure Sensor #13
2514	Intake Valve Actuator Pressure Sensor #14
2515	Intake Valve Actuator Pressure Sensor #15
2516	Intake Valve Actuator Pressure Sensor #16
2517	Intake Valve Actuator Pressure Sensor #17
2518	Intake Valve Actuator Pressure Sensor #18
2519	Intake Valve Actuator Pressure Sensor #19
2520	Intake Valve Actuator Pressure Sensor #20
2521	Turbocharger #1 Turbine Speed Sensor
2522	Turbocharger #2 Turbine Speed Sensor
2523	3rd Function Operating Mode Switch
2524	Satellite Antenna
2525	Load Sense Control Solenoid
2526	Air Inlet Temperature Sensor
2527	Blade Control Handle Thumbwheel Position Sensor
2528	Engine Coolant System Thermostat
2529	Loader Joystick Thumbwheel Position Sensor
2530	Hoe Left Joystick Thumbwheel Position Sensor
2531	Hoe Right Joystick Thumbwheel Position Sensor
2532	Operator Gear Ratio Set/Recall Switch Position
2533	Compression Brake Low/High Solenoid #1
2534	Compression Brake Low/High Solenoid #2
2535	Compression Brake Medium/High Solenoid #1

2536	Compression Brake Medium/High Solenoid #2
2537	Pump to Blade Lift Rod End Solenoid
2538	Pump to Blade Lift Head End Solenoid
2539	Blade Lift Rod End to Tank Solenoid
2540	Blade Lift Head End to Tank Solenoid
2541	Blade Lift Rod End Pressure Sensor
2542	Blade Lift Head End Pressure Sensor
2543	Joystick Steering Enable Switch
2544	Offset Boom Offset Left Solenoid
2545	Offset Boom Offset Right Solenoid
2546	Hydraulic Cab Riser Raise Solenoid
2547	Hydraulic Cab Riser Lower Solenoid
2548	3rd Function Maximum Flow Rate Control Position Sensor
2549	Left Conveyor Reverse Solenoid
2550	Right Conveyor Reverse Solenoid
2551	Left Hopper Raise Solenoid
2552	Left Hopper Lower Solenoid
2553	Right Hopper Raise Solenoid
2554	Right Hopper Lower Solenoid
2555	Left Extender Extend Solenoid
2556	Left Extender Retract Solenoid
2557	Right Extender Extend Solenoid
2558	Right Extender Retract Solenoid
2559	Left Station Auger Lift Switch
2560	Right Station Auger Lift Switch
2561	Left Station Hopper Lift Switch
2562	Right Station Hopper Lift Switch
2563	Left Station Screed Height Adjustment Switch
2564	Right Station Screed Height Adjustment Switch
2565	Left Station Steering Dial Position Sensor
2566	Right Station Steering Dial Position Sensor
2567	Left Station Truck Hitch Switch
2568	Right Station Truck Hitch Switch
2569	Screed Float Solenoid
2570	Screed Raise Solenoid
2571	Truck Hitch Open Solenoid
2572	Truck Hitch Close Solenoid
2573	Turn Signal Switch
2574	Vibratory System Enable Solenoid
2575	Vibratory System Speed Dial
2576	Tilt Cylinder Regeneration Solenoid
2577	Counterbalance Dial
2578	Counterbalance Standby Switch
2579	Counterbalance Solenoid
2580	Left Station Hopper Apron Fold Switch
2581	Hopper Apron Raise Solenoid
2582	Hopper Apron Lower Solenoid
2583	Left Station Friction Steer Solenoid
2584	Right Station Friction Steer Solenoid
2585	Left Station Left Screed Extender Switch
2586	Left Station Right Screed Extender Switch

2587	Right Station Left Screed Extender Switch
2588	Right Station Right Screed Extender Switch
2589	Counterbalance Lock Switch
2590	Counterbalance Lock Solenoid
2591	Counterbalance Standby Solenoid
2592	Auxiliary Valve #1 Port A Flow Solenoid
2593	Auxiliary Valve #1 Port B Flow Solenoid
2594	Hammer Solenoid
2595	Service Brake Solenoid
2596	Brake Pressure Modulation Solenoid
2597	Blade Raise Load Sense Solenoid
2598	Blade Lower Load Sense Solenoid
2599	Auxiliary Valve #1 Port A Line Relief Pressure Solenoid
2600	Auxiliary Valve #1 Port B Line Relief Pressure Solenoid
2601	Cylinder #1 Injector Actuator #1
2602	Cylinder #1 Injector Actuator #2
2603	Cylinder #2 Injector Actuator #1
2604	Cylinder #2 Injector Actuator #2
2605	Cylinder #3 Injector Actuator #1
2606	Cylinder #3 Injector Actuator #2
2607	Cylinder #4 Injector Actuator #1
2608	Cylinder #4 Injector Actuator #2
2609	Cylinder #5 Injector Actuator #1
2610	Cylinder #5 Injector Actuator #2
2611	Cylinder #6 Injector Actuator #1
2612	Cylinder #6 Injector Actuator #2
2613	Cylinder #7 Injector Actuator #1
2614	Cylinder #7 Injector Actuator #2
2615	Cylinder #8 Injector Actuator #1
2616	Cylinder #8 Injector Actuator #2
2617	Cylinder #9 Injector Actuator #1
2618	Cylinder #9 Injector Actuator #2
2619	Cylinder #10 Injector Actuator #1
2620	Cylinder #10 Injector Actuator #2
2621	Cylinder #11 Injector Actuator #1
2622	Cylinder #11 Injector Actuator #2
2623	Cylinder #12 Injector Actuator #1
2624	Cylinder #12 Injector Actuator #2
2625	Cylinder #13 Injector Actuator #1
2626	Cylinder #13 Injector Actuator #2
2627	Cylinder #14 Injector Actuator #1
2628	Cylinder #14 Injector Actuator #2
2629	Cylinder #15 Injector Actuator #1
2630	Cylinder #15 Injector Actuator #2
2631	Cylinder #16 Injector Actuator #1
2632	Cylinder #16 Injector Actuator #2
2633	Cylinder #17 Injector Actuator #1
2634	Cylinder #17 Injector Actuator #2
2635	Cylinder #18 Injector Actuator #1
2636	Cylinder #18 Injector Actuator #2
2637	Cylinder #19 Injector Actuator #1

2638	Cylinder #19 Injector Actuator #2
2639	Cylinder #20 Injector Actuator #1
2640	Cylinder #20 Injector Actuator #2
2641	Cylinder #21 Injector Actuator #1
2642	Cylinder #21 Injector Actuator #2
2643	Cylinder #22 Injector Actuator #1
2644	Cylinder #22 Injector Actuator #2
2645	Cylinder #23 Injector Actuator #1
2646	Cylinder #23 Injector Actuator #2
2647	Cylinder #24 Injector Actuator #1
2648	Cylinder #24 Injector Actuator #2
2649	Auxiliary Valve #1 Load Sense Solenoid
2650	Primary Steering Valve Control Module Power Supply Output
2651	Lift Kickout Switch
2652	Laser Mast Power Relay
2653	Screed Left Material Height Sensor
2654	Screed Right Material Height Sensor
2655	Left Conveyor Material Height Sensor
2656	Right Conveyor Material Height Sensor
2657	Left Hopper Lift Switch
2658	Right Hopper Lift Switch
2659	Cab Air Temperature Control Switch
2660	Air Conditioner Condenser Relay
2661	Cab Air Temperature Control
2662	Cab Air Heater Engine Coolant Actuator
2663	Cab Ventilation Duct Temperature Sensor
2664	Boom Float Up Solenoid
2665	Boom Float Down Solenoid
2666	Offset Boom Enable Switch
2667	Limp Home Switch
2668	Hydraulic Cab Riser Enable Switch
2669	Creeper Mode Switch
2670	Stabilizer Flow Control Solenoid
2671	Air Conditioner Compressor Clutch Solenoid
2674	Multi-Velocity Program Enable Switch
2677	Traction Assist Speed Dial
2678	Access Platform Position Switch
2679	Blade Shake Switch
2680	Center Implement Pump Oil Supply Shutoff Valve Switch
2681	Right Implement Pump Oil Supply Shutoff Valve Switch
2682	Payload Action Switch
2683	Secondary Brake Pedal Position Sensor
2684	Ride Control Solenoid #3
2685	Left Drive Motor Speed Sensor #1
2686	Left Drive Motor Speed Sensor #2
2687	Right Drive Motor Speed Sensor #1
2688	Right Drive Motor Speed Sensor #2
2689	Breathing Air Pressure Sensor
2690	Aerial Master Stream Water Pressure Sensor
2691	Aerial Master Stream Water Flow Sensor
2692	Aerial Ambient Air Temperature Sensor

2693	Urea Injection Air Solenoid
2694	Urea Purge Solenoid
2695	Crane Operation Mode Light
2696	Bucket Cylinder Head End Pressure Switch
2697	Crane Mode Switch
2698	Right Station Hopper Apron Fold Switch
2699	Screed Auger Rotation Switch
2700	Left Extender Panel Screed Extender Switch
2701	Right Extender Panel Screed Extender Switch
2702	Left Main Panel Screed Extender Switch
2703	Right Main Panel Screed Extender Switch
2704	Crane Mode Cylinder Limit Override Switch
2705	Cab Throttle Switch
2706	E-Fence/Crane Backup Mode Switch
2707	Output Transfer Gear (OTG) Oil Temperature Sensor
2708	Joystick Function #1 Circuit
2709	Joystick Function #2 Circuit
2710	Engine Tertiary Speed Sensor
2711	Joystick Function #3 Circuit
2712	Joystick Function #4 Circuit
2713	Stick Cylinder Retract Cab Contour Avoidance Solenoid
2714	Drive Pump Swash Plate Angle Solenoid
2715	Drive Motor Solenoid
2716	Creep Control Position Sensor
2717	Reduced Rimpull Control Position Sensor
2718	5th Lever Position Sensor
2719	6th Function Control Switch
2720	6th Function Forward Solenoid
2721	6th Function Rearward Solenoid
2722	Longitudinal Stability Indicator Hydraulic Lockout Override Switch
2723	Auxiliary Valve #1 Port A Switch
2724	Auxiliary Valve #1 Port B Switch
2725	Auxiliary Valve #2 Port A Switch
2726	Auxiliary Valve #2 Port B Switch
2727	Starting System #1 Relay
2728	Starting System #2 Relay
2729	Cab Tilt Switch
2730	Drive Pump Forward Control Solenoid
2731	Drive Pump Reverse Control Solenoid
2732	Implement Right Front Pump Pressure Sensor
2733	NOx Level Sensor
2734	Compression Brake Switch
2735	Loader Auxiliary Continuous Flow Switch
2736	Hoe Auxiliary Continuous Flow Switch
2737	Park Brake Wear Switch
2738	Turbocharger #1 Compressor Inlet Pressure Sensor
2739	Turbocharger #2 Compressor Inlet Pressure Sensor
2740	Turbocharger #3 Compressor Inlet Pressure Sensor
2741	Turbocharger #4 Compressor Inlet Pressure Sensor
2742	Brake Accumulator Charging Solenoid
2743	Rear Attachment Lockout Switch

2744	Circle Left Solenoid #2
2745	Circle Right Solenoid #2
2746	Blade Left Constant Down Force Control
2747	Blade Right Constant Down Force Control
2748	Blade Constant Down Force Enable Switch
2749	Blade Left Raise Relief Enable Solenoid
2750	Blade Right Raise Relief Enable Solenoid
2751	Blade Left Raise Relief Solenoid
2752	Blade Right Raise Relief Solenoid
2753	Detonation Module Engine Speed Sensor
2754	Auxiliary Valve #1 Switch
2755	Blade Control Mode Switch
2756	Engine System Warning Indicator
2757	Transmission System Warning Indicator
2758	Front Drum Vibratory Solenoid
2759	Drum Offset Control
2760	Propel Mode Selector Switch
2761	Vibratory Activation Control
2762	ARD Secondary Air Differential Pressure Sensor
2763	Rear Drum Vibratory Solenoid
2764	Water Spray Mode Switch
2765	Water Spray Timer Control
2766	Intermediate Engine Speed Switch
2767	Drum Offset Left Solenoid
2768	Drum Offset Right Solenoid
2769	Detonation Module
2770	Throttle Lock Resume/Decel Switch
2771	Throttle Lock Set/Accel Switch
2772	Desired Grade Offset Increment Switch
2773	Desired Grade Offset Decrement Switch
2774	Generator Speed Sensor
2775	Drive Motor Speed Sensor #1
2776	Drive Motor Speed Sensor #2
2777	Drive Circuit Pressure Sensor
2778	Power Inverter Temperature #1 Sensor
2779	Power Inverter Temperature #2 Sensor
2780	Generator Winding #1 Temperature Sensor
2781	Generator Winding #2 Temperature Sensor
2782	Generator Winding #3 Temperature Sensor
2783	Drive Motor #1 Winding #1 Temperature Sensor
2784	Drive Motor #1 Winding #2 Temperature Sensor
2785	Drive Motor #1 Winding #3 Temperature Sensor
2786	Drive Motor #2 Winding #1 Temperature Sensor
2787	Drive Motor #2 Winding #2 Temperature Sensor
2788	Drive Motor #2 Winding #3 Temperature Sensor
2789	Drive Motor Phase A Current Sensor
2790	Drive Motor Phase B Current Sensor
2791	Drive Motor Phase C Current Sensor
2792	Generator Phase A Current Sensor
2793	Generator Phase B Current Sensor
2794	Generator Phase C Current Sensor

2795	Accelerator Pedal Position Sensor
2796	Front Work Light
2797	Rear Work Light
2798	Power Inverter #1 ECM Power Supply Output #1
2799	Power Inverter #1 ECM Power Supply Output #2
2800	Power Inverter #1 ECM Power Supply Output #3
2801	Power Inverter #2 ECM Power Supply Output #1
2802	Power Inverter #2 ECM Power Supply Output #2
2803	Power Inverter #2 ECM Power Supply Output #3
2804	Left Rear Turn Signal Light
2805	Right Rear Turn Signal Light
2806	Left Front Turn Signal Light
2807	Right Front Turn Signal Light
2808	Bucket Left Turn Signal Light
2809	Bucket Right Turn Signal Light
2810	Service Test Harness Detection Input
2811	Cab Blower Speed Control
2812	Cab Blower Motor Command
2813	Secondary Brake Accumulator Pressure Sensor
2814	Quick Coupler Engage Solenoid
2815	Quick Coupler Disengage Solenoid
2816	Transmission Synchronizer Supply Pressure Solenoid
2817	Transmission Synchronizer #1 Position Sensor
2818	Transmission Synchronizer #2 Position Sensor
2819	Transmission Synchronizer #3 Position Sensor
2820	Transmission Planetary Speed Sensor #1
2821	Transmission Planetary Speed Sensor #2
2822	Counterbalance Standby Control
2823	Counterbalance System Pressure Sensor
2824	Implement Generator Operator Enable Switch
2825	Axle Oil Cooler Bypass Solenoid
2826	Steering Tank Oil Level Sensor
2827	Tamper Ramp Rate Control
2828	Main Hydraulic Pump Pressure Sensor #1
2829	Main Hydraulic Pump Pressure Sensor #2
2830	Main Hydraulic Pump Load Sense Pressure Sensor #1
2831	Main Hydraulic Pump Load Sense Pressure Sensor #2
2832	Transmission Synchronizer #1 Solenoid #1
2833	Transmission Synchronizer #1 Solenoid #2
2834	Transmission Synchronizer #2 Solenoid #1
2835	Transmission Synchronizer #2 Solenoid #2
2836	Transmission Synchronizer #3 Solenoid #1
2837	Transmission Synchronizer #3 Solenoid #2
2838	Transmission Hydrostatic Loop A Pressure Sensor
2839	Transmission Hydrostatic Loop B Pressure Sensor
2840	Right Auger Master Switch
2841	Left Conveyor Master Switch
2842	Right Conveyor Master Switch
2843	Left Conveyor Stop Switch
2844	Right Conveyor Stop Switch
2845	Left Main Panel Feeder Switch

2846	Right Main Panel Feeder Switch
2847	Left Extender Panel Feeder Switch
2848	Right Extender Panel Feeder Switch
2849	Screed Panel Auger Height Adjustment Switch
2850	Charging System Warning Indicator
2851	Idle Shutdown Timer Relay
2852	Compressor Discharge Pressure Sensor
2853	Engine Aftercooler Coolant Temperature Control Module
2854	Coolant Temperature Control Module
2855	Main Hydraulic Pump #1 Solenoid
2856	Main Hydraulic Pump #2 Solenoid
2857	Exhaust Temperature Module
2858	Bearing Temperature Module
2859	Transmission Dropbox Disconnect #1 Engage Solenoid
2860	Transmission Dropbox Disconnect #2 Engage Solenoid
2861	Transmission Dropbox Disconnect #3 Engage Solenoid
2862	Transmission Dropbox Disconnect #1 Disengage Solenoid
2863	Transmission Dropbox Disconnect #2 Disengage Solenoid
2864	Transmission Dropbox Disconnect #3 Disengage Solenoid
2865	Steering Control Force Feedback Motor Enable Output
2866	Steering Control Force Feedback Motor Torque Sensor
2867	Main Hydraulic Pump Solenoid Enable Relay
2868	Powertrain Oil Tank Temperature Sensor
2869	System Air Pressure Indicator
2870	Power Inverter #1 ECM Power Supply Output #4
2871	Power Inverter #1 ECM Power Supply Output #5
2872	Power Inverter #2 ECM Power Supply Output #4
2873	Power Inverter #2 ECM Power Supply Output #5
2874	Left Front Stabilizer Operator Switch
2875	Right Front Stabilizer Operator Switch
2876	Left Rear Stabilizer Operator Switch
2877	Right Rear Stabilizer Operator Switch
2878	Left Auger Master Switch
2879	Left Front Stabilizer Extension Operator Switch
2880	Right Front Stabilizer Extension Operator Switch
2881	Left Front Stabilizer Raise Solenoid
2882	Left Front Stabilizer Lower Solenoid
2883	Right Front Stabilizer Raise Solenoid
2884	Right Front Stabilizer Lower Solenoid
2885	Left Rear Stabilizer Raise Solenoid
2886	Left Rear Stabilizer Lower Solenoid
2887	Right Rear Stabilizer Raise Solenoid
2888	Right Rear Stabilizer Lower Solenoid
2889	Left Front Stabilizer Extend Solenoid
2890	Left Front Stabilizer Retract Solenoid
2891	Right Front Stabilizer Extend Solenoid
2892	Right Front Stabilizer Retract Solenoid
2893	Hydraulic Cab Riser Switch
2894	Left Front Stabilizer Raise Pressure Switch
2895	Right Front Stabilizer Raise Pressure Switch
2896	Left Rear Stabilizer Raise Pressure Switch

2897	Right Rear Stabilizer Raise Pressure Switch
2898	Stabilizer Automatic Stow Switch
2899	Main Hydraulic Pump #1 Displacement Sensor
2900	Main Hydraulic Pump #2 Displacement Sensor
2901	Transmission Regeneration Solenoid #1
2902	Transmission Regeneration Solenoid #2
2903	Rear Wiper Control Position Sensor
2904	Front Wiper Control Position Sensor
2905	Switch Panel #2
2906	Input/Output Module
2907	Left Marker Lights
2908	Right Marker Lights
2909	Rear Wiper Activation Relay
2910	Front Wiper Activation Relay
2911	Rear Wiper Speed Control Relay
2912	Front Wiper Speed Control Relay
2913	Window Washer Switch
2914	Machine Feature Audible Indicator
2915	Front Axle Oil Level Switch
2916	Rear Axle Oil Level Switch
2917	Electro-hydraulic Control Module
2918	Water Hose Reel Out Solenoid
2919	Water Hose Reel In Solenoid
2920	Power Cable Reel Out Solenoid
2921	Power Cable Reel In Solenoid
2922	Power Cable Reel Out Limit Switch
2923	Power Cable Reel In Limit Switch
2924	Power Cable Reel Nearly Out Limit Switch
2925	Power Cable Reel Switch
2926	Water Hose Reel Switch
2927	Boom Control Module
2928	Left Extender Activation Indicator
2929	Exhaust Diverter Relay
2930	Right Extender Activation Indicator
2932	Left Front Stabilizer Extend Position Switch
2933	Right Front Stabilizer Extend Position Switch
2934	DC Power Bus Voltage #1 Sensor
2935	DC Power Bus Voltage #2 Sensor
2936	Air Conditioner #1 Compressor Outlet Temperature Sensor
2937	Air Conditioner #2 Compressor Outlet Temperature Sensor
2938	Cab Ventilation Duct #1 Air Temperature Sensor
2939	Cab Ventilation Duct #2 Air Temperature Sensor
2940	Air Conditioner #1 Expansion Valve Pressure Switch
2941	Air Conditioner #2 Expansion Valve Pressure Switch
2942	Air Conditioner #1 Compressor Motor Solenoid
2943	Air Conditioner #2 Compressor Motor Solenoid
2944	Cab Blower Motor #1 Solenoid
2945	Cab Blower Motor #2 Solenoid
2946	Hook Lift Control Position Sensor
2947	Hook Raise Solenoid
2948	Hook Lower Solenoid

2949	Quick Coupler Solenoid Enable Relay
2950	Hook Speed Select Solenoid
2951	Hook Free Fall Clutch Solenoid #1
2952	Hook Free Fall Clutch Solenoid #2
2953	Boom Lift Control Position Sensor
2954	Unknown Electronic Implement Control
2955	Implement Pump High Pressure Mode Enable Solenoid
2956	Counterweight Control Position Sensor
2957	Counterweight Extend Solenoid
2958	Counterweight Retract Solenoid
2959	Hook Speed Select Switch
2960	Hook Free Fall Clutch Switch
2961	Boom Kickout Switch
2962	Loader Raise Solenoid
2963	Loader Lower Solenoid
2964	Loader Dump Solenoid
2965	Loader Rackback Solenoid
2966	Right Stabilizer Raise Solenoid
2967	Right Stabilizer Lower Solenoid
2968	Left Stabilizer Raise Solenoid
2969	Left Stabilizer Lower Solenoid
2970	Hydraulic Pump Torque Limit Solenoid
2971	Automatic Engine Speed Control (AESC) Mode Selection Switch
2972	Air Conditioner #1 Compressor Inlet Temperature Sensor
2973	Air Conditioner #2 Compressor Inlet Temperature Sensor
2974	Brake Charge Pressure Sensor
2975	Brake Cooling Solenoid
2976	Parking Brake Oil Pressure Sensor
2977	Low Idle Switch
2978	Left Turbocharger Compressor Bypass Valve Open Limit Switch
2979	Left Turbocharger Compressor Bypass Valve Close Limit Switch
2980	Right Turbocharger Compressor Bypass Valve Open Limit Switch
2981	Right Turbocharger Compressor Bypass Valve Close Limit Switch
2982	Left Turbocharger Compressor Bypass Valve Actuator
2983	Right Turbocharger Compressor Bypass Valve Actuator
2984	Auto Lube Pump Outlet Pressure Sensor
2985	Air Conditioner Compressor
2986	Accessory Power Converter
2987	Brake Charge Pressure Sensor #1
2988	Brake Charge Pressure Sensor #2
2989	Reverse Desired Ground Speed Selection Switch
2990	Transmission Shifter
2991	Transmission Shifter #2
2992	Primary Engine ECM Ready Lamp
2993	Direction Selector Position Sensor #1
2994	Direction Selector Position Sensor #2
2995	Power Inverter Control #1
2996	Power Inverter Control #2
2997	Implement Valve Load Sense Pressure Sensor
2998	Transmission Dropbox Disconnect #1 Speed Sensor
2999	Transmission Dropbox Disconnect #2 Speed Sensor

3000	Transmission Dropbox Disconnect #3 Speed Sensor
3001	Counterweight Lock Bypass Solenoid
3002	Engine Exhaust NOx Level Sensor
3003	Edge Cutter Water Spray Solenoid
3004	Drive Motor Winding #1 Temperature Sensor
3005	Drive Motor Winding #2 Temperature Sensor
3006	Drive Motor Bearing #1 Temperature Sensor
3007	Drive Motor Bearing #2 Temperature Sensor
3008	Generator Excitation Field Regulator Diagnostic Feedback Line
3009	Generator Excitation Field Current Drive Circuit
3010	Electric Drive Cooling Fan Solenoid
3011	Electric Drive Cooling Fan Speed Sensor
3012	Boom Cylinder Retract Pilot Pressure Sensor
3013	Lockup Clutch Disable Switch
3014	Powertrain Control Module #2
3015	Generator Bearing #1 Temperature Sensor
3016	Generator Bearing #2 Temperature Sensor
3017	Traction Assist Enable Solenoid
3018	Dual Water Spray Solenoid
3019	Parking Brake Retract Motor Switch
3020	Auxiliary Valve #1 Float Switch
3021	Left Final Drive Lube Pressure Sensor
3022	Right Final Drive Lube Pressure Sensor
3023	Power Inverter Temperature #3 Sensor
3024	Power Inverter Temperature #4 Sensor
3025	Power Inverter Temperature #5 Sensor
3026	Power Inverter Temperature #6 Sensor
3027	Power Inverter Temperature #7 Sensor
3028	Power Inverter Control #1 Enable Line
3029	Power Inverter Control #2 Enable Line
3030	Generator Phase A-B Voltage Sensor
3031	Intake Manifold #2 Pressure Sensor
3032	Turbocharger Compressor Outlet Temperature Sensor
3033	Fuel Efficient Reverse Switch
3034	Secondary Generator Speed Sensor
3035	Battery Cable Shield
3036	Ride Control Accumulator #1 Pressure Sensor
3037	Ride Control Accumulator #2 Pressure Sensor
3038	Boom Low Pressure Relief Enable Solenoid
3039	DC Power Bus #1 Voltage Signal #1
3040	DC Power Bus #1 Voltage Signal #2
3041	12 Volt Sensor Power Supply
3042	Bucket Cylinder Extend Limit Solenoid
3043	Main Hydraulic Pump Load Sense Reduction Enable Solenoid
3044	Main Hydraulic Pump Load Sense Reduction Solenoid
3045	Retarding Grid Current #1 Sensor
3046	Retarding Grid Current #2 Sensor
3047	Ground Fault Voltage Sensor
3048	DC Power Bus Current Sensor
3049	15 Volt Sensor Power Supply
3050	Drivetrain Control

3051	Overvoltage Control Rectifier
3052	Engine Sensing Module (ESM)
3053	Joystick Mapping Solenoid
3054	Generator Field Coil Control Relay
3055	Cylinder #17 Combustion Probe
3056	Cylinder #18 Combustion Probe
3057	Cylinder #19 Combustion Probe
3058	Cylinder #20 Combustion Probe
3059	Left Pump Flow Limit Enable Solenoid
3060	Hydraulic Cab Riser Position Sensor
3061	Quick Coupler Enable Solenoid
3062	Left Front Wheel Speed Sensor
3063	Right Front Wheel Speed Sensor
3064	Front Long Range Work Light #1 Relay
3065	Rear Long Range Work Light #1 Relay
3066	Front Long Range Work Light #2 Relay
3067	Rear Long Range Work Light #2 Relay
3068	Beacon Relay
3069	Window Defroster Relay
3070	Road Light Relay
3071	High Beam Light Relay
3072	Right Marker Light Relay
3073	Left Marker Light Relay
3074	Ripper Shank Lower Anti Drift Solenoid
3075	Drive Motor Phase A Power Transistor #1
3076	Drive Motor Phase A Power Transistor #2
3077	Drive Motor Phase B Power Transistor #1
3078	Drive Motor Phase B Power Transistor #2
3079	Drive Motor Phase C Power Transistor #1
3080	Drive Motor Phase C Power Transistor #2
3081	Loader Auxiliary Valve Port A Anti Drift Solenoid
3082	Steering Control Force Feedback Motor
3083	Powertrain Lube Pressure Sensor
3084	AESC Enable Switch
3085	Water Spray Bar #1 Solenoid
3086	Water Spray Bar #2 Solenoid
3087	Forward Rotation Vibratory Solenoid
3088	Reverse Rotation Vibratory Solenoid
3089	Aftertreatment DPF Configuration Identification
3090	Aftertreatment #1 DEF Pressure #1 Sensor
3091	Aftertreatment #2 DEF Pressure #1 Sensor
3092	Aftertreatment #1 SCR Dosing Air Assist Pressure Sensor
3093	Aftertreatment #2 SCR Dosing Air Assist Pressure Sensor
3094	Aftertreatment #1 SCR Dosing Air Assist Signal
3095	Aftertreatment #2 SCR Dosing Air Assist Signal
3096	Aftertreatment #1 DEF Temperature #1 Sensor
3097	Aftertreatment #1 DEF Temperature #2 Sensor
3098	Aftertreatment #2 DEF Temperature #1 Sensor
3099	Aftertreatment #2 DEF Temperature #2 Sensor
3100	Aftertreatment #1 DEF Tank Fluid Quality Sensor
3101	Aftertreatment #2 DEF Tank Fluid Quality Sensor

3102	Aftertreatment #1 DEF Pump #1
3103	Aftertreatment #1 SCR Catalyst Exhaust Gas Differential Pressure Sensor
3104	Aftertreatment #2 SCR Catalyst Exhaust Gas Differential Pressure Sensor
3105	Aftertreatment #1 SCR Catalyst Intake Gas Temperature Sensor
3106	Aftertreatment #2 SCR Catalyst Intake Gas Temperature Sensor
3107	Aftertreatment #1 SCR Catalyst Outlet Gas Temperature Sensor
3108	Aftertreatment #2 SCR Catalyst Outlet Gas Temperature Sensor
3109	Aftertreatment #2 DEF Pump #1
3110	Aftertreatment #1 DEF Line Heater #1
3111	Aftertreatment #1 DEF Line Heater #2
3112	Aftertreatment #1 DEF Line Heater #3
3113	Aftertreatment #1 DEF Line Heater #4
3114	Aftertreatment #2 DEF Line Heater #1
3115	Aftertreatment #2 DEF Line Heater #2
3116	Aftertreatment #2 DEF Line Heater #3
3117	Aftertreatment #2 DEF Line Heater #4
3118	Aftertreatment #1 DEF Pump Motor Speed Sensor
3119	Aftertreatment #2 DEF Pump Motor Speed Sensor
3120	Aftertreatment #1 DEF Return Signal
3121	Aftertreatment #2 DEF Return Signal
3122	Secondary Steering Valve Control Module Power Supply Output
3123	Secondary Steering Valve Spool Displacement Signal Line
3124	Secondary Steering Valve Control Module
3125	Operator Backup Throttle Switch
3126	Aftertreatment #1 DEF Tank Heater #1
3127	Aftertreatment #1 DEF Tank #2 Heater Coolant Diverter Solenoid
3128	Aftertreatment #2 DEF Tank Heater #1
3129	Aftertreatment #2 DEF Tank #2 Heater Coolant Diverter Solenoid
3130	Aftertreatment #1 DEF Tank #1 Level Sensor
3131	Aftertreatment #1 DEF Quick Thaw Tank Volume Sensor
3132	Aftertreatment #2 DEF Tank #1 Level Sensor
3133	Aftertreatment #2 DEF Quick Thaw Tank Volume Sensor
3134	Aftertreatment #1 DEF Tank #1 Temperature #1 Sensor
3135	Aftertreatment #1 DEF Quick Thaw Tank Temperature Sensor
3136	Aftertreatment #2 DEF Tank #1 Temperature #1 Sensor
3137	Aftertreatment #2 DEF Quick Thaw Tank Temperature Sensor
3138	Aftertreatment #1 Outlet NH3 Sensor
3139	Aftertreatment #2 Outlet NH3 Sensor
3140	Exhaust Valve Actuator #1
3141	Exhaust Valve Actuator #2
3142	Exhaust Valve Actuator #3
3143	Exhaust Valve Actuator #4
3144	Exhaust Valve Actuator #5
3145	Exhaust Valve Actuator #6
3146	Exhaust Valve Actuator #7
3147	Exhaust Valve Actuator #8
3148	Exhaust Valve Actuator #9
3149	Exhaust Valve Actuator #10
3150	Exhaust Valve Actuator #11
3151	Exhaust Valve Actuator #12
3152	Exhaust Valve Actuator #13

3153	Exhaust Valve Actuator #14
3154	Exhaust Valve Actuator #15
3155	Exhaust Valve Actuator #16
3156	Exhaust Valve Actuator #17
3157	Exhaust Valve Actuator #18
3158	Exhaust Valve Actuator #19
3159	Exhaust Valve Actuator #20
3160	Exhaust Valve Actuation System Oil Pressure Sensor
3161	Exhaust Valve Actuation System Oil Temperature Sensor
3162	Exhaust Valve Actuation System Pressure Control Valve Solenoid
3163	Generator Phase A Power Transistor #1
3164	Generator Phase A Power Transistor #2
3165	Generator Phase B Power Transistor #1
3166	Generator Phase B Power Transistor #2
3167	Generator Phase C Power Transistor #1
3168	Generator Phase C Power Transistor #2
3169	Clean Gas Induction System #1 Differential Pressure Sensor
3170	Clean Gas Induction System #2 Differential Pressure Sensor
3171	Clean Gas Induction System #1 Pressure Sensor
3172	Clean Gas Induction System #2 Pressure Sensor
3173	Clean Gas Induction System #1 Throttle Actuator
3174	Clean Gas Induction System #2 Throttle Actuator
3175	Clean Gas Induction System #1 Exhaust Back Pressure Actuator
3176	Clean Gas Induction System #2 Exhaust Back Pressure Actuator
3177	Drive Pump Signal Pressure Sensor
3178	Clean Gas Induction System #1 Temperature #1 Sensor
3179	Clean Gas Induction System #2 Temperature #1 Sensor
3180	Aftertreatment #1 Ignition Transformer Secondary
3181	Aftertreatment #1 Fuel Injector #1 Heater Relay
3182	Aftertreatment #1 Fuel Injector #1 Heater
3183	DPF Regeneration Force Switch
3184	DPF Regeneration Inhibit Switch
3185	Engine Throttle Valve Differential Pressure Sensor
3186	Fuel Pressure Release Actuator
3187	Auxiliary Valve #1 Port B Solenoid Return
3188	Auxiliary Valve #1 Port A Solenoid Return
3189	Auxiliary Valve #2 Port B Solenoid Return
3190	Auxiliary Valve #2 Port A Solenoid Return
3191	Winch Spool In Solenoid Return
3192	Winch Spool Out Solenoid Return
3193	Winch Free Spool Solenoid Return
3194	Winch Drive Away Solenoid Return
3195	Blade Angle Left Solenoid Return
3196	Blade Angle Right Solenoid Return
3197	Counterweight Extend Solenoid Return
3198	Counterweight Retract Solenoid Return
3199	Counterweight Lock Bypass Solenoid Return
3200	Hook Speed Select Solenoid Return
3201	Ripper Shank Lower Solenoid Return
3202	Ripper Shank Raise Solenoid Return
3203	Ripper Shank Lower Anti Drift Solenoid Return

3204	Loader Auxiliary Valve Port A Solenoid Return
3205	Loader Auxiliary Valve Port B Solenoid Return
3206	Loader Auxiliary Valve Port A Anti Drift Solenoid Return
3207	-15 Volt Sensor Power Supply
3208	Variable Geometry Turbocharger Vane Position Sensor
3209	Auxiliary Valve #2 Float Switch
3210	Transmission Pump Bypass Solenoid
3211	Pump to Boom Rod End Solenoid Return
3212	Pump to Boom Head End Solenoid Return
3213	Pump to Bucket Rod End Solenoid Return
3214	Pump to Bucket Head End Solenoid Return
3215	Pump to Stick Rod End Solenoid Return
3216	Pump to Stick Head End Solenoid Return
3217	Pump to Swing Motor Left Solenoid Return
3218	Pump to Swing Motor Right Solenoid Return
3219	Pump to Attachment #1 Rod End Solenoid Return
3220	Pump to Attachment #1 Head End Solenoid Return
3221	Pump to Attachment #2 Rod End Solenoid Return
3222	Pump to Attachment #2 Head End Solenoid Return
3223	Pump to Attachment #3 Rod End Solenoid Return
3224	Pump to Attachment #3 Head End Solenoid Return
3225	Boom Rod End to Tank Solenoid Return
3226	Boom Head End to Tank Solenoid Return
3227	Bucket Rod End to Tank Solenoid Return
3228	Bucket Head End to Tank Solenoid Return
3229	Stick Rod End to Tank Solenoid Return
3230	Stick Head End to Tank Solenoid Return
3231	Swing Motor Left to Tank Solenoid Return
3232	Swing Motor Right to Tank Solenoid Return
3233	Attachment #1 Rod End to Tank Solenoid Return
3234	Attachment #1 Head End to Tank Solenoid Return
3235	Attachment #2 Rod End to Tank Solenoid Return
3236	Attachment #2 Head End to Tank Solenoid Return
3237	Attachment #3 Rod End to Tank Solenoid Return
3238	Attachment #3 Head End to Tank Solenoid Return
3239	Air Shutoff Relay
3240	Transmission Dropbox Oil Filter Bypass Switch
3241	Air Conditioner Compressor Communication Gateway
3242	Hazardous Voltage Indicator
3243	Water Pump Control Module
3244	Fire Suppression Relay
3245	Camera Wash Relay
3246	Remote Control Mode Enable Relay
3247	Cylinder Light Relay
3248	Ripper Light Relay
3249	Roll Over Protection System (ROPS) Forward Light Relay
3250	Roll Over Protection System (ROPS) Rearward Light Relay
3251	Cab Key Switch Disable Relay
3252	Key Switch On Relay
3253	Key Switch Start Relay
3254	Remote Control System Beacon Relay

3255	Remote Control Mode Enable Switch
3256	Water Pump Control Output
3257	Air Inlet Heater
3258	Implement Lockout Relay
3259	Parking Brake Relay
3260	Operator Horn Switch
3261	Fire Suppression Activation Switch
3262	Camera Wash Switch
3263	Machine Lighting System Switch
3264	Primary Remote Control Transceiver
3265	Water Pump Control Module Power Supply
3266	Water Pump Control Module Supply Input
3267	Air Conditioner Compressor Power Supply
3268	Air Conditioner Compressor Supply Input
3269	DC Power Bus #1 Power Supply
3270	DC Power Bus #1 Supply Input
3271	Drive Motor Speed Sensor #1 Signal Line #1
3272	Drive Motor Speed Sensor #1 Signal Line #2
3273	Drive Motor Speed Sensor #2 Signal Line #1
3274	Drive Motor Speed Sensor #2 Signal Line #2
3275	Power Inverter Control #1 Enable Feedback Line
3276	Power Inverter Control #2 Enable Feedback Line
3277	Swing Pressure Sensor
3278	Object Detection System Control Module
3279	Ride Control Rod End Check Valve Solenoid
3280	Ride Control Head End Check Valve Solenoid
3281	Ride Control Balance Solenoid
3282	Turbocharger Compressor Outlet Pressure Sensor
3283	Implement Pilot Supply Solenoid Return
3284	Primary Steering System Steer Left Solenoid
3285	Primary Steering System Steer Right Solenoid
3286	Tilt Kickout Switch
3287	Primary Brake Air Pressure Sensor
3288	Air Compressor Motor Relay
3289	Engine Start Alarm Relay
3290	Traction Motor Blower #1 Air Flow Sensor
3291	Traction Motor Blower #2 Air Flow Sensor
3292	Engine #3 Electronic Control Module
3293	Bridge Contactor
3294	Parallel Contactor #1
3295	Parallel Contactor #2
3296	Parallel Contactor #3
3297	Parallel Contactor #4
3298	Parallel Contactor #5
3299	Parallel Contactor #6
3300	Air Compressor Inverter
3301	Traction Motor Blower Inverter
3302	Generator #1 Current Sensor #1
3303	Generator #1 Current Sensor #2
3304	Generator #2 Current Sensor #1
3305	Generator #2 Current Sensor #2

3306	Generator #3 Current Sensor #1
3307	Generator #3 Current Sensor #2
3308	Electric Retarding Grid Blower #1
3309	Electric Retarding Grid Blower #2
3310	Retarding Grid Current #3 Sensor
3311	Retarding Grid Blower Inverter
3312	Generator Excitation Field Regulator Enable Feedback Line
3313	Short Range Object Detection Sensor #1
3314	Short Range Object Detection Sensor #2
3315	Short Range Object Detection Sensor #3
3316	Short Range Object Detection Sensor #4
3317	Medium Range Object Detection Sensor #1
3318	Medium Range Object Detection Sensor #2
3319	Medium Range Object Detection Sensor #3
3320	Medium Range Object Detection Sensor #4
3321	Medium Range Object Detection Sensor #5
3322	Medium Range Object Detection Sensor #6
3323	Medium Range Object Detection Sensor #7
3324	Medium Range Object Detection Sensor #8
3325	Short Range Object Detection Sensor #1 Power Supply
3326	Short Range Object Detection Sensor #2 Power Supply
3327	Short Range Object Detection Sensor #3 Power Supply
3328	Short Range Object Detection Sensor #4 Power Supply
3329	Medium Range Object Detection Sensor #1 Power Supply
3330	Medium Range Object Detection Sensor #2 Power Supply
3331	Medium Range Object Detection Sensor #3 Power Supply
3332	Medium Range Object Detection Sensor #4 Power Supply
3333	Medium Range Object Detection Sensor #5 Power Supply
3334	Medium Range Object Detection Sensor #6 Power Supply
3335	Medium Range Object Detection Sensor #7 Power Supply
3336	Medium Range Object Detection Sensor #8 Power Supply
3337	Traction Control Module
3338	Cooling Fan #1 High Speed Relay
3339	Cooling Fan #1 Low Speed Relay
3340	Cooling Fan #2 High Speed Relay
3341	Cooling Fan #2 Low Speed Relay
3342	Cooling Fan #3 High Speed Relay
3343	Cooling Fan #3 Low Speed Relay
3344	Traction Motor #1 To Traction Motor #4 Series Contactor
3345	Traction Motor #2 To Traction Motor #5 Series Contactor
3346	Traction Motor #3 To Traction Motor #6 Series Contactor
3347	Ground Fault Relay
3348	Main Air Reservoir Supply Relay
3349	Main Air Reservoir #1 Pressure Sensor
3350	Traction Motor #1 Current Sensor
3351	Traction Motor #2 Current Sensor
3352	Traction Motor #3 Current Sensor
3353	Traction Motor #4 Current Sensor
3354	Traction Motor #5 Current Sensor
3355	Traction Motor #6 Current Sensor
3356	Traction Motor #1 Voltage Sensor

3357	Traction Motor #2 Voltage Sensor
3358	Traction Motor #3 Voltage Sensor
3359	Traction Motor #4 Voltage Sensor
3360	Traction Motor #5 Voltage Sensor
3361	Traction Motor #6 Voltage Sensor
3362	Reverser Handle
3363	Companion Alternator #1
3364	Companion Alternator #2
3365	Companion Alternator #3
3366	Companion Alternator #1 Rectifier
3367	Companion Alternator #2 Rectifier
3368	Companion Alternator #3 Rectifier
3369	Companion Alternator #1 Field Regulator
3370	Companion Alternator #2 Field Regulator
3371	Companion Alternator #3 Field Regulator
3372	Engine Charge Air Cooler #1 Outlet Temperature Sensor
3373	Engine Charge Air Cooler #2 Outlet Temperature Sensor
3374	Transmission Dropbox Lube Oil Diverter Valve Solenoid
3375	Direction Selector #1 Position Sensor #1
3376	Direction Selector #1 Position Sensor #2
3377	Direction Selector #2 Position Sensor #1
3378	Direction Selector #2 Position Sensor #2
3379	Remote Operator Station Module
3380	Remote Operator Station Control Transceiver
3381	Transmission Shifter Selector Switch
3382	Fan/Brake Pump Load Sense Bypass Solenoid
3383	Autoshift Switch
3384	Pilot Supply Disable Signal
3385	EGR Intake Pressure Sensor
3386	EGR Temperature Sensor
3387	EGR Differential Pressure Sensor
3388	Boom Raise Disable Solenoid
3389	Boom Speed Select Solenoid
3390	Boom Speed Select Switch
3391	ARD Fuel Pressure #2 Control Actuator
3392	ARD Fuel Nozzle Heater
3393	Crankcase Ventilation Filter Differential Pressure Sensor
3394	Intake Valve Actuation System Oil Pressure #2 Solenoid
3395	PTO (Power Takeoff) #1 Attachment Pump Flow Control Switch
3396	PTO (Power Takeoff) #2 Attachment Pump Flow Control Switch
3397	DPF #1 Soot Loading Sensor
3398	DPF #2 Soot Loading Sensor
3399	Engine Charge Air Cooler #3 Outlet Temperature Sensor
3400	Engine Charge Air Cooler #4 Outlet Temperature Sensor
3401	Secondary Steering Oil Flow Switch
3402	EGR #2 Intake Pressure Sensor
3403	EGR #2 Differential Pressure Sensor
3404	EGR #2 Temperature Sensor
3405	EGR Valve Control
3406	EGR #2 Valve Control
3407	EGR Valve Position Sensor

3408	EGR #2 Valve Position Sensor
3409	Engine Exhaust Manifold Bank #1 Flow Balance Valve Solenoid
3410	Engine Exhaust Manifold Bank #2 Flow Balance Valve Solenoid
3411	Engine Exhaust Manifold Bank #1 Flow Balance Valve Actuator Position Sensor
3412	Engine Exhaust Manifold Bank #2 Flow Balance Valve Actuator Position Sensor
3413	ARD Fuel Flow Diverter Actuator
3414	Fuel Control Valve #2
3415	Direction Selector #1
3416	Direction Selector #2
3417	Fuel Filter (suction side) Intake Pressure Sensor
3418	Fuel Filter (suction side) Differential Pressure Sensor
3419	Rackback Cushioning Solenoid
3420	Retarding Grid Blower Inverter Harness Code
3421	Boom Raise Disable Solenoid Return
3422	Intake Valve Actuation System Oil Pressure #2 Sensor
3423	Grade Control System
3424	Fuel Pump
3425	Generator Excitation Field Regulator Enable Line
3426	Aftertreatment Fuel Pump
3427	Aftertreatment Fuel Pump Relay
3428	Generator Control Module
3429	Motor Control Module
3430	Power Inverter Module
3431	Cab Seat Swivel Speed Switch
3432	Cab Seat Swivel Mode Switch
3433	Cab Seat Swivel Position Sensor
3434	Steering Control Module
3435	Accessory Power Converter Output
3436	Cab Seat Clockwise Swivel Solenoid
3437	Cab Seat Counterclockwise Swivel Solenoid
3438	Cab Seat Manual Swivel Switch
3439	Throttle Lock Control Switch
3440	Front Service Brake Oil Pressure Sensor
3441	Auxiliary Valve #2 Diverter Solenoid
3442	Rear Service Brake Oil Pressure Sensor
3443	Front Brake Cooling Oil Diverter Solenoid
3444	Rear Brake Cooling Oil Diverter Solenoid
3445	Rear Hitch Joystick Forward/Reverse Position Sensor
3446	Rear Hitch Joystick Left/Right Position Sensor
3447	Rear Hitch Joystick Thumbwheel Position Sensor
3448	Rear Hitch Pitch Backward Solenoid
3449	Rear Hitch Pitch Forward Solenoid
3450	Rear Hitch Tilt Left Solenoid
3451	Rear Hitch Tilt Right Solenoid
3452	Implement Modulation Mode Switch
3453	Machine Cooling Fan Solenoid
3454	Autonomous Steering Enable Solenoid #1
3455	Autonomous Steering Enable Solenoid #2
3456	Autonomous Steering Enable Solenoid #1 Return
3457	Autonomous Steering Enable Solenoid #2 Return
3458	Autonomous Steering Enable Valve Displacement Sensor

3459	Machine Cooling Fan Speed Sensor
3460	Generator Excitation Field Regulator Command Line
3461	Computer Aided Earth Moving Systems (CAES)
3462	Remote Operator Station Display Transceiver
3463	Remote Control Display Transceiver
3464	DPF #1 Intake Pressure Sensor
3465	DPF #2 Intake Pressure Sensor
3466	Power Inverter Enable Feedback Line
3467	Main Power Relay
3468	Aftertreatment #1 Identification Number Module
3469	Aftertreatment #2 Identification Number Module
3470	Machine Power Distribution Relay
3471	ARD Air Pressure Control Module
3472	ARD Air Pressure Control System
3473	Tire Monitoring Module
3474	Left Front Tire Pressure/Temperature Sensor
3475	Right Front Tire Pressure/Temperature Sensor
3476	Left Rear Inner Tire Pressure/Temperature Sensor
3477	Left Rear Outer Tire Pressure/Temperature Sensor
3478	Right Rear Inner Tire Pressure/Temperature Sensor
3479	Right Rear Outer Tire Pressure/Temperature Sensor
3480	Sensor Supply #1
3481	Sensor Supply #2
3482	Sensor Supply #3
3483	Sensor Supply #4
3484	Throttle Selection Switch
3485	Aftertreatment #1 Exhaust Gas Temperature #1 Sensor
3486	Aftertreatment #1 Exhaust Gas Temperature #2 Sensor
3487	Aftertreatment #1 Exhaust Gas Temperature #3 Sensor
3488	Left Front Wheel Speed Sensor Signal Line #1
3489	Left Front Wheel Speed Sensor Signal Line #2
3490	Right Front Wheel Speed Sensor Signal Line #1
3491	Right Front Wheel Speed Sensor Signal Line #2
3492	Engine Application
3493	Aftertreatment #1 Secondary Air Pressure Sensor
3494	Rear Hitch Float Switch
3495	Ejector Cylinder Head End Pressure Sensor
3496	Ejector Cylinder Rod End Pressure Sensor
3497	Apron Cylinder Position Sensor
3498	Bowl Cylinder Position Sensor
3499	Apron Lower Anti Drift Solenoid
3500	Generator Excitation Field Regulator Current Line
3501	Generator Excitation Field Regulator
3502	Bowl Up Solenoid #1
3503	Bowl Up Solenoid #2
3504	Bowl Down Solenoid #1
3505	Bowl Down Solenoid #2
3506	Engine Injector Metering Rail #1 Pressure Sensor
3507	Engine Injector Metering Rail #2 Pressure Sensor
3508	Engine Fuel Pump Pressurizing Assembly #1
3509	Engine Fuel Pump Pressurizing Assembly #2

3510	Right Implement Pump Solenoid
3511	EGR Outlet Pressure Sensor
3512	Engine Exhaust Back Pressure Regulator
3513	Engine Exhaust Back Pressure Regulator Valve Position Sensor
3514	Engine Throttle Actuator
3515	Engine Throttle Actuator Position Sensor
3516	Blade Tip Solenoid
3517	Rear Hitch Enable Relay #1
3518	Rear Hitch Enable Relay #2
3519	Traction Alternator #1 Rectifier
3520	Traction Alternator #2 Rectifier
3521	Traction Alternator #3 Rectifier
3522	PTO (Power Takeoff) #1 Attachment Pump Solenoid
3523	PTO (Power Takeoff) #2 Attachment Pump Solenoid
3524	PTO (Power Takeoff) #1 Engagement Solenoid
3525	PTO (Power Takeoff) #2 Engagement Solenoid
3526	Direct Shift Gear Switch
3527	Direction Selector
3528	Barometric Pressure Sensor
3529	Hydraulic Oil Level/Temperature Sensor
3530	Steering Oil Level/Temperature Sensor
3531	Front Differential Speed Sensor
3532	Center Differential Speed Sensor
3533	Rear Differential Speed Sensor
3534	Left Front Axle Speed Sensor
3535	Right Front Axle Speed Sensor
3536	Left Center Axle Speed Sensor
3537	Right Center Axle Speed Sensor
3538	Left Rear Axle Speed Sensor
3539	Right Rear Axle Speed Sensor
3540	Center Cross Axle Lock Solenoid
3541	Rear Cross Axle Lock Solenoid
3542	Interaxle Lock Accumulator Pressure Sensor
3543	Interaxle Lock Accumulator Charge Solenoid
3544	Interaxle Lock Solenoid
3545	Stick Cylinder Extend Pilot Pressure Sensor
3546	Stick Cylinder Retract Pilot Pressure Sensor
3547	Water In Fuel System Switch
3548	Aftertreatment Cooling Fan Control Module
3549	Traction Alternator #1
3550	Traction Alternator #2
3551	Traction Alternator #3
3552	Traction Alternator #1 Current Sensor
3553	Traction Alternator #2 Current Sensor
3554	Traction Alternator #3 Current Sensor
3555	Dust Bin Blower Inverter
3556	Input/Output Module #1
3557	Input/Output Module #2
3558	Input/Output Module #3
3559	Input/Output Module #4
3560	Tilt Mode Selection Switch

3561	Drive Circuit Forward Pressure Sensor
3562	Drive Circuit Reverse Pressure Sensor
3563	Drive Motor #1 Solenoid
3564	Drive Motor #2 Solenoid
3565	Transmission Input #1 Speed #1 Sensor
3566	Transmission Input #1 Speed #2 Sensor
3567	Transmission Input #2 Speed #1 Sensor
3568	Transmission Input #2 Speed #2 Sensor
3569	Traction Alternator #1 Generator Field Contactor
3570	Traction Alternator #2 Generator Field Contactor
3571	Traction Alternator #3 Generator Field Contactor
3572	Swing Pilot Pressure Sensor
3573	Pump #1 Negative Flow Control Pressure Reducer Pressure Sensor
3574	Pump #2 Negative Flow Control Pressure Reducer Pressure Sensor
3575	Pump #1 Flow Limitation Pressure Solenoid
3576	Pump #2 Flow Limitation Pressure Solenoid
3577	Attachment Pedal #1 Pilot Pressure Sensor
3578	Attachment Pedal #2 Pilot Pressure Sensor
3579	Bypass Cutoff Valve #1 Pressure Solenoid
3580	Bypass Cutoff Valve #2 Pressure Solenoid
3581	Throttle #3 Position Sensor
3582	Generator Pump Solenoid
3583	Switch Panel #1
3584	Switch Panel #3
3585	Switch Panel #4
3586	Fumes Ventilation Solenoid
3587	Stable Blade Control Enable Switch
3588	Long Range Object Detection Sensor #1
3589	Long Range Object Detection Sensor #2
3590	Long Range Object Detection Sensor #3
3591	Long Range Object Detection Sensor #4
3592	Long Range Object Detection Sensor #5
3593	Long Range Object Detection Sensor #6
3594	Long Range Object Detection Sensor #7
3595	Long Range Object Detection Sensor #8
3596	Long Range Object Detection Sensor #1 Pulse per Second (PPS) Input Signal
3597	Mainframe Left Extender Switch
3598	Mainframe Right Extender Switch
3599	Operator Station Steering Select Solenoid
3600	Long Range Object Detection Sensor #1 RS-232 Data Link
3601	Automatic Ripper Control Switch
3602	Backlight Adjust Switch
3603	Auto/Manual Switch
3604	Aftertreatment #1 DEF Manifold Heater Relay
3605	Aftertreatment #1 DEF Tank Refill Solenoid
3606	Aftertreatment #1 DEF Tank Heater Relay
3607	Aftertreatment #1 DEF Pump Heater Relay
3608	Aftertreatment #1 SCR Dosing Manifold Temperature Sensor
3609	Aftertreatment #1 Outlet #1 NOx Level Sensor
3610	Aftertreatment #1 Outlet #2 NOx Level Sensor
3611	GPS Receiver RS-232 Data Link #1

3612	GPS Receiver RS-232 Data Link #2
3613	GPS Receiver Antenna #1
3614	GPS Receiver Antenna #2
3615	EGR Valve Control System
3616	EGR #2 Valve Control System
3617	EGR Valve Control Module
3618	EGR #2 Valve Control Module
3619	Aftertreatment #1 Outlet #1 NOx Level Sensor Power Supply
3620	Aftertreatment #1 Outlet #2 NOx Level Sensor Power Supply
3621	Engine Exhaust #1 NOx Level Sensor Power Supply
3622	Downshift Switch #2
3623	Traction Motor #1 to Traction Motor #3 Series Contactor
3624	Traction Motor #2 to Traction Motor #4 Series Contactor
3625	Engine #1 Electronic Control Module
3626	Engine #2 Electronic Control Module
3627	Left Ladder Down Relay
3628	Left Ladder Up Relay
3629	Left Ladder Switch
3630	Rear Engine Start Enable Relay
3631	Joystick Heater Internal Temperature Sensor
3632	Main Air Reservoir #2 Pressure Sensor
3633	Swing Priority Solenoid
3634	Boom Light Relay
3635	Cab Seat Swivel Control Solenoid
3636	Torque Converter Impeller Speed Sensor
3637	Trailer Stabilizer Select Solenoid
3638	Camera Set/Scroll Switch
3639	ARD Air Pressure Control Module Power Supply Output
3640	EGR Valve Control Module Power Supply Output
3641	EGR #2 Valve Control Module Power Supply Output
3642	Operator Speed Set/Recall Switch
3643	Motor Control #1
3644	Motor Control #2
3645	DC Power Bus #1 Current Sensor
3646	Phase Module A Temperature Sensor
3647	Phase Module B Temperature Sensor
3648	Phase Module C Temperature Sensor
3649	Chopper Module Temperature Sensor
3650	Fire Suppression System Active Input
3651	Fuel Filter Differential Pressure Switch
3652	Steering Pump Oil Pressure #1 Sensor
3653	Steering Pump Oil Pressure #2 Sensor
3654	Implement Pump Pressure Sensor
3655	Aftertreatment #1 Intake NOx Level Sensor
3656	Aftertreatment #2 Intake NOx Level Sensor
3657	Operator In Seat Sensor
3658	Neutralizer Disable Switch
3659	Hydraulic Pilot Controls Pressure Switch
3660	Knife Open Solenoid
3661	Knife Close Solenoid
3662	Topping Saw Solenoid

3663	Ground Saw Solenoid
3664	Saw Bar Up Solenoid
3665	Particulate Matter Control
3666	Engine Fuel Supply Lift Pump Relay
3667	Aftertreatment #1 SCR Cabinet Air Temperature Sensor
3668	Chopper Module Output Current Sensor
3669	Retarding Grid Contactor Output Current Sensor
3670	Cooling Fan #1 Motor Circuit
3671	Cooling Fan #2 Motor Circuit
3672	Cooling Fan #3 Motor Circuit
3673	Topping Saw Switch
3674	Ground Saw Switch
3675	Knife Open Switch
3676	Knife Close Switch
3677	Saw Bar Up Switch
3678	Engine Back Pressure Valve Control Module
3679	Aftertreatment #2 SCR Cabinet Air Temperature Sensor
3680	Left Turn Signal Light
3681	Right Turn Signal Light
3682	Marker Light
3683	Auxiliary Temperature Sensor #2
3684	Air Compressor Motor Circuit
3685	Tilt Bucket Angle Sensor
3686	Tilt Bucket Angle Sensor Power Supply
3687	Directional Heading Sensor
3688	Directional Heading Sensor Power Supply
3689	Left Tilt Cylinder Extend Solenoid
3690	Left Tilt Cylinder Retract Solenoid
3691	Right Tilt Cylinder Extend Solenoid
3692	Right Tilt Cylinder Retract Solenoid
3693	Chassis Angle Sensor Power Supply
3694	Blade Slope Sensor
3695	Blade Slope Sensor Power Supply
3696	Blade Rotation Angle Sensor Power Supply
3697	Blade Rotation Angle Sensor
3698	Laser Receiver Power Supply
3699	Inclination Sensor Power Supply
3700	Loader Bucket Inclinometer Sensor
3701	Magnet Lift/Drop Relay
3702	Service Brake Pressure Sensor
3703	DPF Low Speed Regeneration Engine Speed Control Enable Switch
3704	DPF High Engine Speed Regeneration Enable Switch
3705	Hydraulic High Flow Control Solenoid
3706	Hydraulic Low Flow Control Solenoid
3707	Hydraulic Pilot Supply Solenoid
3708	Variable Pitch Engine Fan Blade Position Sensor
3709	All Wheel Drive (AWD) Solenoid
3710	Office Site Management System
3711	Left Front Leg Raise Solenoid
3712	Right Front Leg Raise Solenoid
3713	Left Front Leg Lower Solenoid

3714	Right Front Leg Lower Solenoid
3715	Grade Control System Light Bar
3716	Torque Limit Switch
3717	Engine Speed Increment Switch
3718	Engine Speed Decrement Switch
3719	Auxiliary Valve #2 Enable Switch
3720	Engine Injector Metering Rail #1 Pressure #2 Sensor
3721	Engine Injector Metering Rail #2 Pressure #2 Sensor
3722	Engine Fuel Pump Pressurizing Assembly #3
3723	Engine Fuel Pump Pressurizing Assembly #4
3724	Autonomous Control Module #1
3725	Autonomous Control Module #2
3726	Autonomous Control Module #3
3727	Autonomous Control Module #4
3728	Autonomous Control Module #5
3729	Manual Mode Indicator
3730	Autonomous Stop Indicator
3731	Autonomous Mode Indicator
3732	Autonomous Stop Cab Switch
3733	Autonomous Cabinet Temperature Sensor
3734	Autonomous Stop Receiver #1
3735	Autonomous Stop Receiver #2
3736	Separate Circuit Coolant Temperature Sensor
3737	Transmission Main Relief Valve Solenoid
3738	Quick Coupler Disengage Solenoid Return
3739	Implement Pump Load Sense Pressure Override Solenoid
3740	Implement Pump Load Sense Pressure Override Solenoid Return
3741	Quick Coupler Pressure Sensor
3742	Main Hydraulic Pump Displacement Limit Solenoid
3743	Engine Aftertreatment Control #2
3744	Winch Control Handle Brake/Free Spool Position Sensor
3745	Left Rear Tire Pressure/Temperature Sensor
3746	Right Rear Tire Pressure/Temperature Sensor
3747	Winch Main Pressure Solenoid
3748	Load Sharing Module Throttle Signal
3749	Predictive Analysis System Module
3750	Transmission Input #2 Speed Sensor
3751	Incident Recorder Offboard Mass Storage Device
3752	Electric Energy Storage Control Module
3753	Winch Supply Boost Accumulator Solenoid
3754	Generator Output Start Relay
3755	Generator Output Enable Relay
3756	Generator Output Relays Return
3757	Aftertreatment #1 DEF Dosing Solenoid
3758	Aftertreatment #2 DEF Dosing Solenoid
3759	Aftertreatment #1 DEF Pump Heater Coolant Diverter Solenoid
3760	Generator Phase A
3761	Generator Phase B
3762	Generator Phase C
3763	Drive Motor Phase A
3764	Drive Motor Phase B

3765	Drive Motor Phase C
3766	Subscriber Identity Module (SIM) Card
3767	Right Wiper Switch
3768	Left Wiper Switch
3769	Right Wiper Relay
3770	Left Wiper Relay
3771	Front Wiper Relay
3772	Throttle Lock Resume/Accel Switch
3773	Throttle Lock Set/Decel Switch
3774	Implement Pump Swash Plate Angle Sensor
3775	Implement Pump Load Sense Pressure Sensor
3776	Implement Pump #1 Solenoid
3777	Implement Pump #2 Solenoid
3778	Implement Pump #1 Swash Plate Angle Sensor
3779	Implement Pump #2 Swash Plate Angle Sensor
3780	Winch Oil Temperature Switch
3781	Aftertreatment #1 Intake NOx Level Sensor Power Supply
3782	Engine Turbocharger #1 Turbine Outlet Temperature Sensor
3783	Boom Valve #2 Cylinder Extend Limit Solenoid
3784	Winch Control Switch
3785	Engine Exhaust NOx Level Sensor #1
3786	Engine Exhaust NOx Level Sensor #2
3787	Blade Raise Solenoid #1
3788	Blade Raise Solenoid #2
3789	Blade Lower Solenoid #1
3790	Blade Lower Solenoid #2
3791	Ground Level Shutdown Switch
3792	Transmission Output Speed #1 Signal Line #1
3793	Transmission Output Speed #1 Signal Line #2
3794	Transmission Output Speed #2 Signal Line #1
3795	Transmission Output Speed #2 Signal Line #2
3796	Traction Control Switch
3797	Operator Seat Belt Switch
3798	Straight Travel Pressure Sensor
3799	Winch Motor Solenoid
3800	Remote Emergency Stop Switch #2
3801	Remote Emergency Stop Switch #3
3802	Left Rear Drive Motor Speed Sensor #1
3803	Left Rear Drive Motor Speed Sensor #2
3804	Right Rear Drive Motor Speed Sensor #1
3805	Right Rear Drive Motor Speed Sensor #2
3806	Drive Pump #1 Forward Control Solenoid
3807	Drive Pump #1 Reverse Control Solenoid
3808	Drive Pump #2 Forward Control Solenoid
3809	Drive Pump #2 Reverse Control Solenoid
3810	Transmission Intermediate Speed Sensor #3
3811	Engine #1 Throttle #1 Position Sensor
3812	Engine #1 Throttle #3 Position Sensor
3813	Engine #2 Throttle #1 Position Sensor
3814	Engine #2 Throttle #3 Position Sensor
3815	Engine #1 Speed Sensor

3816	Engine #2 Speed Sensor
3817	Engine Coolant Thermostat Intake Temperature Sensor
3818	Main Hydraulic Valve Supply Pressure Sensor
3819	Steering Pressure Reduction Valve Pressure Sensor
3820	Aftertreatment #1 DEF Controller #1
3821	Aftertreatment #1 DEF Dosing Valve Actuator #1
3822	Aftertreatment #1 DEF Line Heater Relay #1
3823	Cushion Hitch and Implement Pilot Supply Disable Solenoid
3824	Steering Excess Flow Control Valve Solenoid
3825	Operator Seat Belt Indicator
3826	Operator Seat Belt Action Alarm
3827	Pantograph Raise Solenoid
3828	Pantograph Speed Solenoid
3829	Emergency Start Ramp Rate Override Switch
3830	Emergency Fuel Limit Override Switch
3831	Engine Governor Constant Speed Mode Switch
3832	External Load Sharing Fuel Limit Switch
3833	Main Hydraulic Pump Loading Solenoid
3834	Power Transistor Power Supply Feedback Line
3835	Cushion Hitch Leveling Solenoid
3836	Cushion Hitch Cylinder Position Sensor
3837	Aftertreatment #1 DEF Dosing Control Module
3838	Aftertreatment #1 DEF Controller Relay #1
3839	Aftertreatment #2 DEF Controller Relay #1
3840	Trolley Cabinet Cooling Fan
3841	Trolley Cabinet Temperature Sensor
3842	Aftertreatment #2 DEF Dosing Control Module
3843	Cylinder Long Range Light Relay
3844	Fender Light Relay
3845	Trolley Contactor Relay #1
3846	Trolley Contactor Relay #2
3847	Phase Module #1 A/B Temperature Sensor
3848	Phase Module #2 A/B Temperature Sensor
3849	Snow Wing Light Relay
3850	Snow Wing Light Fuse
3851	Blade Cushion Relay
3852	Blade Cushion Fuse
3853	Arch Lever Position Sensor
3854	Left Rear Drive Motor Solenoid
3855	Right Rear Drive Motor Solenoid
3856	Hydraulic Charge Filter Bypass Switch
3857	Graphical Display Module #2
3858	Drive Circuit #1 Pressure Sensor
3859	Drive Circuit #2 Pressure Sensor
3860	Apron Cylinder Rod End Pressure Sensor
3861	Parking Brake Solenoid Enable Relay
3862	Aftertreatment #1 DEF Return Valve Solenoid
3863	Rear Legs Lower Solenoid
3864	Rear Legs Raise Solenoid
3865	Rear Legs Lift Speed Solenoid
3866	Conveyor Raise Relay

3867	Conveyor Lower Relay
3868	Conveyor Swing Left Relay
3869	Conveyor Swing Right Relay
3870	Conveyor Swing Speed Solenoid
3871	First Stage Conveyor Drive Forward Solenoid
3872	Second Stage Conveyor Drive Forward Solenoid
3873	First Stage Conveyor Drive Reverse Solenoid
3874	Second Stage Conveyor Drive Reverse Solenoid
3875	First Stage Conveyor Drive Pump Forward Pressure Sensor
3876	Second Stage Conveyor Drive Pump Forward Pressure Sensor
3877	Moldboard Raise Solenoid
3878	Moldboard Lower Solenoid
3879	Moldboard Float Solenoid
3880	Left Rear Leg Cylinder Position Sensor
3881	Left Front Leg Cylinder Position Sensor
3882	Right Rear Leg Cylinder Position Sensor
3883	Right Front Leg Cylinder Position Sensor
3884	Left Side Plate Front Cylinder Position Sensor
3885	Left Side Plate Rear Cylinder Position Sensor
3886	Right Side Plate Front Cylinder Position Sensor
3887	Right Side Plate Rear Cylinder Position Sensor
3888	Front Steering Cylinder Position Sensor
3889	Front Toe Cylinder Position Sensor
3890	Rear Steering Cylinder Position Sensor
3891	Rear Toe Cylinder Position Sensor
3892	Tire Air System Relief Valve Solenoid
3893	Rear Drum Vibratory Speed Sensor
3894	Front Drum Vibratory Speed Sensor
3895	Automatic Articulation Mode Switch
3896	Swing Accumulator #1 Gas Pressure Sensor
3897	Swing Accumulator #2 Gas Pressure Sensor
3898	Emulsion Pump Relay
3899	Asphalt Mat Temperature Sensor
3900	Ethernet Data Link #1
3901	Ethernet Data Link #2
3902	Return Hydraulic Oil Pressure Sensor
3903	Swing Accumulator Oil Pressure Sensor
3904	Swing Accumulator Charge Solenoid
3905	Swing Accumulator Discharge Solenoid
3906	Swing Accumulator Bleed Shutoff Solenoid
3907	Swing Dual Pressure Relief Solenoid
3908	Engine Turbocharger #1 Turbine Intake Temperature Sensor
3909	Engine Turbocharger #2 Turbine Intake Temperature Sensor
3910	Engine Turbocharger #3 Turbine Intake Temperature Sensor
3911	Engine Turbocharger #4 Turbine Intake Temperature Sensor
3912	Switch Panel #5
3913	Separate Circuit Coolant Pressure Sensor
3914	Center Brake Oil Temperature Sensor
3915	Lift Linkage Limit Switch
3916	Brake Charge Pump Filter Bypass Switch
3917	Cushion Hitch and Implement Pilot Supply Filter Bypass Switch

3918	Elevator Charge Pump Filter Bypass Switch
3919	Elevator Motor Case Drain Filter Bypass Switch
3920	Elevator Pump Case Drain Filter Bypass Switch
3921	Left Work Light
3922	Right Work Light
3923	Switch Panel #6
3924	Operator Station Reverse Relay
3925	Loader Joystick Thumbwheel Position Signal #1
3926	Loader Joystick Thumbwheel Position Signal #2
3927	Hoe Left Joystick Thumbwheel Position Signal #1
3928	Hoe Left Joystick Thumbwheel Position Signal #2
3929	Hoe Right Joystick Thumbwheel Position Signal #1
3930	Hoe Right Joystick Thumbwheel Position Signal #2
3931	Front Toe Out Solenoid
3932	Front Toe In Solenoid
3933	Rear Toe In Solenoid
3934	Rear Toe Out Solenoid
3935	Front Steer Right Solenoid
3936	Rear Steer Right Solenoid
3937	Front Steer Left Solenoid
3938	Rear Steer Left Solenoid
3939	Conveyor Drive Solenoid Return
3940	Rear Steer Solenoid Return
3941	Front Steer Solenoid Return
3942	Drive Pump Solenoid Return
3943	Rotor Belt Tension Solenoid
3944	Left Front Side Plate Lower Solenoid
3945	Right Front Side Plate Lower Solenoid
3946	Left Rear Side Plate Lower Solenoid
3947	Right Rear Side Plate Lower Solenoid
3948	Left Front Side Plate Raise Solenoid
3949	Right Front Side Plate Raise Solenoid
3950	Left Rear Side Plate Raise Solenoid
3951	Right Rear Side Plate Raise Solenoid
3952	Left Rear Side Plate Float Solenoid
3953	Left Front Side Plate Float Solenoid
3954	Right Rear Side Plate Float Solenoid
3955	Right Front Side Plate Float Solenoid
3956	Aftertreatment #1 Diesel Oxidation Catalyst Intake Gas Temperature Sensor
3957	Left Front Leg Equalization Enable Solenoid
3958	Right Front Leg Equalization Enable Solenoid
3959	Front Legs Equalization Enable Solenoid
3960	Left Rear Leg Equalization Enable Solenoid
3961	Right Rear Leg Equalization Enable Solenoid
3962	Aftertreatment #2 Diesel Oxidation Catalyst Intake Gas Temperature Sensor
3963	Window Defroster Switch
3964	Engine Cooling Fan Bypass Relay
3965	Aftertreatment #1 DEF Controller #1 Power Supply #1
3966	Aftertreatment #1 DEF Controller #1 Power Supply #2
3967	Aftertreatment #1 Intake #2 NOx Level Sensor
3968	Aftertreatment #1 Intake #2 NOx Level Sensor Power Supply

3969	Service Brake Pedal Position Sensor #1
3970	Service Brake Pedal Position Sensor #2
3971	Left Front Brake Solenoid
3972	Left Rear Brake Solenoid
3973	Right Front Brake Solenoid
3974	Right Rear Brake Solenoid
3975	Service Brake Pedal Valve Disable Solenoid
3976	Service Brake Pedal Disable Valve Outlet Pressure Sensor
3977	Boom Swing Left Solenoid
3978	Boom Swing Right Solenoid
3979	Drill Steel Blow Air Valve Open Command
3980	Drill Steel Blow Air Valve Close Command
3981	Drill Steel Blow Air Pressure Sensor
3982	Air Compressor Oil Temperature Sensor
3983	Air Compressor Load Solenoid
3984	Feed Dump Forward Solenoid
3985	Feed Dump Back Solenoid
3986	Feed Swing Right Solenoid
3987	Feed Swing Left Solenoid
3988	Feed Extend Raise Solenoid
3989	Feed Extend Lower Solenoid
3990	Drill Feed Motor Raise Solenoid
3991	Drill Feed Motor Lower Solenoid
3992	Drill Feed Force Solenoid
3993	Drill Feed Force Dial
3994	Drill Feed Down Pressure Sensor
3995	Feed Winch Spool In Solenoid
3996	Feed Winch Spool Out Solenoid
3997	Feed Winch Control Switch
3998	Right Joystick Thumb Rocker Position Sensor
3999	Right Joystick Trigger Switch
4000	Ambient Air Temperature Sensor #1
4001	Ambient Air Temperature Sensor #2
4002	HVAC System Selection Switch
4003	HVAC System #1 Cab Blower Motor #1 Speed Sensor
4004	HVAC System #1 Cab Blower Motor #2 Speed Sensor
4005	HVAC System #2 Cab Blower Motor #1 Speed Sensor
4006	HVAC System #2 Cab Blower Motor #2 Speed Sensor
4007	Air Conditioner #1 Evaporator Coil Temperature Sensor
4008	Air Conditioner #2 Evaporator Coil Temperature Sensor
4009	Air Conditioner #1 Compressor Motor Bypass Solenoid
4010	Air Conditioner #2 Compressor Motor Bypass Solenoid
4011	Air Conditioner #1 Condenser Fan #1 Speed Sensor
4012	Air Conditioner #1 Condenser Fan #2 Speed Sensor
4013	Air Conditioner #1 Condenser Fan #3 Speed Sensor
4014	Air Conditioner #2 Condenser Fan #1 Speed Sensor
4015	Air Conditioner #2 Condenser Fan #2 Speed Sensor
4016	Air Conditioner #2 Condenser Fan #3 Speed Sensor
4017	Cab Air Heater #1 Engine Coolant Actuator
4018	Cab Air Heater #2 Engine Coolant Actuator
4019	Air Conditioner Suction Pressure Sensor

4020	Air Conditioner #1 Suction Pressure Sensor
4021	Air Conditioner #2 Suction Pressure Sensor
4022	Air Conditioner Compressor Discharge Pressure Sensor
4023	Air Conditioner #1 Compressor Discharge Pressure Sensor
4024	Air Conditioner #2 Compressor Discharge Pressure Sensor
4025	Hydraulic Lockout Switch
4026	Carriage Motor Counterclockwise Solenoid
4027	Carriage Motor Clockwise Solenoid
4028	Breakout Centralizer Counterclockwise Solenoid
4029	Breakout Centralizer Clockwise Solenoid
4030	Centralizer Close Solenoid
4031	Centralizer Open Solenoid
4032	Wrench Clamp Close Solenoid
4033	Wrench Clamp Open Solenoid
4034	Wrench In Solenoid
4035	Wrench Out Solenoid
4036	Snubber In Solenoid
4037	Snubber Out Solenoid
4038	Coupling Grease Spray Solenoid
4039	Coupling Grease Spray Switch
4040	Drill/Tram Mode Selector Switch
4041	Drill Rotation Pressure Sensor
4042	Drill Counterclockwise Rotation Solenoid
4043	Drill Clockwise Rotation Solenoid
4044	Dust Collector Fan Solenoid
4045	Dust Collector Pickup Pot Lower Solenoid
4046	Dust Collector Pickup Pot Raise Solenoid
4047	Hammer Pressure Sensor
4048	Track Oscillation Forward Solenoid
4049	Track Oscillation Backward Solenoid
4050	Track Oscillation Lock Solenoid
4051	Water Tank Stowed Switch
4052	Drill Water Valve
4053	Hydraulic Oil Warm Up Solenoid
4054	Aftertreatment #1 SCR Catalyst Intake Pressure Sensor
4055	Aftertreatment #2 SCR Catalyst Intake Pressure Sensor
4056	Screed Heating Zone #1 Temperature Sensor
4057	Screed Heating Zone #2 Temperature Sensor
4058	Screed Heating Zone #3 Temperature Sensor
4059	Screed Heating Zone #4 Temperature Sensor
4060	Screed Heating Zone #5 Temperature Sensor
4061	Screed Heating Zone #6 Temperature Sensor
4062	Screed Heating Zone #7 Temperature Sensor
4063	Screed Heating Zone #8 Temperature Sensor
4064	Screed Heating Zone #9 Temperature Sensor
4065	Screed Heating Zone #10 Temperature Sensor
4066	Screed Heating Zone #11 Temperature Sensor
4067	Screed Heating Zone #12 Temperature Sensor
4068	Screed Left Material Height Dial
4069	Screed Right Material Height Dial
4070	Left Station Left Conveyor Material Height Dial

4071	Left Station Right Conveyor Material Height Dial
4072	Right Station Left Conveyor Material Height Dial
4073	Right Station Right Conveyor Material Height Dial
4074	Remote Emergency Stop Switch #4
4075	Remote Emergency Stop Switch #5
4076	Remote Emergency Stop Switch #6
4077	Auto Lube Control Module
4078	Moldboard Raised Position Switch
4079	Moldboard Lowered Position Switch
4080	Rotor Door Open Relay
4081	Rotor Door Close Relay
4082	Anti-slab Device Float Relay
4083	Anti-slab Device Raise Relay
4084	Anti-slab Device Lower Relay
4085	Moldboard Pressure Control Solenoid
4086	Moldboard Lift Solenoid
4087	Moldboard Boost Pressure Solenoid
4088	Digital Video Incident Recorder
4089	Fuel Tank #2 Level Sensor
4090	Machine Auto Lube System Feedback Signal
4091	Hammer Auto Lube System Feedback Signal
4092	Conveyor Raise Solenoid
4093	Conveyor Lower Solenoid
4094	Conveyor Motor Forward Contactor
4095	Conveyor Motor Reverse Contactor
4096	Conveyor Motor Forward Contactor Feedback Signal
4097	Conveyor Left Solenoid
4098	Conveyor Right Solenoid
4099	Cutter Head Raise Solenoid
4100	Cutter Head Lower Solenoid
4101	Cutter Drum Extend Solenoid
4102	Cutter Drum Retract Solenoid
4103	Cutter Head Cylinder Head End Oil Pressure Sensor
4104	Cutter Head Cylinder Rod End Oil Pressure Sensor
4105	Fan Motor Winding Temperature Sensor #1
4106	Fan Motor Winding Temperature Sensor #2
4107	Fan Motor Contactor
4108	Fan Motor Contactor Feedback Signal
4109	Fan Motor Winding Temperature Sensor #3
4110	Fan Motor Winding Temperature Sensor #4
4111	Fan Motor Phase A Current Sensor
4112	Fan Motor Phase B Current Sensor
4113	Fan Motor Phase C Current Sensor
4114	Fan Motor Bearing Temperature Sensor #1
4115	Fan Motor Bearing Temperature Sensor #2
4116	Fan Motor Frame Temperature Switch #1
4117	Fan Motor Frame Temperature Switch #2
4118	Gathering Head Raise Solenoid
4119	Gathering Head Lower Solenoid
4120	Gathering Motor Forward Contactor
4121	Gathering Motor Reverse Contactor

4122	Gathering Motor Forward Contactor Feedback Signal
4123	Gathering Wing Extend Solenoid
4124	Gathering Wing Retract Solenoid
4125	Conveyor Motor Reverse Contactor Feedback Signal
4126	Left Conveyor Motor Winding Temperature Sensor #1
4127	Left Conveyor Motor Winding Temperature Sensor #2
4128	Left Conveyor Motor Winding Temperature Sensor #3
4129	Left Conveyor Motor Winding Temperature Sensor #4
4130	Left Conveyor Motor Phase A Current Sensor
4131	Left Conveyor Motor Phase B Current Sensor
4132	Left Conveyor Motor Phase C Current Sensor
4133	Left Conveyor Motor Bearing Temperature Sensor #1
4134	Left Conveyor Motor Bearing Temperature Sensor #2
4135	Left Conveyor Motor Frame Temperature Switch #1
4136	Left Conveyor Motor Frame Temperature Switch #2
4137	Left Cutter Motor Winding Temperature Sensor #1
4138	Left Cutter Motor Winding Temperature Sensor #2
4139	Left Cutter Motor Contactor
4140	Left Cutter Motor Contactor Feedback Signal
4141	Left Cutter Motor Winding Temperature Sensor #3
4142	Left Cutter Motor Winding Temperature Sensor #4
4143	Left Cutter Motor Phase A Current Sensor
4144	Left Cutter Motor Phase B Current Sensor
4145	Left Cutter Motor Phase C Current Sensor
4146	Left Cutter Motor Bearing Temperature Sensor #1
4147	Left Cutter Motor Bearing Temperature Sensor #2
4148	Left Cutter Motor Frame Temperature Switch #1
4149	Left Cutter Motor Frame Temperature Switch #2
4150	Gathering Motor Reverse Contactor Feedback Signal
4151	Left Gathering Motor Winding Temperature Sensor #1
4152	Left Gathering Motor Winding Temperature Sensor #2
4153	Left Gathering Motor Winding Temperature Sensor #3
4154	Left Gathering Motor Winding Temperature Sensor #4
4155	Left Gathering Motor Phase A Current Sensor
4156	Left Gathering Motor Phase B Current Sensor
4157	Left Gathering Motor Phase C Current Sensor
4158	Left Gathering Motor Bearing Temperature Sensor #1
4159	Left Gathering Motor Bearing Temperature Sensor #2
4160	Left Gathering Motor Frame Temperature Switch #1
4161	Left Gathering Motor Frame Temperature Switch #2
4162	Left Traction Motor Winding Temperature Sensor #1
4163	Left Traction Motor Winding Temperature Sensor #2
4164	Left Traction Motor Winding Temperature Sensor #3
4165	Left Traction Motor Winding Temperature Sensor #4
4166	Left Traction Motor Phase A Current Sensor
4167	Left Traction Motor Phase B Current Sensor
4168	Left Traction Motor Phase C Current Sensor
4169	Left Traction Motor Bearing Temperature Sensor #1
4170	Left Traction Motor Bearing Temperature Sensor #2
4171	Left Traction Motor Frame Temperature Switch #1
4172	Left Traction Motor Frame Temperature Switch #2

4173	Pump Motor Winding Temperature Sensor #1
4174	Pump Motor Winding Temperature Sensor #2
4175	Pump Motor Contactor
4176	Pump Motor Contactor Feedback Signal
4177	Pump Motor Winding Temperature Sensor #3
4178	Pump Motor Winding Temperature Sensor #4
4179	Pump Motor Phase A Current Sensor
4180	Pump Motor Phase B Current Sensor
4181	Pump Motor Phase C Current Sensor
4182	Pump Motor Bearing Temperature Sensor #1
4183	Pump Motor Bearing Temperature Sensor #2
4184	Pump Motor Frame Temperature Switch #1
4185	Pump Motor Frame Temperature Switch #2
4186	Right Conveyor Motor Winding Temperature Sensor #1
4187	Right Conveyor Motor Winding Temperature Sensor #2
4188	Right Conveyor Motor Winding Temperature Sensor #3
4189	Right Conveyor Motor Winding Temperature Sensor #4
4190	Right Conveyor Motor Phase A Current Sensor
4191	Right Conveyor Motor Phase B Current Sensor
4192	Right Conveyor Motor Phase C Current Sensor
4193	Right Conveyor Motor Bearing Temperature Sensor #1
4194	Right Conveyor Motor Bearing Temperature Sensor #2
4195	Right Conveyor Motor Frame Temperature Switch #1
4196	Right Conveyor Motor Frame Temperature Switch #2
4197	Right Cutter Motor Winding Temperature Sensor #1
4198	Right Cutter Motor Winding Temperature Sensor #2
4199	Right Cutter Motor Contactor
4200	Right Cutter Motor Contactor Feedback Signal
4201	Right Cutter Motor Winding Temperature Sensor #3
4202	Right Cutter Motor Winding Temperature Sensor #4
4203	Right Cutter Motor Phase A Current Sensor
4204	Right Cutter Motor Phase B Current Sensor
4205	Right Cutter Motor Phase C Current Sensor
4206	Right Cutter Motor Bearing Temperature Sensor #1
4207	Right Cutter Motor Bearing Temperature Sensor #2
4208	Right Cutter Motor Frame Temperature Switch #1
4209	Right Cutter Motor Frame Temperature Switch #2
4210	Right Gathering Motor Winding Temperature Sensor #1
4211	Right Gathering Motor Winding Temperature Sensor #2
4212	Right Gathering Motor Winding Temperature Sensor #3
4213	Right Gathering Motor Winding Temperature Sensor #4
4214	Right Gathering Motor Phase A Current Sensor
4215	Right Gathering Motor Phase B Current Sensor
4216	Right Gathering Motor Phase C Current Sensor
4217	Right Gathering Motor Bearing Temperature Sensor #1
4218	Right Gathering Motor Bearing Temperature Sensor #2
4219	Right Gathering Motor Frame Temperature Switch #1
4220	Right Gathering Motor Frame Temperature Switch #2
4221	Track Brake Release Solenoid
4222	Right Traction Motor Winding Temperature Sensor #1
4223	Right Traction Motor Winding Temperature Sensor #2

4224	Right Traction Motor Winding Temperature Sensor #3
4225	Right Traction Motor Winding Temperature Sensor #4
4226	Right Traction Motor Phase A Current Sensor
4227	Right Traction Motor Phase B Current Sensor
4228	Right Traction Motor Phase C Current Sensor
4229	Right Traction Motor Bearing Temperature Sensor #1
4230	Right Traction Motor Bearing Temperature Sensor #2
4231	Right Traction Motor Frame Temperature Switch #1
4232	Right Traction Motor Frame Temperature Switch #2
4233	Left Track Brake Pressure Switch
4234	Right Track Brake Pressure Switch
4235	Stabilizer Raise Solenoid
4236	Stabilizer Lower Solenoid
4237	Stabilizer Cylinder Head End Oil Pressure Sensor
4238	Stabilizer Cylinder Rod End Oil Pressure Sensor
4239	Traction Circuit Breaker Feedback Signal
4240	Proximity Detection Switch #1
4241	Proximity Detection Switch #2
4242	Proximity Detection Switch #3
4243	Cutter Head Inclinator Sensor
4244	Chassis Inclinator Sensor
4245	Circle Mirror Switch
4246	Remote Control Main Power Relay
4247	Remote Control Engine Run Input
4248	Bowl Cylinder Head End Pressure Sensor
4249	Bowl Cylinder Rod End Pressure Sensor
4250	3rd Function Port A Solenoid
4251	3rd Function Port B Solenoid
4252	4th Function Port A Solenoid
4253	4th Function Port B Solenoid
4254	Front Brake/Transmission Oil Temperature Sensor
4255	Telemetry Data Link #2
4256	Autonomous Cabinet Fan
4257	Grade Control Machine Measure Up
4258	Aftertreatment #1 DEF Dosing Line Purge Required Indicator
4259	Enclosure Temperature Sensor #1
4260	Enclosure Temperature Sensor #2
4261	Hydraulic Oil Pressure Sensor #1
4262	Hydraulic Oil Pressure Sensor #2
4263	Hydraulic Oil Pressure Sensor #3
4264	Hydraulic Oil Temperature Sensor #1
4265	Hydraulic Oil Temperature Sensor #2
4266	Hydraulic Oil Temperature Sensor #3
4267	Machine Supply Phase A Voltage Sensor
4268	Machine Supply Phase B Voltage Sensor
4269	Machine Supply Phase C Voltage Sensor
4270	Circuit Breaker Close Solenoid
4271	Main Circuit Breaker Feedback Signal
4272	Circuit Breaker Open Solenoid
4273	Reverse Light Relay
4274	Audible Alarm Relay

4275	Cab Operation Enable Foot Switch
4276	Emergency Stop Override Relay
4277	Emergency Stop Relay Feedback Signal
4278	External Emergency Stop Switch
4279	Ground Fault Switch #1
4280	Ground Fault Switch #2
4281	Ground Fault Switch #3
4282	Ground Fault Switch #4
4283	Ground Fault Switch #5
4284	Ground Fault Switch #6
4285	High Voltage Enclosure Door Switch
4286	Intermediate Circuit Breaker Feedback Signal
4287	Left Emergency Stop Switch
4288	Machine Current Detection Switch
4289	Machine Off Key Switch
4290	Machine Remote Control Radio Channel Switch #1
4291	Machine Remote Control Radio Channel Switch #2
4292	Machine Remote Control Radio Channel Switch #3
4293	Machine Remote Control Radio Channel Switch #4
4294	Main Transformer Temperature Sensor
4295	Main Transformer Temperature Switch
4296	Maintenance Mode Switch
4297	Manual Mode Switch
4298	Operator Cab Mode Switch
4299	Operator Remote Control Mode Switch
4300	Power Center Trip Relay
4301	Power Center Trip Relay Test Switch
4302	Right Emergency Stop Switch
4303	Methane Detection System Warning Switch
4304	Methane Detection System Shutdown Switch
4305	Proximity Detection Machine Speed Indication Relay
4306	Cutter Circuit Breaker Feedback Signal
4307	Roof Bolting Mode Switch
4308	Temporary Roof Support Lower Solenoid
4309	Temporary Roof Support Raise Solenoid
4310	Sump Frame Extend Solenoid
4311	Sump Frame Retract Solenoid
4312	Traction Transformer Temperature Sensor
4313	Traction Transformer Temperature Switch
4314	Dust Suppression Spray Solenoid
4315	Fan Spray Solenoid
4316	Fire Suppression Spray Solenoid
4317	Machine Supply Water Flow Switch
4318	Machine Supply Water Pressure Switch
4319	Headlight Relay
4320	Rear Inertial Measurement Sensor
4321	Front Inertial Measurement Sensor
4322	Front Brake Charge Pressure Sensor
4323	Rear Brake Charge Pressure Sensor
4324	Front Brake Accumulator Bleed Solenoid
4325	Rear Brake Accumulator Bleed Solenoid

4326	Swing Angle Sensor
4327	Medium Pressure Pump Displacement Control Solenoid
4328	Bidirectional Autoshift Selector Dial
4329	Winch Spool In Pressure Sensor
4330	Winch Spool Out Pressure Sensor
4331	Lift Cylinder Regeneration Solenoid
4332	Turbocharger #3 Turbine Speed Sensor
4333	Turbocharger #4 Turbine Speed Sensor
4334	Screed Heating Zone #1 Element
4335	Screed Heating Zone #2 Element
4336	Screed Heating Zone #3 Element
4337	Screed Heating Zone #4 Element
4338	Screed Heating Zone #5 Element
4339	Screed Heating Zone #6 Element
4340	Screed Heating Zone #7 Element
4341	Screed Heating Zone #8 Element
4342	Screed Heating Zone #9 Element
4343	Screed Heating Zone #10 Element
4344	Screed Heating Zone #11 Element
4345	Screed Heating Zone #12 Element
4346	Screed Assist Solenoid
4347	Screed Assist System Pressure Sensor
4348	Screed Lower Solenoid
4349	Screed Lift Boost Pressure Solenoid
4350	Screed Heating Control Module
4351	Generator Lube Oil Temperature Sensor
4352	Generator Lube Oil Pressure Sensor
4353	Main Hydraulic Pump #3 Displacement Sensor
4354	Main Hydraulic Pump #1 Pressure Sensor
4355	Main Hydraulic Pump #2 Pressure Sensor
4356	Main Hydraulic Pump #3 Pressure Sensor
4357	Swing Pilot Supply Solenoid
4358	Boom Valve #1 Cylinder Extend Solenoid
4359	Boom Valve #1 Cylinder Retract Solenoid
4360	Boom Valve #2 Cylinder Extend Solenoid
4361	Boom Valve #2 Cylinder Retract Solenoid
4362	Main Hydraulic Pump #3 Solenoid
4363	Interaxle Lock Supply Pressure Sensor
4364	Rear Wiper Control Switch
4365	Hook Motor Speed Sensor #1
4366	Hook Motor Speed Sensor #2
4367	Boom Motor Speed Sensor #1
4368	Boom Motor Speed Sensor #2
4369	Drawworks Pilot Supply Solenoid
4371	Hook Lower Brake Solenoid
4372	Boom Lower Brake Solenoid
4373	Hook Pump Lower Solenoid
4374	Hook Pump Raise Solenoid
4375	Boom Pump Lower Solenoid
4376	Boom Pump Raise Solenoid
4377	Hook Motor Solenoid

4378	Boom Motor Solenoid
4379	Hook Motor Pressure Sensor
4380	Boom Motor Pressure Sensor
4381	Centershift Lock Pin Retract Solenoid
4382	Parking Brake Retract Motor Enable Relay
4383	Access Platform Light Relay
4384	Front Parking Brake Oil Pressure Sensor
4385	Front Parking Brake Solenoid
4386	Auxiliary Lever #8 Position Sensor
4387	Auxiliary Lever #9 Position Sensor
4388	Accessory Power Inverter #1
4389	Accessory Power Inverter #2
4390	Port Troll Mode Control Module
4391	Starboard Troll Mode Control Module
4392	Port Master Station Throttle Signal
4393	Starboard Master Station Throttle Signal
4394	Port Control Station Throttle Signal
4395	Starboard Control Station Throttle Signal
4396	Port Master Station Gear Signal
4397	Starboard Master Station Gear Signal
4398	Port Control Station Gear Signal
4399	Starboard Control Station Gear Signal
4400	Torque Convertor Stator Clutch Solenoid
4401	Front Asphalt Mat Temperature Sensor
4402	Rear Asphalt Mat Temperature Sensor
4403	Gear Range Switch
4404	Left Joystick
4405	Right Joystick
4406	Center Joystick
4407	Accumulate Arm Open Solenoid
4408	Accumulate Arm Close Solenoid
4409	Swing Hydraulic Pump Displacement Sensor
4410	Left Rear Drive Pump Forward Control Solenoid
4411	Left Rear Drive Pump Reverse Control Solenoid
4412	Right Rear Drive Pump Forward Control Solenoid
4413	Right Rear Drive Pump Reverse Control Solenoid
4414	Left Front Drive Circuit Forward Pressure Sensor
4415	Left Front Drive Circuit Reverse Pressure Sensor
4416	Left Rear Drive Circuit Forward Pressure Sensor
4417	Left Rear Drive Circuit Reverse Pressure Sensor
4418	Right Front Drive Circuit Forward Pressure Sensor
4419	Right Front Drive Circuit Reverse Pressure Sensor
4420	Right Rear Drive Circuit Forward Pressure Sensor
4421	Right Rear Drive Circuit Reverse Pressure Sensor
4422	Front Steering Angle Sensor
4423	Rear Steering Angle Sensor
4424	Cab Slide Left Solenoid
4425	Cab Slide Right Solenoid
4426	Front Rotor Door Position Sensor
4427	Rear Rotor Door Position Sensor
4428	Rotor Depth Cylinder Position Sensor

4429	Rotor Brake Disengage Switch
4430	Mixing Chamber Tilt Unlock Solenoid #1
4431	Mixing Chamber Tilt Unlock Solenoid #2
4432	Mixing Chamber Tilt Forward Solenoid
4433	Mixing Chamber Tilt Backward Solenoid
4434	Water Spray Pump Forward Control Solenoid
4435	Emulsion Spray Pump Forward Control Solenoid
4436	Emulsion Spray Pump Reverse Control Solenoid
4437	Water Spray Flow Rate Sensor
4438	Emulsion Spray Flow Rate Sensor
4439	Right Center Wheel Speed Sensor
4440	Left Center Wheel Speed Sensor
4441	Right Rear Wheel Speed Sensor
4442	Left Rear Wheel Speed Sensor
4443	Water Spray Bar Solenoid
4444	Emulsion Spray Bar Solenoid
4445	Generator Lube Oil Filter Bypass Switch
4446	Screed Left End Gate Lower Solenoid
4447	Screed Right End Gate Lower Solenoid
4448	Screed Left End Gate Raise Solenoid
4449	Screed Right End Gate Raise Solenoid
4450	Screed Left End Gate Boost Pressure Solenoid
4451	Screed Right End Gate Boost Pressure Solenoid
4452	Left Extender Lower Solenoid
4453	Right Extender Lower Solenoid
4454	Left Extender Raise Solenoid
4455	Right Extender Raise Solenoid
4456	Left Extender Width Position Sensor
4457	Right Extender Width Position Sensor
4458	Left Extender Height Offset Position Sensor
4459	Right Extender Height Offset Position Sensor
4460	Autonomous Proximity Avoidance Indicator
4461	Winch Pilot Supply Solenoid
4462	Left Screed Keypad
4463	Right Screed Keypad
4464	Left Screed Remote Keypad
4465	Right Screed Remote Keypad
4466	Left Station Hazard Light Keypad
4467	Left Station Material Feed Keypad
4468	Left Station Propel Keypad
4469	Right Station Hopper Keypad
4470	Right Station Hazard Light Keypad
4471	Right Station Material Feed Keypad
4472	Right Station Propel Keypad
4473	Machine Body Front to Back Leveling Angle Sensor
4474	Machine Body Side to Side Leveling Angle Sensor
4475	Mainframe Left Extender Extend Solenoid
4476	Mainframe Left Extender Retract Solenoid
4477	Mainframe Right Extender Extend Solenoid
4478	Mainframe Right Extender Retract Solenoid
4479	Hopper Material Temperature Sensor

4480	Hopper Material Height Sensor
4481	Rotor Brake Engage Enable Solenoid
4482	Bucket Cylinder Extend Pilot Pressure Sensor
4483	Bucket Cylinder Retract Pilot Pressure Sensor
4484	Variable Adjustable Boom Cylinder Extend Pilot Pressure Sensor
4485	Variable Adjustable Boom Cylinder Retract Pilot Pressure Sensor
4486	Blade Lift Pilot Pressure Sensor
4487	Windshield Washer Fluid Relay
4488	Travel Forward Select Solenoid
4489	Travel Reverse Select Solenoid
4490	Machine Speed Control Mode Switch
4491	Machine Speed Control Set/Resume Switch
4492	Machine Speed Control Increment/Decrement Switch
4493	Bridge Station
4494	Fly Bridge Station
4495	Port Wing Station
4496	Starboard Wing Station
4497	Tower Station
4498	Engine Room Station
4499	Bow Station
4500	Aft Station
4501	Differential (Axle) Fan Relay
4502	Power Management Module Location Code
4503	Heating Element Control Module Location Code
4504	Left Blade Cushion Solenoid
4505	Right Blade Cushion Solenoid
4506	Left Tow Point Position Sensor
4507	Right Tow Point Position Sensor
4508	Auger Height Position Sensor
4509	Screed Crown Position Sensor
4510	Left Extender Slope Position Sensor
4511	Right Extender Slope Position Sensor
4512	Hook Free Fall Clutch Solenoid
4513	Hook Free Fall Clutch Solenoid Return
4514	Lift Cylinder Load Hold Check Valve Solenoid
4515	Fuel Supply Flow Rotor Speed Sensor #1
4516	Fuel Supply Flow Rotor Speed Sensor #2
4517	Fuel Return Flow Rotor Speed Sensor #1
4518	Fuel Return Flow Rotor Speed Sensor #2
4519	Fuel Supply Temperature Sensor
4520	Fuel Measurement Module
4521	Brake Accumulator Bleed Relay
4522	Electric Energy Storage Device Voltage Signal
4524	Electric Energy Storage Device Current Signal
4526	Electric Energy Storage System Power Converter Voltage Signal
4528	Electric Energy Storage System Power Converter Current Signal
4530	Electric Energy Storage Device Temperature Sensor
4531	Electric Energy Storage System Power Converter Temperature Sensor
4532	Machine Position Sensing Control Module
4533	Time Synchronization Input Signal #1
4534	Time Synchronization Input Signal #2

4535	Time Synchronization Input Signal #3
4536	Time Synchronization Input Signal #4
4537	Time Synchronization Input Signal #5
4538	Machine Position Sensing Control Module Data Link #1
4539	Machine Position Sensing Control Module Data Link #2
4540	Machine Position Sensing Control Module Data Link #3
4541	Machine Position Sensing Control Module Data Link #4
4542	Machine Position Sensing Control Module Data Link #5
4543	Machine Position Sensing Control Module Data Link #6
4544	Seat Control Module
4545	Suspension System Control Module
4546	Hook Free Fall Clutch Switch #1
4547	Hook Free Fall Clutch Switch #2
4548	Raw Water Temperature Sensor
4549	Electric Energy Storage Power Converter
4550	Electric Fuel Transfer Pump Relay
4551	Bowl Lower Anti Drift Solenoid
4552	Air Filter Differential Pressure Sensor
4553	Air Compressor Bleed Solenoid
4554	Manual Override Switch
4555	Unmanned Mode Indicator
4556	Manual Mode Indicator
4557	Proximity Indicator
4558	Unmanned Stop Indicator
4559	Front Camera
4560	Rear Camera
4561	Left Camera
4562	Right Camera
4563	Ethernet Router
4564	Right Joystick Switch #1
4565	Right Joystick Switch #2
4566	Left Joystick Switch #1
4567	Left Joystick Switch #2
4568	Aftertreatment #1 Mixing Tube Identification Number Module
4569	Left Station Hopper Keypad
4570	Aftertreatment #2 Mixing Tube Identification Number Module
4571	Aftertreatment DEF Pump Electronics Tank Unit Identification Number Module
4572	Brake Pedal Sensor
4573	Amber Payload Lamp
4574	Green Payload Lamp
4575	Red Payload Lamp
4576	Bucket Angle Sensor
4577	Aftertreatment #2 DEF Controller #1
4578	Aftertreatment #1 DEF Pump Heater
4579	Aftertreatment #2 DEF Pump Heater
4580	Front Drum Eccentric Weight Cylinder Position Sensor
4581	Rear Drum Eccentric Weight Cylinder Position Sensor
4582	Front Drum Vibratory Speed Sensor #1
4583	Front Drum Vibratory Speed Sensor #2
4584	Rear Drum Vibratory Speed Sensor #1
4585	Rear Drum Vibratory Speed Sensor #2

4586	Implement Remote Control Enable Feedback Line
4587	Powertrain Remote Control Enable Feedback Line
4588	Transmission Low Flow Control Hold Mode Input
4589	Transmission Low Flow Control Desired Speed Input
4590	Transmission Low Flow Control Mode Switch
4591	Engine Staged Turbocharger Solenoid
4592	Aftertreatment #1 Outlet NH3 Sensor Power Supply
4593	Aftertreatment #2 Outlet NH3 Sensor Power Supply
4594	Electric Fuel Transfer Pump Outlet Pressure Sensor
4595	Left Front Outrigger Extend Solenoid
4596	Left Front Outrigger Retract Solenoid
4597	Right Front Outrigger Extend Solenoid
4598	Right Front Outrigger Retract Solenoid
4599	Rear Stabilizer Lower Solenoid
4600	Rear Stabilizer Raise Solenoid
4601	Center Joystick Forward/Reverse Position Sensor
4602	Center Joystick Left/Right Position Sensor
4603	Boom Lift Angle Sensor
4604	Boom Swing Angle Sensor
4605	Drill Feed Extend Solenoid
4606	Drill Feed Retract Solenoid
4607	Drill Steel Blow Air Solenoid
4608	Drill Steel Blow Air Switch
4609	Feed Dump Lower Solenoid
4610	Feed Dump Raise Solenoid
4611	Feed Rollover Clockwise Solenoid
4612	Feed Rollover Counterclockwise Solenoid
4613	Feed Table Dump Lower Solenoid
4614	Feed Table Dump Raise Solenoid
4615	Stinger Extend Solenoid
4616	Stinger Retract Solenoid
4617	Cab Lift Main Frame Forward/Rearward Angle Sensor
4618	Cab Lift Main Frame Forward Solenoid
4619	Cab Lift Main Frame Rearward Solenoid
4620	Cab Lift Secondary Frame Raise/Lower Angle Sensor
4621	Cab Lift Secondary Frame Raise Solenoid
4622	Cab Lift Secondary Frame Lower Solenoid
4623	Transmission Drive Pump Pressure Override
4624	Boom Electronic Pressure Override
4625	Hook Electronic Pressure Override
4626	Engine Coolant Intake Pressure Sensor
4627	Engine Coolant Pressure Sensor
4628	Feed Dump Angle Sensor
4629	Feed Swing Angle Sensor
4630	Drill Steel Water Mixing Valve Position Sensor
4631	Screed Power Module
4632	Accessory Power Inverter #1 Cooling Fan
4633	Accessory Power Inverter #2 Cooling Fan
4634	Accessory Power Inverter #1 Power Feedback Line
4635	Accessory Power Inverter #2 Power Feedback Line
4636	Left Tow Point Raise Solenoid

4637	Right Tow Point Raise Solenoid
4638	Left Tow Point Lower Solenoid
4639	Right Tow Point Lower Solenoid
4640	Left Main Screed Angle Sensor
4641	Right Main Screed Angle Sensor
4642	Left Extender Control Position Sensor
4643	Left Extender Control Position Signal #1
4644	Left Extender Control Position Signal #2
4645	Right Extender Control Position Sensor
4646	Right Extender Control Position Signal #1
4647	Right Extender Control Position Signal #2
4648	Aftertreatment Ambient Air Temperature Sensor
4649	Electric Retarding Lamps/Relay
4650	Waiting Brake Indicator
4651	Blade Inertial Measurement Sensor
4652	Well Stimulation Pump Intake Pressure Sensor
4653	Well Stimulation Pump Outlet Pressure Sensor
4654	Well Stimulation Pump Speed Sensor
4655	Well Stimulation Pump Oil Pressure Sensor
4656	Well Stimulation Pump Oil Temperature Sensor
4657	Blade Angle Cylinder Position Sensor
4658	Left Station Left Front Leg Control Position Sensor
4659	Left Station Right Front Leg Control Position Sensor
4660	Right Station Left Front Leg Control Position Sensor
4661	Right Station Right Front Leg Control Position Sensor
4662	Left Station Left Front Leg Control Position Signal #1
4663	Left Station Left Front Leg Control Position Signal #2
4664	Left Station Right Front Leg Control Position Signal #1
4665	Left Station Right Front Leg Control Position Signal #2
4666	Right Station Left Front Leg Control Position Signal #1
4667	Right Station Left Front Leg Control Position Signal #2
4668	Right Station Right Front Leg Control Position Signal #1
4669	Right Station Right Front Leg Control Position Signal #2
4670	Left Station Rear Steer Control Position Sensor
4671	Right Station Rear Steer Control Position Sensor
4672	Left Station Rear Steer Control Position Signal #1
4673	Left Station Rear Steer Control Position Signal #2
4674	Right Station Rear Steer Control Position Signal #1
4675	Right Station Rear Steer Control Position Signal #2
4676	Left Grade Control Ski Position Sensor
4677	Right Grade Control Ski Position Sensor
4678	Left Station Conveyor Raise/Lower Control Position Sensor
4679	Right Station Conveyor Raise/Lower Control Position Sensor
4680	Left Station Conveyor Left/Right Control Position Sensor
4681	Right Station Conveyor Left/Right Control Position Sensor
4682	Cellular Antenna
4683	Left Station Keypad
4684	Right Station Keypad
4685	Ground Level Front Left Station Keypad
4686	Ground Level Front Right Station Keypad
4687	Ground Level Rear Left Station Keypad

4688	Ground Level Rear Right Station Keypad
4689	Left Station Input/Output Module
4690	Right Station Input/Output Module
4691	Left Station Input/Output Module 5 Volt Power Supply Output
4692	Right Station Input/Output Module 5 Volt Power Supply Output
4693	Machine Power Distribution Input/Output Module
4694	Steer Left Control Position Sensor #1
4695	Steer Left Control Position Sensor #2
4696	Steer Right Control Position Sensor #1
4697	Steer Right Control Position Sensor #2
4698	Engine Charge Air Cooler Bypass Valve #1
4699	Engine Charge Air Cooler Bypass Valve #2
4700	Aftertreatment #1 DEF Control Module Circuit Breaker
4701	All Stop Transceiver
4702	Grade Control Type Select Switch
4703	Auxiliary AC Power Control Module
4704	Auxiliary AC Phase A to Neutral Voltage Sensor
4705	Auxiliary AC Phase B to Neutral Voltage Sensor
4706	Auxiliary AC Phase C to Neutral Voltage Sensor
4707	Auxiliary AC Phase A-B Voltage Sensor
4708	Auxiliary AC Phase B-C Voltage Sensor
4709	Auxiliary AC Phase A Current Sensor
4710	Auxiliary AC Phase B Current Sensor
4711	Auxiliary AC Phase C Current Sensor
4712	Auxiliary AC Neutral Current Sensor
4713	Engine Fan Blade Variable Pitch Position Solenoid
4714	Machine Battery Charge Level Module
4715	Secondary Steering Motor Temperature Sensor
4716	Secondary Steering Bypass Solenoid
4717	Starter Control Solenoid
4718	Hydraulic Starter Accumulator Charge Solenoid
4719	Primary Brake Engage Disable Solenoid
4720	Secondary Brake Release Disable Solenoid
4721	Hazard Light Relay
4722	Automatic Engine Start/Stop Switch
4723	Hydraulic Oil Cooling Fan Speed Sensor
4724	Tong Open Pressure Sensor
4725	Intermittent Saw Return to Tank Solenoid
4726	Intermittent Saw Solenoid
4727	Hot Saw Solenoid
4728	Felling Head Counterclockwise Rotation Solenoid
4729	Felling Head Clockwise Rotation Solenoid
4730	Propel Forward Pedal Position Sensor #1
4731	Propel Forward Pedal Position Sensor #2
4732	Propel Reverse Pedal Position Sensor #1
4733	Propel Reverse Pedal Position Sensor #2
4734	Body Front Leveling Solenoid
4735	Body Rear Leveling Solenoid
4736	Body Left Side Leveling Solenoid
4737	Body Right Side Leveling Solenoid
4738	Front Drive Circuit Forward Pressure Sensor

4739	Rear Drive Circuit Forward Pressure Sensor
4740	Front Drive Circuit Reverse Pressure Sensor
4741	Rear Drive Circuit Reverse Pressure Sensor
4742	Front Drive Pump Forward Control Solenoid
4743	Rear Drive Pump Forward Control Solenoid
4744	Front Drive Pump Reverse Control Solenoid
4745	Rear Drive Pump Reverse Control Solenoid
4746	EGR Valve #2 Control
4747	Proprietary CAN Data Link #2
4748	Proprietary CAN Data Link #3
4749	Aftertreatment #1 DEF Pump Relay
4750	Engine Crankcase Ventilation Heater Relay
4751	Quick Coupler Solenoid #1
4752	Quick Coupler Solenoid #2
4753	Gas Fuel Temperature Sensor
4754	Engine Fuel #2 Filter Outlet Temperature Sensor
4755	Engine Fuel #2 Injector Metering Rail Pressure Sensor #1
4756	Engine Fuel #2 Injector Metering Rail Pressure Sensor #2
4757	Engine Fuel #2 Injector Metering Rail Temperature Sensor #1
4758	Engine Fuel #2 Injector Metering Rail Temperature Sensor #2
4759	Engine Fuel #2 Hydraulic Pump Directional Valve
4760	Engine Fuel #2 Hydraulic Pump Flow Control Valve
4761	Engine Fuel #2 Hydraulic Pump Pressure Sensor
4762	Engine Fuel #2 Supply Pressure Sensor
4763	Engine Fuel #2 Tank #1 Pressure Sensor
4764	Engine Fuel #2 Tank #2 Pressure Sensor
4765	Engine Fuel #2 Vaporizer Coolant Outlet Temperature Sensor
4766	Engine Fuel #2 Vaporizer Discharge Temperature Sensor
4767	Engine Fuel #2 Tank #1 Level Sensor
4768	Engine Fuel #2 Tank #2 Level Sensor
4769	Engine Fuel #2 Hydraulic Pump Swash Plate Angle Sensor
4770	Input/Output Module #5
4771	Input/Output Module #6
4772	Transmission Forward Gear Solenoid
4773	Transmission Reverse Gear Solenoid
4774	Engine Fuel Injection Pump Control Valve
4775	Hydraulic Oil Cooling Fan Pump Pressure Sensor
4776	Engine Fuel #2 Vent Pressure Sensor
4777	Engine Fuel #2 High Pressure Shutoff Valve
4778	Engine Fuel Isolation Valve Solenoid
4779	Engine Fuel Return Pressure Sensor
4780	Engine Fuel Shutoff Vent Solenoid
4781	Engine Turbocharger Compressor Bypass Valve Control Module
4782	Engine Turbocharger Compressor Blowoff Valve Control Module
4783	Main Power Override Relay
4784	Blade Cross Slope Favorite Switch
4785	Implement Pilot Oil Pressure Sensor #1
4786	Implement Pilot Oil Pressure Sensor #2
4787	Implement Overload Protection Solenoid
4788	Engine Fuel #2 Tank Transfer Pump
4789	Engine Fuel #2 Tank Transfer Pump Pressure Sensor

4790	Brake Solenoids Return
4791	Emergency Stop (E-Stop) Switch #1
4792	Emergency Stop (E-Stop) Switch #2
4793	Drill Steel Air Valve Position Sensor
4794	Fluid Level Additional Monitoring System Keypad
4795	Joystick Pattern Mapping Pressure Sensor
4796	Return Hydraulic Oil Filter Bypass Switch
4797	Aftertreatment #1 DEF Controller #2
4798	Aftertreatment #2 DEF Controller #2
4799	Aftertreatment #1 DEF Controller #2 Power Supply #1
4800	Aftertreatment #1 DEF Controller #2 Power Supply #2
4801	Aftertreatment #2 DEF Controller #1 Power Supply #1
4802	Aftertreatment #2 DEF Controller #1 Power Supply #2
4803	Aftertreatment #2 DEF Controller #2 Power Supply #1
4804	Aftertreatment #2 DEF Controller #2 Power Supply #2
4805	Engine Cylinder #1 Pressure Sensor
4806	Engine Cylinder #2 Pressure Sensor
4807	Engine Cylinder #3 Pressure Sensor
4808	Engine Cylinder #4 Pressure Sensor
4809	Engine Cylinder #5 Pressure Sensor
4810	Engine Cylinder #6 Pressure Sensor
4811	Engine Cylinder #7 Pressure Sensor
4812	Engine Cylinder #8 Pressure Sensor
4813	Engine Cylinder #9 Pressure Sensor
4814	Engine Cylinder #10 Pressure Sensor
4815	Engine Cylinder #11 Pressure Sensor
4816	Engine Cylinder #12 Pressure Sensor
4817	Engine Cylinder #13 Pressure Sensor
4818	Engine Cylinder #14 Pressure Sensor
4819	Engine Cylinder #15 Pressure Sensor
4820	Engine Cylinder #16 Pressure Sensor
4821	Engine Cylinder #17 Pressure Sensor
4822	Engine Cylinder #18 Pressure Sensor
4823	Engine Cylinder #19 Pressure Sensor
4824	Engine Cylinder #20 Pressure Sensor
4825	Counterweight Kickout Switch
4826	All Wheel Drive (AWD) Pilot Pressure Supply Solenoid
4827	Tilt Kickout Activation Switch
4828	Lower Kickout Activation Switch
4829	Center Axle Oil Temperature Sensor
4830	Hoist Boost Pressure Solenoid
4831	GPS Receiver #1
4832	GPS Receiver #2
4833	Satellite Radio Module
4834	Cellular Radio Module
4835	Aftertreatment #1 DEF Line Heater Relay #2
4836	Aftertreatment #1 DEF Line Heater Relay #3
4837	Aftertreatment #2 DEF Line Heater Relay #1
4838	Aftertreatment #2 DEF Line Heater Relay #2
4839	Aftertreatment #2 DEF Line Heater Relay #3
4840	Aftertreatment #1 DEF Line Heater #5

4841	Aftertreatment #1 DEF Line Heater #6
4842	Aftertreatment #1 DEF Line Heater #7
4843	Aftertreatment #1 DEF Line Heater #8
4844	Aftertreatment #1 DEF Line Heater #9
4845	Aftertreatment #1 DEF Line Heater #10
4846	Aftertreatment #2 DEF Line Heater #5
4847	Aftertreatment #2 DEF Line Heater #6
4848	Aftertreatment #2 DEF Line Heater #7
4849	Aftertreatment #2 DEF Line Heater #8
4850	Aftertreatment #2 DEF Line Heater #9
4851	Aftertreatment #2 DEF Line Heater #10
4856	Fuse #1
4857	Fuse #2
4858	Fuse #3
4859	Fuse #4
4860	Fuse #5
4861	Fuse #6
4862	Fuse #7
4863	Fuse #8
4864	Fuse #9
4865	Fuse #10
4866	Fuse #11
4867	Fuse #12
4868	Fuse #13
4869	Fuse #14
4870	Fuse #15
4871	Fuse #16
4872	Fuse #17
4873	Fuse #18
4874	Fuse #19
4875	Fuse #20
4876	Fuse #21
4877	Fuse #22
4878	Fuse #23
4879	Fuse #24
4880	Fuse #25
4881	Fuse #26
4882	Fuse #27
4883	Fuse #28
4884	Fuse #29
4885	Fuse #30
4886	Fuse #31
4887	Fuse #32
4888	Fuse #33
4889	Fuse #34
4890	Fuse #35
4891	Fuse #36
4892	Fuse #37
4893	Fuse #38
4894	Fuse #39
4895	Fuse #40

4896	Fuse #41
4897	Fuse #42
4898	Fuse #43
4899	Fuse #44
4900	Fuse #45
4901	Fuse #46
4902	Fuse #47
4903	Fuse #48
4904	Fuse #49
4905	Fuse #50
4906	Fuse #51
4907	Fuse #52
4908	Fuse #53
4909	Fuse #54
4910	Fuse #55
4911	Fuse #56
4912	Fuse #57
4913	Fuse #58
4914	Fuse #59
4915	Fuse #60
4916	Travel Pilot Pressure Limit Solenoid
4917	Implement Pilot Pressure Limit Solenoid
4918	Right Travel Forward Pressure Switch
4919	Right Travel Backward Pressure Switch
4920	Left Travel Forward Pressure Switch
4921	Left Travel Backward Pressure Switch
4922	Work Tool Type Detection Circuit
4924	Dust Collector Clean Solenoid #1
4925	Dust Collector Clean Solenoid #2
4926	Dust Collector Clean Solenoid #3
4927	Dust Collector Clean Solenoid #4
4928	Gaseous Fuel Leakage Detection Sensor
4929	Transmission Input Speed #1 Sensor
4930	Transmission Input Speed #2 Sensor
4931	Drill Feed Motor Speed Sensor Signal Line #1
4932	Drill Feed Motor Speed Sensor Signal Line #2
4933	Front Legs Lower Solenoid
4934	Front Legs Raise Solenoid
4935	Left Rear Leg Lower Solenoid
4936	Left Rear Leg Raise Solenoid
4937	Right Rear Leg Lower Solenoid
4938	Right Rear Leg Raise Solenoid
4939	Leg Swing In Solenoid
4940	Leg Swing Out Solenoid
4941	Conveyor Drive Forward Solenoid
4942	Conveyor Drive Reverse Solenoid
4943	Left Side Plate Lower Solenoid
4944	Left Side Plate Raise Solenoid
4945	Left Side Plate Float Solenoid
4946	Right Side Plate Lower Solenoid
4947	Right Side Plate Raise Solenoid

4948	Right Side Plate Float Solenoid
4949	Water Spray Pressure Sensor
4950	Propel Equal Flow Divider Solenoid
4951	Hammer Auto Lube Pressure Sensor
4952	Drill Station Boom Select Keypad
4953	Drill Station Wiper Keypad
4954	Tram Station Front Functions Keypad
4955	Tram Station Rear Functions Keypad
4956	Tram Station Stabilizer Keypad
4957	Air Compressor Outlet Air Temperature Sensor
4958	Air Tank Pressure Sensor
4959	Center Joystick Switch
4960	Left Joystick Switch
4961	Right Joystick Switch
4962	Drifter Lubricant Injector Solenoid
4963	Left Drifter Lubricant Oil Pressure Sensor
4964	Right Drifter Lubricant Oil Pressure Sensor
4965	Drifter Lubricant Left Select Solenoid
4966	Left Drifter Lubricant Flushing Air Solenoid
4967	Right Drifter Lubricant Flushing Air Solenoid
4968	Drifter Lubricant Low Level Switch
4969	Machine Supply Water Pressure Sensor
4970	Air Conditioner #1 Compressor Speed Sensor
4971	Air Conditioner #2 Compressor Speed Sensor
4972	Left Hydraulic Pump Motor Very High Temperature Switch
4973	Right Hydraulic Pump Motor Very High Temperature Switch
4974	Left Hydraulic Pump Motor High Temperature Switch
4975	Right Hydraulic Pump Motor High Temperature Switch
4976	Power Cable Reel Empty Warning Switch
4977	Power Cable Reel Empty Switch
4978	Power Cable Reel Full Switch
4979	Water Hose Reel Empty Warning Switch
4980	Water Hose Reel Empty Switch
4981	Water Hose Reel Full Switch
4982	Left Drill Flushing Air Solenoid
4983	Right Drill Flushing Air Solenoid
4984	Left Drill Flushing Pressure Sensor
4985	Right Drill Flushing Pressure Sensor
4986	Percussion Pressure Sensor
4987	Percussion Solenoid
4988	Low Percussion Solenoid
4989	Percussion Pump High Pressure Cutoff Solenoid
4990	Drill Rotation Pump High Pressure Cutoff Solenoid
4991	Left Front Outrigger Cylinder Head End Pressure Sensor
4992	Left Front Outrigger Cylinder Rod End Pressure Sensor
4993	Right Front Outrigger Cylinder Head End Pressure Sensor
4994	Right Front Outrigger Cylinder Rod End Pressure Sensor
4995	Left Front Stabilizer Cylinder Head End Pressure Sensor
4996	Left Front Stabilizer Cylinder Rod End Pressure Sensor
4997	Right Front Stabilizer Cylinder Head End Pressure Sensor
4998	Right Front Stabilizer Cylinder Rod End Pressure Sensor

4999	Rear Stabilizer Cylinder Rod End Pressure Sensor
5000	Traction Power Converter Transistor
5001	Right Pedal Position Sensor
5002	Left Pedal Position Sensor
5003	Transmission Main Relief Valve Pressure Sensor
5004	Barometric Pressure #2 Sensor
5005	Turbocharger Compressor Bypass Valve Position Sensor
5006	Aftertreatment #1 DEF Pressure #2 Sensor
5007	Aftertreatment #2 DEF Pressure #2 Sensor
5008	Aftertreatment #1 DEF Return Valve #2 Solenoid
5009	Aftertreatment #2 DEF Return Valve #1 Solenoid
5010	Aftertreatment #2 DEF Return Valve #2 Solenoid
5011	Aftertreatment #1 DEF Tank Heater #2
5012	Aftertreatment #2 DEF Tank Heater #2
5013	Aftertreatment #1 DEF Tank Level #2 Sensor
5014	Aftertreatment #2 DEF Tank Level #2 Sensor
5015	Aftertreatment #1 DEF Tank Temperature #2 Sensor
5016	Aftertreatment #2 DEF Tank Temperature #2 Sensor
5017	Aftertreatment #1 DEF Dosing Valve Actuator #2
5018	Aftertreatment #1 DEF Dosing Valve Actuator #3
5019	Aftertreatment #1 DEF Dosing Valve Actuator #4
5020	Aftertreatment #2 DEF Dosing Valve Actuator #1
5021	Aftertreatment #2 DEF Dosing Valve Actuator #2
5022	Aftertreatment #2 DEF Dosing Valve Actuator #3
5023	Aftertreatment #2 DEF Dosing Valve Actuator #4
5024	Aftertreatment #1 DEF Backflow Valve #1
5025	Aftertreatment #1 DEF Backflow Valve #2
5026	Aftertreatment #2 DEF Backflow Valve #1
5027	Aftertreatment #2 DEF Backflow Valve #2
5028	Aftertreatment #1 DEF Controller #1 Identification
5029	Aftertreatment #1 DEF Controller #2 Identification
5030	Aftertreatment #2 DEF Controller #1 Identification
5031	Aftertreatment #2 DEF Controller #2 Identification
5032	Aftertreatment #1 DEF Pump #2
5033	Aftertreatment #2 DEF Pump #2
5034	Aftertreatment #1 DEF Quick Thaw Heater
5035	Attachment Valve #1 Pilot Pressure Sensor
5036	Attachment Valve #2 Pilot Pressure Sensor
5037	Attachment Valve #3 Pilot Pressure Sensor
5038	Attachment Valve #4 Pilot Pressure Sensor
5039	Ripper Lift Angle Sensor
5040	Boom Inertial Measurement Sensor #2
5041	Boom Inertial Measurement Sensor #1
5042	Bucket Inertial Measurement Sensor #2
5043	Bucket Inertial Measurement Sensor #1
5044	Stick Inertial Measurement Sensor #2
5045	Stick Inertial Measurement Sensor #1
5046	Left Screed Keypad 5 Volt Power Supply Output
5047	Right Screed Keypad 5 Volt Power Supply Output
5048	Clam Control Position Sensor
5049	Electric Energy Storage Device #1 Voltage #1 Sensor

5050	Electric Energy Storage Device #2 Voltage #1 Sensor
5051	Electric Energy Storage Device #3 Voltage #1 Sensor
5052	Electric Energy Storage Device #2 Voltage #2 Sensor
5053	Electric Energy Storage Device #1 Voltage #2 Sensor
5054	Electric Energy Storage Device #3 Voltage #2 Sensor
5055	Electric Energy Storage Device #1 Current Sensor
5056	Electric Energy Storage Device #2 Current Sensor
5057	Electric Energy Storage Device #3 Current Sensor
5058	High Pressure Wash Breaker
5059	High Pressure Wash Contactor
5060	Air Compressor Breaker
5061	Air Compressor Contactor
5062	Water Boost Pump Breaker
5063	Water Boost Pump Contactor
5064	Auxiliary AC Contactor Breaker
5065	Auxiliary AC Contactor
5066	Rear Axle Oil Cooler Relay
5067	Aftertreatment #1 Sensor Supply #1
5068	Aftertreatment #1 Sensor Supply #2
5069	Aftertreatment #2 Sensor Supply #1
5070	Aftertreatment #2 Sensor Supply #2
5071	Motor Control Center DC Power Supply #2 Input Breaker
5072	Motor Control Center DC Power Supply #2 Input Contactor
5073	Water Boost Pump Motor
5074	Air Compressor Motor
5075	High Pressure Wash Circuit
5076	Left Hydraulic Pump Motor Breaker
5077	Right Hydraulic Pump Motor Breaker
5078	Crowd Center Manifold Cylinder Head End Pressure Sensor
5079	Crowd Center Manifold Cylinder Rod End Pressure Sensor
5080	Crowd Left Valve Cylinder Head End Pressure Sensor
5081	Crowd Right Valve Cylinder Head End Pressure Sensor
5082	Crowd Left Valve Cylinder Rod End Pressure Sensor
5083	Crowd Right Valve Cylinder Rod End Pressure Sensor
5084	Crowd Left Valve Cylinder to Tank Head End Solenoid
5085	Crowd Right Valve Cylinder to Tank Head End Solenoid
5086	Crowd Left Valve Cylinder to Tank Rod End Solenoid
5087	Crowd Right Valve Cylinder to Tank Rod End Solenoid
5088	Crowd Left Valve Pump to Cylinder Head End Solenoid
5089	Crowd Right Valve Pump to Cylinder Head End Solenoid
5090	Crowd Left Valve Pump to Cylinder Rod End Solenoid
5091	Crowd Right Valve Pump to Cylinder Rod End Solenoid
5092	Transmission Intermediate Speed Sensor
5093	Filter Capacitor Phase A-B Voltage Sensor
5094	Filter Capacitor Phase B-C Voltage Sensor
5095	Filter Capacitor Temperature Sensor
5096	Filter Inductor Temperature Sensor #1
5097	Filter Inductor Temperature Sensor #2
5098	Filter Inductor Temperature Sensor #3
5099	Transformer Temperature Sensor #1
5100	Transformer Temperature Sensor #2

5101	Transformer Temperature Sensor #3
5102	Cab Air Pressure Sensor
5103	Left Hydraulic Pump Motor Communication Gateway
5104	Right Hydraulic Pump Motor Communication Gateway
5105	Motor Control Center Switchgear Communication Gateway
5106	Left Hydraulic Pump Motor Controller
5107	Right Hydraulic Pump Motor Controller
5108	Boom Accumulator #1 Gas Pressure Sensor
5109	Boom Accumulator #2 Gas Pressure Sensor
5110	Boom Accumulator #3 Gas Pressure Sensor
5111	Boom Accumulator Oil Pressure Sensor
5112	Boom Accumulator Charge Solenoid
5113	Boom Accumulator Discharge Solenoid
5114	Boom Accumulator Bleed Shutoff Solenoid
5115	Service Door Position Switch
5116	Screed Lift Float Rod End Solenoid
5117	Screed Lift Float Head End Solenoid
5118	Cab Lift Main Frame Forward/Rearward Switch
5119	Cab Lift Secondary Frame Raise/Lower Switch
5120	Stick Limiter Override Switch
5121	Blade Work Light Relay
5122	Operator Seat Belt Beacon Relay
5123	Rear Work Light Relay
5124	Rear Defroster Fan Enable Relay
5125	Rear Defroster Fan High Speed Relay
5126	Swing Motor Speed Sensor Signal Line #1
5127	Swing Motor Speed Sensor Signal Line #2
5128	Gear Control Position Sensor #1
5129	Gear Control Position Sensor #2
5130	Right Station Main Keypad
5131	Left Station Main Keypad
5132	Right Station Conveyor Keypad
5133	Left Station Conveyor Keypad
5134	Right Station Propel/Steer Joystick
5135	Left Station Propel/Steer Joystick
5136	Right Station Conveyor Joystick
5137	Left Station Conveyor Joystick
5138	Blade Quick Drop Solenoid #1
5139	Blade Quick Drop Solenoid #2
5140	Ripper Load Sense Boost Pressure Solenoid
5141	Aftertreatment #2 Outlet NOx Level Sensor
5142	Right Hydraulic Pump Pressure Sensor
5143	Left Hydraulic Pump Pressure Sensor
5144	Dust Suppression Spray Switch
5145	Dust Suppression Spray Flow Rate Switch
5146	Dust Suppression Air Valve Solenoid
5147	Dust Suppression Air Mixing Solenoid
5148	Dust Suppression Water Valve Solenoid
5149	Dust Suppression Water Mixing Solenoid
5150	Dust Suppression Water Pressure Sensor
5151	Track Speed Switch

5152	Left Traction Motor Forward Solenoid
5153	Right Traction Motor Forward Solenoid
5154	Left Traction Motor Reverse Solenoid
5156	Right Traction Motor Reverse Solenoid
5157	Left Traction Motor Speed Sensor Signal Line #1
5158	Left Traction Motor Speed Sensor Signal Line #2
5159	Right Traction Motor Speed Sensor Signal Line #1
5160	Right Traction Motor Speed Sensor Signal Line #2
5161	Rear Conveyor Raise Solenoid
5162	Rear Conveyor Lower Solenoid
5163	Push Roller Extend Solenoid
5164	Push Roller Retract Solenoid
5165	Cutter Boom Feed Extend Solenoid
5166	Cutter Boom Feed Retract Solenoid
5167	Cutter Boom Feed Cylinder #1 Position Sensor
5168	Cutter Boom Feed Cylinder #2 Position Sensor
5169	Cutter Boom Feed Unlock Solenoid
5170	Cutter Boom Raise Solenoid
5171	Cutter Boom Lower Solenoid
5172	Cutter Boom Lift Cylinder #1 Position Sensor
5173	Cutter Boom Lift Cylinder #2 Position Sensor
5174	Cutter Boom Swing Left Solenoid
5175	Cutter Boom Swing Right Solenoid
5176	Cutter Boom Swing Cylinder #1 Position Sensor
5177	Cutter Boom Swing Cylinder #2 Position Sensor
5178	Cutter Head Rollover Clockwise Solenoid
5179	Cutter Head Rollover Counterclockwise Solenoid
5180	Cutter Head Rollover Angle Sensor #1
5181	Cutter Head Rollover Angle Sensor #2
5182	Gathering Head Feed Extend Solenoid
5183	Gathering Head Feed Retract Solenoid
5184	Gathering Head Feed Cylinder #1 Position Sensor
5185	Gathering Head Feed Cylinder #2 Position Sensor
5186	Gathering Head Raise Solenoid
5187	Gathering Head Lower Solenoid
5188	Gathering Head Lift Cylinder #1 Position Sensor
5189	Gathering Head Lift Cylinder #2 Position Sensor
5190	Gathering Head Lift Cylinder Rod End Pressure Sensor
5191	Gathering Head Auto Lower Switch
5192	Left Gathering Arm Swing Left Solenoid
5193	Left Gathering Arm Swing Right Solenoid
5194	Right Gathering Arm Swing Left Solenoid
5195	Right Gathering Arm Swing Right Solenoid
5196	Left Gathering Arm Swing Cylinder Rod End Pressure Sensor
5197	Right Gathering Arm Swing Cylinder Rod End Pressure Sensor
5198	Left Gathering Arm Swing Cylinder Head End Pressure Sensor
5199	Right Gathering Arm Swing Cylinder Head End Pressure Sensor
5200	Left Gathering Wing Extend Solenoid
5201	Right Gathering Wing Extend Solenoid
5202	Left Gathering Wing Retract Solenoid
5203	Right Gathering Wing Retract Solenoid

5204	Left Gathering Wing Cylinder Position Sensor
5205	Right Gathering Wing Cylinder Position Sensor
5206	Left Front Stabilizer Raise Solenoid
5207	Right Front Stabilizer Raise Solenoid
5208	Left Rear Stabilizer Raise Solenoid
5209	Right Rear Stabilizer Raise Solenoid
5210	Left Front Stabilizer Lower Solenoid
5211	Right Front Stabilizer Lower Solenoid
5212	Left Rear Stabilizer Lower Solenoid
5213	Right Rear Stabilizer Lower Solenoid
5214	Loading Shield Raise Solenoid
5215	Loading Shield Lower Solenoid
5216	Loading Shield Cylinder Rod End Pressure Sensor
5217	Sourcing Driver Output #3
5218	Sourcing Driver Output #4
5219	Sourcing Driver Output #5
5220	Sourcing Driver Output #6
5221	Right Joystick Mapping Switch
5222	Left Front Inner Tire Pressure/Temperature Sensor
5223	Left Front Outer Tire Pressure/Temperature Sensor
5224	Right Front Inner Tire Pressure/Temperature Sensor
5225	Right Front Outer Tire Pressure/Temperature Sensor
5226	Swing Left Pilot Pressure Sensor
5227	Swing Right Pilot Pressure Sensor
5228	Product Link Module
5229	Tiltrotator Control Enable Switch
5230	Tiltrotator Quick Coupler Switch
5231	Tiltrotator Quick Coupler Disengage Solenoid #1
5232	Tiltrotator Quick Coupler Disengage Solenoid #2
5233	Multi-Function Auxiliary System Right Joystick Control Override Switch
5234	Multi-Function Auxiliary System Diverter Valve Solenoid
5235	Right Joystick Thumbwheel #1 Position Sensor
5236	Right Joystick Thumbwheel #2 Position Sensor
5237	Left Joystick Thumbwheel #1 Position Sensor
5238	Left Joystick Thumbwheel #2 Position Sensor
5239	Work Tool Free Rotate Solenoid
5240	Boom Coupler Engage Solenoid
5241	Boom Coupler Disengage Solenoid
5242	TMAC System
5243	Emergency Shutdown Accumulator Bleed Relay
5244	Emergency Shutdown Hazard Light Relay
5245	Emergency Shutdown Cab Blower Motor Disable Relay
5246	Additional Brake Indication Service Brake Lamp Relay
5247	Additional Brake Indication Retarding Lamp Relay
5248	Tiltrotator System Hardware
5249	Air Compressor Motor Solenoid
5250	Variable Angle Boom Pedal Position Sensor
5251	Variable Angle Boom Extend Solenoid
5252	Variable Angle Boom Retract Solenoid
5253	Boom Coupler Disengage Switch
5254	Emergency Shutdown Operator Horn Control Relay

5255	Emergency Shutdown Accumulator Bleed Relay Return
5256	Emergency Shutdown Hazard Light Relay Return
5257	Powertrain Oil Pressure Sensor
5258	Left Rear Stabilizer Cylinder Head End Pressure Sensor
5259	Left Rear Stabilizer Cylinder Rod End Pressure Sensor
5260	Right Rear Stabilizer Cylinder Head End Pressure Sensor
5261	Right Rear Stabilizer Cylinder Rod End Pressure Sensor
5262	Port Transmission Forward Gear Solenoid
5263	Starboard Transmission Forward Gear Solenoid
5264	Port Transmission Reverse Gear Solenoid
5265	Starboard Transmission Reverse Gear Solenoid
5266	Bucket Extended Pressure Switch
5267	Bucket Lock Solenoid
5268	Stick In Limit Solenoid
5269	Stick Out Limit Solenoid
5270	Stick Out Away Solenoid
5271	Access Ladder Position Switch
5272	Fore Boom Angle Sensor
5273	Starter Lockout Switch
5274	Hydraulic Pump #1 Case Drain Oil Temperature Sensor
5275	Hydraulic Pump #2 Case Drain Oil Temperature Sensor
5276	Hydraulic Pump #3 Case Drain Oil Temperature Sensor
5277	Hydraulic Pump #4 Case Drain Oil Temperature Sensor
5278	Hydraulic Pump #5 Case Drain Oil Temperature Sensor
5279	Hydraulic Pump #6 Case Drain Oil Temperature Sensor
5280	Boom Lower Pilot Pressure Limit Solenoid
5281	Boom Raise Pilot Pressure Limit Solenoid
5282	Swing Right Pilot Pressure limit Solenoid
5283	Swing Left Pilot Pressure limit Solenoid
5284	Motor Control Center DC Power Supply #1
5285	Motor Control Center DC Power Supply #2
5286	Motor Control Center DC Power Supply #1 Input Contactor
5287	Motor Control Center DC Power Supply #1 Input Breaker
5288	Hydraulic Pump #1 Case Drain Oil Differential Pressure Sensor
5289	Hydraulic Pump #2 Case Drain Oil Differential Pressure Sensor
5290	Hydraulic Pump #3 Case Drain Oil Differential Pressure Sensor
5291	Hydraulic Pump #4 Case Drain Oil Differential Pressure Sensor
5292	Hydraulic Pump #5 Case Drain Oil Differential Pressure Sensor
5293	Hydraulic Pump #6 Case Drain Oil Differential Pressure Sensor
5294	Tiltrotator Rotation Solenoids
5295	Tiltrotator Tilt Solenoids
5296	Tiltrotator Auxiliary Circuit #1 Solenoids
5297	Tiltrotator Auxiliary Circuit #2 Solenoids
5298	Tiltrotator Quick Coupler Wedge Sensor
5299	Tiltrotator Quick Coupler Sensor Module
5300	Tiltrotator Quick Coupler Front Axle Engagement Sensor
5301	Tiltrotator Quick Coupler Rear Axle Engagement Sensor
5302	Cab Air Electric Heater #1
5303	Cab Air Electric Heater #2
5304	Main Hydraulic Pump #4 Solenoid
5305	Main Hydraulic Pump #5 Solenoid

5306	Main Hydraulic Pump #6 Solenoid
5307	Main Hydraulic Pump #7 Solenoid
5308	Main Hydraulic Pump #8 Solenoid
5309	Main Hydraulic Pump #9 Solenoid
5310	Main Hydraulic Pump #10 Solenoid
5311	Main Hydraulic Pump #11 Solenoid
5312	Main Hydraulic Pump #12 Solenoid
5313	Main Hydraulic Pump #4 Pressure Sensor
5314	Main Hydraulic Pump #5 Pressure Sensor
5315	Main Hydraulic Pump #6 Pressure Sensor
5316	Main Hydraulic Pump #7 Pressure Sensor
5317	Main Hydraulic Pump #8 Pressure Sensor
5318	Main Hydraulic Pump #9 Pressure Sensor
5319	Main Hydraulic Pump #10 Pressure Sensor
5320	Main Hydraulic Pump #11 Pressure Sensor
5321	Main Hydraulic Pump #12 Pressure Sensor
5322	Solenoid Return #6
5323	Solenoid Return #7
5324	Solenoid Return #8
5325	Engine Cooling Fan Directional Solenoid
5326	Entertainment Module
5327	HVAC Control Module
5328	Jog Dial Module
5329	Wiper Control Module
5330	Engine Start/Stop Switch
5331	Stick Unload Solenoid
5332	Left Travel Pedal Position Sensor
5333	Swing Motor Angle Sensor Signal #1
5334	Swing Motor Angle Sensor Signal #2
5335	Left Front Service Brake Oil Pressure Sensor
5336	Right Front Service Brake Oil Pressure Sensor
5337	Left Rear Service Brake Oil Pressure Sensor
5338	Right Rear Service Brake Oil Pressure Sensor
5339	Clam Cylinder Head End Oil Pressure Sensor
5340	Clam Cylinder Rod End Oil Pressure Sensor
5341	Clam Open Solenoid
5342	Clam Close Solenoid
5343	Stick Valve #1 Cylinder Retract Solenoid
5344	Stick Valve #2 Cylinder Retract Solenoid
5345	Stick Valve #1 Cylinder Extend Solenoid
5346	Stick Valve #2 Cylinder Extend Solenoid
5347	Bucket Valve #1 Cylinder Retract Solenoid
5348	Bucket Valve #2 Cylinder Retract Solenoid
5349	Bucket Valve #1 Cylinder Extend Solenoid
5350	Bucket Valve #2 Cylinder Extend Solenoid
5351	Machine Lockout Switch
5352	Right Travel Pedal Position Sensor
5353	Aftertreatment #2 Outlet NOx Level #1 Sensor Power Supply
5354	Aftertreatment #2 Intake NOx Level #1 Sensor Power Supply
5355	High Pressure Common Rail Fuel Pressure Relief Valve
5356	Emergency Brake Switch

5357	Service Brake Pedal Valve Front Control Disable Solenoid
5358	Service Brake Pedal Valve Rear Control Disable Solenoid
5359	Machine Coolant Temperature Sensor
5360	Warning Beacon
5361	Cutter Boom Raise Solenoid #1
5362	Cutter Boom Raise Solenoid #2
5363	Cutter Boom Lower Solenoid #1
5364	Cutter Boom Lower Solenoid #2
5365	Cutter Gearbox Oil Pump Solenoid
5366	Tire Inflation System Bleed Valve Solenoid
5367	Cutter Gearbox Oil Temperature Sensor
5368	Air Supply Pressure Sensor
5369	Cutter Head Lift Angle Sensor
5370	Gathering Head Lift Angle Sensor
5371	Cutter Head Swing Angle Sensor
5372	Right Front Hydraulic Pump Pressure Sensor
5373	Right Rear Hydraulic Pump Pressure Sensor
5374	Roof Bolter Enable Relay
5375	Machine Cooling Fan Bypass Solenoid
5376	Machine Cooling Fan Reverse Solenoid
5377	Machine Coolant Pressure Sensor
5378	Left Front Emergency Stop Switch
5379	Right Front Emergency Stop Switch
5380	Left Rear Emergency Stop Switch
5381	Right Rear Emergency Stop Switch
5382	Rear Conveyor Left Emergency Stop Switch
5383	Rear Conveyor Right Emergency Stop Switch
5384	Oxygen Detection System Warning Switch
5385	Oxygen Detection System Shutdown Switch
5386	Roof Bolter Remote Control Emergency Stop Switch
5387	Mesh Handler Remote Control Emergency Stop Switch
5388	Machine Remote Control Emergency Stop Switch
5389	High-Pressure Fuel Pump Oil Pressure Sensor
5390	Front Edge Cutter Lower Solenoid
5391	Front Edge Cutter Raise Solenoid
5392	Rear Edge Cutter Lower Solenoid
5393	Rear Edge Cutter Raise Solenoid
5394	Rear Edge Cutter Water Spray Solenoid
5395	Front Edge Cutter Water Spray Solenoid
5396	Electric Cooling Fan Warning Feedback
5397	Fire Suppression Relay Return
5398	Remote Control Mode Enable Relay Return
5399	Right Joystick Clockwise/Counterclockwise Position Sensor
5400	Left Joystick Clockwise/Counterclockwise Position Sensor
5401	Unmanned System Auxiliary Power Relay
5402	Left Travel Pump Pressure Sensor
5403	Right Travel Pump Pressure Sensor
5404	Conveyor Swing Manual Release Valve Switch
5405	Aftertreatment DPF Temperature Sensor Module
5406	Aftertreatment #1 DEF Tank Fill Valve
5407	Tool Automation Implement Valve

5408	Steering Pump High Pressure Cutoff Solenoid
5409	Rear Conveyor Swing Left Solenoid
5410	Rear Conveyor Swing Right Solenoid
5411	Access Ladder Raise Solenoid
5412	Operator Dead Engine Boom Lower Switch
5413	Engine #1 Start Switch
5414	Engine #1 Stop Switch
5415	Engine #2 Start Switch
5416	Engine #2 Stop Switch
5417	Fuel Tank #1 Level Sensor
5418	Hydraulic Oil Cooling Fan #1 Solenoid
5419	Hydraulic Oil Cooling Fan #2 Solenoid
5420	Hydraulic Pilot Supply #1 Filter Bypass Switch
5421	Hydraulic Pilot Supply #2 Filter Bypass Switch
5422	Hydraulic Oil Low Level Switch
5423	Main Hydraulic Pump #1 High Temperature Switch
5424	Main Hydraulic Pump #2 High Temperature Switch
5425	Main Hydraulic Pump #3 High Temperature Switch
5426	Main Hydraulic Pump #4 High Temperature Switch
5427	Main Hydraulic Pump #5 High Temperature Switch
5428	Main Hydraulic Pump #6 High Temperature Switch
5429	Main Hydraulic Pump #7 High Temperature Switch
5430	Main Hydraulic Pump #8 High Temperature Switch
5431	Left Implement Pump Oil Supply Shutoff Valve Switch
5432	PTO (Power Takeoff) #1 Oil Temperature Sensor
5433	PTO (Power Takeoff) #2 Oil Temperature Sensor
5434	Operator Swing Brake Switch
5435	Swing Drive Oil Temperature Sensor
5436	Track Tension Relief Solenoid
5437	Travel Boost Pressure Solenoid
5438	Travel Enable Relay
5439	Auto Lube Line #2 Selector Solenoid
5440	Auto Lube Relief Valve Solenoid
5441	Service Station Position Switch
5442	High Pressure Wash Control Switch
5443	Brake Accumulator #1 Gas Pressure Sensor
5444	Brake Accumulator #2 Gas Pressure Sensor
5445	Brake Accumulator #3 Gas Pressure Sensor
5446	Brake Accumulator #4 Gas Pressure Sensor
5447	Brake Accumulator #5 Gas Pressure Sensor
5448	Danger Beacon
5449	Left Travel Forward Pump to Motor Solenoid
5450	Left Travel Backward Pump to Motor Solenoid
5451	Right Travel Forward Pump to Motor Solenoid
5452	Right Travel Backward Pump to Motor Solenoid
5453	Left Travel Bypass Solenoid
5454	Right Travel Bypass Solenoid
5455	Stick Float Solenoid
5456	Left Hydraulic Pumps Circuit Pressure Sensor
5457	Right Hydraulic Pumps Circuit Pressure Sensor
5458	Left Hydraulic Pumps Circuit Solenoid

5459	Right Hydraulic Pumps Circuit Solenoid
5460	Hydraulic Pilot Supply Solenoid #1
5461	Hydraulic Pilot Supply Solenoid #2
5462	Hydraulic Pilot Supply Solenoid #3
5463	Hydraulic Pilot Supply Solenoid #4
5464	Swing Charge Pump #1 Oil Pressure Sensor
5465	Swing Charge Pump #2 Oil Pressure Sensor
5466	Trolley Input Current Sensor
5467	Trolley Voltage Sensor
5468	Pantograph Accumulator Bleed Solenoid
5469	All Wheel Drive (AWD) Charge Pump Bypass Solenoid
5470	Left Rear Leg Control Position Sensor
5471	Left Rear Leg Control Position Signal #1
5472	Left Rear Leg Control Position Signal #2
5473	Right Rear Leg Control Position Sensor
5474	Right Rear Leg Control Position Signal #1
5475	Right Rear Leg Control Position Signal #2
5476	Graphical Display Module #3
5477	Steering Control Module #2
5478	Quick Coupler Engage Solenoid Return
5479	Quick Coupler Solenoid Return
5480	Swing Pump Supply Pressure Sensor
5481	Steering System Backup Battery Relay
5482	Steering System Backup Battery Relay Return
5483	Steering Pilot Supply Select Solenoid
5484	Steering Pilot Supply Select Solenoid Return
5485	Steering Control State Feedback Signal
5486	Steering System Warning Indicator
5487	Steer Left Solenoid Return
5488	Steer Right Solenoid Return
5489	Steer Left Solenoid
5490	Steer Right Solenoid
5491	Drill Depth Encoder Signal #1
5492	Drill Depth Encoder Signal #2
5493	Drill Depth Sensor
5494	Aftertreatment #1 DEF Concentration Sensor
5495	Analysis Module
5496	Unmanned System Park Brake Switch Disable Relay
5497	Camera #1
5498	Camera #2
5499	Camera #3
5500	Camera #4
5501	Camera #5
5502	Camera #6
5503	Camera #7
5504	Camera #8
5505	Camera #9
5506	Camera #10
5507	Sensor Purge Air Pump Relay
5508	Secondary Steering Relay Return
5509	Steering Valve Spool Displacement Signal Line #1

5510	Steering Valve Spool Displacement Signal Line #2
5511	Left Door Wiper Control Switch
5512	Right Door Wiper Control Switch
5513	Right Door Wiper Control Position Sensor
5514	Left Door Wiper Control Position Sensor
5515	Hammer Pedal Switch
5516	Left Joystick Switch #3
5517	Left Joystick Switch #4
5518	Left Joystick Switch #5
5519	Left Joystick Switch #6
5520	Right Joystick Switch #3
5521	Right Joystick Switch #4
5522	Right Joystick Switch #5
5523	Right Joystick Switch #6
5524	Right Joystick Switch #7
5525	Hydraulic Pump #1 Bypass Valve Solenoid
5526	Hydraulic Pump #2 Bypass Valve Solenoid
5527	Cutter Gearbox Oil Pressure Sensor
5528	Cutter Gearbox Oil Pump #1 Solenoid
5529	Cutter Gearbox Oil Pump #2 Solenoid
5530	Cutter Gearbox Oil Pump #1 Suction Pressure Sensor
5531	Cutter Gearbox Oil Pump #2 Suction Pressure Sensor
5532	Roof Bolter Hydraulic Supply Solenoid
5533	Dust Suppression Spray Water Valve
5534	Dust Suppression Spray Air Valve
5535	Gathering Head Left Cylinder Head End Counterbalance Bypass Solenoid
5536	Gathering Head Left Cylinder Rod End Counterbalance Bypass Solenoid
5537	Gathering Head Right Cylinder Head End Counterbalance Bypass Solenoid
5538	Gathering Head Right Cylinder Rod End Counterbalance Bypass Solenoid
5539	Mesh Handler Hydraulic Supply Solenoid
5540	Loading Shield Cylinder Head End Pressure Sensor
5541	Left Stabilizer Lever Position Signal #1
5542	Left Stabilizer Lever Position Signal #2
5543	Right Stabilizer Lever Position Signal #1
5544	Right Stabilizer Lever Position Signal #2
5545	Left Stabilizer Lever Position Sensor
5546	Right Stabilizer Lever Position Sensor
5547	Left Joystick Thumbwheel Position Signal #1
5548	Left Joystick Thumbwheel Position Signal #2
5549	Right Joystick Thumbwheel Position Signal #1
5550	Right Joystick Thumbwheel Position Signal #2
5551	Loader Quick Coupler Switch
5552	Loader Quick Coupler Diverter Relay
5553	Loader Quick Coupler Diverter Solenoid Feedback Line
5554	Hoe Quick Coupler Locking Pin Control Switch
5555	Hoe Quick Coupler Wedge Retract Solenoid
5556	Hoe Quick Coupler Wedge Control Switch
5557	Hoe Quick Coupler Locking Pin Retract Solenoid
5558	Loader Tilt Linkage Position Sensor
5559	Loader Lift Linkage Position Sensor
5560	Blade Left Lift Cylinder Rod End Pressure Sensor

5561	Blade Right Lift Cylinder Rod End Pressure Sensor
5562	Dedusting Fan System Feedback Signal
5563	Left Front Stabilizer Cylinder Position Sensor
5564	Right Front Stabilizer Cylinder Position Sensor
5565	Machine Remote Control
5566	Machine Remote Control Transceiver
5567	Site Positioning System
5568	Motor Power Inverter Controller
5569	Power Electronics Module
5570	Dust Collection System Filter Backflush Solenoid
5571	Fire Suppression Machine Shutdown Request Switch
5572	Fire Suppression System Warning Switch
5573	Main Left Implement Control
5574	Auxiliary Left Implement Control
5575	Main Right Implement Control
5576	Auxiliary Right Implement Control
5577	Relay/Fuse Module #1
5578	Water Tank Level Sensor
5579	Proximity Detection System Bypass Indication Relay
5580	Powertrain Operator Interface Module
5581	Engine Fuel #2 High Pressure Shutoff Valve #2
5582	Aftertreatment #1 DEF Pump Power Supply
5583	Proximity Detection Interface Module
5584	Air Compressor Air Filter Differential Pressure Sensor
5585	Trolley Cabinet Cooling Fan Speed Signal
5586	Feed Cable Tension Solenoid
5587	Front Stabilizer Lower Solenoid
5588	Front Stabilizer Raise Solenoid
5589	Left Rear Stabilizer Extend Position Switch
5590	Right Rear Stabilizer Extend Position Switch
5591	Blade Left Lift Arm Angle Sensor
5592	Blade Right Lift Arm Angle Sensor
5593	Blade Left Yoke Angle Sensor
5594	Blade Right Yoke Angle Sensor
5595	Dust Collector Clean Solenoid #5
5596	Dust Collector Clean Solenoid #6
5597	Windshield Position Switch
5598	Cab Dome Light Relay
5599	Intermittent Wiper Relay
5600	Main Hydraulic Pump #4 Displacement Sensor
5601	Secondary Steering Accumulator Precharge Gas Pressure Sensor
5602	Left Travel Pedal Position Sensor Signal #1
5603	Left Travel Pedal Position Sensor Signal #2
5604	Right Travel Pedal Position Sensor Signal #1
5605	Right Travel Pedal Position Sensor Signal #2
5606	Rear Wiper Relay
5607	Cab Blower Motor Low Speed Enable Relay
5608	Cab Blower Motor Medium Speed Enable Relay
5609	Cab Blower Motor High Speed Enable Relay
5610	Dust Collector Filter #1 Solenoid
5611	Dust Collector Filter #2 Solenoid

5612	Dust Collector Filter #3 Solenoid
5613	Dust Collector Filter #4 Solenoid
5614	Dust Collector Filter #5 Solenoid
5615	Dust Collector Filter #6 Solenoid
5616	Feed Pump Loading Solenoid
5617	Rock Drill Control Input Direction Selector Switch
5618	Tilt Back Solenoid
5619	Tilt Dump Solenoid
5620	Optional Vision Dedicated Display
5621	Swing Balance Valve Supply Pressure Sensor
5622	Single Engine Hydraulic Pump Operation Solenoid
5623	Swing Left Enable Solenoid
5624	Swing Right Enable Solenoid
5625	Swing Pump Control Left Pressure Sensor
5626	Swing Pump Control Right Pressure Sensor
5627	Auxiliary High Flow Valve Port A Solenoid
5628	Auxiliary High Flow Valve Port B Solenoid
5629	Expandable Undercarriage Diverter Relay
5630	Cab Front Door Position Switch
5631	Cab Left Door Position Switch
5632	Roof Wiper Relay
5633	Viewing Hatch Open Solenoid
5634	Viewing Hatch Close Solenoid
5635	Platform Access Ladder Switch
5636	Ground Level Access Ladder Switch
5637	Access Ladder Lower Solenoid
5638	Dust Curtain Raise Solenoid
5639	Dust Curtain Lower Solenoid
5640	Dust Curtain Raised Position Switch
5641	Winch Spool In Limit Switch
5642	Drill Mast Angle Sensor
5643	Drill Mast Lower Solenoid
5644	Drill Mast Raise Solenoid
5645	Drill Mast Left Locking Pin Disengaged Position Switch
5646	Drill Mast Left Locking Pin Engaged Position Switch
5647	Drill Mast Right Locking Pin Disengaged Position Switch
5648	Drill Mast Right Locking Pin Engaged Position Switch
5649	Drill Mast Lock Solenoid
5650	Drill Mast Unlock Solenoid
5651	Drill Rotation Motor Speed Sensor #1
5652	Drill Rotation Motor Speed Sensor #2
5653	Digital Desired Speed Control Accel Switch
5654	Digital Desired Speed Control Decel Switch
5655	Drill Rotation Motor Solenoid
5656	Drill Torque Dial
5657	Drill Feed Hold Back Pressure Sensor
5658	Drill Feed Hold Back Relief Solenoid
5659	Tram Diverter Solenoid
5660	Left Track Forward / Drill Clockwise Rotation Solenoid
5661	Left Track Reverse / Drill Counterclockwise Rotation Solenoid
5662	Right Track Forward / Drill Feed Retract Solenoid

5663	Right Track Reverse / Drill Feed Extend Solenoid
5664	Left Track / Drill Rotation Port A Pressure Sensor
5665	Left Track / Drill Rotation Port B Pressure Sensor
5666	Right Track / Drill Feed Port A Pressure Sensor
5667	Right Track / Drill Feed Port B Pressure Sensor
5668	Pipe Positioner Left Arm Disengaged Position Switch
5669	Pipe Positioner Left Arm Engaged Position Switch
5670	Pipe Positioner Right Arm Disengaged Position Switch
5671	Pipe Positioner Right Arm Engaged Position Switch
5672	Pipe Positioner Swing In Solenoid
5673	Pipe Positioner Swing Out Solenoid
5674	Pipe Retaining Safety Arm Engage Solenoid
5675	Pipe Retaining Safety Arm Disengage Solenoid
5676	Pipe Retaining Safety Arm Engaged Position Switch #1
5677	Pipe Retaining Safety Arm Engaged Position Switch #2
5678	Carousel Load Position Switch
5679	Carousel Parked Position Switch
5680	Carousel Locking Pin Engaged Position Switch
5681	Carousel Index Locking Pin Engaged Position Switch
5682	Carousel Index Lock Solenoid
5683	Carousel Index Unlock Solenoid
5684	Carousel Pipe Detect Switch
5685	Carousel Rotary Position Sensor
5686	Carousel Index Cylinder Position Sensor
5687	Hydraulic Operated Bit Basket Disengaged Position Switch
5688	Hydraulic Operated Bit Basket Disengage Solenoid
5689	Hydraulic Operated Bit Basket Engage Solenoid
5690	Hydraulic Operated Breakout Wrench Engaged Position Switch
5691	Hydraulic Operated Breakout Wrench Disengaged Position Switch
5692	Hydraulic Operated Breakout Wrench Swing In Solenoid
5693	Hydraulic Operated Breakout Wrench Swing Out Solenoid
5694	Hydraulic Operated Breakout Wrench Clamp Solenoid
5695	Hydraulic Operated Breakout Wrench Unclamp Solenoid
5696	Hydraulic Operated Breakout Wrench Reverse Rotation Solenoid
5697	Deck Wrench Cylinder Position Sensor
5698	Deck Wrench Engage Solenoid
5699	Deck Wrench Disengage Solenoid
5700	Implement Lockout Indicator
5701	Turbocharger Wastegate Actuator Position Sensor
5702	EGR #1 Cooler Intake Temperature Sensor
5703	EGR #1 Cooler Outlet Temperature Sensor
5704	Auxiliary #1 Pump Pressure Sensor
5705	Hydraulic System Bypass Solenoid
5706	Implement Pedal Position Sensor Signal #1
5707	Implement Pedal Position Sensor Signal #2
5708	Implement Pedal Position Sensor
5709	Implement Function #1 Port A Solenoid
5710	Implement Function #2 Port A Solenoid
5711	Implement Function #3 Port A Solenoid
5712	Implement Function #1 Port B Solenoid
5713	Implement Function #2 Port B Solenoid

5714	Implement Function #3 Port B Solenoid
5715	Blade Angle Left Switch
5716	Blade Angle Right Switch
5717	Hoe Bucket Curl Solenoid
5718	Hoe Bucket Dump Solenoid
5719	Hoe Boom Raise Solenoid
5720	Hoe Boom Lower Solenoid
5721	Hoe Swing Left Solenoid
5722	Hoe Swing Right Solenoid
5723	Hoe Stick Out Solenoid
5724	Hoe Stick In Solenoid
5725	Engine Turbocharger #2 Turbine Outlet Temperature Sensor
5726	Engine Turbocharger #3 Turbine Outlet Temperature Sensor
5727	Engine Turbocharger #4 Turbine Outlet Temperature Sensor
5728	Hoe Valve Minimum Flow Enable Solenoid
5729	Fore Boom Pump Pilot Signal Disable Solenoid
5730	Traction Control (TCS) Lamp
5731	Saw Speed Sensor
5732	Auxiliary Valve #1 Port A Pressure Sensor
5733	Auxiliary Valve #2 Port A Pressure Sensor
5734	Auxiliary Valve #3 Port A Pressure Sensor
5735	Auxiliary Valve #4 Port A Pressure Sensor
5736	Auxiliary Valve #5 Port A Pressure Sensor
5737	Auxiliary Valve #6 Port A Pressure Sensor
5738	Auxiliary Valve #7 Port A Pressure Sensor
5739	Auxiliary Valve #1 Port B Pressure Sensor
5740	Auxiliary Valve #2 Port B Pressure Sensor
5741	Auxiliary Valve #3 Port B Pressure Sensor
5742	Auxiliary Valve #4 Port B Pressure Sensor
5743	Auxiliary Valve #5 Port B Pressure Sensor
5744	Auxiliary Valve #6 Port B Pressure Sensor
5745	Auxiliary Valve #7 Port B Pressure Sensor
5746	Cab Door Latch Position Switch
5747	Main Hydraulic Pump #1 and #7 Control Pressure Sensor
5748	Main Hydraulic Pump #2 and #8 Control Pressure Sensor
5749	Main Hydraulic Pump #3 and #5 Control Pressure Sensor
5750	Main Hydraulic Pump #4 and #6 Control Pressure Sensor
5751	Main Hydraulic Pump #1 and #7 Solenoid
5752	Main Hydraulic Pump #2 and #8 Solenoid
5753	Main Hydraulic Pump #3 and #5 Solenoid
5754	Main Hydraulic Pump #4 and #6 Solenoid
5755	Operator Remote Control Console
5756	Pump to Attachment #4 Rod End Solenoid
5757	Pump to Attachment #4 Head End Solenoid
5758	Pump to Attachment #5 Rod End Solenoid
5759	Pump to Attachment #5 Head End Solenoid
5760	Moldboard Cylinder Position Sensor
5761	HVAC Blower Motor
5762	Air Conditioner Compressor Discharge Pressure Switch
5763	Cab Air Heater Mix Actuator
5764	Port Inboard Transmission Oil Temperature Sensor

5765	Starboard Inboard Transmission Oil Temperature Sensor
5766	Port Transmission Oil Temperature Sensor
5767	Starboard Transmission Oil Temperature Sensor
5768	Port Inboard Transmission Oil Pressure Sensor
5769	Port Transmission Oil Pressure Sensor
5770	Starboard Inboard Transmission Oil Pressure Sensor
5771	Starboard Transmission Oil Pressure Sensor
5772	Port Inboard Pod Steering Motor Position Sensor
5773	Port Pod Steering Motor Position Sensor
5774	Starboard Inboard Pod Steering Motor Position Sensor
5775	Starboard Pod Steering Motor Position Sensor
5776	Port Inboard Pod Position Sensor
5777	Port Pod Position Sensor
5778	Starboard Inboard Pod Position Sensor
5779	Starboard Pod Position Sensor
5780	Lever #1 Calibration Sensor
5781	Lever #2 Calibration Sensor
5782	Lever #3 Calibration Sensor
5783	Port Inboard Pod Steering Motor Internal Temperature Sensor
5784	Port Pod Steering Motor Internal Temperature Sensor
5785	Starboard Inboard Pod Steering Motor Internal Temperature Sensor
5786	Starboard Pod Steering Motor Internal Temperature Sensor
5787	Auxiliary Pump Load Sense Disable Solenoid
5788	Charge Pump Load Sense Disable Solenoid
5789	Left Gathering Forward Solenoid
5790	Left Gathering Reverse Solenoid
5791	Right Gathering Forward Solenoid
5792	Right Gathering Reverse Solenoid
5793	Left Gathering Forward Pressure Sensor
5794	Left Gathering Reverse Pressure Sensor
5795	Right Gathering Forward Pressure Sensor
5796	Right Gathering Reverse Pressure Sensor
5797	Tow Mode Parking Brake Release Solenoid
5798	Left Front Leg Control Position Signal #1
5799	Left Front Leg Control Position Signal #2
5800	Left Front Leg Control Position Sensor
5801	Right Front Leg Control Position Signal #1
5802	Right Front Leg Control Position Signal #2
5803	Right Front Leg Control Position Sensor
5804	Output Transfer Gear Lube Oil Relief Valve Solenoid
5805	Communication Gateway
5806	Communication Gateway #1
5807	Communication Gateway #2
5808	Fan Motor Data Transmitter
5809	Input/output Backplane #1
5810	Input/output Backplane #1 Module #1
5811	Input/output Backplane #1 Module #2
5812	Input/output Backplane #1 Module #3
5813	Input/output Backplane #1 Module #4
5814	Input/output Backplane #1 Module #5
5815	Input/output Backplane #1 Module #6

5816	Input/output Backplane #1 Module #7
5817	Input/output Backplane #1 Module #8
5818	Input/output Backplane #1 Module #9
5819	Input/output Backplane #1 Module #10
5820	Input/output Backplane #1 Module #11
5821	Input/output Backplane #2
5822	Input/output Backplane #2 Module #1
5823	Input/output Backplane #2 Module #2
5824	Input/output Backplane #2 Module #3
5825	Input/output Backplane #2 Module #4
5826	Input/output Backplane #2 Module #5
5827	Input/output Backplane #2 Module #6
5828	Input/output Backplane #2 Module #7
5829	Input/output Backplane #2 Module #8
5830	Input/output Backplane #2 Module #9
5831	Input/output Backplane #2 Module #10
5832	Input/output Backplane #2 Module #11
5833	Left Conveyor Motor Data Transmitter
5834	Left Cutter Motor Data Transmitter
5835	Left Gathering Motor Data Transmitter
5836	Left Traction Motor Data Transmitter
5837	Operator Remote Control Antenna
5838	Pump Motor Data Transmitter
5839	Right Conveyor Motor Data Transmitter
5840	Right Cutter Motor Data Transmitter
5841	Right Gathering Motor Data Transmitter
5842	Right Traction Motor Data Transmitter
5843	Traction Power Converter
5844	Machine Supply Voltage Sensor
5845	Left Traction Motor Controller Power Transistor
5846	Right Traction Motor Controller Power Transistor
5847	Left Traction Motor Speed Sensor
5848	Right Traction Motor Speed Sensor
5849	Machine Mode Switch
5850	Uninterruptable Power Supply Battery
5851	Uninterruptable Power Supply Controller
5852	Left Traction Motor Controller
5853	Right Traction Motor Controller
5854	Arch In Solenoid
5855	Arch Out Solenoid
5856	SAE J1939 Data Link #3
5857	SAE J1939 Data Link #4
5858	Steering Accumulator Oil Pressure Sensor #2
5859	Rear Rotor Door Lift Lock Switch
5860	Rear Rotor Door Open Solenoid
5861	Rear Rotor Door Close Solenoid
5862	Rear Rotor Door Float Solenoid
5863	Rear Rotor Door Pressure Control Solenoid
5864	Rear Rotor Door Downward Pressure Sensor
5865	Front Rotor Door Open Solenoid
5866	Front Rotor Door Close Solenoid

5867	Rotor Raise Solenoid
5868	Rotor Lower Solenoid
5869	Rotor Lift Speed Solenoid
5870	Port Inboard Transmission Forward Gear Solenoid
5871	Starboard Inboard Transmission Forward Gear Solenoid
5872	Starboard Inboard Transmission Reverse Gear Solenoid
5873	Port Inboard Transmission Reverse Gear Solenoid
5874	Bluetooth Transceiver
5875	Variable Angle Boom Pedal Position Sensor Signal #1
5876	Variable Angle Boom Pedal Position Sensor Signal #2
5877	Straight Travel Pedal Position Sensor Signal #1
5878	Straight Travel Pedal Position Sensor Signal #2
5879	Blade Lift Lever Position Sensor Signal #1
5880	Blade Lift Lever Position Sensor Signal #2
5881	Blade Lift Lever Position Sensor
5882	Travel Forward Solenoid
5883	Travel Reverse Solenoid
5884	GPS Corrections Radio
5885	Blade Lift Arm Inertial Measurement Sensor
5886	EGR #1 Cooler Bypass Actuator
5887	EGR #2 Cooler Bypass Actuator
5888	DC Bus Power Port Voltage Sensor
5889	DC Bus Power Port Current Sensor
5890	Drive Motor Power Inverter Fault Reset Feedback Line
5891	Generator Power Inverter Fault Reset Feedback Line
5892	Power Inverter Revision Signal
5893	Auxiliary Valve #1 Load Sense Pressure Sensor
5894	Auxiliary Valve #2 Load Sense Pressure Sensor
5895	Auxiliary Valve #3 Load Sense Pressure Sensor
5896	Drill Flushing Air Solenoid
5897	Drill Flushing Pressure Sensor
5898	Air Compressor Oil Separator Wet Side Pressure Sensor
5899	Air Compressor Oil Separator Dry Side Pressure Sensor
5900	Air Compressor Inlet Close Solenoid
5901	Air Compressor Inlet Open Solenoid
5902	Air Compressor Flow Reduction Solenoid
5903	Air Compressor Interstage Temperature Sensor
5904	Air Compressor Air Inlet Pressure Sensor
5905	Air Compressor Oil Pressure Sensor
5906	Water Tank #1 Level Sensor
5907	Water Tank #2 Level Sensor
5908	Boom Lower Check Valve Solenoid
5909	Loader Auxiliary Valve Port B Anti Drift Solenoid
5910	Transmission Oil Cooler Outlet Temperature Sensor
5911	Emulsion Cleanout Mode Control Switch
5912	Cab Emergency Stop Switch
5913	Dash Keypad
5914	Propel Keypad
5915	Steering Keypad
5916	Leveling Keypad
5917	Service Keypad

5918	Rotor Keypad
5919	Engine Exhaust #2 NOx Level Sensor Power Supply
5920	Engine Exhaust #1 NOx Level Sensor
5921	Engine Exhaust #2 NOx Level Sensor
5922	Steering Control Position Sensor
5923	Auxiliary Power Unit Motor Relay
5924	Transmission Hydrostatic Loop A Pressure Sensor #1
5925	Transmission Hydrostatic Loop A Pressure Sensor #2
5926	Transmission Hydrostatic Loop B Pressure Sensor #1
5927	Transmission Hydrostatic Loop B Pressure Sensor #2
5928	Left Front Drive Motor Speed Sensor
5929	Right Front Drive Motor Speed Sensor
5930	Left Rear Drive Motor Speed Sensor
5931	Right Rear Drive Motor Speed Sensor
5932	Tool Oil Cycle Switch
5933	Tool Oil Tank Level Sensor
5934	Cab Main Power Relay
5935	Chassis Main Power Relay
5936	Carousel Index Clockwise Solenoid
5937	Carousel Index Counterclockwise Solenoid
5938	Carousel Swing Load Solenoid
5939	Carousel Swing Park Solenoid
5940	Carousel Index Cylinder Clockwise Position Switch
5941	Carousel Index Cylinder Counterclockwise Position Switch
5942	Dust Collector Motor Speed Sensor
5943	Water Injection Pump Solenoid
5944	Ride Control Solenoid #1
5945	Variable Angle Boom Cylinder Rod End Pressure
5946	Variable Angle Boom Cylinder Head End Pressure
5947	Oscillating Axle Enable Solenoid
5948	Left Side Attachment Pedal Sensor #1
5949	Left Side Attachment Pedal Sensor #2
5950	Tool Oil Solenoid
5951	Foam Injection Solenoid
5952	Foam Suction Solenoid
5953	Foam Low Level Switch
5954	Carousel Index Angle Sensor Line #1
5955	Carousel Index Angle Sensor Line #2
5956	Cutter Motor Rectifier Phase A Current Sensor
5957	Cutter Motor Rectifier Phase B Current Sensor
5958	Cutter Motor Rectifier Phase C Current Sensor
5959	Cutter Motor Contactor Feedback Signal
5960	Cutter Clutch Output Speed Sensor
5961	Cutter Motor Power Inverter High Voltage Interlock Loop
5962	Retarding Grid High Voltage Interlock Loop
5963	Left Hydraulic Pump Motor High Voltage Interlock Loop
5964	Right Hydraulic Pump Motor High Voltage Interlock Loop
5965	Left Conveyor Motor High Voltage Interlock Loop
5966	Right Conveyor Motor High Voltage Interlock Loop
5967	Rear Conveyor Motor High Voltage Interlock Loop
5968	Transformer Primary High Voltage Interlock Loop

5969	Transformer Secondary #1 High Voltage Interlock Loop
5970	Transformer Secondary #2 High Voltage Interlock Loop
5971	Auxiliary Outlet High Voltage Interlock Loop
5972	Lubricant Pump High Voltage Interlock Loop
5973	Tank Fill Pump High Voltage Interlock Loop
5974	Water Boost Pump High Voltage Interlock Loop
5975	Cooling Pump High Voltage Interlock Loop
5976	Air Conditioner High Voltage Interlock Loop
5977	Right Conveyor Motor High Temperature Switch
5978	Left Conveyor Motor High Temperature Switch
5979	Rear Conveyor Motor High Temperature Switch
5980	Right Conveyor Motor Very High Temperature Switch
5981	Left Conveyor Motor Very High Temperature Switch
5982	Rear Conveyor Motor Very High Temperature Switch
5983	Main Transformer Temperature #1 Sensor
5984	Main Transformer Temperature #2 Sensor
5985	Drive Motor Winding #3 Temperature Sensor
5986	Engine Gaseous Fuel Supply Shutoff Valve #1 Intake Pressure Sensor
5987	Engine Gaseous Fuel Supply Shutoff Valve #2 Intake Pressure Sensor
5988	Steering Remote Control Enable Feedback Line
5989	Quick Coupler Front Unlock Solenoid
5990	Quick Coupler Wedge Unlock Solenoid
5991	Left Headlight Relay
5992	Right Headlight Relay
5993	12 Volt DC Power Supply #1
5994	12 Volt DC Power Supply #2
5995	Hoist Assist Enable Switch
5996	Engine Coolant Temperature Sensor #2
5997	Hoe Boom Raise Solenoid Return
5998	Hoe Boom Lower Solenoid Return
5999	Hoe Stick In Solenoid Return
6000	Hoe Stick Out Solenoid Return
6001	Hoe Bucket Curl Solenoid Return
6002	Hoe Bucket Dump Solenoid Return
6003	Hoe Swing Left Solenoid Return
6004	Hoe Swing Right Solenoid Return
6005	Hydraulic Valve Bank Spool Centered Pressure Sensor
6006	Rear Differential Lock Pressure Sensor
6007	Aftertreatment #1 Hydrocarbon Doser Intake Fuel Temperature Sensor
6008	Implement Function #4 Port A Solenoid
6009	Implement Function #4 Port B Solenoid
6010	Battery Cable Shield Input #1
6011	Battery Cable Shield Input #2
6012	Battery Cable Shield Input #3
6013	Remote Winch Control Switch
6014	Foam Injection Tank Low Level Switch
6015	Platform Level Emergency Stop Switch
6016	Ground Level Emergency Stop Switch
6017	Autonomous Control Module #6
6018	Autonomous Control Module #7
6019	Autonomous Control Module #8

6020	Autonomous Control Module #9
6021	Autonomous Control Module #10
6022	Autonomous Control Module #11
6023	Autonomous Control Module #12
6024	Time Synchronization Input Signal #6
6025	Time Synchronization Input Signal #7
6026	Time Synchronization Input Signal #8
6027	Time Synchronization Input Signal #9
6028	Time Synchronization Input Signal #10
6029	Time Synchronization Input Signal #11
6030	Time Synchronization Input Signal #12
6031	Differential Lock Pressure Sensor
6032	Implement Boost Load Sense Solenoid
6033	Left Front Stabilizer Retract Position Switch
6034	Right Front Stabilizer Retract Position Switch
6035	Left Rear Stabilizer Retract Position Switch
6036	Right Rear Stabilizer Retract Position Switch
6037	Air Compressor Inlet Valve Differential Pressure Sensor
6038	Air Compressor Air Filter Outlet Pressure Sensor
6039	Air Compressor Inlet Valve Position Sensor
6040	Air Compressor Blow Down Valve Position Sensor
6041	Engine Gaseous Fuel Supply Pressure Regulator
6042	Water in Fuel System Switch #1
6043	Water in Fuel System Switch #2
6044	Secondary Steering Pilot Oil Pressure Sensor
6045	Remote Control Aftermarket System
6046	Engine #1 Ignition Key Switch
6047	Engine #2 Ignition Key Switch
6048	Engine Off Implement Lowering Enable Switch
6049	Engine #1 Speed Increment/Decrement Switch
6050	Engine #2 Speed Increment/Decrement Switch
6051	Engine Off Implement Lowering Enable Solenoid
6052	Engine #1 Oil Life Extension Relay
6053	Engine #2 Oil Life Extension Relay
6054	Main Hydraulic Pump #1 Control Pressure Sensor
6055	Main Hydraulic Pump #2 Control Pressure Sensor
6056	Main Hydraulic Pump #3 Control Pressure Sensor
6057	Main Hydraulic Pump #4 Control Pressure Sensor
6058	Main Hydraulic Pump #5 Control Pressure Sensor
6059	Main Hydraulic Pump #6 Control Pressure Sensor
6060	Main Hydraulic Pump #7 Control Pressure Sensor
6061	Main Hydraulic Pump #8 Control Pressure Sensor
6062	Travel Disable Solenoid
6063	Travel Lockout Switch
6064	User Defined Relay
6065	Air Conditioner #1 Compressor Pump Control Solenoid
6066	Air Conditioner #2 Compressor Pump Control Solenoid
6067	Clam Pedal Position Sensor
6068	Clam Thumbwheel Position Sensor
6069	Operator Stick Float Switch
6070	Operator Boom Float Switch

6071	Kidney Loop Hydraulic Oil Pressure Sensor
6072	Auto Lube Manual Mode Switch
6073	Front Implement Pump Solenoid
6074	Rear Implement Pump Solenoid
6075	Machine Monitoring Module
6076	Left Center Tire Pressure/Temperature Sensor
6077	Right Center Tire Pressure/Temperature Sensor
6078	Fuel/Water Separator Level Sensor
6079	Operator Refueling Pump Momentary Switch
6080	Left Auger Material Temperature Sensor
6081	Right Auger Material Temperature Sensor
6082	Powertrain Speed Range Switch
6083	Left Joystick Forward/Reverse Position Sensor #1
6084	Left Joystick Forward/Reverse Position Sensor #2
6085	Right Joystick Forward/Reverse Position Sensor #1
6086	Right Joystick Forward/Reverse Position Sensor #2
6087	Left Joystick Left/Right Position Sensor #1
6088	Left Joystick Left/Right Position Sensor #2
6089	Right Joystick Left/Right Position Sensor #1
6090	Right Joystick Left/Right Position Sensor #2
6091	Hydraulic Oil Filter Differential Pressure Sensor
6092	Powertrain Oil Filter Differential Pressure Sensor
6093	Cab Slide Switch
6094	High Pressure Wash Solenoid
6095	Machine Control Module #1
6096	Machine Control Module #2
6097	Hydraulic Pump Control Module #1
6098	Hydraulic Pump Control Module #2
6099	Swing Pump Port A Solenoid
6100	Swing Pump Port B Solenoid
6101	Swing Flow Limit Solenoid
6102	Left Swing Motor Solenoid
6103	Right Swing Motor Solenoid
6104	Brake Accumulator Charging Solenoid Return
6105	Parking Brake Solenoid Return
6106	Seat Rotation Release Solenoid
6107	Seat Slide Release Solenoid
6108	Front Drum Forward Rotation Vibratory Solenoid
6109	Front Drum Reverse Rotation Vibratory Solenoid
6110	Rear Drum Forward Rotation Vibratory Solenoid
6111	Rear Drum Reverse Rotation Vibratory Solenoid
6112	Friction Steer Solenoid
6113	Drum Light Relay
6114	Left Edge Cutter Raise Solenoid
6115	Left Edge Cutter Lower Solenoid
6116	Right Edge Cutter Raise Solenoid
6117	Right Edge Cutter Lower Solenoid
6118	Left Edge Cutter Water Spray Solenoid
6119	Right Edge Cutter Water Spray Solenoid
6120	Rotor Drivetrain Supply Solenoid
6121	Operator Station Slide In Relay

6122	Operator Station Slide Out Relay
6123	Operator Station Slide Cylinder Position Sensor
6124	Left Front Wheel Drive Enable Solenoid
6125	Right Front Wheel Drive Enable Solenoid
6126	Left Front Wheel Drive Charge Control Solenoid
6127	Right Front Wheel Drive Charge Control Solenoid
6128	Load Brake Switch
6129	Rest Switch
6130	Front Brake Control Module
6131	Rear Brake Control Module
6132	Grapple Saw Solenoid
6133	Grapple Saw Flow Control Solenoid
6134	Aftertreatment Fuel Pressure #1 Actuator Control
6135	Aftertreatment Fuel Pressure #2 Actuator Control
6136	Aftertreatment Fuel Pressure #1 Sensor
6137	Aftertreatment Fuel Pressure #2 Sensor
6138	Engine Cooling Fan Pump Load Sense Pressure Sensor
6139	Engine Air Filter #1 Differential Pressure Sensor
6140	Engine Air Filter #2 Differential Pressure Sensor
6141	Steering Pump Load Sense Pressure Sensor
6142	Implement Cooling Return Oil Filter Differential Pressure Sensor
6143	Steering Cooling Return Oil Filter Differential Pressure Sensor
6144	Operator Boom Power Down Enable Switch
6145	Operator Stick Power In Enable Switch
6146	Rear Drum Eccentric Weight Cylinder Extend Solenoid
6147	Rear Drum Eccentric Weight Cylinder Retract Solenoid
6148	Front Drum Eccentric Weight Cylinder Extend Solenoid
6149	Front Drum Eccentric Weight Cylinder Retract Solenoid
6150	Accelerator Control Feedback Signal
6151	Brake/Retarder Control Feedback Signal
6152	Brake/Retarder Pedal Position Sensor
6153	Retarder Lever Control Feedback Signal
6154	Retarder Speed Control Dial Control Feedback Signal
6155	Retarder Speed Control Dial
6156	Rotor Exposed Warning Lamp Relay
6157	Front Steering Toe Unlock Relay
6158	First Stage Conveyor Drive Pump Reverse Pressure Sensor
6159	Second Stage Conveyor Drive Pump Reverse Pressure Sensor
6160	First Stage Conveyor Drive Speed Sensor
6161	Second Stage Conveyor Drive Speed Sensor
6162	Moldboard Left Cylinder Position Sensor
6163	Moldboard Right Cylinder Position Sensor
6164	Cab Dome Light
6165	Backup Alarm Enable Relay
6166	Blackout Light Relay
6167	Blackout Switch Disable Relay
6168	Manual Mode Indicator Enable Relay
6169	Fender Forward Light Relay
6170	Fender Rearward Light Relay
6171	Secondary Steering Motor #1 Relay
6172	Secondary Steering Motor #2 Relay

6173	Secondary Steering Motor #1 Relay Return
6174	Secondary Steering Motor #2 Relay Return
6175	Rear Personnel Detect Bluetooth Transceiver
6176	Steering Enable Switch
6177	Engine Oil Property Sensor
6178	Transmission Oil Property Sensor
6179	Hydraulic Oil Property Sensor
6180	Right Steering Cylinder Head End Pressure Sensor
6181	Left Steering Cylinder Head End Pressure Sensor
6182	Collision Avoidance System Override Switch
6183	V2X Radio #1
6184	V2X Radio #2
6185	Wi-Fi Customer Network Radio
6186	Front Work Tool Lift Linkage Angle Sensor
6187	Cab Air Heater Engine Coolant Valve Position Sensor
6188	Joystick Heater Switch
6189	Proximity Detection System
6190	Lift Raise Solenoid
6191	Lift Lower Solenoid
6192	Tilt Rackback Solenoid
6193	Tilt Dump Solenoid
6194	Implement Pilot Oil Pressure Sensor
6195	Engine Turbocharger #1 Air Shutoff Valve Solenoid Status
6196	Engine Turbocharger #2 Air Shutoff Valve Solenoid Status
6197	Engine Turbocharger #3 Air Shutoff Valve Solenoid Status
6198	Engine Turbocharger #4 Air Shutoff Valve Solenoid Status
6199	Engine Turbocharger #5 Air Shutoff Valve Solenoid Status
6200	Engine Turbocharger #6 Air Shutoff Valve Solenoid Status
6201	Steering Angle Sensor #1
6202	Steering Angle Sensor #2
6203	Left Mirror Control Module
6204	Right Mirror Control Module
6205	Right Equalizer Beam Rear Outer Strain Gauge
6206	Right Equalizer Beam Rear Inner Strain Gauge
6207	Right Equalizer Beam Front Outer Strain Gauge
6208	Right Equalizer Beam Front Inner Strain Gauge
6209	Left Equalizer Beam Rear Outer Strain Gauge
6210	Left Equalizer Beam Rear Inner Strain Gauge
6211	Left Equalizer Beam Front Outer Strain Gauge
6212	Left Equalizer Beam Front Inner Strain Gauge
6213	Brake System Backup Battery Test Load Resistor
6214	Brake System Backup Battery Test Load Resistor Return
6215	Brake System Backup Battery Isolation Relay
6216	Travel Diverter Solenoid
6217	Chip Spreader Enable Solenoid
6218	Loader Joystick Left/Right Position Sensor
6219	Loader Joystick Forward/Reverse Position Sensor
6220	Clutch #1 Pressure Sensor
6221	Clutch #2 Pressure Sensor
6222	Clutch #3 Pressure Sensor
6223	Clutch #4 Pressure Sensor

6224	Clutch #5 Pressure Sensor
6225	Clutch #6 Pressure Sensor
6226	Clutch #7 Pressure Sensor
6227	Clutch #8 Pressure Sensor
6228	Clutch #9 Pressure Sensor
6229	Clutch #10 Pressure Sensor
6230	Transmission Clutch Pressure Switch
6231	Rotor Gear Shift Fork Position Sensor
6232	Transmission Control Override Switch
6233	Water Spray Keypad
6234	Battery Potential / Power Input #2
6235	Battery Potential / Power Input #3
6236	Battery Potential / Power Input #4
6237	Rotor Drivetrain Oil Temperature Sensor
6238	Left Drive Circuit Forward Pressure Sensor
6239	Right Drive Circuit Forward Pressure Sensor
6240	Left Drive Circuit Reverse Pressure Sensor
6241	Right Drive Circuit Reverse Pressure Sensor
6242	Auxiliary Keypad
6243	Left Station Operator Seat Belt Switch
6244	Right Station Operator Seat Belt Switch
6245	Left Joystick Trigger Switch
6246	Left Track Link Wear Sensor
6247	Right Track Link Wear Sensor
6248	Engine Intake Manifold Air Flow Sensor
6249	Camera Lights Control Relay Module
6250	Machine Cooling Fan #1 Speed Sensor
6251	Machine Cooling Fan #2 Speed Sensor
6252	Machine Cooling Fan #3 Speed Sensor
6253	Machine Cooling Fan #4 Speed Sensor
6254	Rotor Drivetrain Oil Pump Outlet Pressure Sensor
6255	Right Pedal Position Sensor Signal #1
6256	Right Pedal Position Sensor Signal #2
6257	Left Pedal Position Sensor Signal #1
6258	Left Pedal Position Sensor Signal #2
6259	Rotor Drivetrain Oil Cooler Solenoid
6260	Left Drive Motor Winding #1 Temperature Sensor
6261	Left Drive Motor Winding #2 Temperature Sensor
6262	Left Drive Motor Winding #3 Temperature Sensor
6263	Right Drive Motor Winding #1 Temperature Sensor
6264	Right Drive Motor Winding #2 Temperature Sensor
6265	Right Drive Motor Winding #3 Temperature Sensor
6266	Left Drive Motor Phase A Current Sensor
6267	Left Drive Motor Phase B Current Sensor
6268	Left Drive Motor Phase C Current Sensor
6269	Right Drive Motor Phase A Current Sensor
6270	Right Drive Motor Phase B Current Sensor
6271	Right Drive Motor Phase C Current Sensor
6272	Left Drive Motor Phase A Power Transistor #1
6273	Left Drive Motor Phase A Power Transistor #2
6274	Left Drive Motor Phase B Power Transistor #1

6275	Left Drive Motor Phase B Power Transistor #2
6276	Left Drive Motor Phase C Power Transistor #1
6277	Left Drive Motor Phase C Power Transistor #2
6278	Right Drive Motor Phase A Power Transistor #1
6279	Right Drive Motor Phase A Power Transistor #2
6280	Right Drive Motor Phase B Power Transistor #1
6281	Right Drive Motor Phase B Power Transistor #2
6282	Right Drive Motor Phase C Power Transistor #1
6283	Right Drive Motor Phase C Power Transistor #2
6284	Left Drive Motor Speed Sensor #1 Signal Line #1
6285	Left Drive Motor Speed Sensor #1 Signal Line #2
6286	Left Drive Motor Speed Sensor #2 Signal Line #1
6287	Left Drive Motor Speed Sensor #2 Signal Line #2
6288	Right Drive Motor Speed Sensor #1 Signal Line #1
6289	Right Drive Motor Speed Sensor #1 Signal Line #2
6290	Right Drive Motor Speed Sensor #2 Signal Line #1
6291	Right Drive Motor Speed Sensor #2 Signal Line #2
6292	Left Drive Motor Power Inverter Fault Reset Feedback Line
6293	Right Drive Motor Power Inverter Fault Reset Feedback Line
6294	Pump Motor Speed Sensor #1 Signal Line #1
6295	Pump Motor Speed Sensor #1 Signal Line #2
6296	Pump Motor Speed Sensor #2 Signal Line #1
6297	Pump Motor Speed Sensor #2 Signal Line #2
6298	Pump Motor Phase A Power Transistor #1
6299	Pump Motor Phase B Power Transistor #1
6300	Pump Motor Phase C Power Transistor #1
6301	Pump Motor Phase A Power Transistor #2
6302	Pump Motor Phase B Power Transistor #2
6303	Pump Motor Phase C Power Transistor #2
6304	Pump Motor Power Inverter Fault Reset Feedback Line
6305	Front Stabilizer Cylinder Head End Pressure Sensor
6306	Front Stabilizer Cylinder Rod End Pressure Sensor
6307	Torque Converter Output Speed Sensor #1
6308	Torque Converter Output Speed Sensor #2
6309	Turbocharger #5 Turbine Speed Sensor
6310	Turbocharger #6 Turbine Speed Sensor
6311	Turbocharger #5 Compressor Inlet Pressure Sensor
6312	Turbocharger #6 Compressor Inlet Pressure Sensor
6313	Propel Lever Position Sensor
6314	Wash Down Tank Level Sensor
6315	Mast Load Sense Relief Solenoid
6316	Drill Feed Extend Solenoid #1
6317	Drill Feed Extend Solenoid #2
6318	Drill Feed Retract Solenoid #1
6319	Drill Feed Retract Solenoid #2
6320	Auxiliary Lever #2 Position Signal #1
6321	Auxiliary Lever #2 Position Signal #2
6322	Left Front Stabilizer Enable Valve Solenoid
6323	Right Front Stabilizer Enable Valve Solenoid
6324	Left Rear Stabilizer Enable Valve Solenoid
6325	Right Rear Stabilizer Enable Valve Solenoid

6326	Trailer Tailboard Enable Valve Solenoid
6327	Trailer Tipping Enable Valve Solenoid
6328	Dozer Blade Enable Valve Solenoid
6329	Roof Window Washer Pump Relay
6330	Left Turn Signal Enable Relay
6331	Right Turn Signal Enable Relay
6332	Brake Light Relay
6333	Cab Intake Air Filter System Relay
6334	Winch Control Module
6335	Wi-Fi/Bluetooth Adapter
6336	Brake Cooling Oil Diverter Solenoid
6337	Engine Cooling Fan #2 Solenoid
6338	Supply Brake Accumulator Pressure Sensor
6339	Hoe Sideshift Left Switch
6340	Hoe Sideshift Right Switch
6341	Hoe Sideshift Left Solenoid
6342	Hoe Sideshift Right Solenoid
6343	Stabilizer/Sideshift High Pressure Solenoid
6344	Aftertreatment #1 Intake NOx Sensor Protection Air Pressure Sensor
6345	Aftertreatment #1 Outlet NOx Sensor Protection Air Pressure Sensor
6346	Object Detection Rear Camera
6347	Object Detection Left Side Camera
6348	Object Detection Front Camera
6349	Object Detection Right Side Camera
6350	Quick Coupler Wedge Position Sensor
6351	Low Beam Lights
6352	Reverse Lights
6353	Tail Lights
6354	Side Work Lights
6355	Front Left Position Light
6356	Front Right Position Light
6357	Left Daytime Running Light
6358	Right Daytime Running Light
6359	Drive Circuit #1 Forward Pressure Sensor
6360	Drive Circuit #2 Forward Pressure Sensor
6361	Drive Circuit #1 Reverse Pressure Sensor
6362	Drive Circuit #2 Reverse Pressure Sensor
6363	Vibratory Drum Enable Switch
6364	Vibratory System Switch
6365	Drive Pump Reverse Control Solenoids
6366	Drive Pump Forward Control Solenoids
6367	Fuel Metering Module #1
6368	Fuel Metering Module #2
6369	Blade Angle Disable Solenoid
6370	Blade Wings Enable Solenoid
6371	Blade Left Wing Enable Solenoid
6372	Blade Right Wing Enable Solenoid
6373	Front Auxiliary Work Light Relay
6374	Rear Auxiliary Work Light Relay
6375	Drive Circuit Port A Pressure Sensor
6376	Drive Circuit Port B Pressure Sensor

6377	Drive Pump Port A Control Solenoid
6378	Drive Pump Port B Control Solenoid
6379	Implement Keypad
6380	Inverter Guard Deflection Switch
6381	Drive Motor #1 Speed Sensor #1
6382	Drive Motor #1 Speed Sensor #2
6383	Drive Motor #2 Speed Sensor #1
6384	Drive Motor #2 Speed Sensor #2
6385	Drive Motor #1 Speed Sensor
6386	Drive Motor #2 Speed Sensor
6387	Dust Collector Fan Speed Sensor
6388	Pipe Rotation Angle Sensor
6389	Drill Feed Extend Relief Solenoid
6390	Drill Rotation Motor Position Sensor #1
6391	Drill Rotation Motor Position Sensor #2
6392	Primary Pipe Loader Gate Open Solenoid
6393	Primary Pipe Loader Gate Close Solenoid
6394	Secondary Pipe Loader Gate Open Solenoid
6395	Secondary Pipe Loader Gate Close Solenoid
6396	Primary Pipe Loader Engage Solenoid
6397	Primary Pipe Loader Disengage Solenoid
6398	Secondary Pipe Loader Engage Solenoid
6399	Secondary Pipe Loader Disengage Solenoid
6400	Primary Pipe Loader Gate Open Position Switch
6401	Primary Pipe Loader Gate Close Position Switch
6402	Secondary Pipe Loader Gate Open Position Switch
6403	Secondary Pipe Loader Gate Close Position Switch
6404	Primary Pipe Loader Engage Position Switch
6405	Primary Pipe Loader Disengage Position Switch
6406	Secondary Pipe Loader Engage Position Switch
6407	Secondary Pipe Loader Disengage Position Switch
6408	Primary Pipe Detect Switch
6409	Secondary Pipe Detect Switch
6410	Rotary Head Proximity Detection Switch #1
6411	Rotary Head Proximity Detection Switch #2
6412	Rotary Head Proximity Detection Switch #3
6413	Front Stabilizer Extend Position Switch
6414	Implement Load Add Control Solenoid
6415	Air Conditioner Condenser Fan #1 Speed Sensor
6416	Air Conditioner Condenser Fan #2 Speed Sensor
6417	Engine Oil Pressure Sensor #2
6418	Aftertreatment #1 SCR Outlet Pressure Sensor
6419	Charge Pump Pressure Relief Valve Solenoid
6420	Parking Brake Release Solenoid
6421	Side Work Lights Relay
6422	Service Brake Pedal Pressure Sensor
6423	Drive Motor Speed Sensor
6424	Left Extender Carriage Width Position Sensor
6425	Right Extender Carriage Width Position Sensor
6426	Secondary Steering Accumulator Pressure Sensor
6427	Water Spray Mode Dial

6428	Water Pump Supply Solenoid
6429	Screed Heating Zone #1 Relay
6430	Screed Heating Zone #2 Relay
6431	Screed Heating Zone #3 Relay
6432	Screed Heating Zone #4 Relay
6433	Screed Heating Zone #5 Relay
6434	Screed Heating Zone #6 Relay
6435	Charger Harmonic Filter Phase A Temperature Sensor
6436	Charger Harmonic Filter Phase B Temperature Sensor
6437	Charger Harmonic Filter Phase C Temperature Sensor
6438	Charger Cooling System Fan
6439	Charger Coolant Temperature Sensor
6440	Charger Coolant Pump
6441	Coolant Level Sensor
6442	Charger Input Circuit Breaker
6443	Charger Input Contactor
6444	Charger Input Precharge Contactor
6445	Charger Input Ground Fault Monitor
6446	Charger Output Ground Fault Monitor
6447	Charger Input Ground Fault Alarm
6448	Charger Input Voltage Phase A-B Sensor
6449	Charger Input Voltage Phase B-C Sensor
6450	Charger Harmonic Filter Phase A Voltage Sensor
6451	Charger Harmonic Filter Phase B Voltage Sensor
6452	Charger Harmonic Filter Phase C Voltage Sensor
6453	Charger Input Phase A Current Sensor
6454	Charger Input Phase B Current Sensor
6455	Charger Input Phase C Current Sensor
6456	Charger Output Current Sensor
6457	Charger Cable Assembly Positive Wire #1 Current Sensor
6458	Charger Cable Assembly Negative Wire #1 Current Sensor
6459	Charger Output Positive Contactor
6460	Charger Output Negative Contactor
6461	Charger Output Precharge Contactor
6462	Charger Output Ground Fault Alarm
6463	Charger Output Phase #1 Inductor Temperature Sensor
6464	Charger Output Phase #2 Inductor Temperature Sensor
6465	Charger Output Phase #3 Inductor Temperature Sensor
6466	Charger Output Voltage Sensor
6467	Charger Cable Assembly Voltage Sensor
6468	Charger Output Capacitor Voltage Sensor
6469	Charger Safety Relay
6470	Charger Input Contactor Controller
6471	Charger Inverter Phase #1 Current Sensor
6472	Charger Inverter Phase #2 Current Sensor
6473	Charger Inverter Phase #3 Current Sensor
6477	Charger Inverter Phase A Transistor Set
6478	Charger Inverter Phase B Transistor Set
6479	Charger Inverter Phase C Transistor Set
6480	Charger Inverter Phase A Current Sensor
6481	Charger Inverter Phase B Current Sensor

6482	Charger Inverter Phase C Current Sensor
6483	Charger Inverter Phase #1 Transistor Set
6484	Charger Inverter Phase #2 Transistor Set
6485	Charger Inverter Phase #3 Transistor Set
6486	Charger Inverter Temperature Sensor #1
6487	Charger Inverter Temperature Sensor #2
6488	Charger Inverter Temperature Sensor #3
6489	Control Enclosure Temperature Sensor
6490	Power Enclosure Temperature Sensor
6491	Ground Fault Test Load Relay
6492	Actual Gear Range Switch
6493	Front Steering Solenoids
6494	Rear Steering Solenoids
6495	Brake Cooling Pressure Sensor
6496	Left Screed Extension Type Sensor
6497	Right Screed Extension Type Sensor
6498	Tilt Enable Trigger Switch
6499	Left Rear Track Pitch Angle Cylinder Sensor
6500	Right Rear Track Pitch Angle Cylinder Sensor
6501	Emergency Stop (E-Stop) Switch
6502	Auxiliary Pre-Lube Pump
6503	Pipe Positioner Arm Engaged Position Switch
6504	Pipe Positioner Arm Disengaged Position Switch
6505	Implement Tank Case Drain Filter #2 Bypass Switch
6506	Upper Pipe Support Proximity Switch
6507	Upper Pipe Support Engage Solenoid
6508	Upper Pipe Support Disengage Solenoid
6509	Hydraulic Case Drain Filter #1
6510	Hydraulic Case Drain Filter #2
6511	Ambient Light Sensor
6512	Blade Rotation Angle Sensor Signal #1
6513	Blade Rotation Angle Sensor Signal #2
6514	Operator Parking Brake Pressure Sensor
6515	Parking Brake Engage Override Solenoid
6516	Screed Harness Detection Input
6517	Screed Lift Float Solenoid
6518	Work Tool Flow Request Code Input
6519	Work Tool Pilot Oil Pressure Input for Tool
6520	Work Tool Flow Request Pilot Pressure Sensor
6521	Cab Rear Light Relay
6522	Cab Riser Light Relay
6523	Attachment Valve #5 Retract Pressure Solenoid
6524	Attachment Valve #5 Extend Pressure Solenoid
6525	Attachment Valve #6 Extend Pressure Solenoid
6526	Attachment Valve #6 Retract Pressure Solenoid
6527	Attachment Valve #7 Extend Pressure Solenoid
6528	Attachment Valve #7 Retract Pressure Solenoid
6529	Attachment Valve #8 Extend Pressure Solenoid
6530	Attachment Valve #8 Retract Pressure Solenoid
6531	Hydraulic Vacuum Pump Relay
6532	Traction Battery Charge Port Current Sensor

6533	Traction Battery Charge Port Negative Conductor #1 Temperature Sensor
6534	Traction Battery Charge Port Negative Conductor #2 Temperature Sensor
6535	Traction Battery Charge Port Positive Conductor #1 Temperature Sensor
6536	Traction Battery Charge Port Positive Conductor #2 Temperature Sensor
6537	Traction Battery Charge Port Negative Contactor
6538	Traction Battery Charge Port Positive Contactor
6539	Traction Battery Charge Port Negative Conductor Voltage Sensor
6540	Traction Battery Charge Port Positive Conductor Voltage Sensor
6541	Traction Battery Pack Negative Contactor
6542	Traction Battery Pack Positive Contactor
6543	Traction Battery Pack Precharge Negative Contactor
6544	Traction Battery Pack Precharge Positive Contactor
6545	Master Traction Battery Management Module
6546	Traction Battery Pack #1 String #1 Battery Management Module
6547	Traction Battery Pack #1 String #2 Battery Management Module
6548	Traction Battery Pack #1 String #3 Battery Management Module
6549	Traction Battery Pack #1 String #4 Battery Management Module
6550	Traction Battery Pack #1 String #5 Battery Management Module
6551	Traction Battery Pack #2 String #1 Battery Management Module
6552	Traction Battery Pack #2 String #2 Battery Management Module
6553	Traction Battery Pack #2 String #3 Battery Management Module
6554	Traction Battery Pack #2 String #4 Battery Management Module
6555	Traction Battery Pack #2 String #5 Battery Management Module
6501	Emergency Stop (E-Stop) Switch
6502	Auxiliary Pre-Lube Pump
6503	Pipe Positioner Arm Engaged Position Switch
6504	Pipe Positioner Arm Disengaged Position Switch
6505	Implement Tank Case Drain Filter #2 Bypass Switch
6506	Upper Pipe Support Proximity Switch
6507	Upper Pipe Support Engage Solenoid
6508	Upper Pipe Support Disengage Solenoid
6509	Hydraulic Case Drain Filter #1
6510	Hydraulic Case Drain Filter #2
6511	Ambient Light Sensor
6512	Blade Rotation Angle Sensor Signal #1
6513	Blade Rotation Angle Sensor Signal #2
6514	Operator Parking Brake Pressure Sensor
6515	Parking Brake Engage Override Solenoid
6516	Screed Harness Detection Input
6517	Screed Lift Float Solenoid
6518	Work Tool Flow Request Code Input
6519	Work Tool Pilot Oil Pressure Input for Tool
6520	Work Tool Flow Request Pilot Pressure Sensor
6521	Cab Rear Light Relay
6522	Cab Riser Light Relay
6523	Attachment Valve #5 Retract Pressure Solenoid
6524	Attachment Valve #5 Extend Pressure Solenoid
6525	Attachment Valve #6 Extend Pressure Solenoid
6526	Attachment Valve #6 Retract Pressure Solenoid
6527	Attachment Valve #7 Extend Pressure Solenoid
6528	Attachment Valve #7 Retract Pressure Solenoid

6529	Attachment Valve #8 Extend Pressure Solenoid
6530	Attachment Valve #8 Retract Pressure Solenoid
6531	Hydraulic Vacuum Pump Relay
6532	Traction Battery Charge Port Current Sensor
6533	Traction Battery Charge Port Negative Conductor #1 Temperature Sensor
6534	Traction Battery Charge Port Negative Conductor #2 Temperature Sensor
6535	Traction Battery Charge Port Positive Conductor #1 Temperature Sensor
6536	Traction Battery Charge Port Positive Conductor #2 Temperature Sensor
6537	Traction Battery Charge Port Negative Contactor
6538	Traction Battery Charge Port Positive Contactor
6539	Traction Battery Charge Port Negative Conductor Voltage Sensor
6540	Traction Battery Charge Port Positive Conductor Voltage Sensor
6541	Traction Battery Pack Negative Contactor
6542	Traction Battery Pack Positive Contactor
6543	Traction Battery Pack Precharge Negative Contactor
6544	Traction Battery Pack Precharge Positive Contactor
6545	Master Traction Battery Management Module
6546	Traction Battery Pack #1 String #1 Battery Management Module
6547	Traction Battery Pack #1 String #2 Battery Management Module
6548	Traction Battery Pack #1 String #3 Battery Management Module
6549	Traction Battery Pack #1 String #4 Battery Management Module
6550	Traction Battery Pack #1 String #5 Battery Management Module
6551	Traction Battery Pack #2 String #1 Battery Management Module
6552	Traction Battery Pack #2 String #2 Battery Management Module
6553	Traction Battery Pack #2 String #3 Battery Management Module
6554	Traction Battery Pack #2 String #4 Battery Management Module
6555	Traction Battery Pack #2 String #5 Battery Management Module
6556	Rotor 2nd Gear Engage Solenoid
6557	Rotor 2nd Gear Release Solenoid
6558	Attachment Valve #1 Float Solenoid
6559	Attachment Valve #2 Float Solenoid
6560	Attachment Valve #3 Float Solenoid
6561	Attachment Valve #4 Float Solenoid
6562	Attachment Valve #5 Float Solenoid
6563	Attachment Valve #6 Float Solenoid
6564	Attachment Valve #7 Float Solenoid
6565	Attachment Valve #8 Float Solenoid
6566	Impending Shutdown Lamp
6567	Roof Wiper Switch
6568	DC Power Conditioning Supply
6569	Work Tool Flow Request PWM Input
6570	Brake Cooling Oil Diverter Solenoid Return
6571	Engine Turbocharger Lube Oil Pressure Sensor
6572	Left Legs Control Position Sensor
6573	Right Legs Control Position Sensor
6574	Rear Legs Accumulator Charge Solenoid
6575	Rear Legs Accumulator Bleed Solenoid
6576	Rear Legs Load Balance Enable Solenoid
6577	Rear Legs Accumulator Enable Relay Status
6578	Rear Legs Cylinders Load Hold Check Valve Disable Solenoid
6579	Left Rear Leg Speed Solenoid

6580	Right Rear Leg Speed Solenoid
6581	Left Front Machine Height Sensor
6582	Right Front Machine Height Sensor
6583	Left Rear Machine Height Sensor
6584	Right Rear Machine Height Sensor
6585	Left Legs Control Position Signal #1
6586	Left Legs Control Position Signal #2
6587	Right Legs Control Position Signal #1
6588	Right Legs Control Position Signal #2
6589	Guidance Control Module #1
6590	Guidance Control Module #2
6591	Carousel Lock Solenoid
6592	Carousel Unlock Solenoid
6593	Auxiliary Relay #1
6594	Auxiliary Relay #2
6595	Auxiliary Relay #3
6596	Auxiliary Relay #4
6597	Auxiliary Relay #5
6598	Auxiliary Relay #6
6599	Auxiliary Relay #7
6600	Auxiliary Relay #8
6601	Hydraulic Pilot Supply Filter Differential Pressure Sensor
6602	Hydraulic Fan Return Filter Differential Pressure Sensor
6603	Engine Cooling Fan Vibration Motor
6604	Water Delivery System Control Module
6605	Generator Speed Sensor #1
6606	Generator Speed Sensor #2
6607	Charging Status Indicator
6608	High Voltage Battery Control Enable Relay
6609	High Voltage System Control Enable Relay
6610	Trailer Tipping Raise Enable Valve Solenoid
6611	Trailer Tipping Lower Enable Valve Solenoid
6612	Generator Pump Hydraulic Pressure Sensor
6613	Left Screed Display Left Keypad
6614	Left Screed Display Right Keypad
6615	Right Screed Display Left Keypad
6616	Right Screed Display Right Keypad
6617	Left Screed Display Lower Keypad
6618	Right Screed Display Lower Keypad
6619	Cab Tilt Up Solenoid
6620	Cab Tilt Down Solenoid
6621	Cab Tilt Float Solenoid
6622	Cab Tilt Enable Solenoid
6623	Drive Motor #1 Minimum Displacement Position Switch
6624	Emulsion Spray Bar Bank #1 Nozzles Solenoid
6625	Emulsion Spray Bar Bank #2 Nozzles Solenoid
6626	Emulsion Spray Bar Bank #3 Nozzles Solenoid
6627	Emulsion Spray Bar Bank #4 Nozzles Solenoid
6628	Emulsion Spray Bar Bank #5 Nozzles Solenoid
6629	Emulsion Spray Bar Bank #6 Nozzles Solenoid
6630	Emulsion Spray Bar Bank #7 Nozzles Solenoid

6631	Emulsion Spray Bar Bank #8 Nozzles Solenoid
6632	Aftertreatment #1 Diesel Oxidation Catalyst #1 Intake Gas Pressure Sensor
6633	Cellular Antenna #2
6634	Front Brake Enable Switch
6635	Hydraulic Operated Bit Basket (HOBB) Inner Bushing Captured Proximity Switch
6636	Hydraulic Operated Bit Basket (HOBB) Outer Bushing Captured Proximity Switch
6637	Cab Front Retainer Bolt Engaged Position Detect Switch
6638	Cab Rear Retainer Bolt Engaged Position Detect Switch
6639	Electric Drive Motor Cooling Air Pressure Sensor
6640	Stick Inertial Measurement Sensor
6641	Boom Inertial Measurement Angle Sensor
6642	Linkage Position Sensor Identification
6643	Machine Inertial Measurement Sensor
6644	Auxiliary Joystick
6645	Auxiliary Joystick Switch #1
6646	Auxiliary Joystick Switch #2
6647	Auxiliary Joystick Switch #3
6648	Jacket Water Heater Relay
6649	Left Bank Compression Brake Solenoid
6650	Right Bank Compression Brake Solenoid
6651	Battery Pack Voltage Sensor
6652	Battery String #1 Current Sensor
6653	Battery String #2 Current Sensor
6654	Battery String #3 Current Sensor
6655	Battery String #4 Current Sensor
6656	Battery String #5 Current Sensor
6657	Battery String #6 Current Sensor
6658	Battery String #7 Current Sensor
6659	Battery String #8 Current Sensor
6660	Battery String #9 Current Sensor
6661	Battery String #10 Current Sensor
6662	ECM Power Supply Voltage
6663	Battery Coolant Temperature Sensor
6664	Torque Converter Oil Inlet Pressure Sensor
6665	Transmission Oil Filter Inlet Pressure Sensor
6666	Transmission Oil Filter Outlet Pressure Sensor
6667	Frame Level Left Solenoid
6668	Frame Level Right Solenoid
6669	Tiltrotator Rotation Zero Switch
6670	Auxiliary Relay Module
6671	Single Tilt Solenoid
6672	Tip Solenoid
6673	Body Inertial Measurement Sensor
6674	Autonomous Mass Storage Drive Unmount Request Switch
6675	Autonomous Cabinet Main Power Relay
6676	Machine Auxiliary Pressure Sensor
6677	Auxiliary Relay #3/#4 Switch
6678	Auxiliary Relay #5/#6 Switch
6679	Tool Mode Switch
6680	Rear Machine Height Sensor
6681	Frame Level Lever Position Sensor

6682	Steering Dial Position Sensor
6683	Drill Rotation Motor Cooling Solenoid
6684	Travel Motor Cooling Solenoid
6685	Cab Riser Linkage Angle Sensor
6686	Hydraulic Pump #1 to Stick Circuit Solenoid
6687	Hydraulic Pump #2 to Stick Circuit Solenoid
6688	Hydraulic Pump #1 to Boom Circuit Solenoid
6689	Hydraulic Pump #2 to Boom Circuit Solenoid
6690	Attachment Valve #1 Pressure Limit Solenoid
6691	Hydraulic Pump #1 to One Way Tool Valve Circuit Solenoid
6692	Hydraulic Pump #1 to Attachment Valve #1 Circuit Solenoid
6693	Hydraulic Pump #2 to Attachment Valve #1 Circuit Solenoid
6694	Attachment Valve #1 Retract Solenoid
6695	Attachment Valve #1 Extend Solenoid
6696	Attachment Valve #2 Retract Solenoid
6697	Attachment Valve #2 Extend Solenoid
6698	Attachment Valve #3 Retract Solenoid
6699	Attachment Valve #3 Extend Solenoid
6700	Attachment Valve #4 Retract Solenoid
6701	Attachment Valve #4 Extend Solenoid
6702	Attachment Valve #5 Retract Solenoid
6703	Attachment Valve #5 Extend Solenoid
6704	Attachment Valve #6 Retract Solenoid
6705	Attachment Valve #6 Extend Solenoid
6706	Attachment Valve #7 Retract Solenoid
6707	Attachment Valve #7 Extend Solenoid
6708	Attachment Valve #8 Retract Solenoid
6709	Attachment Valve #8 Extend Solenoid
6710	Medium Range Object Detection Sensor #9
6711	Medium Range Object Detection Sensor #10
6712	Medium Range Object Detection Sensor #11
6713	Medium Range Object Detection Sensor #12
6714	Medium Range Object Detection Sensor #13
6715	Medium Range Object Detection Sensor #14
6716	Medium Range Object Detection Sensor #15
6717	Medium Range Object Detection Sensor #16
6718	Screed Crown Slope Switch
6719	Cab Carbon Dioxide Sensor
6720	Battery Pack #1 Coolant Pressure Sensor
6721	Battery Pack #2 Coolant Pressure Sensor
6722	Battery Pack #1 Coolant Temperature Sensor
6723	Battery Pack #2 Coolant Temperature Sensor
6724	Vibration Sensor #1
6725	Vibration Sensor #2
6726	Vibration Sensor #3
6727	Vibration Sensor #4
6728	Vibration Sensor #5
6729	Vibration Sensor #6
6730	Vibration Sensor #7
6731	Vibration Sensor #8
6732	Vibration Sensor #9

6733	Vibration Sensor #10
6734	Vibration Sensor #11
6735	Vibration Sensor #12
6736	Vibration Sensor #13
6737	Vibration Sensor #14
6738	Vibration Sensor #15
6739	Vibration Sensor #16
6740	Vibration Sensor #17
6741	Vibration Sensor #18
6742	Vibration Sensor #19
6743	Vibration Sensor #20
6744	Implement Oil Property Sensor
6745	Steering Oil Property Sensor
6746	Boom Angle Sensor Signal #1
6747	Boom Angle Sensor Signal #2
6748	Offset Boom Angle Sensor #1
6749	Offset Boom Angle Sensor #2
6750	Stick Angle Sensor Signal #1
6751	Stick Angle Sensor Signal #2
6752	Hydraulic Motor Inverter
6753	Traction Motor Inverter #1
6754	Traction Motor Inverter #2
6755	Machine Coolant Pump
6756	Machine Coolant Heating Element
6757	Heater Loop Coolant Pump
6758	High Voltage Charger #1 Module
6759	High Voltage Charger #2 Module
6760	High Voltage Charger #3 Module
6761	Machine High Voltage System Precharge Relay
6762	Machine High Voltage System Discharge Relay
6763	Battery #1 Positive Contactor
6764	Battery #2 Positive Contactor
6765	Battery #3 Positive Contactor
6766	Battery #4 Positive Contactor
6767	Battery #5 Positive Contactor
6768	Battery Positive Contactor
6769	Battery Negative Contactor
6770	Battery String #1 Negative Contactor
6771	Battery String #2 Negative Contactor
6772	Machine High Voltage System Main Contactor
6773	Machine High Voltage System Accessory Contactor
6774	Battery Pack Negative Contactor Feedback Signal
6775	Battery Pack Positive Contactor Feedback Signal
6776	Battery String #1 Negative Contactor Feedback Signal
6777	Battery String #2 Negative Contactor Feedback Signal
6778	Traction Motor #1 Coolant Temperature Sensor
6779	Traction Motor #2 Coolant Temperature Sensor
6780	Hydraulic Motor Coolant Temperature Sensor
6781	DC to DC Converter #1
6782	DC to DC Converter #2
6783	DC to DC Converter #3

6784	DC to DC Converter #4
6785	Battery Pack #1
6786	Battery Pack #2
6787	Battery Pack #3
6788	Battery Pack #4
6789	Battery Pack #5
6790	Battery Pack
6791	Machine Electric Drive Controller
6792	Battery Management System Controller
6793	Brake Accumulator Pressure #1 Sensor
6794	Brake Accumulator Pressure #2 Sensor
6795	Machine High Voltage Interlock Loop
6796	Battery High Voltage Interlock Loop
6797	Machine Motor Inverter High Voltage Interlock Loop
6798	HVAC System High Voltage Interlock Loop
6799	Charging System High Voltage Interlock Loop
6800	Machine Power Distribution Unit High Voltage Interlock Loop
6801	Engine Filtered Fuel Sensor Module
6802	Engine Oil Sensor Module
6803	DPF Pressure Sensor Module
6804	Engine Intake Air Sensor Module
6805	Engine Air Filter #3 Differential Pressure Sensor
6806	Engine Air Filter #4 Differential Pressure Sensor
6807	Counterweight Angle Sensor
6808	Traction Battery Pack #1
6809	Traction Battery Pack #2
6810	Traction Battery Pack #1 String #1 Contactor Fuse
6811	Traction Battery Pack #1 String #2 Contactor Fuse
6812	Traction Battery Pack #1 String #3 Contactor Fuse
6813	Traction Battery Pack #1 String #4 Contactor Fuse
6814	Traction Battery Pack #1 String #5 Contactor Fuse
6815	Traction Battery Pack #2 String #1 Contactor Fuse
6816	Traction Battery Pack #2 String #2 Contactor Fuse
6817	Traction Battery Pack #2 String #3 Contactor Fuse
6818	Traction Battery Pack #2 String #4 Contactor Fuse
6819	Traction Battery Pack #2 String #5 Contactor Fuse
6820	Traction Battery Pack #1 String #1 Current Sensor
6821	Traction Battery Pack #1 String #2 Current Sensor
6822	Traction Battery Pack #1 String #3 Current Sensor
6823	Traction Battery Pack #1 String #4 Current Sensor
6824	Traction Battery Pack #1 String #5 Current Sensor
6825	Traction Battery Pack #2 String #1 Current Sensor
6826	Traction Battery Pack #2 String #2 Current Sensor
6827	Traction Battery Pack #2 String #3 Current Sensor
6828	Traction Battery Pack #2 String #4 Current Sensor
6829	Traction Battery Pack #2 String #5 Current Sensor
6830	Tiltrotator Rotation Angle Sensor
6831	Lower Boom Block Force Sensor
6832	Thermal Management Controller
6833	Traction Battery Pack #1 String #1 Safety Monitoring Unit Power Supply
6834	Traction Battery Pack #1 String #2 Safety Monitoring Unit Power Supply

6835	Traction Battery Pack #1 String #3 Safety Monitoring Unit Power Supply
6836	Traction Battery Pack #1 String #4 Safety Monitoring Unit Power Supply
6837	Traction Battery Pack #1 String #5 Safety Monitoring Unit Supply Voltage
6838	Traction Battery Pack #2 String #1 Safety Monitoring Unit Power Supply
6839	Traction Battery Pack #2 String #2 Safety Monitoring Unit Power Supply
6840	Traction Battery Pack #2 String #3 Safety Monitoring Unit Power Supply
6841	Traction Battery Pack #2 String #4 Safety Monitoring Unit Power Supply
6842	Traction Battery Pack #2 String #5 Safety Monitoring Unit Power Supply
6843	Sourcing Driver Output #7
6844	Sourcing Driver Output #8
6845	Sourcing Driver Output #9
6846	Sourcing Driver Output #10
6847	Sourcing Driver Output #11
6848	Sourcing Driver Output #12
6849	Sourcing Driver Output #13
6850	Sourcing Driver Output #14
6851	Sourcing Driver Output #15
6852	Sourcing Driver Output #16
6853	Implement Oil Particle Sensor Count Signal
6854	Implement Oil Particle Sensor Aeration Signal
6855	Steering Oil Particle Sensor Count Signal
6856	Steering Oil Particle Sensor Aeration Signal
6857	Swing Pump #1 Temperature Sensor
6858	Swing Pump #2 Temperature Sensor
6859	Swing Pump #3 Temperature Sensor
6860	Swing Pump #4 Temperature Sensor
6861	Swing Pump #1 Swing Left Solenoid
6862	Swing Pump #1 Swing Right Solenoid
6863	Swing Pump #2 Swing Left Solenoid
6864	Swing Pump #2 Swing Right Solenoid
6865	Swing Pump #3 Swing Left Solenoid
6866	Swing Pump #3 Swing Right Solenoid
6867	Swing Pump #4 Swing Left Solenoid
6868	Swing Pump #4 Swing Right Solenoid
6869	Swing Interlock Solenoid #1
6870	Swing Interlock Solenoid #2
6871	Swing Angle Sensor #1
6872	Swing Angle Sensor #2
6873	Swing Angle Sensor #3
6874	Cab Air Electric Heater #1 Relay #1
6875	Cab Air Electric Heater #1 Relay #2
6876	Cab Air Electric Heater #1 Relay #1 Feedback Signal
6877	Cab Air Electric Heater #1 Relay #2 Feedback Signal
6878	Cab Air Electric Heater #2 Relay #1 Feedback Signal
6879	Cab Air Electric Heater #2 Relay #2 Feedback Signal
6880	Cab Air Electric Heater #2 Relay #1
6881	Cab Air Electric Heater #2 Relay #2
6882	Cab Air Electric Heater #1 Temperature Sensor
6883	Cab Air Electric Heater #2 Temperature Sensor
6884	Swing Auto Lube Pressure Sensor
6885	Implement Auto Lube Pressure Sensor

6886	Track Tension Solenoid
6887	Main Hydraulic Pump #1 Temperature Sensor
6888	Main Hydraulic Pump #2 Temperature Sensor
6889	Main Hydraulic Pump #3 Temperature Sensor
6890	Main Hydraulic Pump #4 Temperature Sensor
6891	Hydraulic Pumps Motor #1 Contactor Control Relay #1
6892	Hydraulic Pumps Motor #2 Contactor Control Relay #1
6893	Hydraulic Pump Motor #1 Real Power
6894	Hydraulic Pump Motor #2 Real Power
6895	Power Cable Reel Enable Relay
6896	Hydraulic Pumps Motor #1 Key Switch
6897	Hydraulic Pumps Motor #2 Key Switch
6898	Power Systems Manager Control Module
6899	Emergency Stop (E-Stop) Reset Switch Indicator
6900	Hydraulic Pumps Motor #1 Contactor Control Relay #2
6901	Hydraulic Pumps Motor #2 Contactor Control Relay #2
6902	Rear Axle Oscillation Left Unlock Solenoid
6903	Rear Axle Oscillation Right Unlock Solenoid
6904	Battery Pack Coolant Pressure Sensor
6905	Local Positioning System Receiver #1
6906	Local Positioning System Receiver #2
6907	Local Positioning System Module
6908	Local Positioning System Transmitter
6909	Auxiliary Hydraulic Pump Solenoid
6910	Power Inverter Temperature #8 Sensor
6911	Auxiliary Valve #3 Diverter Solenoid
6912	Additional Brake Indication Park Brake Lamp Relay
6913	Lift Linkage Position Sensor Signal #1
6914	Lift Linkage Position Sensor Signal #2
6915	High Voltage Electric Distribution Device Temperature Sensor
6916	Battery Thermal Management System Refrigerant Supply Solenoid
6917	High Voltage System Insulation Sensor
6918	Air Conditioner Refrigerant Supply Solenoid
6919	High Voltage Electric Equipment Cooling System Pump Pressure Sensor
6920	Cabin Heater System Pump Pressure Sensor
6921	Energy Management Module
6922	Swing Pump #1 Case Drain Oil Temperature Sensor
6923	Swing Pump #2 Case Drain Oil Temperature Sensor
6924	Swing Pump #3 Case Drain Oil Temperature Sensor
6925	Swing Pump #4 Case Drain Oil Temperature Sensor
6926	Engine Throttle Valve #1 Outlet Pressure Sensor
6927	Engine Throttle Valve #2 Outlet Pressure Sensor
6928	Machine Low Voltage System Converter #1
6929	Machine Low Voltage System Converter #2
6930	Machine Low Voltage System Converter #3
6931	Machine Low Voltage System Converter #4
6932	Machine Low Voltage System Converter #1 Output
6933	Machine Low Voltage System Converter #2 Output
6934	Machine Low Voltage System Converter #3 Output
6935	Machine Low Voltage System Converter #4 Output
6936	Machine Cooling Radiator Bypass Valve Position Sensor

6937	High Voltage System Insulation Monitor Module
6938	Machine Cooling Radiator In Temperature Sensor
6939	Machine Cooling Radiator Out Temperature Sensor
6940	DC Charging Positive Contactor Control Relay
6941	DC Charging Negative Contactor Control Relay
6942	Machine Power Distribution DC Charging High Voltage Interlock Loop
6943	DC Charging Positive Contactor
6944	DC Charging Negative Contactor
6945	Charge Port Interface Module
6946	Charge Port Lock Feedback
6947	Water Injection Pump Intake Mixing Valve
6948	Water Injection Pump Outlet Recirculation Diverter Valve
6949	High Voltage AC Quick Charge Port Interlock Loop
6950	High Voltage Electric Distribution Device #1 Temperature Sensor
6951	High Voltage Electric Distribution Device #2 Temperature Sensor
6952	High Voltage Electric Distribution Device #3 Temperature Sensor
6953	High Voltage Charger #1 Enable Relay
6954	High Voltage Charger #2 Enable Relay
6955	High Voltage Charger #3 Enable Relay
6956	High Voltage Charger #4 Enable Relay
6957	High Voltage AC Charge Contactor #1 Feedback Signal
6958	High Voltage AC Charge Contactor #2 Feedback Signal
6959	High Voltage AC Tethered Charge Port Interlock Loop
6960	High Voltage Thermal Management System Interlock Loop
6961	Machine Cooling Condenser Discharge Pressure Sensor
6962	High Voltage Electric Equipment Coolant Temperature Sensor
6963	High Voltage Battery Outlet Coolant Temperature Sensor
6964	Machine Low Voltage System Converter Interlock Loop
6965	High Voltage Slip Ring Interlock Loop
6966	High Voltage Tethered Charge System Indicator
6967	Cabin Heater System Water Pump Control Module
6968	High Voltage Electric Equipment Cooling System Water Pump Control Module
6969	Battery Cooling System Water Pump Control Module
6970	Cabin Heater System Electric Heater Control Module
6971	Battery Heater System Electric Heater Control Module
6972	High Voltage Charge Port System Control Module
6973	High Voltage Charge System Status Indicator Module
6974	Hydraulic Pumps Motor Control Module
6975	High Voltage Charger #4 Module
6976	Battery Pack #6
6977	Battery Pack #7
6978	Battery Pack #8
6979	High Voltage AC Charge Contactor #1
6980	High Voltage AC Charge Contactor #2
6981	Machine Cooling System Compressor Control Module
6982	High Voltage AC Quick Charge System Indicator
6983	High Voltage Battery Intake Coolant Temperature Sensor
6984	Machine Cooling Compressor Discharge Pressure Sensor
6985	Machine Cooling Compressor Intake Pressure Sensor
6986	Fore Boom Inertial Measurement Sensor
6987	Battery Charge Port #1 Current Sensor

6988	Battery Charge Port #2 Current Sensor
6989	Battery Charge Port #1 Negative Conductor #1 Temperature Sensor
6990	Battery Charge Port #1 Negative Conductor #2 Temperature Sensor
6991	Battery Charge Port #1 Positive Conductor #1 Temperature Sensor
6992	Battery Charge Port #1 Positive Conductor #2 Temperature Sensor
6993	Battery Charge Port #2 Negative Conductor #1 Temperature Sensor
6994	Battery Charge Port #2 Negative Conductor #2 Temperature Sensor
6995	Battery Charge Port #2 Positive Conductor #1 Temperature Sensor
6996	Battery Charge Port #2 Positive Conductor #2 Temperature Sensor
6997	Battery Charge Port #1 Negative Conductor Voltage Sensor
6998	Battery Charge Port #2 Negative Conductor Voltage Sensor
6999	Battery Charge Port #1 Positive Conductor Voltage Sensor
7000	Battery Charge Port #2 Positive Conductor Voltage Sensor
7001	Primary Steering Pump Drive Motor Speed
7002	Left Front Steering Cylinder Position Sensor
7003	Right Front Steering Cylinder Position Sensor
7004	Front Steering Toe Unlock Solenoid
7005	Left Front Steer Left Solenoid
7006	Left Front Steer Right Solenoid
7007	Right Front Steer Right Solenoid
7008	Right Front Steer Left Solenoid
7009	Work Tool Velocity
7010	Auxiliary Lever #10 Position Sensor
7011	Auxiliary Lever #11 Position Sensor
7012	Tree Spade Port A Solenoid
7013	Tree Spade Port B Solenoid
7014	Tree Spade Control Solenoid #1
7015	Tree Spade Control Solenoid #2
7016	Tree Spade Control Solenoid #3
7017	Tree Spade Control Solenoid #4
7018	Tree Spade Control Solenoid #5
7019	Tree Spade Control Solenoid #6
7020	Tree Spade Control Solenoid #7
7021	Tree Spade Control Solenoid #8
7022	Tree Spade Function Direction Selection Switch
7023	Battery Pack #3 Coolant Pressure Sensor
7024	Tiltrotator Quick Coupler Pressure Sensor
7025	Quick Coupler Wedge Position Sensor Module
7026	Engine Crankcase Pressure Sensor Module Supply Voltage
7027	Engine Filtered Fuel Sensor Module Supply Voltage
7028	EGR Intake Pressure Sensor Module Supply Voltage
7029	Engine Fuel Delivery Absolute Pressure Supply Voltage
7030	Engine Oil Sensor Module Supply Voltage
7031	DPF Pressure Sensor Module Supply Voltage
7032	Engine Intake Air Sensor Module Supply Voltage
7033	Leg Lift Solenoids
7034	Battery Charge Port #1 Supply Equipment
7035	Battery Charge Port #1 Proximity Pilot Circuit
7036	Hydraulic Motor Inverter 5V Power Supply Output
7037	Hydraulic Motor Speed Sensor
7038	Traction Inverter #1 High Voltage Input

7039	Traction Inverter #1 High Voltage Output
7040	Hydraulic Inverter High Voltage Input
7041	Hydraulic Inverter High Voltage Output
7042	Low Voltage Battery Charger High Voltage Input
7043	Low Voltage Battery Charger Output Voltage
7044	Machine Coolant Heating Element High Voltage Input
7045	Air Conditioner Compressor High Voltage Input
7046	Traction Motor #1 Speed Sensor
7047	Traction Motor Winding Temperature #1 Sensor
7048	Traction Motor Winding Temperature #2 Sensor
7049	Hydraulic Motor Winding Temperature #1 Sensor
7050	Hydraulic Motor Winding Temperature #2 Sensor
7051	Implement Minimum Flow Demand Solenoid
7052	Machine Cooling Fan #1 Feedback
7053	Machine Cooling Fan #2 Feedback
7055	Collision Awareness/Avoidance Module #1
7056	Collision Awareness/Avoidance Module #2
7798	Road Light
7799	High Beam Light
7800	Front Long Range Work Light #1
7801	Rear Long Range Work Light #1
7802	Beacon

Failure Mode Identifiers (FMI) on Cat[®] Data Link

Failure Mode Identifiers (FMI) are used to communicate what the ECM or ECU has detected via the Cat[®] Data Link (CDL). The CID - FMI diagnostic code is used to describe a detected problem, not a root cause. For example, a CID 100 - FMI 03 "Engine Oil Pressure - Voltage Above Normal" code. The system detected that the signal voltage from this sensor input went above the valid voltage range. The root cause can be an open circuit, a short to a power source, a failed sensor, and so on.

Refer to the troubleshooting guide for the specific product. The troubleshooting guide procedure will help determine the root cause of a diagnostic trouble code (DTC).

Table 4

Failure Mode Identifier	
FMI	"Failure Description"
0	"High"
1	"Low"
2	"Erratic, Intermittent, or Incorrect"
3	"Voltage Above Normal"
4	"Voltage Below Normal"
5	"Current Below Normal"
6	"Current Above Normal"
7	"Not Responding Properly"
8	"Abnormal Frequency, Pulse Width, or Period"
9	"Abnormal Update Rate"
10	"Abnormal Rate of Change"
11	"Other Failure Mode"
12	"Failure"
13	"Out of Calibration"
14	"Special Instruction"
19	"Data Error"
20	"Data Drifted High"

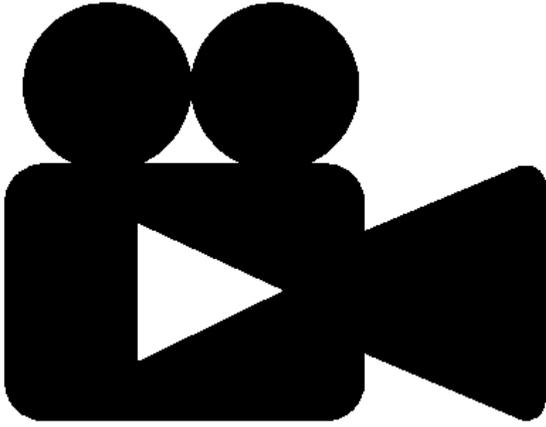


Illustration 1

g06471531

Reference: For more information, refer to the supplemental video that goes with the procedures you are referencing on Caterpillar Channel1.

Note: Click or copy the following links into a web browser, or scan the following QR codes using a QR enabled device. A CWS login is required to access Caterpillar Channel1.

https://channel1.mediaspace.kaltura.com/media/-3+FMI+Code+%28ElectroNicks%29/1_uedjvtuz/96189352

Illustration 2
-3 FMI Code

g07773603

https://channel1.mediaspace.kaltura.com/media/-4+FMI+Code+%28ElectroNicks%29/1_80s8b2x9/96189352

Illustration 3
-4 FMI Code

g07773607

https://channel1.mediaspace.kaltura.com/media/-5+FMI+CODE+%28Electronics%29/1_rfm1r6w/96189352



Illustration 4
-5 FMI Code

g07773610

https://channel1.mediaspace.kaltura.com/media/-6+FMI+CODE+%28Electronics%29/1_0d15zq4e/96189352



Illustration 5
-6 FMI Code

g07773611

https://channel1.mediaspace.kaltura.com/media/FMI+-15%2C+-16%2C+-0+THE+DATA+HIGHS+%28ELECTRONICKS%29/1_ihyra0f7/96189352



Illustration 6
FMI -15, -16, -0 the Data Highs

g07773615

[https://channel1.mediaspace.kaltura.com/media/FMI%20-18%2C%20-17%2C%20-1%20THE%20DATA%20LOWS%20\(ELECTRONICKS\)/1_f8xyq0rd](https://channel1.mediaspace.kaltura.com/media/FMI%20-18%2C%20-17%2C%20-1%20THE%20DATA%20LOWS%20(ELECTRONICKS)/1_f8xyq0rd)



Illustration 7
FMI -18, -17, -1 the Data Lows

g07773639

FMI 00 "High". If an input is still functioning in the valid range but the input is sending a signal that is above the acceptable limit of the parameter, an FMI 00 code will be generated. On Cat[®] Data Link event codes are normally used for this condition.

FMI 01 "Low". An input that is still functioning in the valid range but sending a signal below the acceptable limit of the parameter will cause the FMI 01 code. On Cat[®] Data Link event codes are normally used for this condition.

FMI 02 "Erratic, Intermittent, or Incorrect". Erratic or intermittent data includes all measurements that change at a rate that is not considered possible in the real world condition and must be caused by improper operation of the measuring device or the connection to the ECM / ECU module. Signal data from a component is present, at least intermittently. The signal is either unstable or invalid as recognized by the control doing diagnostics. Data can be correct sometimes and not at other times. FMI 02 is also used for data that is invalid, such as an invalid state of a parity switch.

Note: FMI 02 is different from FMI 10. FMI 02 is used for situations where the rate of change is not physically possible. FMI 10 is used for situations where the rate of change is physically possible, but outside the predefined limits of a properly functioning system.

FMI 03 "Voltage Above Normal". FMI 03 occurs when the voltage reading from the identified circuit is above the valid range. FMI 03 most often relates to a signal circuit.

FMI 04 "Voltage Below Normal". FMI 04 occurs when the voltage reading from the identified circuit is below the valid range. FMI 04 most often relates to a signal circuit.

FMI 05 "Current Below Normal". FMI 05 occurs when the current through the identified circuit is below the valid range. FMI 05 most often relates to a driver circuit.

FMI 06 "Current Above Normal". FMI 06 occurs when the current through the identified circuit is above the valid range. FMI 06 most often relates to a driver circuit.

FMI 07 "Not Responding Properly". FMI 07 occurs when an electronic control sends an electrical command to a mechanical system and the result is not within the acceptable range. An example of FMI 07 occurs when the ICM transmission (EPTC II) is shifting slowly as a result of a sluggish solenoid valve.

FMI 08 "Abnormal Frequency, Pulse Width, or Period". FMI 08 occurs when a frequency of the signal or the pulse width of the signal is not within the range that is expected.

Note: The period is the time in seconds for one cycle at a specific frequency.

FMI 09 "Abnormal Update Rate". FMI 09 pertains to the communication between the electronic controls on the data link. FMI 09 occurs when an electronic control is not able to receive any information from another electronic control, when the electronic control expects to receive information.

FMI 10 "Abnormal Rate of Change". FMI 10 relates to a signal that changes too fast or too slow. The rate of change is outside of the expected limit, but possible in the real world.

FMI 11 "Other Failure Mode". FMI 11 occurs when the electronic control identifies more than one FMI as being responsible for a single problem, or when the failure mode does not properly fit into any other FMI.

FMI 12 "Failure". FMI 12 occurs when a smart device (such as an ECM / ECU) has determined that a device has failed.

Note: In the past, FMI 12 had also been used to describe the following conditions:

- An electronic control sends a signal to another electronic module over a data link. The electronic control expects a response but the electronic control receives no response or an incorrect response.
- An electronic control expects to receive information on a continuing basis from another electronic module over a data link, but not all expected information is received.

FMI 13 "Out of Calibration". FMI 13 occurs when calibration is required. Either the calibration has never been performed or the system has gone out of calibration.

FMI 14 "Special Instruction". FMI 14 is used when a special procedure or more detailed information is required to understand the code.

FMI 19 "Data Error". FMI 19 is associated with network data that is received. The component that is used to measure the real world signal is wired directly to the module that is sourcing the data to the network. The module that is receiving the data via the network is receiving the information with an error indicator, and not the actual data.

FMI 20 "Data Drifted High".

FMI 21 "Data Drifted Low".

Event Codes

Event Codes are also referred to as Event Identifiers (EID)

Table 5

EID	Description
1	Engine Oil Filter Restriction Derate
2	Engine Oil Filter Restriction Shutdown
3	Engine Overspeed Derate
4	Engine Overspeed Shutdown
5	Fuel Filter Restriction Derate
6	Fuel Filter Restriction Shutdown
7	High Aftercooler Temperature Derate
8	High Aftercooler Temperature Shutdown
9	High Altitude Derate
10	High Altitude Shutdown
11	High Altitude Warning
12	High Crankcase Pressure Derate
13	High Crankcase Pressure Shutdown
15	High Engine Coolant Temperature Derate
16	High Engine Coolant Temperature Shutdown
17	High Engine Coolant Temperature Warning
18	High Engine Oil Temperature Derate
19	High Engine Oil Temperature Shutdown
20	High Engine Oil Temperature Warning
21	High Exhaust Temperature Derate
22	High Exhaust Temperature Shutdown
23	High Hydraulic Oil Temperature Derate
24	High Hydraulic Oil Temperature Shutdown
25	High Inlet Air Temperature Derate
26	High Inlet Air Temperature Shutdown
27	High Inlet Air Temperature Warning
28	High Transmission Oil Temperature Derate
29	High Transmission Oil Temperature Shutdown
30	High Transmission Oil Temperature Warning
31	Air Filter Restriction Derate
32	Air Filter Restriction Shutdown
33	Loss of Coolant Flow Derate
34	Loss of Coolant Flow Shutdown
35	Loss of Coolant Flow Warning
36	Low Engine Coolant Temperature Derate
37	Low Engine Coolant Temperature Shutdown
38	Low Engine Coolant Temperature Warning
39	Low Engine Oil Pressure Derate
40	Low Engine Oil Pressure Shutdown
41	Low System Voltage Derate
42	Low System Voltage Shutdown
43	Low System Voltage Warning
44	Low Transmission Oil Pressure Derate
45	Low Transmission Oil Pressure Shutdown
46	Low Transmission Oil Pressure Warning
47	Transmission Abuse Warning
48	Backup ECM Took Control
49	Coasting in Neutral Warning

50	High System Voltage Warning
51	Low Fuel Pressure Derate
52	Low Fuel Pressure Shutdown
53	Low Fuel Pressure Warning
54	High Fuel Temperature Derate
55	High Fuel Temperature Shutdown
56	High Fuel Temperature Warning
57	Low Engine Coolant Level Derate
58	Low Engine Coolant Level Shutdown
59	Low Engine Coolant Level Warning
60	Hydrocarbon Filter Change Due
61	Hydrocarbon Filter Change 100 Hours Overdue
62	Low Hydrocarbon Level
63	Out of Hydrocarbon
64	Low Hydrocarbon Pressure
65	High Hydrocarbon Pressure
66	Hydrocarbon Leak
67	Plugged Hydrocarbon Injector
68	High Catalyst Temperature
69	Insufficient Hydrocarbon Injected
70	Incorrect Number of Hydrocarbon Injectors
71	Oil Level Add Mark
72	Oil Level Low Mark
73	High Oil Filter Differential Pressure
74	Oil Filter Differential Pressure Very High
75	Hydrocarbon Pump Motor Overheated
76	Rotor Height Not Attained
77	Differential (Axle) Filter Restriction
78	Blade Pitch Not Zeroed
79	Low Machine Speed for Cruise Control
80	Low Engine Speed for Cruise Control
81	Incorrect Gear for Cruise Control
82	Operator Shift Settings Not Saved
83	Transmission Overspeed
84	Machine Overspeed Warning
85	Engine Shutdown Overridden
86	High Left Front Brake Oil Temperature
87	High Right Front Brake Oil Temperature
88	High Left Rear Brake Oil Temperature
89	High Right Rear Brake Oil Temperature
90	High Differential (Axle) Oil Temperature
91	High Differential (Axle) Oil Pressure
92	Boost Pressure Above Normal
93	Boost Pressure Below Normal
94	Axle Protection Derate
95	Fuel Filter Restriction Warning
96	High Fuel Pressure
97	Engine Derate Overridden
98	Engine Pre-lube Override
99	Engine Oil Filter Restriction Warning
100	Low Engine Oil Pressure Warning

101	High Crankcase Pressure Warning
102	Module Internal Under Temperature
103	Module Internal Over Temperature
104	CMRs from GPS Reference
105	Turbocharger Turbine Inlet Air Temperature High
106	High Front Brake Oil Temperature
107	High Rear Brake Oil Temperature
108	Machine Upshift to Prevent Engine Overspeed
109	Draft Setpoint Switch Depressed
110	Invalid Event
111	Metal Particle Warning
112	Metal Particle Shutdown
113	High Transmission Oil Pressure
114	Aftertreatment #1 DEF Dosing Unit #1 Input Lines Not Purged
116	Powertrain Filter Bypass Switch Closed
117	High Main Hydraulic Pump Pressure
118	High Tilt Hydraulic Pump Pressure
119	Low Fuel Level
120	Jacket Water Temperature High Warning
121	Jacket Water Temperature High Derate
122	Jacket Water Temperature High Shutdown
123	Jacket Water to Engine Oil Temp Low Warning
124	Jacket Water to Engine Oil Temp Low Shutdown
125	Engine Oil Pressure High Warning
126	Engine Oil Pressure High Shutdown
127	Engine Oil Filter Diff Pressure Low Warning
128	Engine Oil Filter Diff Pressure Low Shutdown
129	Engine Oil Filter Diff Pressure High Warning
130	Engine Oil Filter Diff Pressure High Shutdown
131	Jacket Water Level Low Warning
132	Jacket Water Level Low Shutdown
133	Low Jacket Water Pressure Warning
134	Low Jacket Water Pressure Derate
135	Low Jacket Water Pressure Shutdown
136	No GPS Position Data
137	Left Extender Lost Flame Detection
138	Left Extender No Flame Detection
139	Left Extender Failure to Reach Temperature
140	Left Extender Unexpected Flame Detection
141	Left Main Lost Flame Detection
142	Left Main No Flame Detection
143	Left Main Failure to Reach Temperature
144	Left Main Unexpected Flame Detection
145	Right Extender Lost Flame Detection
146	Right Extender No Flame Detection
147	Right Extender Failure to Reach Temperature
148	Right Extender Unexpected Flame Detection
149	Right Main Lost Flame Detection
150	Right Main No Flame Detection
151	Right Main Failure to Reach Temperature
152	Right Main Unexpected Flame Detection

153	High Speed Directional Shift
154	Low Torque Converter Oil Temperature
155	High Torque Converter Oil Temperature
156	Excessive Sustained Third Gear Operation
157	Engine #1 Failure to Start
158	Low Gas Pressure Start Inhibit
159	Closed Circuit Breather
160	Low Gas Pressure
161	High Intake Manifold Air Pressure
162	High Boost Pressure
163	Engine Spitback
164	High Injector Actuation Pressure
165	Injection Actuation Pressure System Fault
166	Radiator Cleanout Door Opened with Engine Running
167	Machine Driven with Rear Axle Pivot Locked
168	Invalid Event
169	Engine Oil Maintenance Required
170	Fuel Filter Change Required
171	Low Engine Oil Level
172	High Air Filter Restriction
173	High Exhaust Temperature Warning
174	Low Expansion Tank Fluid Level
175	External Derate Requested
176	High Starting Air Pressure
177	Low Starting Air Pressure
178	Low Fuel Temperature
179	Alternator Not Charging
180	Auto Lube Distribution Line Plugged
181	Limited Mobility Mode
182	Suction Valve Off
183	High Pressure Oil Line Broken
184	High Pressure Fuel Line Broken
185	Low Seawater Outlet Pressure
186	Low Inlet Air Temperature
187	See Service Manual
188	Service Brake Pedal Not Actuating Parking Brake
189	Excess Oil Mist in Crankcase
190	Engine Overspeed Warning
191	Boom Raise Limit Reached Due to Machine in Motion
192	Steering System Malfunction
193	Boom Raise Limit Reached Due to Park Brake Not Engaged
194	High Exhaust Temperature
195	Conflicting Travel Pedal Switches Information
196	Conflicting Attachment Pedal Switches Information
197	High Engine Oil Temperature
198	Low Fuel Pressure
199	Low Coolant Temperature
200	Continuous Cylinder Misfire
201	Cylinder #1 Intermittent Misfire
202	Cylinder #2 Intermittent Misfire
203	Cylinder #3 Intermittent Misfire

204	Cylinder #4 Intermittent Misfire
205	Cylinder #5 Intermittent Misfire
206	Cylinder #6 Intermittent Misfire
207	Cylinder #7 Intermittent Misfire
208	Cylinder #8 Intermittent Misfire
209	Cylinder #9 Intermittent Misfire
210	Cylinder #10 Intermittent Misfire
211	Cylinder #11 Intermittent Misfire
212	Cylinder #12 Intermittent Misfire
213	Cylinder #13 Intermittent Misfire
214	Cylinder #14 Intermittent Misfire
215	Cylinder #15 Intermittent Misfire
216	Cylinder #16 Intermittent Misfire
217	Low Diesel Fuel Pressure
218	High Diesel Fuel Pressure
219	Low Diesel Fuel Differential Pressure
220	High Diesel Fuel Temperature
221	Low Gas Supply Pressure
222	High Gas Supply Pressure
223	High Gas Temperature
224	High Jacket Water Inlet Pressure
225	Engine Overcrank
226	Driven Equipment Not Ready
227	Insufficient Boost
228	Low Jacket Water Outlet Pressure
229	Fuel Energy Content Setting Low
230	Fuel Energy Content Setting High
231	Fuel Quality Out of Range
232	High Fuel/Water Separator Water Level
233	Low Engine Pre-Lube Pressure
234	Low Auto Lube Grease Level
235	Low Hydraulic Oil Level
236	Return Hydraulic Oil Filter Plugged
237	Machine Overloaded
238	Low Jacket Water Inlet Pressure
239	Left Rear Parking Brake Dragging
240	Right Rear Parking Brake Dragging
241	Abnormal Engine Fan System Operation
242	Engine Overload
243	High Left Turbocharger Turbine Outlet Temperature
244	High Right Turbocharger Turbine Outlet Temperature
245	High Right Turbocharger Turbine Inlet Temperature
246	High Left Turbocharger Turbine Inlet Temperature
247	Low Left Turbocharger Turbine Outlet Temperature
248	Low Right Turbocharger Turbine Outlet Temperature
249	Low Right Turbocharger Turbine Inlet Temperature
250	Low Left Turbocharger Turbine Inlet Temperature
251	High Raw Water Temperature
252	Loss of Key Table Information
253	Detonation Derate Requested
254	No Detonation Derate Action Taken

255	Diagnostic Reset
256	Steering Output Detected in Wrong Direction
257	Steering Output Detected with No Command Given
258	No steering detected with command given
259	Excessive steering system command error
260	High Boom Position
261	High Quick Coupler Pressure
262	Low Quick Coupler Pressure
263	Low main pump pressure
264	Emergency Stop Activated
265	User Defined Shutdown
266	Low Hydrax Oil Pressure
267	High Gas Fuel Pressure
268	Unexpected Engine Shutdown
269	Customer Shutdown Requested
270	Driven Equipment Shutdown Requested
271	User Defined Switch Active
272	Inlet Air Restriction Warning
273	Machine operation attempted using an invalid key
274	Security override used
275	Engine #2 (Slave) Not Running
276	Engine #2 (Slave) Running with Engine #1 (Master) Not Running
277	Engine-to-Engine Power Balancing Not Achieved
278	High Exhaust Differential Temperature
279	High Aftercooler Temperature Warning
280	Engine Control Switch (ECS) Not in Automatic
281	Steering Hydraulic Oil Filter Restricted
282	Implement Hydraulic Oil Filter Restricted
283	Low Hydraulic Charge Pressure
284	Low Brake Accumulator Pressure
285	Low Left Track Tension Accumulator Pressure
286	Low Right Track Tension Accumulator Pressure
287	High Left Track Tension Accumulator Pressure
288	High Right Track Tension Accumulator Pressure
289	Low System Air Pressure
290	High System Air Pressure
291	Shifted into Park at High Speed
292	Rear Power Takeoff (PTO) Overspeed
293	Low Steering Oil Flow
294	Impending Brake Application
295	Plugged Auger Filter
296	Implement Controls Not in Neutral Position
297	Blade Float Hydraulic System Failure
298	Work Lights On With Key Switch Off
299	Road Lights On With Key Switch Off
300	Machine Operated With Auto Lube System Disabled
301	Cylinder #1 Gas Admission Valve (GAV) Stuck Open
302	Cylinder #2 Gas Admission Valve (GAV) Stuck Open
303	Cylinder #3 Gas Admission Valve (GAV) Stuck Open
304	Cylinder #4 Gas Admission Valve (GAV) Stuck Open
305	Cylinder #5 Gas Admission Valve (GAV) Stuck Open

306	Cylinder #6 Gas Admission Valve (GAV) Stuck Open
307	Cylinder #7 Gas Admission Valve (GAV) Stuck Open
308	Cylinder #8 Gas Admission Valve (GAV) Stuck Open
309	Cylinder #9 Gas Admission Valve (GAV) Stuck Open
310	Cylinder #10 Gas Admission Valve (GAV) Stuck Open
311	Cylinder #11 Gas Admission Valve (GAV) Stuck Open
312	Cylinder #12 Gas Admission Valve (GAV) Stuck Open
313	Cylinder #13 Gas Admission Valve (GAV) Stuck Open
314	Cylinder #14 Gas Admission Valve (GAV) Stuck Open
315	Cylinder #15 Gas Admission Valve (GAV) Stuck Open
316	Cylinder #16 Gas Admission Valve (GAV) Stuck Open
317	Cylinder #17 Gas Admission Valve (GAV) Stuck Open
318	Cylinder #18 Gas Admission Valve (GAV) Stuck Open
319	Cylinder #19 Gas Admission Valve (GAV) Stuck Open
320	Cylinder #20 Gas Admission Valve (GAV) Stuck Open
321	High Right Exhaust Temperature
322	High Left Exhaust Temperature
323	Low Left Exhaust Temperature
324	Low Right Exhaust Temperature
325	High Exhaust Stack Temperature
326	Low Transmission Latching Pressure
327	Low Output Transfer Gear Pressure
328	Output Transfer Gear Filter Plugged
329	Transmission Filter Plugged
330	Transmission Output Speed Mismatch
331	Manual Transmission Override Activated
332	Excess Water in the Intake Air Manifold
333	High Auto Lube Pressure
334	Low Auto Lube Pressure
335	Low Swing Brake Pilot Pressure
336	Low Travel Brake Pilot Pressure
337	High Engine Oil to Engine Coolant Diff Temp
338	Swing Requested with Swing Brake On
339	Travel Requested with Travel Brake On
340	Implement Lever Movement Aborted the Autodig Cycle
341	Low Lift Cylinder Pres Aborted Autodig Cycle
342	Low TC Output Torque Aborted the Autodig Cycle
343	High Ground Speed aborted the autodig cycle
344	Maximum Autodig Cycle Time Exceeded
345	Lift Func Lever not in hold position on startup
346	Tilt Func Lever not in hold position on startup
347	3rd Function Lever not in hold position on startup
348	4th Function Lever not in hold position on startup
349	Lift Linkage Movement Detected w/ no Command Given
350	Tilt Linkage Movement Detected w/ no Command Given
351	Lift Linkage Movement Detected in Wrong Direction
352	Tilt Linkage Movement Detected in Wrong Direction
353	Machine Configuration Changed
354	Low Fan Pump Pressure
355	High Left Turbine Speed
356	High Inlet Air Pressure

357	Low Inlet Air Pressure
358	Engine Underspeed
359	Maximum Blade Tilt Position Exceeded
360	Low Engine Oil Pressure
361	High Engine Coolant Temperature
362	Engine Overspeed
363	High Fuel Supply Temperature
364	Low Prechamber Fuel Pressure
365	High Prechamber Fuel Pressure
366	Low Main Chamber Fuel Pressure
367	High Main Chamber Fuel Pressure
368	High Inlet Air Temperature
369	Engine Stall Condition
370	Screed Material Height Sensor Change During Operation
371	Operator Station Change while Machine in Motion
372	Machine Operating in Open Loop
373	Machine Not Stopped in Allotted Time
374	Feeder Switches in Manual Position at Startup
375	Prohibited Maneuver
376	Gear Change with Propel Lever Not in Neutral
377	250 Hour Maintenance Due
378	500 Hour Maintenance Due
379	1000 Hour Maintenance Due
380	2000 Hour Maintenance Due
381	3000 Hour Maintenance Due
382	6000 Hour Maintenance Due
383	User Defined Maintenance Due
384	Left Air Inlet Restriction
385	Right Air Inlet Restriction
386	Low Engine Coolant or Engine Oil Level
387	Excessive Track Slip
388	Access Platform Not Compatible
389	Plugged Elevator Oil Filter
390	Fuel Filter Restriction
391	Inlet Air Restriction
392	Downshift Suspended
393	High Inlet #2 Air Temperature
394	High Boost Pressure #2
395	Transmission Stall Condition
396	High Fuel Rail Pressure
397	High Fuel Rail #2 Pressure
398	Low Fuel Rail Pressure
399	Low Fuel Rail #2 Pressure
400	Ground Speed Too High for Park Brake Engagement
401	Cylinder #1 Detonation
402	Cylinder #2 Detonation
403	Cylinder #3 Detonation
404	Cylinder #4 Detonation
405	Cylinder #5 Detonation
406	Cylinder #6 Detonation
407	Cylinder #7 Detonation

408	Cylinder #8 Detonation
409	Cylinder #9 Detonation
410	Cylinder #10 Detonation
411	Cylinder #11 Detonation
412	Cylinder #12 Detonation
413	Cylinder #13 Detonation
414	Cylinder #14 Detonation
415	Cylinder #15 Detonation
416	Cylinder #16 Detonation
417	Cylinder #17 Detonation
418	Cylinder #18 Detonation
419	Cylinder #19 Detonation
420	Cylinder #20 Detonation
421	Cylinder #1 Detonation Shutdown
422	Cylinder #2 Detonation Shutdown
423	Cylinder #3 Detonation Shutdown
424	Cylinder #4 Detonation Shutdown
425	Cylinder #5 Detonation Shutdown
426	Cylinder #6 Detonation Shutdown
427	Cylinder #7 Detonation Shutdown
428	Cylinder #8 Detonation Shutdown
429	Cylinder #9 Detonation Shutdown
430	Cylinder #10 Detonation Shutdown
431	Cylinder #11 Detonation Shutdown
432	Cylinder #12 Detonation Shutdown
433	Cylinder #13 Detonation Shutdown
434	Cylinder #14 Detonation Shutdown
435	Cylinder #15 Detonation Shutdown
436	Cylinder #16 Detonation Shutdown
437	Cylinder #17 Detonation Shutdown
438	Cylinder #18 Detonation Shutdown
439	Cylinder #19 Detonation Shutdown
440	Cylinder #20 Detonation Shutdown
441	Idle Elevated to Increase Battery Voltage
442	Engine Failed to Stop with a No-Fuel Command
443	High Auxiliary Pressure
444	Low Auxiliary Pressure
445	High Auxiliary Temperature
446	Low Auxiliary Temperature
447	Park Brake Not Engaged With No Operator In Seat
448	PTO Is Engaged With No Operator In Seat
449	Implement Not in Hold State With No Operator In Seat
450	PTO Not Engaged Because Hitch Not Centered
451	PTO Engage Attempted With Remote Rear PTO Switch While Tractor Not In Park
452	Excessive Inching Mode Operation
453	Desired Gear Prohibited for Machine Speed
454	Hydraulic Case Drain Filter Plugged
455	Hydraulic Pilot Supply Filter Plugged
456	Maintenance Due Soon
457	Maintenance Past Due
458	High Right Turbine Speed

459	Engine Rated Horsepower Output Changed
460	Machine Tip Condition Detected
461	Ripper Autostow Timed Out
462	Local GPS Receiver Internal Temperature High
463	Base (Remote) GPS Receiver Internal Temperature High
464	Inertial Measurement Unit Internal Temperature High
465	Unexpected Guidance System Deactivation
466	Feature Mismatch With ECM Swap
467	Blade Lift Control Out Of Neutral At Inappropriate Time
468	Blade Tilt Control Out Of Neutral At Inappropriate Time
469	Blade Pitch Control Out Of Neutral At Inappropriate Time
470	Mode Select Switch Depressed At Inappropriate Time
471	Manual Select Switch Depressed At Inappropriate Time
472	Ripper In/Out Control Out Of Neutral At Inappropriate Time
473	Ripper Lift Control Out Of Neutral At Inappropriate Time
474	Ripper Autostow Switch Depressed At Inappropriate Time
475	Winch Spool In/Out Control Out Of Neutral At Inappropriate Time
476	Winch Drum Release Control Out Of Neutral At Inappropriate Time
477	Local GPS Receiver L1 Signal Lost
478	Local GPS Receiver L2 Signal Lost
479	Base (Remote) GPS Receiver L1 Signal Lost
480	Base (Remote) GPS Receiver L2 Signal Lost
481	DGPS Correction Signal Lost
482	Unexpected Left Track Forward Movement Detected
483	Unexpected Right Track Forward Movement Detected
484	Unexpected Left Track Reverse Movement Detected
485	Unexpected Right Track Reverse Movement Detected
486	Multiple Security System Master ECMs Detected
487	No Security System Master ECM Detected
488	Low Intake Valve Actuation Pressure
489	Intake Valve Actuation Pressure System Failure
490	Park Brake Applied While Shift Lever Not In Neutral
491	Incorrect Number of Valve ECMs Detected
492	Low Engine Oil Temperature
493	Low Boost Pressure #2
494	Speed Inappropriate for Automatic Guidance System Operation
495	Unexpected Guidance System Deactivation Due to GPS Hardware
496	Unexpected Guidance System Deactivation Due to Inertial Measurement Sensor
497	Unexpected Guidance System Deactivation Due to Steering System
498	Fuel Pressure Present During Initial Cranking
499	Fuel Rail #1 Pressure Leak
500	Fuel Rail #2 Pressure Leak
501	Cylinder #1 Spark Plug Maintenance Required
502	Cylinder #2 Spark Plug Maintenance Required
503	Cylinder #3 Spark Plug Maintenance Required
504	Cylinder #4 Spark Plug Maintenance Required
505	Cylinder #5 Spark Plug Maintenance Required
506	Cylinder #6 Spark Plug Maintenance Required
507	Cylinder #7 Spark Plug Maintenance Required
508	Cylinder #8 Spark Plug Maintenance Required
509	Cylinder #9 Spark Plug Maintenance Required

510	Cylinder #10 Spark Plug Maintenance Required
511	Cylinder #11 Spark Plug Maintenance Required
512	Cylinder #12 Spark Plug Maintenance Required
513	Cylinder #13 Spark Plug Maintenance Required
514	Cylinder #14 Spark Plug Maintenance Required
515	Cylinder #15 Spark Plug Maintenance Required
516	Cylinder #16 Spark Plug Maintenance Required
517	Cylinder #17 Spark Plug Maintenance Required
518	Cylinder #18 Spark Plug Maintenance Required
519	Cylinder #19 Spark Plug Maintenance Required
520	Cylinder #20 Spark Plug Maintenance Required
521	Auto Lube Pressure Not Decreasing After Cycle
522	Blade Angle Control Not In Neutral At Inappropriate Time
523	Unable to Determine Rotation Direction of Left Drive Motor
524	Unable to Determine Rotation Direction of Right Drive Motor
525	High Brake Pump Pressure
526	Brake Pump Pressure Not Responding to Command
527	High Brake Pump Command
528	Service Brake Accumulator Pressure Not Responding
529	Operator High Engine Coolant Temperature
530	Engine Oil Evacuation Occurred
531	Low Transmission Oil Level
532	Service Brake Abuse Due to Gear Too High
533	Service Brake Abuse Due to Torque Converter Pedal Misuse
534	Swing Movement Detected With No Command Given
535	Boom Movement Detected With No Command Given
536	Stick Movement Detected With No Command Given
537	Extendable Stick Movement Detected With No Command Given
538	Bucket Movement Detected With No Command Given
539	High Intake Manifold Air Temperature
540	Low Engine Oil Refill Tank Level
541	Low Steering Accumulator Pressure
542	Low Steering Pump Pressure
543	High Steering Pump Pressure
544	Blade Left Lift Lever Out Of Neutral At Inappropriate Time
545	Blade Right Lift Lever Out Of Neutral At Inappropriate Time
546	Articulation Lever Out Of Neutral At Inappropriate Time
547	Blade Sideshift Lever Out Of Neutral At Inappropriate Time
548	Circle Drive Lever Out Of Neutral At Inappropriate Time
549	Blade Pitch Control Out Of Neutral At Inappropriate Time
550	Wheel Lean Control Out Of Neutral At Inappropriate Time
551	Circle Sideshift Control Out Of Neutral At Inappropriate Time
552	Low Aftercooler Coolant Level
553	Low Tractor System Air Pressure
554	Low Scraper System Air Pressure
555	Low Pilot System Air Pressure
556	Low Brake Pump Pressure
557	Low Boost Pressure #1
558	Snapshot Stored
559	Event List Memory Low
560	Secondary Steering Pump Pressure Not Responding to Command

561	Low Hydraulic Oil Temperature
562	Steering Lever Has Not Been Aligned to Wheel Steering Angle
563	Low Engine Coolant Flow
564	Transmission Slip Detected
565	Compression Brake Inhibited Due to Lockup Clutch Disengaged
566	Compression Brake Inhibited Due to Impeller Clutch Active
567	Impeller Clutch Inhibited Due to Compression Brake Active
568	Unexpected Left Motor Forward Speed Detected
569	Unexpected Left Motor Reverse Speed Detected
570	Unexpected Right Motor Forward Speed Detected
571	Unexpected Right Motor Reverse Speed Detected
572	Brake Engaged Due to Cold Transmission Oil
573	High Output Transfer Gear Oil Temperature
574	Parking Brake Dragging
575	Unexpected Drive Motor Forward Speed Detected
576	Unexpected Drive Motor Rearward Speed Detected
577	Engine Ramp Rate Limited Due to Cold Hydraulic Oil
578	Auxiliary System Requested Shutdown
579	5th Function Control Out Of Neutral At Inappropriate Time
580	6th Function Control Out Of Neutral At Inappropriate Time
581	Excessive Park Brake Wear
582	Low Differential (Axle) Lube Pressure
583	High Engine Air Filter #1 Differential Pressure
584	High Engine Air Filter #2 Differential Pressure
585	High Engine Air Filter #3 Differential Pressure
586	High Engine Air Filter #4 Differential Pressure
587	Low Turbocharger #1 Compressor Inlet Pressure
588	Low Turbocharger #2 Compressor Inlet Pressure
589	Low Turbocharger #3 Compressor Inlet Pressure
590	Low Turbocharger #4 Compressor Inlet Pressure
591	Transmission Front Oil Filter Plugged
592	Transmission Rear Oil Filter Plugged
593	Aftertreatment Insufficient Temperature to Complete Regeneration
594	High Transmission Lube Oil Temperature
595	Case Drain Hydraulic Oil Filter Plugged
596	Return Hydraulic Oil Filter #2 Plugged
597	Unexpected Winch Motor Pressure Detected
598	Steering Limited Due to Cold Hydraulic Oil
599	Gear Too High for Steering with Cold Oil
600	High Hydraulic Oil Temperature Warning
601	Cylinder #1 Continuous Misfire
602	Cylinder #2 Continuous Misfire
603	Cylinder #3 Continuous Misfire
604	Cylinder #4 Continuous Misfire
605	Cylinder #5 Continuous Misfire
606	Cylinder #6 Continuous Misfire
607	Cylinder #7 Continuous Misfire
608	Cylinder #8 Continuous Misfire
609	Cylinder #9 Continuous Misfire
610	Cylinder #10 Continuous Misfire
611	Cylinder #11 Continuous Misfire

612	Cylinder #12 Continuous Misfire
613	Cylinder #13 Continuous Misfire
614	Cylinder #14 Continuous Misfire
615	Cylinder #15 Continuous Misfire
616	Cylinder #16 Continuous Misfire
617	Machine Lockout Active
618	Park Brake Lockout Active
619	Transmission Lockout Active
620	Starter Lockout Active
621	Body Up
622	Hoist System Not in Float
623	Low Left Track Forward Steering Pressure
624	Low Left Track Reverse Steering Pressure
625	Low Right Track Forward Steering Pressure
626	Low Right Track Reverse Steering Pressure
627	Parking Brake Applied with Machine in Motion
628	Unrecognized User Command
629	Harness Disconnect Detected
630	Switched Sensor #1 Activated
631	Switched Sensor #2 Activated
632	Switched Sensor #3 Activated
633	Switched Sensor #4 Activated
636	Low ARD Secondary Air Differential Pressure
637	High ARD Secondary Air Differential Pressure
638	Low ARD Secondary Air Gas Mass Flow
639	High ARD Secondary Air Gas Mass Flow
640	Water Spray Activation Time Exceeded
641	Vibratory System Manual Mode Time Exceeded While Machine Stationary
642	Display Button Pressed Too Long
643	Payload Control System Not Zeroed
644	Low Transmission Oil Pressure
645	Differential (Axle) Filter Plugged
646	Differential (Final Drive) Filter Plugged
647	Right Brake Cooling Oil Filter Plugged
648	Left Brake Cooling Oil Filter Plugged
649	Engine Cooling Fan Drive Oil Filter Plugged
650	High Differential (Axle) Lube Pressure
651	Low Differential (Final Drive) Lube Pressure
652	Low Service Brake Accumulator Pressure
653	Low Secondary Brake Accumulator Pressure
654	High Generator Winding Temperature
655	High DC Power Bus Voltage #1
656	High DC Power Bus Voltage #2
657	High Generator Phase A Current
658	High Power Inverter #1 Temperature
659	High Power Inverter #2 Temperature
660	Secondary Brake Accumulator Pressure Not Responding
661	High Brake Cooling Pump Speed
662	High Engine Cooling Fan Speed
663	Body Up while Machine in Motion
664	Low Differential (Axle) Oil Level

665	Hydraulic Hoist Screen Filter Plugged
666	Low Oil Filter Differential Pressure
667	Machine Overspeed
668	High Drive Motor Phase A Current
669	High Drive Motor Phase B Current
670	High Drive Motor Phase C Current
671	High Drive Motor #1 Winding Temperature
672	High Drive Motor #2 Winding Temperature
673	Low DC Power Bus Voltage #1
674	Low DC Power Bus Voltage #2
675	High Generator Phase B Current
676	High Generator Phase C Current
677	High Steering Accumulator Pressure
678	Ground Level Shutdown
679	Idle Elevated to Increase Engine Coolant Temperature
680	Access Ladder Lowered With Transmission In Gear
681	Payload Above Target Weight
682	Engine Above Top Engine Speed Limit
683	High Engine Oil Pressure
684	High Catalyst Temperature
685	Laser Receiver Signal Interference
686	All Wheel Drive (AWD) Limited Due to Cold Hydraulic Oil
687	Fuel Filter #1 Restriction
688	Fuel Filter #2 Restriction
689	High Front Tire Temperature
690	High Rear Tire Temperature
691	Speed Limited Due to High Tire Temperature
692	High Powertrain Oil Tank Temperature
693	High Powertrain Oil Temperature
694	Drive Motor Overspeed
695	Unexpected Motor Speed Detection Disabled
696	Opposite Machine Movement Commands Disabled
697	Negative High Peak Frame Bias
698	Positive High Peak Frame Rack
699	Negative High Peak Frame Rack
700	Negative High Peak Frame Pitch
701	Invalid Event
702	High Left Track Steering Pressure
703	High Right Track Steering Pressure
704	Automatic Engine Speed Control (AESC) Disabled Due to System Fault
705	Power Cable Reel Out of Cable
706	Park Brake Disabled Due to System Fault
707	Transmission Failed to Engage Desired Gear
708	High Air Conditioner Compressor Temperature
709	High Air Conditioner Compressor Voltage
710	Low Air Conditioner Compressor Voltage
711	High Accessory Power Converter Temperature
712	High Accessory Power Converter Output Voltage
713	Low Accessory Power Converter Output Voltage
714	High Battery Charger Current
715	Ground Fault

716	Conflicting Brake Pressure Information
717	Engine Exhaust NOx Level Sensor Operating Temperature Not Reached
718	Screed Height Adjustment Switch Out of Hold Position at Inappropriate Time
719	High Drive Motor Winding Temperature
720	High Drive Motor Bearing #1 Temperature
721	Automatic Engine Speed Control (AESC) Speed Change Locked Out
722	Low Powertrain Lube Pressure
723	Implement System Limited Due to Cold Hydraulic Oil
724	High Generator Bearing #1 Temperature
725	High Generator Bearing #2 Temperature
726	High Drive Motor Bearing #2 Temperature
727	Engine Exhaust Emissions Feedback Feature Manually Disabled
728	Parking Brake Retract Motor Activated
729	Left Final Drive Filter Plugged
730	Right Final Drive Filter Plugged
731	Low Left Final Drive Lube Pressure
732	Low Right Final Drive Lube Pressure
733	High Left Final Drive Lube Temperature
734	High Right Final Drive Lube Temperature
735	Transmission Gear Limited Due to Cold Transmission Oil
736	Torque Converter Screen Filter Plugged
737	Inching Control Disabled Due to System Fault
738	High Generator Winding #1 Temperature
739	High Generator Winding #2 Temperature
740	Unexpected Machine Movement Detection Disabled
741	High Power Inverter Temperature #3
742	High Power Inverter Temperature #4
743	High Power Inverter Temperature #5
744	High Power Inverter Temperature #6
745	High Power Inverter Temperature #7
746	Low Secondary Steering Oil Flow
747	Cylinder #17 Continuous Misfire
748	Cylinder #18 Continuous Misfire
749	Cylinder #19 Continuous Misfire
750	Cylinder #20 Continuous Misfire
751	Cylinder #17 Intermittent Misfire
752	Cylinder #18 Intermittent Misfire
753	Cylinder #19 Intermittent Misfire
754	Cylinder #20 Intermittent Misfire
755	Low Ride Control Accumulator Pressure
756	Low Generator Voltage
757	Crowbar Protection Circuit Not Responding to Command
758	Unexpected Crowbar Protection Circuit Activation
759	High Chopper Module Output Current
760	High Retarding Contactor Output Current
761	Drive Motor Phase Current Imbalance
762	Machine Driven with Cold Transmission
763	Trip Data Memory Low
764	Trip Data Memory Full
765	Transmission Charge Filter Plugged
766	Torque Converter Filter Plugged

767	Lockup Clutch Filter Plugged
768	Engine Shutdown Due to Loss of Machine Lockout
769	Low Catalyst Differential Pressure
770	High Fuel Rail Temperature
771	High Aftercooler Temperature
772	Conveyor Material Height Sensor Changed During Operation
773	Left Conveyor Material Height Sensor Signal Out of Range
774	Right Conveyor Material Height Sensor Signal Out of Range
775	High Left Exhaust #2 Temperature
776	High Right Exhaust #2 Temperature
777	Positive High Peak Frame Bias
778	High Peak Frame Rack
779	Positive High Peak Frame Pitch
780	Conflicting Transmission Selector Position Information
781	Low Injector Actuation Pressure
782	Lift Pressure Rate of Change Too High to Weigh Payload
783	Insufficient Bucket Rack or Excessive Machine Pitch to Weigh Payload
784	Payload Weight Too Heavy to Zero
785	Access Platform Lowered With Transmission In Gear
786	Access Platform Lowered With Park Brake Disengaged
787	Transmission Neutralized Due to Access Platform Lowered
788	Auxiliary Hydraulics #1 Control Out Of Neutral At Inappropriate Time
789	Auxiliary Hydraulics #2 Control Out Of Neutral At Inappropriate Time
790	Auxiliary Hydraulics #3 Control Out Of Neutral At Inappropriate Time
791	Excessive Air Conditioning Refrigerant Monitoring Circuit Open Time
792	High Air Conditioning Clutch Cycle Rate
793	Cab Air Heater Engine Coolant Valve Not Responding to Command
794	Steering Systems Not Synchronized
795	Machine Speed Excessive for Machine Articulation Angle
796	Machine Articulation Angle Limited Due to Machine Speed
797	Low Brake Boost Pressure
798	Low Brake Fluid Level
799	Center Implement Pump Oil Supply Shutoff Valve Closed With Pump Running
800	Right Implement Pump Oil Supply Shutoff Valve Closed With Pump Running
801	Cylinder #1 High Exhaust Port Temp
802	Cylinder #2 High Exhaust Port Temp
803	Cylinder #3 High Exhaust Port Temp
804	Cylinder #4 High Exhaust Port Temp
805	Cylinder #5 High Exhaust Port Temp
806	Cylinder #6 High Exhaust Port Temp
807	Cylinder #7 High Exhaust Port Temp
808	Cylinder #8 High Exhaust Port Temp
809	Cylinder #9 High Exhaust Port Temp
810	Cylinder #10 High Exhaust Port Temp
811	Cylinder #11 High Exhaust Port Temp
812	Cylinder #12 High Exhaust Port Temp
813	Cylinder #13 High Exhaust Port Temp
814	Cylinder #14 High Exhaust Port Temp
815	Cylinder #15 High Exhaust Port Temp
816	Cylinder #16 High Exhaust Port Temp
817	Cylinder #17 High Exhaust Port Temp

818	Cylinder #18 High Exhaust Port Temp
819	Cylinder #19 High Exhaust Port Temp
820	Cylinder #20 High Exhaust Port Temp
821	Cyl #1 Exhaust Port Temp Deviating High
822	Cyl #2 Exhaust Port Temp Deviating High
823	Cyl #3 Exhaust Port Temp Deviating High
824	Cyl #4 Exhaust Port Temp Deviating High
825	Cyl #5 Exhaust Port Temp Deviating High
826	Cyl #6 Exhaust Port Temp Deviating High
827	Cyl #7 Exhaust Port Temp Deviating High
828	Cyl #8 Exhaust Port Temp Deviating High
829	Cyl #9 Exhaust Port Temp Deviating High
830	Cyl #10 Exhaust Port Temp Deviating High
831	Cyl #11 Exhaust Port Temp Deviating High
832	Cyl #12 Exhaust Port Temp Deviating High
833	Cyl #13 Exhaust Port Temp Deviating High
834	Cyl #14 Exhaust Port Temp Deviating High
835	Cyl #15 Exhaust Port Temp Deviating High
836	Cyl #16 Exhaust Port Temp Deviating High
837	Cyl #17 Exhaust Port Temp Deviating High
838	Cyl #18 Exhaust Port Temp Deviating High
839	Cyl #19 Exhaust Port Temp Deviating High
840	Cyl #20 Exhaust Port Temp Deviating High
841	Cyl #1 Exhaust Port Temp Deviating Low
842	Cyl #2 Exhaust Port Temp Deviating Low
843	Cyl #3 Exhaust Port Temp Deviating Low
844	Cyl #4 Exhaust Port Temp Deviating Low
845	Cyl #5 Exhaust Port Temp Deviating Low
846	Cyl #6 Exhaust Port Temp Deviating Low
847	Cyl #7 Exhaust Port Temp Deviating Low
848	Cyl #8 Exhaust Port Temp Deviating Low
849	Cyl #9 Exhaust Port Temp Deviating Low
850	Cyl #10 Exhaust Port Temp Deviating Low
851	Cyl #11 Exhaust Port Temp Deviating Low
852	Cyl #12 Exhaust Port Temp Deviating Low
853	Cyl #13 Exhaust Port Temp Deviating Low
854	Cyl #14 Exhaust Port Temp Deviating Low
855	Cyl #15 Exhaust Port Temp Deviating Low
856	Cyl #16 Exhaust Port Temp Deviating Low
857	Cyl #17 Exhaust Port Temp Deviating Low
858	Cyl #18 Exhaust Port Temp Deviating Low
859	Cyl #19 Exhaust Port Temp Deviating Low
860	Cyl #20 Exhaust Port Temp Deviating Low
861	Clock Manual Alignment Required
862	Attachment Hydraulic Oil Filter Plugged
863	Abnormal Machine Auto Lube System Operation
864	Low Gas Fuel Differential Pressure
865	High Gas Fuel Differential Pressure
866	Low Gas Fuel Flow Rate
867	Improper Gas Flow Control Valve Response
868	Gas Flow Control Valve Malfunction

869	Unstable Gas Fuel Pressure
870	High Turbocharger Turbine Inlet Air Temperature
871	Geographical Exclusive Zone #1 Boundary Violation
872	Geographical Exclusive Zone #2 Boundary Violation
873	Geographical Exclusive Zone #3 Boundary Violation
874	Geographical Exclusive Zone #4 Boundary Violation
875	Low System Voltage
876	High System Voltage
877	High Transmission Oil Temperature
878	High Hydraulic Oil Temperature
879	Hydraulic Tank Oil Filter Plugged
880	E/H (Implement Pilot Supply) Filter Plugged
881	Multiple Stations on Master Control Data Link
882	Low Brake Oil Cooler Pressure
883	Engine Failed to Stop When Fuel Solenoid Disengaged
884	Fuel Correction Factor Upper Limit Reached
885	Fuel Correction Factor Lower Limit Reached
886	Compression Brake System Failure
887	Blade Function Disabled Due to System Fault
888	Ripper Function Disabled Due to System Fault
889	Winch Function Disabled Due to System Fault
890	Auto Lube System Cannot Operate
891	Geographical Exclusive Zone #5 Boundary Violation
892	Blade Tilt Limiting Disabled Due to System Fault
893	High Engine Oil Level
894	Power Inverter Control #1 Signal Enable Mismatch
895	Power Inverter Control #2 Signal Enable Mismatch
896	Inverter Interface Module Enable Mismatch
897	Retarding Grid Contactor Signal Mismatch
898	High DC Power Bus Current
899	Power Transistor Wiring Incorrect
900	Drive Motor Phase A Power Transistor #1 Signal Mismatch
901	Drive Motor Phase A Power Transistor #2 Signal Mismatch
902	Drive Motor Phase B Power Transistor #1 Signal Mismatch
903	Drive Motor Phase B Power Transistor #2 Signal Mismatch
904	Drive Motor Phase C Power Transistor #1 Signal Mismatch
905	Drive Motor Phase C Power Transistor #2 Signal Mismatch
906	Drive Motor Speed Signal Mismatch
907	Low Chopper Module Output Current
908	Low Retarding Grid Contactor Output Current
909	Low DC Power Bus #1 Current
910	Low DC Power Bus #2 Current
911	Unexpected Chopper Module Output Current Detected
912	Unexpected Retarding Grid Contactor Output Current Detected
913	Low Power Inverter Capacitance
914	DC Power Bus #1 Voltage Mismatch
915	Primary Retarding Capacity Exceeded
916	High Power Inverter Temperature #1
917	High Power Inverter Temperature #2
918	Retarding Grid Power Transistor Signal Mismatch
919	Quick Coupler Desired State Unknown

920	High Steering Control Force Feedback Motor Temperature
921	Aftertreatment DPF System Mismatch
922	Low Generator Phase A-B Voltage
923	Generator Phase A Power Transistor #1 Signal Mismatch
924	Generator Phase A Power Transistor #2 Signal Mismatch
925	Generator Phase B Power Transistor #1 Signal Mismatch
926	Generator Phase B Power Transistor #2 Signal Mismatch
927	Generator Phase C Power Transistor #1 Signal Mismatch
928	Generator Phase C Power Transistor #2 Signal Mismatch
929	Battery Charging System Not Charging
930	High Aftertreatment #1 DEF Pressure #1
931	Low Aftertreatment #1 DEF Pressure #1
932	High Aftertreatment #2 DEF Pressure #1
933	Low Aftertreatment #2 DEF Pressure #1
934	High Aftertreatment #1 DEF Temperature #1
935	High Aftertreatment #1 DEF Temperature #2
936	Low Aftertreatment #1 DEF Temperature #1
937	Low Aftertreatment #1 DEF Temperature #2
938	High Aftertreatment #2 DEF Temperature #1
939	High Aftertreatment #2 DEF Temperature #2
940	Low Aftertreatment #2 DEF Temperature #1
941	Low Aftertreatment #2 DEF Temperature #2
942	High Aftertreatment #1 SCR Catalyst Differential Pressure
943	Low Aftertreatment #1 SCR Catalyst Differential Pressure
944	High Aftertreatment #2 SCR Catalyst Differential Pressure
945	Low Aftertreatment #2 SCR Catalyst Differential Pressure
946	High Aftertreatment #1 SCR Catalyst Intake Gas Temperature
947	Low Aftertreatment #1 SCR Catalyst Intake Gas Temperature
948	High Aftertreatment #2 SCR Catalyst Intake Gas Temperature
949	Low Aftertreatment #2 SCR Catalyst Intake Gas Temperature
950	High Aftertreatment #1 SCR Catalyst Outlet Gas Temperature
951	Low Aftertreatment #1 SCR Catalyst Outlet Gas Temperature
952	High Aftertreatment #2 SCR Catalyst Outlet Gas Temperature
953	Low Aftertreatment #2 SCR Catalyst Outlet Gas Temperature
954	Low Aftertreatment DEF Tank Level
955	Low Aftertreatment #1 DEF Tank #2 Level
956	Low Aftertreatment #2 DEF Tank Level #1
957	Low Aftertreatment #2 DEF Tank #2 Level
958	Low Clean Gas Induction System #1 Temperature #1
959	High Clean Gas Induction System #1 Temperature #1
960	High Aftertreatment #1 DEF Tank Temperature #1
961	High Aftertreatment #1 DEF Tank #2 Temperature
962	High Aftertreatment #2 DEF Tank Temperature #1
963	High Aftertreatment #2 DEF Tank #2 Temperature
964	Low Aftertreatment #1 DEF Dosing Atomization Air Assist Pressure
965	Low Aftertreatment #2 DEF Dosing Atomization Air Assist Pressure
966	High Aftertreatment #1 Outlet NH3
967	High Aftertreatment #2 Outlet NH3
968	Low Exhaust Valve Actuation System Oil Pressure
969	High Exhaust Valve Actuation System Oil Pressure
970	Low Clean Gas Induction System #2 Temperature #1

971	High Clean Gas Induction System #2 Temperature #1
972	Low Clean Gas Induction System #1 Mass Flow
973	High Clean Gas Induction System #1 Mass Flow
974	Low Clean Gas Induction System #2 Mass Flow
975	High Clean Gas Induction System #2 Mass Flow
976	Unexpected Drive Pump Signal Pressure Detected
977	Unexpected Drive Pump Signal Pressure Detection Disabled
978	Generator Phase Imbalance
979	Stabilizer Raised While Transmission In Gear
980	Turbocharger #1 Overspeed
981	Turbocharger #1 Underspeed
982	Turbocharger #2 Overspeed
983	Turbocharger #2 Underspeed
984	Turbocharger Correction Factor Limit Reached
985	High Generator Position Sensing Offset
986	Transmission Dropbox Oil Filter Plugged
987	High Battery Charger Temperature
988	DC Ground Fault
989	Drive Motor System AC Ground Fault
990	High Accessory Bus Current
991	DPF Active Regeneration Inhibited Due to Permanent System Lockout
992	DPF Active Regeneration Inhibited Due to Temporary System Lockout
993	DPF Active Regeneration Inhibited Due to Inhibit Switch
994	Low Crankcase Pressure
995	High DPF #1 Soot Loading
996	High DPF #2 Soot Loading
997	High DPF #1 Ash Loading
998	High DPF #2 Ash Loading
999	Generator System AC Ground Fault
1000	High Left Intake Manifold Air Temperature
1001	High Right Intake Manifold Air Temperature
1002	Low Shift Rail Oil Pressure
1003	High Brake Oil Temperature
1004	Brake Oil Filter Plugged
1005	Main Pump High Pressure Screen Plugged
1006	Tilt Pump High Pressure Screen Plugged
1007	Fan Pump High Pressure Screen Plugged
1008	High DPF #1 Intake Temperature
1009	High DPF #1 Intermediate Temperature
1010	High DPF #1 Outlet Temperature
1011	High DPF #2 Intake Temperature
1012	High DPF #2 Intermediate Temperature
1013	High DPF #2 Outlet Temperature
1014	Low DPF #1 Intake Temperature
1015	Low DPF #1 Outlet Temperature
1016	Low DPF #2 Intake Temperature
1017	Low DPF #2 Outlet Temperature
1018	High DPF #1 Differential Pressure
1019	High DPF #2 Differential Pressure
1020	Low DPF #1 Differential Pressure
1021	Low DPF #2 Differential Pressure

1022	Low ARD Fuel Pressure #1
1023	Ejector Blade Not Responding to Command
1024	Manual Differential Locks Activated Too Long
1025	Aftertreatment #1 Failed to Ignite
1026	Aftertreatment #1 Loss of Combustion
1027	Lift Performed Too Slowly to Weigh Payload
1028	Lift Stopped During Weigh
1029	High ARD Intake Temperature
1030	High ARD Intermediate Temperature
1031	High ARD Outlet Temperature
1032	Low ARD Intake Temperature
1033	Low ARD Intermediate Temperature
1034	Low ARD Outlet Temperature
1035	Low ARD Purge Air Pressure
1036	High Crankcase Pressure
1037	Conflicting Seat Position Switch Information
1038	Low ARD Supply Air Pressure
1040	ARD Manually Disabled
1041	ARD Air Pressure Control Actuator Not Responding to Command
1042	Average Lift Speed Inconsistent to Weigh Payload
1043	Lift Speed Rate of Change Too High to Weigh Payload
1044	High Intake Manifold Pressure
1045	Low Intake Manifold Pressure
1046	High Work Tool Hydraulic Oil Temperature
1047	Blade Tilt Limit Reached
1048	Blade Tilt Limit Exceeded
1049	High DPF Intake Pressure
1050	High Aftertreatment #1 Fuel Pressure #1
1051	High Aftertreatment #1 Fuel Pressure #2
1052	Low Aftertreatment #1 Fuel Pressure #1
1053	Low Aftertreatment #1 Fuel Pressure #2
1054	High Aftertreatment #2 Fuel Pressure #1
1055	High Aftertreatment #2 Fuel Pressure #2
1056	Low Aftertreatment #2 Fuel Pressure #1
1057	Low Aftertreatment #2 Fuel Pressure #2
1058	Fire Suppression Switch Activated
1059	Ground Level Engine Shutdown Switch Activated
1060	Cab Engine Shutdown Switch Activated
1061	Engine Shutdown Due to Primary Remote Control
1062	Engine Shutdown Due to Secondary Remote Control
1063	High Water Pump Control Module Temperature
1064	Low Water Pump Speed
1065	Water Pump Disabled Due to System Fault
1066	Water Pump System AC Ground Fault
1067	High Drive Motor Winding #1 Temperature
1068	High Drive Motor Winding #2 Temperature
1069	Fuel Rail #1 Pressure Not Responding
1070	Aftertreatment Fuel Injector #1 not responding
1071	Accessory Power Converter Cannot be Enabled
1072	High Air Compressor Temperature
1073	Power Generation Assembly #1 Disabled Due to System Fault

1074	Power Generation Assembly #2 Disabled Due to System Fault
1075	Power Generation Assembly #3 Disabled Due to System Fault
1076	Retarding Grid Blower Phase Current Incorrect
1077	Retarding Grid Blower Inverter Input Voltage Incorrect
1078	Air Conditioner System AC Ground Fault
1079	High Engine Charge Air Cooler #1 Outlet Temperature
1080	High Engine Charge Air Cooler #2 Outlet Temperature
1081	High Center Brake Oil Temperature
1082	High Chopper Retarding Grid Accumulated Thermal Energy
1083	High Contactor Retarding Grid Accumulated Thermal Energy
1084	Generator Current Not Responding to Command
1085	Generator Overspeed
1086	Low Output Transfer Gear (OTG) Oil Level
1087	Trend Data Storage Memory Low
1088	Trend Data Storage Memory Full
1089	Low EGR Intake Pressure
1090	High EGR Intake Pressure
1091	Low EGR Temperature
1092	High EGR Temperature
1093	Low EGR Differential Pressure
1094	High EGR Differential Pressure
1095	Low EGR Mass Flow Rate
1096	High EGR Mass Flow Rate
1097	High ARD Supply Air Pressure
1098	Low ARD Fuel Pressure #2
1099	High Crankcase Ventilation Filter Differential Pressure
1100	Low Crankcase Ventilation Filter Differential Pressure
1101	Intake Valve Actuation System Oil Pressure #1 Not Responding to Command
1102	Intake Valve Actuation System Oil Pressure #2 Not Responding to Command
1103	Low Intake Valve Actuation System Oil Pressure #1
1104	Low Intake Valve Actuation System Oil Pressure #2
1105	High Intake Manifold #2 Pressure
1106	High Fuel Rail Pump Flow
1107	Low Engine Charge Air Cooler #1 Outlet Temperature
1108	Low Engine Charge Air Cooler #2 Outlet Temperature
1109	Low Engine Charge Air Cooler #3 Outlet Temperature
1110	Low Engine Charge Air Cooler #4 Outlet Temperature
1111	High Engine Charge Air Cooler #3 Outlet Temperature
1112	High Engine Charge Air Cooler #4 Outlet Temperature
1113	Low EGR #2 Differential Pressure
1114	High EGR #2 Differential Pressure
1115	Low EGR #2 Intake Pressure
1116	High EGR #2 Intake Pressure
1117	Low EGR #2 Temperature
1118	High EGR #2 Temperature
1119	Low EGR #2 Mass Flow Rate
1120	High EGR #2 Mass Flow Rate
1121	EGR Valve Control Not Responding to Command
1122	EGR #2 Valve Control Not Responding to Command
1123	Engine Exhaust Manifold Bank #1 Flow Balance Valve Not Responding to Command
1124	Engine Exhaust Manifold Bank #2 Flow Balance Valve Not Responding to Command

1125	ARD Fuel Flow Diverter Actuator Not Responding to Command
1126	DC Power Bus Voltage Mismatch
1127	Low Fuel Filter (suction side) Intake Pressure
1128	High Fuel Filter (suction side) Intake Pressure
1129	Fuel Filter (suction side) Restriction
1130	High Intake Manifold #2 Air Temperature
1131	Low Intake Manifold #2 Pressure
1132	Inconsistent Configuration Detected
1133	Fuel Pump Not Responding to Command
1134	Aftertreatment Fuel Pump Not Responding to Command
1135	Generator Voltage Out of Range
1136	Accessory Power Converter Ground Fault Detection Disabled
1137	Remote Control System Shutdown Due to Signal Interference
1138	Remote Control System Shutdown Due to Low Signal Strength
1139	Short Range Object Detection Sensor #1 Blockage Detected
1140	Short Range Object Detection Sensor #2 Blockage Detected
1141	Short Range Object Detection Sensor #3 Blockage Detected
1142	Short Range Object Detection Sensor #4 Blockage Detected
1143	Medium Range Object Detection Sensor #1 Blockage Detected
1144	Medium Range Object Detection Sensor #2 Blockage Detected
1145	Medium Range Object Detection Sensor #3 Blockage Detected
1146	Medium Range Object Detection Sensor #4 Blockage Detected
1147	Medium Range Object Detection Sensor #5 Blockage Detected
1148	Medium Range Object Detection Sensor #6 Blockage Detected
1149	Medium Range Object Detection Sensor #7 Blockage Detected
1150	Medium Range Object Detection Sensor #8 Blockage Detected
1151	Generator Phase Current Imbalance
1152	Armrest Raised while Machine in Motion
1153	Autonomous Steering Enable Valve Not Responding to Command
1154	Low DPF #1 Intake Pressure
1155	Low DPF #2 Intake Pressure
1156	High DPF #1 Intake Pressure
1157	High DPF #2 Intake Pressure
1158	Low Secondary Steering Pressure
1159	Low Brake Cooling Oil Level
1160	Secondary Brake Pressure Not Responding to Command
1161	Front Service Brake Pressure Not Responding to Command
1162	Rear Service Brake Pressure Not Responding to Command
1163	High Aftertreatment #1 Exhaust Gas Temperature #1
1164	High Aftertreatment #1 Exhaust Gas Temperature #2
1165	High Aftertreatment #1 Exhaust Gas Temperature #3
1166	Low Aftertreatment #1 Exhaust Gas Temperature #1
1167	Low Aftertreatment #1 Exhaust Gas Temperature #2
1168	Low Aftertreatment #1 Exhaust Gas Temperature #3
1169	High Aftertreatment #1 Secondary Air Pressure
1170	Low Aftertreatment #1 Secondary Air Pressure
1171	Engine Idle Shutdown Occurred
1172	Engine Idle Shutdown Pending
1173	High Engine Injector Metering Rail #1 Pressure
1174	Low Engine Injector Metering Rail #1 Pressure
1175	High Engine Injector Metering Rail #2 Pressure

1176	Low Engine Injector Metering Rail #2 Pressure
1177	Elevator Charge Pump Filter Plugged
1178	Elevator Motor Case Drain Filter Plugged
1179	Elevator Pump Case Drain Filter Plugged
1180	Engine #2 Failure to Start
1181	Engine #3 Failure to Start
1182	Drive Motor #1 Manually Disabled
1183	Drive Motor #2 Manually Disabled
1184	AC Ground Fault
1185	Fan Pump/Motor Case Drain Filter Plugged
1186	Implement Pilot Oil Filter Plugged
1187	Engine Exhaust Manifold Bank #1 Flow Balance Valve Stuck Closed
1188	Engine Exhaust Manifold Bank #1 Flow Balance Valve Stuck Open
1189	File System Memory Low
1190	Low Aftertreatment Cooling Fan Speed
1191	High Traction Alternator #1 Rectifier Temperature
1192	High Traction Alternator #2 Rectifier Temperature
1193	High Traction Alternator #3 Rectifier Temperature
1194	High Companion Alternator #1 Rectifier Temperature
1195	High Companion Alternator #2 Rectifier Temperature
1196	High Companion Alternator #3 Rectifier Temperature
1197	Test Flash File Installed
1198	Steering/Brake Pump Case Drain Filter Plugged
1199	High Companion Alternator #1 Winding Temperature
1200	High Companion Alternator #2 Winding Temperature
1201	High Companion Alternator #3 Winding Temperature
1202	High Traction Alternator #1 Winding Temperature
1203	High Traction Alternator #2 Winding Temperature
1204	High Traction Alternator #3 Winding Temperature
1205	Low Left Front Tire Pressure
1206	Low Right Front Tire Pressure
1207	Low Left Rear Inner Tire Pressure
1208	Low Left Rear Outer Tire Pressure
1209	Low Right Rear Inner Tire Pressure
1210	Low Right Rear Outer Tire Pressure
1211	High Left Front Tire Pressure
1212	High Right Front Tire Pressure
1213	High Left Rear Inner Tire Pressure
1214	High Left Rear Outer Tire Pressure
1215	High Right Rear Inner Tire Pressure
1216	High Right Rear Outer Tire Pressure
1217	Delayed Engine Shutdown Override
1218	High Unfiltered Fuel Pressure
1219	Low Unfiltered Fuel Pressure
1220	Low Cranking Fuel Rail Pressure
1221	Low Cranking Fuel Rail #2 Pressure
1222	Low Cranking Engine Injector Metering Rail #1 Pressure
1223	Front Brake Cooling Filter Plugged
1224	Rear Brake Cooling Filter Plugged
1225	Brake Charge Pump Filter Plugged
1226	Low Cranking Engine Injector Metering Rail #2 Pressure

1227	Generator Speed Not Responding to Command
1228	High Intake Manifold Air Differential Temperature
1229	Unable to Load in Traction
1230	Unable to Load Electric Retarding Grid
1231	Long Range Object Detection Sensor #1 Blockage Detected
1232	Long Range Object Detection Sensor #2 Blockage Detected
1233	Long Range Object Detection Sensor #3 Blockage Detected
1234	Long Range Object Detection Sensor #4 Blockage Detected
1235	Long Range Object Detection Sensor #5 Blockage Detected
1236	Long Range Object Detection Sensor #6 Blockage Detected
1237	Long Range Object Detection Sensor #7 Blockage Detected
1238	Long Range Object Detection Sensor #8 Blockage Detected
1239	DPF #1 Conditions Not Met for Active Regeneration
1240	Machine Operation With Rear Engine Stopped
1241	Long Range Object Detection Sensor #1 Rotational Speed Not Responding to Command
1242	High Interaxle Lock Accumulator Pressure
1243	Center Implement Pump Case Drain Filter Plugged
1244	Left Front Implement Pump Case Drain Filter Plugged
1245	Left Rear Implement Pump Case Drain Filter Plugged
1246	Right Implement Pump Case Drain Filter Plugged
1247	Predictive Analysis Data Stored
1248	Front Cross Axle Lock Speed Mismatch
1249	Center Cross Axle Lock Speed Mismatch
1250	Rear Cross Axle Lock Speed Mismatch
1251	Interaxle Lock Speed Mismatch
1252	Low Machine Position Accuracy
1253	High Gear Box #1 Oil Temperature
1254	High Gear Box #2 Oil Temperature
1255	High Gear Box #3 Oil Temperature
1256	Key Input Off While Machine in Operation
1257	Winch Filter Plugged
1258	Low Interaxle Lock Accumulator Pressure
1259	Low Main Air Reservoir #1 Pressure
1260	Low Main Air Reservoir #2 Pressure
1261	Cushion Hitch and Implement Pilot Supply Filter Plugged
1262	Engine Throttle Actuator Not Responding to Command
1263	Engine Exhaust Back Pressure Regulator Not Responding to Command
1264	High Pressure Common Rail Fuel Pressure Relief Valve Active
1265	DPF Active Regeneration Inhibited Due to Low Exhaust Gas Pressure
1266	DPF Active Regeneration Usage High
1267	Hydraulic Oil Filter Plugged
1268	High Left Front Tire Temperature
1269	High Right Front Tire Temperature
1270	High Left Rear Inner Tire Temperature
1271	High Left Rear Outer Tire Temperature
1272	High Right Rear Inner Tire Temperature
1273	High Right Rear Outer Tire Temperature
1274	High DC Power Bus Voltage
1275	Low DC Power Bus Voltage
1276	High Phase Module A Temperature
1277	High Phase Module B Temperature

1278	High Phase Module C Temperature
1279	Phase Module A Positive Signal Mismatch
1280	Phase Module A Negative Signal Mismatch
1281	Phase Module B Positive Signal Mismatch
1282	Phase Module B Negative Signal Mismatch
1283	Phase Module C Positive Signal Mismatch
1284	Phase Module C Negative Signal Mismatch
1285	Chopper Module Signal Mismatch
1286	Fire Suppression System Activated
1287	High Transmission Hydrostatic Oil Outlet Temperature
1288	High Transmission Charge Oil Pressure
1289	Transmission Synchronizer #1 Not Responding to Command
1290	Transmission Synchronizer #2 Not Responding to Command
1291	Transmission Synchronizer #3 Not Responding to Command
1292	Transmission System Failed to Synchronize
1293	Transmission Internal Component Overspeed
1294	Lockup Clutch Failed to Engage
1295	Hydraulic Cooling Oil Filter Plugged
1296	Steering Cooling Oil Filter Plugged
1297	Left Steering Pump Case Drain Oil Filter Plugged
1298	Right Steering Pump Case Drain Oil Filter Plugged
1299	High Chopper Module Temperature
1300	Aftertreatment Regeneration Cannot Start Due to Low Engine Temperature
1301	Aftertreatment Regeneration Cannot Start Due to System Fault
1302	Aftertreatment Regeneration Cannot Start Due to Conditions Not Met
1303	Excessive Machine Speed with Cold Transmission Oil
1304	Secondary Steering Pump Automatic Test Bypassed
1305	Initial Assembly Aftertreatment #1 Procedure Required
1306	Initial Assembly Aftertreatment #2 Procedure Required
1307	High Aftertreatment #1 DEF Dosing Atomization Air Assist Pressure
1308	High Aftertreatment #2 DEF Dosing Atomization Air Assist Pressure
1309	Low Aftertreatment #1 SCR Catalyst Conversion Efficiency
1310	Low Aftertreatment #2 SCR Catalyst Conversion Efficiency
1311	Low DC Power Bus Voltage Detected During Drivetrain System Test
1312	High Generator Phase Current Detected During Drivetrain System Test
1313	High DC Power Bus Current Detected During Drivetrain System Test
1314	High Auxiliary Temperature #2
1315	Low Auxiliary Temperature #2
1316	Linkage Elevation Boundary Violation
1317	Avoidance System Override Activated
1318	Drive Motor Thermal Capacity Exceeded
1319	EGR Mass Flow Rate Not Responding
1320	Real Time Clock Incorrect
1325	Incident Recorder Activated
1326	Incorrect Engine Rotation Detected
1327	High Engine Speed Shift
1328	Transmission Neutral Coast Active
1329	High Axle Lock Clutch Accumulated Thermal Energy
1330	High Autonomous Cabinet Temperature
1331	Wheel Speed versus Transmission Output Speed Mismatch
1332	Hydraulic Case Drain Left Oil Filter Plugged

1333	Hydraulic Case Drain Right Oil Filter Plugged
1334	Implement Left Oil Filter Plugged
1335	Implement Right Oil Filter Plugged
1336	Access Ladder Lowered With Park Brake Disengaged
1337	Access Ladder Lowered
1338	Low Left Rear Tire Pressure
1339	Low Right Rear Tire Pressure
1340	High Left Rear Tire Pressure
1341	High Right Rear Tire Pressure
1342	High Left Rear Tire Temperature
1343	High Right Rear Tire Temperature
1344	Emergency Fuel Limit Override Activated
1345	Steering Pump Overspeed
1346	Position of Other Equipment Within Proximity Is Undetermined
1347	High Separate Circuit Coolant Temperature
1348	Machine Cycle Timer Memory Full
1349	Machine Cycle Timer Memory Low
1350	Low Starting System #1 Cranking Speed
1351	Low Starting System #2 Cranking Speed
1352	High Aftertreatment Cooling Fan Temperature
1353	Drive Motor #1 Overspeed
1354	Drive Motor #2 Overspeed
1355	Low Drive Circuit Pressure
1356	High Drive Circuit Pressure
1357	Direction Selector Disabled Due to System Fault
1358	Direction Selector #1 Disabled Due to System Fault
1359	Direction Selector #2 Disabled Due to System Fault
1360	Speed Limited Due to Cold Final Drive Oil
1361	Low Drive Circuit Pressure Detected During Service Brake Test
1362	Low Drive Circuit Pressure Detected During Park Brake Test
1363	Low Engine Cooling Fan Speed
1364	Low Aftertreatment #1 DEF Concentration
1365	High Aftertreatment #1 DEF Concentration
1366	Low Aftertreatment #2 DEF Concentration
1367	High Aftertreatment #2 DEF Concentration
1368	Incorrect Aftertreatment #1 SCR Catalyst Tank Reagent Fluid
1369	Incorrect Aftertreatment #2 SCR Catalyst Tank Reagent Fluid
1370	Aftertreatment #1 DEF Dosing Unit #1 Loss of Prime
1371	Aftertreatment #2 DEF Dosing Unit #1 Loss of Prime
1372	Machine Speed Not Responding to Command
1373	Transmission Neutral Lock Applied While Shift Lever Not in Neutral
1374	Steering Valve Spool Not Responding to Command
1375	Unexpected Steering Valve Spool Movement Detected
1376	Service Brake Abuse Due to Coasting in Neutral
1377	Machine Disable Pending Due to Machine Security
1378	High ECM Power Input Voltage
1379	Low ECM Power Input Voltage
1380	Engine Exhaust NOx Level Sensor #1 Operating Temperature Not Reached
1381	Engine Exhaust NOx Level Sensor #2 Operating Temperature Not Reached
1382	Parallel Lift Disabled Due to System Fault
1383	Parallel Lift Disabled Due to Low Hydraulic Oil Temperature

1384	Aftertreatment Cooling Fan Oil Filter Plugged
1385	Service Brake Pedal Position Mismatch
1386	Park Brake Control Position Mismatch
1387	Operator Seat Belt Unfastened While Machine is Idle
1388	Operator Seat Belt Unfastened While Machine is Not Idle
1389	Aftertreatment #1 SCR Operator Inducement
1390	Aftertreatment #1 SCR Monitoring System Malfunction
1391	High Generator Excitation Field Current
1392	High Winch Oil Temperature
1393	Machine Sliding
1394	Unacceptable Machine Orientation
1395	Lift Linkage Not Responding to Command
1396	Tilt Linkage Not Responding to Command
1397	Access Ladder Lowered with Blade Movement Detected
1398	Low Aftertreatment #1 DEF Tank Temperature #1
1399	Low Aftertreatment #1 DEF Tank #2 Temperature
1400	Low Aftertreatment #2 DEF Tank Temperature #1
1401	Low Aftertreatment #2 DEF Tank #2 Temperature
1402	Low Hoist Cylinder Rod End Pressure
1403	Seat Belt Unfastened with Park Brake Disengaged
1404	Powertrain Speed Range Limited Due to Cold Transmission Oil
1405	Coupled Engine Speed Mismatch
1407	High Aftertreatment #1 Intake O2 Concentration #1
1408	High Aftertreatment #1 Outlet O2 Concentration #1
1409	Low Motor Power Factor
1410	Invalid Aftertreatment #1 SCR Conversion Efficiency
1411	Invalid Aftertreatment #2 SCR Conversion Efficiency
1412	High Phase Module #1 A/B Temperature
1413	High Phase Module #2 A/B Temperature
1414	High Trolley Voltage
1415	Low Trolley Voltage
1416	High Trolley Input Current
1417	Low Trolley Input Current
1418	Trolley Contactor #1 Signal Mismatch
1419	Trolley Contactor #2 Signal Mismatch
1420	Pantograph #1 Signal Mismatch
1421	Pantograph #2 Signal Mismatch
1422	High Trolley Cabinet Temperature
1423	Hydraulic Charge Filter Plugged
1424	Drive Motor Speed Not Responding to Command
1425	Left Drive Motor Speed Not Responding to Command
1426	Right Drive Motor Speed Not Responding to Command
1427	Aftertreatment #1 DEF Dosing Unit #1 Temperature Not Responding
1428	Generator Excitation Field Regulator Current Not Responding to Command
1429	High Water In Fuel
1430	High Aftertreatment #1 DEF Controller #1 Temperature
1431	Invalid Aftertreatment #1 Intake NOx Level #1
1432	Invalid Aftertreatment #1 Outlet NOx Level #1
1433	Steering Lever Has Not Been Aligned to Machine Articulation Angle
1434	Operator Seat Belt Unfastened
1435	High Swing Accumulator #1 Gas Pressure

1436	High Swing Accumulator #2 Gas Pressure
1437	Low Swing Accumulator #1 Gas Pressure
1438	Low Swing Accumulator #2 Gas Pressure
1439	Tire Pressure System Not Responding to Command
1440	Low Separate Circuit Coolant Pressure
1441	Aftertreatment #1 DEF Tank Temperature #1 Not Responding
1442	Stabilizers Not Fully Stowed While Transmission in Gear
1443	Excessive Brake Pump Charge Cycling
1444	Manual Configuration Required
1445	Left Front Service Brake Not Responding to Command
1446	Right Front Service Brake Not Responding to Command
1447	Left Rear Service Brake Not Responding to Command
1448	Right Rear Service Brake Not Responding to Command
1449	Low Brake Accumulator Precharge Gas Pressure
1450	Low Front Brake Accumulator Precharge Gas Pressure
1451	Low Rear Brake Accumulator Precharge Gas Pressure
1452	Low Secondary Brake Accumulator Precharge Gas Pressure
1453	High Drill Steel Blow Air Pressure
1454	High Air Compressor Oil Temperature
1455	High Drill Feed Down Pressure
1456	Low Return Hydraulic Oil Pressure
1457	High Hammer Pressure
1458	Water Tank Not Stowed
1459	High Turbocharger #1 Turbine Intake Temperature
1460	High Turbocharger #2 Turbine Intake Temperature
1461	High Aftertreatment #2 Intake O2 Concentration
1462	High Aftertreatment #2 Outlet O2 Concentration
1463	Invalid Aftertreatment #2 Intake NOx Level
1464	High Transmission Oil Level
1465	Aftertreatment #1 SCR Desulfation Too Frequent
1466	Operator Forced Shutdown with High Exhaust Temperature
1467	Fuel Rail #2 Pressure Not Responding
1468	High Machine Auto Lube Pressure
1469	Low Machine Auto Lube Pressure
1470	High Hammer Auto Lube Pressure
1471	Low Hammer Auto Lube Pressure
1472	Starter Disabled Due to Stored Compressor Air Pressure
1473	Feed Emergency Stop Activated
1474	Low Aftertreatment #1 DEF Dosing Quantity
1475	High Aftertreatment #1 DEF Dosing Quantity
1476	High Aftertreatment #1 SCR Catalyst Intake Pressure
1477	High Aftertreatment #2 SCR Catalyst Intake Pressure
1478	Remote Control System Disabled Due to Park Brake Not Engaged
1479	High Front Brake/Transmission Oil Temperature
1480	GPS Receiver Antenna Separation Distance Out of Range
1481	Operator Input Detected While in Autonomous Mode
1482	Invalid Path Data from Autonomous Control Module
1483	Low Autonomous Cabinet Fan Speed
1484	Secondary Steering Automatic Test Required
1485	Autonomous Stop Receiver Radio Not Receiving Radio Signals
1486	Autonomous Mass Storage Drive Not Accessible

1487	High Autonomous Control Module Core Temperature
1488	Autonomous Machine Not in Autonomous Zone
1489	Aggressive Brake System Response
1490	Reduced Brake System Response
1491	Aggressive Steering System Response
1492	Reduced Steering System Response
1493	Aggressive Machine Speed Control System Response
1494	Reduced Machine Speed Control System Response
1495	Machine Not Obeying Speed Limit
1496	Machine Stability Limits Exceeded
1497	Unacceptable Machine Trajectory Prediction
1498	Aftertreatment #1 DPF Monitoring System Malfunction
1499	High Voltage Bus Interlock Active
1500	Low Generator Lube Oil Pressure
1501	High Interaxle Lock Supply Pressure
1502	Low Interaxle Lock Supply Pressure
1503	Unexpected Hook Raise Movement Detected
1504	Unexpected Hook Lower Movement Detected
1505	Armrest Raised While Steering Lock Switch Is Off
1506	Hydraulic Pump Overspeed
1507	Real Time Clock Master Not Secured
1508	Front Parking Brake Pressure Not Responding to Command
1509	High Long Range Object Detection Sensor #1 Temperature
1510	Low Long Range Object Detection Sensor #1 Temperature
1511	Turbocharger #3 Overspeed
1512	Turbocharger #4 Overspeed
1513	Turbocharger #3 Underspeed
1514	Turbocharger #4 Underspeed
1516	Swing Movement Detected While Swing Locked
1517	Power Inverter Cooling Fan Speed Not Responding to Command
1518	Power Inverter Priming Power Supply Not Responding to Command
1519	Spray System Hydraulic Oil Filter Plugged
1520	High Generator Lube Oil Temperature
1521	Generator Lube Oil Filter Plugged
1522	Primary Steering Not Available Due to Low Engine Speed
1523	Low Front Differential (Axle) Lube Pressure
1524	Low Rear Differential (Axle) Lube Pressure
1525	Front Differential (Axle) Filter Plugged
1526	Rear Differential (Axle) Filter Plugged
1527	Cab Door Open While Machine In Motion
1528	Accumulator Gas Pressure Test Overdue
1529	Unexpected Boom Raise Movement Detected
1530	Unexpected Boom Lower Movement Detected
1531	High Generator Lube Oil Pressure
1532	Unacceptable Machine Front Roll Angle
1533	Unacceptable Machine Rear Roll Angle
1534	Unacceptable Hoisting Condition
1535	High Main Hydraulic Pump #1 Pressure During Automatic Warm Up
1536	Autonomous Control Module Not Receiving GPS Correction
1537	Excessive Wheel Slip Detected
1538	Excessive Interaxle Lock Accumulator Charge Cycling

1539	High Electric Energy Storage System Power Converter Temperature
1540	Unexpected Machine Rollback Detected
1541	High Electric Energy Storage Device Voltage
1542	Low Electric Energy Storage Device Voltage
1543	High Electric Energy Storage Device Charge Current
1544	High Electric Energy Storage Device Discharge Current
1545	High Electric Energy Storage Device Temperature
1546	High Air Filter Differential Pressure
1547	High Main Hydraulic Pump #2 Pressure During Automatic Warm Up
1548	Manual Override Activated
1549	Remote Control Fire Suppression System Commanded
1550	Remote Control Gateway Not Detected
1551	Operator Inactive
1552	Loss of Video Feedback
1553	Remote Operator Not Present
1554	Avoidance System Configuration File Invalid
1555	Avoidance System Design File Invalid
1556	Avoidance System Configuration File Bounding Boxes Invalid
1557	Mobile Object Detected Within Machine Proximity
1558	Control Arm Switch Overridden
1559	Outrigger Sensors Overridden
1560	Low Brake Pressure Due to Low Engine Speed
1561	Low Brake Accumulator Pressure
1562	Low Swing Drive Oil Level
1563	Main Pump High Pressure Screen #1 Plugged
1564	Main Pump High Pressure Screen #2 Plugged
1565	Swing Accumulator Gas Pressure Mismatch
1566	Excessive Swing Energy Reduction Valve Leakage
1567	GPS Accuracy Insufficient
1568	Perception Based Position Accuracy Insufficient
1569	Low Electric Fuel Transfer Pump Outlet Pressure
1570	Boom Sensors Overridden
1571	Cab Lift Sensors Overridden
1572	Unexpected Left Front Motor Forward Speed Detected
1573	Unexpected Left Front Motor Reverse Speed Detected
1574	Unexpected Right Front Motor Forward Speed Detected
1575	Unexpected Right Front Motor Reverse Speed Detected
1576	Unexpected Left Rear Motor Forward Speed Detected
1577	Unexpected Left Rear Motor Reverse Speed Detected
1578	Unexpected Right Rear Motor Forward Speed Detected
1579	Unexpected Right Rear Motor Reverse Speed Detected
1580	Low Engine Speed for Rotor Drive
1581	Low Emulsion Spray Flow
1582	Low Water Spray Flow
1583	High Emulsion Spray Flow
1584	High Water Spray Flow
1585	Aftertreatment #1 Inconsistent Configuration Detected
1586	Aftertreatment #2 Inconsistent Configuration Detected
1587	Incorrect Antenna Detected by Cellular Radio Module
1588	Incorrect Antenna Detected by Satellite Radio Module
1589	Aftertreatment #1 DEF Tank Refill Not Responding to Command

1590	Implement Cooling Fan Pump Case Drain Filter Plugged
1591	Service Brake Automatic Test Required
1592	Maximum Left Screed Extension Width Exceeded
1593	Maximum Right Screed Extension Width Exceeded
1594	Screed Heating Not Responding to Command
1595	High Display Module Internal Temperature
1596	Unexpected Wheel Motion Detected
1597	Engine Emissions Operator Inducement Emergency Override Activated
1598	Engine Emissions Operator Inducement Emergency Override Renewal Required
1599	Low Engine Coolant Pump Differential Pressure
1600	Low Engine Coolant Pump Intake Pressure
1601	High Engine Coolant Pump Intake Pressure
1602	Low Left Station Input/Output Module Power Input Voltage
1603	High Left Station Input/Output Module Power Input Voltage
1604	Low Right Station Input/Output Module Power Input Voltage
1605	High Right Station Input/Output Module Power Input Voltage
1606	Ground Fault Detection Disabled
1607	Aftertreatment #1 DEF Control Module Circuit Breaker Open
1608	All Stop Activated
1609	Unable to Stay on Path
1610	Not Aligned to Path
1611	Office Site Management System Stop Activated
1612	Office Site Management System Pause Activated
1613	Office Site Management System Communications Lost
1614	Autonomous Assignment Timeout
1615	Unexpected End of Path Detected
1616	Terrain Not Mapped for Current Trajectory
1617	High Auxiliary AC Phase A to Neutral Voltage
1618	High Auxiliary AC Phase B to Neutral Voltage
1619	High Auxiliary AC Phase C to Neutral Voltage
1620	Low Auxiliary AC Phase A to Neutral Voltage
1621	Low Auxiliary AC Phase B to Neutral Voltage
1622	Low Auxiliary AC Phase C to Neutral Voltage
1623	High Auxiliary AC Phase A-B Voltage
1624	High Auxiliary AC Phase B-C Voltage
1625	Low Auxiliary AC Phase A-B Voltage
1626	Low Auxiliary AC Phase B-C Voltage
1627	High Auxiliary AC Phase A Current
1628	High Auxiliary AC Phase B Current
1629	High Auxiliary AC Phase C Current
1630	High Auxiliary AC Neutral RMS Current
1631	Swing Pump Charge Filter Restriction
1632	Hydraulic Reservoir Breather Restriction
1633	Front Wheel Speed to Machine Speed Crosscheck
1634	Refueling Pump Screen Plugged
1635	Refueling Pump Running Dry
1636	Aftertreatment System Manually Disabled
1637	Low Aftertreatment #1 SCR Catalyst Intake Pressure
1638	Low Aftertreatment #2 SCR Catalyst Intake Pressure
1639	Low Engine Fuel #2 Injector Metering Rail Pressure
1640	High Engine Fuel #2 Injector Metering Rail Pressure

1641	Low Engine Fuel #2 Injector Metering Rail Temperature
1642	High Engine Fuel #2 Injector Metering Rail Temperature
1643	Low Engine Fuel #2 Hydraulic Pump Pressure
1644	High Engine Fuel #2 Hydraulic Pump Pressure
1645	Aftertreatment Active Regeneration Inhibited Due to Low Exhaust Pressure
1646	Engine Turbocharger #1 Speed Not Responding to Command
1647	Engine Turbocharger #2 Speed Not Responding to Command
1648	Implement Pump Discharge Screen Plugged
1649	Implement Tank Case Drain Filter #1 Plugged
1650	Implement Tank Case Drain Filter #2 Plugged
1651	Brake Cooling Pump Not Responding to Command
1652	High Well Stimulation Pump Rod Loading
1653	Low Well Stimulation Pump Intake Pressure
1654	All Wheel Drive (AWD) Charge Filter Plugged
1655	Torque Converter Stator Clutch Locked Condition Detected
1656	High Aftertreatment #1 DEF Controller #2 Temperature
1657	High Aftertreatment #2 DEF Controller #1 Temperature
1658	High Aftertreatment #2 DEF Controller #2 Temperature
1659	Machine Inactive Without Brake Engaged
1660	Low Engine Fuel #2 Vaporizer Discharge Temperature
1661	High Engine Fuel #2 Vaporizer Discharge Temperature
1662	Low Rotor Speed
1663	Aftertreatment #1 DEF Dosing Unit #2 Input Lines Not Purged
1664	Aftertreatment #2 DEF Dosing Unit #1 Input Lines Not Purged
1665	Aftertreatment #2 DEF Dosing Unit #2 Input Lines Not Purged
1666	Aftertreatment #1 DEF Dosing Unit #2 Loss of Prime
1667	Aftertreatment #2 DEF Dosing Unit #2 Loss of Prime
1668	High Center Axle Oil Temperature
1669	High Front Inertial Measurement Sensor Temperature
1670	Low Front Inertial Measurement Sensor Temperature
1671	Excessive Inertial Measurement Sensor Acceleration Detected
1672	Progress Monitor Stop
1673	Machine Travel Seat Swivel Lock Disabled Due to System Fault
1674	Low Implement System Efficiency
1675	Low Engine Fuel #2 Tank #1 Level
1676	High Interaxle Lock Clutch Accumulated Thermal Energy
1677	High Center Cross Axle Lock Clutch Accumulated Thermal Energy
1678	High Front Cross Axle Lock Clutch Accumulated Thermal Energy
1679	High Rear Cross Axle Lock Clutch Accumulated Thermal Energy
1680	Gaseous Fuel Leakage Detected
1681	High Turbocharger #3 Turbine Intake Temperature
1682	High Turbocharger #4 Turbine Intake Temperature
1683	Leg Swing Position Mismatch
1684	Moldboard Position Mismatch
1685	Primary Steering Disable System Not Responding to Command
1686	Mine Site Power Phase Sequence Mismatch
1687	Dead Front Panel Open
1688	High Left Hydraulic Pump Motor Temperature
1689	High Right Hydraulic Pump Motor Temperature
1690	Low Intake Manifold Air Temperature
1691	Low Exhaust Temperature

1692	High Main Transformer Temperature
1693	Proximity Detection Override Activated
1694	Low Operator Remote Control Battery
1695	Low Transmission Main Relief Valve Pressure
1696	High Aftertreatment #1 DEF Tank Temperature #2
1697	Low Aftertreatment #1 DEF Tank Temperature #2
1698	High Aftertreatment #2 DEF Tank Temperature #2
1699	Low Aftertreatment #2 DEF Tank Temperature #2
1700	Aftertreatment #1 DEF Dosing Unit #2 Temperature Not Responding
1701	Aftertreatment #2 DEF Dosing Unit #1 Temperature Not Responding
1702	Aftertreatment #2 DEF Dosing Unit #2 Temperature Not Responding
1703	Inertial Measurement Sensor Accuracy Insufficient
1704	High Transmission Clutch Accumulated Thermal Energy
1705	High Aftertreatment #1 DEF Pressure #2
1706	Low Aftertreatment #1 DEF Pressure #2
1707	High Aftertreatment #2 DEF Pressure #2
1708	Low Aftertreatment #2 DEF Pressure #2
1709	Unexpected Hook Motor Pressure Detected
1710	Unexpected Boom Motor Pressure Detected
1711	High Electric Energy Storage Device #1 Voltage
1712	High Electric Energy Storage Device #2 Voltage
1713	High Electric Energy Storage Device #3 Voltage
1714	High Electric Energy Storage Device #1 Charging Current
1715	High Electric Energy Storage Device #2 Charging Current
1716	High Electric Energy Storage Device #3 Charging Current
1717	High Electric Energy Storage Device #1 Discharging Current
1718	High Electric Energy Storage Device #2 Discharging Current
1719	High Electric Energy Storage Device #3 Discharging Current
1720	Electric Energy Storage Device #1 Circuit Breaker Signal Mismatch
1721	Electric Energy Storage Device #2 Circuit Breaker Signal Mismatch
1722	Electric Energy Storage Device #3 Circuit Breaker Signal Mismatch
1723	Aftertreatment #1 DEF Doser #1 Pressure Not Responding To Command
1724	Aftertreatment #2 DEF Doser #1 Pressure Not Responding To Command
1725	Aftertreatment #1 DEF Doser #2 Pressure Not Responding To Command
1726	Aftertreatment #2 DEF Doser #2 Pressure Not Responding To Command
1727	Low Cab Air Pressure
1728	Maximum Left Track Link Wear Level Reached
1729	Maximum Right Track Link Wear Level Reached
1730	Electric Energy Storage Device #1 Not Charging
1731	Electric Energy Storage Device #2 Not Charging
1732	Electric Energy Storage Device #3 Not Charging
1733	Electric Energy Storage Device #1 Circuit Breaker Open
1734	Electric Energy Storage Device #2 Circuit Breaker Open
1735	Electric Energy Storage Device #3 Circuit Breaker Open
1736	High Service Brake Accumulated Thermal Energy
1737	Low Swing Charge Pressure
1738	High Aftertreatment #1 SCR System Sulfation Level
1739	High Aftertreatment #2 SCR System Sulfation Level
1740	Low Aftertreatment #1 DEF Average Consumption
1741	Aftertreatment #1 DEF Tank Temperature #2 Not Responding
1742	Aftertreatment #2 DEF Tank Temperature #1 Not Responding

1743	Aftertreatment #2 DEF Tank Temperature #2 Not Responding
1744	Low Water Supply Pressure
1745	Low Separate Circuit Coolant Level
1746	High Seawater Outlet Pressure
1747	Low Engine Cylinder #1 Indicated Mean Effective Pressure
1748	Low Engine Cylinder #2 Indicated Mean Effective Pressure
1749	Low Engine Cylinder #3 Indicated Mean Effective Pressure
1750	Low Engine Cylinder #4 Indicated Mean Effective Pressure
1751	Low Engine Cylinder #5 Indicated Mean Effective Pressure
1752	Low Engine Cylinder #6 Indicated Mean Effective Pressure
1753	Low Engine Cylinder #7 Indicated Mean Effective Pressure
1754	Low Engine Cylinder #8 Indicated Mean Effective Pressure
1755	Low Engine Cylinder #9 Indicated Mean Effective Pressure
1756	Low Engine Cylinder #10 Indicated Mean Effective Pressure
1757	Low Engine Cylinder #11 Indicated Mean Effective Pressure
1758	Low Engine Cylinder #12 Indicated Mean Effective Pressure
1759	Low Engine Cylinder #13 Indicated Mean Effective Pressure
1760	Low Engine Cylinder #14 Indicated Mean Effective Pressure
1761	Low Engine Cylinder #15 Indicated Mean Effective Pressure
1762	Low Engine Cylinder #16 Indicated Mean Effective Pressure
1763	Low Engine Cylinder #17 Indicated Mean Effective Pressure
1764	Low Engine Cylinder #18 Indicated Mean Effective Pressure
1765	Low Engine Cylinder #19 Indicated Mean Effective Pressure
1766	Low Engine Cylinder #20 Indicated Mean Effective Pressure
1767	Low Powertrain Oil Pressure
1768	Operator Input Detected While in Unmanned Mode
1769	High Hydraulic Pump #1 Case Drain Flow Rate
1770	High Hydraulic Pump #2 Case Drain Flow Rate
1771	High Hydraulic Pump #3 Case Drain Flow Rate
1772	High Hydraulic Pump #4 Case Drain Flow Rate
1773	High Hydraulic Pump #5 Case Drain Flow Rate
1774	High Hydraulic Pump #6 Case Drain Flow Rate
1775	Low Hydraulic Pump #1 Efficiency
1776	Low Hydraulic Pump #2 Efficiency
1777	Low Hydraulic Pump #3 Efficiency
1778	Low Hydraulic Pump #4 Efficiency
1779	Low Hydraulic Pump #5 Efficiency
1780	Low Hydraulic Pump #6 Efficiency
1781	Motor Control Center DC Power Supply #2 Circuit Breaker Open
1782	Auxiliary AC Contactor Circuit Breaker Open
1783	Air Compressor Circuit Breaker Open
1784	High Pressure Wash Circuit Breaker Open
1785	Water Boost Pump Circuit Breaker Open
1786	Motor Control Center DC Power Supply #2 Contactor Mode Switch Not in Auto Position
1787	ECM #1 Interface Mismatch
1788	ECM #2 Interface Mismatch
1789	Low Air Tank Pressure
1790	High Air Tank Pressure
1791	Powertrain Filter Plugged
1792	Auxiliary AC Contactor Mode Switch Not in Auto Position
1793	Air Compressor Contactor Mode Switch Not in Auto Position

1794	High Pressure Wash Contactor Mode Switch Not in Auto Position
1795	Water Boost Pump Contactor Mode Switch Not in Auto Position
1796	Motor Control Center DC Power Supply #2 Phase Current Imbalance
1797	Auxiliary AC Contactor Phase Current Imbalance
1798	Air Compressor Motor Phase Current Imbalance
1799	High Pressure Wash Motor Phase Current Imbalance
1800	Water Boost Pump Motor Phase Current Imbalance
1801	High Engine Cylinder #1 Pressure
1802	High Engine Cylinder #2 Pressure
1803	High Engine Cylinder #3 Pressure
1804	High Engine Cylinder #4 Pressure
1805	High Engine Cylinder #5 Pressure
1806	High Engine Cylinder #6 Pressure
1807	High Engine Cylinder #7 Pressure
1808	High Engine Cylinder #8 Pressure
1809	High Engine Cylinder #9 Pressure
1810	High Engine Cylinder #10 Pressure
1811	High Engine Cylinder #11 Pressure
1812	High Engine Cylinder #12 Pressure
1813	High Engine Cylinder #13 Pressure
1814	High Engine Cylinder #14 Pressure
1815	High Engine Cylinder #15 Pressure
1816	High Engine Cylinder #16 Pressure
1817	High Engine Cylinder #17 Pressure
1818	High Engine Cylinder #18 Pressure
1819	High Engine Cylinder #19 Pressure
1820	High Engine Cylinder #20 Pressure
1821	Incorrect Motor Control Center DC Power Supply #2 Breaker Installed
1822	Incorrect Auxiliary AC Breaker Installed
1823	Incorrect Air Compressor Breaker Installed
1824	Incorrect High Pressure Wash Breaker Installed
1825	Incorrect Water Boost Pump Breaker Installed
1826	Incorrect Motor Control Center DC Power Supply #2 Breaker Trip Setting
1827	Incorrect Auxiliary AC Contactor Breaker Trip Setting
1828	Incorrect Air Compressor Breaker Trip Setting
1829	High Traction Power Converter DC Bus Voltage
1830	High Left Traction Motor Controller DC Bus Voltage
1831	High Right Traction Motor Controller DC Bus Voltage
1832	Low Traction Power Converter DC Bus Voltage
1833	Low Left Traction Motor Controller DC Bus Voltage
1834	Low Right Traction Motor Controller DC Bus Voltage
1835	Low Traction Power Converter Supply Voltage
1836	Traction Power Converter Instantaneous Current Overload
1837	Traction Power Converter Phase Current Imbalance
1838	High Traction Power Converter Transistor Temperature
1839	High Traction Power Converter Temperature
1840	Traction Dynamic Braking Thermal Capacity Exceeded
1841	Conveyor Motor Load Imbalance
1842	Left Conveyor Motor Current Not Responding to Command
1843	Left Conveyor Motor Current without Command
1844	Left Conveyor Motor Instantaneous Current Overload

1845	Left Conveyor Motor Phase Current Imbalance
1846	Right Conveyor Motor Current Not Responding to Command
1847	Right Conveyor Motor Current without Command
1848	Right Conveyor Motor Instantaneous Current Overload
1849	Right Conveyor Motor Phase Current Imbalance
1850	Cutter Circuit Breaker Open
1851	Cutter Motor Load Imbalance
1852	Left Cutter Motor Current Not Responding to Command
1853	Left Cutter Motor Current without Command
1854	Left Cutter Motor Instantaneous Current Overload
1855	Left Cutter Motor Phase Current Imbalance
1856	Right Cutter Motor Current Not Responding to Command
1857	Right Cutter Motor Current without Command
1858	Right Cutter Motor Instantaneous Current Overload
1859	Right Cutter Motor Phase Current Imbalance
1860	Fan Motor Current Not Responding to Command
1861	Fan Motor Current without Command
1862	Fan Motor Instantaneous Current Overload
1863	Fan Motor Phase Current Imbalance
1864	Gathering Motor Load Imbalance
1865	Left Gathering Motor Current Not Responding to Command
1866	Left Gathering Motor Current without Command
1867	Left Gathering Motor Instantaneous Current Overload
1868	Left Gathering Motor Phase Current Imbalance
1869	Right Gathering Motor Current Not Responding to Command
1870	Right Gathering Motor Current without Command
1871	Right Gathering Motor Instantaneous Current Overload
1872	Right Gathering Motor Phase Current Imbalance
1873	High Machine Supply Voltage
1874	Intermediate Circuit Breaker Open
1875	Low Machine Supply Voltage
1876	Main Circuit Breaker Open
1877	Power Center Trip Relay Activated
1878	Pump Motor Current Not Responding to Command
1879	Pump Motor Current without Command
1880	Pump Motor Instantaneous Current Overload
1881	Pump Motor Phase Current Imbalance
1882	Left Traction Motor Current Not Responding to Command
1883	Left Traction Motor Current without Command
1884	Left Traction Motor Instantaneous Current Overload
1885	Left Traction Motor Phase Current Imbalance
1886	Right Traction Motor Current Not Responding to Command
1887	Right Traction Motor Current without Command
1888	Right Traction Motor Instantaneous Current Overload
1889	Right Traction Motor Phase Current Imbalance
1890	Traction Circuit Breaker Open
1891	Conveyor Left/Right Spool Not Responding to Command
1892	Conveyor Raise/Lower Spool Not Responding to Command
1893	Cutter Drum Extend/Retract Spool Not Responding to Command
1894	Cutter Head Raise/Lower Spool Not Responding to Command
1895	Gathering Head Raise/Lower Spool Not Responding to Command

1896	Gathering Wing Extend/Retract Spool Not Responding to Command
1897	Emergency Stop Override Activated
1898	Emergency Stop Relay Not Responding to Command
1899	External Emergency Stop Activated
1900	High Voltage Enclosure Door Open
1901	Invalid Operator Remote Control Channel
1902	Left Emergency Stop Activated
1903	Low Machine Supply Water Flow
1904	Low Machine Supply Water Pressure
1905	Machine Current Detected With Machine Inactive
1906	Machine Off Key Switch Activated
1907	Machine Operation Attempted Without Cab Operation Foot Switch Depressed
1908	Machine Shutdown Due To Inactivity
1909	Multiple Operator Remote Control Signals Detected
1910	Operator Remote Control Disabled Due to Stuck Switch
1911	Operator Remote Control Signal Lost
1912	Operator Remote Control Stop Activated
1913	Right Emergency Stop Activated
1914	Methane Detection System Shutdown
1915	Methane Detection System Warning
1916	Personnel Detected Within Machine Proximity
1917	Temporary Roof Support Raise/Lower Spool Not Responding to Command
1918	Stabilizer Raise/Lower Spool Not Responding to Command
1919	Sump Frame Extend/Retract Spool Not Responding to Command
1920	Left Track Brake Pressure Not Responding to Command
1921	Left Traction Motor Overspeed
1922	Right Track Brake Pressure Not Responding to Command
1923	Right Traction Motor Overspeed
1924	Speed Limited Due to Traction Motor Speed Signal Loss
1925	High Left Conveyor Motor Bearing Temperature
1926	High Left Conveyor Motor Frame Temperature
1927	High Left Conveyor Motor Winding Temperature
1928	High Right Conveyor Motor Bearing Temperature
1929	High Right Conveyor Motor Frame Temperature
1930	High Right Conveyor Motor Winding Temperature
1931	Left Conveyor Motor Thermal Capacity Exceeded
1932	Right Conveyor Motor Thermal Capacity Exceeded
1933	High Left Cutter Motor Bearing Temperature
1934	High Left Cutter Motor Frame Temperature
1935	High Left Cutter Motor Winding Temperature
1936	High Right Cutter Motor Bearing Temperature
1937	High Right Cutter Motor Frame Temperature
1938	High Right Cutter Motor Winding Temperature
1939	Left Cutter Motor Thermal Capacity Exceeded
1940	Right Cutter Motor Thermal Capacity Exceeded
1941	Fan Motor Thermal Capacity Exceeded
1942	High Fan Motor Bearing Temperature
1943	High Fan Motor Frame Temperature
1944	High Fan Motor Winding Temperature
1945	High Left Gathering Motor Bearing Temperature
1946	High Left Gathering Motor Frame Temperature

1947	High Left Gathering Motor Winding Temperature
1948	High Right Gathering Motor Bearing Temperature
1949	High Right Gathering Motor Frame Temperature
1950	High Right Gathering Motor Winding Temperature
1951	Left Gathering Motor Thermal Capacity Exceeded
1952	Right Gathering Motor Thermal Capacity Exceeded
1953	High Pump Motor Bearing Temperature
1954	High Pump Motor Frame Temperature
1955	High Pump Motor Winding Temperature
1956	Pump Motor Thermal Capacity Exceeded
1957	High Left Traction Motor Bearing Temperature
1958	High Left Traction Motor Controller Temperature
1959	High Left Traction Motor Frame Temperature
1960	High Left Traction Motor Winding Temperature
1961	High Right Traction Motor Bearing Temperature
1962	High Right Traction Motor Controller Temperature
1963	High Right Traction Motor Frame Temperature
1964	High Right Traction Motor Winding Temperature
1965	High Traction Transformer Temperature
1966	Left Traction Motor Thermal Capacity Exceeded
1967	Right Traction Motor Thermal Capacity Exceeded
2000	Pump to Bucket Rod End Spool Not Responding to Command
2001	Pump to Bucket Head End Spool Not Responding to Command
2002	Pump to Boom Rod End Spool Not Responding to Command
2003	Pump to Boom Head End Spool Not Responding to Command
2004	Pump to Stick Rod End Spool Not Responding to Command
2005	Pump to Stick Head End Spool Not Responding to Command
2006	Pump to Swing Motor Left Spool Not Responding to Command
2007	Pump to Swing Motor Right Spool Not Responding to Command
2008	Pump to Right Travel Forward Motor Spool Not Responding to Command
2009	Pump to Right Travel Backward Motor Spool Not Responding to Command
2010	Pump to Left Travel Forward Motor Spool Not Responding to Command
2011	Pump to Left Travel Backward Motor Spool Not Responding to Command
2012	Pump to Standard Attachment Rod End Spool Not Responding to Command
2013	Pump to Standard Attachment Head End Spool Not Responding to Command
2014	Pump to Auxiliary #1 Rod End Spool Not Responding to Command
2015	Pump to Auxiliary #1 Head End Spool Not Responding to Command
2016	Pump to Auxiliary #2 Rod End Spool Not Responding to Command
2017	Pump to Auxiliary #2 Head End Spool Not Responding to Command
2018	Bucket Rod End to Tank Spool Not Responding to Command
2019	Bucket Head End to Tank Spool Not Responding to Command
2020	Boom Rod End to Tank Spool Not Responding to Command
2021	Boom Head End to Tank Spool Not Responding to Command
2022	Stick Rod End to Tank Spool Not Responding to Command
2023	Stick Head End to Tank Spool Not Responding to Command
2024	Swing Motor Left to Tank Spool Not Responding to Command
2025	Swing Motor Right to Tank Spool Not Responding to Command
2026	Right Travel Forward Motor to Tank Spool Not Responding to Command
2027	Right Travel Backward Motor to Tank Spool Not Responding to Command
2028	Left Travel Forward Motor to Tank Spool Not Responding to Command
2029	Left Travel Backward Motor to Tank Spool Not Responding to Command

2030	Standard Attachment Rod End to Tank Spool Not Responding to Command
2031	Standard Attachment Head End to Tank Spool Not Responding to Command
2032	Auxiliary #1 Rod End to Tank Spool Not Responding to Command
2033	Auxiliary #1 Head End to Tank Spool Not Responding to Command
2034	Auxiliary #2 Rod End to Tank Spool Not Responding to Command
2035	Auxiliary #2 Head End to Tank Spool Not Responding to Command
2036	Pump to Bucket Rod End Spool Sticking
2037	Pump to Bucket Head End Spool Sticking
2038	Pump to Boom Rod End Spool Sticking
2039	Pump to Boom Head End Spool Sticking
2040	Pump to Stick Rod End Spool Sticking
2041	Pump to Stick Head End Spool Sticking
2042	Pump to Swing Motor Left Spool Sticking
2043	Pump to Swing Motor Right Spool Sticking
2044	Pump to Right Travel Forward Motor Spool Sticking
2045	Pump to Right Travel Backward Motor Spool Sticking
2046	Pump to Left Travel Forward Motor Spool Sticking
2047	Pump to Left Travel Backward Motor Spool Sticking
2048	Pump to Standard Attachment Rod End Spool Sticking
2049	Pump to Standard Attachment Head End Spool Sticking
2050	Pump to Auxiliary #1 Rod End Spool Sticking
2051	Pump to Auxiliary #1 Head End Spool Sticking
2052	Pump to Auxiliary #2 Rod End Spool Sticking
2053	Pump to Auxiliary #2 Head End Spool Sticking
2054	Bucket Rod End to Tank Spool Sticking
2055	Bucket Head End to Tank Spool Sticking
2056	Boom Rod End to Tank Spool Sticking
2057	Boom Head End to Tank Spool Sticking
2058	Stick Rod End to Tank Spool Sticking
2059	Stick Head End to Tank Spool Sticking
2060	Swing Motor Left to Tank Spool Sticking
2061	Swing Motor Right to Tank Spool Sticking
2062	Right Travel Forward Motor to Tank Spool Sticking
2063	Right Travel Backward Motor to Tank Spool Sticking
2064	Left Travel Forward Motor to Tank Spool Sticking
2065	Left Travel Backward Motor to Tank Spool Sticking
2066	Standard Attachment Rod End to Tank Spool Sticking
2067	Standard Attachment Head End to Tank Spool Sticking
2068	Auxiliary #1 Rod End to Tank Spool Sticking
2069	Auxiliary #1 Head End to Tank Spool Sticking
2070	Auxiliary #2 Rod End to Tank Spool Sticking
2071	Auxiliary #2 Head End to Tank Spool Sticking
2072	Screed Left Material Height Sensor Signal Out of Range
2073	Screed Right Material Height Sensor Signal Out of Range
2074	Engine Shutdown Due to Diagnostic
2075	Winch Low Speed Lock Switch Depressed At Inappropriate Time
2076	Auto Blade Assist Switch Depressed at Inappropriate Time
2077	Auto Carry Switch Depressed at Inappropriate Time
2078	Steering Control Out Of Neutral At Inappropriate Time
2079	Low Left Front Suspension Cylinder Pressure
2080	Low Right Front Suspension Cylinder Pressure

2081	Low Left Rear Suspension Cylinder Pressure
2082	Low Right Rear Suspension Cylinder Pressure
2083	Payload Memory Low
2085	Invalid Articulation Response Detected
2086	Hydraulic Fan Return Filter Plugged
2087	Air Intake Shutoff Closed
2088	Air Intake Shutoff Detection Circuit Detected but Not Installed
2089	Oil Renewal System Cannot Operate
2090	Machine Motion Restricted While Steering Wheel is in Stowed Position
2091	Steering Wheel Stowed while Machine is in Motion
2092	Auto Blade Assist Disabled due to System Fault
2093	Moisture Detected in Fuel
2094	AutoReturn Disabled Due to System Fault
2095	AutoSpread Disabled Due to System Fault
2096	Low Engine Oil Refill Tank Level
2097	Swing Motor Spool Not Responding to Command
2098	Right Travel Motor Spool Not Responding to Command
2099	Left Travel Motor Spool Not Responding to Command
2100	Hydraulic Pump #1 Control Spool Not Responding to Command
2101	Hydraulic Pump #2 Control Spool Not Responding to Command
2102	Combining Spool Not Responding to Command
2103	Swing Motor Spool Sticking
2104	Right Travel Motor Spool Sticking
2105	Left Travel Motor Spool Sticking
2106	Hydraulic Pump #1 Control Spool Sticking
2107	Hydraulic Pump #2 Control Spool Sticking
2108	Combining Spool Sticking
2109	Secondary ECM Took Control
2110	Left Front Charge Filter Plugged
2111	Right Front Charge Filter Plugged
2112	Low Engine Coolant Pressure
2113	Low Aftercooler Coolant Pressure
2114	Swing Angle Out of Normal Operating Range
2115	Implements Disabled Due to System Fault
2116	High Implement Pilot Oil Pressure
2117	Low Implement Pilot Oil Pressure
2118	High Steering Pilot Oil Pressure
2119	Low Steering Pilot Oil Pressure
2120	Steering Case Drain Oil Filter Plugged
2121	Steering Pilot Oil Filter Plugged
2122	Transmission Left Oil Filter Plugged
2123	Transmission Right Oil Filter Plugged
2124	Low Front Brake Accumulator Pressure
2125	Low Rear Brake Accumulator Pressure
2126	Payload Overload Limit Exceeded
2127	Left Air Filter Restricted
2128	Right Air Filter Restricted
2129	High Front Axle Oil Temperature
2130	High Rear Axle Oil Temperature
2131	Geographical Inclusive Zone Boundary Violation
2132	Geographical Exclusive Zone Boundary Violation

2133	Operation Time Boundary Violation
2134	Low Primary Steering Pressure
2135	Parameter Translation File Invalid
2136	AutoCarry Disabled Due to System Fault
2137	AutoCarry Inhibited Due to Low Engine Speed
2138	Payload Memory Full
2139	Snapshot Memory Full
2140	Powertrain Limited Due to System Fault
2141	Low Steering Oil Level
2142	High Steering Oil Temperature
2143	Low Engine Coolant Level
2144	Low Front Brake Lube Oil Pressure
2145	Low Rear Brake Lube Oil Pressure
2146	Implement Tank Return Filter Plugged
2147	Implement Case Drain Filter Plugged
2148	High Lift Cylinder Head End Pressure
2149	High Tilt Cylinder Head End Pressure
2150	Low Windshield Washer Fluid Level
2151	Downshift Inhibited
2152	Lockup Clutch Disabled Due to System Fault
2153	Auto Lube Inhibited Due to Engine Speed
2154	Transmission Neutralized Due to Parking Brake Applied
2155	Incorrect Gear for AutoCarry
2156	AccuGrade Disabled Due to System Fault
2157	Starter Disabled Due to Transmission Not in Neutral
2158	Starter Disabled Due to High System Voltage
2159	High Generator Power Inverter Temperature
2160	Machine Operation Attempted Outside Security Bypass Period
2161	Low Left Steering Oil Pressure
2162	Low Center Steering Oil Pressure
2163	High Turbocharger Turbine Intake Differential Temperature
2164	Invalid Aftertreatment #2 Outlet #1 NOx Level
2165	Low Aftertreatment #1 Diesel Oxidation Catalyst #1 Intake Gas Temperature
2166	Low Aftertreatment #1 Diesel Oxidation Catalyst #2 Intake Gas Temperature
2167	Lift Kickout Disabled Due to System Fault
2168	Tilt Kickout Disabled Due to System Fault
2169	Powertrain Disabled Due to System Fault
2170	Implement Limited Due to System Fault
2171	High Engine Coolant Pump Outlet Temperature
2172	Low Fuel Transfer Pump Inlet Pressure
2173	Transmission Not In Neutral at Startup
2174	Parking Brake Switch Off At Inappropriate Time
2175	Low Urea Injection Air Pressure
2176	Low Urea Level
2177	High Catalyst Differential Pressure
2178	Low Aftertreatment #2 Diesel Oxidation Catalyst #1 Intake Gas Temperature
2179	Low Aftertreatment #2 Diesel Oxidation Catalyst #2 Intake Gas Temperature
2180	Low Aftertreatment #1 Diesel Oxidation Catalyst #1 Conversion Efficiency
2181	Low Aftertreatment #1 Diesel Oxidation Catalyst #2 Conversion Efficiency
2182	Low Aftertreatment #2 Diesel Oxidation Catalyst #1 Conversion Efficiency
2183	Low Aftertreatment #2 Diesel Oxidation Catalyst #2 Conversion Efficiency

2184	High Filter Capacitor Phase A-B Voltage
2185	High Filter Capacitor Phase B-C Voltage
2186	High Auxiliary AC Voltage
2187	Low Auxiliary AC Voltage
2188	Incorrect High Pressure Wash Breaker Trip Setting
2189	Incorrect Water Boost Pump Breaker Trip Setting
2190	Incorrect Motor Control Center DC Power Supply #2 Breaker Trip Class
2191	Incorrect Auxiliary AC Breaker Trip Class
2192	Incorrect Air Compressor Breaker Trip Class
2193	Incorrect High Pressure Wash Breaker Trip Class
2194	Incorrect Water Boost Pump Breaker Trip Class
2195	Motor Control Center Enclosure Door Open
2196	Motor Control Center Enclosure Heater Circuit Breaker Open
2197	High Motor Control Center Enclosure Temperature
2198	High Auxiliary AC Contactor Accumulated Thermal Energy
2199	High Air Compressor Motor Accumulated Thermal Energy
2200	Torque Converter Lockup Clutch Slip Detected in Direct Drive
2201	Transmission Slip Detected in First Forward Gear
2202	Transmission Slip Detected in Second Forward Gear
2203	Transmission Slip Detected in Third Forward Gear
2204	Transmission Slip Detected in Fourth Forward Gear
2205	Transmission Slip Detected in Fifth Forward Gear
2206	Transmission Slip Detected in Sixth Forward Gear
2207	Transmission Slip Detected in Seventh Forward Gear
2208	Transmission Slip Detected in Eighth Forward Gear
2209	Transmission Slip Detected in Ninth Forward Gear
2210	Transmission Slip Detected in Tenth Forward Gear
2211	Transmission Slip Detected in Eleventh Forward Gear
2212	Transmission Slip Detected in Twelfth Forward Gear
2213	Transmission Slip Detected in Thirteenth Forward Gear
2214	Transmission Slip Detected in Fourteenth Forward Gear
2215	Transmission Slip Detected in Fifteenth Forward Gear
2216	Transmission Slip Detected in Sixteenth Forward Gear
2217	High Pressure Wash Motor Accumulated Thermal Energy
2218	High Water Boost Pump Motor Accumulated Thermal Energy
2219	Left Hydraulic Pump Motor Contactor Signal Mismatch
2220	Right Hydraulic Pump Motor Contactor Signal Mismatch
2221	High Left Hydraulic Pump Motor Control Pole A Temperature
2222	High Left Hydraulic Pump Motor Control Pole B Temperature
2223	High Left Hydraulic Pump Motor Control Pole C Temperature
2224	High Right Hydraulic Pump Motor Control Pole A Temperature
2225	High Right Hydraulic Pump Motor Control Pole B Temperature
2226	High Right Hydraulic Pump Motor Control Pole C Temperature
2227	High Left Hydraulic Pump Motor Gateway Power Input Voltage
2228	Low Left Hydraulic Pump Motor Gateway Power Input Voltage
2229	High Right Hydraulic Pump Motor Gateway Power Input Voltage
2230	Low Right Hydraulic Pump Motor Gateway Power Input Voltage
2231	High Left Hydraulic Pump Motor Gateway Temperature
2232	High Right Hydraulic Pump Motor Gateway Temperature
2233	Left Hydraulic Pump Motor Gateway IP Setting Incorrect
2234	Right Hydraulic Pump Motor Gateway IP Setting Incorrect

2235	Cab Air Electric Heater #1 Current Not Responding to Command
2236	Cab Air Electric Heater #2 Current Not Responding to Command
2237	Tiltrotator System Voltage High
2238	Tiltrotator System Voltage Low
2239	Transformer #1 Input Breaker Open
2240	Transformer #2 Input Breaker Open
2241	Transformer #1 Output Breaker Open
2242	Transformer #2 Output Breaker Open
2243	Motor Control Center DC Power Supply #2 Contactor Stuck Closed
2244	Motor Control Center DC Power Supply #2 Contactor Stuck Open
2245	Auxiliary AC Contactor Stuck Closed
2246	Auxiliary AC Contactor Stuck Open
2247	Air Compressor Contactor Stuck Closed
2248	Air Compressor Contactor Stuck Open
2249	High Pressure Wash Contactor Stuck Closed
2250	High Pressure Wash Contactor Stuck Open
2251	Water Boost Pump Contactor Stuck Closed
2252	Water Boost Pump Contactor Stuck Open
2253	Auxiliary AC Ground Continuity Fault
2254	Invalid Aftertreatment #1 Intake NOx Level #2
2255	Invalid Aftertreatment #1 Outlet NOx Level #2
2256	High Aftertreatment #1 Intake O2 Concentration #2
2257	High Aftertreatment #1 Outlet O2 Concentration #2
2258	High Left Front Inner Tire Temperature
2259	High Left Front Outer Tire Temperature
2260	High Right Front Inner Tire Temperature
2261	High Right Front Outer Tire Temperature
2262	High Left Front Outer Tire Pressure
2263	Low Left Front Outer Tire Pressure
2264	High Right Front Outer Tire Pressure
2265	Low Right Front Outer Tire Pressure
2266	High Left Front Inner Tire Pressure
2267	Low Left Front Inner Tire Pressure
2268	Low Right Front Inner Tire Pressure
2269	Low Steering Accumulator Pressure
2270	High Right Front Inner Tire Pressure
2271	High Machine Coolant Temperature
2272	Low Machine Coolant Pressure
2273	High Cutter Gearbox Oil Temperature
2274	Low Air Supply Pressure
2276	Front Left Emergency Stop Activated
2277	Front Right Emergency Stop Activated
2278	Rear Left Emergency Stop Activated
2279	Rear Right Emergency Stop Activated
2280	Rear Conveyor Left Emergency Stop Activated
2281	Rear Conveyor Right Emergency Stop Activated
2282	Oxygen Detection System Warning Activated
2283	Oxygen Detection System Shutdown Activated
2284	Roof Bolter Remote Control Emergency Stop Activated
2285	Mesh Handler Remote Control Emergency Stop Activated
2286	Machine Remote Control Emergency Stop Activated

2287	High Engine Turbocharger Differential Speed
2288	High High-Pressure Fuel Pump Oil Pressure
2289	Low High-Pressure Fuel Pump Oil Pressure
2290	GPS #1 Accuracy Insufficient
2291	GPS #2 Accuracy Insufficient
2292	High Air Conditioner Discharge Pressure
2293	Low Air Conditioner Suction Pressure
2294	Fuel Injection Disabled
2295	Hydraulic Pilot Supply #1 Filter Plugged
2296	Hydraulic Pilot Supply #2 Filter Plugged
2297	High Main Hydraulic Pump #1 Oil Temperature
2298	High Main Hydraulic Pump #2 Oil Temperature
2299	High Main Hydraulic Pump #3 Oil Temperature
2300	High Main Hydraulic Pump #4 Oil Temperature
2301	Transmission Slip Detected in First Reverse Gear
2302	Transmission Slip Detected in Second Reverse Gear
2303	Transmission Slip Detected in Third Reverse Gear
2304	Transmission Slip Detected in Fourth Reverse Gear
2305	Transmission Slip Detected in Fifth Reverse Gear
2306	Transmission Slip Detected in Sixth Reverse Gear
2307	High Main Hydraulic Pump #5 Oil Temperature
2308	High Main Hydraulic Pump #6 Oil Temperature
2309	High Main Hydraulic Pump #7 Oil Temperature
2310	High Main Hydraulic Pump #8 Oil Temperature
2311	Main Hydraulic Pump #1 Metal Contamination Present
2312	Main Hydraulic Pump #2 Metal Contamination Present
2313	Main Hydraulic Pump #3 Metal Contamination Present
2314	Main Hydraulic Pump #4 Metal Contamination Present
2315	Main Hydraulic Pump #5 Metal Contamination Present
2316	Main Hydraulic Pump #6 Metal Contamination Present
2317	Main Hydraulic Pump #7 Metal Contamination Present
2318	Main Hydraulic Pump #8 Metal Contamination Present
2319	Left Implement Pump Oil Supply Shutoff Valve Closed With Pump Running
2320	High PTO (Power Takeoff) #1 Oil Temperature
2321	High PTO (Power Takeoff) #2 Oil Temperature
2322	Low PTO (Power Takeoff) #1 Oil Pressure
2323	Low PTO (Power Takeoff) #2 Oil Pressure
2324	Low PTO (Power Takeoff) #1 Oil Level
2325	Low PTO (Power Takeoff) #2 Oil Level
2326	High Swing Drive Oil Temperature
2327	Low Swing Drive #1 Oil Level
2328	Low Swing Drive #2 Oil Level
2329	Low Swing Drive #3 Oil Level
2330	Low Swing Drive #4 Oil Level
2331	Swing Drive #1 Metal Contamination Present
2332	Swing Drive #2 Metal Contamination Present
2333	Swing Drive #3 Metal Contamination Present
2334	Swing Drive #4 Metal Contamination Present
2335	High Swing Pump #1 Temperature
2336	High Swing Pump #2 Temperature
2337	High Swing Pump #3 Temperature

2338	High Swing Pump #4 Temperature
2339	Swing Pump #1 Metal Contamination Present
2340	Swing Pump #2 Metal Contamination Present
2341	Swing Pump #3 Metal Contamination Present
2342	Swing Pump #4 Metal Contamination Present
2343	Service Station Lowered
2344	Park Brake Engaged While Shift Lever Not in Park
2345	Low Brake Accumulator #1 Precharge Gas Pressure
2346	Low Brake Accumulator #2 Precharge Gas Pressure
2347	Low Brake Accumulator #3 Precharge Gas Pressure
2348	Low Brake Accumulator #4 Precharge Gas Pressure
2349	Low Brake Accumulator #5 Precharge Gas Pressure
2350	Brake Master Cylinder Overstoked
2351	Roof Bolter Not Stowed When Not Roof Bolting
2352	Mesh Handler Not Stowed When Not Mesh Handling
2353	Dedusting Fan System Not Responding to Command
2354	Dedusting Fan System Fault
2355	Dust Suppression Spray Not Active During Cutting
2356	Operation Inhibited Due to Machine Supply Water Flow Not Detected
2357	Cutter Clutch Slip Detected
2358	Machine Remote Control Signal Low
2359	Machine Remote Control Signal Lost
2360	Machine Remote Control Fire Suppression System Commanded
2361	Auto Cutting Shutdown Due to Operator Inactivity
2362	Cutting Inhibited Due to Stabilizer Position
2363	Travel Inhibited Due to Stabilizer Position
2364	Cutting Inhibited Due to Cutter Boom Position
2365	Cutting Inhibited Due to Machine Position
2366	Cutting Inhibited Due to Gathering Head Position
2367	Travel Inhibited Due to Loading Shield Position
2368	Cutter Boom and Gathering Head Limited Due to Proximity
2369	Gathering Head and Front Stabilizer Limited Due to Proximity
2370	Low Cutter Gearbox Pump #1 Suction Pressure
2371	Low Cutter Gearbox Pump #2 Suction Pressure
2372	Low Cutter Gearbox Oil Pressure
2373	High Cutter Gearbox Oil Pressure
2374	Cutter Gearbox Oil Filter Plugged
2375	Dedusting Fan System Not Active During Cutting
2376	Low Pivot Shaft Lube Oil Level
2377	Access Ladder Lowered While Machine in Motion
2378	High Air Compressor Air Filter Differential Pressure
2379	Trolley Cabinet Cooling Fan Speed Not Responding to Command
2380	Pantograph Failed to Lower
2381	Manual Gear Too High for Operating Conditions
2382	Low Secondary Steering Accumulator Precharge Gas Pressure
2383	Idle Elevated for Aftertreatment Thermal Management
2384	Aftertreatment #2 DEF Control Module Breaker Open
2385	Turbocharger Wastegate Not Responding to Command
2386	High Engine Turbocharger #1 Differential Speed
2387	High Engine Turbocharger #2 Differential Speed
2388	High Engine Turbocharger #3 Differential Speed

2389	High Engine Turbocharger #4 Differential Speed
2390	High Engine Turbocharger #1 Turbine Outlet Temperature
2391	High Engine Turbocharger #2 Turbine Outlet Temperature
2392	High Engine Turbocharger #3 Turbine Outlet Temperature
2393	High Engine Turbocharger #4 Turbine Outlet Temperature
2394	High Saw Speed
2395	Low Air Conditioner Evaporator Coil Temperature
2396	High Machine Cooling Fan Speed
2397	Low Engine Turbocharger #1 Efficiency
2398	Low Engine Turbocharger #2 Efficiency
2399	Low Engine Turbocharger #3 Efficiency
2400	Low Engine Turbocharger #4 Efficiency
2401	High Service Brake Temperature
2402	High Port Inboard Transmission Oil Temperature
2403	High Starboard Inboard Transmission Oil Temperature
2404	High Port Transmission Oil Temperature
2405	High Starboard Transmission Oil Temperature
2406	High Port Inboard Transmission Oil Pressure
2407	Low Port Inboard Transmission Oil Pressure
2408	High Port Transmission Oil Pressure
2409	Low Port Transmission Oil Pressure
2410	High Starboard Inboard Transmission Oil Pressure
2411	Low Starboard Inboard Transmission Oil Pressure
2412	High Starboard Transmission Oil Pressure
2413	Low Starboard Transmission Oil Pressure
2414	High Port Inboard Pod Steering Motor Internal Temperature
2415	Low Port Inboard Pod Steering Motor Internal Temperature
2416	High Port Pod Steering Motor Internal Temperature
2417	Low Port Pod Steering Motor Internal Temperature
2418	High Starboard Inboard Pod Steering Motor Internal Temperature
2419	Low Starboard Inboard Pod Steering Motor Internal Temperature
2420	High Starboard Pod Steering Motor Internal Temperature
2421	Low Starboard Pod Steering Motor Internal Temperature
2422	High Port Inboard Pod Steering Motor Control Supply Voltage
2423	Low Port Inboard Pod Steering Motor Control Supply Voltage
2424	High Port Pod Steering Motor Control Supply Voltage
2425	Low Port Pod Steering Motor Control Supply Voltage
2426	High Starboard Inboard Pod Steering Motor Control Supply Voltage
2427	Low Starboard Inboard Pod Steering Motor Control Supply Voltage
2428	High Starboard Pod Steering Motor Control Supply Voltage
2429	Low Starboard Pod Steering Motor Control Supply Voltage
2430	Hydrostatic Case Drain Filter Plugged
2431	Air Compressor Oil Filter Plugged
2432	Left Gathering Jammed
2433	Right Gathering Jammed
2434	Hook Free Fall Clutch Activated
2435	High Generator Phase Current
2436	High Drive Motor Phase Current
2437	Generator Power Inverter Transistor Desaturation Fault
2438	Drive Motor Power Inverter Transistor Desaturation Fault
2439	Low Generator Power Inverter Transistor Gate Drive Power Supply Voltage

2440	Low Drive Motor Power Inverter Transistor Gate Drive Power Supply Voltage
2441	Low Generator Power Inverter Main Power Supply Voltage
2442	Low Drive Motor Power Inverter Main Power Supply Voltage
2443	DC Bus Power Port Cannot be Enabled
2444	High DC Bus Power Port Voltage
2445	High DC Bus Power Port Current
2446	Power Inverter Revision Mismatch
2447	Air Compressor Oil Separator Plugged
2448	High Air Compressor Interstage Temperature
2449	Air Compressor Air Filter Plugged
2450	Low Air Compressor Oil Pressure
2451	Unexpected Drill Clockwise Rotation
2452	Unexpected Drill Counterclockwise Rotation
2453	Unexpected Drill Feed Retract Detected
2454	Unexpected Drill Feed Extend Detected
2455	Low Park Brake Disengage Pressure
2456	High Motor Power Inverter Transistor Temperature
2457	High Generator Power Inverter Transistor Temperature
2458	Cab Emergency Stop Activated
2459	Generator Rotor Position Unknown
2460	Drive Motor Rotor Position Unknown
2461	Low Drive Motor Phase A Current
2462	Low Drive Motor Phase B Current
2463	Low Drive Motor Phase C Current
2464	Low Generator Phase A Current
2465	Low Generator Phase B Current
2466	Low Generator Phase C Current
2467	Unexpected Spool Movement Detected with No Command Given While Steering System #1 Enabled
2468	Unexpected Spool Movement Detected with No Command Given While Steering System #2 Enabled
2469	Unexpected Spool Movement Detected From Steering System #1 Commands While Steering System #2 Enabled
2470	Unexpected Spool Movement Detected From Steering System #2 Commands While Steering System #1 Enabled
2471	Unexpected Spool Direction Detected for Steering System #1
2472	Unexpected Spool Direction Detected for Steering System #2
2473	Excessive Spool Movement for Steering System #1
2474	Excessive Spool Movement for Steering System #2
2475	Insufficient Spool Movement for Steering System #1
2476	Insufficient Spool Movement for Steering System #2
2477	High Engine Exhaust #1 O2 Concentration
2478	High Engine Exhaust #2 O2 Concentration
2479	Steering System Functional Test Maximum Time Exceeded
2480	Left Service Brake Pedal Position Mismatch
2481	Right Service Brake Pedal Position Mismatch
2482	High Cutter Motor Rectifier Phase A Current
2483	High Cutter Motor Rectifier Phase B Current
2484	High Cutter Motor Rectifier Phase C Current
2485	Cutter Motor Contactor Stuck Closed
2486	Cutter Motor Contactor Stuck Open
2487	Cutter Motor System Fault
2488	Cutter Breaker Tripped
2489	High Cutter Motor Supply Voltage
2490	Low Cutter Motor Supply Voltage

2491	Cutter Motor Speed Not Responding to Command
2492	High Right Conveyor Motor Temperature
2493	High Left Conveyor Motor Temperature
2494	High Rear Conveyor Motor Temperature
2495	Cutter Motor Pre-Charge Contactor Stuck Closed
2496	Cutter Motor Pre-Charge Contactor Stuck Open
2497	Cutter Motor Pre-Charge Circuit Not Responding to Command
2498	Machine Working Automatic Service Brake Failure to Engage
2499	Drive Motor Winding Temperature Signals Lost
2500	Main Breaker Tripped
2501	Machine Supply Ground Fault
2502	Cutter Motor Supply Ground Fault
2503	Transformer Secondary Ground Fault
2504	High Motor Control Center DC Power Supply #1 Temperature
2505	Left Hydraulic Pump Motor System Fault
2506	Right Hydraulic Pump Motor System Fault
2507	Left Conveyor Motor System Fault
2508	Right Conveyor Motor System Fault
2509	Rear Conveyor Motor System Fault
2510	Motor Control Center System Fault
2511	Low Water Tank Level
2512	Low Aftertreatment #1 Diesel Oxidation Catalyst #1 Outlet Gas Temperature
2513	High Engine Coolant Temperature #2
2514	High Aftertreatment #1 Hydrocarbon Doser Intake Fuel Temperature
2515	Low Aftertreatment #1 Hydrocarbon Doser Intake Fuel Temperature
2516	Low Tool Oil Flow
2517	High Engine Variable Geometry Turbocharger Actuator Temperature
2518	Low Secondary Steering Pilot Oil Pressure
2519	High Auto Lube Pressure During Line #1 Lubrication
2520	High Auto Lube Pressure During Line #2 Lubrication
2521	Low Auto Lube Pressure During Line #1 Lubrication
2522	Low Auto Lube Pressure During Line #2 Lubrication
2523	PTO (Power Takeoff) #1 Metal Contamination Present
2524	PTO (Power Takeoff) #2 Metal Contamination Present
2525	High Air Conditioner #1 Compressor Discharge Pressure
2526	High Air Conditioner #2 Compressor Discharge Pressure
2527	Low Air Conditioner #1 Compressor Suction Pressure
2528	Low Air Conditioner #2 Compressor Suction Pressure
2529	Auto Lube Distributor Injector Position #1 Not Responding to Command
2530	Auto Lube Distributor Injector Position #2 Not Responding to Command
2531	Engine Torque Limiting Clutch Slip Detected
2532	Unexpected Hydraulic Valve Bank Spool Centered Pressure Detected
2533	Low Left Center Tire Pressure
2534	Low Right Center Tire Pressure
2535	High Left Center Tire Pressure
2536	High Right Center Tire Pressure
2537	High Left Center Tire Temperature
2538	High Right Center Tire Temperature
2539	High Return Hydraulic Oil Pressure
2540	Implement Cooling Return Oil Filter Plugged
2541	Steering Cooling Return Oil Filter Plugged

2542	High Swing Left Pilot Pressure
2543	High Swing Right Pilot Pressure
2544	Secondary Steering Pump #1 Pressure Not Responding to Command
2545	Secondary Steering Pump #2 Pressure Not Responding to Command
2546	ECU #3 Interface Mismatch
2547	Engine Oil Quality Out of Range
2548	Transmission Oil Quality Out of Range
2549	Hydraulic Oil Quality Out of Range
2550	Left Low Beam Headlight Not Responding to On Command
2551	Right Low Beam Headlight Not Responding to On Command
2552	Left High Beam Headlight Not Responding to On Command
2553	Right High Beam Headlight Not Responding to On Command
2554	Left Clearance/Turn Signal Light Not Responding to On Command
2555	Right Clearance/Turn Signal Light Not Responding to On Command
2556	Horn Not Responding to On Command
2557	Aftertreatment #1 DEF Pump Not Responding to Command
2558	Well Stimulation Pump Fluid End Cylinder #1 Suction Valve Leak
2559	Well Stimulation Pump Fluid End Cylinder #2 Suction Valve Leak
2560	Well Stimulation Pump Fluid End Cylinder #3 Suction Valve Leak
2561	Well Stimulation Pump Fluid End Cylinder #4 Suction Valve Leak
2562	Well Stimulation Pump Fluid End Cylinder #5 Suction Valve Leak
2563	Well Stimulation Pump Fluid End Cylinder #1 Discharge Valve Leak
2564	Well Stimulation Pump Fluid End Cylinder #2 Discharge Valve Leak
2565	Well Stimulation Pump Fluid End Cylinder #3 Discharge Valve Leak
2566	Well Stimulation Pump Fluid End Cylinder #4 Discharge Valve Leak
2567	Well Stimulation Pump Fluid End Cylinder #5 Discharge Valve Leak
2568	High Rotor Drivetrain Oil Temperature
2569	Transmission Clutch Not Responding to Command
2570	Drive Motor #2 Not Responding to Command
2571	High Aftertreatment #1 Diesel Oxidation Catalyst #1 Outlet Gas Temperature
2572	High Machine Cooling Fan #1 Speed
2573	High Machine Cooling Fan #2 Speed
2574	High Machine Cooling Fan #3 Speed
2575	High Machine Cooling Fan #4 Speed
2576	High Left Drive Motor Winding Temperature
2577	High Right Drive Motor Winding Temperature
2578	High Left Drive Motor Phase A Current
2579	High Left Drive Motor Phase B Current
2580	High Left Drive Motor Phase C Current
2581	High Right Drive Motor Phase A Current
2582	High Right Drive Motor Phase B Current
2583	High Right Drive Motor Phase C Current
2584	Low Left Drive Motor Phase A Current
2585	Low Left Drive Motor Phase B Current
2586	Low Left Drive Motor Phase C Current
2587	Low Right Drive Motor Phase A Current
2588	Low Right Drive Motor Phase B Current
2589	Low Right Drive Motor Phase C Current
2590	Left Drive Motor Overspeed
2591	Right Drive Motor Overspeed
2592	Left Drive Motor Phase Current Imbalance

2593	Right Drive Motor Phase Current Imbalance
2594	High Left Drive Motor Phase Current
2595	High Right Drive Motor Phase Current
2596	High Pump Motor Phase Current
2597	High Pump Motor Phase A Current
2598	High Pump Motor Phase B Current
2599	High Pump Motor Phase C Current
2600	Low Pump Motor Phase Current
2601	Low Pump Motor Phase A Current
2602	Low Pump Motor Phase B Current
2603	Low Pump Motor Phase C Current
2604	Pump Motor Overspeed
2605	Pump Motor Inverter Transistor Desaturation Fault
2606	Low Pump Motor Power Inverter Transistor Gate Drive Power Supply Voltage
2607	Low Pump Motor Power Inverter Main Power Supply Voltage
2608	Pump Motor Rotor Position Unknown
2609	Left Drive Motor Inverter Transistor Desaturation Fault
2610	Right Drive Motor Inverter Transistor Desaturation Fault
2611	Low Left Drive Motor Power Inverter Transistor Gate Drive Power Supply Voltage
2612	Low Right Drive Motor Power Inverter Transistor Gate Drive Power Supply Voltage
2613	Low Left Drive Motor Power Inverter Main Power Supply Voltage
2614	Low Right Drive Motor Power Inverter Main Power Supply Voltage
2615	Left Drive Motor Rotor Position Unknown
2616	Right Drive Motor Rotor Position Unknown
2617	Low Rotor Drivetrain Oil Pump Outlet Pressure
2618	High Rotor Drivetrain Oil Pump Outlet Pressure
2619	Low Turbocharger #5 Compressor Inlet Pressure
2620	Low Turbocharger #6 Compressor Inlet Pressure
2621	Turbocharger #5 Overspeed
2622	Turbocharger #6 Overspeed
2623	High Left Drive Motor Power Inverter Transistor Temperature
2624	High Right Drive Motor Power Inverter Transistor Temperature
2625	High Pump Motor Power Inverter Transistor Temperature
2626	High Machine Speed While in Winch Freespool Mode
2627	High Machine Speed While in Winch Drive Away Mode
2628	High Ether Actuation Attempts
2629	Leg Swing Inhibited Due to Operator Station Slid Out
2630	Engine Gaseous Fuel Valve #1 Not Responding to Command
2631	Engine Gaseous Fuel Valve #2 Not Responding to Command
2632	Engine Gaseous Fuel Valve #3 Not Responding to Command
2633	Engine Gaseous Fuel Valve #4 Not Responding to Command
2634	Engine Gaseous Fuel Valve #5 Not Responding to Command
2635	Engine Gaseous Fuel Valve #6 Not Responding to Command
2636	Engine Gaseous Fuel Valve #7 Not Responding to Command
2637	Engine Gaseous Fuel Valve #8 Not Responding to Command
2638	Engine Gaseous Fuel Valve #9 Not Responding to Command
2639	Engine Gaseous Fuel Valve #10 Not Responding to Command
2640	Engine Gaseous Fuel Valve #11 Not Responding to Command
2641	Engine Gaseous Fuel Valve #12 Not Responding to Command
2642	Engine Gaseous Fuel Valve #13 Not Responding to Command
2643	Engine Gaseous Fuel Valve #14 Not Responding to Command

2644	Engine Gaseous Fuel Valve #15 Not Responding to Command
2645	Engine Gaseous Fuel Valve #16 Not Responding to Command
2646	Engine Gaseous Fuel Valve #17 Not Responding to Command
2647	Engine Gaseous Fuel Valve #18 Not Responding to Command
2648	Engine Gaseous Fuel Valve #19 Not Responding to Command
2649	Engine Gaseous Fuel Valve #20 Not Responding to Command
2650	High Left Service Brake Plate Temperature
2651	High Right Service Brake Plate Temperature
2652	High Powertrain Oil Pressure
2653	Port Engine Not Responding to Command
2654	Starboard Engine Not Responding to Command
2655	Port Transmission Gear Mismatch
2656	Starboard Transmission Gear Mismatch
2657	Low Supply Brake Accumulator Pressure
2658	Low Aftertreatment #1 Intake NOx Sensor Protection Air Pressure
2659	Low Aftertreatment #1 Outlet NOx Sensor Protection Air Pressure
2660	Incorrect Fuel Type
2661	Object Detection Rear Camera Blockage Detected
2662	Object Detection Left Side Camera Blockage Detected
2663	Object Detection Front Camera Blockage Detected
2664	Object Detection Right Side Camera Blockage Detected
2665	Low Winch Accumulator Pressure
2666	Low Battery Charge
2667	High Fuel Valve #1 Temperature
2668	High Fuel Valve #2 Temperature
2669	Low Fuel Valve #1 Pressure
2670	Low Fuel Valve #2 Pressure
2671	High Fuel Valve #1 Pressure
2672	High Fuel Valve #2 Pressure
2673	Low Fuel Valve #1 Differential Pressure
2674	Low Fuel Valve #2 Differential Pressure
2675	High Fuel Valve #1 Differential Pressure
2676	High Fuel Valve #2 Differential Pressure
2679	Engine Fuel System Gas Mass Flow Reversed
2680	Ripper Raise Inhibited Due to Inverter Guard Deflection
2681	Unexpected Tiltrotator Quick Coupler Disengagement Detected
2682	Drill Rotation Position Magnets Not Detected
2683	Low Brake Charge Pressure
2684	High Turbocharger #1 Compressor Inlet Pressure
2685	High Turbocharger #2 Compressor Inlet Pressure
2686	High Turbocharger #3 Compressor Inlet Pressure
2687	High Turbocharger #4 Compressor Inlet Pressure
2688	High Turbocharger #5 Compressor Inlet Pressure
2689	High Turbocharger #6 Compressor Inlet Pressure
2690	Left Rear Leg Position Mismatch
2691	Right Rear Leg Position Mismatch
2692	Carousel Not Responding to Engage Command
2693	Pipe Positioner Not Responding to Engage Command
2694	Deck Wrench Not Responding to Engage Command
2695	Deck Wrench Not Responding to Disengage Command
2696	Hydraulic Operated Breakout Wrench (HOBO) Not Responding to Engage Command

2697	Carousel Not Responding to Park Command
2698	Pipe Positioner Not Responding to Park Command
2699	Carousel Lock Not Responding to Lock Command
2700	Carousel Lock Not Responding to Unlock Command
2701	Carousel Index Lock Not Responding to Lock Command
2702	Carousel Index Lock Not Responding to Unlock Command
2703	Carousel Index Cylinder Not Responding to Extend Command
2704	Carousel Index Cylinder Not Responding to Retract Command
2705	Failed to Break Out Head from Pipe in Carousel
2706	Excessive Rotation Before Pipe Breakout
2707	Unacceptable Machine Pitch/Roll Angle
2708	Pipe Detect Switch Not Determined to be Functional
2709	Rotary Head Not Above Carousel
2710	Low Drill Forward Rotation Speed
2711	Low Drill Reverse Rotation Speed
2712	Ladder Unexpectedly Not Stowed
2713	Mast Unexpectedly Not Stowed
2714	Mast Unexpectedly Not Locked
2715	Carousel Unexpectedly Not Parked
2716	Hydraulic Operated Breakout Wrench (HOBO) Unexpectedly Not Parked
2717	Hydraulic Operated Bit Basket (HOBB) Unexpectedly Not Parked
2718	Pipe Retaining Safety Arm Unexpectedly Not Engaged
2719	Pipe Positioner Unexpectedly Not Engaged
2720	Carousel Unexpectedly Not Engaged
2721	Deck Wrench Unexpectedly Not Disengaged
2722	Deck Wrench Unexpectedly Not Engaged
2723	Hydraulic Operated Breakout Wrench (HOBO) Not Responding to Park Command
2724	Hydraulic Operated Bit Basket (HOBB) Not Responding to Park Command
2725	Drill Flushing Pressure Not Responding to Off Command
2726	Drill Flushing Pressure Not Responding to On Command
2727	Drill Flushing Valve Not Responding to Close Command
2728	Drill Flushing Valve Not Responding to Open Command
2729	Pipe Unexpectedly in Hole
2730	Pipe Detect Switch Unexpectedly Detected Pipe
2731	Premature Drill Feed Stall Detected While Connecting Pipe
2732	Failed to Break Out Pipe Top Thread
2733	Low Drill Torque
2734	Low Rotation Torque During Drill String Connection
2735	Rotation Stalled Prematurely During Drill String Connection
2736	Carousel Loading Stopped Due to Incorrect Pipe Rotation Angle
2737	Pipe Unscrewed
2738	Hydraulic Operated Breakout Wrench (HOBO) Failed to Break Out Pipe Bottom Thread
2739	Excessive Drill Anti-Jam
2740	Drill Feed Stall Not Detected While Connecting Pipe
2741	Low Secondary Steering Accumulator Pressure
2742	Unexpectedly Large Adjustment of Rotary Head Position
2743	Rotary Head Position Target Not Detected
2744	High Charger Harmonic Filter Temperature
2745	Charger Input Circuit Breaker Tripped
2746	Charger Input Precharge Contactor Signal Mismatch
2747	Charger Input Precharge Sequence Failed

2748	Charger Input Ground Fault
2749	High Charger Harmonic Filter Phase A Voltage
2750	High Charger Harmonic Filter Phase B Voltage
2751	High Charger Harmonic Filter Phase C Voltage
2752	High Charger Input Phase A Current
2753	High Charger Input Phase B Current
2754	High Charger Input Phase C Current
2755	Charger Cable Assembly Positive Wire Current Imbalance
2756	Charger Cable Assembly Negative Wire Current Imbalance
2757	Low Charger Input Voltage
2758	High Charger Input Voltage
2759	Charger Input Contactor Controller Current Phase Loss
2760	Charger Input Contactor Controller Current Imbalance
2761	Charger Input Contactor Controller Overcurrent
2762	Charger Input Contactor Controller Voltage Phase Loss
2763	Charger Input Contactor Controller Voltage Imbalance
2764	Charger Input Contactor Controller Frequency Deviation Fast
2765	Charger Input Contactor Controller Frequency Deviation Slow
2766	Charger Input Contactor Controller High Power
2767	Charger Input Contactor Controller Starts Limit Exceeded
2768	Charger Input Contactor Controller Overload
2769	Charger Input Contactor Controller Phase Rotation Mismatch
2770	Charger Input Contactor Controller Measurement Module Not Available
2771	High Charger Coolant Temperature
2772	Low Charger Coolant Level
2773	Low Charger Output Current
2774	High Charger Output Current
2775	Charger Output Positive Contactor Signal Mismatch
2776	Charger Output Negative Contactor Signal Mismatch
2777	Charger Output Precharge Contactor Signal Mismatch
2778	Charger Output Precharge Sequence Failed
2779	Charger Output Ground Fault
2780	High Charger Output Inductor Temperature
2781	High Charger Output Voltage
2782	Low Charger Output Voltage
2783	High Charger Cable Assembly Voltage
2784	Low Charger Cable Assembly Voltage
2785	High Charger Output Capacitor Voltage
2786	Low Charger Output Capacitor Voltage
2787	High Charger Inverter Temperature #1
2788	High Charger Inverter Temperature #2
2789	High Charger Inverter Temperature #3
2790	High Charger Inverter Phase A Current
2791	High Charger Inverter Phase B Current
2792	High Charger Inverter Phase C Current
2793	High Charger Inverter Phase #1 Current
2794	High Charger Inverter Phase #2 Current
2795	High Charger Inverter Phase #3 Current
2796	High Control Enclosure Temperature
2797	High Power Enclosure Temperature
2798	Charger Input Contactor Signal Mismatch

2799	High Transmission Clutch #1 Temperature
2800	High Transmission Clutch #2 Temperature
2801	High Transmission Clutch #3 Temperature
2802	High Transmission Clutch #4 Temperature
2803	High Transmission Clutch #5 Temperature
2804	High Transmission Clutch #6 Temperature
2805	High Transmission Clutch #7 Temperature
2806	High Transmission Clutch #8 Temperature
2807	Machine Operation Limited Due to Cold Engine
2808	Low Engine Turbocharger Actuator Power Supply Voltage
2809	Engine Starter Failed to Crank
2810	High Brake Cooling Pressure
2811	Low Brake Cooling Pressure
2812	High Engine Throttle Valve Temperature
2813	User Defined Machine Stability Limits Exceeded
2814	High Traction Battery Pack #1 Temperature
2815	High Traction Battery Pack #2 Temperature
2816	Traction Battery Charge Port Current Imbalance
2817	High Traction Battery Charge Port Positive Conductor #1 Temperature
2818	High Traction Battery Charge Port Positive Conductor #2 Temperature
2819	High Traction Battery Charge Port Negative Conductor #1 Temperature
2820	High Traction Battery Charge Port Negative Conductor #2 Temperature
2821	High Traction Battery Charge Port Voltage
2822	Low Traction Battery Charge Port Voltage
2823	Traction Battery Pack #1 String #1 Disabled
2824	Traction Battery Pack #1 String #2 Disabled
2825	Traction Battery Pack #1 String #3 Disabled
2826	Traction Battery Pack #1 String #4 Disabled
2827	Traction Battery Pack #1 String #5 Disabled
2828	Traction Battery Pack #2 String #1 Disabled
2829	Traction Battery Pack #2 String #2 Disabled
2830	Traction Battery Pack #2 String #3 Disabled
2831	Traction Battery Pack #2 String #4 Disabled
2832	Traction Battery Pack #2 String #5 Disabled
2833	Traction Battery Precharge Sequence Failed
2834	Low Engine Oil Pressure #1
2835	Low Engine Oil Pressure #2
2836	High DC Power Conditioning Supply Voltage
2837	Low DC Power Conditioning Supply Voltage
2838	Low Engine Turbocharger Lube Oil Pressure
2839	Service Brake Pressure Not Responding to On Command
2840	Left Front Drive Motor Speed Not Responding to Command
2841	Right Front Drive Motor Speed Not Responding to Command
2842	Left Rear Drive Motor Speed Not Responding to Command
2843	Right Rear Drive Motor Speed Not Responding to Command
2844	High Main Pilot Pressure
2845	Low Main Pilot Pressure
2846	Service Brake Pedal Disable Valve Not Responding to Enable Command
2847	Service Brake Pedal Disable Valve Not Responding to Disable Command
2848	Traction Battery Charge Port Negative Contactor Signal Mismatch
2849	Traction Battery Charge Port Positive Contactor Signal Mismatch

2850	Charger Safety Relay Unexpected Activation
2851	Ground Fault Test Load Relay Signal Mismatch
2852	Low Steering System Efficiency
2853	Low Engine Cooling Fan System Efficiency
2854	Low Engine Coolant Temperature #2
2855	Transmission Slip Detected in Finish Gear
2856	Lift Cylinder Lock Mode Active
2857	High Hydraulic Pilot Oil Pressure
2858	Low Hydraulic Pilot Oil Pressure
2859	High Aftertreatment #1 Diesel Oxidation Catalyst #1 Intake Gas Pressure
2860	Remote Control Operator Console System Disabled Due to Signal Interference
2861	Remote Control Operator Console System Disabled Due to Low Signal Strength
2862	Remote Control Operator Station System Disabled Due to Signal Interference
2863	Remote Control Operator Station System Disabled Due to Low Signal Strength
2864	Remote Control Aftermarket System Disabled Due to Signal Interference
2865	Remote Control Aftermarket System Disabled Due to Low Signal Strength
2866	Low Engine Intake #1 Air Mass Flow Rate
2867	Low Engine Intake #2 Air Mass Flow Rate
2868	Low Air Conditioner Refrigerant Charge
2869	Low Electric Drive Motor Cooling Air Pressure
2870	High Drill Flushing Pressure
2871	Secondary Steering System Maximum Continuous Operation Time Exceeded
2872	Low Lockup Clutch Pressure
2873	High Lockup Clutch Pressure
2874	Inconsistent Quick Coupler Configuration Detected While Switch Locked
2875	Inconsistent Quick Coupler Configuration Detected While Switch Unlocked
2876	Engine Starter #1 Failed to Crank
2877	Engine Starter #2 Failed to Crank
2878	Left Front Wheel Speed to Machine Speed Crosscheck
2879	Right Front Wheel Speed to Machine Speed Crosscheck
2880	High Hydraulic Charge Pressure
2881	Low Transmission Clutch #1 Pressure
2882	Low Transmission Clutch #2 Pressure
2883	Low Transmission Clutch #3 Pressure
2884	Low Transmission Clutch #4 Pressure
2885	Low Transmission Clutch #5 Pressure
2886	Low Transmission Clutch #6 Pressure
2887	Low Transmission Clutch #7 Pressure
2888	Low Transmission Clutch #8 Pressure
2889	Low Transmission Clutch #9 Pressure
2890	Low Transmission Clutch #10 Pressure
2891	High Transmission Clutch #1 Pressure
2892	High Transmission Clutch #2 Pressure
2893	High Transmission Clutch #3 Pressure
2894	High Transmission Clutch #4 Pressure
2895	High Transmission Clutch #5 Pressure
2896	High Transmission Clutch #6 Pressure
2897	High Transmission Clutch #7 Pressure
2898	High Transmission Clutch #8 Pressure
2899	High Transmission Clutch #9 Pressure
2900	High Transmission Clutch #10 Pressure

2901	Unexpected Drive Motor Forward Speed Detected in Low Gear
2902	Unexpected Drive Motor Reverse Speed Detected in Low Gear
2903	Unexpected Drive Motor Forward Speed Detected in High Gear
2904	Unexpected Drive Motor Reverse Speed Detected in High Gear
2905	Unexpected Drive Motor Forward Distance Travelled in Low Gear
2906	Unexpected Drive Motor Reverse Distance Travelled in Low Gear
2907	Unexpected Drive Motor Forward Distance Travelled in High Gear
2908	Unexpected Drive Motor Reverse Distance Travelled in High Gear
2909	Hoist Pump Filter #1 Plugged
2910	Hoist Pump Filter #2 Plugged
2911	Transmission Intermediate Speed Mismatch
2912	Primary Pipe Loader Gate Not Responding to Open Command
2913	Primary Pipe Loader Gate Not Responding to Close Command
2914	Secondary Pipe Loader Gate Not Responding to Open Command
2915	Secondary Pipe Loader Gate Not Responding to Close Command
2916	Primary Pipe Loader Gate Unexpectedly Not Opened
2917	Primary Pipe Loader Gate Unexpectedly Not Closed
2918	Secondary Pipe Loader Gate Unexpectedly Not Opened
2919	Secondary Pipe Loader Gate Unexpectedly Not Closed
2920	Pipe Detect Switch Unexpectedly Not Detected Pipe
2921	Transmission Low Gear Not Responding to Disengage Command
2922	Transmission High Gear Not Responding to Disengage Command
2923	Transmission Low Gear Not Responding to Engage Command
2924	Transmission High Gear Not Responding to Engage Command
2925	Drive Motor #1 Minimum Displacement Feedback Not Responding to Command
2926	Left Front Machine Height Sensor Signal Out of Range
2927	Right Front Machine Height Sensor Signal Out of Range
2928	Left Rear Machine Height Sensor Signal Out of Range
2929	Right Rear Machine Height Sensor Signal Out of Range
2930	Rear Machine Height Sensor Signal Out of Range
2931	Medium Range Object Detection Sensor #9 Blockage Detected
2932	Medium Range Object Detection Sensor #10 Blockage Detected
2933	Medium Range Object Detection Sensor #11 Blockage Detected
2934	Medium Range Object Detection Sensor #12 Blockage Detected
2935	Medium Range Object Detection Sensor #13 Blockage Detected
2936	Medium Range Object Detection Sensor #14 Blockage Detected
2937	Medium Range Object Detection Sensor #15 Blockage Detected
2938	Medium Range Object Detection Sensor #16 Blockage Detected
2939	High Cab Carbon Dioxide Level
2940	Implement Oil Quality Out of Range
2941	Steering Oil Quality Out of Range
2942	Low Charger #1 Input Voltage
2943	Low Charger #2 Input Voltage
2944	Low Charger #3 Input Voltage
2945	Low Charger #1 Output Voltage
2946	Low Charger #2 Output Voltage
2947	Low Charger #3 Output Voltage
2948	Low Charger #1 Current
2949	Low Charger #2 Current
2950	Low Charger #3 Current
2951	High Charger #1 Current

2952	High Charger #2 Current
2953	High Charger #3 Current
2954	High Charger #1 Temperature
2955	High Charger #2 Temperature
2956	High Charger #3 Temperature
2957	Charger #1 Not Charging
2958	Charger #2 Not Charging
2959	Charger #3 Not Charging
2960	Low Insulation Resistance in High Voltage System
2961	Machine High Voltage Interlock Active
2962	Battery High Voltage Interlock Active
2963	Battery Pack Negative Contactor Not Responding to Open Command
2964	Battery Pack Negative Contactor Not Responding to Close Command
2965	Battery Pack Positive Contactor Not Responding to Open Command
2966	Battery Pack Positive Contactor Not Responding to Close Command
2967	Battery String #1 Negative Contactor Not Responding to Open Command
2968	Battery String #1 Negative Contactor Not Responding to Close Command
2969	Battery String #2 Negative Contactor Not Responding to Open Command
2970	Battery String #2 Negative Contactor Not Responding to Close Command
2971	Battery Discharge Sequence Failed
2972	Low Voltage System Not Charging
2973	High Voltage System Not Charging
2974	High Battery System Temperature
2975	Battery Precharge Sequence Failed
2976	Machine Motion Inhibited Due to Charger Port Cap Removed
2977	High Traction Battery Module Temperature Difference
2978	High Traction Battery String Current Difference
2979	High Traction Battery String Voltage Difference
2980	Low Traction Battery Pack #1 String #1 Controller Power Input Voltage
2981	Low Traction Battery Pack #1 String #2 Controller Power Input Voltage
2982	Low Traction Battery Pack #1 String #3 Controller Power Input Voltage
2983	Low Traction Battery Pack #1 String #4 Controller Power Input Voltage
2984	Low Traction Battery Pack #1 String #5 Controller Power Input Voltage
2985	Low Traction Battery Pack #2 String #1 Controller Power Input Voltage
2986	Low Traction Battery Pack #2 String #2 Controller Power Input Voltage
2987	Low Traction Battery Pack #2 String #3 Controller Power Input Voltage
2988	Low Traction Battery Pack #2 String #4 Controller Power Input Voltage
2989	Low Traction Battery Pack #2 String #5 Controller Power Input Voltage
2990	High Traction Battery Pack #1 String #1 Charging Current
2991	High Traction Battery Pack #1 String #2 Charging Current
2992	High Traction Battery Pack #1 String #3 Charging Current
2993	High Traction Battery Pack #1 String #4 Charging Current
2994	High Traction Battery Pack #1 String #5 Charging Current
2995	High Traction Battery Pack #2 String #1 Charging Current
2996	High Traction Battery Pack #2 String #2 Charging Current
2997	High Traction Battery Pack #2 String #3 Charging Current
2998	High Traction Battery Pack #2 String #4 Charging Current
2999	High Traction Battery Pack #2 String #5 Charging Current
3000	Propulsion System Warning
3001	High Propulsion System Temperature
3002	No Retard / No Propel Warning

3003	No Propel Warning
3004	Drive System Reduced Propulsion
3005	Dynamic Retarder Not Responding to Command
3006	AC Drive System Not Responding to Energize Command
3007	AC Drive System Not Responding to Deenergize Command
3008	Engine Shutdown Requested
3009	High Vehicle Interface Cabinet Temperature
3010	System/Component Failure
3011	Maintenance Monitor Active
3012	Proximity Detection System Disabled
3013	Low Brake System Backup Battery Voltage
3014	Brake System Backup Battery Capacity Low
3015	Fire Suppression System Fault
3287	High Left Final Drive Lube Pressure
3288	High Right Final Drive Lube Pressure
10000	Engineering Data Gathering Condition Occurred
10001	Engineering Data Gathering Condition #1 Occurred
10002	Engineering Data Gathering Condition #2 Occurred
10003	Engineering Data Gathering Condition #3 Occurred
10004	Engineering Data Gathering Condition #4 Occurred
10005	Engineering Data Gathering Condition #5 Occurred
10006	Engineering Data Gathering Condition #6 Occurred
10007	Engineering Data Gathering Condition #7 Occurred
10008	Engineering Data Gathering Condition #8 Occurred
10009	Engineering Data Gathering Condition #9 Occurred
10010	Engineering Data Gathering Condition #10 Occurred
10011	Engineering Data Gathering Condition #11 Occurred
10012	Engineering Data Gathering Condition #12 Occurred
10013	Engineering Data Gathering Condition #13 Occurred
10014	Engineering Data Gathering Condition #14 Occurred
10015	Engineering Data Gathering Condition #15 Occurred
10016	Engineering Data Gathering Condition #16 Occurred
10017	Engineering Data Gathering Condition #17 Occurred
10018	Engineering Data Gathering Condition #18 Occurred
10019	Engineering Data Gathering Condition #19 Occurred
10020	Engineering Data Gathering Condition #20 Occurred
10021	Engineering Data Gathering Condition #21 Occurred
10022	Engineering Data Gathering Condition #22 Occurred
10023	Engineering Data Gathering Condition #23 Occurred
10024	Engineering Data Gathering Condition #24 Occurred
10025	Engineering Data Gathering Condition #25 Occurred
10026	Engineering Data Gathering Condition #26 Occurred
10027	Engineering Data Gathering Condition #27 Occurred
10028	Engineering Data Gathering Condition #28 Occurred
10029	Engineering Data Gathering Condition #29 Occurred
10030	Engineering Data Gathering Condition #30 Occurred
10031	Engineering Data Gathering Condition #31 Occurred
10032	Engineering Data Gathering Condition #32 Occurred
10033	Engineering Data Gathering Condition #33 Occurred
10034	Engineering Data Gathering Condition #34 Occurred
10035	Engineering Data Gathering Condition #35 Occurred

10036	Engineering Data Gathering Condition #36 Occurred
10037	Engineering Data Gathering Condition #37 Occurred
10038	Engineering Data Gathering Condition #38 Occurred
10039	Engineering Data Gathering Condition #39 Occurred
10040	Engineering Data Gathering Condition #40 Occurred
10041	Engineering Data Gathering Condition #41 Occurred
10042	Engineering Data Gathering Condition #42 Occurred
10043	Engineering Data Gathering Condition #43 Occurred
10044	Engineering Data Gathering Condition #44 Occurred
10045	Engineering Data Gathering Condition #45 Occurred
10046	Engineering Data Gathering Condition #46 Occurred
10047	Engineering Data Gathering Condition #47 Occurred
10048	Engineering Data Gathering Condition #48 Occurred
10049	Engineering Data Gathering Condition #49 Occurred
10050	Engineering Data Gathering Condition #50 Occurred
10051	Engineering Data Gathering Condition #51 Occurred
10052	Engineering Data Gathering Condition #52 Occurred
10053	Engineering Data Gathering Condition #53 Occurred
10054	Engineering Data Gathering Condition #54 Occurred
10055	Engineering Data Gathering Condition #55 Occurred
10056	Engineering Data Gathering Condition #56 Occurred
10057	Engineering Data Gathering Condition #57 Occurred
10058	Engineering Data Gathering Condition #58 Occurred
10059	Engineering Data Gathering Condition #59 Occurred
10060	Engineering Data Gathering Condition #60 Occurred
60000	Hydraulic Operated Breakout Wrench (HOBO) Not Parked Interlock Override
60001	Ladder Not Stowed Interlock Override
60002	Machine Stability Limits Exceeded Interlock Override
60003	Drill Mast Not Locked or Stowed Interlock Override
60004	Pipe in Hole Interlock Override
60005	Rotary Head Not Above Carousel Interlock Override
60006	Hydraulic Operated Bit Basket (HOBB) Not Stowed Interlock Override
60007	Low Foam Tank Level Interlock Override
60008	Deck Wrench Not Stowed Interlock Override
60009	Pipe Positioner Aligned With Rotary Head Interlock Override
60010	Carousel Not Completely Engaged or Disengaged Interlock Override
60011	Pipe Retaining Safety Arm Not Engaged Interlock Override
60012	Carousel or Deck Wrench Engaged Interlock Override
60013	Rear Jacks Exceed Minimum Pressure Interlock Override
60014	Low Tool Oil Tank Level Interlock Override
60015	Winch Cable Not Retracted Interlock Override
60016	Drill Mast Locking Pins Not Retracted Interlock Override
60017	Machine Not Lifted and Leveled Interlock Override
60018	Stabilizers Not Fully Stowed Interlock Override
60019	Dust Curtain Not Raised Interlock Override
60020	Service Brake Misuse
60021	Emission Control System Operator Inducement
60022	Cab Seat Swivel Lock Not Engaged
60023	Machine Shipping Mode Active
60024	Ground Level Emergency Stop Activated
60025	Platform Level Emergency Stop Activated

60026	Load Interference with Bucket
60027	Boom Overextended in Crane Mode
60028	Engine Start Inhibited Due to Park Brake Not Engaged
60029	Engine Start Inhibited Due to Gear Lever Not in Neutral
60030	Engine Start Inhibited Due to Hydraulic Lockout Switch Not Locked
60031	Engine Start Inhibited Due to Engine Cranking
60032	Engine Speed Limited Due to Cold Engine
60033	Unacceptable Operator Remote Control Console Orientation
60034	Swing Brake Applied While Swinging
60035	Automatic Level Stopped Due to Machine Stability Limits Exceeded
60036	Automatic Drill Stopped Due to Machine Stability Limits Exceeded
60037	Rotary Head Not Above Pipe Loader Interlock Override
60038	Primary Pipe Loader Gate Not Completely Opened or Closed Interlock Override
60039	Secondary Pipe Loader Gate Not Completely Opened or Closed Interlock Override
60040	Operator Pipe Count Manual Adjustment
60041	Primary Pipe Loader Not Completely Engaged or Disengaged Interlock Override
60042	Secondary Pipe Loader Not Completely Engaged or Disengaged Interlock Override
60043	Primary Pipe Loader Gate Not Completely Opened or Closed Interlock Override
60044	Secondary Pipe Loader Gate Not Completely Opened or Closed Interlock Override
60045	Crane Overload
60046	Remote Control System Disabled Due to Operator Station Fault
60047	Vibratory Drum Decoupling
60048	Machine Front Vibratory Drum Decoupling
60049	Machine Rear Vibratory Drum Decoupling
60050	Automatic Level Stopped by User
60051	Automatic Mast Stopped by User
60052	Automatic Drill Stopped by User
60053	Automatic Pipe Handling Stopped by User
60054	Automatic Level Stopped Due to Parked Mode
60055	Automatic Pipe Handling Stopped Due to Parked or Tram Mode
60056	Automatic Drill Stopped Due to Parked or Tram Mode
60057	Automatic Mast Stopped Due to Parked or Tram Mode
60058	Automatic Level Stopped Due to System Fault
60059	Automatic Mast Stopped Due to System Fault
60060	Automatic Drill Stopped Due to System Fault
60061	Automatic Pipe Handling Stopped Due to System Fault
60062	Automatic Level Stopped Due to Operator Not Present
60063	Automatic Mast Stopped Due to Operator Not Present
60064	Automatic Drill Stopped Due to Operator Not Present
60065	Automatic Pipe Handling Stopped Due to Operator Not Present
60066	Automatic Level Stopped Due to Time Out
60067	Automatic Pipe Handling Stopped Due to Time Out
60068	Automatic Mast Stopped Due to Time Out
60069	Automatic Mast Stopped Due to Machine Interlock
60070	Automatic Level Stopped Due to Machine Interlock
60071	Automatic Drill Stopped Due to Machine Interlock
60072	Automatic Pipe Handling Stopped Due to Machine Interlock
60073	Automatic Level Stopped Due to Tram Command
60074	Pipe Count Mismatch
60075	Automatic Pipe Handling Stopped Due to Interlock Override
60076	Automatic Level Stopped Due to Interlock Override

60077	Automatic Drill Stopped Due to Interlock Override
60078	Automatic Mast Stopped Due to Interlock Override
60079	Unexpected Implement Shutdown
60088	Rotary Head Not Above Pipe Loaders Interlock Override
60089	Pipe Loaders Not Completely Engaged or Disengaged Interlock Override
60090	Pipe Loader Gate Manual Interlock Override
60091	Drilling Attempted on Bootleg Hole
60092	High Machine Speed While In Neutral
60093	Pipe Not Available While Adding Pipe
60094	Drill String Already Full When Requested to Add a Pipe
60095	Free Slot Not Available While Removing Pipe
60096	Impact Detected
60097	User Requested Unmanned System Restart
60098	High Left Front Tire Weight-Speed
60099	High Right Front Tire Weight-Speed
60100	High Left Rear Tire Weight-Speed
60101	High Right Rear Tire Weight-Speed
60103	Service Brake Misuse while Machine in Motion
60104	Service Brake Misuse while Machine Stalled
60105	Low Engine Oil Level Crank Lockout Override
63000	Machine Motion Inhibited Due to Park Brake Engaged
63001	Implement Motion Inhibited Due to Implements Locked
63002	Auto Inhibited Due to Park Brake Engaged
63003	Auto Inhibited Due to Implements Locked
63004	Auto Inhibited Due to Machine Not in Gear
63005	Auto Inhibited Due to Requested Speed Incorrect
63006	Auto Inhibited Due to Requested Speed Too High
63007	Auto Inhibited Due to Gear Not Forward
63008	Auto Inhibited Due to Engine Speed Out of Range
63009	Auto Inhibited Due to Controls Not in Neutral Position
63010	Auto Inhibited Due to Blade Float Active
63011	Auto Inhibited Due to GPS Signal Lost
63012	Grade Control System Detected
63013	Engine Speed Elevated Due to Transmission System Fault
63014	Low Fuel Tank #1 Level
63015	Low Fuel Tank #2 Level
63016	Bucket Lockout Pending
63017	Bucket Lockout Active
63018	Low Foam Injection Tank Level
63019	Low Tool Oil Tank Level
63020	Operator Station Avoidance Feature Active
63021	High Crane Load
63022	Crane Overload
63023	Crane Mode Inhibited Due to Bucket Not Racked
63024	Collision Avoidance Motion Inhibit Active
63025	Collision Avoidance Emergency Stop Active
63026	Collision Avoidance Controlled Stop Active
63027	Long Range Object Detection Sensor #1 Power Disabled
63028	Machine Derate Active
63029	Wireless Disable Switch Engaged
63030	Operator Station Avoidance Function Disabled Due to System Fault

63031	Shovel Crane Function Disabled Due to System Fault
63032	Collision Avoidance Slow Down Active
63033	Collision Avoidance System Override Active
63034	Perception Coverage Lost
63035	Remote Disable Active
63036	Tamper Disable Active
63037	Tool Oil Injection Required
63038	Tip-Off Assist Disarmed Due to Time Out
63039	Tip-Off Assist Disarmed Due to Payload Not Achievable
63040	Tip-Off Assist Disarmed Due to Tilt Lever Racked
63041	Tip-Off Assist Disarmed Due to Not in Pile Tip-Off Mode
63042	Tip-Off Assist Disarmed Due to Truck Target Not Set
63043	Tip-Off Assist Disarmed Due to Tilt Lever Released
63044	Tip-Off Assist Disarmed Due to End of Travel
63045	Tip-Off Assist Armed
63046	Tip-Off Assist Complete
63047	Body Height Limit Exceeded
63048	Port Throttle Lever Position Mismatch
63049	Starboard Throttle Lever Position Mismatch
63050	Port Gear Lever Position Mismatch
63051	Starboard Gear Lever Position Mismatch
63052	Glow Plugs Active Wait to Start
63053	Rotor Gear Shift Inhibited Due to Rotor Drive On
63054	Rotor Drive Inhibited Due to Rotor Height Low
63055	Unexpected Quick Coupler Disengagement Detected
63056	Loss of Quick Coupler System Engagement Pressure
63057	Security Derate Active
63058	Propel Lockout Due to Propel Lever Not in Neutral
63059	Operator Not Seated While Machine is in Motion
63060	Charge Rate Limited
63061	Unexpected Tiltrotator Quick Coupler Disengagement Detected
63062	Joystick Propel Disabled Due to System Fault
63063	Propel Disabled Due to Cold Hydraulic Oil
63064	Entertainment Module Incompatible
63065	Starting Inhibited Pending Coast Down
63066	High Payload Carryback
63067	Boom Angle Limit Feature Disabled Due to System Fault
63068	Boom Angle Limit Feature Active
63069	Operator Settings Reset
63070	Operator Settings Reset Failed
63071	Unmanned-Manual Mode Request Not Responding to Command
63072	Body Height Limit Geofence Disabled Due to GPS Signal Lost
63073	Machine Speed Limit Geofence Disabled Due to GPS Signal Lost
63074	Seat Belt Unfastened with Hydraulics Not Locked
63075	Manned Operator Autonomy Override Not Ready
63076	Rear Steering Mode Forced Active
63077	Machine Derate Pending Due to Machine Security
63078	Tip-Off Assist Disarmed Due to Excessive Machine Speed
63079	Machine Motion Inhibited Due to Low Engine Speed
63080	Cab Door Open While Machine Power On
63081	Machine Idle Shutdown Pending

63082	Upshift Inhibited
63083	Stationary Shift Inhibited
63084	Tip-Off Assist Disarmed Due to Lift Command
63085	Loss of Rear Scraper Communications
63086	Implement Inhibited Due to Operator Not in Seat
63087	Steering Inhibited Due to Machine Not in Gear
63088	Unexpected Quick Coupler Engagement Detected
63089	Transmission Calibration Required
63090	Secondary Steering Pump Active
63091	Payload Legal For Trade Measurement Not Sealed
63092	Traction Battery Extended Charge Required
63093	Park Brake Engaged Due to System Test Active
63094	Maintenance Mode Active
63095	Machine Motion Inhibited Due to Charger Port Cap Removed
63096	Swing Assist Disabled Due to System Fault
63097	E-Fence Boundary Violation
63098	Bucket Assist Degraded Due to Tool Change
63099	Automatic Retarding Control Disabled Due to System Fault
63100	Blade Recall Lift Position Set
63101	Blade Recall Pitch Position Set
63102	Blade Recall Lift and Pitch Positions Set
63103	Grade System Updating
63104	Water Injection Pump Flow Management Disabled Due To System Fault
63105	Machine Speed Limit Features Impaired Due to System Fault
63106	Transmission Gear Limited Due to Engine Fault
63107	Machine Speed Too High for Steering with Cold Oil
63108	Auto Set Tires Snoozed Until Next Shift to Reverse
63109	Service Brake Response Limited Due to Cold Hydraulic Oil
63110	Neutralizer Smoothing Disabled Due to High Clutch Temperature
63111	Unsupported Machine Detected
63112	Unstable Digging Detected
63113	Inappropriate Travel Detected With Ground-Engaged Work Tool
63114	High Tamping Impact Detected
63115	High Velocity Impact at End of Cylinder Detected
63116	Operation at End of Cylinder Detected
63117	High Dig Rate Over Undesired Side of the Machine Detected
63118	Major Machine Drop Impact Detected
63119	Minor Machine Drop Impact Detected
63120	Major Swing Impact Detected
63121	Minor Swing Impact Detected
63122	High Powertrain System Temperature
63123	Machine Retarding Limited Due to Battery Charge Limit
63124	Machine Performance Temporarily Limited Due to Powertrain System Temperature
63125	Preconditioning Limited Due to Low Power Charger Connected
63126	Machine Charge Duration Exceeds Work Day Scheduled Start Time
63127	High Voltage Charging System Derate Active
63128	Winch Free Spool Disabled Due to Motor Speed Detection
64000	Steering System Functional Test Bypassed
64001	Cutter Motor Stall Condition
64002	Emergency Stop Cooldown Activated
64003	Aftertreatment DEF Doser Not Ready

64004	Rotor Disengaged Due to Rotor Exposed with Machine in Reverse
64005	Inverter Guard Deflection Disabled Due to System Fault
64006	Automatic Pipe Handling Stopped Due to Insufficient Hole Depth
64007	Remote Control Disabled Due to Steering Lock Switch Off
64008	Joystick Steering Disabled Due to System Fault
64009	Service Brake Latch Disabled Due to System Fault
64010	Low Operator Inducement Time to Torque Derate Level 1
64011	Low Operator Inducement Time to Final Inducement Action
64012	Snapshot in Progress
64013	Snapshot Stored
64014	Snapshot Failed
64015	Implement Inhibited Due to Requested Speed Incorrect
64016	Retarding Limited Due to High Battery Charge
64017	E-Fence Active
64018	E-Fence Disabled Due to System Fault
64019	E-Fence Set Required Due to Travel Detected
64020	E-Fence Disabled Due to Low Hydraulic Oil Temperature
64021	E-Fence Degraded Due to Tool Change
64022	E-Fence Set Required Due to Tool Rotation
64023	Charger Cable Connected but Machine Not Charging
64024	Traction Inverter #1 Derate Active
64025	Traction Inverter #2 Derate Active
64026	Hydraulic Inverter Derate Active
64027	Battery System Shutdown Pending
64028	Machine Performance Limited Due to Battery Temperature
64029	Machine Performance Limited Due to Battery Current Limits
64030	Machine Performance Limited Due to Battery State of Charge
64031	High Voltage Battery Charge Level Low
64034	Park Brake Release Request Denied Due To Engine Not Running
64035	Park Brake Release Request Denied Due To Operator not in Seat
64036	Ease Of Use Features Limited Due To No Tool Selected
64037	Low Payload Confidence
64038	Armrest Raised while Machine in Motion

Suspect Parameter Numbers (SPN)

The Suspect Parameter Number (SPN) is diagnostic fault code terminology found on some Caterpillar products using a J1939 CAN data link.

The Society of Automotive Engineers (SAE) developed the J1939 standards and SPN code terms have been assigned for specific parameters (component or system circuits) that diagnostic trouble codes (DTC) are associated with.

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Only the SPN numbers that are intended to use on Caterpillar products are listed.

Table 6

SPN Code	Description
16	Engine Fuel Filter (suction side) Differential Pressure
18	Engine Extended Range Fuel Pressure
19	Engine Extended Range Engine Oil Pressure
20	Engine Coolant Pressure
21	Engine ECU Temperature

22	Engine Extended Crankcase Blow-by Pressure
23	Generator Oil Pressure
24	Generator Coolant Temperature
27	EGR #1 Valve Position
28	Accelerator Pedal Position #3
29	Accelerator Pedal Position #2
30	Engine Crankcase Blowby Pressure
31	Transmission Range Position
32	Transmission Splitter Position
33	Clutch Cylinder Position
36	Clutch Plates
37	Transmission Air Tank Pressure
38	Second Fuel Level
39	Tire Pressure Check Interval
46	Pneumatic Supply Pressure
48	Extended Range Barometric Pressure
51	Engine Throttle Position
52	Engine Intercooler Temperature
53	Transmission Synchronizer Clutch Value
54	Transmission Synchronizer Brake Value
59	Transmission Shift Finger Gear Position
60	Transmission Shift Finger Rail Position
64	Transmission #2 Oil Temperature
69	Two Speed Axle Switch
70	Parking Brake Switch
72	Engine Blower Bypass Valve Position
73	Auxiliary Pump Pressure
74	Maximum Vehicle Speed Limit
75	Steering Axle Temperature
76	Axle Lift Air Pressure
77	Forward Rear Drive Axle Temperature
78	Rear Rear Drive Axle Temperature
79	Road Surface Temperature
80	Washer Fluid Level
81	DPF #1 Intake Pressure
82	Engine Air Start Pressure
84	Wheel-Based Vehicle Speed
86	Cruise Control Set Speed
87	Cruise Control High Set Limit Speed
88	Cruise Control Low Set Limit Speed
90	Power Takeoff Oil Temperature
91	Accelerator Pedal Position #1
92	Engine Percent Load At Current Speed
93	Engine Net Brake Torque
94	Engine Fuel Delivery Pressure
95	Engine Fuel Filter Differential Pressure
96	Fuel Level
97	Water In Fuel Indicator
98	Engine Oil Level
99	Engine Oil Filter Differential Pressure
100	Engine Oil Pressure

101	Engine Crankcase Pressure
102	Engine Intake Manifold #1 Pressure
103	Engine Turbocharger #1 Speed
104	Engine Turbocharger Lube Oil Pressure #1
105	Engine Intake Manifold #1 Temperature
106	Engine Air Inlet Pressure
107	Engine Air Filter 1 Differential Pressure
108	Barometric Pressure
109	Engine Coolant Pressure
110	Engine Coolant Temperature
111	Engine Coolant Level
112	Engine Coolant Filter Differential Pressure
113	Engine Governor Droop
114	Net Battery Current
115	Alternator Current
116	Brake Application Pressure
117	Brake Primary Pressure
118	Brake Secondary Pressure
119	Hydraulic Retarder Pressure
120	Hydraulic Retarder Oil Temperature
122	Engine Retarder Percent
123	Clutch Pressure
124	Transmission Oil Level
126	Transmission Filter Differential Pressure
127	Transmission Oil Pressure
129	Engine Injector Metering Rail #2 Pressure
130	Engine Power Specific Fuel Economy
131	Engine Exhaust Back Pressure
132	Engine Inlet Air Mass Flow Rate
133	Engine Average Fuel Rate
135	Engine Fuel Delivery Pressure
136	Auxiliary Vacuum Pressure Reading
137	Auxiliary Gage Pressure Reading 1
138	Auxiliary Absolute Pressure Reading
141	Trailer, Tag Or Push Channel Tire Pressure Target
142	Drive Channel Tire Pressure Target
143	Steer Channel Tire Pressure Target
144	Trailer, Tag Or Push Channel Tire Pressure
145	Drive Channel Tire Pressure
146	Steer Channel Tire Pressure
147	Engine Average Fuel Economy
148	Engine Instantaneous Fuel Economy
149	Engine Mass Flow Rate
152	Number Of ECU Resets
153	Engine High-Resolution Crankcase Pressure
156	Engine Injector Timing Rail 1 Pressure
157	Engine Injector Metering Rail #1 Pressure
158	Key Switch Battery Potential
159	Engine Gas Supply Pressure
160	Main Shaft Speed
161	Transmission Input Shaft Speed

162	Transmission Requested Range
163	Transmission Current Range
164	Engine Injection Control Pressure
165	Compass Bearing
166	Engine Rated Power
167	Charging System Potential
168	Battery Potential / Power Input #1
169	Cargo Ambient Temperature
170	Cab Interior Temperature
171	Ambient Air Temperature
172	Engine Air Inlet Temperature
173	Engine Exhaust Gas Temperature
174	Engine Fuel Temperature 1
175	Engine Oil Temperature 1
176	Engine Turbocharger Oil Temperature
177	Transmission Oil Temperature
178	Front Axle Weight
179	Rear Axle Weight
180	Trailer Weight
181	Cargo Weight
182	Engine Trip Fuel
183	Engine Fuel Rate
184	Engine Instantaneous Fuel Economy
185	Engine Average Fuel Economy
186	Power Takeoff Speed
187	Power Takeoff Set Speed
188	Engine Speed At Idle, Point 1
189	Engine Rated Speed
190	Engine Speed
191	Transmission Output Shaft Speed
228	Speed Sensor Calibration
229	Total Fuel Used (Gaseous)
230	Total Idle Fuel Used (Gaseous)
231	Trip Fuel (Gaseous)
232	DGPS Differential Correction
233	Unit Number
234	Software Identification
235	Engine Total Idle Hours
236	Engine Total Idle Fuel Used
237	Vehicle Identification Number
238	Velocity Vector
241	Tire Pressure
242	Tire Temperature
244	Trip Distance
245	Total Vehicle Distance
246	Total Vehicle Hours
247	Engine Total Hours of Operation
248	Total Power Takeoff Hours
249	Engine Total Revolutions
250	Engine Total Fuel Used
251	Time

252	Date
257	Cold Restart Of Specific Component
258	Warm Restart Of Specific Component
259	Acknowledgement Of Warm Or Cold Restart
354	Relative Humidity
355	Engine Oil Life
378	Fare Collection Unit Status
380	Articulation Angle
383	Vehicle Acceleration
411	EGR Differential Pressure
412	EGR Temperature
430	Engine Starter Solenoid Voltage
441	Auxiliary Temperature #1
442	Auxiliary Temperature #2
443	Auxiliary Gage Pressure Reading 2
444	Battery Potential / Power Input #2
445	Engine Cylinder Head Temperature Bank B
446	Engine Cylinder Head Temperature Bank A
447	Passenger Counter
501	Signage Message
502	Fare Collection Unit - Point Of Sale
503	Fare Collection Unit - Service Detail
504	Annunciator Voice Message
505	Vehicle Control Head Keyboard Message
506	Vehicle Control Head Display Message
507	Driver Identification
508	Transit Route Identification
509	Milepost Identification
512	Driver's Demand Engine - Percent Torque
513	Actual Engine - Percent Torque
514	Nominal Friction - Percent Torque
515	Engine's Desired Operating Speed
516	Ground-Based Vehicle Speed
517	Navigation-Based Vehicle Speed
518	Engine Requested Torque/Torque Limit
519	Engine's Desired Operating Speed Asymmetry Adjustment
520	Actual Retarder - Percent Torque
521	Brake Pedal Position
522	Percent Clutch Slip
523	Transmission Current Gear
524	Transmission Selected Gear
525	Transmission Requested Gear
526	Transmission Actual Gear Ratio
527	Cruise Control States
528	Engine Speed at Point 2
529	Engine Speed at Point 3
530	Engine Speed at Point 4
531	Engine Speed at Point 5
532	Engine Speed At High Idle, Point 6
533	Engine Maximum Momentary Override Speed, Point 7
534	Engine Maximum Momentary Override Time Limit

535	Engine Requested Speed Control Range Lower Limit
536	Engine Requested Speed Control Range Upper Limit
537	Engine Requested Torque Control Range Lower Limit
538	Engine Requested Torque Control Range Upper Limit
539	Engine Percent Torque At Idle, Point 1
540	Engine Percent Torque at Point 2
541	Engine Percent Torque at Point 3
542	Engine Percent Torque at Point 4
543	Engine Percent Torque at Point 5
544	Engine Reference Torque
545	Engine Gain (Kp) Of The Endspped Governor
546	Retarder Speed At Idle, Point 1
547	Retarder Speed At Peak Torque, Point 5
548	Maximum Retarder Speed, Point 2
549	Retarder Speed at Point 3
550	Retarder Speed at Point 4
551	Percent Torque At Idle, Point 1
552	Percent Torque At Maximum Speed, Point 2
553	Percent Torque at Point 3
554	Percent Torque at Point 4
555	Percent Torque At Peak Torque, Point 5
556	Reference Retarder Torque
557	Retarder Control Method
558	Accelerator Pedal #1 Low Idle Switch
559	Accelerator Pedal Kickdown Switch
560	Transmission Driveline Engaged
561	TCS/ASR Engine Control Active
562	TCS/ASR Brake Control Active
563	Anti-Lock Braking (ABS) Active
564	Differential Lock State - Central
565	Differential Lock State - Central Front
566	Differential Lock State - Central Rear
567	Differential Lock State - Front Axle 1
568	Differential Lock State - Front Axle 2
569	Differential Lock State - Rear Axle 1
570	Differential Lock State - Rear Axle 2
571	Retarder Enable - Brake Assist Switch
572	Retarder Enable - Shift Assist Switch
573	Torque Converter Lockup Engaged
574	Transmission Shift In Process
575	ABS Off-road Switch
576	ASR Off-road Switch
577	ASR "Hill Holder" Switch
578	Drive Axle Temperature
579	Drive Axle Lift Air Pressure
580	Altitude
581	Transmission Gear Ratio
582	Axle Weight
583	Pitch
584	Latitude
585	Longitude

586	Make
587	Model
588	Serial Number
589	Alternator Speed
590	Engine Idle Shutdown Timer State
591	Engine Idle Shutdown Timer Function
592	Engine Idle Shutdown Timer Override
593	Engine Idle Shutdown has Shutdown Engine
594	Engine Idle Shutdown Driver Alert Mode
595	Cruise Control Active
596	Cruise Control Enable Switch
597	Brake Switch
598	Clutch Switch
599	Cruise Control Set Switch
600	Cruise Control Coast (Decelerate) Switch
601	Cruise Control Resume Switch
602	Cruise Control Accelerate Switch
603	Brake Pedal Switch #2
604	Transmission Neutral Switch
605	Refrigerant High Pressure Switch
606	Engine Momentary Overspeed Enable
607	Progressive Shift Disable
608	J1587 (previously SAE J1708)
609	Controller #2
610	Power Connect Device
611	System Diagnostic Code #1
612	System Diagnostic Code #2
613	System Diagnostic Code #3
614	System Diagnostic Code #4
615	System Diagnostic Code #5
616	Auxiliary Analog Input #1
617	Parking Brake On Actuator
618	Parking Brake Off Actuator
619	Parking Brake Actuator
620	5 Volts DC Supply
621	Antenna Electronics
622	J1922
623	Red Stop Lamp
624	Amber Warning Lamp
625	Proprietary Data Link
626	Engine Start Enable Device 1
627	Power Supply
628	Program Memory
629	Controller #1
630	Calibration Memory
631	Calibration Module
632	Engine Fuel Shutoff Valve #1
633	Engine Fuel Actuator 1 Control Command
634	Engine Throttle Bypass Valve
635	Engine Timing Actuator #1
636	Engine Position Sensor

637	Engine Timing Sensor
638	Engine Fuel Rack Actuator
639	J1939 Network #1
640	Engine External Protection Input
641	Engine Turbocharger Variable Geometry Actuator #1
642	Engine Turbocharger Variable Geometry Actuator #2
643	Engine External Fuel Command Input
644	Engine External Speed Command Input
645	Engine Tachometer Signal Output
646	Engine Turbocharger #1 Wastegate Drive
647	Engine Fan Clutch Output Device Driver
648	Engine Exhaust Back Pressure Sensor
649	Engine Exhaust Back Pressure Regulator Control Command
650	Electronic Drive Unit Power Relay
651	Engine Injector Cylinder #01
652	Engine Injector Cylinder #02
653	Engine Injector Cylinder #03
654	Engine Injector Cylinder #04
655	Engine Injector Cylinder #05
656	Engine Injector Cylinder #06
657	Engine Injector Cylinder #07
658	Engine Injector Cylinder #08
659	Engine Injector Cylinder #09
660	Engine Injector Cylinder #10
661	Engine Injector Cylinder #11
662	Engine Injector Cylinder #12
663	Engine Injector Cylinder #13
664	Engine Injector Cylinder #14
665	Engine Injector Cylinder #15
666	Engine Injector Cylinder #16
667	Engine Injector Cylinder #17
668	Engine Injector Cylinder #18
669	Engine Injector Cylinder #19
670	Engine Injector Cylinder #20
671	Engine Injector Cylinder #21
672	Engine Injector Cylinder #22
673	Engine Injector Cylinder #23
674	Engine Injector Cylinder #24
675	Engine Glow Plug Lamp
676	Engine Glow Plug Relay
677	Engine Starter Motor Relay
678	ECU 8 Volts DC Supply
679	Engine Injection Control Pressure Regulator
680	Engine Valve Variable Swirl System
681	Transmission Gear Shift Inhibit Request
682	Torque Converter Lockup Disable Request
683	Disengage Driveline Request
684	Requested Percent Clutch Slip
685	Disengage Differential Lock Request - Front Axle 1
686	Disengage Differential Lock Request - Front Axle 2
687	Disengage Differential Lock Request - Rear Axle 1

688	Disengage Differential Lock Request - Rear Axle 2
689	Disengage Differential Lock Request - Central
690	Disengage Differential Lock Request - Central Front
691	Disengage Differential Lock Request - Central Rear
692	ABS Offroad Switch Request
693	ASR Offroad Switch Request
694	ASR "Hill Holder" Switch Request
695	Engine Override Control Mode
696	Engine Requested Speed Control Conditions
697	Auxiliary PWM Driver #1
698	Auxiliary PWM Driver #2
699	Auxiliary PWM Driver #3
700	Auxiliary PWM Driver #4
701	Auxiliary I/O #01
702	Auxiliary I/O #02
703	Auxiliary I/O #03
704	Auxiliary I/O #04
705	Auxiliary I/O #05
706	Auxiliary I/O #06
707	Auxiliary I/O #07
708	Auxiliary I/O #08
709	Auxiliary I/O #09
710	Auxiliary I/O #10
711	Auxiliary I/O #11
712	Auxiliary I/O #12
713	Auxiliary I/O #13
714	Auxiliary I/O #14
715	Auxiliary I/O #15
716	Auxiliary I/O #16
717	Autoshift High Gear Actuator
718	Autoshift Low Gear Actuator
719	Autoshift Neutral Actuator
720	Autoshift Common Low Side
721	Prestroke Sensor
722	Prestroke Actuator
723	Engine Speed Sensor #2
724	Engine Oxygen Sensor Heated
725	Engine Ignition Control Mode Signal
726	Engine Ignition Control Timing Signal
727	Engine Turbocharger Secondary Inlet Pressure
728	Engine After Cooler-Oil Cooler Coolant Temperature
729	Engine Inlet Air Heater Driver #1
730	Engine Inlet Air Heater Driver #2
731	Engine Knock Sensor
732	Engine Gas Metering Valve
733	Engine Rack Position Sensor
734	Transmission Range Clutch C1 Solenoid
735	Transmission Range Clutch C2 Solenoid
736	Transmission Range Clutch C3 Solenoid
737	Transmission Range Clutch C4 Solenoid
738	Transmission Range Clutch C5 Solenoid

739	Transmission Range Clutch C6 Solenoid
740	Transmission Lockup Clutch Actuator
741	Transmission Forward Solenoid Valve
742	Transmission Low Signal Solenoid Valve
743	Retarder Enable Solenoid Valve
744	Retarder Modulation Solenoid Valve
745	Retarder Response Solenoid Valve
746	Differential Lock Solenoid Valve #1
747	Engine/Transmission Match
748	Transmission Output Retarder
749	Transmission Neutral Start Output
750	Transmission Turbine Speed Sensor
751	Transmission Primary Shift Selector
752	Transmission Secondary Shift Selector
753	Transmission Special Function Inputs
754	Transmission Range C1 Clutch Pressure Indicator
755	Transmission Range C2 Clutch Pressure Indicator
756	Transmission Range C3 Clutch Pressure Indicator
757	Transmission Range C4 Clutch Pressure Indicator
758	Transmission Range C5 Clutch Pressure Indicator
759	Transmission Range C6 Clutch Pressure Indicator
760	Transmission Lockup Clutch Pressure Indicator
761	Transmission Forward Range Pressure Indicator
762	Transmission Neutral Range Pressure Indicator
763	Transmission Reverse Range Pressure Indicator
764	Retarder Response System Pressure Indicator
765	Differential Lock Clutch Pressure Indicator
766	Transmission Multiple Pressure Indicators
767	Transmission Reverse Direction Switch
768	Transmission Range High Actuator
769	Transmission Range Low Actuator
770	Transmission Splitter Direct Actuator
771	Transmission Splitter Indirect Actuator
772	Transmission Shift Finger Rail Actuator 1
773	Transmission Shift Finger Gear Actuator 1
774	Transmission Upshift Request Switch
775	Transmission Downshift Request Switch
776	Torque Converter Interrupt Actuator
777	Torque Converter Lockup Actuator
778	Transmission High Range Sense Switch
779	Transmission Low Range Sense Switch
780	Transmission Shift Finger Neutral Indicator
781	Transmission Shift Finger Engagement Indicator
782	Transmission Shift Finger Center Rail Indicator
783	Transmission Shift Finger Rail Actuator 2
784	Transmission Shift Finger Gear Actuator 2
785	Transmission Hydraulic System
786	Transmission Defuel Actuator
787	Transmission Inertia Brake Actuator
788	Transmission Clutch Actuator
789	Wheel Sensor ABS Axle 1 Left

790	Wheel Sensor ABS Axle 1 Right
791	Wheel Sensor ABS Axle 2 Left
792	Wheel Sensor ABS Axle 2 Right
793	Wheel Sensor ABS Axle 3 Left
794	Wheel Sensor ABS Axle 3 Right
795	Pressure Modulation Valve ABS Axle 1 Left
796	Pressure Modulation Valve ABS Axle 1 Right
797	Pressure Modulation Valve ABS Axle 2 Left
798	Pressure Modulation Valve ABS Axle 2 Right
799	Pressure Modulation Valve ABS Axle 3 Left
800	Pressure Modulation Valve ABS Axle 3 Right
801	Retarder Control Relay
802	Relay Diagonal 1
803	Relay Diagonal 2
804	Mode Switch ABS
805	Mode Switch ASR
806	Dif 1 - ASR Valve
807	Dif 2 - ASR Valve
808	Pneumatic Engine Control
809	Electronic Engine Control
810	Speed Signal Input
811	Warning Light Bulb
812	ASR Light Bulb
813	Wheel Sensor ABS Axle 1 Average
814	Wheel Sensor ABS Axle 2 Average
815	Wheel Sensor ABS Axle 3 Average
816	Pressure Modulator, Drive Axle Relay Valve
817	Pressure Transducer, Drive Axle Relay Valve
818	Master Control Relay
819	Trailer Brake Slack Out Of Adjustment Forward Axle Left
820	Trailer Brake Slack Out Of Adjustment Forward Axle Right
821	Trailer Brake Slack Out Of Adjustment Rear Axle Left
822	Trailer Brake Slack Out Of Adjustment Rear Axle Right
823	Tractor Brake Slack Out Of Adjustment Axle 1 Left
824	Tractor Brake Slack Out Of Adjustment Axle 1 Right
825	Tractor Brake Slack Out Of Adjustment Axle 2 Left
826	Tractor Brake Slack Out Of Adjustment Axle 2 Right
827	Tractor Brake Slack Out Of Adjustment Axle 3 Left
828	Tractor Brake Slack Out Of Adjustment Axle 3 Right
829	Left Fuel Level Sensor
830	Right Fuel Level Sensor
831	Engine Fuel Feed Rate Sensor
832	Engine Fuel Return Rate Sensor
833	Fuel Rack Position Sensor
834	Fuel Rack Actuator
835	Oil Level Indicator Output
836	Tachometer Drive Output
837	Speedometer Drive Output
838	PWM Input
839	Dead Reckoning Unit
840	Loran Receiver

841	Global Positioning System
842	Integrated Navigation Unit
843	Operator Control Panel
844	Pneumatic Control Unit
845	PCU Steer Solenoid
846	PCU Drive Solenoid
847	PCU Trailer, Tag, Or Push Solenoid
848	PCU Supply Solenoid
849	PCU Control Solenoid
850	PCU Deflate Solenoid
851	Pneumatic - Steer Channel
852	Pneumatic - Drive Channel
853	Pneumatic - Trailer, Tag Or Push Channel
854	Heater Circuit #01
855	Heater Circuit #02
856	Heater Circuit #03
857	Heater Circuit #04
858	Heater Circuit #05
859	Heater Circuit #06
860	Heater Circuit #07
861	Heater Circuit #08
862	Heater Circuit #09
863	Heater Circuit #10
864	Heater Circuit #11
865	Heater Circuit #12
866	Heater Circuit #13
867	Heater Circuit #14
868	Heater Circuit #15
869	Heater Circuit #16
870	Heater Regeneration System
871	Refrigerant Charge
872	Refrigerant Moisture Level
873	Non-Condensable Gas In Refrigerant
874	Refrigerant Flow Control Solenoid
875	Refrigerant Low Pressure Switch
876	Compressor Clutch Circuit
877	Evaporator Thermostat Circuit
878	Clearance, Side Marker, Identification Lamp Circuit
879	Left Turn Lamp Circuit
880	Stop Lamp Circuit
881	Right Turn Lamp Circuit
882	Tail Lamp/License Plate Lamp Circuit
883	Auxiliary Lamp Circuit
884	Tractor Mounted Rear Axle Slider Control Unit
885	Trailer Mounted Rear Axle Slider Control Unit
886	Headway Controller Forward Antenna
887	Headway Controller Brake Input Monitor
888	Headway Controller Speaker Monitor
889	Headway Controller Steering Sensor Monitor
890	Headway Controller Speedometer Monitor
891	Headway Controller Right Turn Signal Monitor

892	Headway Controller Left Turn Signal Monitor
893	Headway Controller Control Display Unit
894	Headway Controller Right Side Sensor
895	Headway Controller Left Side Sensor
896	Headway Controller Rear Sensor
897	Override Control Mode Priority
898	Engine Requested Speed/Speed Limit
899	Engine Torque Mode
900	Retarder Torque Mode
901	Retarder Type
902	Retarder Location
903	Transmission Forward Direction Switch
904	Front Axle Speed
905	Relative Speed; Front Axle, Left Wheel
906	Relative Speed; Front Axle, Right Wheel
907	Relative Speed; Rear Axle #1, Left Wheel
908	Relative Speed; Rear Axle #1, Right Wheel
909	Relative Speed; Rear Axle #2, Left Wheel
910	Relative Speed; Rear Axle #2, Right Wheel
911	Service Component Identification
912	Service Component Identification
913	Service Component Identification
914	Service Distance
915	Service Delay/Calendar Time Based
916	Service Delay/Operational Time Based
917	High-Resolution Total Vehicle Distance
918	High-Resolution Trip Distance
919	Ambient Light Sensor
920	Audible Alarm
921	Green Lamp
922	Ride Height Relay
923	PWM Output
924	Auxiliary Output #1
925	Auxiliary Output #2
926	Auxiliary Output #3
927	Location
928	Axle Location
929	Tire Location
930	Drive Axle Location
931	Engine Fuel Supply Pump Actuator
932	Brake System Hold Modulator Valve Solenoid Axle #1 Left
933	Brake System Hold Modulator Valve Solenoid Axle #1 Right
934	Brake System Hold Modulator Valve Solenoid Axle #2 Left
935	Brake System Hold Modulator Valve Solenoid Axle #2 Right
936	Brake System Hold Modulator Valve Solenoid Axle #3 Left
937	Brake System Hold Modulator Valve Solenoid Axle #3 Right
938	Brake System Dump Modulator Valve Solenoid Axle #1 Left
939	Brake System Dump Modulator Valve Solenoid Axle #1 Right
940	Brake System Dump Modulator Valve Solenoid Axle #2 Left
941	Brake System Dump Modulator Valve Solenoid Axle #2 Right
942	Brake System Dump Modulator Valve Solenoid Axle #3 Left

943	Brake System Dump Modulator Valve Solenoid Axle #3 Right
944	Driver Air Bag Ignitor Loop
945	Passenger Air Bag Ignitor Loop
946	Left Belt Tensioner Ignitor Loop
947	Right Belt Tensioner Ignitor Loop
948	Safety Restraint System Lamp
949	Automotive Seat Occupancy Sensor - passenger side
950	Side Collision Detector - Left
951	Side Bag Ignitor Loop 1 - Left
952	Side Bag Ignitor Loop 2 - Left
953	Side Collision Detector - Right
954	Side Bag Ignitor Loop 1 - Right
955	Side Bag Ignitor Loop 2 - Right
956	Rollover Sensor
957	Number of Forward Gear Ratios
958	Number of Reverse Gear Ratios
959	Seconds
960	Minutes
961	Hours
962	Day
963	Month
964	Year
965	Number of Software Identification Fields
966	Engine Test Mode Switch
967	Engine Idle Decrement Switch
968	Engine Idle Increment Switch
969	Remote Accelerator Enable Switch
970	Engine Auxiliary Engine Shutdown Switch
971	Engine Derate Switch
972	Accelerator Interlock Switch
973	Engine Retarder Selection
974	Remote Accelerator Pedal Position
975	Estimated Percent Fan Speed
976	PTO State
977	Fan Drive State
978	Engine Remote PTO Variable Speed Control Switch
979	Engine Remote PTO Preprogrammed Speed Control Switch
980	Engine PTO Enable Switch
981	Engine PTO Accelerate Switch
982	Engine PTO Resume Switch
983	Engine PTO Coast/Decelerate Switch
984	Engine PTO Set Switch
985	A/C High Pressure Fan Switch
986	Requested Percent Fan Speed
987	Protect Lamp
988	Trip Group 1
989	Trip Group 2 - Proprietary
990	Total Compression Brake Distance
991	Trip Compression Brake Distance
992	Trip Service Brake Distance
993	Trip Service Brake Applications

994	Trip Fan On Time
995	Trip Fan On Time Due to the Engine System
996	Trip Fan On Time Due to a Manual Switch
997	Trip Fan On Time Due to the A/C System
998	Trip Distance on VSL
999	Trip Gear Down Distance
1000	Trip Distance in Top Gear
1001	Trip Drive Fuel Used
1002	Trip PTO Moving Fuel Used
1003	Trip PTO Non-moving Fuel Used
1004	Trip Vehicle Idle Fuel Used
1005	Trip Cruise Fuel Used
1006	Trip Drive Fuel Economy
1007	Trip Drive Fuel Used
1008	Trip PTO Moving Fuel Used
1009	Trip PTO Non-moving Fuel Used
1010	Trip Vehicle Idle Fuel Used
1011	Trip Cruise Fuel Used
1012	Trip Drive Fuel Economy
1013	Trip Maximum Engine Speed
1014	Trip Average Engine Speed
1015	Trip Drive Average Load Factor
1016	Total Drive Average Load Factor
1017	Total Engine Cruise Time
1018	Trip Maximum Vehicle Speed
1019	Trip Cruise Distance
1020	Trip Number of Hot Shutdowns
1021	Trip Number of Idle Shutdowns
1022	Trip Number of Idle Shutdown Overrides
1023	Trip Sudden Decelerations
1024	Trip Time in VSL
1025	Trip Time in Top Gear
1026	Trip Time in Gear Down
1027	Trip Time in Derate by Engine
1028	Total Engine PTO Fuel Used
1029	Trip Average Fuel Rate
1030	Total Engine PTO Fuel Used
1031	Trip Average Fuel Rate
1032	Total ECU Distance
1033	Total ECU Run Time
1034	Trip Cruise Time
1035	Trip PTO Time
1036	Trip Engine Running Time
1037	Trip Idle Time
1038	Trip Air Compressor On Time
1039	Trip Fuel
1040	Total Fuel Used
1041	Start Signal Indicator
1042	Electronic Tractor/Trailer Interface
1043	Internal Sensor Voltage Supply
1044	Hydraulic Pump Motor

1045	Brake Light Switch #1
1046	Brake Light Switch #2
1047	Electronic Pressure Control Axle 1
1048	Pneumatic Back-up Pressure Control Axle 1
1049	Brake Pressure Sensing Axle #1
1050	Electronic Pressure Control Axle 2
1051	Pneumatic Back-up Pressure Control Axle 2
1052	Brake Pressure Sensing Axle #2
1053	Electronic Pressure Control Axle 3
1054	Pneumatic Back-up Pressure Control Axle 3
1055	Brake Pressure Sensing Axle #3
1056	Electronic Pressure Control, Trailer Control
1057	Pneumatic Back-up Pressure Control, Trailer Control
1058	Brake Pressure Sensing, Trailer Control
1059	Axle Load Sensor
1060	Lining Wear Sensor Axle 1 Left
1061	Lining Wear Sensor Axle 1 Right
1062	Lining Wear Sensor Axle 2 Left
1063	Lining Wear Sensor Axle 2 Right
1064	Lining Wear Sensor Axle 3 Left
1065	Lining Wear Sensor Axle 3 Right
1066	Brake Signal Transmitter
1067	Brake Signal Sensor #1
1068	Brake Signal Sensor #2
1069	Tire Dimension Supervision
1070	Vehicle Deceleration Control
1071	Cooling Fan Drive Output
1072	Engine (Compression) Brake Output #1
1073	Engine (Compression) Brake Output #2
1074	Engine (Exhaust) Brake Output
1075	Engine Electric Lift Pump for Engine Fuel Supply
1076	Engine Fuel Injection Pump Fuel Control Valve
1077	Engine Fuel Injection Pump Controller
1078	Engine Fuel Injection Pump Speed/Position Sensor
1079	Sensor Supply Voltage 1
1080	Sensor Supply Voltage 2
1081	Engine Wait to Start Lamp
1082	Engine Coolant Load Increase
1083	Auxiliary I/O Channel #1
1084	Auxiliary I/O Channel #2
1085	Intended Retarder Percent Torque
1086	Parking and/or Trailer Air Pressure
1087	Service Brake Air Pressure Circuit #1
1088	Service Brake Air Pressure Circuit #2
1089	Auxiliary Equipment Supply Pressure
1090	Air Suspension Supply Pressure
1091	Brake Application Pressure High Range, Front Axle, Left Wheel
1092	Brake Application Pressure High Range, Front Axle, Right Wheel
1093	Brake Application Pressure High Range, Rear Axle #1, Left Wheel
1094	Brake Application Pressure High Range, Rear Axle #1, Right Wheel
1095	Brake Application Pressure High Range, Rear Axle #2, Left Wheel

1096	Brake Application Pressure High Range, Rear Axle #2, Right Wheel
1097	Brake Application Pressure High Range, Rear Axle #3, Left Wheel
1098	Brake Application Pressure High Range, Rear Axle #3, Right Wheel
1099	Brake Lining Remaining, Front Axle, Left Wheel
1100	Brake Lining Remaining, Front Axle, Right Wheel
1101	Brake Lining Remaining, Rear Axle #1, Left Wheel
1102	Brake Lining Remaining, Rear Axle #1, Right Wheel
1103	Brake Lining Remaining, Rear Axle #2, Left Wheel
1104	Brake Lining Remaining, Rear Axle #2, Right Wheel
1105	Brake Lining Remaining, Rear Axle #3, Left Wheel
1106	Brake Lining Remaining, Rear Axle #3, Right Wheel
1107	Engine Protection System Timer State
1108	Engine Protection System Timer Override
1109	Engine Protection System Approaching Shutdown
1110	Engine Protection System has Shutdown Engine
1111	Engine Protection System Configuration
1112	Engine (Compression) Brake Output #3
1113	Recommended Gear
1114	Lowest Possible Gear
1115	Highest Possible Gear
1116	Engine Gaseous Fuel Correction Factor
1117	Engine Desired Rated Exhaust Oxygen
1118	Engine Desired Exhaust Oxygen
1119	Engine Actual Exhaust Oxygen
1120	Articulation Angle
1121	EBS Brake Switch
1122	Engine Alternator Bearing 1 Temperature
1123	Engine Alternator Bearing 2 Temperature
1124	Engine Alternator Winding 1 Temperature
1125	Engine Alternator Winding 2 Temperature
1126	Engine Alternator Winding 3 Temperature
1127	Engine Turbocharger #1 Boost Pressure
1128	Engine Turbocharger #2 Boost Pressure
1129	Engine Turbocharger #3 Boost Pressure
1130	Engine Turbocharger #4 Boost Pressure
1131	Engine Intake Manifold #2 Temperature
1132	Engine Intake Manifold #3 Temperature
1133	Engine Intake Manifold #4 Temperature
1134	Engine Intercooler Thermostat Opening
1135	Engine Oil Temperature 2
1136	Engine ECU Temperature
1137	Engine Exhaust Gas Port 1 Temperature
1138	Engine Exhaust Gas Port 2 Temperature
1139	Engine Exhaust Gas Port 3 Temperature
1140	Engine Exhaust Gas Port 4 Temperature
1141	Engine Exhaust Gas Port 5 Temperature
1142	Engine Exhaust Gas Port 6 Temperature
1143	Engine Exhaust Gas Port 7 Temperature
1144	Engine Exhaust Gas Port 8 Temperature
1145	Engine Exhaust Gas Port 9 Temperature
1146	Engine Exhaust Gas Port 10 Temperature

1147	Engine Exhaust Gas Port 11 Temperature
1148	Engine Exhaust Gas Port 12 Temperature
1149	Engine Exhaust Gas Port 13 Temperature
1150	Engine Exhaust Gas Port 14 Temperature
1151	Engine Exhaust Gas Port 15 Temperature
1152	Engine Exhaust Gas Port 16 Temperature
1153	Engine Exhaust Gas Port 17 Temperature
1154	Engine Exhaust Gas Port 18 Temperature
1155	Engine Exhaust Gas Port 19 Temperature
1156	Engine Exhaust Gas Port 20 Temperature
1157	Engine Main Bearing #1 Temperature
1158	Engine Main Bearing #2 Temperature
1159	Engine Main Bearing #3 Temperature
1160	Engine Main Bearing #4 Temperature
1161	Engine Main Bearing #5 Temperature
1162	Engine Main Bearing #6 Temperature
1163	Engine Main Bearing #7 Temperature
1164	Engine Main Bearing #8 Temperature
1165	Engine Main Bearing #9 Temperature
1166	Engine Main Bearing #10 Temperature
1167	Engine Main Bearing #11 Temperature
1168	Engine Turbocharger Lube Oil Pressure #2
1169	Engine Turbocharger #2 Speed
1170	Engine Turbocharger #3 Speed
1171	Engine Turbocharger #4 Speed
1172	Engine Turbocharger #1 Compressor Inlet Temperature
1173	Engine Turbocharger #2 Compressor Inlet Temperature
1174	Engine Turbocharger #3 Compressor Inlet Temperature
1175	Engine Turbocharger #4 Compressor Inlet Temperature
1176	Engine Turbocharger #1 Compressor Inlet Pressure
1177	Engine Turbocharger #2 Compressor Inlet Pressure
1178	Engine Turbocharger #3 Compressor Inlet Pressure
1179	Engine Turbocharger #4 Compressor Inlet Pressure
1180	Engine Turbocharger #1 Turbine Inlet Temperature
1181	Engine Turbocharger #2 Turbine Inlet Temperature
1182	Engine Turbocharger #3 Turbine Inlet Temperature
1183	Engine Turbocharger #4 Turbine Inlet Temperature
1184	Engine Turbocharger #1 Turbine Outlet Temperature
1185	Engine Turbocharger #2 Turbine Outlet Temperature
1186	Engine Turbocharger #3 Turbine Outlet Temperature
1187	Engine Turbocharger #4 Turbine Outlet Temperature
1188	Engine Turbocharger #1 Wastegate Drive
1189	Engine Turbocharger #2 Wastegate Drive
1190	Engine Turbocharger #3 Wastegate Drive
1191	Engine Turbocharger #4 Wastegate Drive
1192	Engine Turbocharger Wastegate Actuator Control Air Pressure
1193	Engine Operation Time Since Rebuild
1194	Anti-theft Encryption Seed Present Indicator
1195	Anti-theft Password Valid Indicator
1196	Anti-theft Component Status States
1197	Anti-theft Modify Password States

1198	Anti-theft Random Number
1199	Anti-theft Encryption Indicator States
1200	Anti-theft Desired Exit Mode States
1201	Anti-theft Command States
1202	Anti-theft Password Representation
1203	Engine Auxiliary Coolant Pressure
1204	Electrical Load
1205	Safety Wire Status
1206	Engine Turning Gear Engaged
1207	Engine ECU Temperature
1208	Engine Pre-filter Oil Pressure
1209	Engine Exhaust Gas Pressure
1210	Engine Fuel Rack Position
1211	Engine Build Hours Reset
1212	Engine Auxiliary Coolant Temperature
1213	Malfunction Indicator Lamp (MIL)
1214	Suspect Parameter Number
1215	Failure Mode Identifier
1216	Occurrence Count
1217	Freeze Frame Length
1218	Active Trouble Codes
1219	Previously Active Trouble Codes
1220	OBD Compliance
1221	Continuously Monitored Systems Support/Status
1222	Non-continuously Monitored Systems Support
1223	Non-continuously Monitored Systems Status
1224	Test Identifier
1225	Test Type/Component Identifier
1226	Test Value
1227	Test Limit Maximum
1228	Test Limit Minimum
1229	Test Identifiers Supported
1230	Current Data Link
1231	J1939 Network #2
1232	ISO 9141
1233	J1850
1234	Other, Manufacturer Specified Port
1235	J1939 Network #3
1236	Hold Signal
1237	Engine Shutdown Override Switch
1238	Traction Control Override Switch
1239	Engine Fuel Leakage 1
1240	Engine Fuel Leakage 2
1241	Engine Gas Mass Flow Rate #1
1242	Instantaneous Estimated Brake Power
1243	ABS Fully Operational
1244	Engine Fuel Actuator 2 Control Command
1245	Engine Timing Actuator #2
1246	Number of Engine Torque History Records
1247	Engine Power
1248	Engine Peak Torque 1

1249	Engine Peak Torque 2
1250	Calibration Record Start Month
1251	Calibration Record Start Day
1252	Calibration Record Start Year
1253	Calibration Record Duration Time
1254	Torque Limiting Feature Status
1255	Transmission Gear Ratio 1
1256	Engine Torque Limit 1, Transmission
1257	Transmission Gear Ratio 2
1258	Engine Torque Limit 2, Transmission
1259	Transmission Gear Ratio 3
1260	Engine Torque Limit 3, Transmission
1261	Engine Torque Limit 4, Transmission
1262	Engine Torque Limit 5, Switch
1263	Engine Torque Limit 6, Axle Input
1264	Engine Extended Crankcase Blow-by Pressure
1265	Engine Oil Burn Valve
1266	Engine Oil Replacement Valve
1267	Idle Shutdown Vehicle Accessories Relay Driver Circuit
1268	Engine Ignition Coil #1
1269	Engine Ignition Coil #2
1270	Engine Ignition Coil #3
1271	Engine Ignition Coil #4
1272	Engine Ignition Coil #5
1273	Engine Ignition Coil #6
1274	Engine Ignition Coil #7
1275	Engine Ignition Coil #8
1276	Engine Ignition Coil #9
1277	Engine Ignition Coil #10
1278	Engine Ignition Coil #11
1279	Engine Ignition Coil #12
1280	Engine Ignition Coil #13
1281	Engine Ignition Coil #14
1282	Engine Ignition Coil #15
1283	Engine Ignition Coil #16
1284	Engine Ignition Coil #17
1285	Engine Ignition Coil #18
1286	Engine Ignition Coil #19
1287	Engine Ignition Coil #20
1288	Engine Ignition Coil #21
1289	Engine Ignition Coil #22
1290	Engine Ignition Coil #23
1291	Engine Ignition Coil #24
1292	Engine Ignition Control Module #1
1293	Engine Ignition Control Module #2
1294	Engine Spark Plug #1
1295	Engine Spark Plug #2
1296	Engine Spark Plug #3
1297	Engine Spark Plug #4
1298	Engine Spark Plug #5
1299	Engine Spark Plug #6

1300	Engine Spark Plug #7
1301	Engine Spark Plug #8
1302	Engine Spark Plug #9
1303	Engine Spark Plug #10
1304	Engine Spark Plug #11
1305	Engine Spark Plug #12
1306	Engine Spark Plug #13
1307	Engine Spark Plug #14
1308	Engine Spark Plug #15
1309	Engine Spark Plug #16
1310	Engine Spark Plug #17
1311	Engine Spark Plug #18
1312	Engine Spark Plug #19
1313	Engine Spark Plug #20
1314	Engine Spark Plug #21
1315	Engine Spark Plug #22
1316	Engine Spark Plug #23
1317	Engine Spark Plug #24
1318	Engine Exhaust Temperature Bank Imbalance
1319	Engine Intake Manifold Pressure Bank Imbalance
1320	Engine External Shutdown Air Supply Pressure
1321	Engine Starter Solenoid Lockout Relay Driver Circuit
1322	Engine Misfire for Multiple Cylinders
1323	Engine Misfire Cylinder #1
1324	Engine Misfire Cylinder #2
1325	Engine Misfire Cylinder #3
1326	Engine Misfire Cylinder #4
1327	Engine Misfire Cylinder #5
1328	Engine Misfire Cylinder #6
1329	Engine Misfire Cylinder #7
1330	Engine Misfire Cylinder #8
1331	Engine Misfire Cylinder #9
1332	Engine Misfire Cylinder #10
1333	Engine Misfire Cylinder #11
1334	Engine Misfire Cylinder #12
1335	Engine Misfire Cylinder #13
1336	Engine Misfire Cylinder #14
1337	Engine Misfire Cylinder #15
1338	Engine Misfire Cylinder #16
1339	Engine Misfire Cylinder #17
1340	Engine Misfire Cylinder #18
1341	Engine Misfire Cylinder #19
1342	Engine Misfire Cylinder #20
1343	Engine Misfire Cylinder #21
1344	Engine Misfire Cylinder #22
1345	Engine Misfire Cylinder #23
1346	Engine Misfire Cylinder #24
1347	Engine Fuel Pump Pressurizing Assembly #1
1348	Engine Fuel Pump Pressurizing Assembly #2
1349	Engine Injector Metering Rail #2 Pressure
1350	Time Since Last Service

1351	Air Compressor Status
1352	Engine Cylinder #1 Knock Level
1353	Engine Cylinder #2 Knock Level
1354	Engine Cylinder #3 Knock Level
1355	Engine Cylinder #4 Knock Level
1356	Engine Cylinder #5 Knock Level
1357	Engine Cylinder #6 Knock Level
1358	Engine Cylinder #7 Knock Level
1359	Engine Cylinder #8 Knock Level
1360	Engine Cylinder #9 Knock Level
1361	Engine Cylinder #10 Knock Level
1362	Engine Cylinder #11 Knock Level
1363	Engine Cylinder #12 Knock Level
1364	Engine Cylinder #13 Knock Level
1365	Engine Cylinder #14 Knock Level
1366	Engine Cylinder #15 Knock Level
1367	Engine Cylinder #16 Knock Level
1368	Engine Cylinder #17 Knock Level
1369	Engine Cylinder #18 Knock Level
1370	Engine Cylinder #19 Knock Level
1371	Engine Cylinder #20 Knock Level
1372	Engine Cylinder #21 Knock Level
1373	Engine Cylinder #22 Knock Level
1374	Engine Cylinder #23 Knock Level
1375	Engine Cylinder #24 Knock Level
1376	Battery #2 Potential (Voltage)
1377	Engine Synchronization Switch
1378	Engine Oil Change Interval
1379	Service Component Identification
1380	Engine Oil Level Remote Reservoir
1381	Engine Fuel Supply Pump Inlet Pressure
1382	Engine Fuel Filter (suction side) Differential Pressure
1383	Engine was Shut Down Hot
1384	Engine has Been Shut Down from Data Link Information
1385	Auxiliary Temperature #1
1386	Auxiliary Temperature #2
1387	Auxiliary Pressure #1
1388	Auxiliary Pressure #2
1389	Engine Fuel Specific Gravity
1390	Engine Fuel Valve #1 Inlet Absolute Pressure
1391	Engine Fuel Valve Differential Pressure
1392	Engine Air to Fuel Differential Pressure
1393	Engine Cylinder #1 Ignition Transformer Secondary Output
1394	Engine Cylinder #2 Ignition Transformer Secondary Output
1395	Engine Cylinder #3 Ignition Transformer Secondary Output
1396	Engine Cylinder #4 Ignition Transformer Secondary Output
1397	Engine Cylinder #5 Ignition Transformer Secondary Output
1398	Engine Cylinder #6 Ignition Transformer Secondary Output
1399	Engine Cylinder #7 Ignition Transformer Secondary Output
1400	Engine Cylinder #8 Ignition Transformer Secondary Output
1401	Engine Cylinder #9 Ignition Transformer Secondary Output

1402	Engine Cylinder #10 Ignition Transformer Secondary Output
1403	Engine Cylinder #11 Ignition Transformer Secondary Output
1404	Engine Cylinder #12 Ignition Transformer Secondary Output
1405	Engine Cylinder #13 Ignition Transformer Secondary Output
1406	Engine Cylinder #14 Ignition Transformer Secondary Output
1407	Engine Cylinder #15 Ignition Transformer Secondary Output
1408	Engine Cylinder #16 Ignition Transformer Secondary Output
1409	Engine Cylinder #17 Ignition Transformer Secondary Output
1410	Engine Cylinder #18 Ignition Transformer Secondary Output
1411	Engine Cylinder #19 Ignition Transformer Secondary Output
1412	Engine Cylinder #20 Ignition Transformer Secondary Output
1413	Engine Cylinder #1 Ignition Timing
1414	Engine Cylinder #2 Ignition Timing
1415	Engine Cylinder #3 Ignition Timing
1416	Engine Cylinder #4 Ignition Timing
1417	Engine Cylinder #5 Ignition Timing
1418	Engine Cylinder #6 Ignition Timing
1419	Engine Cylinder #7 Ignition Timing
1420	Engine Cylinder #8 Ignition Timing
1421	Engine Cylinder #9 Ignition Timing
1422	Engine Cylinder #10 Ignition Timing
1423	Engine Cylinder #11 Ignition Timing
1424	Engine Cylinder #12 Ignition Timing
1425	Engine Cylinder #13 Ignition Timing
1426	Engine Cylinder #14 Ignition Timing
1427	Engine Cylinder #15 Ignition Timing
1428	Engine Cylinder #16 Ignition Timing
1429	Engine Cylinder #17 Ignition Timing
1430	Engine Cylinder #18 Ignition Timing
1431	Engine Cylinder #19 Ignition Timing
1432	Engine Cylinder #20 Ignition Timing
1433	Engine Desired Ignition Timing #1
1434	Engine Desired Ignition Timing #2
1435	Engine Desired Ignition Timing #3
1436	Engine Actual Ignition Timing
1437	Road Speed Limit Status
1438	ABS/EBS Amber Warning Signal
1439	EBS Red Warning Signal
1440	Engine Fuel Flow Rate #1
1441	Engine Fuel Flow Rate #2
1442	Engine Fuel Valve #1 Position
1443	Engine Fuel Valve #2 Position
1444	Engine Cylinder #1 Combustion Time
1445	Engine Cylinder #2 Combustion Time
1446	Engine Cylinder #3 Combustion Time
1447	Engine Cylinder #4 Combustion Time
1448	Engine Cylinder #5 Combustion Time
1449	Engine Cylinder #6 Combustion Time
1450	Engine Cylinder #7 Combustion Time
1451	Engine Cylinder #8 Combustion Time
1452	Engine Cylinder #9 Combustion Time

1453	Engine Cylinder #10 Combustion Time
1454	Engine Cylinder #11 Combustion Time
1455	Engine Cylinder #12 Combustion Time
1456	Engine Cylinder #13 Combustion Time
1457	Engine Cylinder #14 Combustion Time
1458	Engine Cylinder #15 Combustion Time
1459	Engine Cylinder #16 Combustion Time
1460	Engine Cylinder #17 Combustion Time
1461	Engine Cylinder #18 Combustion Time
1462	Engine Cylinder #19 Combustion Time
1463	Engine Cylinder #20 Combustion Time
1464	Engine Desired Combustion Time
1465	Engine Average Combustion Time
1466	Steer Channel Mode
1467	Trailer/tag Channel Mode
1468	Drive Channel Mode
1469	PCU Drive Solenoid Status
1470	PCU Steer Solenoid Status
1471	Tire Pressure Supply Switch Status
1472	PCU Deflate Solenoid Status
1473	PCU Control Solenoid Status
1474	PCU Supply Solenoid Status
1475	PCU Trailer, Tag, or Push Solenoid Status
1476	Engine Oil Specific Resistance
1477	Engine Oil Kinematic Viscosity
1478	Engine Oil Relative Dielectricity
1479	Security Entity Type
1480	Source Address of Controlling Device for Retarder Control
1481	Source Address of Controlling Device for Brake Control
1482	Source Address of Controlling Device for Transmission Control
1483	Source Address of Controlling Device for Engine Control
1484	Other ECUs Have Reported Fault Codes Affecting Operation
1485	ECM Main Relay
1486	Concave Position
1487	Illumination Brightness Percent
1488	Thresher Speed
1489	Cleaning Fan Speed
1490	Header Backshaft Speed
1491	Instrument Panel #1 Backlighting Driver
1492	Instrument Panel #2 Backlighting Driver
1493	Tailings System
1494	Tailings Sensor #1
1495	Tailings Sensor #2
1496	Tailings Elevator Paddles
1497	Unloading Auger Drive
1498	Header Drive
1499	Separator Drive
1500	Tachometer Module Switch Matrix
1501	Grain Loss Module Switch Matrix
1502	Automatic Header Control Switch Matrix
1503	Arm Rest Switch Matrix

1504	Operator Seat Switch
1505	Automatic Header Sensitivity Adjustment
1506	Automatic Header Rate Adjustment Input
1507	Discharge Beater Speed Disable Adjustment
1508	Hydraulic Reservoir Temperature
1509	Thresher Separator Hydraulic Drive 1 Temperature
1510	Chopper Vane Adjustment
1511	Right side Cleaning Shoe Relative Grain Loss
1512	Left side Cleaning Shoe Relative Grain Loss
1513	Right side Separator Relative Grain Loss
1514	Left side Separator Relative Grain Loss
1515	Header Height System
1516	Header
1517	Header Lift Cylinder Pressure
1518	Header Sensor Identification
1519	Header Raise Valve Drive
1520	Header Lower Valve Drive
1521	Header Tilt Left Valve Drive
1522	Header Tilt Right Valve Drive
1523	Header Lift Cylinder Pressure Diverted Valve Drive
1524	Reel Position Forward Actuator
1525	Reel Position Aft Actuator
1526	Reel Position Raise Actuator
1527	Reel Position Lower Actuator
1528	Header Drop Rate Control Valve Drive
1529	Header Lift Cylinder Accumulator Shutoff Valve Drive
1530	Unloading auger flow bypass valve drive
1531	Reel Drive Motor Speed Increase Valve Drive
1532	Reel Drive Motor Speed Decrease Valve Drive
1533	Feederhouse Angle
1534	Header Leftmost Height
1535	Header Rightmost Height
1536	Header Center Height
1537	Reel Fore-Aft Position
1538	Reel Up-Down Position
1539	Header Lateral Tilt Angle
1540	Reel Speed Actuator Position
1541	Reel Speed
1542	ECU Power Supply Voltage #2
1543	ECU Power Supply Voltage #3
1544	Hydro Handle Matrix Switch
1545	Not used - reserved
1546	HVAC Coolant Valve Position Sensor
1547	A/C Evaporator Temperature
1548	HVAC Duct Temperature
1549	HVAC Water Valve Drive
1550	Not used - reserved
1551	A/C Pressurizer Drive Circuit
1552	Operator Input device for Cab Climate Control
1553	HVAC Blower Motor Speed Adjustment
1554	Clean Grain Elevator Speed

1555	Moisture Sensor Cell Frequency
1556	Datalog Memory card
1557	Not used - reserved
1558	Programming Error, Device Refused to Enter Programming Mode
1559	Programming Error, Device Timed Out While Entering the Programming Mode
1560	Programming Error, Device Timed Out While Erasing
1561	Programming Error, Device Timed Out While Programming
1562	Programming Error, Device did not Accept Program Line
1563	Incompatible Monitor/Controller
1564	CCD Data Link
1565	Armrest Status
1566	Armrest Rotary Inputs
1567	Header Height Control Mode Selector Switches
1568	Engine Torque Curve Selection
1569	Engine Protection Torque Derate
1570	Implement Disconnected
1571	Display Conflict
1572	Display Overload
1573	LED Display Data #1
1574	Laser Strike Vertical Deviation
1575	Modify Set Point
1576	Mast Position
1577	Blade Duration and Direction
1578	Blade Control Mode
1579	Laser Tracer Target Deviation
1580	Laser Tracer Vertical Distance
1581	Laser Tracer Horizontal Deviation
1582	LED Display Data #2
1583	Laser Tracer Information
1584	Service Component Identification
1585	Powered Vehicle Weight
1586	Speed of forward vehicle
1587	Distance to forward vehicle
1588	Adaptive Cruise Control Set Speed
1589	Adaptive Cruise Control Set Distance Mode
1590	Adaptive Cruise Control Mode
1591	Road curvature
1592	Front Axle, Left Wheel Speed
1593	Front axle, right wheel speed
1594	Rear axle, left wheel speed
1595	Rear axle, right wheel speed
1596	Security Entity Length
1597	Data Security Parameter
1598	PGN of message to be authenticated
1599	Seed
1600	Engine Fuel Rate
1601	Local minute offset
1602	Local hour offset
1603	Adjust seconds
1604	Adjust minutes
1605	Adjust hours

1606	Adjust month
1607	Adjust day
1608	Adjust year
1609	Adjust local minute offset
1610	Adjust local hour offset
1611	Drive recognize
1612	Driver 1 working state
1613	Driver 2 working state
1614	Overspeed
1615	Driver card, driver 1
1616	Driver card, driver 2
1617	Driver 1 Time Related States
1618	Driver 2 Time Related States
1619	Direction indicator
1620	Tachograph performance
1621	Handling information
1622	System event
1623	Tachograph output shaft speed
1624	Tachograph vehicle speed
1625	Driver 1 identification
1626	Driver 2 identification
1627	Reserved for Certification agency ID
1628	Reserved for Certification seed/key length
1629	Reserved for Certification signature
1630	Reserved for Certification public key
1631	Reserved for Certification vehicle identification number
1632	Engine Torque Limit Feature
1633	Cruise Control Pause Switch
1634	Calibration Verification Number
1635	Calibration Identification
1636	Engine Intake Manifold #1 Air Temperature
1637	Engine Coolant Temperature
1638	Hydraulic Temperature
1639	Fan Speed
1640	Length/Number Requested
1641	Pointer Type
1642	Command
1643	Pointer Extension
1644	Pointer
1645	Key/User_Level
1646	Status
1647	EDCP Extension
1648	Error Indicator/EDC Parameter 1
1649	Length/Number Allowed
1650	Number of Occurrences of Raw Binary Data
1651	Raw Binary Data
1652	Boot Load Data
1653	Vehicle Limiting Speed Governor Enable Switch
1654	Vehicle Limiting Speed Governor Increment Switch
1655	Vehicle Limiting Speed Governor Decrement Switch
1656	Engine Automatic Start Enable Switch

1657	Engine Injector Needle Lift Sensor #1
1658	Engine Injector Needle Lift Sensor #2
1659	Engine Coolant System Thermostat
1660	Engine Automatic Start Alarm
1661	Engine Automatic Start Lamp
1662	Cab Interior Temperature Thermostat
1663	Engine Automatic Start Safety Interlock Circuit
1664	Engine Automatic Start Failed
1665	Engine Turbocharger Oil Level Switch
1666	Automatic Gear Shifting Enable Switch
1667	Retarder Requesting Brake Light
1668	J1939 Network #4
1669	J1939 Network #5
1670	J1939 Network #6
1671	J1939 Network #7
1672	J1939 Network #8
1673	J1939 Network #9
1674	J1939 Network #10
1675	Engine Starter Mode
1676	Auxiliary Heater Water Pump Status
1677	Auxiliary Heater Mode
1678	Cab Ventilation
1679	Engine Heating Zone
1680	Cab Heating Zone
1681	Battery Main Switch Hold State
1682	Battery Main Switch Hold Request
1683	Auxiliary Heater Mode Request
1684	Auxiliary Heater Coolant Pump Request
1685	Request Engine Zone Heating
1686	Request Cab Zone Heating
1687	Auxiliary Heater Output Coolant Temperature
1688	Auxiliary Heater Input Air Temperature
1689	Auxiliary Heater Output Power Percent
1690	Auxiliary Heater Maximum Output Power
1691	Cab Interior Temperature Command
1692	Engine Desired Absolute Intake Manifold Pressure
1693	Engine Turbocharger Wastegate Valve Position
1694	Engine Gas Mass Flow Sensor Fueling Correction
1695	Engine Exhaust Gas Oxygen Sensor Fueling Correction
1696	Engine Exhaust Gas Oxygen Sensor Closed Loop Operation
1697	CTI Wheel End Electrical Fault
1698	CTI Tire Status
1699	CTI Wheel Sensor Status
1700	Lane Departure Imminent, Left Side
1701	Lane Departure Imminent, Right Side
1702	Lane Departure Indication Enable Status
1703	Lane Tracking Speaker - Right Side
1704	Lane Tracking Speaker - Left Side
1705	Forward View Imager System
1706	SPN Conversion Method
1708	Fan 2 Drive Bypass Command Status

1709	Transmission Controller Power Relay
1710	Lane Tracking Status Left Side
1711	Lane Tracking Status Right Side
1712	Engine Requested Speed Control Range Upper Limit
1713	Hydraulic Oil Filter Restriction Switch
1714	Operator Seat Direction Switch
1715	Drivers Demand Retarder - Percent Torque
1716	Retarder Selection, non-engine
1717	Actual Maximum Available Retarder - Percent Torque
1718	Damper Stiffness Request Front Axle
1719	Damper Stiffness Request Rear Axle
1720	Damper Stiffness Request Lift / Tag Axle
1721	Relative Level Front Axle Left
1722	Relative Level Front Axle Right
1723	Relative Level Rear Axle Right
1724	Relative Level Rear Axle Left
1725	Bellow Pressure Front Axle Left
1726	Bellow Pressure Front Axle Right
1727	Bellow Pressure Rear Axle Left
1728	Bellow Pressure Rear Axle Right
1729	Damper Stiffness Front Axle
1730	Damper Stiffness Rear Axle
1731	Damper Stiffness Lift / Tag Axle
1732	Level Preset Front Axle Left
1733	Nominal Level Rear Axle
1734	Nominal Level Front Axle
1735	Level Preset Rear Axle Right
1736	Above Nominal Level Rear Axle
1737	Above Nominal Level Front Axle
1738	Below Nominal Level Front Axle
1739	Lifting Control Mode Front Axle
1740	Lowering Control Mode Front Axle
1741	Level Control Mode
1742	Kneeling Information
1743	Lift Axle 1 Position
1744	Door Release
1745	Vehicle Motion Inhibit
1746	Security Device
1747	Kneeling Control Mode Request
1748	Kneeling Request Right Side
1749	Kneeling Request Left Side
1750	Nominal Level Request Rear Axle
1751	Nominal Level Request Front Axle
1752	Lift Axle 1 Position Command
1753	Level Control Mode Request
1754	Below Nominal Level Rear Axle
1755	Lowering Control Mode Rear Axle
1756	Lifting Control Mode Rear Axle
1757	Level Preset Front Axle Right
1758	Level Preset Rear Axle Left
1759	Blade Height Set Point - High Resolution

1760	Gross Combination Vehicle Weight
1761	Aftertreatment #1 DEF Tank Volume #1
1762	Hydraulic Pressure
1763	Engine Hydraulic Pressure Governor Mode Indicator
1764	Engine Hydraulic Pressure Governor Switch
1765	Engine Requested Fuel Valve 1 Position
1766	Engine Requested Fuel Valve 2 Position
1767	Specific Heat Ratio
1768	Engine Low Limit Threshold for Maximum RPM from Engine
1769	Engine High Limit Threshold for Minimum Continuous Engine RPM
1770	Engine Low Limit Threshold for Maximum Torque from Engine
1771	Engine High Limit Threshold for Minimum Continuous Torque from Engine
1772	Engine Maximum Continuous RPM
1773	Engine Minimum Continuous RPM
1774	Engine Maximum Continuous Torque
1775	Engine Minimum Continuous Torque
1776	Low Limit Threshold for Maximum RPM from Retarder
1777	High Limit Threshold for Minimum Continuous RPM from Retarder
1778	Low Limit Threshold for Maximum Torque from Retarder
1779	High Limit Threshold for Minimum Continuous Torque from Retarder
1780	Maximum Continuous Retarder Speed
1781	Minimum Continuous Retarder Speed
1782	Maximum Continuous Retarder Torque
1783	Minimum Continuous Retarder Torque
1784	Engine Speed Limit Request - Minimum Continuous
1785	Engine Speed Limit Request - Maximum Continuous
1786	Engine Torque Limit Request - Minimum Continuous
1787	Engine Torque Limit Request - Maximum Continuous
1788	Minimum Continuous Retarder Speed Limit Request
1789	Maximum Continuous Retarder Speed Limit Request
1790	Minimum Continuous Retarder Torque Limit Request
1791	Maximum Continuous Retarder Torque Limit Request
1792	Tractor-Mounted Trailer ABS Warning Signal
1793	ATC/ASR Information Signal
1794	Engine Moment of Inertia
1795	Alternator Current
1796	ACC Distance Alert Signal
1797	ACC System Shutoff Warning
1798	ACC Target Detected
1799	Requested ACC Distance Mode
1800	Battery #1 Temperature
1801	Battery #2 Temperature
1802	Engine Intake Manifold #5 Temperature
1803	Engine Intake Manifold #6 Temperature
1804	Engine Start Enable Device 2
1805	LED Display Mode Control
1806	LED Display Deadband Control
1807	Steering Wheel Angle
1808	Yaw Rate
1809	Lateral Acceleration
1810	Longitudinal Acceleration

1811	Steering Wheel Turn Counter
1812	Steering Wheel Angle Sensor Type
1813	VDC Information Signal
1814	VDC Fully Operational
1815	VDC brake light request
1816	ROP Engine Control active
1817	YC Engine Control active
1818	ROP Brake Control active
1819	YC Brake Control active
1820	Ramp / Wheel Chair Lift Position
1821	Position of doors
1822	Lift Axle 2 Position
1823	Rear Axle in Bumper Range
1824	Front Axle in Bumper Range
1825	Suspension Remote control 2
1826	Suspension Remote Control 1
1827	Suspension Control Refusal Information
1828	Lift Axle 2 Position Command
1829	Kneeling Command - Rear Axle
1830	Kneeling Command - Front Axle
1831	Electronic Shock Absorber Control Mode - Lift/Tag Axle
1832	Electronic Shock Absorber Control Mode - Rear Axle
1833	Electronic Shock Absorber Control Mode - Front Axle
1834	Engine Total Average Fuel Rate
1835	Engine Total Average Fuel Economy
1836	Trailer ABS Status
1837	Convoy Driving Lamp Select
1838	Convoy Lamp Select
1839	Front Black Out Marker Lamp Select
1840	Rear Black Out Marker Select
1841	Black Out Brake/Stop Lamp Select
1842	Black Out Work Lamp Select
1843	Night Vision Illuminator Select
1844	Operators Black Out Intensity Selection
1845	Transmission Torque Limit
1846	Engine Default Torque Limit
1849	Transmission Requested Range Display Flash State
1850	Transmission Requested Range Display Blank State
1851	Transmission Shift Inhibit Indicator
1852	Transmission Mode 1
1853	Transmission Mode 2
1854	Transmission Mode 3
1855	Transmission Mode 4
1856	Seat Belt Switch
1857	Winch Oil Pressure Switch
1858	Intermittent Wiper Control
1859	Ground Based Implement Speed
1860	Ground Based Implement Distance
1861	Ground Based Direction
1862	Wheel Based Speed
1863	Wheel Based Distance

1864	Wheel Based Direction
1865	Key Switch NOT OFF
1866	Maximum Time of Tractor Power
1867	Maintain ECU Power
1868	Maintain Actuator Power
1869	Implement Transport State
1870	Implement Park State
1871	Implement Work State
1872	Front Hitch Position
1873	Rear Hitch Position
1874	Front Hitch Position Command
1875	Rear Hitch Position Command
1876	Front Hitch In-work Indication
1877	Rear Hitch In-work Indication
1878	Front Draft
1879	Rear Draft
1880	Front Nominal Lower Link Force
1881	Rear Nominal Lower Link Force
1882	Front PTO output shaft speed
1883	Rear PTO output shaft speed
1884	Front PTO Output Shaft Speed Set Point
1885	Rear PTO Output Shaft Speed Set Point
1886	Front PTO Output Shaft Speed Set Point Command
1887	Rear PTO Output Shaft Speed Set Point Command 1
1888	Front Power Takeoff Engagement
1889	Front Power Takeoff Mode
1890	Rear Power Takeoff Mode
1891	Front Power Takeoff Economy Mode
1892	Rear Power Takeoff Economy Mode
1893	Front Power Takeoff Engagement Command
1894	Rear Power Takeoff Engagement Command
1895	Front Power Takeoff Mode Command
1896	Rear Power Takeoff Mode Command
1897	Front Power Takeoff Economy Mode Command
1898	Rear Power Takeoff Economy Mode Command
1899	Aux Valve 0 Extend Port Measured Flow
1900	Aux Valve 0 Retract Port Measured Flow
1901	Aux Valve 0 Extend Port Estimated Flow
1902	Aux Valve 0 Retract Port Estimated Flow
1903	Aux Valve 0 State
1904	Aux Valve 0 Extend Port Pressure
1905	Aux Valve 0 Retract Port Pressure
1906	Aux Valve 0 Return Port Pressure
1907	Aux Valve 0 Port Flow Command
1908	Aux Valve 0 State command
1909	Aux Valve 0 Fail Safe Mode Command
1910	Aux Valve 0 Fail Safe Mode
1911	Aux Valve 1 Extend Port Measured Flow
1912	Aux Valve 1 Retract Port Measured Flow
1913	Aux Valve 1 Extend Port Estimated Flow
1914	Aux Valve 1 Retract Port Estimated Flow

1915	Aux Valve 1 State
1916	Aux Valve 1 Extend Port Pressure
1917	Aux Valve 1 Retract Port Pressure
1918	Aux Valve 1 Return Port Pressure
1919	Aux Valve 1 Port Flow Command
1920	Aux Valve 1 State Command
1921	Aux Valve 1 Fail Safe Mode Command
1922	Aux Valve 1 Fail Safe Mode
1923	Aux Valve 2 Extend Port Measured Flow
1924	Aux Valve 2 Retract Port Measured Flow
1925	Aux Valve 2 Extend Port Estimated Flow
1926	Aux Valve 2 Retract Port Estimated Flow
1927	Aux Valve 2 State
1928	Aux Valve 2 Extend Port Pressure
1929	Aux Valve 2 Retract Port Pressure
1930	Aux Valve 2 Return Port Pressure
1931	Aux Valve 2 Port Flow Command
1932	Aux Valve 2 State Command
1933	Aux Valve 2 Fail Safe Mode Command
1934	Aux Valve 2 Fail Safe Mode
1935	Aux Valve 3 Extend Port Measured Flow
1936	Aux Valve 3 Retract Port Measured Flow
1937	Aux Valve 3 Extend Port Estimated Flow
1938	Aux Valve 3 Retract Port Estimated Flow
1939	Aux Valve 3 State
1940	Aux Valve 3 Extend Port Pressure
1941	Aux Valve 3 Retract Port Pressure 1
1942	Aux Valve 3 Return Port Pressure
1943	Aux Valve 3 Port Flow Command
1944	Aux Valve 3 State Command
1945	Aux Valve 3 Fail Safe Mode Command
1946	Aux Valve 3 Fail Safe Mode
1947	Aux Valve 4 Extend Port Measured Flow
1948	Aux Valve 4 Retract Port Measured Flow
1949	Aux Valve 4 Extend Port Estimated Flow
1950	Aux Valve 4 Retract Port Estimated Flow
1951	Aux Valve 4 State
1952	Aux Valve 4 Extend Port Pressure
1953	Aux Valve 4 Retract Port Pressure
1954	Aux Valve 4 Return Port Pressure
1955	Aux Valve 4 Port Flow Command
1956	Aux Valve 4 State Command
1957	Aux Valve 4 Fail Safe Mode Command
1958	Aux Valve 4 Fail Safe Mode
1959	Aux Valve 5 Extend Port Measured Flow
1960	Aux Valve 5 Retract Port Measured Flow
1961	Aux Valve 5 Extend Port Estimated Flow
1962	Aux Valve 5 Retract Port Estimated Flow
1963	Aux Valve 5 State
1964	Aux Valve 5 Extend Port Pressure
1965	Aux Valve 5 Retract Port Pressure

1966	Aux Valve 5 Return Port Pressure
1967	Aux Valve 5 Port Flow Command
1968	Aux Valve 5 State Command
1969	Aux Valve 5 Fail Safe Mode Command
1970	Aux Valve 5 Fail Safe Mode
1971	Aux Valve 6 Extend Port Measured Flow
1972	Aux Valve 6 Retract Port Measured Flow
1973	Aux Valve 6 Extend Port Estimated Flow
1974	Aux Valve 6 Retract Port Estimated Flow
1975	Aux Valve 6 State
1976	Aux Valve 6 Extend Port Pressure
1977	Aux Valve 6 Retract Port Pressure
1978	Aux Valve 6 Return Port Pressure
1979	Aux Valve 6 Port Flow Command
1980	Aux Valve 6 State Command
1981	Aux Valve 6 Fail Safe Mode Command
1982	Aux Valve 6 Fail Safe Mode
1983	Aux Valve 7 Extend Port Measured Flow
1984	Aux Valve 7 Retract Port Measured Flow
1985	Aux Valve 7 Extend Port Estimated Flow
1986	Aux Valve 7 Retract Port Estimated Flow
1987	Aux Valve 7 State
1988	Aux Valve 7 Extend Port Pressure
1989	Aux Valve 7 Retract Port Pressure
1990	Aux Valve 7 Return Port Pressure
1991	Aux Valve 7 Port Flow Command
1992	Aux Valve 7 State command
1993	Aux Valve 7 Fail Safe Mode Command
1994	Aux Valve 7 Fail Safe Mode
1995	Aux Valve 8 Extend Port Measured Flow
1996	Aux Valve 8 Retract Port Measured Flow
1997	Aux Valve 8 Extend Port Estimated Flow
1998	Aux Valve 8 Retract Port Estimated Flow
1999	Aux Valve 8 State
2000	Source Address 0
2001	Source Address 1
2002	Source Address 2
2003	Source Address 3
2004	Source Address 4
2005	Source Address 5
2006	Source Address 6
2007	Source Address 7
2008	Source Address 8
2009	Source Address 9
2010	Source Address 10
2011	Source Address 11
2012	Source Address 12
2013	Source Address 13
2014	Source Address 14
2015	Source Address 15
2016	Source Address 16

2017	Source Address 17
2018	Source Address 18
2019	Source Address 19
2020	Source Address 20
2021	Source Address 21
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2026	Source Address 26
2027	Source Address 27
2028	Source Address 28
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2100	Source Address 100
2101	Source Address 101
2102	Source Address 102
2103	Source Address 103
2104	Source Address 104
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2112	Source Address 112
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2200	Source Address 200
2201	Source Address 201
2202	Source Address 202
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2223	Source Address 223
2224	Source Address 224
2225	Source Address 225
2226	Source Address 226
2227	Source Address 227
2228	Source Address 228
2229	Source Address 229
2230	Source Address 230
2231	Source Address 231
2232	Source Address 232
2233	Source Address 233
2234	Source Address 234
2235	Source Address 235
2236	Source Address 236
2237	Source Address 237
2238	Source Address 238
2239	Source Address 239
2240	Source Address 240
2241	Source Address 241
2242	Source Address 242
2243	Source Address 243
2244	Source Address 244
2245	Source Address 245
2246	Source Address 246
2247	Source Address 247
2248	Source Address 248
2249	Source Address 249
2250	Source Address 250
2251	Source Address 251
2252	Source Address 252
2253	Source Address 253
2254	Source Address 254
2255	Source Address 255
2256	Aux Valve 8 Extend Port Pressure
2257	Aux Valve 8 Retract Port Pressure
2258	Aux Valve 8 Return Port Pressure
2259	Aux Valve 8 Port Flow Command
2260	Aux Valve 8 State Command
2261	Aux Valve 8 Fail-Safe Mode Command
2262	Aux Valve 8 Fail-Safe Mode
2263	Aux Valve 9 Extend Port Measured Flow
2264	Aux Valve 9 Retract Port Measured Flow
2265	Aux Valve 9 Extend Port Estimated Flow
2266	Aux Valve 9 Retract Port Estimated Flow
2267	Aux Valve 9 State
2268	Aux Valve 9 Extend Port Pressure
2269	Aux Valve 9 Retract Port Pressure
2270	Aux Valve 9 Return Port Pressure
2271	Aux Valve 9 Port Flow Command

2272	Aux Valve 9 State Command
2273	Aux Valve 9 Fail-Safe Mode Command
2274	Aux Valve 9 Fail-Safe Mode
2275	Aux Valve 10 Extend Port Measured Flow
2276	Aux Valve 10 Retract Port Measured Flow
2277	Aux Valve 10 Extend Port Estimated Flow
2278	Aux Valve 10 Retract Port Estimated Flow
2279	Aux Valve 10 State
2280	Aux Valve 10 Extend Port Pressure
2281	Aux Valve 10 Retract Port Pressure
2282	Aux Valve 10 Return Port Pressure
2283	Aux Valve 10 Port Flow Command
2284	Aux Valve 10 State Command
2285	Aux Valve 10 Fail-Safe Mode Command
2286	Aux Valve 10 Fail-Safe Mode
2287	Aux Valve 11 Extend Port Measured Flow
2288	Aux Valve 11 Retract Port Measured Flow
2289	Aux Valve 11 Extend Port Estimated Flow
2290	Aux Valve 11 Retract Port Estimated Flow
2291	Aux Valve 11 State
2292	Aux Valve 11 Extend Port Pressure
2293	Aux Valve 11 Retract Port Pressure
2294	Aux Valve 11 Return Port Pressure
2295	Aux Valve 11 Port Flow Command
2296	Aux Valve 11 State Command
2297	Aux Valve 11 Fail-Safe Mode Command
2298	Aux Valve 11 Fail-Safe Mode
2299	Aux Valve 12 Extend Port Measured Flow
2300	Aux Valve 12 Retract Port Measured Flow
2301	Aux Valve 12 Extend Port Estimated Flow
2302	Aux Valve 12 Retract Port Estimated Flow
2303	Aux Valve 12 State
2304	Aux Valve 12 Extend Port Pressure
2305	Aux Valve 12 Retract Port Pressure
2306	Aux Valve 12 Return Port Pressure
2307	Aux Valve 12 Port Flow Command
2308	Aux Valve 12 State Command
2309	Aux Valve 12 Fail-Safe Mode Command
2310	Aux Valve 12 Fail-Safe Mode
2311	Aux Valve 13 Extend Port Measured Flow
2312	Aux Valve 13 Retract Port Measured Flow
2313	Aux Valve 13 Extend Port Estimated Flow
2314	Aux Valve 13 Retract Port Estimated Flow
2315	Aux Valve 13 State
2316	Aux Valve 13 Extend Port Pressure
2317	Aux Valve 13 Retract Port Pressure
2318	Aux Valve 13 Return Port Pressure
2319	Aux Valve 13 Port Flow Command
2320	Aux Valve 13 State Command
2321	Aux Valve 13 Fail-Safe Mode Command
2322	Aux Valve 13 Fail-Safe Mode

2323	Aux Valve 14 Extend Port Measured Flow
2324	Aux Valve 14 Retract Port Measured Flow
2325	Aux Valve 14 Extend Port Estimated Flow
2326	Aux Valve 14 Retract Port Estimated Flow
2327	Aux Valve 14 State
2328	Aux Valve 14 Extend Port Pressure
2329	Aux Valve 14 Retract Port Pressure
2330	Aux Valve 14 Return Port Pressure
2331	Aux Valve 14 Port Flow Command
2332	Aux Valve 14 State Command
2333	Aux Valve 14 Fail-Safe Mode Command
2334	Aux Valve 14 Fail-Safe Mode
2335	Aux Valve 15 Extend Port Measured Flow
2336	Aux Valve 15 Retract Port Measured Flow
2337	Aux Valve 15 Extend Port Estimated Flow
2338	Aux Valve 15 Retract Port Estimated Flow
2339	Aux Valve 15 State
2340	Aux Valve 15 Extend Port Pressure
2341	Aux Valve 15 Retract Port Pressure
2342	Aux Valve 15 Return Port Pressure
2343	Aux Valve 15 Port Flow Command
2344	Aux Valve 15 State Command
2345	Aux Valve 15 Fail-Safe Mode Command
2346	Aux Valve 15 Fail-Safe Mode
2347	High Beam Head Light Command
2348	High Beam Head Light Data
2349	Low Beam Head Light Command
2350	Low Beam Head Light Data
2351	Alternate Beam Head Light Command
2352	Alternate Beam Head Light Data
2353	Tractor Front Low Mounted Work Lights Command
2354	Tractor Front Low Mounted Work Lights
2355	Tractor Front High Mounted Work Lights Command
2356	Tractor Front High Mounted Work Lights
2357	Tractor Underside Mounted Work Lights Command
2358	Tractor Underside Mounted Work Lights
2359	Tractor Rear Low Mounted Work Lights Command
2360	Tractor Rear Low Mounted Work Lights
2361	Tractor Rear High Mounted Work Lights Command
2362	Tractor Rear High Mounted Work Lights
2363	Tractor Side Low Mounted Work Lights Command
2364	Tractor Side Low Mounted Work Lights
2365	Tractor Side High Mounted Work Lights Command
2366	Tractor Side High Mounted Work Lights
2367	Left Turn Signal Lights Command
2368	Left Turn Signal Lights
2369	Right Turn Signal Lights Command
2370	Right Turn Signal Lights
2371	Left Stop Light Command
2372	Left Stop Light
2373	Right Stop Light Command

2374	Right Stop Light
2375	Center Stop Light Command
2376	Center Stop Light
2377	Tractor Marker Light Command
2378	Tractor Marker Light
2379	Implement Marker Light Command
2380	Implement Marker Light
2381	Tractor Clearance Light Command
2382	Tractor Clearance Light
2383	Implement Clearance Light Command
2384	Implement Clearance Light
2385	Rotating Beacon Light Command
2386	Rotating Beacon Light
2387	Tractor Front Fog Lights Command
2388	Tractor Front Fog Lights
2389	Rear Fog Light Command
2390	Rear Fog Lights
2391	Back Up Light and Alarm Horn Command
2392	Back Up Light and Alarm Horn
2393	Lighting Data Request Command
2394	Implement Rear Work Light
2395	Implement OEM Option 1 Light Command
2396	Implement OEM Option 1 Light
2397	Implement OEM Option 2 Light Command
2398	Implement OEM Option 2 Light
2399	Implement Left Forward Work Light Command
2400	Implement Left Forward Work Light
2401	Implement Right Forward Work Light Command
2402	Implement Right Forward Work Light
2403	Running Light Command
2404	Running Light
2405	Implement Rear Work Light Command
2406	Implement Right Facing Work Light Command
2407	Implement Right Facing Work Light
2408	Rear Power Takeoff Engagement
2409	Number of Members in Working Set 1
2410	Language Code Command
2411	Decimal Symbol Command
2412	Date Command
2413	Time Command
2414	Distance Unit Command
2415	Area Unit Command
2416	Volume Unit Command
2417	Mass Unit Command 1
2418	Repetition Rate Parameter 1
2419	Data Format/Error Condition 1
2420	Process Data Type 1
2421	Process Data Modifier 1
2422	Count Number
2423	Group Number
2424	Element Number

2425	Implement Type 1
2426	Implement Position 1
2427	Data Dictionary Row 1
2428	Data Dictionary Column 1
2429	Process Variable Value
2430	Engine Coolant Level - Main Radiator
2431	Engine Oil Rail High-Pressure Leakage
2432	Engine Demand Percent Torque
2433	Engine Exhaust Manifold Bank #2 Temperature #1
2434	Engine Exhaust Manifold Bank #1 Temperature #1
2435	Seawater Pump Outlet Pressure
2436	Generator Average AC Frequency
2437	Generator Phase A AC Frequency
2438	Generator Phase B AC Frequency
2439	Generator Phase C AC Frequency
2440	Generator Average Line-Line AC RMS Voltage
2441	Generator Phase AB Line-Line AC RMS Voltage
2442	Generator Phase BC Line-Line AC RMS Voltage
2443	Generator Phase CA Line-Line AC RMS Voltage
2444	Generator Average Line-Neutral AC RMS Voltage
2445	Generator Phase A Line-Neutral AC RMS Voltage
2446	Generator Phase B Line-Neutral AC RMS Voltage
2447	Generator Phase C Line-Neutral AC RMS Voltage
2448	Generator Average AC RMS Current
2449	Generator Phase A AC RMS Current
2450	Generator Phase B AC RMS Current
2451	Generator Phase C AC RMS Current
2452	Generator Total Real Power
2453	Generator Phase A Real Power
2454	Generator Phase B Real Power
2455	Generator Phase C Real Power
2456	Generator Total Reactive Power
2457	Generator Phase A Reactive Power
2458	Generator Phase B Reactive Power
2459	Generator Phase C Reactive Power
2460	Generator Total Apparent Power
2461	Generator Phase A Apparent Power
2462	Generator Phase B Apparent Power
2463	Generator Phase C Apparent Power
2464	Generator Overall Power Factor
2465	Generator Phase A Power Factor
2466	Generator Phase B Power Factor
2467	Generator Phase C Power Factor
2468	Generator Total kW Hours Export
2469	Generator Total kW Hours Import
2470	Utility Average AC Frequency
2471	Utility Phase A AC Frequency
2472	Utility Phase B AC Frequency
2473	Utility Phase C AC Frequency
2474	Utility Average Line-Line AC RMS Voltage
2475	Utility Phase AB Line-Line AC RMS Voltage

2476	Utility Phase BC Line-Line AC RMS Voltage
2477	Utility Phase CA Line-Line AC RMS Voltage
2478	Utility Average Line-Neutral AC RMS Voltage
2479	Utility Phase A Line-Neutral AC RMS Voltage
2480	Utility Phase B Line-Neutral AC RMS Voltage
2481	Utility Phase C Line-Neutral AC RMS Voltage
2482	Utility Average AC RMS Current
2483	Utility Phase A AC RMS Current
2484	Utility Phase B AC RMS Current
2485	Utility Phase C AC RMS Current
2486	Utility Total Real Power
2487	Utility Phase A Real Power
2488	Utility Phase B Real Power
2489	Utility Phase C Real Power
2490	Utility Total Reactive Power
2491	Utility Phase A Reactive Power
2492	Utility Phase B Reactive Power
2493	Utility Phase C Reactive Power
2494	Utility Total Apparent Power
2495	Utility Phase A Apparent Power
2496	Utility Phase B Apparent Power
2497	Utility Phase C Apparent Power
2498	Utility Overall Power Factor
2499	Utility Phase A Power Factor
2500	Utility Phase B Power Factor
2501	Utility Phase C Power Factor
2502	Utility Total kW Hours Export
2503	Utility Total kW Hours Import
2504	Bus #1 Average AC Frequency
2505	Bus #1 Phase A AC Frequency
2506	Bus #1 Phase B AC Frequency
2507	Bus #1 Phase C AC Frequency
2508	Bus #1 Average Line-Line AC RMS Voltage
2509	Bus #1 Phase AB Line-Line AC RMS Voltage
2510	Bus #1 Phase BC Line-Line AC RMS Voltage
2511	Bus #1 Phase CA Line-Line AC RMS Voltage
2512	Bus #1 Average Line-Neutral AC RMS Voltage
2513	Bus #1 Phase A Line-Neutral AC RMS Voltage
2514	Bus #1 Phase B Line-Neutral AC RMS Voltage
2515	Bus #1 Phase C Line-Neutral AC RMS Voltage
2516	Bus #1/Generator AC Phase Difference
2517	Bus #1/Utility AC Phase Difference
2518	Generator Overall Power Factor Lagging
2519	Generator Phase A Power Factor Lagging
2520	Generator Phase B Power Factor Lagging
2521	Generator Phase C Power Factor Lagging
2522	Utility Overall Power Factor Lagging
2523	Utility Phase A Power Factor Lagging
2524	Utility Phase B Power Factor Lagging
2525	Utility Phase C Power Factor Lagging
2526	Bus #1/Generator Phase Match

2527	Bus #1/Generator Voltage Match
2528	Bus #1/Generator Frequency Match
2529	Bus #1/Generator In Sync
2530	Bus #1/Generator Dead Bus
2531	Bus #1/Utility Phase Match
2532	Bus #1/Utility Voltage Match
2533	Bus #1/Utility Frequency Match
2534	Bus #1/Utility In Sync
2535	Bus #1/Utility Dead Bus
2536	Transmission Mode 1 Indicator
2537	Transmission Mode 2 Indicator
2538	Transmission Mode 3 Indicator
2539	Transmission Mode 4 Indicator
2540	Parameter Group Number
2541	Control Byte
2542	Group Function Value
2543	Parameter Group Number
2544	Group Function Value
2545	Parameter Group Number
2546	Group Function Value
2547	Parameter Group Number
2548	Group Function Value
2549	Parameter Group Number
2550	Manufacturer Specific Information
2551	Manufacturer Defined Usage (PropB_PDU2) 1
2552	Parameter Group Number of Requested Information
2553	Length of data for the reported PGN
2554	Short Name of Actual Reporting Device
2555	Transfer Data
2556	Control Byte
2557	Total Message Size (TP.CM_RTS) 1
2558	Total Number of Packets
2559	Maximum Number of Packets
2560	Parameter Group Number of the packeted message
2561	Number of Packets that can be sent
2562	Next Packet Number to be sent
2563	Parameter Group Number of the packeted message
2564	Total Message Size
2565	Total Number of Packets
2566	Parameter Group Number of the packeted message
2567	Total Message Size
2568	Total Number of Packets
2569	Parameter Group Number of the packeted message
2570	Connection Abort Reason
2571	Parameter Group Number of packeted message
2572	Sequence Number
2573	Packetized Data
2574	Parameter Group Number
2575	Use Transfer Mode
2576	Laser Receiver Type
2577	Display Deadbands

2578	LED Pattern Control
2579	Net Battery Current
2580	Hydraulic Brake Pressure Circuit 1
2581	Hydraulic Brake Pressure Circuit 2
2582	Hydraulic Brake Pressure Supply State Circuit 1
2583	Hydraulic Brake Pressure Supply State Circuit 2
2584	Hydraulic Brake Pressure Warning State Circuit 1
2585	Hydraulic Brake Pressure Warning State Circuit 2
2586	Tire Air Leakage Rate
2587	Tire Pressure Threshold Detection
2588	Maximum Vehicle Speed Limit 1
2589	Maximum Vehicle Speed Limit 2
2590	Maximum Vehicle Speed Limit 3
2591	Maximum Vehicle Speed Limit 4
2592	Maximum Vehicle Speed Limit 5
2593	Maximum Vehicle Speed Limit 6
2594	Maximum Vehicle Speed Limit 7
2595	Applied Vehicle Speed Limit
2596	Selected Maximum Vehicle Speed Limit
2597	Implement Left Facing Work Light Command
2598	Implement Left Facing Work Light
2599	Fire Apparatus Pump Engagement
2600	Payload Percentage
2601	Travel Velocity Control Position
2602	Hydraulic Oil Level
2603	Pneumatic Supply Pressure Request
2604	Parking and/or Trailer Air Pressure Request
2605	Service Brake Air Pressure Request, Circuit #1
2606	Service Brake Air Pressure Request, Circuit #2
2607	Auxiliary Equipment Supply Pressure Request
2608	Air Suspension Supply Pressure Request
2609	Cab A/C Refrigerant Compressor Outlet Pressure
2610	Solar Intensity Percent
2611	Solar Sensor Maximum
2612	Front Wheel Drive Actuator Status
2613	Drive Axle Lube Pressure
2614	Steering Axle Lube Pressure
2615	Engine Throttle Synchronization Mode Status
2616	Trolling Mode Status
2617	Slow Vessel Mode Status
2618	Suspend Signal
2619	Suspend Duration
2620	Brake Lining Display
2621	Pneumatic Brake Pressure Limitation Valve Front Axle
2622	Hillholder system
2623	Accelerator Pedal #1 Channel #2
2624	Accelerator Pedal #1 Channel #3
2625	Accelerator Pedal #2 Channel #2
2626	Accelerator Pedal #2 Channel #3
2627	Engine Gaseous Fuel Shutoff Valve - High Pressure
2628	Engine Gaseous Fuel Shutoff Valve - Low Pressure

2629	Engine Turbocharger #1 Compressor Outlet Temperature
2630	Engine Charge Air Cooler Outlet Temperature
2631	Engine Charge Air Cooler Outlet Pressure
2632	Engine Charge Air Cooler Bypass
2633	Engine Variable Geometry Turbocharger (VGT) 1 Nozzle Position
2634	Power Relay
2635	Neutral Only Power Relay
2636	Windshield Wiper Motor ON/OFF
2637	Windshield Wiper Motor Speed
2638	Differential Lock Control Valve #2
2639	Cab Door "Lock" Control
2640	Cab Door "Unlock" Control
2641	Horn
2642	Mirror Heater
2643	Battery Monitor Load #1
2644	Battery Monitor Load #2
2645	ECU "Wake Up" Control
2646	Auxiliary Output #4
2647	Auxiliary Output #5
2648	Maintenance Lamp
2649	Low Air Pressure
2650	Fan Override Indicator
2651	Interior Lamps
2652	Switch Diagnostic Enable
2653	Headlamp Low Beam Left #1
2654	Headlamp Low Beam Left #2
2655	Headlamp Low Beam Right #1
2656	Headlamp Low Beam Right #2
2657	Engine Auxiliary Cooling System
2658	Engine Inlet Air Precleaner
2659	EGR Mass Flow Rate
2660	Joystick 1 X-Axis Position
2661	Joystick 1 Y-Axis Position
2662	Joystick 1 Grip X-Axis Position
2663	Joystick 1 Grip Y-Axis Position
2664	Joystick 1 Theta-Axis Position
2665	Joystick 1 X-Axis Lever Right Positive Position Status
2666	Joystick 1 Y-Axis Lever Forward Positive Position Status
2667	Joystick 1 Grip X-Axis Lever Right Positive Position Status
2668	Joystick 1 Grip Y-Axis Lever Forward Positive Position Status
2669	Joystick 1 Theta-Axis Clockwise Positive Position Status
2670	Joystick 1 X-Axis Lever Left Negative Position Status
2671	Joystick 1 Y-Axis Lever Back Negative Position Status
2672	Joystick 1 Grip X-Axis Lever Left Negative Position Status
2673	Joystick 1 Grip Y-Axis Lever Back Negative Position Status
2674	Joystick 1 Theta-Axis Counterclockwise Negative Position Status
2675	Joystick 1 X-Axis Neutral Position Status
2676	Joystick 1 Y-Axis Neutral Position Status
2677	Joystick 1 Grip X-Axis Neutral Position Status
2678	Joystick 1 Grip Y-Axis Neutral Position Status
2679	Joystick 1 Theta-Axis Neutral Position Status

2680	Joystick 1 X-Axis Detent Position Status
2681	Joystick 1 Y-Axis Detent Position Status
2682	Joystick 1 Grip X-Axis Detent Position Status
2683	Joystick 1 Grip Y-Axis Detent Position Status
2684	Joystick 1 Theta-Axis Detent Position Status
2685	Joystick 1 Button 1 Pressed Status
2686	Joystick 1 Button 2 Pressed Status
2687	Joystick 1 Button 3 Pressed Status
2688	Joystick 1 Button 4 Pressed Status
2689	Joystick 1 Button 5 Pressed Status
2690	Joystick 1 Button 6 Pressed Status
2691	Joystick 1 Button 7 Pressed Status
2692	Joystick 1 Button 8 Pressed Status
2693	Joystick 1 Button 9 Pressed Status
2694	Joystick 1 Button 10 Pressed Status
2695	Joystick 1 Button 11 Pressed Status
2696	Joystick 1 Button 12 Pressed Status
2697	Joystick 2 X-Axis Position
2698	Joystick 2 Y-Axis Position
2699	Joystick 2 Grip X-Axis Position
2700	Joystick 2 Grip Y-Axis Position
2701	Joystick 2 Theta-Axis Position
2702	Joystick 2 X-Axis Lever Right Positive Position Status
2703	Joystick 2 Y-Axis Lever Forward Positive Position Status
2704	Joystick 2 Grip X-Axis Lever Right Positive Position Status
2705	Joystick 2 Grip Y-Axis Lever Forward Positive Position Status
2706	Joystick 2 Theta-Axis Clockwise Positive Position Status
2707	Joystick 2 X-Axis Lever Left Negative Position Status
2708	Joystick 2 Y-Axis Lever Back Negative Position Status
2709	Joystick 2 Grip X-Axis Lever Left Negative Position Status
2710	Joystick 2 Grip Y-Axis Lever Back Negative Position Status
2711	Joystick 2 Theta-Axis Counterclockwise Negative Position Status
2712	Joystick 2 X-Axis Neutral Position Status
2713	Joystick 2 Y-Axis Neutral Position Status
2714	Joystick 2 Grip X-Axis Neutral Position Status
2715	Joystick 2 Grip Y-Axis Neutral Position Status
2716	Joystick 2 Theta-Axis Neutral Position Status
2717	Joystick 2 X-Axis Detent Position Status
2718	Joystick 2 Y-Axis Detent Position Status
2719	Joystick 2 Grip X-Axis Detent Position Status
2720	Joystick 2 Grip Y-Axis Detent Position Status
2721	Joystick 2 Theta-Axis Detent Position Status
2722	Joystick 2 Button 1 Pressed Status
2723	Joystick 2 Button 2 Pressed Status
2724	Joystick 2 Button 3 Pressed Status
2725	Joystick 2 Button 4 Pressed Status
2726	Joystick 2 Button 5 Pressed Status
2727	Joystick 2 Button 6 Pressed Status
2728	Joystick 2 Button 7 Pressed Status
2729	Joystick 2 Button 8 Pressed Status
2730	Joystick 2 Button 9 Pressed Status

2731	Joystick 2 Button 10 Pressed Status
2732	Joystick 2 Button 11 Pressed Status
2733	Joystick 2 Button 12 Pressed Status
2734	Joystick 3 X-Axis Position
2735	Joystick 3 Y-Axis Position
2736	Joystick 3 Grip X-Axis Position
2737	Joystick 3 Grip Y-Axis Position
2738	Joystick 3 Theta-Axis Position
2739	Joystick 3 X-Axis Lever Right Positive Position Status
2740	Joystick 3 Y-Axis Lever Forward Positive Position Status
2741	Joystick 3 Grip X-Axis Lever Right Positive Position Status
2742	Joystick 3 Grip Y-Axis Lever Forward Positive Position Status
2743	Joystick 3 Theta-Axis Clockwise Positive Position Status
2744	Joystick 3 X-Axis Lever Left Negative Position Status
2745	Joystick 3 Y-Axis Lever Back Negative Position Status
2746	Joystick 3 Grip X-Axis Lever Left Negative Position Status
2747	Joystick 3 Grip Y-Axis Lever Back Negative Position Status
2748	Joystick 3 Theta-Axis Counterclockwise Negative Position Status
2749	Joystick 3 X-Axis Neutral Position Status
2750	Joystick 3 Y-Axis Neutral Position Status
2751	Joystick 3 Grip X-Axis Neutral Position Status
2752	Joystick 3 Grip Y-Axis Neutral Position Status
2753	Joystick 3 Theta-Axis Neutral Position Status
2754	Joystick 3 X-Axis Detent Position Status
2755	Joystick 3 Y-Axis Detent Position Status
2756	Joystick 3 Grip X-Axis Detent Position Status
2757	Joystick 3 Grip Y-Axis Detent Position Status
2758	Joystick 3 Theta-Axis Detent Position Status
2759	Joystick 3 Button 1 Pressed Status
2760	Joystick 3 Button 2 Pressed Status
2761	Joystick 3 Button 3 Pressed Status
2762	Joystick 3 Button 4 Pressed Status
2763	Joystick 3 Button 5 Pressed Status
2764	Joystick 3 Button 6 Pressed Status
2765	Joystick 3 Button 7 Pressed Status
2766	Joystick 3 Button 8 Pressed Status
2767	Joystick 3 Button 9 Pressed Status
2768	Joystick 3 Button 10 Pressed Status
2769	Joystick 3 Button 11 Pressed Status
2770	Joystick 3 Button 12 Pressed Status
2771	Engine Turbocharger Compressor Bypass Actuator #1 Control
2772	Engine Turbocharger Compressor Blowoff Actuator #1 Control
2773	Engine Fuel Supply Flow Rate
2774	Engine Fuel Return Flow Rate
2775	Engine Fuel Supply Temperature
2776	Engine Fuel Return Temperature
2777	Number of Fuel Consumption Monitoring Transducers
2778	Engine Idle Fuel Flow Rate Threshold
2779	Starting/Lighting/Ignition (SLI) Battery #3 Temperature
2780	Starting/Lighting/Ignition (SLI) Battery #4 Temperature
2781	Reserved for assignment

2782	Reserved for assignment
2783	Reserved for assignment
2784	Reserved for assignment
2785	Reserved for assignment
2786	Reserved for assignment
2787	Reserved for assignment
2788	Reserved for assignment
2789	Engine Turbocharger #1 Calculated Turbine Inlet Temperature
2790	Engine Turbocharger #1 Calculated Turbine Outlet Temperature
2791	EGR Valve Control
2792	Engine Variable Geometry Turbocharger (VGT) Air Control Shutoff Valve
2793	Laser Strike Data Latency
2794	Absolute Laser Strike Position
2795	Engine Variable Geometry Turbocharger (VGT) 1 Actuator Position
2796	Transfer Case Selector Switch
2797	Engine Injector Group 1
2798	Engine Injector Group 2
2799	Engine Turbocharger #2 Compressor Outlet Temperature
2800	Engine Turbocharger #3 Compressor Outlet Temperature
2801	Engine Turbocharger #4 Compressor Outlet Temperature
2802	Data Memory Usage
2803	Keep-Alive Battery Consumption
2804	FMS-standard Diagnostics Supported
2805	FMS-standard Requests Supported
2806	FMS-standard SW-version supported.
2807	Engine Fuel Shutoff Valve #2 Control
2808	Keypad
2809	Engine Air Filter 2 Differential Pressure
2810	Engine Air Filter 3 Differential Pressure
2811	Engine Air Filter 4 Differential Pressure
2812	Engine Overspeed Test
2813	Engine Air Shutoff Command Status
2814	Engine Alarm Output Command Status
2815	Engine Alarm Acknowledge
2816	Simultaneous Upshift and Downshift
2817	Operator Using Clutch Pedal During Non- Recoverable Clutch Fault
2818	Operators Rear PTO Switch On with Operator Not Present
2819	Park Interlock Error
2820	Operator Not Present During Reverser Command
2821	Reverser Lever Neutral and Power Signals Conflict
2822	Reverser Lever Neither Forward or Reverse
2823	Reverser Lever Simultaneous Forward and Reverse
2824	Reverser Lever Motion Interlock Conflict
2825	Reverser Lever
2826	Reverser Lever Multiple Switch Conflicts
2827	Power Up Without Neutral
2828	Reverser Lever In Power Zero/Direction Transition Too Long
2829	Reverser Lever in Neutral/Park Transition Too Long
2830	Reversing Ratio Rationality Fault
2831	No Carrier Speed at Start-up
2832	Operator Not in Operating Station

2833	Motion with Park Brake Engaged
2834	No Hydrostatic Unit Speed at Start-up
2835	Neutral to Gear Command Conflict
2836	Battery #1 Potential 2 (Voltage), Switched
2837	Identity Number
2838	Manufacturer Code
2839	Function Instance
2840	ECU Instance
2841	Function
2842	Vehicle System
2843	Vehicle System Instance
2844	Arbitrary Address Capable
2845	NAME of Working Set Member
2846	Industry Group
2847	Address Assignment
2848	NAME of Controller Application
2849	NAME of Commanded Address Target
2850	Communications Antenna
2851	Communications Service Personal Identification Number
2852	Communications Service Subscriber Identification Module
2853	Communications Connection
2854	Communications Carrier
2855	Communications Bit Error Rate
2856	Communications Data Upload
2857	Communications Data Download
2858	Machine Data Configuration 1
2859	Machine Data Configuration 2
2860	Machine Data Configuration 3
2861	Machine Data Configuration 4
2862	Machine Data Configuration 5
2863	Front Operator Wiper Switch
2864	Front Non-operator Wiper Switch
2865	Rear Wiper Switch
2866	Front Operator Washer Switch
2867	Front Non-operator Washer Switch
2868	Rear Washer Function
2869	Front Operator Wiper Delay Control
2870	Front Non-operator Wiper Delay Control
2871	Rear Wiper Delay Control
2872	Main Light Switch
2873	Work Light Switch
2874	High-Low Beam Switch
2875	Hazard Light Switch
2876	Turn Signal Switch
2877	Operators Desired - Delayed Lamp Off Time
2878	Operators Desired Back-light
2879	Engine Alternate Droop Accelerator 2 Select
2880	Engine Operator Primary Intermediate Speed Select
2881	Engine Alternate Droop Accelerator 1 Select
2882	Engine Alternate Rating Select
2883	Engine Alternate Low Idle Switch

2884	Engine Auxiliary Governor Switch
2885	Engine Alternate Droop Auxiliary Input Select
2886	Engine Alternate Droop Remote Accelerator Select
2887	Total Count of Configuration Changes Made
2888	Engine Alternate Rating Select State
2889	Engine Alternate Droop Accelerator 1 Select State
2890	Engine Multi-Unit Sync State
2891	Engine Alternate Low Idle Select State
2892	Engine Operator Primary Intermediate Speed Select State
2893	Engine Alternate Droop Accelerator 2 Select State
2894	Engine Alternate Droop Remote Accelerator Select State
2895	Engine Alternate Droop Auxiliary Input Select State
2896	Engine Auxiliary Governor State
2897	Operator PTO Memory Select Switch
2898	Engine Start Enable Device 2 Configuration
2899	Engine Start Enable Device 1 Configuration
2900	Transmission Engine Crank Enable
2901	ECU Part Number
2902	ECU Serial Number
2903	ECU Location
2904	ECU Type
2905	Transmission Range Clutch C7 Solenoid
2906	Transmission Range Clutch C8 Solenoid
2907	Transmission Axle Disconnect Clutch Valve Actuator
2908	Transmission Boost Pressure Valve Actuator
2909	Torque Converter Modulating Clutch Valve Actuator
2910	Transmission PTO Clutch Valve Actuator
2911	Halt brake switch
2912	Hill holder mode
2913	Halt brake mode
2914	XBR EBI Mode
2915	XBR Priority
2916	XBR Control Mode
2917	XBR System State
2918	XBR Active Control Mode
2919	Foundation Brake Use
2920	External Acceleration Demand
2921	XBR Acceleration Limit
2922	Steerable Lift Axle Lowering Inhibit
2923	Status of Steering Axle
2924	Steering Type
2925	Type of Steering Forces
2926	Type of Steering Transmission
2927	Actual Inner wheel steering angle
2928	Axle Location
2930	Hydraulic Brake System Audible Warning Command
2931	Hydraulic Brake Fluid Level Switch
2932	Valve State
2933	Valve State Command
2934	Valve Fail-Safe Mode
2935	Valve Fail-Safe Mode Command

2936	General Purpose Valve Number
2937	Extend Port Measured Flow
2938	Retract Port Measured Flow
2939	Extend Port Estimated Flow
2940	Retract Port Estimated Flow
2941	Extend Port Pressure
2942	Retract Port Pressure
2943	Return Port Pressure
2944	Port Flow Command
2945	Active Shift Console Indicator
2946	Engine Mixer Inlet Relative Humidity
2947	Engine Fuel Rack Position #2
2948	Engine Intake Valve Actuation System Oil Pressure
2949	Engine Intake Valve Actuation System Oil Pressure Control Valve
2950	Engine Intake Valve Actuator #1
2951	Engine Intake Valve Actuator #2
2952	Engine Intake Valve Actuator #3
2953	Engine Intake Valve Actuator #4
2954	Engine Intake Valve Actuator #5
2955	Engine Intake Valve Actuator #6
2956	Engine Intake Valve Actuator #7
2957	Engine Intake Valve Actuator #8
2958	Engine Intake Valve Actuator #9
2959	Engine Intake Valve Actuator #10
2960	Engine Intake Valve Actuator #11
2961	Engine Intake Valve Actuator #12
2962	Engine Intake Valve Actuator #13
2963	Engine Intake Valve Actuator #14
2964	Engine Intake Valve Actuator #15
2965	Engine Intake Valve Actuator #16
2966	Engine Intake Valve Actuator #17
2967	Engine Intake Valve Actuator #18
2968	Engine Intake Valve Actuator #19
2969	Engine Intake Valve Actuator #20
2970	Accelerator Pedal #2 Low Idle Switch
2971	Accelerator Pedal #3 Low Idle Switch
2972	Accelerator Pedal Position #1 Output #2
2973	Accelerator Pedal Position #1 Output #3
2974	Accelerator Pedal Position #2 Output #2
2975	Accelerator Pedal Position #2 Output #3
2976	Accelerator Pedal Position #3 Output #2
2977	Accelerator Pedal Position #3 Output #3
2978	Estimated Engine Parasitic Losses - Percent Torque
2979	Vehicle Acceleration Rate Limit Status
2980	Engine Fuel Valve #1 Outlet Absolute Pressure
2981	Engine Coolant Loop 2 Pressure
2982	Engine Coolant Loop 2 Temperature
2983	Clutch Life Remaining
2984	Automatic traction help
2985	Transmission Shift Selector Display Mode Switch
2986	Engine Intake Valve Actuation System Oil Temperature

2987	Engine will not start, pre-lube system issue
2988	Engine Coolant Diverter Valve
2989	Combine separator speed
2990	Reserved by SAE
2991	Tailings volume
2992	Move reel forward
2993	Move reel aft
2994	Reel raise
2995	Reel lower
2996	Header raise slow
2997	Header lower slow
2998	Header raise fast
2999	Header lower fast
3000	Tilt header left
3001	Tilt header right
3002	Header fold
3003	Header unfold
3004	Draper speed increment
3005	Draper speed decrement
3006	Reel speed increment
3007	Reel speed decrement
3008	Threshing clearance increment
3009	Threshing clearance decrement
3010	Threshing speed increment
3011	Threshing speed decrement
3012	Product fan speed increment
3013	Product fan speed decrement
3015	Implement fold down
3016	Implement fold up
3017	RH header raise
3018	LH header raise
3019	Product fan engage mode
3020	Augers engage mode
3021	Product basket fill state
3022	Augers enable mode
3023	Header height control mode
3024	Header remote tether control mode
3025	Lubrication control mode
3026	Transmission Oil Level Measurement Status
3027	Transmission Oil Level High / Low
3028	Transmission Oil Level Countdown Timer
3029	Engine start inhibited, pre-lube system issue
3030	Transmission Torque Converter Ratio
3031	Aftertreatment #1 DEF Tank Temperature
3032	Right Brake Pedal Position
3033	Left Brake Pedal Position
3034	DM22 Control Byte - Individual DTC Clear/Reset Control Byte
3035	DM22 - Negative Acknowledge Indicator For Individual DTC Clear
3036	DM22 - DTC SPN Clear
3037	DM22 - DTC FMI to Clear
3038	Flash Malfunction Indicator Lamp

3039	Flash Red Stop Lamp
3040	Flash Amber Warning Lamp
3041	Flash Protect Lamp
3042	Requested Wheel Speed
3043	Type of Passenger Count
3044	Silent Alarm Status
3045	Vehicle Use Status
3046	Transit Run Status
3047	Patron Count
3048	Ignition Cycle Counter
3049	OBD Monitoring Conditions Encountered Counts
3050	Catalyst 1 System Monitor
3051	Catalyst 2 System Monitor
3052	Engine Misfire Monitor
3053	Engine Evaporative System Monitor
3054	Engine Secondary Air System Monitor
3055	Engine Fuel System Monitor
3056	Engine Oxygen Sensor 1 Monitor
3057	Engine Oxygen Sensor 2 Monitor
3058	EGR System Monitor
3059	Engine Positive Crankcase Ventilation System Monitor
3060	Engine Cooling System Monitor
3061	Engine Cold Start Emission Reduction Strategy System Monitor
3062	Air Conditioning System Component Monitor
3063	Direct Ozone Reduction Monitor
3064	Aftertreatment DPF System Monitor
3065	Comprehensive Component Monitor
3066	SPN of Applicable System Monitor
3067	Applicable System Monitor Numerator
3068	Applicable System Monitor Denominator
3069	Distance Traveled While MIL is Activated
3070	Number of bytes in the Milepost Identification
3071	Number of bytes in the Transit Assigned Route Identity
3072	Number of bytes in the Transit Assigned Run Identity
3073	Number of bytes in the Transit Assigned Block Identity
3074	Transit Assigned Route Identity
3075	Transit Assigned Run Identity
3076	Transit Assigned Block Identity
3078	Agency
3079	Intersection Preemption Request/Response
3080	Transit Route ID Usage
3081	Range Code Enable
3082	Strobe Activation Control Status
3083	Transit Door Enable
3084	Priority of Response Sent by Emitter
3085	Vehicle ID
3086	Transmission Ready for Brake Release
3087	Auxiliary Level
3088	Header height vertical rate control
3089	Header height sensitivity control
3090	Header height setpoint change

3091	Header height setpoint change sequence number
3092	Header platform height
3093	Header platform height maximum
3094	Reserved - available to assign
3095	Reserved - available to assign
3096	Header float pressure
3097	Header float pressure maximum
3098	Header position percent
3099	Header position percent maximum
3100	Reserved - available to assign
3101	Reserved - available to assign
3102	Unloading Auger swing out
3103	Unloading auger swing in
3104	Unloading auger swing out-auto :
3105	Unloading auger swing in-auto
3106	Side hill left tilt
3107	Side hill right tilt
3108	Spreader speed increment
3109	Spreader speed decrement
3110	Precleaner open
3111	Precleaner close
3112	Open chaffer
3113	Close chaffer
3114	Open sieve
3115	Close sieve
3116	Move chopper vane left
3117	Move chopper vane right
3118	Quick stop switch
3119	Unloading auger engage/disengage
3120	Unloading auger fold
3121	Unloading auger unfold
3122	Max allowable cleaning shoe travel
3123	Right-hand header height setpoint
3124	Left-hand header height setpoint
3125	Left-hand header height
3126	Right-hand header height
3127	Header control response rate setpoint
3128	Header control response rate maximum setpoint
3129	Header control response rate minimum setpoint
3130	Product system tank water level
3131	Product fan speed
3132	Product system manifold pressure
3133	Product system pump discharge pressure
3134	Product fan hours
3135	Right-hand header height max setpoint
3136	Right-hand header height min setpoint
3137	Left-hand header height min setpoint
3138	Left-hand header height max setpoint
3139	Right-hand header unit speed
3140	Left-hand header unit speed
3141	GPS differential corrections license

3142	Method, GNSS
3143	Differential source
3144	Differential source, Secondary
3145	DGNSS fix
3146	PGN of message being configured
3147	Parameter being included
3148	Position of configured parameter
3149	Message will be used proprietarily
3150	Message will use transport protocol
3151	First parameter only being identified
3152	Number of parameters included
3153	Starting bit for this parameter
3154	Parameter to be located
3155	Parameter locate command
3156	Blade Control Mode Switch
3157	Desired Grade Offset Switch
3158	Blade Auto Mode Command
3159	Trip Number
3160	Assigned Route
3161	Pattern Number
3162	Assigned Run
3163	Assigned Block
3164	Driver's farebox security code
3165	Fare Validity
3166	Pass Category
3167	Initial Fare Agency
3168	Transfer Sold
3169	Route Number
3170	Transaction Type
3171	Passenger Type
3172	Type of Service
3173	Transfer Type
3174	Trip Direction
3175	Fare Presets
3176	Type of Fare
3177	Payment Details
3178	Farebox Service Status
3179	Farebox Emergency Status
3180	Trip Status
3181	Farebox Alarm Identifier
3182	Transmission Retarder Enable Solenoid Valve
3183	Transmission Retarder Modulation Solenoid Valve
3184	Transmission Lockup Clutch Pressure Indicator
3185	Transmission Differential Lock Solenoid Valve
3186	Transmission Differential Lock Clutch Pressure Indicator
3187	Transmission Shift Console Data Link
3188	XBR Message Checksum
3189	XBR Message Counter
3190	Tire Location
3191	Reference Tire Pressure
3192	Tire Location

3193	Reference Tire Pressure Setting
3194	Control Byte
3195	Number of Ports
3196	Uptime since last power-on reset
3197	Average Messages Filtered per Second
3198	Average Messages Forwarded per Second
3199	Average Messages Received per Second
3200	Number of Messages with Excessive Transit Delay Time
3201	Number of Messages lost due to Buffer Overflow
3202	Average Transit Delay Time
3203	Maximum Transit Delay Time
3204	Maximum Messages Filtered per Second
3205	Maximum Messages Forwarded per Second
3206	Maximum Messages Received per Second
3207	Number of Filter Database Entries
3208	Maximum Filter Database Size
3209	Buffer Size
3210	Parameter Number
3211	SA_List
3212	PGN_List
3213	Filter_Mode
3214	Port_Pair
3215	Prohibit air suspension control
3216	Engine Exhaust #1 NOx #1
3217	Engine Exhaust #1 Percent Oxygen #1
3218	Engine Exhaust #1 Gas Sensor #1 Power In Range
3219	Aftertreatment #1 Intake Gas Sensor at Temperature
3220	Engine Exhaust #1 NOx #1 Reading Stable
3221	Aftertreatment #1 Intake Wide-Range O2 Reading Stable
3222	Aftertreatment #1 Intake Gas Sensor Heater Preliminary FMI
3223	Aftertreatment #1 Intake Gas Sensor Heater Control
3224	Engine Exhaust #1 NOx Sensor #1 Preliminary FMI
3225	Aftertreatment #1 Intake O2 Sensor Preliminary FMI
3226	Aftertreatment #1 Outlet NOx
3227	Aftertreatment #1 Outlet O2
3228	Aftertreatment #1 Outlet Gas Sensor Power In Range
3229	Aftertreatment #1 Outlet Gas Sensor at Temperature
3230	Aftertreatment #1 Outlet NOx Reading Stable
3231	Aftertreatment #1 Outlet Wide-Range O2 Reading Stable
3232	Aftertreatment #1 Outlet Gas Sensor Heater Preliminary FMI
3233	Aftertreatment #1 Outlet Gas Sensor Heater Control
3234	Aftertreatment #1 Outlet NOx Sensor Preliminary FMI
3235	Aftertreatment #1 Outlet O2 Sensor Preliminary FMI
3236	Exhaust Gas Mass
3237	Aftertreatment Intake Dew Point Message
3238	Aftertreatment Exhaust Dew Point Message
3239	Aftertreatment Intake Dew Point Message
3240	Aftertreatment Exhaust Dew Point Message
3241	Exhaust Gas Temperature 1
3242	Aftertreatment #1 DPF Intake Temperature
3245	Exhaust Gas Temperature 3

3246	Aftertreatment #1 DPF Outlet Gas Temperature
3249	Exhaust Gas Temperature 2
3250	Aftertreatment #1 DPF Intermediate Temperature
3251	Aftertreatment #1 DPF Differential Pressure
3255	Engine Exhaust #2 NOx #1
3256	Engine Exhaust #2 Percent Oxygen #1
3257	Engine Exhaust #2 Gas Sensor #1 Power In Range
3258	Aftertreatment #2 Intake Gas Sensor at Temperature
3259	Engine Exhaust #2 NOx #1 Reading Stable
3260	Aftertreatment #2 Intake Wide-Range %O2 Reading Stable
3262	Aftertreatment #2 Intake Gas Sensor Heater Control
3265	Aftertreatment #2 Outlet NOx
3266	Aftertreatment #2 Outlet %O2
3267	Aftertreatment #2 Outlet Gas Sensor Power In Range
3268	Aftertreatment #2 Outlet Gas Sensor at Temperature
3269	Aftertreatment #2 Outlet NOx Reading Stable
3270	Aftertreatment #2 Outlet Wide-Range %O2 Reading Stable
3272	Aftertreatment #2 Outlet Gas Sensor Heater Control
3275	Aftertreatment #2 Exhaust Gas Temperature 1
3276	Aftertreatment #2 DPF Intake Temperature
3279	Exhaust Gas Temperature 3
3280	Aftertreatment #2 DPF Outlet Temperature
3283	Exhaust Gas Temperature 2
3284	Aftertreatment #2 DPF Intermediate Temperature
3285	Aftertreatment #2 DPF Differential Pressure
3289	Transmission Requested Gear Feedback
3290	Address Acknowledged
3291	Address Negative Acknowledgement
3292	Address Access Denied
3293	Address Busy
3294	Distance Since Diagnostic Trouble Codes Cleared
3295	Minutes Run by Engine While MIL Activated
3296	Time Since Diagnostic Trouble Codes Cleared
3297	SPN Supported
3298	SPN Support Type
3299	SPN Data Length
3300	Expanded Freeze Frame Length
3301	Time Since Engine Start
3302	Number of Warm Ups Since DTCs Cleared
3303	Continuously Monitored Systems Enabled/Completed Status
3304	Non-Continuously Monitored Systems Enabled Status
3305	Non-Continuously Monitored Systems Complete Status
3306	Variable Valve Timing and/or Control
3307	Fifth Wheel Error Status
3308	Fifth Wheel Vertical Force
3309	Fifth Wheel Drawbar Force
3310	Fifth Wheel Roll Moment
3311	Fifth Wheel Slider Position
3312	Fifth Wheel Lock Ready to Couple Indicator
3313	Fifth Wheel Lock Couple Status Indicator
3314	Fifth Wheel Release Control

3315	Fifth Wheel Release Control Security Lockout
3316	Fifth Wheel Slider Lock Indicator
3317	Fifth Wheel Roll Warning Indicator
3318	Pitch Angle
3319	Roll Angle
3322	Pitch Rate
3323	Pitch Angle Figure of Merit
3324	Roll Angle Figure of Merit
3325	Pitch Rate Figure of Merit
3326	Pitch and Roll Compensated
3327	Roll and Pitch Measurement Latency
3328	Manufacturer Specific Information
3329	Message Selection Control
3330	PGN of Configurable Message Desired
3331	Blade Rotation Angle
3332	Blade Rotation Angle Figure of Merit
3333	Feederhouse Height
3334	Left Blade Control Mode Operator Control
3335	Right Blade Control Mode Operator Control
3336	Left Desired Blade Offset Operator Control
3337	Right Desired Blade Offset Operator Control
3338	Side-shift Blade Control Mode Operator Control
3339	Side-shift Desired Blade Offset Operator Control
3340	Engine Charge Air Cooler 1 Inlet Pressure
3341	Engine Charge Air Cooler 2 Inlet Pressure
3342	Engine Coolant Pump Differential Pressure
3343	Engine Centrifugal Oil Filter speed
3344	Support Variable Rate TSC1 Message
3345	Support TSC1 Control Purpose Group 1 of 4
3346	Support TSC1 Control Purpose Group 2 of 4
3347	Support TSC1 Control Purpose Group 3 of 4
3348	Support TSC1 Control Purpose Group 4 of 4
3349	TSC1 Transmission Rate
3350	TSC1 Control Purpose
3351	Engine Exhaust Pressure Regulator Vent Valve Control
3352	Engine Exhaust Pressure Regulator Vent Valve Position
3353	Alternator 1 Status
3354	Alternator 2 Status
3355	Alternator 3 Status
3356	Alternator 4 Status
3357	Actual Maximum Available Engine - Percent Torque
3358	EGR Inlet Pressure
3359	Transmission Oil Filter Restriction Switch
3360	Aftertreatment #1 DEF Controller
3361	Aftertreatment #1 DEF Dosing Unit
3362	Aftertreatment #1 DEF Dosing Unit Input Lines
3363	Aftertreatment #1 DEF Tank Heater
3364	Aftertreatment #1 DEF Tank Quality
3365	Relative Blade Height
3366	Relative Blade Height and Blade Rotation Angle Measurement Latency
3367	Relative Blade Height Figure of Merit

3368	Network Transceiver Status 1
3369	Network Service Status 1
3370	Network Antenna Status 1
3371	Network Signal Strength 1
3372	Wireless Communication Network Type 1
3374	Generator Excitation Ripple Current
3375	Voltage Regulator Load Compensation Mode
3376	Voltage Regulator VAr/Power Factor operating mode
3377	Voltage Regulator Underfrequency Compensation enabled
3378	Voltage Regulator Soft Start State
3379	Voltage Regulator Enabled
3380	Generator Excitation Field Voltage
3381	Generator Excitation Field Current
3382	Generator Output Voltage Bias Percentage
3383	Requested Generator Total AC Reactive Power
3384	Requested Generator Overall Power Factor
3385	Requested Generator Overall Power Factor Lagging
3386	Requested Generator Average Line-Line AC RMS Voltage
3387	Engine Cylinder 1 Combustion Status
3388	Engine Cylinder 2 Combustion Status
3389	Engine Cylinder 3 Combustion Status
3390	Engine Cylinder 4 Combustion Status
3391	Engine Cylinder 5 Combustion Status
3392	Engine Cylinder 6 Combustion Status
3393	Engine Cylinder 7 Combustion Status
3394	Engine Cylinder 8 Combustion Status
3395	Engine Cylinder 9 Combustion Status
3396	Engine Cylinder 10 Combustion Status
3397	Engine Cylinder 11 Combustion Status
3398	Engine Cylinder 12 Combustion Status
3399	Engine Cylinder 13 Combustion Status
3400	Engine Cylinder 14 Combustion Status
3401	Engine Cylinder 15 Combustion Status
3402	Engine Cylinder 16 Combustion Status
3403	Engine Cylinder 17 Combustion Status
3404	Engine Cylinder 18 Combustion Status
3405	Engine Cylinder 19 Combustion Status
3406	Engine Cylinder 20 Combustion Status
3407	Engine Cylinder 21 Combustion Status
3408	Engine Cylinder 22 Combustion Status
3409	Engine Cylinder 23 Combustion Status
3410	Engine Cylinder 24 Combustion Status
3411	Status 2 of doors
3412	Lock Status of Door 1
3413	Open Status of Door 1
3414	Enable Status of Door 1
3415	Lock Status of Door 2
3416	Open Status of Door 2
3417	Enable Status of Door 2
3418	Lock Status of Door 3
3419	Open Status of Door 3

3420	Enable Status of Door 3
3421	Lock Status of Door 4
3422	Open Status of Door 4
3423	Enable Status of Door 4
3424	Lock Status of Door 5
3425	Open Status of Door 5
3426	Enable Status of Door 5
3427	Lock Status of Door 6
3428	Open Status of Door 6
3429	Enable Status of Door 6
3430	Lock Status of Door 7
3431	Open Status of Door 7
3432	Enable Status of Door 7
3433	Lock Status of Door 8
3434	Open Status of Door 8
3435	Enable Status of Door 8
3436	Lock Status of Door 9
3437	Open Status of Door 9
3438	Enable Status of Door 9
3439	Lock Status of Door 10
3440	Open Status of Door 10
3441	Enable Status of Door 10
3442	Network Transceiver Status 2
3443	Network Service Status 2
3444	Network Antenna Status 2
3445	Network Signal Strength 2
3446	Wireless Communication Network Type 2
3447	Remote PTO preprogrammed speed control switch #2
3448	Auxiliary Input Ignore Switch
3451	Engine Multiple Cylinder Spark Voltage
3452	Enable Switch Transmission input shaft PTO 1
3453	Enable Switch Transmission input shaft PTO 2
3454	Enable Switch Transmission output shaft PTO
3455	Enable Switch Transfer case output shaft PTO
3456	Engagement Consent Transmission input shaft PTO 1
3457	Engagement Consent Transmission input shaft PTO 2
3458	Engagement Consent Transmission output shaft PTO
3459	Engagement Consent Transfer case output shaft PTO
3460	Engagement Status Transmission input shaft PTO 1
3461	Engagement Status Transmission input shaft PTO 2
3462	Engagement Status Transmission output shaft PTO
3463	Engagement Status Transfer case output shaft PTO
3464	Engine Throttle Actuator 1 Control Command
3465	Engine Throttle Actuator 2 Control Command
3466	Engine Fuel Valve #2 Inlet Absolute Pressure
3467	Engine Gas Mass Flow Rate #2
3468	Engine Fuel Temperature 2
3469	Engine Fuel Valve #2 Outlet Absolute Pressure
3470	Engine Turbocharger Compressor Control
3471	Aftertreatment #1 Fuel Pressure Control Actuator
3472	Aftertreatment #1 Air Pressure Control Actuator

3473	Aftertreatment #1 Failed to Ignite
3474	Aftertreatment #1 Loss of Combustion
3475	Aftertreatment #2 Fuel Pressure Control Actuator
3476	Aftertreatment #2 Air Pressure Control Actuator
3477	Aftertreatment #2 Failed to Ignite
3478	Aftertreatment #2 Loss of Ignition
3479	Aftertreatment #1 Fuel Pressure Control
3480	Aftertreatment #1 Fuel Pressure #1
3481	Aftertreatment #1 Fuel Rate
3482	Aftertreatment #1 Fuel Enable Actuator
3483	Aftertreatment #1 Regeneration Status
3484	Aftertreatment #1 Ignition
3485	Aftertreatment #1 Supply Air Pressure
3486	Aftertreatment #1 Purge Air Pressure
3487	Aftertreatment #1 Air Pressure Control
3488	Aftertreatment #1 Air Pressure Actuator Position
3489	Aftertreatment #1 Air Enable Actuator
3490	Aftertreatment #1 Purge Air Actuator
3491	Aftertreatment #1 Atomization Air Actuator
3492	Aftertreatment #1 Air System Relay
3493	Aftertreatment #2 Fuel Pressure Control
3494	Aftertreatment #2 Fuel Pressure
3495	Aftertreatment #2 Fuel Rate
3496	Aftertreatment #2 Fuel Enable Actuator
3497	Aftertreatment #2 Regeneration Status
3498	Aftertreatment #2 Ignition
3499	Aftertreatment #2 Supply Air Pressure
3500	Aftertreatment #2 Purge Air Pressure
3501	Aftertreatment #2 Air Pressure Control
3502	Aftertreatment #2 Air Pressure Actuator Position
3503	Aftertreatment #2 Air Enable Actuator
3504	Aftertreatment #2 Purge Air Actuator
3505	Aftertreatment #2 Atomization Air Actuator
3506	Aftertreatment #2 Air System Relay
3507	TECU ECU_PWR relay
3508	TECU PWR Relay
3509	Sensor Supply Voltage 1
3510	Sensor Supply Voltage 2
3511	Sensor Supply Voltage 3
3512	Sensor Supply Voltage 4
3513	Sensor Supply Voltage 5
3514	Sensor Supply Voltage 6
3515	Aftertreatment #1 DEF Temperature #2
3516	Aftertreatment #1 DEF Concentration
3517	Aftertreatment #1 DEF Tank Level
3518	Aftertreatment #1 DEF Conductivity
3519	Aftertreatment 1 DEF Temperature 2 Preliminary FMI
3520	Aftertreatment 1 DEF Properties Preliminary FMI
3521	Aftertreatment #1 DEF Property
3522	Aftertreatment #1 Total Fuel Used
3522	Aftertreatment #1 Total Fuel Used

3523	Aftertreatment #1 Total Regeneration Time
3524	Aftertreatment #1 Total Disabled Time
3525	Aftertreatment #1 Total Number of Active Regenerations
3526	Aftertreatment #2 Total Fuel Used
3527	Aftertreatment #2 Total Regeneration Time
3528	Aftertreatment #2 Total Disabled Time
3529	Aftertreatment #2 Total Number of Active Regenerations
3530	Aftertreatment #1 Regeneration Manually Disabled
3531	Aftertreatment #2 Regeneration Manually Disabled
3532	Aftertreatment 1 Diesel Exhaust Fluid Tank Level Preliminary FMI
3541	Brake Light Relay
3542	Requested Engine Control Mode
3543	Engine Operating State
3544	Time Remaining in Engine Operating State
3545	Generator Circuit Breaker Status
3546	Utility Circuit Breaker Status
3547	Automatic Transfer Switch Status
3549	Engine Oil Filter Outlet Pressure
3550	Engine Oil Priming Pump Switch
3551	Engine Oil Priming State
3554	Engine Ventilation Status
3556	Aftertreatment Fuel Injector #1
3557	Engine Intake Manifold #2 Pressure
3562	Engine Intake Manifold #2 Pressure
3563	Engine Intake Manifold #1 Absolute Pressure
3567	Generator Control Not in Automatic Start State
3568	Generator Not Ready to Automatically Parallel State
3569	Neutral Earth Fault
3570	Generator Load Neutral Earth Leakage
3571	Generator Breaker Failure to Open
3572	Generator Breaker Failure to Close
3573	Utility Breaker Failure to Open
3574	Utility Circuit Breaker Closing Time
3575	Utility to Generator Transfer Failure
3576	Generator to Utility Transfer Time
3577	Loss of Utility Grid
3578	Generator to Bus Synchronization Failure
3579	Generator to Bus Phase Sequence Mismatch
3580	Generator Soft Unload Failure
3581	Modbus Data Link
3582	Utility Power Supply
3285	Engine Emergency Shutdown Switch
3587	Ether Hold Relay
3588	Ether Start Relay
3589	Pre-Lube Relay
3590	Generator Total Percent kW
3593	Generator Total kVAr Hours Export
3594	Generator Total kVAr Hours Import
3595	Utility Total kVAr Hours Export
3596	Utility Total kVAr Hours Import
3597	ECU Power Output Supply Voltage #1

3598	ECU Power Output Supply Voltage #2
3601	Engine Fuel Shutoff Valve Leak Test Control
3602	Engine Oil Pre-heater Control
3604	Engine Pre-Heater Control
3605	Engine Coolant Pump Control
3606	Engine Controlled Shutdown Request
3607	Engine Emergency Shutdown Indication
3608	Engine Fuel Shutoff Vent Control
3609	DPF #1 Intake Pressure
3610	Aftertreatment #1 DEF Outlet Pressure
3611	Aftertreatment #2 DPF Intake Pressure
3644	Engine Derate Request
3645	Transfer Case Status
3648	Transmission Neutral Selector
3659	Engine Injector Cylinder #1 Actuator #2
3660	Engine Injector Cylinder #2 Actuator #2
3661	Engine Injector Cylinder #3 Actuator #2
3662	Engine Injector Cylinder #4 Actuator #2
3663	Engine Injector Cylinder #5 Actuator #2
3664	Engine Injector Cylinder #6 Actuator #2
3665	Engine Injector Cylinder #7 Actuator #2
3666	Engine Injector Cylinder #8 Actuator #2
3667	Engine Air Shutoff Status
3668	Engine Intercooler Coolant Level
3669	Engine Rotation Direction
3670	Maximum Crank Attempts per Start Attempt
3671	Crank Attempt Count on Present Start Attempt
3673	Engine Throttle Valve 2 Position
3675	Engine Turbocharger Compressor Bypass Actuator Position
3676	Engine Aftercooler Coolant Level
3677	Generator Unavailable to Start/Run
3695	DPF Regeneration Inhibit Switch Status
3696	DPF Regeneration Force Switch Status
3697	DPF Lamp Command
3698	Exhaust System High Temperature Lamp Command
3699	Aftertreatment DPF Passive Regeneration Status
3700	DPF Active Regeneration Status
3701	DPF Status
3702	DPF Active Regeneration Inhibited Status
3703	DPF Active Regeneration Inhibited Due to Inhibit Switch
3707	DPF Active Regeneration Inhibited Due to Accelerator Pedal Off Idle
3708	DPF Active Regeneration Inhibited Due to Out of Neutral
3710	DPF Active Regeneration Inhibited Due to Parking Brake Not Set
3711	DPF Active Regeneration Inhibited Due to Low Exhaust Gas Temperature
3712	DPF Active Regeneration Inhibited Due to System Fault Active
3713	DPF Active Regeneration Inhibited Due to System Timeout
3714	DPF Active Regeneration Inhibited Due to Temporary System Lockout
3715	DPF Active Regeneration Inhibited Due to Permanent System Lockout
3716	DPF Active Regeneration Inhibited Due to Engine Not Warmed Up
3719	DPF #1 Soot Loading Percent
3720	DPF #1 Ash Load Percent

3721	DPF #1 Time Since Last Active Regeneration
3722	Aftertreatment #2 DPF Soot Load Percent
3723	DPF #2 Ash Load Percent
3750	DPF #1 Conditions Not Met for Active Regeneration
3783	Inlet Manifold Charge Combustion
3785	Tractor Brake Stroke Axle 1 Left
3786	Tractor Brake Stroke Axle 1 Right
3787	Tractor Brake Stroke Axle 2 Left
3788	Tractor Brake Stroke Axle 2 Right
3789	Tractor Brake Stroke Axle 3 Left
3790	Tractor Brake Stroke Axle 3 Right
3791	Tractor Brake Stroke Axle 4 Left
3792	Tractor Brake Stroke Axle 4 Right
3793	Tractor Brake Stroke Axle 5 Left
3794	Tractor Brake Stroke Axle 5 Right
3795	Trailer Brake Stroke Axle 1 Left
3796	Trailer Brake Stroke Axle 1 Right
3797	Trailer Brake Stroke Axle 2 Left
3798	Trailer Brake Stroke Axle 2 Right
3799	Trailer Brake Stroke Axle 3 Left
3800	Trailer Brake Stroke Axle 3 Right
3801	Trailer Brake Stroke Axle 4 Left
3802	Trailer Brake Stroke Axle 4 Right
3803	Trailer Brake Stroke Axle 5 Left
3804	Trailer Brake Stroke Axle 5 Right
3805	Tractor Brake Stroke Alert Monitor
3806	Trailer Brake Stroke Alert Monitor
3807	Park Brake Release Inhibit Request
3808	Park Brake Release Inhibit Status
3809	Transmission Oil Level Request
3810	Retract Status of ramp 1
3811	Enable status of ramp 1
3812	Movement status of ramp 1
3813	Retract Status of ramp 2
3814	Enable status of ramp 2
3815	Movement status of ramp 2
3816	Retract Status of ramp 3
3817	Enable status of ramp 3
3818	Movement status of ramp 3
3819	Front axle group engagement status
3820	Rear axle group engagement status
3821	EGR Valve #2 Control
3822	EGR Valve #2 Position
3823	Transmission Torque Converter Oil Outlet Temperature
3824	Transmission Gear Latch Actuator
3825	Transmission Output Speed 2
3826	Aftertreatment #1 DEF Average Consumption
3828	Aftertreatment #1 Commanded DEF Consumption
3829	EPS Supplying Load
3830	Aftertreatment #1 Secondary Air Differential Pressure
3831	Aftertreatment #1 Secondary Air Temperature

3832	Aftertreatment #1 Secondary Air Mass Flow
3833	Aftertreatment #2 Secondary Air Differential Pressure
3834	Aftertreatment #2 Secondary Air Temperature
3835	Aftertreatment #2 Secondary Air Mass Flow
3837	Aftertreatment #1 Secondary Air Pressure
3838	Aftertreatment #2 Secondary Air Pressure
3839	Brake Temperature Warning
3840	Auxiliary I/O #17
3841	Auxiliary I/O #18
3842	Auxiliary I/O #19
3843	Auxiliary I/O #20
3844	Auxiliary I/O #21
3845	Auxiliary I/O #22
3846	Auxiliary I/O #23
3847	Auxiliary I/O #24
3848	Auxiliary I/O #25
3849	Auxiliary I/O #26
3850	Auxiliary I/O #27
3851	Auxiliary I/O #28
3852	Auxiliary I/O #29
3853	Auxiliary I/O #30
3854	Auxiliary I/O #31
3855	Auxiliary I/O #32
3856	Auxiliary I/O #33
3857	Auxiliary I/O #34
3858	Auxiliary I/O #35
3859	Auxiliary I/O #36
3860	Auxiliary I/O #37
3861	Auxiliary I/O #38
3862	Auxiliary I/O #39
3863	Auxiliary I/O #40
3864	Auxiliary I/O #41
3865	Auxiliary I/O #42
3866	Auxiliary I/O #43
3867	Auxiliary I/O #44
3868	Auxiliary I/O #45
3869	Auxiliary I/O #46
3870	Auxiliary I/O #47
3871	Auxiliary I/O #48
3872	Auxiliary I/O #49
3873	Auxiliary I/O #50
3874	Auxiliary I/O #51
3875	Auxiliary I/O #52
3876	Auxiliary I/O #53
3877	Auxiliary I/O #54
3878	Auxiliary I/O #55
3879	Auxiliary I/O #56
3880	Auxiliary I/O #57
3881	Auxiliary I/O #58
3882	Auxiliary I/O #59
3883	Auxiliary I/O #60

3884	Auxiliary I/O #61
3885	Auxiliary I/O #62
3886	Auxiliary I/O #63
3887	Auxiliary I/O #64
3888	Auxiliary I/O #65
3889	Auxiliary I/O #66
3890	Auxiliary I/O #67
3891	Auxiliary I/O #68
3892	Auxiliary I/O #69
3893	Auxiliary I/O #70
3894	Auxiliary I/O #71
3895	Auxiliary I/O #72
3896	Auxiliary I/O #73
3897	Auxiliary I/O #74
3898	Auxiliary I/O #75
3899	Auxiliary I/O #76
3900	Auxiliary I/O #77
3901	Auxiliary I/O #78
3902	Auxiliary I/O #79
3903	Auxiliary I/O #80
3904	Auxiliary I/O #81
3905	Auxiliary I/O #82
3906	Auxiliary I/O #83
3907	Auxiliary I/O #84
3908	Auxiliary I/O #85
3909	Auxiliary I/O #86
3910	Auxiliary I/O #87
3911	Auxiliary I/O #88
3912	Auxiliary I/O #89
3913	Auxiliary I/O #90
3914	Auxiliary I/O #91
3915	Auxiliary I/O #92
3916	Auxiliary I/O #93
3917	Auxiliary I/O #94
3918	Auxiliary I/O #95
3919	Auxiliary I/O #96
3920	Auxiliary I/O #97
3921	Auxiliary I/O #98
3922	Auxiliary I/O #99
3923	Auxiliary I/O #100
3924	Auxiliary I/O #101
3925	Auxiliary I/O #102
3926	Auxiliary I/O #103
3927	Auxiliary I/O #104
3928	Auxiliary I/O #105
3929	Auxiliary I/O #106
3930	Auxiliary I/O #107
3931	Auxiliary I/O #108
3932	Auxiliary I/O #109
3933	Auxiliary I/O #110
3934	Auxiliary I/O #111

3935	Auxiliary I/O #112
3936	Aftertreatment DPF System
3938	Generator Governing Bias
3985	Cab HVAC System Controller
4000	Engine Exhaust Brake Enable Switch
4001	Engine Exhaust Brake Enable Switch Indicator
4002	Engine Remote Start
4003	Engine Remote Stop
4004	Exterior Lamp Check Switch
4005	Fifth Wheel Lock Actuator
4006	Fifth Wheel Slider Lock Actuator
4007	Fifth Wheel Slider Lock Switch
4009	Fuel Filter Fuel Heater Relay
4010	Fuel Tank Transfer Pump
4011	Headlamp #1 High Beam
4012	Headlamp #2 High Beam
4013	Headlight Interrupt Switch
4014	High Current Auxiliary Load Switch #1
4015	High Current Auxiliary Load Switch #2
4016	High Current Auxiliary Power Relay #1
4017	High Current Auxiliary Power Relay #2
4018	Lift Axle Lower Actuator
4019	Lift Axle Lower Switch
4027	Power Inverter Enable Switch
4028	Service Brake Circuit #1 Air Tank Drain Valve
4029	Service Brake Circuit #1 Air Tank Drain Valve Switch
4033	Engine Remote Start/Stop Enable
4043	Transfer Case Front Driveline Actuator
4044	Transfer Case High Range Actuator
4045	Transfer Case Low Range Actuator
4046	Transfer Case Neutral Actuator
4047	Transfer Case Output Shaft PTO Actuator
4049	Transfer Case Rear Driveline Actuator
4056	Two Speed Axle Actuator
4076	Engine Coolant Temperature #2
4077	Aftertreatment #1 Fuel Pressure #2
4079	Generator Governing Speed Command
4082	Fuel Pump Primer Control
4083	Fuel Pump Primer Status
4085	General Purpose Valve
4151	Engine Exhaust Gas Temperature Average
4152	Engine Exhaust Gas Temperature Average - Bank #2
4153	Engine Exhaust Gas Temperature Average - Bank #1
4155	Auxiliary I/O Channel #6
4157	Auxiliary I/O Channel #4
4158	Auxiliary I/O Channel #3
4165	Auxiliary I/O Channel #12
4166	Auxiliary I/O Channel #11
4177	Transmission Oil Life Remaining
4180	Data Dictionary Manufacturer Code
4181	Data Dictionary Method

4191	Engine Requested Torque
4193	Engine Coolant Pump Outlet Temperature
4194	Engine Coolant Thermostat Opening
4195	Engine Coolant Thermostat Mode
4196	Desired Engine Coolant Engine Pump Outlet Temperature
4197	Desired Engine Coolant Thermostat Opening
4198	Aftercooler Coolant Thermostat Mode
4199	Desired Aftercooler Coolant Inlet Temperature
4200	Desired Aftercooler Coolant Thermostat Opening
4201	Engine Speed Sensor #1
4202	Engine Speed Sensor #3
4203	Engine Speed Sensor 1 Timing Pattern Status
4204	Engine Speed Sensor 2 Timing Pattern Status
4205	Engine Speed Sensor 3 Timing Pattern Status
4209	Engine Crank Without Pre-lube
4210	Engine Pre-lube Drive
4211	Hydraulic Fan Motor Pressure
4212	Fan Drive Bypass Command Status
4213	Engine Crank Without Fuel Injection
4214	Engine Fan Reverse Actuator
4215	Ground-Level Shutdown Activated
4216	Transmission Reverse Solenoid Valve
4217	Transmission Shift Modulation Solenoid Valve
4218	Transmission Shift Rail 1 Position
4219	Transmission Shift Rail 2 Position
4220	Transmission Shift Rail 3 Position
4221	High-Speed Directional Shift
4239	Long Term Fuel Trim - Bank #2
4240	Engine Exhaust Gas Oxygen Sensor Closed Loop Operation, Bank #1
4241	Engine Exhaust Gas Oxygen Sensor Closed Loop Operation, Bank #2
4243	Engine Oil to Coolant Differential Temperature
4244	Engine Run Relay
4245	Fuel Energy Content
4250	Transmission Mode 5 Indicator
4256	Cranking Voltage
4265	Aftertreatment #1 Transformer Secondary Output
4289	Aftertreatment #1 Three Way Catalytic Converter Intake Gas Temperature
4290	Aftertreatment #1 Three Way Catalytic Converter Outlet Gas Temperature
4291	Aftertreatment #1 Three Way Catalytic Converter Differential Pressure
4301	Aftertreatment #1 Fuel Injector #1 Heater Control
4331	Aftertreatment #1 DEF Actual Dosing Quantity
4332	Aftertreatment #1 SCR System #1 State
4333	Aftertreatment #1 DEF Actual Quantity of Integrator
4334	Aftertreatment #1 DEF #1 Pressure (absolute)
4335	Aftertreatment #1 SCR Dosing Air Assist Absolute Pressure
4336	Aftertreatment #1 SCR Dosing Air Assist Valve
4337	Aftertreatment #1 DEF Doser #1 Temperature
4338	Aftertreatment #1 SCR Dosing Valve Exhaust Temperature Reduction Request
4340	Aftertreatment #1 DEF Line Heater #1 State
4341	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 1 Preliminary FMI
4342	Aftertreatment #1 DEF Line Heater #2 State

4343	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 2 Preliminary FMI
4344	Aftertreatment #1 DEF Line Heater #3 State
4345	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 3 Preliminary FMI
4346	Aftertreatment #1 DEF Line Heater #4 State
4347	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 4 Preliminary FMI
4348	Aftertreatment #1 DEF Dosing Requested Quantity
4350	Aftertreatment #1 DEF Requested Quantity of Integrator
4352	Aftertreatment 1 Diesel Exhaust Fluid Doser Fault Suppression Request
4353	Aftertreatment #1 DEF Doser Heating Mode Request
4354	Aftertreatment #1 DEF Line Heater #1
4355	Aftertreatment #1 DEF Line Heater #2
4356	Aftertreatment #1 DEF Line Heater #3
4357	Aftertreatment #1 DEF Line Heater #4
4358	Aftertreatment #1 SCR Catalyst Exhaust Gas Differential Pressure
4365	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Temperature Preliminary FMI
4366	Aftertreatment 1 Diesel Exhaust Fluid Tank 1 Heater Preliminary FMI
4367	Aftertreatment #1 DEF Quick Thaw Tank Volume
4368	Aftertreatment #1 DEF Quick Thaw Temperature
4369	Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Level 2
4370	Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Level Preliminary FMI
4371	Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Temperature Preliminary FMI
4372	Aftertreatment #1 DEF Quick Thaw Heater
4373	Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Heater Preliminary FMI
4358	Aftertreatment #1 SCR Catalyst Exhaust Gas Differential Pressure
4360	Aftertreatment #1 SCR Catalyst Intake Gas Temperature
4363	Aftertreatment #1 SCR Catalyst Outlet Gas Temperature
4364	Aftertreatment #1 SCR Catalyst Conversion Efficiency
4374	Aftertreatment #1 DEF Pump #1 Motor Speed
4375	Aftertreatment #1 DEF Pump Drive Command
4376	Aftertreatment #1 DEF Return Valve
4377	Aftertreatment #1 Outlet NH3
4380	Aftertreatment #1 Outlet NH3 Gas Sensor Power In Range
4383	Aftertreatment #1 Outlet NH3 Gas sensor heater control
4384	Aftertreatment #2 DEF Actual Dosing Quantity
4385	Aftertreatment #2 SCR System #1 State
4386	Aftertreatment 2 Diesel Exhaust Fluid Actual Quantity of Integrator
4387	Aftertreatment #2 DEF #1 Pressure (absolute)
4390	Aftertreatment #2 DEF Doser #1 Temperature
4393	Aftertreatment #2 DEF Line Heater #1 State
4394	Aftertreatment 2 Diesel Exhaust Fluid Line Heater 1 Preliminary FMI
4395	Aftertreatment #2 DEF Line Heater #2 State
4396	Aftertreatment 2 Diesel Exhaust Fluid Line Heater 2 Preliminary FMI
4397	Aftertreatment #2 DEF Line Heater #3 State
4398	Aftertreatment 2 Diesel Exhaust Fluid Line Heater 3 Preliminary FMI
4399	Aftertreatment #2 DEF Line Heater #4 State
4400	Aftertreatment 2 Diesel Exhaust Fluid Line Heater 4 Preliminary FMI
4401	Aftertreatment 2 Diesel Exhaust Fluid Dosing Requested Quantity
4403	Aftertreatment 2 Diesel Exhaust Fluid Requested Quantity of Integrator
4405	Aftertreatment 2 Diesel Exhaust Fluid Doser Fault Suppression Request
4406	Aftertreatment 2 Diesel Exhaust Fluid Doser Heating Mode Request
4407	Aftertreatment #2 DEF Line Heater #1

4408	Aftertreatment #2 DEF Line Heater #2
4409	Aftertreatment #2 DEF Line Heater #3
4410	Aftertreatment #2 DEF Line Heater #4
4413	Aftertreatment #2 SCR Catalyst Intake Gas Temperature
4415	Aftertreatment #2 SCR Outlet Temperature
4417	Aftertreatment 2 Diesel Exhaust Fluid Average Consumption
4418	Aftertreatment 2 SCR Commanded Diesel Exhaust Fluid Consumption
4419	Aftertreatment #2 SCR Conversion Efficiency
4420	Aftertreatment 2 Diesel Exhaust Fluid Temperature 2
4421	Aftertreatment 2 Diesel Exhaust Fluid Concentration
4422	Aftertreatment 2 Diesel Exhaust Fluid Conductivity
4423	Aftertreatment 2 Diesel Exhaust Fluid Temperature 2 Preliminary FMI
4424	Aftertreatment 2 Diesel Exhaust Fluid Properties Preliminary FMI
4425	Aftertreatment 2 Diesel Exhaust Fluid Type
4426	Aftertreatment #2 DEF Tank Volume #1
4427	Aftertreatment #2 DEF Tank Temperature
4428	Aftertreatment 2 Diesel Exhaust Fluid Tank Level 2
4429	Aftertreatment 2 Diesel Exhaust Fluid Tank Level Preliminary FMI
4430	Aftertreatment 2 Diesel Exhaust Fluid Tank 1 Temperature Preliminary FMI
4431	Aftertreatment #2 DEF Tank Heater
4432	Aftertreatment 2 Diesel Exhaust Fluid Tank 1 Heater Preliminary FMI
4433	Aftertreatment #2 DEF Tank #2 Level
4434	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Temperature
4435	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Level 2
4436	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Level Preliminary FMI
4437	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Temperature Preliminary FMI
4438	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Heater
4439	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Heater Preliminary FMI
4440	Aftertreatment #2 DEF Pump Motor Speed
4441	Aftertreatment #2 DEF Pump Drive Percentage
4442	Aftertreatment #2 DEF Dosing Unit #1 Diverter Valve
4450	Aftertreatment #2 DEF Controller
4451	Aftertreatment #2 DEF Dosing Unit
4452	Aftertreatment #2 DEF Dosing Unit #1 Input Lines
4453	Aftertreatment 2 Diesel Exhaust Fluid Tank Quality
4490	Specific Humidity
4750	EGR Cooler Inlet Temperature
4751	EGR Cooler Intake Pressure (absolute)
4752	EGR 1 Cooler Efficiency
4765	Aftertreatment #1 Diesel Oxidation Catalyst Intake Gas Temperature
4766	Aftertreatment #1 Diesel Oxidation Catalyst Outlet Gas Temperature
4767	Aftertreatment #1 Diesel Oxidation Catalyst Differential Pressure
4771	Aftertreatment #2 Diesel Oxidation Catalyst Intake Temperature
4772	Aftertreatment #2 Diesel Oxidation Catalyst Outlet Temperature
4773	Aftertreatment #2 Diesel Oxidation Catalyst Differential Pressure
4779	Aftertreatment #1 Three Way Catalyst Differential Gas Temperature
4781	DPF #1 Soot Mass
4783	DPF #1 Mean Soot Signal
4785	DPF #1 Soot Sensor
4792	Aftertreatment #1 SCR System
4797	Engine Injector Cylinder #9 Actuator #2

4798	Engine Injector Cylinder #10 Actuator #2
4799	Engine Injector Cylinder #11 Actuator #2
4800	Engine Injector Cylinder #12 Actuator #2
4801	Engine Injector Cylinder #13 Actuator #2
4802	Engine Injector Cylinder #14 Actuator #2
4803	Engine Injector Cylinder #15 Actuator #2
4804	Engine Injector Cylinder #16 Actuator #2
4805	Engine Injector Cylinder #17 Actuator #2
4806	Engine Injector Cylinder #18 Actuator #2
4807	Engine Injector Cylinder #19 Actuator #2
4808	Engine Injector Cylinder #20 Actuator #2
4815	Engine Cooling Fan Thermal Switch
4817	Engine Intake Manifold #1 Absolute Pressure
4990	Battery Charger #1 State
4991	Battery Charger #1 Power Line State
4992	Battery Charger #1 Output Voltage
4993	Battery Charger #1 Output Current
4994	Battery Charger #2 State
4995	Battery Charger #2 Power Line State
4996	Battery Charger #2 Output Voltage
4997	Battery Charger #2 Output Current
4998	Magnet Boost Time
4999	Magnet Rated Power
5000	Generator Overheat Status
5001	Genset System Output Voltage Range Status
5002	Reverse Current Range Setting
5003	Grapple/Magnet Selection Switch
5004	Genset Softstart Active
5005	Genset Enable Active
5006	Voltage Monitor Active
5007	Generator Duty Cycle Exceeded Status
5008	Magnet Forward Current
5009	Magnet Reverse Current
5010	Material Lift Switch
5011	Material Drop Switch
5012	Generator Current Boost Active Status
5013	Material Lift Active Status
5014	Material Drop Active
5018	Aftertreatment #1 Diesel Oxidation Catalyst System
5019	EGR Outlet Pressure
5020	EGR Mixer Inlet Temperature
5024	Engine Exhaust #1 NOx Sensor Heater Ratio
5025	Engine Exhaust #1 NOx Sensor New Part Deviation NOx Gain
5026	Engine Exhaust #1 NOx Sensor New Part Deviation NOx Offset
5027	Engine Exhaust #1 NOx Sensor O2 Pressure Correction
5028	Engine Exhaust #1 NOx Sensor NOx Pressure Correction
5029	Engine Exhaust #1 NOx Sensor NO2 Correction
5030	Engine Exhaust #1 NOx Sensor NH3 Correction
5031	Aftertreatment #1 Outlet NOx Sensor Heater Ratio
5032	Aftertreatment #1 Outlet NOx Sensor New Part Deviation NOx Gain
5033	Aftertreatment #1 Outlet NOx Sensor New Part Deviation NOx Offset

5034	Aftertreatment #1 Outlet NOx Sensor O2 Pressure Correction
5035	Aftertreatment #1 Outlet NOx Sensor NOx Pressure Correction
5036	Aftertreatment #1 Outlet NOx Sensor NO2 Correction
5037	Aftertreatment #1 Outlet NOx Sensor NH3 Correction
5041	Engine Exhaust #2 NOx Sensor O2 Pressure Correction
5042	Engine Exhaust #2 NOx Sensor NOx Pressure Correction
5048	Aftertreatment #2 Outlet NOx Sensor O2 Pressure Correction
5049	Aftertreatment #2 Outlet NOx Sensor NOx Pressure Correction
5055	Engine Oil Viscosity
5056	Engine Oil Density
5057	Cab Noise Control State
5059	Cab Noise Control Status
5060	Cab Noise Control Tuning Status
5061	Noise Controller
5062	Noise Control Microphone 1
5063	Noise Control Microphone 2
5064	Noise Control Microphone 3
5065	Noise Control Microphone 4
5066	Noise Control Microphone 5
5067	Noise Control Microphone 6
5068	Noise Control Output 1
5069	Noise Control Output 2
5070	Noise Control Output 3
5071	Noise Control Output 4
5072	Noise Control Output 5
5073	Noise Control Output 6
5074	Noise Control Feed Forward Sensor 1
5075	Noise Control Feed Forward Sensor 2
5077	Engine Protect Lamp Command
5080	Malfunction Indicator Lamp Command
5082	Engine Oil Pressure Low Lamp Command
5083	Engine Coolant Temperature High Lamp Command
5084	Engine Coolant Level Low Lamp Command
5085	Engine Idle Management Active Lamp Command
5086	Engine Air Filter Restriction Lamp Command
5094	Engine Amber Warning Lamp Data
5095	Engine Red Stop Lamp Data
5099	Engine Oil Pressure Low Lamp Data
5101	Engine Coolant Level Low Lamp Data
5106	Vehicle Air Pressure Low Lamp Data
5109	Controller #3
5110	Controller #4
5111	Controller #5
5137	Aftertreatment #1 DEF Tank Heater Command
5138	Aftertreatment 2 Diesel Exhaust Fluid Tank Heater Command
5245	Aftertreatment Selective Catalytic Reduction Operator Inducement Active
5246	Aftertreatment SCR Operator Inducement Severity
5252	EGR #2 Differential Pressure
5253	EGR #2 Intake Pressure
5255	EGR #2 Temperature
5257	EGR #2 Mass Flow Rate

5260	EGR #2 Cooler Efficiency
5264	EGR #2 Valve Control
5272	Unexpected Engine Shutdown
5273	Crank Terminate Relay
5276	Engine Exhaust Manifold Bank #1 Flow Balance Valve Actuator Control
5302	Aftertreatment #1 Post SCR NH3 Conversion Efficiency
5304	Aftertreatment #1 NOx Adsorbing Catalyst Conversion Efficiency
5312	Engine Intake Manifold Commanded Pressure
5323	Engine Fuel Control Mode
5324	Engine Glow Plug #1
5325	Engine Glow Plug #2
5326	Engine Glow Plug #3
5327	Engine Glow Plug #4
5344	Transmission Warning Indicator
5347	Lateral Acceleration
5348	Longitudinal Acceleration
5349	Vertical Acceleration
5350	Lateral Acceleration Figure of Merit
5351	Longitudinal Acceleration Figure of Merit
5352	Vertical Acceleration Figure of Merit
5353	Transmission Repetition Rate for Acceleration Sensor
5357	Engine Fuel Injection Quantity Error for Multiple Cylinders
5368	Engine Turbocharger Compressor Bypass Actuator #1 Temperature Status
5369	Engine Turbocharger Compressor Bypass Actuator #2 Command
5370	Engine Desired Turbocharger Wastegate Actuator #1 Position
5374	Engine Desired Throttle Valve #1 Position
5376	Engine Throttle Valve #1 Temperature Status
5381	Engine Fuel Valve #1 Temperature Status
5386	Engine Turbocharger Wastegate Actuator #1 Command
5392	Aftertreatment #1 DEF Dosing Unit #1 Loss of Prime
5393	EGR #1 Cooler Bypass Actuator
5394	Aftertreatment DEF Dosing Valve
5400	SCR Thermal Management Active
5401	Engine Turbocharger Turbine Bypass Actuator
5404	PTO Shutdown has Shutdown Engine
5414	Aftertreatment 1 Diesel Exhaust Fluid Tank 2 Heater Command
5415	Aftertreatment 2 Diesel Exhaust Fluid Tank 2 Heater Command
5417	Fuel Filter (Suction Side) Intake Pressure
5418	Engine Fuel Actuator #1
5419	Engine Throttle Actuator #1
5420	Engine Turbocharger Compressor Bypass Actuator #1
5421	Engine Turbocharger Wastegate Actuator #1
5422	Engine Intake Manifold #2 Absolute Pressure
5423	Aftertreatment #1 Fuel Pump Relay Control
5424	Aftertreatment #1 Fuel Flow Diverter Valve Control
5425	Aftertreatment #1 Fuel Pressure #2 Actuator Control
5429	EGR #2 Intake Absolute Pressure
5430	EGR #1 Intake Pressure (absolute)
5434	Aftertreatment 1 Diesel Exhaust Fluid Tank Fill Valve Command
5435	Aftertreatment #1 DEF Pump State
5436	Aftertreatment #2 DEF Pump State

5437	Aftertreatment 2 Diesel Exhaust Fluid Tank Fill Valve Command
5438	Aftertreatment 2 Diesel Exhaust Fluid Pump State
5439	Aftertreatment 2 Diesel Exhaust Fluid Tank Drain Valve Command
5441	Engine Fuel Injection Timing Error for Multiple Cylinders
5443	Aftertreatment #1 Hydrocarbon Dosing System
5447	Engine Fuel Valve #1 Operation Status
5448	Engine Fuel Valve #2 Operation Status
5456	Aftertreatment #1 Hydrocarbon Doser Intake Fuel Temperature
5468	Engine Oil Relative Dielectricity
5478	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Loss of Prime (obsolete)
5480	Aftertreatment #1 DEF Controller Temperature
5485	Aftertreatment #1 DEF Pump Orifice Flow
5486	Exhaust Emission Controller ECU Temperature
5487	Aftertreatment #1 Burner Unit Combustion Chamber Temperature
5488	Aftertreatment 1 Diesel Exhaust Fluid Line Heater 5 State
5489	Aftertreatment 2 Diesel Exhaust Fluid Line Heater 5 Preliminary FMI
5490	Aftertreatment 2 Diesel Exhaust Fluid Line Heater 5
5491	Aftertreatment #1 DEF Line Heater Relay
5495	Aftertreatment #1 DPF Soot Mean Calibration Offset
5499	Intake Valve Actuation System Oil Pressure Solenoid Status
5505	Requested Fuel Mass Rate
5506	Hydrocarbon (HC) Doser Status
5511	Lubrication Cycle Set Command
5512	Lubrication Operation Mode Set Command
5516	Lubrication Cycle Mode Status
5517	Lubrication Operation Mode Status
5519	Lubrication Reservoir Level
5536	Hydraulic Oil Temperature
5450	Engine Fuel Temperature
5540	Engine Fuel Temperature
5546	Engine Auxiliary Cooler Supply Valve #1 Actuator Command
5556	Supplemental Fan Enable Status
5557	Supplemental Fan Direction Status
5559	Supplemental Fan Controller Temperature Status
5562	Supplemental Fan Speed
5563	Supplemental Fan Current
5569	DPF #1 Soot Sensor ECU Internal Temperature
5571	High-Pressure Common Rail Fuel Pressure Relief Valve
5576	Aftertreatment #1 Identification
5577	Aftertreatment #2 Identification
5578	Engine Fuel Delivery Absolute Pressure
5579	Engine Filtered Fuel Delivery Pressure
5580	Engine Filtered Fuel Delivery Absolute Pressure
5584	Engine Fuel Filter Degradation
5585	Engine Injector Metering Rail #1 Cranking Pressure
5587	Engine Intake Manifold Temperatures Inconsistent
5588	Proprietary Network #2
5589	Aftertreatment #1 Secondary Air Absolute Pressure
5591	Aftertreatment #1 DPF Air Control Module
5625	Engine Exhaust Back Pressure Regulator Position
5629	DPF Active Regeneration Inhibited Due to Low Exhaust Gas Pressure

5631	Engine Throttle Valve Differential Pressure
5685	Barometric Absolute Pressure
5686	Engine Exhaust Gas Port #1 Difference from Average Temperature
5687	Engine Exhaust Gas Port #2 Difference from Average Temperature
5688	Engine Exhaust Gas Port #3 Difference from Average Temperature
5689	Engine Exhaust Gas Port #4 Difference from Average Temperature
5690	Engine Exhaust Gas Port #5 Difference from Average Temperature
5691	Engine Exhaust Gas Port #6 Difference from Average Temperature
5692	Engine Exhaust Gas Port #7 Difference from Average Temperature
5693	Engine Exhaust Gas Port #8 Difference from Average Temperature
5694	Engine Exhaust Gas Port #9 Difference from Average Temperature
5695	Engine Exhaust Gas Port #10 Difference from Average Temperature
5696	Engine Exhaust Gas Port #11 Difference from Average Temperature
5697	Engine Exhaust Gas Port #12 Difference from Average Temperature
5698	Engine Exhaust Gas Port #13 Difference from Average Temperature
5699	Engine Exhaust Gas Port #14 Difference from Average Temperature
5700	Engine Exhaust Gas Port #15 Difference from Average Temperature
5701	Engine Exhaust Gas Port #16 Difference from Average Temperature
5702	Engine Exhaust Gas Port #17 Difference from Average Temperature
5703	Engine Exhaust Gas Port #18 Difference from Average Temperature
5704	Engine Exhaust Gas Port #19 Difference from Average Temperature
5705	Engine Exhaust Gas Port #20 Difference from Average Temperature
5706	Aftertreatment #1 DEF Pump Heater
5707	Aftertreatment #1 DEF Pump Heater Command
5708	Engine Coolant Pressure #2
5721	Aftertreatment #1 Outlet NOx Sensor Operation Hours
5722	Aftertreatment #1 Intake NOx Sensor Operation Hours
5742	Aftertreatment DPF Temperature Sensor Module
5745	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Heater
5746	Aftertreatment 1 Diesel Exhaust Fluid Dosing Unit Heater Relay
5748	Aftertreatment #2 DEF Dosing Unit #1 Loss of Prime
5758	Aftertreatment #1 Intake Gas Sensor Power Supply
5759	Aftertreatment #1 Outlet Gas Sensor Power Supply
5760	Engine Exhaust #2 Gas Sensor #1 Power Supply
5761	Aftertreatment #2 Outlet Gas Sensor Power Supply
5769	EGR #1 Actuator #2 Temperature
5783	Engine Throttle Valve #1 Temperature
5789	Engine Exhaust Pressure Actuator #1 Desired Position
5791	Engine Turbocharger Compressor Bypass Actuator #1 Temperature
5792	Engine Turbocharger Compressor Bypass Actuator #2 Temperature
5794	Feedback Engine Fueling State
5795	Engine Fueling Inhibit Allowed
5798	Aftertreatment #1 DEF Dosing Unit Heater Temperature
5799	Aftertreatment #1 SCR Dosing Air Assist Pump Relay
5826	Emission Control System Operator Inducement Severity
5833	Engine Fuel Mass Flow Rate
5837	Fuel Type
5838	EGR Valve Malfunction
5839	Diesel Exhaust Fluid Consumption Malfunction
5840	Diesel Exhaust Fluid Dosing Malfunction
5841	DEF Quality Malfunction

5843	Engine OBD Warm Up Sequence
5867	Supply Gas Methane Percentage
5873	Hybrid System Overheat Indicator
5877	Transmission Ratio Forward Range #1
5878	Transmission Ratio Forward Range #2
5879	Transmission Ratio Forward Range #3
5880	Transmission Ratio Forward Range #4
5881	Transmission Ratio Forward Range #5
5882	Transmission Ratio Forward Range #6
5883	Transmission Ratio Forward Range #7
5884	Transmission Ratio Forward Range #8
5885	Transmission Ratio Forward Range #9
5887	Transmission Ratio Reverse Range #1
5888	Transmission Ratio Reverse Range #2
5889	Hybrid System Fault
5913	Transmission Oil Temperature #2
5917	HV ESS Available Discharge Power
5918	HV ESS Available Charge Power
5919	HV ESS Voltage Level
5920	HV ESS Current
5921	HV ESS Fast Update State of Charge
5922	HV ESS Highest Cell Voltage
5923	HV ESS Lowest Cell Voltage
5924	HV ESS Cell Voltage Differential Status
5925	Engine Oil Temperature #3
5926	Engine Charge Air Cooler #1 Differential Pressure
5963	Aftertreatment #1 Total DEF Used
5964	Aftertreatment 2 Total Diesel Exhaust Fluid Used
5965	Aftertreatment #1 DEF Control Module Relay Control
5966	Aftertreatment #1 DEF Control Module Power Supply
5967	Aftertreatment 2 Diesel Exhaust Fluid Control Module Relay Control
5968	Aftertreatment #2 DEF Control Module Power Supply
5969	Engine Exhaust Manifold Bank #2 Temperature #2
5970	Engine Exhaust Manifold Bank #1 Temperature #2
5971	Aftertreatment 2 Diesel Exhaust Fluid Dosing Unit Heater
5972	Aftertreatment #2 DEF Doser Absolute Pressure
5973	Aftertreatment #2 DEF Line Heater Relay #1
5974	Aftertreatment #2 DEF Dosing Valve #1
5978	Aftertreatment #1 DPF Time to Next Active Regeneration
5980	Engine Turbocharger Differential Speed
5981	Battery Pack State of Charge
5983	Battery Pack Health
6016	Fused Output #4
6017	Fused Output #3
6018	Fused Output #2
6019	Fused Output #1
6052	Switched Output #8
6053	Switched Output #7
6080	Fused Output #1 Current
6081	Fused Output #2 Current
6082	Fused Output #3 Current

6083	Fused Output #4 Current
6161	Engine Cylinder 1 Pressure
6162	Engine Cylinder 2 Pressure
6163	Engine Cylinder 3 Pressure
6164	Engine Cylinder 4 Pressure
6165	Engine Cylinder 5 Pressure
6166	Engine Cylinder 6 Pressure
6167	Engine Cylinder 7 Pressure
6168	Engine Cylinder 8 Pressure
6169	Engine Cylinder 9 Pressure
6170	Engine Cylinder 10 Pressure
6171	Engine Cylinder 11 Pressure
6172	Engine Cylinder 12 Pressure
6173	Engine Cylinder 13 Pressure
6174	Engine Cylinder 14 Pressure
6175	Engine Cylinder 15 Pressure
6176	Engine Cylinder 16 Pressure
6177	Engine Cylinder 17 Pressure
6178	Engine Cylinder 18 Pressure
6179	Engine Cylinder 19 Pressure
6180	Engine Cylinder 20 Pressure
6181	Engine Cylinder #1 Gaseous Fuel Valve
6182	Engine Cylinder #2 Gaseous Fuel Valve
6183	Engine Cylinder #3 Gaseous Fuel Valve
6184	Engine Cylinder #4 Gaseous Fuel Valve
6185	Engine Cylinder #5 Gaseous Fuel Valve
6186	Engine Cylinder #6 Gaseous Fuel Valve
6187	Engine Cylinder #7 Gaseous Fuel Valve
6188	Engine Cylinder #8 Gaseous Fuel Valve
6189	Engine Cylinder #9 Gaseous Fuel Valve
6190	Engine Cylinder #10 Gaseous Fuel Valve
6191	Engine Cylinder #11 Gaseous Fuel Valve
6192	Engine Cylinder #12 Gaseous Fuel Valve
6193	Engine Cylinder #13 Gaseous Fuel Valve
6194	Engine Cylinder #14 Gaseous Fuel Valve
6195	Engine Cylinder #15 Gaseous Fuel Valve
6196	Engine Cylinder #16 Gaseous Fuel Valve
6197	Engine Cylinder #17 Gaseous Fuel Valve
6198	Engine Cylinder #18 Gaseous Fuel Valve
6199	Engine Cylinder #19 Gaseous Fuel Valve
6200	Engine Cylinder #20 Gaseous Fuel Valve
6201	Engine Turbocharger Compressor Blowoff Actuator #1 Command
6203	Engine Control Module 2 Ready for Use Lamp Data
6205	Engine Control Module #1 Ready for Use Lamp Command
6206	Engine Control Module #2 Ready for Use Lamp Command
6207	Engine Control Module #3 Ready for Use Lamp Command
6209	Engine Coolant Temperature 3
6270	Engine Spark Plug #1 Misfire Rate
6271	Engine Spark Plug #2 Misfire Rate
6272	Engine Spark Plug #3 Misfire Rate
6273	Engine Spark Plug #4 Misfire Rate

6274	Engine Spark Plug #5 Misfire Rate
6275	Engine Spark Plug #6 Misfire Rate
6276	Engine Spark Plug #7 Misfire Rate
6277	Engine Spark Plug #8 Misfire Rate
6278	Engine Spark Plug #9 Misfire Rate
6279	Engine Spark Plug #10 Misfire Rate
6280	Engine Spark Plug #11 Misfire Rate
6281	Engine Spark Plug #12 Misfire Rate
6282	Engine Spark Plug #13 Misfire Rate
6283	Engine Spark Plug #14 Misfire Rate
6284	Engine Spark Plug #15 Misfire Rate
6285	Engine Spark Plug #16 Misfire Rate
6301	Water in Fuel Indicator #2
6309	Aftertreatment #1 DEF Control Module #1 Power Supply #2
6310	Aftertreatment #2 DEF Control Module #1 Power Supply #2
6317	Requested Fuel Type
6318	Emergency Fuel Limit Inhibit Switch
6319	Engine Total Hours of Gaseous Fuel Operation
6320	Engine Total Hours of Diesel Fuel Operation
6321	Engine Oil Filter Differential Pressure
6322	Aftertreatment #1 SCR Desulfation Too Frequent
6323	Engine Fuel Supply Pump
6324	Aftertreatment #1 DEF Dosing Valve #2
6325	Aftertreatment #2 DEF Dosing Valve #2
6326	Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 1 Heater
6327	Aftertreatment 1 Diesel Exhaust Fluid Dosing Valve 2 Heater
6328	Aftertreatment 2 Diesel Exhaust Fluid Dosing Valve 1 Heater
6329	Aftertreatment 2 Diesel Exhaust Fluid Dosing Valve 2 Heater
6330	Engine Intake Air Source Valve
6333	Engine Gas Fuel Percentage
6334	Engine Timing Actuator #1 Requested Position
6335	Engine Timing Actuator #2 Requested Position
6336	Engine Timing Actuator #1 Position Command
6337	Engine Timing Actuator #2 Position Command
6374	Steering Controller ECU Temperature
6375	Steering Mode Switch
6376	Front Steering Axle Centered Status
6377	Rear Steering Axle Centered Status
6378	2 Wheel Steer Actuator State
6379	4 Wheel Steer Actuator State
6380	Circle Steer Mode Actuator State
6381	Crab Steer Mode Actuator State
6382	Steer Actuator Common Return 1
6383	Steer Actuator Common Return 2
6386	Engine Gas Fuel Percentage Command
6387	Engine Cylinder Gas Mass Flow Rate Command
6388	Engine Cylinder Diesel Mass Flow Rate Command
6389	Engine Cylinder Torque
6390	Engine Cylinder Pressure Monitor #1 Preliminary FMI
6391	Engine Cylinder Pressure Monitor #2 Preliminary FMI
6393	Engine Total Intake Mass Air Flow Rate

6395	Engine Configuration Identification
6396	Engine Cylinder #1 Heat Release
6397	Engine Cylinder #1 Peak Pressure
6398	Engine Cylinder #1 Knock Level
6399	Engine Cylinder #1 Pressure Sensor Preliminary FMI
6400	Engine Cylinder #2 Heat Release
6401	Engine Cylinder #2 Peak Pressure
6402	Engine Cylinder #2 Knock Level
6403	Engine Cylinder #2 Pressure Sensor Preliminary FMI
6404	Engine Cylinder #3 Heat Release
6405	Engine Cylinder #3 Peak Pressure
6406	Engine Cylinder #3 Knock Level
6407	Engine Cylinder #3 Pressure Sensor Preliminary FMI
6408	Engine Cylinder #4 Heat Release
6409	Engine Cylinder #4 Peak Pressure
6410	Engine Cylinder #4 Knock Level
6411	Engine Cylinder #4 Pressure Sensor Preliminary FMI
6412	Engine Cylinder #5 Heat Release
6413	Engine Cylinder #5 Peak Pressure
6414	Engine Cylinder #5 Knock Level
6415	Engine Cylinder #5 Pressure Sensor Preliminary FMI
6416	Engine Cylinder #6 Heat Release
6417	Engine Cylinder #6 Peak Pressure
6418	Engine Cylinder #6 Knock Level
6419	Engine Cylinder #6 Pressure Sensor Preliminary FMI
6420	Engine Cylinder #7 Heat Release
6421	Engine Cylinder #7 Peak Pressure
6422	Engine Cylinder #7 Knock Level
6423	Engine Cylinder #7 Pressure Sensor Preliminary FMI
6424	Engine Cylinder #8 Heat Release
6425	Engine Cylinder #8 Peak Pressure
6426	Engine Cylinder #8 Knock Level
6427	Engine Cylinder #8 Pressure Sensor Preliminary FMI
6428	Engine Cylinder #9 Heat Release
6429	Engine Cylinder #9 Peak Pressure
6430	Engine Cylinder #9 Knock Level
6431	Engine Cylinder #9 Pressure Sensor Preliminary FMI
6432	Engine Cylinder #10 Heat Release
6433	Engine Cylinder #10 Peak Pressure
6434	Engine Cylinder #10 Knock Level
6435	Engine Cylinder #10 Pressure Sensor Preliminary FMI
6436	Engine Cylinder #11 Heat Release
6437	Engine Cylinder #11 Peak Pressure
6438	Engine Cylinder #11 Knock Level
6439	Engine Cylinder #11 Pressure Sensor Preliminary FMI
6440	Engine Cylinder #12 Heat Release
6441	Engine Cylinder #12 Peak Pressure
6442	Engine Cylinder #12 Knock Level
6443	Engine Cylinder #12 Pressure Sensor Preliminary FMI
6444	Engine Cylinder #13 Heat Release
6445	Engine Cylinder #13 Peak Pressure

6446	Engine Cylinder #13 Knock Level
6447	Engine Cylinder #13 Pressure Sensor Preliminary FMI
6448	Engine Cylinder #14 Heat Release
6449	Engine Cylinder #14 Peak Pressure
6450	Engine Cylinder #14 Knock Level
6451	Engine Cylinder #14 Pressure Sensor Preliminary FMI
6452	Engine Cylinder #15 Heat Release
6453	Engine Cylinder #15 Peak Pressure
6454	Engine Cylinder #15 Knock Level
6455	Engine Cylinder #15 Pressure Sensor Preliminary FMI
6456	Engine Cylinder #16 Heat Release
6457	Engine Cylinder #16 Peak Pressure
6458	Engine Cylinder #16 Knock Level
6459	Engine Cylinder #16 Pressure Sensor Preliminary FMI
6460	Engine Cylinder #17 Heat Release
6461	Engine Cylinder #17 Peak Pressure
6462	Engine Cylinder #17 Knock Level
6463	Engine Cylinder #17 Pressure Sensor Preliminary FMI
6464	Engine Cylinder #18 Heat Release
6465	Engine Cylinder #18 Peak Pressure
6466	Engine Cylinder #18 Knock Level
6467	Engine Cylinder #18 Pressure Sensor Preliminary FMI
6468	Engine Cylinder #19 Heat Release
6469	Engine Cylinder #19 Peak Pressure
6470	Engine Cylinder #19 Knock Level
6471	Engine Cylinder #19 Pressure Sensor Preliminary FMI
6472	Engine Cylinder #20 Heat Release
6473	Engine Cylinder #20 Peak Pressure
6474	Engine Cylinder #20 Knock Level
6475	Engine Cylinder #20 Pressure Sensor Preliminary FMI
6476	Aftertreatment DEF Doser Cooldown Interrupted Count
6477	Aftertreatment DEF Doser Purge Interrupted Count
6478	Aftertreatment Diesel Exhaust Fluid Doser Cooldown Complete This Cycle
6479	Aftertreatment Diesel Exhaust Fluid Doser Cooldown Complete Last Cycle
6480	Aftertreatment Diesel Exhaust Fluid Doser Purge Complete This Cycle
6481	Aftertreatment Diesel Exhaust Fluid Doser Purge Complete Last Cycle
6482	After-run Completion This Cycle
6483	Engine Cylinder #1 Indicated Mean Effective Pressure
6484	Engine Cylinder #1 Average Start of Combustion Timing
6485	Engine Cylinder #1 Average Center of Combustion Timing
6486	Engine Cylinder #1 Average Combustion Duration
6487	Engine Cylinder #2 Indicated Mean Effective Pressure
6488	Engine Cylinder #2 Average Start of Combustion Timing
6489	Engine Cylinder #2 Average Center of Combustion Timing
6490	Engine Cylinder #2 Average Combustion Duration
6491	Engine Cylinder #3 Indicated Mean Effective Pressure
6492	Engine Cylinder #3 Average Start of Combustion Timing
6493	Engine Cylinder #3 Average Center of Combustion Timing
6494	Engine Cylinder #3 Average Combustion Duration
6495	Engine Cylinder #4 Indicated Mean Effective Pressure
6496	Engine Cylinder #4 Average Start of Combustion Timing

6497	Engine Cylinder #4 Average Center of Combustion Timing
6498	Engine Cylinder #4 Average Combustion Duration
6499	Engine Cylinder #5 Indicated Mean Effective Pressure
6500	Engine Cylinder #5 Average Start of Combustion Timing
6501	Engine Cylinder #5 Average Center of Combustion Timing
6502	Engine Cylinder #5 Average Combustion Duration
6503	Engine Cylinder #6 Indicated Mean Effective Pressure
6504	Engine Cylinder #6 Average Start of Combustion Timing
6505	Engine Cylinder #6 Average Center of Combustion Timing
6506	Engine Cylinder #6 Average Combustion Duration
6507	Engine Cylinder #7 Indicated Mean Effective Pressure
6508	Engine Cylinder #7 Average Start of Combustion Timing
6509	Engine Cylinder #7 Average Center of Combustion Timing
6510	Engine Cylinder #7 Average Combustion Duration
6511	Engine Cylinder #8 Indicated Mean Effective Pressure
6512	Engine Cylinder #8 Average Start of Combustion Timing
6513	Engine Cylinder #8 Average Center of Combustion Timing
6514	Engine Cylinder #8 Average Combustion Duration
6515	Engine Cylinder #9 Indicated Mean Effective Pressure
6516	Engine Cylinder #9 Average Start of Combustion Timing
6517	Engine Cylinder #9 Average Center of Combustion Timing
6518	Engine Cylinder #9 Average Combustion Duration
6519	Engine Cylinder #10 Indicated Mean Effective Pressure
6520	Engine Cylinder #10 Average Start of Combustion Timing
6521	Engine Cylinder #10 Average Center of Combustion Timing
6522	Engine Cylinder #10 Average Combustion Duration
6523	Engine Cylinder #11 Indicated Mean Effective Pressure
6524	Engine Cylinder #11 Average Start of Combustion Timing
6525	Engine Cylinder #11 Average Center of Combustion Timing
6526	Engine Cylinder #11 Average Combustion Duration
6527	Engine Cylinder #12 Indicated Mean Effective Pressure
6528	Engine Cylinder #12 Average Start of Combustion Timing
6529	Engine Cylinder #12 Average Center of Combustion Timing
6530	Engine Cylinder #12 Average Combustion Duration
6531	Engine Cylinder #13 Indicated Mean Effective Pressure
6532	Engine Cylinder #13 Average Start of Combustion Timing
6533	Engine Cylinder #13 Average Center of Combustion Timing
6534	Engine Cylinder #13 Average Combustion Duration
6535	Engine Cylinder #14 Indicated Mean Effective Pressure
6536	Engine Cylinder #14 Average Start of Combustion Timing
6537	Engine Cylinder #14 Average Center of Combustion Timing
6538	Engine Cylinder #14 Average Combustion Duration
6539	Engine Cylinder #15 Indicated Mean Effective Pressure
6540	Engine Cylinder #15 Average Start of Combustion Timing
6541	Engine Cylinder #15 Average Center of Combustion Timing
6542	Engine Cylinder #15 Average Combustion Duration
6543	Engine Cylinder #16 Indicated Mean Effective Pressure
6544	Engine Cylinder #16 Average Start of Combustion Timing
6545	Engine Cylinder #16 Average Center of Combustion Timing
6546	Engine Cylinder #16 Average Combustion Duration
6547	Engine Cylinder #17 Indicated Mean Effective Pressure

6548	Engine Cylinder #17 Average Start of Combustion Timing
6549	Engine Cylinder #17 Average Center of Combustion Timing
6550	Engine Cylinder #17 Average Combustion Duration
6551	Engine Cylinder #18 Indicated Mean Effective Pressure
6552	Engine Cylinder #18 Average Start of Combustion Timing
6553	Engine Cylinder #18 Average Center of Combustion Timing
6554	Engine Cylinder #18 Average Combustion Duration
6555	Engine Cylinder #19 Indicated Mean Effective Pressure
6556	Engine Cylinder #19 Average Start of Combustion Timing
6557	Engine Cylinder #19 Average Center of Combustion Timing
6558	Engine Cylinder #19 Average Combustion Duration
6559	Engine Cylinder #20 Indicated Mean Effective Pressure
6560	Engine Cylinder #20 Average Start of Combustion Timing
6561	Engine Cylinder #20 Average Center of Combustion Timing
6562	Engine Cylinder #20 Average Combustion Duration
6564	Engine Cylinder Pressure Monitor 1
6565	Engine Cylinder Pressure Monitor 2
6571	Engine Main Chamber Fuel Absolute Pressure
6572	Engine Main Chamber Fuel Desired Absolute Pressure
6573	Engine Prechamber Fuel Absolute Pressure
6574	Engine Prechamber Fuel Desired Absolute Pressure
6575	Engine Main Chamber Air Fuel Ratio
6576	Engine Main Chamber Desired Air Fuel Ratio
6577	Engine Prechamber Air Fuel Ratio
6578	Engine Prechamber Desired Air Fuel Ratio
6579	Engine Exhaust NOx
6580	Engine Exhaust Desired NOx
6581	Aftertreatment #1 Hydrocarbon Doser #2
6586	Aftertreatment #1 SCR Intake Pressure
6587	Aftertreatment #2 SCR Intake Pressure
6588	Operator Shutdown With High Exhaust Temperature
6589	Engine Injector Metering Rail #1 Pressure #1
6590	Engine Injector Metering Rail #1 Pressure #2
6593	Aftertreatment 1 Diesel Exhaust Fluid Dosing Requested Quantity (High Range)
6594	Aftertreatment 2 Diesel Exhaust Fluid Dosing Requested Quantity (High Range)
6595	Aftertreatment 1 Diesel Exhaust Fluid Actual Dosing Quantity (High Range)
6596	Aftertreatment 2 Diesel Exhaust Fluid Actual Dosing Quantity (High Range)
6598	Network Connection 2
6610	Fuel Vaporizer #1 Discharge Temperature
6642	Fuel #2 Tank #1 Level
6643	Fuel #2 Tank #2 Level
6646	Engine Gas Supply Pressure
6647	Gaseous Fuel High-Pressure Shutoff Valve
6649	Gaseous Fuel Injection Pulse Correction Factor
6649	Gaseous Fuel Injection Pulse Correction Factor
6651	Engine Knock Sensor #2
6656	Engine Gaseous Fuel Valve Nominal Duration Command
6657	Engine Gaseous Fuel Valve Nominal Start of Actuation Command
6658	Engine Gaseous Fuel Valve #1 Duration Command
6659	Engine Gaseous Fuel Valve #2 Duration Command
6660	Engine Gaseous Fuel Valve #3 Duration Command

6661	Engine Gaseous Fuel Valve #4 Duration Command
6662	Engine Gaseous Fuel Valve #5 Duration Command
6663	Engine Gaseous Fuel Valve #6 Duration Command
6664	Engine Gaseous Fuel Valve #7 Duration Command
6665	Engine Gaseous Fuel Valve #8 Duration Command
6666	Engine Gaseous Fuel Valve #9 Duration Command
6667	Engine Gaseous Fuel Valve #10 Duration Command
6668	Engine Gaseous Fuel Valve #11 Duration Command
6669	Engine Gaseous Fuel Valve #12 Duration Command
6670	Engine Gaseous Fuel Valve #13 Duration Command
6671	Engine Gaseous Fuel Valve #14 Duration Command
6672	Engine Gaseous Fuel Valve #15 Duration Command
6673	Engine Gaseous Fuel Valve #16 Duration Command
6674	Engine Gaseous Fuel Valve #17 Duration Command
6675	Engine Gaseous Fuel Valve #18 Duration Command
6676	Engine Gaseous Fuel Valve #19 Duration Command
6677	Engine Gaseous Fuel Valve #20 Duration Command
6709	Engine Speed High Lamp Command
6717	Transmission Driveline Engaged Circuit
6718	Load Share Active Circuit
6719	Engine Fuel Injection Pump #1 Fuel Control Valve Command
6721	Engine Fuel Injection Pump #2 Fuel Control Valve
6722	Transmission #2 Forward Solenoid Valve
6723	Transmission #2 Reverse Solenoid Valve
6724	Vibration Actuator #1
6725	Vibration Actuator #2
6730	Engine Fan 2 Requested Percent Speed
6791	Engine Dual Fuel Mode
6792	Engine Dual Fuel Mode Command
6793	Engine Unload Status
6794	Engine Load Share Status
6797	Aftertreatment #1 SCR Intake Absolute Pressure
6798	Aftertreatment #2 SCR Intake Absolute Pressure
6806	ECU Interface Mismatch
6811	Engine Turbocharger #2 Lube Oil Pressure
6812	Engine Turbocharger #3 Lube Oil Pressure
6814	Engine Gaseous Fuel Vent Pressure
6815	Engine Gaseous Fuel Filter Outlet Temperature
6816	Engine Fuel Return Pressure
6817	DEF Tank #1 Empty Time
6818	DEF Quality Malfunction Time
6819	Aftertreatment SCR Malfunction Time
6830	Engine Main Bearing #12 Temperature
6831	Air Start Pressure
6837	Gas Leakage Detection #1 Pressure
6848	Haul Mode Status
6849	Delivered Payload Weight
6850	Delivered Payload Confidence
6851	Payload Weight
6852	Payload Weight Confidence
6853	Payload Carry Back Weight

6854	Payload Capacity Percentage
6855	Payload Weight Sensor #1 Status
6856	Payload Weight Sensor #2 Status
6857	Payload Weight Sensor #3 Status
6858	Payload Weight Sensor #4 Status
6859	Payload Weight Sensor #5 Status
6860	Payload Weight Sensor #6 Status
6861	Payload Weight Sensor #7 Status
6862	Payload Weight Sensor #8 Status
6863	Payload Weight 1
6864	Payload Weight 2
6865	Payload Weight 3
6866	Payload Weight 4
6867	Payload Weight 5
6868	Payload Weight 6
6869	Payload Weight 7
6870	Payload Weight 8
6873	Payload Correction Factor Command
6875	Aftertreatment #1 DEF Dosing Pressure
6876	Aftertreatment #2 DEF Doser Pressure
6877	SCR Operator Inducement Override Enable
6880	Total Number of SCR Operator Inducement Override Events
6885	Engine Fuel Valve #2 Differential Pressure
6886	Engine Gaseous Fuel Supply Pressure Regulator
6911	Transmission Internal Component #1 Speed
6912	Transmission Internal Component #2 Speed
6930	SCR System Cleaning Inhibited Due to Permanent System Lockout
6935	Aftertreatment #1 SCR System Total Cleaning Time
6949	Number of Axles on the Vehicle
6950	Number of Tires on the Vehicle
6951	Axle #1 Monitored Tire Count
6952	Axle #2 Monitored Tire Count
6953	Axle #3 Monitored Tire Count
6954	Axle #4 Monitored Tire Count
6955	Axle #5 Monitored Tire Count
6956	Axle #6 Monitored Tire Count
6957	Axle #7 Monitored Tire Count
6958	Axle #8 Monitored Tire Count
6959	Axle #9 Monitored Tire Count
6960	Axle #10 Monitored Tire Count
6961	Axle #11 Monitored Tire Count
6962	Axle #12 Monitored Tire Count
6965	Tire Location (PGN 0xFC46) <DNT>
6966	Tire Sensor Identification Number
6971	Tire Location (PGN 0xFC45) <DNT>
6972	Tire Wireless Signal Strength Indicator
6973	Tire Location (PGN 0x8200) <DNT>
6974	Cold Inflation Pressure Setting
6975	Under Pressure Percentage Threshold Setting
6976	Extreme Under Pressure Percentage Threshold Setting
6977	Over Pressure Percentage Threshold Setting

6978	Over Temperature Setting
6979	Tire Location (PGN 0xFC43) <DNT>
6980	Cold Inflation Pressure
6981	Under Pressure Percentage Threshold
6982	Extreme Under Pressure Percentage Threshold
6983	Over Pressure Percentage Threshold
6984	Over Temperature
6987	Tire Location (PGN 0xFC42) <DNT>
6988	Tire Pressure (PGN 0xFC42) <DNT>
6989	Required Tire Pressure (PGN 0xFC42) <DNT>
7016	Engine Fuel #2 Pump Hydraulic Flow Control Valve
7017	Engine Fuel #2 Pump Hydraulic Swash Plate Angle
7018	Engine Fuel #2 Pump Hydraulic Directional Valve
7019	Engine Fuel #2 Pump Hydraulic Pressure
7020	LNG Vaporizer Coolant Outlet Temperature
7021	Engine Fuel #2 Injector Metering Rail #1 Pressure
7022	Engine Fuel #2 Injector Metering Rail #2 Pressure
7023	Engine Fuel #2 Injector Metering Rail #1 Temperature
7024	Engine Fuel #2 Injector Metering Rail #2 Temperature
7025	Engine Staged Turbocharger Solenoid Status
7028	Engine Diesel Fuel Metering Valve Temperature
7032	Aftertreatment System has Shutdown Engine
7037	Transmission Override Control Mode
7039	Transmission Requested Output Shaft Speed
7063	Engine Gaseous Fuel Supply Pressure #2
7065	Engine Gaseous Fuel Supply Shutoff Valve #1 Intake Pressure
7069	Aftertreatment #1 DEF Line Heater Relay #2
7081	Gaseous Fuel Supply Shutoff Valve #1 Position
7082	Gaseous Fuel Supply Shutoff Valve #2 Position
7083	Engine Gaseous Fuel Supply Bleed Valve #1 Position
7085	Engine Gaseous Fuel Supply Bleed Valve 3 Position
7094	Engine Cylinder Head Bypass Actuator #1 Command
7096	Engine Injector Metering Rail #1 Pressure #1
7100	Engine Injector Metering Rail #1 Desired Pressure
7102	Engine Fuel Filter Circulating Pump
7103	Engine Fuel Metering Rail Pump
7105	Aftertreatment #1 Inconsistent Configuration Detected
7107	Aftertreatment #1 DEF Pump
7109	Engine Fuel Flow #1 Output #1
7110	Engine Fuel Flow #1 Output #2
7111	Engine Fuel Flow #2 Output #1
7112	Engine Fuel Flow #2 Output #2
7113	Tire #1 Pressure
7114	Tire #2 Pressure
7115	Tire #3 Pressure
7116	Tire #4 Pressure
7117	Tire #5 Pressure
7118	Tire #6 Pressure
7119	Tire #7 Pressure
7120	Tire #8 Pressure
7121	Tire #9 Pressure

7122	Tire #10 Pressure
7123	Tire #11 Pressure
7124	Tire #12 Pressure
7125	Tire #13 Pressure
7126	Tire #14 Pressure
7127	Tire #15 Pressure
7128	Tire #16 Pressure
7129	Tire #17 Pressure
7130	Tire #18 Pressure
7131	Tire #19 Pressure
7132	Tire #20 Pressure
7133	Tire #21 Pressure
7134	Tire #22 Pressure
7135	Tire #23 Pressure
7136	Tire #24 Pressure
7137	Tire #25 Pressure
7138	Tire #26 Pressure
7139	Tire #27 Pressure
7140	Tire #28 Pressure
7141	Tire #29 Pressure
7142	Tire #30 Pressure
7143	Tire #31 Pressure
7144	Tire #32 Pressure
7145	Tire #33 Pressure
7146	Tire #34 Pressure
7147	Tire #35 Pressure
7148	Tire #36 Pressure
7149	Tire #37 Pressure
7150	Tire #38 Pressure
7151	Tire #39 Pressure
7152	Tire #40 Pressure
7153	Tire #1 Temperature
7154	Tire #2 Temperature
7155	Tire #3 Temperature
7156	Tire #4 Temperature
7157	Tire #5 Temperature
7158	Tire #6 Temperature
7159	Tire #7 Temperature
7160	Tire #8 Temperature
7161	Tire #9 Temperature
7162	Tire #10 Temperature
7163	Tire #11 Temperature
7164	Tire #12 Temperature
7165	Tire #13 Temperature
7166	Tire #14 Temperature
7167	Tire #15 Temperature
7168	Tire #16 Temperature
7169	Tire #17 Temperature
7170	Tire #18 Temperature
7171	Tire #19 Temperature
7172	Tire #20 Temperature

7173	Tire #21 Temperature
7174	Tire #22 Temperature
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7176	Tire #24 Temperature
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7178	Tire #26 Temperature
7179	Tire #27 Temperature
7180	Tire #28 Temperature
7181	Tire #29 Temperature
7182	Tire #30 Temperature
7183	Tire #31 Temperature
7184	Tire #32 Temperature
7185	Tire #33 Temperature
7186	Tire #34 Temperature
7187	Tire #35 Temperature
7188	Tire #36 Temperature
7189	Tire #37 Temperature
7190	Tire #38 Temperature
7191	Tire #39 Temperature
7192	Tire #40 Temperature
7193	Tire #1 Sensor Enable Status
7194	Tire #2 Sensor Enable Status
7195	Tire #3 Sensor Enable Status
7196	Tire #4 Sensor Enable Status
7197	Tire #5 Sensor Enable Status
7198	Tire #6 Sensor Enable Status
7199	Tire #7 Sensor Enable Status
7200	Tire #8 Sensor Enable Status
7201	Tire #9 Sensor Enable Status
7202	Tire #10 Sensor Enable Status
7203	Tire #11 Sensor Enable Status
7204	Tire #12 Sensor Enable Status
7205	Tire #13 Sensor Enable Status
7206	Tire #14 Sensor Enable Status
7207	Tire #15 Sensor Enable Status
7208	Tire #16 Sensor Enable Status
7209	Tire #17 Sensor Enable Status
7210	Tire #18 Sensor Enable Status
7211	Tire #19 Sensor Enable Status
7212	Tire #20 Sensor Enable Status
7213	Tire #21 Sensor Enable Status
7214	Tire #22 Sensor Enable Status
7215	Tire #23 Sensor Enable Status
7216	Tire #24 Sensor Enable Status
7217	Tire #25 Sensor Enable Status
7218	Tire #26 Sensor Enable Status
7219	Tire #27 Sensor Enable Status
7220	Tire #28 Sensor Enable Status
7221	Tire #29 Sensor Enable Status
7222	Tire #30 Sensor Enable Status
7223	Tire #31 Sensor Enable Status

7224	Tire #32 Sensor Enable Status
7225	Tire #33 Sensor Enable Status
7226	Tire #34 Sensor Enable Status
7227	Tire #35 Sensor Enable Status
7228	Tire #36 Sensor Enable Status
7229	Tire #37 Sensor Enable Status
7230	Tire #38 Sensor Enable Status
7231	Tire #39 Sensor Enable Status
7232	Tire #40 Sensor Enable Status
7233	Tire #1 Leak Status
7234	Tire #2 Leak Status
7235	Tire #3 Leak Status
7236	Tire #4 Leak Status
7237	Tire #5 Leak Status
7238	Tire #6 Leak Status
7239	Tire #7 Leak Status
7240	Tire #8 Leak Status
7241	Tire #9 Leak Status
7242	Tire #10 Leak Status
7243	Tire #11 Leak Status
7244	Tire #12 Leak Status
7245	Tire #13 Leak Status
7246	Tire #14 Leak Status
7247	Tire #15 Leak Status
7248	Tire #16 Leak Status
7249	Tire #17 Leak Status
7250	Tire #18 Leak Status
7251	Tire #19 Leak Status
7252	Tire #20 Leak Status
7253	Tire #21 Leak Status
7254	Tire #22 Leak Status
7255	Tire #23 Leak Status
7256	Tire #24 Leak Status
7257	Tire #25 Leak Status
7258	Tire #26 Leak Status
7259	Tire #27 Leak Status
7260	Tire #28 Leak Status
7261	Tire #29 Leak Status
7262	Tire #30 Leak Status
7263	Tire #31 Leak Status
7264	Tire #32 Leak Status
7265	Tire #33 Leak Status
7266	Tire #34 Leak Status
7267	Tire #35 Leak Status
7268	Tire #36 Leak Status
7269	Tire #37 Leak Status
7270	Tire #38 Leak Status
7271	Tire #39 Leak Status
7272	Tire #40 Leak Status
7273	Tire #1 Sensor Electrical Fault
7274	Tire #2 Sensor Electrical Fault

7275	Tire #3 Sensor Electrical Fault
7276	Tire #4 Sensor Electrical Fault
7277	Tire #5 Sensor Electrical Fault
7278	Tire #6 Sensor Electrical Fault
7279	Tire #7 Sensor Electrical Fault
7280	Tire #8 Sensor Electrical Fault
7281	Tire #9 Sensor Electrical Fault
7282	Tire #10 Sensor Electrical Fault
7283	Tire #11 Sensor Electrical Fault
7284	Tire #12 Sensor Electrical Fault
7285	Tire #13 Sensor Electrical Fault
7286	Tire #14 Sensor Electrical Fault
7287	Tire #15 Sensor Electrical Fault
7288	Tire #16 Sensor Electrical Fault
7289	Tire #17 Sensor Electrical Fault
7290	Tire #18 Sensor Electrical Fault
7291	Tire #19 Sensor Electrical Fault
7292	Tire #20 Sensor Electrical Fault
7293	Tire #21 Sensor Electrical Fault
7294	Tire #22 Sensor Electrical Fault
7295	Tire #23 Sensor Electrical Fault
7296	Tire #24 Sensor Electrical Fault
7297	Tire #25 Sensor Electrical Fault
7298	Tire #26 Sensor Electrical Fault
7299	Tire #27 Sensor Electrical Fault
7300	Tire #28 Sensor Electrical Fault
7301	Tire #29 Sensor Electrical Fault
7302	Tire #30 Sensor Electrical Fault
7303	Tire #31 Sensor Electrical Fault
7304	Tire #32 Sensor Electrical Fault
7305	Tire #33 Sensor Electrical Fault
7306	Tire #34 Sensor Electrical Fault
7307	Tire #35 Sensor Electrical Fault
7308	Tire #36 Sensor Electrical Fault
7309	Tire #37 Sensor Electrical Fault
7310	Tire #38 Sensor Electrical Fault
7311	Tire #39 Sensor Electrical Fault
7312	Tire #40 Sensor Electrical Fault
7320	Engine Multiple Cylinder Knock Level
7332	Aftertreatment Thermal Management Status
7343	SCR Operator Inducement Override Renewal Required
7383	Engine Throttle Valve #1 Motor Current Disable
7416	Aftertreatment #1 DEF Pump Power Relay
7417	Aftertreatment #1 DEF Control Module Circuit Breaker
7421	Engine Charge Air Cooler Bypass Valve #1 Command
7422	Engine Charge Air Cooler Bypass Valve #2 Command
7423	Engine Coolant System Thermostat #2
7440	Aftertreatment Active Regeneration Inhibited Due to Low Exhaust Pressure
7441	Aftertreatment Ambient Air Temperature
7455	Engine Total Gaseous Fuel Volume Used
7457	Aftertreatment #1 DEF Dosing Unit #2

7458	Aftertreatment #1 DEF Dosing Unit #2 Input Lines
7459	Aftertreatment #1 DEF Doser #2 Absolute Pressure
7460	Aftertreatment #1 DEF Doser #2 Temperature
7462	Aftertreatment #2 DEF Dosing Unit #2
7463	Aftertreatment #2 DEF Dosing Unit #2 Input Lines
7464	Aftertreatment #2 DEF Doser #2 Pressure (absolute)
7465	Aftertreatment #2 DEF Dosing #2 Temperature
7468	Engine Oil Pressure
7471	Engine Oil Filter Differential Pressure
7472	Fuel Supply Pump Inlet Pressure (absolute)
7488	Aftertreatment #1 DEF Dosing Valve #3
7489	Aftertreatment #2 DEF Dosing Unit #3
7498	SLI Battery #2 Net Current
7499	ECU #2 Interface Mismatch
7501	Engine Charge Air Cooler #2 Bypass
7502	Aftertreatment Engine Speed Increase request
7503	Aftertreatment Engine Load Request
7504	Aftertreatment #1 SCR System Sulfation Level
7522	Aftertreatment #1 DEF Control Module #2 Power Supply #1
7523	Aftertreatment #1 DEF Control Module #2 Power Supply #2
7524	Aftertreatment #1 SCR System #2 State
7525	Aftertreatment #2 SCR System #2 State
7526	Aftertreatment #2 DEF Line Heater Relay #2
7528	Aftertreatment #1 DEF Controller #2 Temperature
7529	Aftertreatment #2 DEF Controller Temperature
7530	Aftertreatment #1 DEF Tank Volume #2
7531	Aftertreatment #2 DEF Tank Volume #2
7533	Aftertreatment #2 DEF Control Module #2 Power Supply #1
7534	Aftertreatment #2 DEF Control Module #2 Power Supply #2
7535	Aftertreatment #2 DEF Controller #2 Temperature
7536	Aftertreatment #1 DEF Dosing Unit #2 Diverter Valve
7537	Aftertreatment #2 DEF Dosing Unit #2 Diverter Valve
7538	Aftertreatment #1 DEF Controller #2
7539	Aftertreatment #2 DEF Controller #2
7540	Aftertreatment #1 DEF Line Heater Relay #3
7541	Aftertreatment #1 DEF Dosing Unit #2 Loss of Prime
7542	Aftertreatment #2 DEF Dosing Unit #2 Loss of Prime
7543	Aftertreatment #1 DEF Dosing Unit #2 Heater Temperature
7544	Aftertreatment #2 DEF Dosing Unit #1 Heater Temperature
7545	Aftertreatment #2 DEF Dosing Unit #2 Heater Temperature
7546	Aftertreatment #1 DEF Dosing Valve #4
7547	Aftertreatment #2 DEF Dosing Valve #4
7549	Hybrid System Propulsion Coolant Level Switch
7550	Hybrid System Power Electronics Coolant Level Switch
7555	Hybrid System Shutdown Switch
7561	Aftertreatment #1 DEF Line Heater #5
7562	Aftertreatment #1 DEF Line Heater #6
7563	Aftertreatment #1 DEF Line Heater #7
7564	Aftertreatment #1 DEF Line Heater #8
7565	Aftertreatment #1 DEF Line Heater #9
7567	Aftertreatment #2 DEF Line Heater #6

7568	Aftertreatment #2 DEF Line Heater #7
7569	Aftertreatment #2 DEF Line Heater #8
7570	Aftertreatment #2 DEF Line Heater #9
7572	Aftertreatment #1 DEF Tank Temperature #2
7573	Aftertreatment #1 DEF Tank Heater #2
7574	Aftertreatment #2 DEF Tank Temperature #2
7575	Aftertreatment #2 DEF Tank Heater #2
7581	Engine Gaseous Fuel Pressure Regulator Intake Pressure
7585	Tire Location (PGN 0x7F00)
7586	Tire Sensor Identification Number
7587	Tire Sensor Enable Setting
7588	Aftertreatment DEF Heater Circuit Breaker
7595	Engine Throttle Valve #2 Differential Pressure
7597	Engine Total Diesel Fuel Demand
7598	Aftertreatment #1 DEF Backflow Valve #1
7599	Aftertreatment #1 DEF Backflow Valve #2
7600	Aftertreatment #2 DEF Backflow Valve #1
7601	Aftertreatment #2 DEF Backflow Valve #2
7602	Aftertreatment #1 DEF Controller #1 Identification
7603	Aftertreatment #1 DEF Controller #2 Identification
7604	Aftertreatment #2 DEF Controller #1 Identification
7605	Aftertreatment #2 DEF Controller #2 Identification
7606	Aftertreatment DEF Tank Volume
7607	Aftertreatment DEF Tank Temperature
7609	Engine Cylinder #1 Low Frequency Knock Level
7610	Engine Cylinder #2 Low Frequency Knock Level
7611	Engine Cylinder #3 Low Frequency Knock Level
7612	Engine Cylinder #4 Low Frequency Knock Level
7613	Engine Cylinder #5 Low Frequency Knock Level
7614	Engine Cylinder #6 Low Frequency Knock Level
7615	Engine Cylinder #7 Low Frequency Knock Level
7616	Engine Cylinder #8 Low Frequency Knock Level
7617	Engine Cylinder #9 Low Frequency Knock Level
7618	Engine Cylinder #10 Low Frequency Knock Level
7619	Engine Cylinder #11 Low Frequency Knock Level
7620	Engine Cylinder #12 Low Frequency Knock Level
7621	Engine Cylinder #13 Low Frequency Knock Level
7622	Engine Cylinder #14 Low Frequency Knock Level
7623	Engine Cylinder #15 Low Frequency Knock Level
7624	Engine Cylinder #16 Low Frequency Knock Level
7625	Engine Cylinder #17 Low Frequency Knock Level
7626	Engine Cylinder #18 Low Frequency Knock Level
7627	Engine Cylinder #19 Low Frequency Knock Level
7628	Engine Cylinder #20 Low Frequency Knock Level
7629	Engine Cylinder #1 Maximum Pressure Increase Rate
7630	Engine Cylinder #2 Maximum Pressure Increase Rate
7631	Engine Cylinder #3 Maximum Pressure Increase Rate
7632	Engine Cylinder #4 Maximum Pressure Increase Rate
7633	Engine Cylinder #5 Maximum Pressure Increase Rate
7634	Engine Cylinder #6 Maximum Pressure Increase Rate
7635	Engine Cylinder #7 Maximum Pressure Increase Rate

7636	Engine Cylinder #8 Maximum Pressure Increase Rate
7637	Engine Cylinder #9 Maximum Pressure Increase Rate
7638	Engine Cylinder #10 Maximum Pressure Increase Rate
7639	Engine Cylinder #11 Maximum Pressure Increase Rate
7640	Engine Cylinder #12 Maximum Pressure Increase Rate
7641	Engine Cylinder #13 Maximum Pressure Increase Rate
7642	Engine Cylinder #14 Maximum Pressure Increase Rate
7643	Engine Cylinder #15 Maximum Pressure Increase Rate
7644	Engine Cylinder #16 Maximum Pressure Increase Rate
7645	Engine Cylinder #17 Maximum Pressure Increase Rate
7646	Engine Cylinder #18 Maximum Pressure Increase Rate
7647	Engine Cylinder #19 Maximum Pressure Increase Rate
7648	Engine Cylinder #20 Maximum Pressure Increase Rate
7649	Engine Exhaust #1 NOx #2
7650	Aftertreatment #1 Intake Percent Oxygen #2
7651	Aftertreatment #1 Intake Gas Sensor #2 Power In Range
7652	Aftertreatment #1 Intake Gas Sensor #2 at Temperature
7660	Aftertreatment #1 Outlet NOx #2
7661	Aftertreatment #1 Outlet Percent Oxygen #2
7662	Aftertreatment #1 Outlet Gas Sensor #2 Power In Range
7663	Aftertreatment #1 Outlet Gas Sensor #2 at Temperature
7697	Aftertreatment #1 DEF Controller Sensor Supply Voltage
7708	Engine Turbocharger Compressor Bypass Actuator #1 Motor Current Disable
7709	Engine Turbocharger Compressor Bypass Actuator #2 Motor Current Disable
7720	Engine Common Rail Oil Pressure
7721	Engine Common Rail Oil Absolute Pressure
7745	Engine Start Request
7753	Engine Starter Command
7760	Requested Engine Speed Acceleration Rate Limit
7762	Engine Valve Control Module #1
7763	Engine Valve Control Module #2
7778	Transmission Reference Torque
7782	Engine Protection Due To Turbocharger Overspeed
7785	Engine Fluid Bund Level
7820	GPS Antenna
7821	Satellite Communication Antenna
7822	Cellular Communication Antenna
7823	Incorrect Antenna for Cellular Radio
7824	Incorrect Antenna for Satellite Radio
7831	Generator Trip kW Hours Export
7832	Generator Trip kVAr Hours Export
7838	Engine Load Threshold Exceeded Output
7839	Engine Load Share Master Output
7840	Engine Speed Governor Mode
7841	Bus Tie Breaker #1
7842	Bus Tie Breaker #2
7843	Engine Load Group
7844	Engine Clutch Engage Request Status
7845	Engine Marine Operating Mode Status
7846	Engine Speed #4
7847	Ready for Clutch Engagement Status

7850	Engine Intake #2 Air Temperature
7851	Aftertreatment System Enable Status
7852	Engine Exhaust Flow Rate
7853	Air Conditioner Compressor Status
7888	Operator Vehicle Mode Request
7895	Stored Energy Source Level
7900	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #1 Net Current
7901	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #1 Temperature
7902	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #1 Voltage
7903	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #1 State of Charge
7904	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #1 Capacity
7905	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #1 Health
7906	Starting/Lighting/Ignition Battery Pack #1 Battery #1 Minimum Crank Voltage
7908	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #2 Net Current
7909	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #2 Temperature
7910	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #2 Voltage
7911	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #2 State of Charge
7912	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #2 Capacity
7913	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #2 Health
7914	Starting/Lighting/Ignition Battery Pack #1 Battery #2 Minimum Crank Voltage
7916	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #3 Net Current
7917	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #3 Temperature
7918	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #3 Voltage
7919	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #3 State of Charge
7920	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #3 Capacity
7921	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #3 Health
7922	Starting/Lighting/Ignition Battery Pack #1 Battery #3 Minimum Crank Voltage
7924	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #4 Net Current
7925	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #4 Temperature
7926	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #4 Voltage
7927	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #4 State of Charge
7928	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #4 Capacity
7929	Starting/Lighting/Ignition (SLI) Battery Pack #1 Battery #4 Health
7930	Starting/Lighting/Ignition Battery Pack #1 Battery #4 Minimum Crank Voltage
7934	Aftertreatment #1 System Hydrocarbon
7935	Aftertreatment #2 System Hydrocarbon
7936	Navigation Control Module
7938	DEF Frozen Time
7967	Power Electronics Coolant Pump Enable Command
7968	Power Electronics Coolant Pump Power Hold
7969	Power Electronics Coolant Pump Speed Command
7970	Power Electronics Coolant Pump Percent Speed Command
7971	Power Electronics Coolant Pump Enable Status
7972	Power Electronics Coolant Pump Controller Status Reason Code
7973	Power Electronics Coolant Pump Controller Command Status
7974	Power Electronics Coolant Pump Motor Speed
7975	Power Electronics Coolant Pump Control Temperature
7976	Power Electronics Coolant Pump Power
7977	Power Electronics Coolant Pump Service Indicator
7978	Power Electronics Coolant Pump Operating Status
7979	Propulsion Motor Coolant Pump Enable Command

7981	Propulsion Motor Coolant Pump Speed Command
7985	Propulsion Motor Coolant Pump Controller Command Status
7986	Propulsion Motor Coolant Pump Motor Speed
7987	Propulsion Motor Coolant Pump Control Temperature
7990	Propulsion Motor Coolant Pump Operating Status
8003	Power Electronics Coolant Fan #1 Enable Command
8004	Power Electronics Coolant Fan #1 Power Hold
8005	Power Electronics Coolant Fan #1 Speed Command
8006	Power Electronics Coolant Fan #1 Percent Speed Command
8007	Power Electronics Coolant Fan #1 Enable Status
8008	Power Electronics Coolant Fan #1 Controller Status Reason Code
8009	Power Electronics Coolant Fan #1 Controller Command Status
8010	Power Electronics Coolant Fan #1 Motor Speed
8011	Power Electronics Coolant Fan #1 Control Temperature
8012	Power Electronics Coolant Fan #1 Power
8013	Power Electronics Coolant Fan #1 Service Indicator
8014	Power Electronics Coolant Fan #1 Operating Status
8015	Power Electronics Coolant Fan #2 Enable Command
8016	Power Electronics Coolant Fan #2 Power Hold
8017	Power Electronics Coolant Fan #2 Speed Command
8018	Power Electronics Coolant Fan #2 Percent Speed Command
8019	Power Electronics Coolant Fan #2 Enable Status
8020	Power Electronics Coolant Fan #2 Controller Status Reason Code
8021	Power Electronics Coolant Fan #2 Controller Command Status
8022	Power Electronics Coolant Fan #2 Motor Speed
8023	Power Electronics Coolant Fan #2 Control Temperature
8024	Power Electronics Coolant Fan #2 Power
8025	Power Electronics Coolant Fan #2 Service Indicator
8026	Power Electronics Coolant Fan #2 Operating Status
8027	Power Electronics Coolant Fan #3 Enable Command
8028	Power Electronics Coolant Fan #3 Power Hold
8029	Power Electronics Coolant Fan #3 Speed Command
8030	Power Electronics Coolant Fan #3 Percent Speed Command
8031	Power Electronics Coolant Fan #3 Enable Status
8032	Power Electronics Coolant Fan #3 Controller Status Reason Code
8033	Power Electronics Coolant Fan #3 Controller Command Status
8034	Power Electronics Coolant Fan #3 Motor Speed
8035	Power Electronics Coolant Fan #3 Control Temperature
8036	Power Electronics Coolant Fan #3 Power
8037	Power Electronics Coolant Fan #3 Service Indicator
8038	Power Electronics Coolant Fan #3 Operating Status
8039	Propulsion Motor Coolant Fan #1 Enable Command
8070	Propulsion Motor Coolant Fan #3 Motor Speed
8075	HVESS Highest Cell Temperature
8076	HVESS Lowest Cell Temperature
8077	HVESS Average Cell Temperature
8078	HVESS Cell Temperature Differential Status
8079	HVESS Discharge Capacity
8080	HVESS Charge Capacity
8081	HVESS Cell Balancing Count
8082	HVESS Discharge Current Limit

8083	HVESS Charge Current Limit
8084	HVESS Minimum Cell State of Charge
8085	HVESS Maximum Cell State of Charge
8086	HVESS Bus Voltage
8087	HVESS Ignition Voltage
8088	HVESS Intake Coolant Temperature
8089	HVESS Outlet Coolant Temperature
8090	HVESS Maximum Charge Voltage Limit
8091	HVESS High-Voltage Bus (Positive) Contactor State
8092	HVESS High-Voltage Bus (Negative) Contactor State
8093	HVESS High-Voltage Bus Disconnect Forewarning
8094	HVESS High-Voltage Bus Pre-Charge Relay State
8095	HVESS Center of Pack Contactor State
8096	HVESS High-Voltage Bus Active Isolation Test Status
8097	HVESS High-Voltage Bus Passive Isolation Test Status
8098	HVESS High Voltage Interlock Loop (HVIL) Status
8099	HVESS Inertia Switch Status
8100	HVESS State of Charge Status
8101	HVESS Cell Balance Status
8102	HVESS Cell Balancing Active
8103	HVESS Discharge Power Limit Due to State of Charge
8104	HVESS Discharge Power Limit Due to Battery Temperature
8105	HVESS Discharge Power Limit Due to Battery Diagnostic Condition
8106	HVESS Discharge Power Limit Due to Battery or Cell Voltage
8107	HVESS Discharge Power Limit Due to Battery Current
8108	HVESS Discharge Power Limit Due to an Undefined Cause
8109	HVESS Charge Power Limit Due to State of Charge
8110	HVESS Charge Power Limit Due to Battery Temperature
8111	HVESS Charge Power Limit Due to Battery Diagnostic Condition
8112	HVESS Charge Power Limit Due to Battery or Cell Voltage
8113	HVESS Charge Power Limit Due to Battery Current
8114	HVESS Charge Power Limit Due to an Undefined Cause
8115	HVESS Nominal Voltage
8116	HVESS Recommended Minimum Operating Voltage
8117	HVESS Recommended Maximum Operating Voltage
8118	HVESS Recommended Minimum State Of Charge
8119	HVESS Recommended Maximum State Of Charge
8120	HVESS Recommended Maximum Operating Temperature
8121	HVESS State of Health
8122	HVESS Contactor Open Under Load Count
8123	HVESS High-Voltage Bus Connect Command
8124	HVESS Power-Down Command
8125	HVESS High-Voltage Bus Active Isolation Test Command
8126	HVESS High-Voltage Bus Passive Isolation Test Command
8127	HVESS Cell Balancing Command
8146	Engine Exhaust #1 Gas Sensor #2 Power Supply
8147	Aftertreatment #1 Outlet #2 Gas Sensor Power Supply
8148	Aftertreatment System Enable Command
8149	Aftertreatment DEF Doser Ready Status
8150	Engine Exhaust Gas Restriction Valve Control
8151	Engine Exhaust Gas Restriction Valve Position

8152	Aftertreatment #1 DEF Doser #2 Pressure
8153	Aftertreatment #2 DEF Doser #2 Pressure
8154	Well Stimulation Pump Suction Pressure
8155	Well Stimulation Pump Discharge Pressure
8156	Well Stimulation Pump Gear Box Oil Pressure
8157	Well Stimulation Pump Gear Box Oil Temperature
8158	Well Stimulation Pump Speed
8159	Engine Oil Pressure Switch
8160	Aftertreatment 1 Diesel Oxidation Catalyst Intake Pressure
8204	HVESS Electronics Temperature
8205	HVESS Discharge Energy Capacity
8206	HVESS Charge Energy Capacity
8207	HVESS Internal Charger Status
8208	HVESS Recommended Minimum Operating Temperature
8209	HVESS Cell Maximum Voltage Limit
8210	HVESS Cell Minimum Voltage Limit
8211	HVESS Total Energy Throughput
8212	HVESS Total Accumulated Charge
8213	HVESS Enable Internal Charger Command
8214	HVESS Module #1 Operational Status
8215	HVESS Module #2 Operational Status
8216	HVESS Module #3 Operational Status
8217	HVESS Module #4 Operational Status
8218	HVESS Module #5 Operational Status
8219	HVESS Module #6 Operational Status
8220	HVESS Module #7 Operational Status
8221	HVESS Module #8 Operational Status
8222	HVESS Module #9 Operational Status
8223	HVESS Module #10 Operational Status
8224	HVESS Module #11 Operational Status
8225	HVESS Module #12 Operational Status
8226	HVESS Module #13 Operational Status
8227	HVESS Module #14 Operational Status
8228	HVESS Module #15 Operational Status
8229	HVESS Module #16 Operational Status
8230	HVESS Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
8231	HVESS Thermal Management System High-Voltage Input Power
8232	HVESS Thermal Management System Compressor Speed
8233	HVESS Thermal Management System Relative Humidity
8234	HVESS Thermal Management System Heater Status
8235	HVESS Thermal Management System Mode
8236	HVESS Highest Cell Voltage Module Number
8237	HVESS Highest Cell Voltage Cell Number
8238	HVESS Lowest Cell Voltage Module Number
8239	HVESS Lowest Cell Voltage Cell Number
8240	HVESS Average Cell Voltage
8241	HVESS Highest Cell Temperature Module Number
8242	HVESS Highest Cell Temperature Cell Number
8243	HVESS Lowest Cell Temperature Module Number
8244	HVESS Lowest Cell Temperature Cell Number
8245	HVESS Highest Cell State of Charge Module Number

8246	HVESS Highest Cell State of Charge Cell Number
8247	HVESS Lowest Cell State of Charge Module Number
8248	HVESS Lowest Cell State of Charge Cell Number
8249	Hydraulic Pump #1 Case Drain Flow Rate
8250	Hydraulic Pump #2 Case Drain Flow Rate
8251	Hydraulic Pump #3 Case Drain Flow Rate
8252	Hydraulic Pump #4 Case Drain Flow Rate
8253	Hydraulic Pump #5 Case Drain Flow Rate
8254	Hydraulic Pump #6 Case Drain Flow Rate
8255	Hydraulic Pump #1 Case Drain Oil Temperature
8256	Hydraulic Pump #2 Case Drain Oil Temperature
8257	Hydraulic Pump #3 Case Drain Oil Temperature
8258	Hydraulic Pump #4 Case Drain Oil Temperature
8259	Hydraulic Pump #5 Case Drain Oil Temperature
8260	Hydraulic Pump #6 Case Drain Oil Temperature
8261	Hydraulic Pump #1 Efficiency
8262	Hydraulic Pump #2 Efficiency
8263	Hydraulic Pump #3 Efficiency
8264	Hydraulic Pump #4 Efficiency
8265	Hydraulic Pump #5 Efficiency
8266	Hydraulic Pump #6 Efficiency
8269	Ethernet Link Status
8311	Engine Fuel Rack #2 Actuator
8313	Dump Body Raise Angle
8316	Ethernet Network #1
8317	Ethernet Network #2
8324	Gaseous Fuel High Pressure Shutoff Valve #2
8325	Engine Exhaust Gas Restriction Valve Temperature
8327	Aftertreatment #1 SCR Intake High Temperature Time
8334	DC/AC Accessory Inverter #1 Device #1 Status
8335	DC/AC Accessory Inverter #1 Device #2 Status
8348	DC/AC Accessory Inverter #2 Device #1 Status
8349	DC/AC Accessory Inverter #2 Device #2 Status
8384	HVESS Fan Enable Command
8385	HVESS Fan Power Hold
8386	HVESS Fan Speed Command
8387	HVESS Fan Percent Speed Command
8388	HVESS Fan Instance #1
8389	HVESS Fan Instance #2
8390	HVESS Fan Instance #3
8391	HVESS Fan Instance #4
8392	HVESS Fan Instance #5
8393	HVESS Fan Instance #6
8394	HVESS Fan Instance #7
8395	HVESS Fan Instance #8
8396	HVESS Fan Instance #9
8397	HVESS Fan Instance #10
8398	HVESS Fan Instance #11
8399	HVESS Fan Instance #12
8400	HVESS Fan Instance #13
8401	HVESS Fan Instance #14

8402	HVESS Fan Instance #15
8403	HVESS Fan Enable Status
8404	HVESS Fan Status Reason Code
8405	HVESS Fan Command Status
8406	HVESS Fan Speed
8407	HVESS Fan Medium Temperature
8408	HVESS Fan Power
8409	HVESS Fan Service Indicator
8410	HVESS Fan Operating Status
8412	HVESS Operation Consent
8413	HVESS High-Voltage Bus Connection Status
8414	HVESS Operational Status
8431	HVESS High-Voltage Bus Active Isolation Test Results
8432	HVESS High-Voltage Bus Passive Isolation Test Results
8433	HVESS High-Voltage Bus High Side Resistor Connect Request
8434	HVESS High-Voltage Bus Low Side Resistor Connect Request
8443	Alternator Winding #7 Temperature
8444	Alternator Winding #8 Temperature
8445	Alternator Winding #9 Temperature
8446	Alternator Winding #10 Temperature
8447	Alternator Winding #11 Temperature
8448	Alternator Winding #12 Temperature
8449	Alternator Air Cooler Air Intake Temperature
8450	Alternator Air Cooler Air Outlet Temperature
8451	Power Rectifier Diode #1 Temperature
8452	Power Rectifier Diode #2 Temperature
8453	Power Rectifier Diode #3 Temperature
8454	Power Rectifier Diode #4 Temperature
8455	Power Rectifier Diode #5 Temperature
8456	Power Rectifier Diode #6 Temperature
8457	Power Rectifier Diode #7 Temperature
8458	Power Rectifier Diode #8 Temperature
8459	Power Rectifier Diode #9 Temperature
8460	Power Rectifier Diode #10 Temperature
8461	Power Rectifier Diode #11 Temperature
8462	Power Rectifier Diode #12 Temperature
8463	Alternator Winding #4 Temperature
8464	Alternator Winding #5 Temperature
8465	Alternator Winding #6 Temperature
8466	Alternator Oil Cooler Oil Intake Temperature
8467	Alternator Oil Cooler Oil Outlet Temperature
8468	Alternator Oil Cooler Coolant Intake Temperature
8469	Alternator Oil Cooler Coolant Outlet Temperature
8470	Alternator Aftercooler Coolant Pump Outlet Temperature
8471	Alternator Aftercooler Coolant Outlet Temperature
8472	Alternator Aftercooler Coolant Pump Outlet Pressure
8473	Engine Coolant Pump Coolant Outlet Pressure
8475	Power Electronics Coolant Fill Switch
8494	Engine Fuel Valve #1 Differential Pressure
8570	DC/DC 1 HVIL Status
8608	Engine Operating Mode Command

8610	Transmission Hardware Indeterminate
8611	Water In Charge Air Duct After Charge Air Cooler Indicator
8612	Engine Overloaded Indicator
8621	Non-Volatile Memory
8631	Engine Turbocharger #1 Efficiency
8635	Alternator Bearing Header Intake Pressure
8636	Alternator Oil Cooler Discharge Pump Pressure
8637	Engine Oil Cooler Discharge Pump Pressure
8638	Engine Oil Cooler Intake Temperature
8640	Well Stimulation Pump Vibration #1
8641	Well Stimulation Pump Vibration #2
8642	Well Stimulation Pump Vibration #3
8643	Well Stimulation Pump Vibration #4
8644	Well Stimulation Pump Vibration #5
8645	Well Stimulation Pump Vibration #6
8646	Well Stimulation Pump Vibration #7
8647	Well Stimulation Pump Vibration #8
8648	Well Stimulation Pump Rod Load
8649	Well Stimulation Pump Cavitation Status
8650	Well Stimulation Pump Flow Rate
8651	Well Stimulation Pump Fluid End Valve Leak
8652	Well Stimulation Pump Plunger Diameter
8653	Well Stimulation Pump Stroke Length
8654	Well Stimulation Pump Gear Ratio
8655	Well Stimulation Pump Rated Speed
8656	Well Stimulation Pump Fluid End Working Hours
8657	Well Stimulation Pump Power End Working Hours
8658	Well Stimulation Pump Working Hours
8659	Well Stimulation Pump Cycle Count
8660	Well Stimulation Pump Oil Viscosity
8661	Well Stimulation Pump Oil Density
8662	Well Stimulation Pump Oil Relative Dielectricity
8663	Well Stimulation Pump Oil Temperature
8664	Engine Operating Mode Selection
8850	Engine Turbocharger #2 Oil Temperature
8886	EGR #2 Cooler Bypass Actuator
8887	Exhaust Particulate Control System Diagnostic Time
8888	Exhaust Particulate Control System Diagnostic Count
8896	DC/DC 2 HVIL Status
9057	Motor/Generator #1 Speed
9059	Motor/Generator #1 Temperature #1
9069	Motor/Generator #1 Inverter Phase U Current
9070	Motor/Generator #1 Inverter Phase V Current
9071	Motor/Generator #1 Inverter Phase W Current
9072	Motor/Generator #2 Inverter Phase U Current
9073	Motor/Generator #2 Inverter Phase V Current
9074	Motor/Generator #2 Inverter Phase W Current
9075	Motor/Generator #1 Inverter Phase U Voltage
9076	Motor/Generator #1 Inverter Phase V Voltage
9077	Motor/Generator #1 Inverter Phase W Voltage
9078	Motor/Generator #2 Inverter Phase U Voltage

9079	Motor/Generator #2 Inverter Phase V Voltage
9080	Motor/Generator #2 Inverter Phase W Voltage
9081	Motor/Generator #1 Inverter Phase U Power Module Switch
9082	Motor/Generator #1 Inverter Phase V Power Module Switch
9083	Motor/Generator #1 Inverter Phase W Power Module Switch
9084	Motor/Generator #2 Inverter Phase U Power Module Switch
9085	Motor/Generator #2 Inverter Phase V Power Module Switch
9086	Motor/Generator #2 Inverter Phase W Power Module Switch
9087	Motor/Generator #1 Inverter Phase U Power Module Switch Temperature
9088	Motor/Generator #1 Inverter Phase V Power Module Switch Temperature
9089	Motor/Generator #1 Inverter Phase W Power Module Switch Temperature
9090	Motor/Generator #2 Inverter Phase U Power Module Switch Temperature
9091	Motor/Generator #2 Inverter Phase V Power Module Switch Temperature
9092	Motor/Generator #2 Inverter Phase W Power Module Switch Temperature
9093	Motor/Generator #1 Inverter Phase U Power Module Switch Power Supply Voltage
9094	Motor/Generator #1 Inverter Phase V Power Module Switch Power Supply Voltage
9095	Motor/Generator #1 Inverter Phase W Power Module Switch Power Supply Voltage
9096	Motor/Generator #2 Inverter Phase U Power Module Switch Power Supply Voltage
9097	Motor/Generator #2 Inverter Phase V Power Module Switch Power Supply Voltage
9098	Motor/Generator #2 Inverter Phase W Power Module Switch Power Supply Voltage
9099	Motor/Generator #1 Inverter AC Current Output
9101	Motor/Generator #1 Inverter DC Side Voltage
9107	Motor/Generator #1 Inverter Power Module Switch Temperature
9108	Motor/Generator #2 Inverter Power Module Switch Temperature
9109	Motor/Generator #1 Inverter Power Module Switch
9110	Motor/Generator #2 Inverter Power Module Switch
9119	HVESS Temperature
9120	HVESS Pre-Charge Failed to Complete
9121	HVESS Voltage Sensors
9176	Aftertreatment DEF Dosing Mode Status
9179	SCR Operator Inducement Emergency Override Total Activation Time
9187	Well Stimulation Pump Fluid End Trip Hours
9188	Well Stimulation Pump Power End Trip Hours
9189	Well Stimulation Pump Power End Serial Number
9190	Well Stimulation Pump Fluid End Serial Number
9204	DC/AC Accessory Inverter #1 Controller Temperature
9205	DC/AC Accessory Inverter #1 Inverter Electronic Filter Temperature
9206	DC/AC Accessory Inverter #1 Power Electronics Temperature
9207	DC/AC Accessory Inverter #1 Coolant In Temperature
9208	DC/AC Accessory Inverter #1 Coolant Out Temperature
9211	DC/AC Accessory Inverter #1 Power Limited Due to DC Side Current
9212	DC/AC Accessory Inverter #1 Power Limited Due to AC Side RMS Current
9213	DC/AC Accessory Inverter #1 Power Limited Due to DC Side Voltage Minimum
9216	DC/AC Accessory Inverter #1 Power Limited Due to Controller Temperature
9217	DC/AC Accessory Inverter #1 Power Limited Due to Electronic Filter Temperature
9218	DC/AC Accessory Inverter #1 Power Limited Due to Power Electronics Temperature
9219	DC/AC Accessory Inverter #1 Power Limited Due to Rate of Change Limit
9220	DC/AC Accessory Inverter #1 Power Limited Due to Undefined Reason
9231	DC/AC Accessory Inverter #2 Controller Temperature
9232	DC/AC Accessory Inverter #2 Inverter Electronic Filter Temperature
9233	DC/AC Accessory Inverter #2 Power Electronics Temperature

9234	DC/AC Accessory Inverter #2 Coolant In Temperature
9235	DC/AC Accessory Inverter #2 Coolant Out Temperature
9241	DC/AC Accessory Inverter #2 Power Limited Due to DC Side Current
9242	DC/AC Accessory Inverter #2 Power Limited Due to AC Side RMS Current
9243	DC/AC Accessory Inverter #2 Power Limited Due to DC Side Voltage Minimum
9246	DC/AC Accessory Inverter #2 Power Limited Due to Controller Temperature
9247	DC/AC Accessory Inverter #2 Power Limited Due to Electronic Filter Temperature
9248	DC/AC Accessory Inverter #2 Power Limited Due to Power Electronics Temperature
9250	DC/AC Accessory Inverter #2 Power Limited Due to Undefined Reason
9261	DC/AC Accessory Inverter #3 Controller Temperature
9262	DC/AC Accessory Inverter #3 Inverter Electronic Filter Temperature
9263	DC/AC Accessory Inverter #3 Power Electronics Temperature
9264	DC/AC Accessory Inverter #3 Coolant In Temperature
9265	DC/AC Accessory Inverter #3 Coolant Out Temperature
9271	DC/AC Accessory Inverter #3 Power Limited Due to DC Side Current
9272	DC/AC Accessory Inverter #3 Power Limited Due to AC Side RMS Current
9273	DC/AC Accessory Inverter #3 Power Limited Due to DC Side Voltage Minimum
9276	DC/AC Accessory Inverter #3 Power Limited Due to Controller Temperature
9277	DC/AC Accessory Inverter #3 Power Limited Due to Electronic Filter Temperature
9278	DC/AC Accessory Inverter #3 Power Limited Due to Power Electronics Temperature
9279	DC/AC Accessory Inverter #3 Power Limited Due to Rate of Change Limit
9280	DC/AC Accessory Inverter #3 Power Limited Due to Undefined Reason
9291	DC/AC Accessory Inverter #4 Controller Temperature
9292	DC/AC Accessory Inverter #4 Inverter Electronic Filter Temperature
9293	DC/AC Accessory Inverter #4 Power Electronics Temperature
9294	DC/AC Accessory Inverter #4 Coolant In Temperature
9295	DC/AC Accessory Inverter #4 Coolant Out Temperature
9301	DC/AC Accessory Inverter #4 Power Limited Due to DC Side Current
9302	DC/AC Accessory Inverter #4 Power Limited Due to AC Side RMS Current
9303	DC/AC Accessory Inverter #4 Power Limited Due to DC Side Voltage Minimum
9306	DC/AC Accessory Inverter #4 Power Limited Due to Controller Temperature
9307	DC/AC Accessory Inverter #4 Power Limited Due to Electronic Filter Temperature
9308	DC/AC Accessory Inverter #4 Power Limited Due to Power Electronics Temperature
9309	DC/AC Accessory Inverter #4 Power Limited Due to Rate of Change Limit
9310	DC/AC Accessory Inverter #4 Power Limited Due to Undefined Reason
9337	DC/AC Accessory Inverter #5 Controller Temperature
9338	DC/AC Accessory Inverter #5 Inverter Electronic Filter Temperature
9339	DC/AC Accessory Inverter #5 Power Electronics Temperature
9340	DC/AC Accessory Inverter #5 Coolant In Temperature
9341	DC/AC Accessory Inverter #5 Coolant Out Temperature
9352	DC/AC Accessory Inverter #5 Power Limited Due to Controller Temperature
9353	DC/AC Accessory Inverter #5 Power Limited Due to Electronic Filter Temperature
9354	DC/AC Accessory Inverter #5 Power Limited Due to Power Electronics Temperature
9372	Engine Idle Management Pending Event Lamp Command
9373	Automatic Start Request Inhibit Indicator
9376	Engine Crankshaft Damper
9378	Engine Speed Low Indicator Output
9379	EGR #1 Cooler Intake Pressure
9401	Motor/Generator #1 Inverter Internal Power Supply #1 Voltage
9436	Motor/Generator #1 Inverter Control Module
9438	Joystick System

9439	Joystick #1 Module
9440	Joystick #2 Module
9441	Joystick #3 Module
9442	Joystick #4 Module
9443	Joystick #5 Module
9444	Joystick #6 Module
9445	Keypad System
9446	Keypad #2
9447	Keypad #3
9448	Keypad #4
9449	Keypad #5
9450	Keypad #6
9451	Steering Helm System
9452	Steering Helm #1 Module
9453	Steering Helm #2 Module
9454	Steering Helm #3 Module
9455	Steering Helm #1 Module Port Communication
9456	Steering Helm #2 Module Port Communication
9457	Steering Helm #3 Module Port Communication
9458	Steering Helm #1 Module Starboard Communication
9459	Steering Helm #2 Module Starboard Communication
9460	Steering Helm #3 Module Starboard Communication
9461	Throttle Lever Module System
9462	Throttle Lever Module #1
9463	Throttle Lever Module #2
9464	Throttle Lever Module #3
9465	Throttle Lever Module #1 Port Lever
9466	Throttle Lever Module #1 Starboard Lever
9467	Throttle Lever Module #2 Port Lever
9468	Throttle Lever Module #2 Starboard Lever
9469	Throttle Lever Module #3 Port Lever
9470	Throttle Lever Module #3 Starboard Lever
9471	Transmission #1 Control Module
9472	Transmission #2 Control Module
9473	Transmission #3 Control Module
9474	Transmission #4 Control Module
9475	Transmission #2 Oil Pressure
9476	Transmission #3 Oil Pressure
9477	Transmission #4 Oil Pressure
9478	Transmission #2 Input Shaft Speed
9479	Transmission #3 Input Shaft Speed
9480	Transmission #4 Input Shaft Speed
9481	Transmission #2 Output Shaft Speed
9482	Transmission #3 Output Shaft Speed
9483	Transmission #4 Output Shaft Speed
9484	Transmission #3 Oil Temperature
9485	Transmission #4 Oil Temperature
9486	Transmission #3 Forward Solenoid Valve
9487	Transmission #4 Forward Solenoid Valve
9488	Transmission #3 Reverse Solenoid Valve
9489	Transmission #4 Reverse Solenoid Valve

9490	Steering Angle Drive Motor #1
9491	Steering Angle Drive Motor #2
9492	Steering Angle Drive Motor #3
9493	Steering Angle Drive Motor #4
9494	Steering Angle Drive Motor #1 Temperature
9495	Steering Angle Drive Motor #2 Temperature
9496	Steering Angle Drive Motor #3 Temperature
9497	Steering Angle Drive Motor #4 Temperature
9498	Steering Angle Drive Motor #1 Position
9499	Steering Angle Drive Motor #2 Position
9500	Steering Angle Drive Motor #3 Position
9501	Steering Angle Drive Motor #4 Position
9502	Propeller #1 Speed
9503	Propeller #2 Speed
9504	Propeller #3 Speed
9505	Propeller #4 Speed
9506	Proprietary Network #3
9507	Proprietary Network #4
9508	ECU #3 Interface Mismatch
9509	ECU #4 Interface Mismatch
9510	Accelerator Pedal Position #4
9511	J1939 Network #11
9512	Operator Control Panel #2
9513	Operator Control Panel #3
9514	Operator Control Panel #4
9580	HVESS Bus Voltage Negative to Chassis Ground Voltage
9581	HVESS Voltage Level Negative to Chassis Ground Voltage
9631	HVESS Controller
9649	Engine Gaseous Fuel Supply Pressure Regulator Control Command
9653	Engine Oil Pressure #2
9654	Operator Station In Control Location
9656	Engine Throttle Synchronization Mode Current Setting
9658	Trolling Mode Current Setting
9667	Operator Station Active Button Status
9668	Trolling Mode Button Status
9669	Engine Throttle Lever Synchronization Button Status
9670	Gear Lockout Button Status
9671	Slow Vessel Mode Button Status
9677	Engine Idle Management Status
9678	Engine Idle Management Restart Reason
9679	Engine Idle Management Shutdown Reason
9686	Drivetrain #1 Water Intrusion
9687	Drivetrain #2 Water Intrusion
9688	Drivetrain #3 Water Intrusion
9689	Drivetrain #4 Water Intrusion
9789	Stationary Inverter External Protection Input
9790	Stationary Inverter Shut Down from Data Link Information
9791	Stationary Inverter Automatic Start Safety Interlock Circuit
9792	Package Circuit Breaker Status
9793	Stationary Inverter Circuit Breaker Status
9794	Stationary Inverter Average AC RMS Voltage

9795	Stationary Inverter Average Line-Neutral AC RMS Voltage
9796	Stationary Inverter Average AC Frequency
9797	Stationary Inverter Average AC RMS Current
9798	Stationary Inverter Total Reactive Power
9799	Stationary Inverter Overall Power Factor
9800	Stationary Inverter Overall Power Factor Lagging
9801	Stationary Inverter Total Real Power
9802	Stationary Inverter Total Apparent Power
9803	Stationary Inverter Not Ready to Automatically Parallel State
9804	Stationary Inverter Auxiliary Shutdown Switch
9805	Stationary Inverter to Bus Phase Sequence Mismatch
9806	Stationary Inverter to Bus Dead Bus
9807	Stationary Inverter to Bus Phase Match
9808	Stationary Inverter to Bus Frequency Match
9809	Stationary Inverter to Bus Voltage Match
9810	Stationary Inverter to Bus In Sync
9811	Stationary Inverter to Bus AC Phase Difference
9813	Well Stimulation Pump Oil Filter Differential Pressure
9814	Well Stimulation Pump Oil Filter Outlet Pressure
9815	Well Stimulation Pump Oil Filter Bypass Switch Status
9824	Generator Coolant Fan Control Temperature
9842	Momentary Operator Key Switch
10117	Power Electronics Coolant Fan #1
10118	Power Electronics Coolant Fan #2
10119	Power Electronics Coolant Fan #3
10120	Power Electronics Coolant Fan #4
10121	Power Electronics Coolant Fan #5
10122	Power Electronics Coolant Fan #6
10123	Power Electronics Coolant Fan #7
10124	Power Electronics Coolant Fan #8
10125	Power Electronics Coolant Fan #9
10126	Power Electronics Coolant Fan #10
10127	Power Electronics Coolant Fan #11
10128	Power Electronics Coolant Fan #12
10129	Power Electronics Coolant Fan #13
10130	Power Electronics Coolant Fan #14
10131	Power Electronics Coolant Fan #15
10159	Motor/Generator #1 Inverter Control Limits Request Override Mode
10175	Motor/Generator #1 Inverter DC Side Current
10216	Motor/Generator #1 Inverter Temperature #1
10217	Motor/Generator #1 Inverter Temperature #2
10218	Motor/Generator #1 Inverter Temperature #3
10219	Motor/Generator #1 Inverter Temperature #4
10225	Motor/Generator #2 Inverter Control Limits Request Override Mode
10282	Motor/Generator #2 Inverter Temperature #1
10283	Motor/Generator #2 Inverter Temperature #2
10284	Motor/Generator #2 Inverter Temperature #3
10285	Motor/Generator #2 Inverter Temperature #4
10298	High Voltage DC Bus Availability
10299	Engine Turbocharger #1 Air Shutoff Valve Solenoid
10300	Engine Turbocharger #2 Air Shutoff Valve Solenoid

10301	Engine Turbocharger #3 Air Shutoff Valve Solenoid
10302	Engine Turbocharger #4 Air Shutoff Valve Solenoid
10303	Engine Turbocharger #5 Air Shutoff Valve Solenoid
10304	Engine Turbocharger #6 Air Shutoff Valve Solenoid
10730	HVESS Configuration
10732	Propulsion Motor Cooler Outlet Coolant Temperature
10733	Power Electronics Cooler Intake Coolant Temperature
10734	Power Electronics Cooler Outlet Coolant Temperature
10737	HVESS Thermal Management System Heat Exchanger Intake Temperature
10738	HVESS Thermal Management System Heat Exchanger Outlet Temperature
10739	Engine Cylinder #1 Temperature
10740	Engine Cylinder #2 Temperature
10741	Engine Cylinder #3 Temperature
10742	Engine Cylinder #4 Temperature
10743	Engine Cylinder #5 Temperature
10744	Engine Cylinder #6 Temperature
10745	Engine Cylinder #7 Temperature
10746	Engine Cylinder #8 Temperature
10747	Engine Cylinder #9 Temperature
10748	Engine Cylinder #10 Temperature
10749	Engine Cylinder #11 Temperature
10750	Engine Cylinder #12 Temperature
10751	Engine Cylinder #13 Temperature
10752	Engine Cylinder #14 Temperature
10753	Engine Cylinder #15 Temperature
10754	Engine Cylinder #16 Temperature
10755	Engine Cylinder #17 Temperature
10756	Engine Cylinder #18 Temperature
10757	Engine Cylinder #19 Temperature
10758	Engine Cylinder #20 Temperature
10774	Motor/Generator #1 Inverter DC Side Negative to Chassis Ground Voltage
10779	Motor/Generator #1 Inverter Power Limited Due to Undefined Reason
10780	Motor/Generator #1 Inverter Power Limited Due to DC Side Current Maximum
10781	Motor/Generator #1 Inverter Power Limited Due to DC Side Current Minimum
10782	Motor/Generator #1 Inverter Power Limited Due to DC Side Voltage Maximum
10783	Motor/Generator #1 Inverter Power Limited Due to DC Side Voltage Minimum
10784	Motor/Generator #1 Inverter Power Limited Due to Mechanical Power Maximum
10785	Motor/Generator #1 Inverter Power Limited Due to Mechanical Power Minimum
10786	Motor/Generator #1 Inverter Power Limited Due to DC Side Power Maximum
10787	Motor/Generator #1 Inverter Power Limited Due to DC Side Power Minimum
10788	Motor/Generator #1 Inverter Power Limited Due to Torque Maximum
10789	Motor/Generator #1 Inverter Power Limited Due to Torque Minimum
10790	Motor/Generator #1 Inverter Power Limited Due to Speed Maximum
10791	Motor/Generator #1 Inverter Power Limited Due to Speed Minimum
10792	Motor/Generator #1 Inverter Power Limited Due to Inverter Temperature
10793	Motor/Generator #1 Inverter Power Limited Due to Motor Temperature
10817	Motor/Generator #2 Inverter Power Limited Due to Undefined Reason
10818	Motor/Generator #2 Inverter Power Limited Due to DC Side Current Maximum
10819	Motor/Generator #2 Inverter Power Limited Due to DC Side Current Minimum
10820	Motor/Generator #2 Inverter Power Limited Due to DC Side Voltage Maximum
10821	Motor/Generator #2 Inverter Power Limited Due to DC Side Voltage Minimum

10822	Motor/Generator #2 Inverter Power Limited Due to Mechanical Power Maximum
10823	Motor/Generator #2 Inverter Power Limited Due to Mechanical Power Minimum
10824	Motor/Generator #2 Inverter Power Limited Due to DC Side Power Maximum
10825	Motor/Generator #2 Inverter Power Limited Due to DC Side Power Minimum
10826	Motor/Generator #2 Inverter Power Limited Due to Torque Maximum
10827	Motor/Generator #2 Inverter Power Limited Due to Torque Minimum
10828	Motor/Generator #2 Inverter Power Limited Due to Speed Maximum
10829	Motor/Generator #2 Inverter Power Limited Due to Speed Minimum
10830	Motor/Generator #2 Inverter Power Limited Due to Inverter Temperature
10831	Motor/Generator #2 Inverter Power Limited Due to Motor Temperature
11029	HVESP #1 High-Voltage Bus Connect Command
11030	HVESP #1 Power-Down Command
11031	HVESP #1 High-Voltage Bus Active Isolation Test Command
11032	HVESP #1 High-Voltage Bus Passive Isolation Test Command
11033	HVESP #1 Cell Balancing Command
11034	HVESP #1 Enable Internal Charger Command
11035	HVESP #1 Operation Consent
11036	HVESP #1 High-Voltage Bus High Side Resistor Connect Request
11037	HVESP #1 High-Voltage Bus Low Side Resistor Connect Request
11038	HVESP #1 Discharge Power Limit Due to State of Charge
11039	HVESP #1 Discharge Power Limit Due to Battery Temperature
11040	HVESP #1 Discharge Power Limit Due to Battery Diagnostic Condition
11041	HVESP #1 Discharge Power Limit Due to Battery or Cell Voltage
11042	HVESP #1 Discharge Power Limit Due to Battery Current
11043	HVESP #1 Discharge Power Limit Due to an Undefined Cause
11044	HVESP #1 Charge Power Limit Due to State of Charge
11045	HVESP #1 Charge Power Limit Due to Battery Temperature
11046	HVESP #1 Charge Power Limit Due to Battery Diagnostic Condition
11047	HVESP #1 Charge Power Limit Due to Battery or Cell Voltage
11048	HVESP #1 Charge Power Limit Due to Battery Current
11049	HVESP #1 Charge Power Limit Due to an Undefined Cause
11050	HVESP #1 Available Discharge Power
11051	HVESP #1 Available Charge Power
11052	HVESP #1 Voltage Level
11053	HVESP #1 Current
11054	HVESP #1 Fast Update State of Charge
11055	HVESP #1 Highest Cell Voltage
11056	HVESP #1 Lowest Cell Voltage
11057	HVESP #1 Cell Voltage Differential Status
11058	HVESP #1 Highest Cell Temperature
11059	HVESP #1 Lowest Cell Temperature
11060	HVESP #1 Average Cell Temperature
11061	HVESP #1 Cell Temperature Differential Status
11062	HVESP #1 Discharge Capacity
11063	HVESP #1 Charge Capacity
11064	HVESP #1 Cell Balancing Count
11065	HVESP #1 Discharge Current Limit
11066	HVESP #1 Charge Current Limit
11067	HVESP #1 Lowest Cell State of Charge
11068	HVESP #1 Highest Cell State of Charge
11069	HVESP #1 Bus Voltage

11070	HVESP #1 Ignition Voltage
11071	HVESP #1 Intake Coolant Temperature
11072	HVESP #1 Outlet Coolant Temperature
11073	HVESP #1 Electronics Temperature
11074	HVESP #1 Temperature
11075	HVESP #1 High-Voltage Bus (Positive) Contactor State
11076	HVESP #1 High-Voltage Bus (Negative) Contactor State
11077	HVESP #1 High-Voltage Bus Disconnect Forewarning
11078	HVESP #1 High-Voltage Bus Pre-Charge Relay State
11079	HVESP #1 Center of Pack Contactor State
11080	HVESP #1 High-Voltage Bus Active Isolation Test Status
11081	HVESP #1 High-Voltage Bus Passive Isolation Test Status
11082	HVESP #1 High Voltage Interlock Loop (HVIL) Status
11083	HVESP #1 Inertia Switch Status
11084	HVESP #1 State of Charge Status
11085	HVESP #1 Cell Balance Status
11086	HVESP #1 Cell Balancing Active
11087	HVESP #1 Internal Charger Status
11088	HVESP #1 High-Voltage Bus Connection Status
11089	HVESP #1 Operational Status
11090	HVESP #1 Discharge Energy Capacity
11091	HVESP #1 Charge Energy Capacity
11092	HVESP #1 Maximum Charge Voltage Limit
11093	HVESP #1 Module #1 Operational Status
11094	HVESP #1 Module #2 Operational Status
11095	HVESP #1 Module #3 Operational Status
11096	HVESP #1 Module #4 Operational Status
11097	HVESP #1 Module #5 Operational Status
11098	HVESP #1 Module #6 Operational Status
11099	HVESP #1 Module #7 Operational Status
11100	HVESP #1 Module #8 Operational Status
11101	HVESP #1 Module #9 Operational Status
11102	HVESP #1 Module #10 Operational Status
11103	HVESP #1 Module #11 Operational Status
11104	HVESP #1 Module #12 Operational Status
11105	HVESP #1 Module #13 Operational Status
11106	HVESP #1 Module #14 Operational Status
11107	HVESP #1 Module #15 Operational Status
11108	HVESP #1 Module #16 Operational Status
11109	HVESP #1 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
11110	HVESP #1 Thermal Management System High-Voltage Input Power
11111	HVESP #1 Thermal Management System Compressor Speed
11112	HVESP #1 Thermal Management System Relative Humidity
11113	HVESP #1 Thermal Management System Heater Status
11114	HVESP #1 Thermal Management System Mode
11115	HVESP #1 Highest Cell Voltage Module Number
11116	HVESP #1 Highest Cell Voltage Cell Number
11117	HVESP #1 Lowest Cell Voltage Module Number
11118	HVESP #1 Lowest Cell Voltage Cell Number
11119	HVESP #1 Average Cell Voltage
11120	HVESP #1 Highest Cell Temperature Module Number

11121	HVESP #1 Highest Cell Temperature Cell Number
11122	HVESP #1 Lowest Cell Temperature Module Number
11123	HVESP #1 Lowest Cell Temperature Cell Number
11124	HVESP #1 Highest Cell State of Charge Module Number
11125	HVESP #1 Highest Cell State of Charge Cell Number
11126	HVESP #1 Lowest Cell State of Charge Module Number
11127	HVESP #1 Lowest Cell State of Charge Cell Number
11128	HVESP #1 High-Voltage Bus Active Isolation Test Results
11129	HVESP #1 High-Voltage Bus Passive Isolation Test Results
11130	HVESP #1 Bus Voltage Negative to Chassis Ground Voltage
11131	HVESP #1 Voltage Level Negative to Chassis Ground Voltage
11132	HVESP #1 Nominal Voltage
11133	HVESP #1 Recommended Minimum Operating Voltage
11134	HVESP #1 Recommended Maximum Operating Voltage
11135	HVESP #1 Recommended Minimum State Of Charge
11136	HVESP #1 Recommended Maximum State Of Charge
11137	HVESP #1 Recommended Maximum Operating Temperature
11138	HVESP #1 Recommended Minimum Operating Temperature
11139	HVESP #1 Cell Maximum Voltage Limit
11140	HVESP #1 Cell Minimum Voltage Limit
11141	HVESP #1 State of Health
11142	HVESP #1 Contactor Open Under Load Count
11143	HVESP #1 Total Energy Throughput
11144	HVESP #1 Total Accumulated Charge
11145	HVESP #2 High-Voltage Bus Connect Command
11146	HVESP #2 Power-Down Command
11147	HVESP #2 High-Voltage Bus Active Isolation Test Command
11148	HVESP #2 High-Voltage Bus Passive Isolation Test Command
11149	HVESP #2 Cell Balancing Command
11150	HVESP #2 Enable Internal Charger Command
11151	HVESP #2 Operation Consent
11152	HVESP #2 High-Voltage Bus High Side Resistor Connect Request
11153	HVESP #2 High-Voltage Bus Low Side Resistor Connect Request
11154	HVESP #2 Discharge Power Limit Due to State of Charge
11155	HVESP #2 Discharge Power Limit Due to Battery Temperature
11156	HVESP #2 Discharge Power Limit Due to Battery Diagnostic Condition
11157	HVESP #2 Discharge Power Limit Due to Battery or Cell Voltage
11158	HVESP #2 Discharge Power Limit Due to Battery Current
11159	HVESP #2 Discharge Power Limit Due to an Undefined Cause
11160	HVESP #2 Charge Power Limit Due to State of Charge
11161	HVESP #2 Charge Power Limit Due to Battery Temperature
11162	HVESP #2 Charge Power Limit Due to Battery Diagnostic Condition
11163	HVESP #2 Charge Power Limit Due to Battery or Cell Voltage
11164	HVESP #2 Charge Power Limit Due to Battery Current
11165	HVESP #2 Charge Power Limit Due to an Undefined Cause
11166	HVESP #2 Available Discharge Power
11167	HVESP #2 Available Charge Power
11168	HVESP #2 Voltage Level
11169	HVESP #2 Current
11170	HVESP #2 Fast Update State of Charge
11171	HVESP #2 Highest Cell Voltage

11172	HVESP #2 Lowest Cell Voltage
11173	HVESP #2 Cell Voltage Differential Status
11174	HVESP #2 Highest Cell Temperature
11175	HVESP #2 Lowest Cell Temperature
11176	HVESP #2 Average Cell Temperature
11177	HVESP #2 Cell Temperature Differential Status
11178	HVESP #2 Discharge Capacity
11179	HVESP #2 Charge Capacity
11180	HVESP #2 Cell Balancing Count
11181	HVESP #2 Discharge Current Limit
11182	HVESP #2 Charge Current Limit
11183	HVESP #2 Lowest Cell State of Charge
11184	HVESP #2 Highest Cell State of Charge
11185	HVESP #2 Bus Voltage
11186	HVESP #2 Ignition Voltage
11187	HVESP #2 Intake Coolant Temperature
11188	HVESP #2 Outlet Coolant Temperature
11189	HVESP #2 Electronics Temperature
11190	HVESP #2 Temperature
11191	HVESP #2 High-Voltage Bus (Positive) Contactor State
11192	HVESP #2 High-Voltage Bus (Negative) Contactor State
11193	HVESP #2 High-Voltage Bus Disconnect Forewarning
11194	HVESP #2 High-Voltage Bus Pre-Charge Relay State
11195	HVESP #2 Center of Pack Contactor State
11196	HVESP #2 High-Voltage Bus Active Isolation Test Status
11197	HVESP #2 High-Voltage Bus Passive Isolation Test Status
11198	HVESP #2 High Voltage Interlock Loop (HVIL) Status
11199	HVESP #2 Inertia Switch Status
11200	HVESP #2 State of Charge Status
11201	HVESP #2 Cell Balance Status
11202	HVESP #2 Cell Balancing Active
11203	HVESP #2 Internal Charger Status
11204	HVESP #2 High-Voltage Bus Connection Status
11205	HVESP #2 Operational Status
11206	HVESP #2 Discharge Energy Capacity
11207	HVESP #2 Charge Energy Capacity
11208	HVESP #2 Maximum Charge Voltage Limit
11209	HVESP #2 Module #1 Operational Status
11210	HVESP #2 Module #2 Operational Status
11211	HVESP #2 Module #3 Operational Status
11212	HVESP #2 Module #4 Operational Status
11213	HVESP #2 Module #5 Operational Status
11214	HVESP #2 Module #6 Operational Status
11215	HVESP #2 Module #7 Operational Status
11216	HVESP #2 Module #8 Operational Status
11217	HVESP #2 Module #9 Operational Status
11218	HVESP #2 Module #10 Operational Status
11219	HVESP #2 Module #11 Operational Status
11220	HVESP #2 Module #12 Operational Status
11221	HVESP #2 Module #13 Operational Status
11222	HVESP #2 Module #14 Operational Status

11223	HVESP #2 Module #15 Operational Status
11224	HVESP #2 Module #16 Operational Status
11225	HVESP #2 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
11226	HVESP #2 Thermal Management System High-Voltage Input Power
11227	HVESP #2 Thermal Management System Compressor Speed
11228	HVESP #2 Thermal Management System Relative Humidity
11229	HVESP #2 Thermal Management System Heater Status
11230	HVESP #2 Thermal Management System Mode
11231	HVESP #2 Highest Cell Voltage Module Number
11232	HVESP #2 Highest Cell Voltage Cell Number
11233	HVESP #2 Lowest Cell Voltage Module Number
11234	HVESP #2 Lowest Cell Voltage Cell Number
11235	HVESP #2 Average Cell Voltage
11236	HVESP #2 Highest Cell Temperature Module Number
11237	HVESP #2 Highest Cell Temperature Cell Number
11238	HVESP #2 Lowest Cell Temperature Module Number
11239	HVESP #2 Lowest Cell Temperature Cell Number
11240	HVESP #2 Highest Cell State of Charge Module Number
11241	HVESP #2 Highest Cell State of Charge Cell Number
11242	HVESP #2 Lowest Cell State of Charge Module Number
11243	HVESP #2 Lowest Cell State of Charge Cell Number
11244	HVESP #2 High-Voltage Bus Active Isolation Test Results
11245	HVESP #2 High-Voltage Bus Passive Isolation Test Results
11246	HVESP #2 Bus Voltage Negative to Chassis Ground Voltage
11247	HVESP #2 Voltage Level Negative to Chassis Ground Voltage
11248	HVESP #2 Nominal Voltage
11249	HVESP #2 Recommended Minimum Operating Voltage
11250	HVESP #2 Recommended Maximum Operating Voltage
11251	HVESP #2 Recommended Minimum State Of Charge
11252	HVESP #2 Recommended Maximum State Of Charge
11253	HVESP #2 Recommended Maximum Operating Temperature
11254	HVESP #2 Recommended Minimum Operating Temperature
11255	HVESP #2 Cell Maximum Voltage Limit
11256	HVESP #2 Cell Minimum Voltage Limit
11257	HVESP #2 State of Health
11258	HVESP #2 Contactor Open Under Load Count
11259	HVESP #2 Total Energy Throughput
11260	HVESP #2 Total Accumulated Charge
11261	HVESP #3 High-Voltage Bus Connect Command
11262	HVESP #3 Power-Down Command
11263	HVESP #3 High-Voltage Bus Active Isolation Test Command
11264	HVESP #3 High-Voltage Bus Passive Isolation Test Command
11265	HVESP #3 Cell Balancing Command
11266	HVESP #3 Enable Internal Charger Command
11267	HVESP #3 Operation Consent
11268	HVESP #3 High-Voltage Bus High Side Resistor Connect Request
11269	HVESP #3 High-Voltage Bus Low Side Resistor Connect Request
11270	HVESP #3 Discharge Power Limit Due to State of Charge
11271	HVESP #3 Discharge Power Limit Due to Battery Temperature
11272	HVESP #3 Discharge Power Limit Due to Battery Diagnostic Condition
11273	HVESP #3 Discharge Power Limit Due to Battery or Cell Voltage

11274	HVESP #3 Discharge Power Limit Due to Battery Current
11275	HVESP #3 Discharge Power Limit Due to an Undefined Cause
11276	HVESP #3 Charge Power Limit Due to State of Charge
11277	HVESP #3 Charge Power Limit Due to Battery Temperature
11278	HVESP #3 Charge Power Limit Due to Battery Diagnostic Condition
11279	HVESP #3 Charge Power Limit Due to Battery or Cell Voltage
11280	HVESP #3 Charge Power Limit Due to Battery Current
11281	HVESP #3 Charge Power Limit Due to an Undefined Cause
11282	HVESP #3 Available Discharge Power
11283	HVESP #3 Available Charge Power
11284	HVESP #3 Voltage Level
11285	HVESP #3 Current
11286	HVESP #3 Fast Update State of Charge
11287	HVESP #3 Highest Cell Voltage
11288	HVESP #3 Lowest Cell Voltage
11289	HVESP #3 Cell Voltage Differential Status
11290	HVESP #3 Highest Cell Temperature
11291	HVESP #3 Lowest Cell Temperature
11292	HVESP #3 Average Cell Temperature
11293	HVESP #3 Cell Temperature Differential Status
11294	HVESP #3 Discharge Capacity
11295	HVESP #3 Charge Capacity
11296	HVESP #3 Cell Balancing Count
11297	HVESP #3 Discharge Current Limit
11298	HVESP #3 Charge Current Limit
11299	HVESP #3 Lowest Cell State of Charge
11300	HVESP #3 Highest Cell State of Charge
11301	HVESP #3 Bus Voltage
11302	HVESP #3 Ignition Voltage
11303	HVESP #3 Intake Coolant Temperature
11304	HVESP #3 Outlet Coolant Temperature
11305	HVESP #3 Electronics Temperature
11306	HVESP #3 Temperature
11307	HVESP #3 High-Voltage Bus (Positive) Contactor State
11308	HVESP #3 High-Voltage Bus (Negative) Contactor State
11309	HVESP #3 High-Voltage Bus Disconnect Forewarning
11310	HVESP #3 High-Voltage Bus Pre-Charge Relay State
11311	HVESP #3 Center of Pack Contactor State
11312	HVESP #3 High-Voltage Bus Active Isolation Test Status
11313	HVESP #3 High-Voltage Bus Passive Isolation Test Status
11314	HVESP #3 High Voltage Interlock Loop (HVIL) Status
11315	HVESP #3 Inertia Switch Status
11316	HVESP #3 State of Charge Status
11317	HVESP #3 Cell Balance Status
11318	HVESP #3 Cell Balancing Active
11319	HVESP #3 Internal Charger Status
11320	HVESP #3 High-Voltage Bus Connection Status
11321	HVESP #3 Operational Status
11322	HVESP #3 Discharge Energy Capacity
11323	HVESP #3 Charge Energy Capacity
11324	HVESP #3 Maximum Charge Voltage Limit

11325	HVESP #3 Module #1 Operational Status
11326	HVESP #3 Module #2 Operational Status
11327	HVESP #3 Module #3 Operational Status
11328	HVESP #3 Module #4 Operational Status
11329	HVESP #3 Module #5 Operational Status
11330	HVESP #3 Module #6 Operational Status
11331	HVESP #3 Module #7 Operational Status
11332	HVESP #3 Module #8 Operational Status
11333	HVESP #3 Module #9 Operational Status
11334	HVESP #3 Module #10 Operational Status
11335	HVESP #3 Module #11 Operational Status
11336	HVESP #3 Module #12 Operational Status
11337	HVESP #3 Module #13 Operational Status
11338	HVESP #3 Module #14 Operational Status
11339	HVESP #3 Module #15 Operational Status
11340	HVESP #3 Module #16 Operational Status
11341	HVESP #3 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
11342	HVESP #3 Thermal Management System High-Voltage Input Power
11343	HVESP #3 Thermal Management System Compressor Speed
11344	HVESP #3 Thermal Management System Relative Humidity
11345	HVESP #3 Thermal Management System Heater Status
11346	HVESP #3 Thermal Management System Mode
11347	HVESP #3 Highest Cell Voltage Module Number
11348	HVESP #3 Highest Cell Voltage Cell Number
11349	HVESP #3 Lowest Cell Voltage Module Number
11350	HVESP #3 Lowest Cell Voltage Cell Number
11351	HVESP #3 Average Cell Voltage
11352	HVESP #3 Highest Cell Temperature Module Number
11353	HVESP #3 Highest Cell Temperature Cell Number
11354	HVESP #3 Lowest Cell Temperature Module Number
11355	HVESP #3 Lowest Cell Temperature Cell Number
11356	HVESP #3 Highest Cell State of Charge Module Number
11357	HVESP #3 Highest Cell State of Charge Cell Number
11358	HVESP #3 Lowest Cell State of Charge Module Number
11359	HVESP #3 Lowest Cell State of Charge Cell Number
11360	HVESP #3 High-Voltage Bus Active Isolation Test Results
11361	HVESP #3 High-Voltage Bus Passive Isolation Test Results
11362	HVESP #3 Bus Voltage Negative to Chassis Ground Voltage
11363	HVESP #3 Voltage Level Negative to Chassis Ground Voltage
11364	HVESP #3 Nominal Voltage
11365	HVESP #3 Recommended Minimum Operating Voltage
11366	HVESP #3 Recommended Maximum Operating Voltage
11367	HVESP #3 Recommended Minimum State Of Charge
11368	HVESP #3 Recommended Maximum State Of Charge
11369	HVESP #3 Recommended Maximum Operating Temperature
11370	HVESP #3 Recommended Minimum Operating Temperature
11371	HVESP #3 Cell Maximum Voltage Limit
11372	HVESP #3 Cell Minimum Voltage Limit
11373	HVESP #3 State of Health
11374	HVESP #3 Contactor Open Under Load Count
11375	HVESP #3 Total Energy Throughput

11376	HVESP #3 Total Accumulated Charge
11377	HVESP #4 High-Voltage Bus Connect Command
11378	HVESP #4 Power-Down Command
11379	HVESP #4 High-Voltage Bus Active Isolation Test Command
11380	HVESP #4 High-Voltage Bus Passive Isolation Test Command
11381	HVESP #4 Cell Balancing Command
11382	HVESP #4 Enable Internal Charger Command
11383	HVESP #4 Operation Consent
11384	HVESP #4 High-Voltage Bus High Side Resistor Connect Request
11385	HVESP #4 High-Voltage Bus Low Side Resistor Connect Request
11386	HVESP #4 Discharge Power Limit Due to State of Charge
11387	HVESP #4 Discharge Power Limit Due to Battery Temperature
11388	HVESP #4 Discharge Power Limit Due to Battery Diagnostic Condition
11389	HVESP #4 Discharge Power Limit Due to Battery or Cell Voltage
11390	HVESP #4 Discharge Power Limit Due to Battery Current
11391	HVESP #4 Discharge Power Limit Due to an Undefined Cause
11392	HVESP #4 Charge Power Limit Due to State of Charge
11393	HVESP #4 Charge Power Limit Due to Battery Temperature
11394	HVESP #4 Charge Power Limit Due to Battery Diagnostic Condition
11395	HVESP #4 Charge Power Limit Due to Battery or Cell Voltage
11396	HVESP #4 Charge Power Limit Due to Battery Current
11397	HVESP #4 Charge Power Limit Due to an Undefined Cause
11398	HVESP #4 Available Discharge Power
11399	HVESP #4 Available Charge Power
11400	HVESP #4 Voltage Level
11401	HVESP #4 Current
11402	HVESP #4 Fast Update State of Charge
11403	HVESP #4 Highest Cell Voltage
11404	HVESP #4 Lowest Cell Voltage
11405	HVESP #4 Cell Voltage Differential Status
11406	HVESP #4 Highest Cell Temperature
11407	HVESP #4 Lowest Cell Temperature
11408	HVESP #4 Average Cell Temperature
11409	HVESP #4 Cell Temperature Differential Status
11410	HVESP #4 Discharge Capacity
11411	HVESP #4 Charge Capacity
11412	HVESP #4 Cell Balancing Count
11413	HVESP #4 Discharge Current Limit
11414	HVESP #4 Charge Current Limit
11415	HVESP #4 Lowest Cell State of Charge
11416	HVESP #4 Highest Cell State of Charge
11417	HVESP #4 Bus Voltage
11418	HVESP #4 Ignition Voltage
11419	HVESP #4 Intake Coolant Temperature
11420	HVESP #4 Outlet Coolant Temperature
11421	HVESP #4 Electronics Temperature
11422	HVESP #4 Temperature
11423	HVESP #4 High-Voltage Bus (Positive) Contactor State
11424	HVESP #4 High-Voltage Bus (Negative) Contactor State
11425	HVESP #4 High-Voltage Bus Disconnect Forewarning
11426	HVESP #4 High-Voltage Bus Pre-Charge Relay State

11427	HVESP #4 Center of Pack Contactor State
11428	HVESP #4 High-Voltage Bus Active Isolation Test Status
11429	HVESP #4 High-Voltage Bus Passive Isolation Test Status
11430	HVESP #4 High Voltage Interlock Loop (HVIL) Status
11431	HVESP #4 Inertia Switch Status
11432	HVESP #4 State of Charge Status
11433	HVESP #4 Cell Balance Status
11434	HVESP #4 Cell Balancing Active
11435	HVESP #4 Internal Charger Status
11436	HVESP #4 High-Voltage Bus Connection Status
11437	HVESP #4 Operational Status
11438	HVESP #4 Discharge Energy Capacity
11439	HVESP #4 Charge Energy Capacity
11440	HVESP #4 Maximum Charge Voltage Limit
11441	HVESP #4 Module #1 Operational Status
11442	HVESP #4 Module #2 Operational Status
11443	HVESP #4 Module #3 Operational Status
11444	HVESP #4 Module #4 Operational Status
11445	HVESP #4 Module #5 Operational Status
11446	HVESP #4 Module #6 Operational Status
11447	HVESP #4 Module #7 Operational Status
11448	HVESP #4 Module #8 Operational Status
11449	HVESP #4 Module #9 Operational Status
11450	HVESP #4 Module #10 Operational Status
11451	HVESP #4 Module #11 Operational Status
11452	HVESP #4 Module #12 Operational Status
11453	HVESP #4 Module #13 Operational Status
11454	HVESP #4 Module #14 Operational Status
11455	HVESP #4 Module #15 Operational Status
11456	HVESP #4 Module #16 Operational Status
11457	HVESP #4 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
11458	HVESP #4 Thermal Management System High-Voltage Input Power
11459	HVESP #4 Thermal Management System Compressor Speed
11460	HVESP #4 Thermal Management System Relative Humidity
11461	HVESP #4 Thermal Management System Heater Status
11462	HVESP #4 Thermal Management System Mode
11463	HVESP #4 Highest Cell Voltage Module Number
11464	HVESP #4 Highest Cell Voltage Cell Number
11465	HVESP #4 Lowest Cell Voltage Module Number
11466	HVESP #4 Lowest Cell Voltage Cell Number
11467	HVESP #4 Average Cell Voltage
11468	HVESP #4 Highest Cell Temperature Module Number
11469	HVESP #4 Highest Cell Temperature Cell Number
11470	HVESP #4 Lowest Cell Temperature Module Number
11471	HVESP #4 Lowest Cell Temperature Cell Number
11472	HVESP #4 Highest Cell State of Charge Module Number
11473	HVESP #4 Highest Cell State of Charge Cell Number
11474	HVESP #4 Lowest Cell State of Charge Module Number
11475	HVESP #4 Lowest Cell State of Charge Cell Number
11476	HVESP #4 High-Voltage Bus Active Isolation Test Results
11477	HVESP #4 High-Voltage Bus Passive Isolation Test Results

11478	HVESP #4 Bus Voltage Negative to Chassis Ground Voltage
11479	HVESP #4 Voltage Level Negative to Chassis Ground Voltage
11480	HVESP #4 Nominal Voltage
11481	HVESP #4 Recommended Minimum Operating Voltage
11482	HVESP #4 Recommended Maximum Operating Voltage
11483	HVESP #4 Recommended Minimum State Of Charge
11484	HVESP #4 Recommended Maximum State Of Charge
11485	HVESP #4 Recommended Maximum Operating Temperature
11486	HVESP #4 Recommended Minimum Operating Temperature
11487	HVESP #4 Cell Maximum Voltage Limit
11488	HVESP #4 Cell Minimum Voltage Limit
11489	HVESP #4 State of Health
11490	HVESP #4 Contactor Open Under Load Count
11491	HVESP #4 Total Energy Throughput
11492	HVESP #4 Total Accumulated Charge
11493	HVESP #5 High-Voltage Bus Connect Command
11494	HVESP #5 Power-Down Command
11495	HVESP #5 High-Voltage Bus Active Isolation Test Command
11496	HVESP #5 High-Voltage Bus Passive Isolation Test Command
11497	HVESP #5 Cell Balancing Command
11498	HVESP #5 Enable Internal Charger Command
11499	HVESP #5 Operation Consent
11500	HVESP #5 High-Voltage Bus High Side Resistor Connect Request
11501	HVESP #5 High-Voltage Bus Low Side Resistor Connect Request
11502	HVESP #5 Discharge Power Limit Due to State of Charge
11503	HVESP #5 Discharge Power Limit Due to Battery Temperature
11504	HVESP #5 Discharge Power Limit Due to Battery Diagnostic Condition
11505	HVESP #5 Discharge Power Limit Due to Battery or Cell Voltage
11506	HVESP #5 Discharge Power Limit Due to Battery Current
11507	HVESP #5 Discharge Power Limit Due to an Undefined Cause
11508	HVESP #5 Charge Power Limit Due to State of Charge
11509	HVESP #5 Charge Power Limit Due to Battery Temperature
11510	HVESP #5 Charge Power Limit Due to Battery Diagnostic Condition
11511	HVESP #5 Charge Power Limit Due to Battery or Cell Voltage
11512	HVESP #5 Charge Power Limit Due to Battery Current
11513	HVESP #5 Charge Power Limit Due to an Undefined Cause
11514	HVESP #5 Available Discharge Power
11515	HVESP #5 Available Charge Power
11516	HVESP #5 Voltage Level
11517	HVESP #5 Current
11518	HVESP #5 Fast Update State of Charge
11519	HVESP #5 Highest Cell Voltage
11520	HVESP #5 Lowest Cell Voltage
11521	HVESP #5 Cell Voltage Differential Status
11522	HVESP #5 Highest Cell Temperature
11523	HVESP #5 Lowest Cell Temperature
11524	HVESP #5 Average Cell Temperature
11525	HVESP #5 Cell Temperature Differential Status
11526	HVESP #5 Discharge Capacity
11527	HVESP #5 Charge Capacity
11528	HVESP #5 Cell Balancing Count

11529	HVESP #5 Discharge Current Limit
11530	HVESP #5 Charge Current Limit
11531	HVESP #5 Lowest Cell State of Charge
11532	HVESP #5 Highest Cell State of Charge
11533	HVESP #5 Bus Voltage
11534	HVESP #5 Ignition Voltage
11535	HVESP #5 Intake Coolant Temperature
11536	HVESP #5 Outlet Coolant Temperature
11537	HVESP #5 Electronics Temperature
11538	HVESP #5 Temperature
11539	HVESP #5 High-Voltage Bus (Positive) Contactor State
11540	HVESP #5 High-Voltage Bus (Negative) Contactor State
11541	HVESP #5 High-Voltage Bus Disconnect Forewarning
11542	HVESP #5 High-Voltage Bus Pre-Charge Relay State
11543	HVESP #5 Center of Pack Contactor State
11544	HVESP #5 High-Voltage Bus Active Isolation Test Status
11545	HVESP #5 High-Voltage Bus Passive Isolation Test Status
11546	HVESP #5 High Voltage Interlock Loop (HVIL) Status
11547	HVESP #5 Inertia Switch Status
11548	HVESP #5 State of Charge Status
11549	HVESP #5 Cell Balance Status
11550	HVESP #5 Cell Balancing Active
11551	HVESP #5 Internal Charger Status
11552	HVESP #5 High-Voltage Bus Connection Status
11553	HVESP #5 Operational Status
11554	HVESP #5 Discharge Energy Capacity
11555	HVESP #5 Charge Energy Capacity
11556	HVESP #5 Maximum Charge Voltage Limit
11557	HVESP #5 Module #1 Operational Status
11558	HVESP #5 Module #2 Operational Status
11559	HVESP #5 Module #3 Operational Status
11560	HVESP #5 Module #4 Operational Status
11561	HVESP #5 Module #5 Operational Status
11562	HVESP #5 Module #6 Operational Status
11563	HVESP #5 Module #7 Operational Status
11564	HVESP #5 Module #8 Operational Status
11565	HVESP #5 Module #9 Operational Status
11566	HVESP #5 Module #10 Operational Status
11567	HVESP #5 Module #11 Operational Status
11568	HVESP #5 Module #12 Operational Status
11569	HVESP #5 Module #13 Operational Status
11570	HVESP #5 Module #14 Operational Status
11571	HVESP #5 Module #15 Operational Status
11572	HVESP #5 Module #16 Operational Status
11573	HVESP #5 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
11574	HVESP #5 Thermal Management System High-Voltage Input Power
11575	HVESP #5 Thermal Management System Compressor Speed
11576	HVESP #5 Thermal Management System Relative Humidity
11577	HVESP #5 Thermal Management System Heater Status
11578	HVESP #5 Thermal Management System Mode
11579	HVESP #5 Highest Cell Voltage Module Number

11580	HVESP #5 Highest Cell Voltage Cell Number
11581	HVESP #5 Lowest Cell Voltage Module Number
11582	HVESP #5 Lowest Cell Voltage Cell Number
11583	HVESP #5 Average Cell Voltage
11584	HVESP #5 Highest Cell Temperature Module Number
11585	HVESP #5 Highest Cell Temperature Cell Number
11586	HVESP #5 Lowest Cell Temperature Module Number
11587	HVESP #5 Lowest Cell Temperature Cell Number
11588	HVESP #5 Highest Cell State of Charge Module Number
11589	HVESP #5 Highest Cell State of Charge Cell Number
11590	HVESP #5 Lowest Cell State of Charge Module Number
11591	HVESP #5 Lowest Cell State of Charge Cell Number
11592	HVESP #5 High-Voltage Bus Active Isolation Test Results
11593	HVESP #5 High-Voltage Bus Passive Isolation Test Results
11594	HVESP #5 Bus Voltage Negative to Chassis Ground Voltage
11595	HVESP #5 Voltage Level Negative to Chassis Ground Voltage
11596	HVESP #5 Nominal Voltage
11597	HVESP #5 Recommended Minimum Operating Voltage
11598	HVESP #5 Recommended Maximum Operating Voltage
11599	HVESP #5 Recommended Minimum State Of Charge
11600	HVESP #5 Recommended Maximum State Of Charge
11601	HVESP #5 Recommended Maximum Operating Temperature
11602	HVESP #5 Recommended Minimum Operating Temperature
11603	HVESP #5 Cell Maximum Voltage Limit
11604	HVESP #5 Cell Minimum Voltage Limit
11605	HVESP #5 State of Health
11606	HVESP #5 Contactor Open Under Load Count
11607	HVESP #5 Total Energy Throughput
11608	HVESP #5 Total Accumulated Charge
11609	HVESP #6 High-Voltage Bus Connect Command
11610	HVESP #6 Power-Down Command
11611	HVESP #6 High-Voltage Bus Active Isolation Test Command
11612	HVESP #6 High-Voltage Bus Passive Isolation Test Command
11613	HVESP #6 Cell Balancing Command
11614	HVESP #6 Enable Internal Charger Command
11615	HVESP #6 Operation Consent
11616	HVESP #6 High-Voltage Bus High Side Resistor Connect Request
11617	HVESP #6 High-Voltage Bus Low Side Resistor Connect Request
11618	HVESP #6 Discharge Power Limit Due to State of Charge
11619	HVESP #6 Discharge Power Limit Due to Battery Temperature
11620	HVESP #6 Discharge Power Limit Due to Battery Diagnostic Condition
11621	HVESP #6 Discharge Power Limit Due to Battery or Cell Voltage
11622	HVESP #6 Discharge Power Limit Due to Battery Current
11623	HVESP #6 Discharge Power Limit Due to an Undefined Cause
11624	HVESP #6 Charge Power Limit Due to State of Charge
11625	HVESP #6 Charge Power Limit Due to Battery Temperature
11626	HVESP #6 Charge Power Limit Due to Battery Diagnostic Condition
11627	HVESP #6 Charge Power Limit Due to Battery or Cell Voltage
11628	HVESP #6 Charge Power Limit Due to Battery Current
11629	HVESP #6 Charge Power Limit Due to an Undefined Cause
11630	HVESP #6 Available Discharge Power

11631	HVESP #6 Available Charge Power
11632	HVESP #6 Voltage Level
11633	HVESP #6 Current
11634	HVESP #6 Fast Update State of Charge
11635	HVESP #6 Highest Cell Voltage
11636	HVESP #6 Lowest Cell Voltage
11637	HVESP #6 Cell Voltage Differential Status
11638	HVESP #6 Highest Cell Temperature
11639	HVESP #6 Lowest Cell Temperature
11640	HVESP #6 Average Cell Temperature
11641	HVESP #6 Cell Temperature Differential Status
11642	HVESP #6 Discharge Capacity
11643	HVESP #6 Charge Capacity
11644	HVESP #6 Cell Balancing Count
11645	HVESP #6 Discharge Current Limit
11646	HVESP #6 Charge Current Limit
11647	HVESP #6 Lowest Cell State of Charge
11648	HVESP #6 Highest Cell State of Charge
11649	HVESP #6 Bus Voltage
11650	HVESP #6 Ignition Voltage
11651	HVESP #6 Intake Coolant Temperature
11652	HVESP #6 Outlet Coolant Temperature
11653	HVESP #6 Electronics Temperature
11654	HVESP #6 Temperature
11655	HVESP #6 High-Voltage Bus (Positive) Contactor State
11656	HVESP #6 High-Voltage Bus (Negative) Contactor State
11657	HVESP #6 High-Voltage Bus Disconnect Forewarning
11658	HVESP #6 High-Voltage Bus Pre-Charge Relay State
11659	HVESP #6 Center of Pack Contactor State
11660	HVESP #6 High-Voltage Bus Active Isolation Test Status
11661	HVESP #6 High-Voltage Bus Passive Isolation Test Status
11662	HVESP #6 High Voltage Interlock Loop (HVIL) Status
11663	HVESP #6 Inertia Switch Status
11664	HVESP #6 State of Charge Status
11665	HVESP #6 Cell Balance Status
11666	HVESP #6 Cell Balancing Active
11667	HVESP #6 Internal Charger Status
11668	HVESP #6 High-Voltage Bus Connection Status
11669	HVESP #6 Operational Status
11670	HVESP #6 Discharge Energy Capacity
11671	HVESP #6 Charge Energy Capacity
11672	HVESP #6 Maximum Charge Voltage Limit
11673	HVESP #6 Module #1 Operational Status
11674	HVESP #6 Module #2 Operational Status
11675	HVESP #6 Module #3 Operational Status
11676	HVESP #6 Module #4 Operational Status
11677	HVESP #6 Module #5 Operational Status
11678	HVESP #6 Module #6 Operational Status
11679	HVESP #6 Module #7 Operational Status
11680	HVESP #6 Module #8 Operational Status
11681	HVESP #6 Module #9 Operational Status

11682	HVESP #6 Module #10 Operational Status
11683	HVESP #6 Module #11 Operational Status
11684	HVESP #6 Module #12 Operational Status
11685	HVESP #6 Module #13 Operational Status
11686	HVESP #6 Module #14 Operational Status
11687	HVESP #6 Module #15 Operational Status
11688	HVESP #6 Module #16 Operational Status
11689	HVESP #6 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
11690	HVESP #6 Thermal Management System High-Voltage Input Power
11691	HVESP #6 Thermal Management System Compressor Speed
11692	HVESP #6 Thermal Management System Relative Humidity
11693	HVESP #6 Thermal Management System Heater Status
11694	HVESP #6 Thermal Management System Mode
11695	HVESP #6 Highest Cell Voltage Module Number
11696	HVESP #6 Highest Cell Voltage Cell Number
11697	HVESP #6 Lowest Cell Voltage Module Number
11698	HVESP #6 Lowest Cell Voltage Cell Number
11699	HVESP #6 Average Cell Voltage
11700	HVESP #6 Highest Cell Temperature Module Number
11701	HVESP #6 Highest Cell Temperature Cell Number
11702	HVESP #6 Lowest Cell Temperature Module Number
11703	HVESP #6 Lowest Cell Temperature Cell Number
11704	HVESP #6 Highest Cell State of Charge Module Number
11705	HVESP #6 Highest Cell State of Charge Cell Number
11706	HVESP #6 Lowest Cell State of Charge Module Number
11707	HVESP #6 Lowest Cell State of Charge Cell Number
11708	HVESP #6 High-Voltage Bus Active Isolation Test Results
11709	HVESP #6 High-Voltage Bus Passive Isolation Test Results
11710	HVESP #6 Bus Voltage Negative to Chassis Ground Voltage
11711	HVESP #6 Voltage Level Negative to Chassis Ground Voltage
11712	HVESP #6 Nominal Voltage
11713	HVESP #6 Recommended Minimum Operating Voltage
11714	HVESP #6 Recommended Maximum Operating Voltage
11715	HVESP #6 Recommended Minimum State Of Charge
11716	HVESP #6 Recommended Maximum State Of Charge
11717	HVESP #6 Recommended Maximum Operating Temperature
11718	HVESP #6 Recommended Minimum Operating Temperature
11719	HVESP #6 Cell Maximum Voltage Limit
11720	HVESP #6 Cell Minimum Voltage Limit
11721	HVESP #6 State of Health
11722	HVESP #6 Contactor Open Under Load Count
11723	HVESP #6 Total Energy Throughput
11724	HVESP #6 Total Accumulated Charge
11729	Hoist Command
11731	Engine Intake Manifold #2 Absolute Pressure
11733	Steering Mode Two Wheel Switch Input
11734	Steering Mode Crab Switch Input
11735	Steering Mode Circle Switch Input
11736	Steering Mode Status
11750	Fire Detected
11752	Transmission Output Shaft Brake Request

11773	Aftertreatment #1 SCR Outlet Absolute Pressure
11775	Aftertreatment #1 SCR Outlet Pressure
12296	Port Transmission Gear Mismatch
12297	Starboard Transmission Gear Mismatch
12301	Engine Gaseous Fuel Supply Filter Differential Pressure
12302	Engine Gaseous Fuel Supply Filter Intake Pressure
12313	Engine Turbocharger #5 Speed
12314	Engine Turbocharger #6 Speed
12315	Engine Turbocharger #5 Compressor Intake Pressure
12316	Engine Turbocharger #6 Compressor Intake Pressure
12765	Aftertreatment #1 Total Engine Runtime With No DEF Delivery
12800	Well Stimulation Pump Cylinder #1 Discharge Valve Leak
12801	Well Stimulation Pump Cylinder #2 Discharge Valve Leak
12802	Well Stimulation Pump Cylinder #3 Discharge Valve Leak
12803	Well Stimulation Pump Cylinder #4 Discharge Valve Leak
12804	Well Stimulation Pump Cylinder #5 Discharge Valve Leak
12805	Well Stimulation Pump Cylinder #1 Suction Valve Leak
12806	Well Stimulation Pump Cylinder #2 Suction Valve Leak
12807	Well Stimulation Pump Cylinder #3 Suction Valve Leak
12808	Well Stimulation Pump Cylinder #4 Suction Valve Leak
12809	Well Stimulation Pump Cylinder #5 Suction Valve Leak
12810	Well Stimulation Pump Monitoring Abnormal Vibration
12812	Well Stimulation Pump Gear Box Outlet Oil Temperature
12813	HVESP Thermal Management System High Voltage Interlock Loop (HVIL) Status
12814	HVESP #6 Thermal Management System High Voltage Interlock Loop (HVIL) Status
12815	HVESP #5 Thermal Management System High Voltage Interlock Loop (HVIL) Status
12816	HVESP #4 Thermal Management System High Voltage Interlock Loop (HVIL) Status
12817	HVESP #3 Thermal Management System High Voltage Interlock Loop (HVIL) Status
12818	HVESP #2 Thermal Management System High Voltage Interlock Loop (HVIL) Status
12819	HVESP #1 Thermal Management System High Voltage Interlock Loop (HVIL) Status
12836	Temperature Sensing Module #1
12837	Temperature Sensing Module #2
12838	Temperature Sensing Module #3
12839	Temperature Sensing Module #4
12840	Temperature Sensing Module #5
12841	Temperature Sensing Module #6
12842	Temperature Sensing Module #7
12843	Temperature Sensing Module #8
12844	Temperature Sensing Module #9
12845	Temperature Sensing Module #10
12846	Temperature Sensing Module #11
12847	Temperature Sensing Module #12
12848	Temperature Sensing Module #13
12849	Temperature Sensing Module #14
12850	Temperature Sensing Module #15
12851	Temperature Sensing Module #16
12853	High Ether Actuation Attempts
12869	Engine Cylinder #1 Difference from Average Temperature
12870	Engine Cylinder #2 Difference from Average Temperature
12871	Engine Cylinder #3 Difference from Average Temperature
12872	Engine Cylinder #4 Difference from Average Temperature

12873	Engine Cylinder #5 Difference from Average Temperature
12874	Engine Cylinder #6 Difference from Average Temperature
12875	Engine Cylinder #7 Difference from Average Temperature
12876	Engine Cylinder #8 Difference from Average Temperature
12877	Engine Cylinder #9 Difference from Average Temperature
12878	Engine Cylinder #10 Difference from Average Temperature
12879	Engine Cylinder #11 Difference from Average Temperature
12880	Engine Cylinder #12 Difference from Average Temperature
12881	Engine Cylinder #13 Difference from Average Temperature
12882	Engine Cylinder #14 Difference from Average Temperature
12883	Engine Cylinder #15 Difference from Average Temperature
12884	Engine Cylinder #16 Difference from Average Temperature
12885	Engine Cylinder #17 Difference from Average Temperature
12886	Engine Cylinder #18 Difference from Average Temperature
12887	Engine Cylinder #19 Difference from Average Temperature
12888	Engine Cylinder #20 Difference from Average Temperature
12889	Engine Turbocharger #3 Oil Temperature
12890	Engine Turbocharger #4 Oil Temperature
12891	Engine Turbocharger #5 Oil Temperature
12892	Engine Turbocharger #6 Oil Temperature
12893	Sea Water Pump Outlet Pressure #2
12894	Engine Cylinder Temperature Average
12895	Engine Cylinder Bank #1 Temperature Average
12896	Engine Cylinder Bank #2 Temperature Average
12897	HVESS Thermal Management System Coolant Level
12898	HVESP #1 Thermal Management System Coolant Level
12899	HVESP #2 Thermal Management System Coolant Level
12900	HVESP #3 Thermal Management System Coolant Level
12901	HVESP #4 Thermal Management System Coolant Level
12902	HVESP #5 Thermal Management System Coolant Level
12903	HVESP #6 Thermal Management System Coolant Level
12904	HVESS Number of HVESP #s Configured
12905	HVESS Number of HVESP #s Ready
12906	Engine Oil Quality
12911	Key Switch #2
12912	Secondary Control Module
12913	Network Connection #4
12914	Network Connection #5
12915	Port Troll Valve
12916	Starboard Troll Valve
12917	Port Engine Commands
12918	Starboard Engine Commands
12919	Port Active Station Throttle
12920	Starboard Active Station Throttle
12962	Engine Fuel System Gas Mass Flow Reversed
12963	Temperature Sensing Module Master Identity Signal
13009	HVESS Charger RMS current L1
13010	HVESS Charger RMS current L2
13011	HVESS Charger RMS current L3
13012	HVESS Charger Neutral RMS current
13065	HVESP #1 Actual Charge Rate

13066	HVESP #2 Actual Charge Rate
13067	HVESP #3 Actual Charge Rate
13068	HVESP #4 Actual Charge Rate
13069	HVESP #5 Actual Charge Rate
13070	HVESP #6 Actual Charge Rate
13071	HVESP #7 Actual Charge Rate
13074	Throttle Lever Module #4
13075	Throttle Lever Module #5
13076	Throttle Lever Module #6
13077	Throttle Lever Module #7
13078	Throttle Lever Module #8
13079	Operator Desired Display Mode Command #1
13080	Operator Desired Display Mode Command #2
13133	HVESP Controller A/D Converter
13134	HVESP Controller Internal Power Supply #1
13135	HVESP Controller Internal Power Supply #2
13136	HVESP Controller Internal Power Supply #3
13137	HVESP Controller Internal Power Supply #4
13138	HVESP Controller Internal Power Supply #5
13139	HVESP Controller Internal Power Supply #6
13140	HVESP Controller Power Output Supply Voltage #1
13141	HVESP Thermal Management System Compressor Motor Current
13142	HVESP Thermal Management System Performance
13143	HVESP Thermal Management System Pressure #1
13144	HVESP Thermal Management System Pressure #2
13145	HVESP Thermal Management System Starting/Lighting/Ignition (SLI) Current
13146	HVESP Thermal Management System Temperature #1
13147	HVESP Thermal Management System Temperature #2
13179	Hybrid DC Contactor Input Voltage
13181	Hybrid DC Inlet Contactor #1 State
13361	Aftertreatment DEF Transfer Pump Purge Relay
13365	HVESP Total Lifetime Energy Input
13366	HVESP Total Lifetime Energy Output
13367	HVESP #1 Total Lifetime Energy Input
13368	HVESP #1 Total Lifetime Energy Output
13369	HVESP #2 Total Lifetime Energy Input
13370	HVESP #2 Total Lifetime Energy Output
13371	HVESP #3 Total Lifetime Energy Input
13372	HVESP #3 Total Lifetime Energy Output
13373	HVESP #4 Total Lifetime Energy Input
13374	HVESP #4 Total Lifetime Energy Output
13375	HVESP #5 Total Lifetime Energy Input
13376	HVESP #5 Total Lifetime Energy Output
13377	HVESP #6 Total Lifetime Energy Input
13378	HVESP #6 Total Lifetime Energy Output
14037	HVESP #7 High-Voltage Bus Connect Command
14038	HVESP #7 Power-Down Command
14039	HVESP #7 High-Voltage Bus Active Isolation Test Command
14040	HVESP #7 High-Voltage Bus Passive Isolation Test Command
14041	HVESP #7 Cell Balancing Command
14042	HVESP #7 Enable Internal Charger Command

14043	HVESP #7 Operation Consent
14044	HVESP #7 High-Voltage Bus High Side Resistor Connect Request
14045	HVESP #7 High-Voltage Bus Low Side Resistor Connect Request
14048	HVESP #7 Discharge Power Limit Due to State of Charge
14049	HVESP #7 Discharge Power Limit Due to Battery Temperature
14050	HVESP #7 Discharge Power Limit Due to Battery Diagnostic Condition
14051	HVESP #7 Discharge Power Limit Due to Battery or Cell Voltage
14052	HVESP #7 Discharge Power Limit Due to Battery Current
14053	HVESP #7 Discharge Power Limit Due to an Undefined Cause
14054	HVESP #7 Charge Power Limit Due to State of Charge
14055	HVESP #7 Charge Power Limit Due to Battery Temperature
14056	HVESP #7 Charge Power Limit Due to Battery Diagnostic Condition
14057	HVESP #7 Charge Power Limit Due to Battery or Cell Voltage
14058	HVESP #7 Charge Power Limit Due to Battery Current
14059	HVESP #7 Charge Power Limit Due to an Undefined Cause
14060	HVESP #7 Available Discharge Power
14061	HVESP #7 Available Charge Power
14062	HVESP #7 Voltage Level
14063	HVESP #7 Current
14064	HVESP #7 Fast Update State of Charge
14065	HVESP #7 Highest Cell Voltage
14066	HVESP #7 Lowest Cell Voltage
14067	HVESP #7 Cell Voltage Differential Status
14068	HVESP #7 Highest Cell Temperature
14069	HVESP #7 Lowest Cell Temperature
14070	HVESP #7 Average Cell Temperature
14071	HVESP #7 Cell Temperature Differential Status
14072	HVESP #7 Discharge Capacity
14073	HVESP #7 Charge Capacity
14074	HVESP #7 Cell Balancing Count
14075	HVESP #7 Discharge Current Limit
14076	HVESP #7 Charge Current Limit
14077	HVESP #7 Lowest Cell State of Charge
14078	HVESP #7 Highest Cell State of Charge
14079	HVESP #7 Bus Voltage
14080	HVESP #7 Ignition Voltage
14081	HVESP #7 Intake Coolant Temperature
14082	HVESP #7 Outlet Coolant Temperature
14083	HVESP #7 Electronics Temperature
14084	HVESP #7 Temperature
14085	HVESP #7 High-Voltage Bus (Positive) Contactor State
14086	HVESP #7 High-Voltage Bus (Negative) Contactor State
14087	HVESP #7 High-Voltage Bus Disconnect Forewarning
14088	HVESP #7 High-Voltage Bus Pre-Charge Relay State
14089	HVESP #7 Center of Pack Contactor State
14090	HVESP #7 High-Voltage Bus Active Isolation Test Status
14091	HVESP #7 High-Voltage Bus Passive Isolation Test Status
14092	HVESP #7 High Voltage Interlock Loop (HVIL) Status
14093	HVESP #7 Inertia Switch Status
14094	HVESP #7 State of Charge Status
14095	HVESP #7 Cell Balance Status

14096	HVESP #7 Cell Balancing Active
14097	HVESP #7 Internal Charger Status
14098	HVESP #7 High-Voltage Bus Connection Status
14099	HVESP #7 Operational Status
14102	HVESP #7 Discharge Energy Capacity
14103	HVESP #7 Charge Energy Capacity
14104	HVESP #7 Maximum Charge Voltage Limit
14105	HVESP #7 Module #1 Operational Status
14106	HVESP #7 Module #2 Operational Status
14107	HVESP #7 Module #3 Operational Status
14108	HVESP #7 Module #4 Operational Status
14109	HVESP #7 Module #5 Operational Status
14110	HVESP #7 Module #6 Operational Status
14111	HVESP #7 Module #7 Operational Status
14112	HVESP #7 Module #8 Operational Status
14113	HVESP #7 Module #9 Operational Status
14114	HVESP #7 Module #10 Operational Status
14115	HVESP #7 Module #11 Operational Status
14116	HVESP #7 Module #12 Operational Status
14117	HVESP #7 Module #13 Operational Status
14118	HVESP #7 Module #14 Operational Status
14119	HVESP #7 Module #15 Operational Status
14120	HVESP #7 Module #16 Operational Status
14121	HVESP #7 Module #17 Operational Status
14122	HVESP #7 Module #18 Operational Status
14123	HVESP #7 Module #19 Operational Status
14124	HVESP #7 Module #20 Operational Status
14125	HVESP #7 Module #21 Operational Status
14126	HVESP #7 Module #22 Operational Status
14127	HVESP #7 Module #23 Operational Status
14128	HVESP #7 Module #24 Operational Status
14129	HVESP #7 Module #25 Operational Status
14130	HVESP #7 Module #26 Operational Status
14131	HVESP #7 Module #27 Operational Status
14132	HVESP #7 Module #28 Operational Status
14133	HVESP #7 Module #29 Operational Status
14134	HVESP #7 Module #30 Operational Status
14135	HVESP #7 Module #31 Operational Status
14136	HVESP #7 Module #32 Operational Status
14137	HVESP #7 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
14138	HVESP #7 Thermal Management System High-Voltage Input Power
14139	HVESP #7 Thermal Management System Compressor Speed
14140	HVESP #7 Thermal Management System Relative Humidity
14141	HVESP #7 Thermal Management System Heater Status
14142	HVESP #7 Thermal Management System High Voltage Interlock Loop (HVIL) Status
14143	HVESP #7 Thermal Management System Mode
14144	HVESP #7 Thermal Management System Coolant Level
14145	HVESP #7 Highest Cell Voltage Module Number
14146	HVESP #7 Highest Cell Voltage Cell Number
14147	HVESP #7 Lowest Cell Voltage Module Number
14148	HVESP #7 Lowest Cell Voltage Cell Number

14149	HVESP #7 Average Cell Voltage
14150	HVESP #7 Highest Cell Temperature Module Number
14151	HVESP #7 Highest Cell Temperature Cell Number
14152	HVESP #7 Lowest Cell Temperature Module Number
14153	HVESP #7 Lowest Cell Temperature Cell Number
14154	HVESP #7 Highest Cell State of Charge Module Number
14155	HVESP #7 Highest Cell State of Charge Cell Number
14156	HVESP #7 Lowest Cell State of Charge Module Number
14157	HVESP #7 Lowest Cell State of Charge Cell Number
14158	HVESP #7 High-Voltage Bus Active Isolation Test Results
14159	HVESP #7 High-Voltage Bus Passive Isolation Test Results
14160	HVESP #7 Bus Voltage Negative to Chassis Ground Voltage
14161	HVESP #7 Voltage Level Negative to Chassis Ground Voltage
14162	HVESP #7 Actual Charge Rate
14163	HVESP #7 State of Health
14164	HVESP #7 Contactor Open Under Load Count
14165	HVESP #7 Total Energy Throughput
14166	HVESP #7 Total Accumulated Charge
14167	HVESP #7 Total Lifetime Energy Input
14168	HVESP #7 Total Lifetime Energy Output
14171	HVESP #7 Nominal Voltage
14172	HVESP #7 Recommended Minimum Operating Voltage
14173	HVESP #7 Recommended Maximum Operating Voltage
14174	HVESP #7 Recommended Minimum State Of Charge
14175	HVESP #7 Recommended Maximum State Of Charge
14176	HVESP #7 Recommended Maximum Operating Temperature
14177	HVESP #7 Recommended Minimum Operating Temperature
14178	HVESP #7 Cell Maximum Voltage Limit
14179	HVESP #7 Cell Minimum Voltage Limit
14180	HVESP #8 High-Voltage Bus Connect Command
14181	HVESP #8 Power-Down Command
14182	HVESP #8 High-Voltage Bus Active Isolation Test Command
14183	HVESP #8 High-Voltage Bus Passive Isolation Test Command
14184	HVESP #8 Cell Balancing Command
14185	HVESP #8 Enable Internal Charger Command
14186	HVESP #8 Operation Consent
14187	HVESP #8 High-Voltage Bus High Side Resistor Connect Request
14188	HVESP #8 High-Voltage Bus Low Side Resistor Connect Request
14191	HVESP #8 Discharge Power Limit Due to State of Charge
14192	HVESP #8 Discharge Power Limit Due to Battery Temperature
14193	HVESP #8 Discharge Power Limit Due to Battery Diagnostic Condition
14194	HVESP #8 Discharge Power Limit Due to Battery or Cell Voltage
14195	HVESP #8 Discharge Power Limit Due to Battery Current
14196	HVESP #8 Discharge Power Limit Due to an Undefined Cause
14197	HVESP #8 Charge Power Limit Due to State of Charge
14198	HVESP #8 Charge Power Limit Due to Battery Temperature
14199	HVESP #8 Charge Power Limit Due to Battery Diagnostic Condition
14200	HVESP #8 Charge Power Limit Due to Battery or Cell Voltage
14201	HVESP #8 Charge Power Limit Due to Battery Current
14202	HVESP #8 Charge Power Limit Due to an Undefined Cause
14203	HVESP #8 Available Discharge Power

14204	HVESP #8 Available Charge Power
14205	HVESP #8 Voltage Level
14206	HVESP #8 Current
14207	HVESP #8 Fast Update State of Charge
14208	HVESP #8 Highest Cell Voltage
14209	HVESP #8 Lowest Cell Voltage
14210	HVESP #8 Cell Voltage Differential Status
14211	HVESP #8 Highest Cell Temperature
14212	HVESP #8 Lowest Cell Temperature
14213	HVESP #8 Average Cell Temperature
14214	HVESP #8 Cell Temperature Differential Status
14215	HVESP #8 Discharge Capacity
14216	HVESP #8 Charge Capacity
14217	HVESP #8 Cell Balancing Count
14218	HVESP #8 Discharge Current Limit
14219	HVESP #8 Charge Current Limit
14220	HVESP #8 Lowest Cell State of Charge
14221	HVESP #8 Highest Cell State of Charge
14222	HVESP #8 Bus Voltage
14223	HVESP #8 Ignition Voltage
14224	HVESP #8 Intake Coolant Temperature
14225	HVESP #8 Outlet Coolant Temperature
14226	HVESP #8 Electronics Temperature
14227	HVESP #8 Temperature
14228	HVESP #8 High-Voltage Bus (Positive) Contactor State
14229	HVESP #8 High-Voltage Bus (Negative) Contactor State
14230	HVESP #8 High-Voltage Bus Disconnect Forewarning
14231	HVESP #8 High-Voltage Bus Pre-Charge Relay State
14232	HVESP #8 Center of Pack Contactor State
14233	HVESP #8 High-Voltage Bus Active Isolation Test Status
14234	HVESP #8 High-Voltage Bus Passive Isolation Test Status
14235	HVESP #8 High Voltage Interlock Loop (HVIL) Status
14236	HVESP #8 Inertia Switch Status
14237	HVESP #8 State of Charge Status
14238	HVESP #8 Cell Balance Status
14239	HVESP #8 Cell Balancing Active
14240	HVESP #8 Internal Charger Status
14241	HVESP #8 High-Voltage Bus Connection Status
14242	HVESP #8 Operational Status
14245	HVESP #8 Discharge Energy Capacity
14246	HVESP #8 Charge Energy Capacity
14247	HVESP #8 Maximum Charge Voltage Limit
14248	HVESP #8 Module #1 Operational Status
14249	HVESP #8 Module #2 Operational Status
14250	HVESP #8 Module #3 Operational Status
14251	HVESP #8 Module #4 Operational Status
14252	HVESP #8 Module #5 Operational Status
14253	HVESP #8 Module #6 Operational Status
14254	HVESP #8 Module #7 Operational Status
14255	HVESP #8 Module #8 Operational Status
14256	HVESP #8 Module #9 Operational Status

14257	HVESP #8 Module #10 Operational Status
14258	HVESP #8 Module #11 Operational Status
14259	HVESP #8 Module #12 Operational Status
14260	HVESP #8 Module #13 Operational Status
14261	HVESP #8 Module #14 Operational Status
14262	HVESP #8 Module #15 Operational Status
14263	HVESP #8 Module #16 Operational Status
14264	HVESP #8 Module #17 Operational Status
14265	HVESP #8 Module #18 Operational Status
14266	HVESP #8 Module #19 Operational Status
14267	HVESP #8 Module #20 Operational Status
14268	HVESP #8 Module #21 Operational Status
14269	HVESP #8 Module #22 Operational Status
14270	HVESP #8 Module #23 Operational Status
14271	HVESP #8 Module #24 Operational Status
14272	HVESP #8 Module #25 Operational Status
14273	HVESP #8 Module #26 Operational Status
14274	HVESP #8 Module #27 Operational Status
14275	HVESP #8 Module #28 Operational Status
14276	HVESP #8 Module #29 Operational Status
14277	HVESP #8 Module #30 Operational Status
14278	HVESP #8 Module #31 Operational Status
14279	HVESP #8 Module #32 Operational Status
14280	HVESP #8 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
14281	HVESP #8 Thermal Management System High-Voltage Input Power
14282	HVESP #8 Thermal Management System Compressor Speed
14283	HVESP #8 Thermal Management System Relative Humidity
14284	HVESP #8 Thermal Management System Heater Status
14285	HVESP #8 Thermal Management System High Voltage Interlock Loop (HVIL) Status
14286	HVESP #8 Thermal Management System Mode
14287	HVESP #8 Thermal Management System Coolant Level
14288	HVESP #8 Highest Cell Voltage Module Number
14289	HVESP #8 Highest Cell Voltage Cell Number
14290	HVESP #8 Lowest Cell Voltage Module Number
14291	HVESP #8 Lowest Cell Voltage Cell Number
14292	HVESP #8 Average Cell Voltage
14293	HVESP #8 Highest Cell Temperature Module Number
14294	HVESP #8 Highest Cell Temperature Cell Number
14295	HVESP #8 Lowest Cell Temperature Module Number
14296	HVESP #8 Lowest Cell Temperature Cell Number
14297	HVESP #8 Highest Cell State of Charge Module Number
14298	HVESP #8 Highest Cell State of Charge Cell Number
14299	HVESP #8 Lowest Cell State of Charge Module Number
14300	HVESP #8 Lowest Cell State of Charge Cell Number
14301	HVESP #8 High-Voltage Bus Active Isolation Test Results
14302	HVESP #8 High-Voltage Bus Passive Isolation Test Results
14303	HVESP #8 Bus Voltage Negative to Chassis Ground Voltage
14304	HVESP #8 Voltage Level Negative to Chassis Ground Voltage
14305	HVESP #8 Actual Charge Rate
14306	HVESP #8 State of Health
14307	HVESP #8 Contactor Open Under Load Count

14308	HVESP #8 Total Energy Throughput
14309	HVESP #8 Total Accumulated Charge
14310	HVESP #8 Total Lifetime Energy Input
14311	HVESP #8 Total Lifetime Energy Output
14314	HVESP #8 Nominal Voltage
14315	HVESP #8 Recommended Minimum Operating Voltage
14316	HVESP #8 Recommended Maximum Operating Voltage
14317	HVESP #8 Recommended Minimum State Of Charge
14318	HVESP #8 Recommended Maximum State Of Charge
14319	HVESP #8 Recommended Maximum Operating Temperature
14320	HVESP #8 Recommended Minimum Operating Temperature
14321	HVESP #8 Cell Maximum Voltage Limit
14322	HVESP #8 Cell Minimum Voltage Limit
14323	HVESP #9 High-Voltage Bus Connect Command
14324	HVESP #9 Power-Down Command
14325	HVESP #9 High-Voltage Bus Active Isolation Test Command
14326	HVESP #9 High-Voltage Bus Passive Isolation Test Command
14327	HVESP #9 Cell Balancing Command
14328	HVESP #9 Enable Internal Charger Command
14329	HVESP #9 Operation Consent
14330	HVESP #9 High-Voltage Bus High Side Resistor Connect Request
14331	HVESP #9 High-Voltage Bus Low Side Resistor Connect Request
14334	HVESP #9 Discharge Power Limit Due to State of Charge
14335	HVESP #9 Discharge Power Limit Due to Battery Temperature
14336	HVESP #9 Discharge Power Limit Due to Battery Diagnostic Condition
14337	HVESP #9 Discharge Power Limit Due to Battery or Cell Voltage
14338	HVESP #9 Discharge Power Limit Due to Battery Current
14339	HVESP #9 Discharge Power Limit Due to an Undefined Cause
14340	HVESP #9 Charge Power Limit Due to State of Charge
14341	HVESP #9 Charge Power Limit Due to Battery Temperature
14342	HVESP #9 Charge Power Limit Due to Battery Diagnostic Condition
14343	HVESP #9 Charge Power Limit Due to Battery or Cell Voltage
14344	HVESP #9 Charge Power Limit Due to Battery Current
14345	HVESP #9 Charge Power Limit Due to an Undefined Cause
14346	HVESP #9 Available Discharge Power
14347	HVESP #9 Available Charge Power
14348	HVESP #9 Voltage Level
14349	HVESP #9 Current
14350	HVESP #9 Fast Update State of Charge
14351	HVESP #9 Highest Cell Voltage
14352	HVESP #9 Lowest Cell Voltage
14353	HVESP #9 Cell Voltage Differential Status
14354	HVESP #9 Highest Cell Temperature
14355	HVESP #9 Lowest Cell Temperature
14356	HVESP #9 Average Cell Temperature
14357	HVESP #9 Cell Temperature Differential Status
14358	HVESP #9 Discharge Capacity
14359	HVESP #9 Charge Capacity
14360	HVESP #9 Cell Balancing Count
14361	HVESP #9 Discharge Current Limit
14362	HVESP #9 Charge Current Limit

14363	HVESP #9 Lowest Cell State of Charge
14364	HVESP #9 Highest Cell State of Charge
14365	HVESP #9 Bus Voltage
14366	HVESP #9 Ignition Voltage
14367	HVESP #9 Intake Coolant Temperature
14368	HVESP #9 Outlet Coolant Temperature
14369	HVESP #9 Electronics Temperature
14370	HVESP #9 Temperature
14371	HVESP #9 High-Voltage Bus (Positive) Contactor State
14372	HVESP #9 High-Voltage Bus (Negative) Contactor State
14373	HVESP #9 High-Voltage Bus Disconnect Forewarning
14374	HVESP #9 High-Voltage Bus Pre-Charge Relay State
14375	HVESP #9 Center of Pack Contactor State
14376	HVESP #9 High-Voltage Bus Active Isolation Test Status
14377	HVESP #9 High-Voltage Bus Passive Isolation Test Status
14378	HVESP #9 High Voltage Interlock Loop (HVIL) Status
14379	HVESP #9 Inertia Switch Status
14380	HVESP #9 State of Charge Status
14381	HVESP #9 Cell Balance Status
14382	HVESP #9 Cell Balancing Active
14383	HVESP #9 Internal Charger Status
14384	HVESP #9 High-Voltage Bus Connection Status
14385	HVESP #9 Operational Status
14388	HVESP #9 Discharge Energy Capacity
14389	HVESP #9 Charge Energy Capacity
14390	HVESP #9 Maximum Charge Voltage Limit
14391	HVESP #9 Module #1 Operational Status
14392	HVESP #9 Module #2 Operational Status
14393	HVESP #9 Module #3 Operational Status
14394	HVESP #9 Module #4 Operational Status
14395	HVESP #9 Module #5 Operational Status
14396	HVESP #9 Module #6 Operational Status
14397	HVESP #9 Module #7 Operational Status
14398	HVESP #9 Module #8 Operational Status
14399	HVESP #9 Module #9 Operational Status
14400	HVESP #9 Module #10 Operational Status
14401	HVESP #9 Module #11 Operational Status
14402	HVESP #9 Module #12 Operational Status
14403	HVESP #9 Module #13 Operational Status
14404	HVESP #9 Module #14 Operational Status
14405	HVESP #9 Module #15 Operational Status
14406	HVESP #9 Module #16 Operational Status
14407	HVESP #9 Module #17 Operational Status
14408	HVESP #9 Module #18 Operational Status
14409	HVESP #9 Module #19 Operational Status
14410	HVESP #9 Module #20 Operational Status
14411	HVESP #9 Module #21 Operational Status
14412	HVESP #9 Module #22 Operational Status
14413	HVESP #9 Module #23 Operational Status
14414	HVESP #9 Module #24 Operational Status
14415	HVESP #9 Module #25 Operational Status

14416	HVESP #9 Module #26 Operational Status
14417	HVESP #9 Module #27 Operational Status
14418	HVESP #9 Module #28 Operational Status
14419	HVESP #9 Module #29 Operational Status
14420	HVESP #9 Module #30 Operational Status
14421	HVESP #9 Module #31 Operational Status
14422	HVESP #9 Module #32 Operational Status
14423	HVESP #9 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
14424	HVESP #9 Thermal Management System High-Voltage Input Power
14425	HVESP #9 Thermal Management System Compressor Speed
14426	HVESP #9 Thermal Management System Relative Humidity
14427	HVESP #9 Thermal Management System Heater Status
14428	HVESP #9 Thermal Management System High Voltage Interlock Loop (HVIL) Status
14429	HVESP #9 Thermal Management System Mode
14430	HVESP #9 Thermal Management System Coolant Level
14431	HVESP #9 Highest Cell Voltage Module Number
14432	HVESP #9 Highest Cell Voltage Cell Number
14433	HVESP #9 Lowest Cell Voltage Module Number
14434	HVESP #9 Lowest Cell Voltage Cell Number
14435	HVESP #9 Average Cell Voltage
14436	HVESP #9 Highest Cell Temperature Module Number
14437	HVESP #9 Highest Cell Temperature Cell Number
14438	HVESP #9 Lowest Cell Temperature Module Number
14439	HVESP #9 Lowest Cell Temperature Cell Number
14440	HVESP #9 Highest Cell State of Charge Module Number
14441	HVESP #9 Highest Cell State of Charge Cell Number
14442	HVESP #9 Lowest Cell State of Charge Module Number
14443	HVESP #9 Lowest Cell State of Charge Cell Number
14444	HVESP #9 High-Voltage Bus Active Isolation Test Results
14445	HVESP #9 High-Voltage Bus Passive Isolation Test Results
14446	HVESP #9 Bus Voltage Negative to Chassis Ground Voltage
14447	HVESP #9 Voltage Level Negative to Chassis Ground Voltage
14448	HVESP #9 Actual Charge Rate
14449	HVESP #9 State of Health
14450	HVESP #9 Contactor Open Under Load Count
14451	HVESP #9 Total Energy Throughput
14452	HVESP #9 Total Accumulated Charge
14453	HVESP #9 Total Lifetime Energy Input
14454	HVESP #9 Total Lifetime Energy Output
14457	HVESP #9 Nominal Voltage
14458	HVESP #9 Recommended Minimum Operating Voltage
14459	HVESP #9 Recommended Maximum Operating Voltage
14460	HVESP #9 Recommended Minimum State Of Charge
14461	HVESP #9 Recommended Maximum State Of Charge
14462	HVESP #9 Recommended Maximum Operating Temperature
14463	HVESP #9 Recommended Minimum Operating Temperature
14464	HVESP #9 Cell Maximum Voltage Limit
14465	HVESP #9 Cell Minimum Voltage Limit
14466	HVESP #10 High-Voltage Bus Connect Command
14467	HVESP #10 Power-Down Command
14468	HVESP #10 High-Voltage Bus Active Isolation Test Command

14469	HVESP #10 High-Voltage Bus Passive Isolation Test Command
14470	HVESP #10 Cell Balancing Command
14471	HVESP #10 Enable Internal Charger Command
14472	HVESP #10 Operation Consent
14473	HVESP #10 High-Voltage Bus High Side Resistor Connect Request
14474	HVESP #10 High-Voltage Bus Low Side Resistor Connect Request
14477	HVESP #10 Discharge Power Limit Due to State of Charge
14478	HVESP #10 Discharge Power Limit Due to Battery Temperature
14479	HVESP #10 Discharge Power Limit Due to Battery Diagnostic Condition
14480	HVESP #10 Discharge Power Limit Due to Battery or Cell Voltage
14481	HVESP #10 Discharge Power Limit Due to Battery Current
14482	HVESP #10 Discharge Power Limit Due to an Undefined Cause
14483	HVESP #10 Charge Power Limit Due to State of Charge
14484	HVESP #10 Charge Power Limit Due to Battery Temperature
14485	HVESP #10 Charge Power Limit Due to Battery Diagnostic Condition
14486	HVESP #10 Charge Power Limit Due to Battery or Cell Voltage
14487	HVESP #10 Charge Power Limit Due to Battery Current
14488	HVESP #10 Charge Power Limit Due to an Undefined Cause
14489	HVESP #10 Available Discharge Power
14490	HVESP #10 Available Charge Power
14491	HVESP #10 Voltage Level
14492	HVESP #10 Current
14493	HVESP #10 Fast Update State of Charge
14494	HVESP #10 Highest Cell Voltage
14495	HVESP #10 Lowest Cell Voltage
14496	HVESP #10 Cell Voltage Differential Status
14497	HVESP #10 Highest Cell Temperature
14498	HVESP #10 Lowest Cell Temperature
14499	HVESP #10 Average Cell Temperature
14500	HVESP #10 Cell Temperature Differential Status
14501	HVESP #10 Discharge Capacity
14502	HVESP #10 Charge Capacity
14503	HVESP #10 Cell Balancing Count
14504	HVESP #10 Discharge Current Limit
14505	HVESP #10 Charge Current Limit
14506	HVESP #10 Lowest Cell State of Charge
14507	HVESP #10 Highest Cell State of Charge
14508	HVESP #10 Bus Voltage
14509	HVESP #10 Ignition Voltage
14510	HVESP #10 Intake Coolant Temperature
14511	HVESP #10 Outlet Coolant Temperature
14512	HVESP #10 Electronics Temperature
14513	HVESP #10 Temperature
14514	HVESP #10 High-Voltage Bus (Positive) Contactor State
14515	HVESP #10 High-Voltage Bus (Negative) Contactor State
14516	HVESP #10 High-Voltage Bus Disconnect Forewarning
14517	HVESP #10 High-Voltage Bus Pre-Charge Relay State
14518	HVESP #10 Center of Pack Contactor State
14519	HVESP #10 High-Voltage Bus Active Isolation Test Status
14520	HVESP #10 High-Voltage Bus Passive Isolation Test Status
14521	HVESP #10 High Voltage Interlock Loop (HVIL) Status

14522	HVESP #10 Inertia Switch Status
14523	HVESP #10 State of Charge Status
14524	HVESP #10 Cell Balance Status
14525	HVESP #10 Cell Balancing Active
14526	HVESP #10 Internal Charger Status
14527	HVESP #10 High-Voltage Bus Connection Status
14528	HVESP #10 Operational Status
14531	HVESP #10 Discharge Energy Capacity
14532	HVESP #10 Charge Energy Capacity
14533	HVESP #10 Maximum Charge Voltage Limit
14534	HVESP #10 Module #1 Operational Status
14535	HVESP #10 Module #2 Operational Status
14536	HVESP #10 Module #3 Operational Status
14537	HVESP #10 Module #4 Operational Status
14538	HVESP #10 Module #5 Operational Status
14539	HVESP #10 Module #6 Operational Status
14540	HVESP #10 Module #7 Operational Status
14541	HVESP #10 Module #8 Operational Status
14542	HVESP #10 Module #9 Operational Status
14543	HVESP #10 Module #10 Operational Status
14544	HVESP #10 Module #11 Operational Status
14545	HVESP #10 Module #12 Operational Status
14546	HVESP #10 Module #13 Operational Status
14547	HVESP #10 Module #14 Operational Status
14548	HVESP #10 Module #15 Operational Status
14549	HVESP #10 Module #16 Operational Status
14550	HVESP #10 Module #17 Operational Status
14551	HVESP #10 Module #18 Operational Status
14552	HVESP #10 Module #19 Operational Status
14553	HVESP #10 Module #20 Operational Status
14554	HVESP #10 Module #21 Operational Status
14555	HVESP #10 Module #22 Operational Status
14556	HVESP #10 Module #23 Operational Status
14557	HVESP #10 Module #24 Operational Status
14558	HVESP #10 Module #25 Operational Status
14559	HVESP #10 Module #26 Operational Status
14560	HVESP #10 Module #27 Operational Status
14561	HVESP #10 Module #28 Operational Status
14562	HVESP #10 Module #29 Operational Status
14563	HVESP #10 Module #30 Operational Status
14564	HVESP #10 Module #31 Operational Status
14565	HVESP #10 Module #32 Operational Status
14566	HVESP #10 Thermal Management System Starting/Lighting/Ignition (SLI) Input Power
14567	HVESP #10 Thermal Management System High-Voltage Input Power
14568	HVESP #10 Thermal Management System Compressor Speed
14569	HVESP #10 Thermal Management System Relative Humidity
14570	HVESP #10 Thermal Management System Heater Status
14571	HVESP #10 Thermal Management System High Voltage Interlock Loop (HVIL) Status
14572	HVESP #10 Thermal Management System Mode
14573	HVESP #10 Thermal Management System Coolant Level
14574	HVESP #10 Highest Cell Voltage Module Number

14575	HVESP #10 Highest Cell Voltage Cell Number
14576	HVESP #10 Lowest Cell Voltage Module Number
14577	HVESP #10 Lowest Cell Voltage Cell Number
14578	HVESP #10 Average Cell Voltage
14579	HVESP #10 Highest Cell Temperature Module Number
14580	HVESP #10 Highest Cell Temperature Cell Number
14581	HVESP #10 Lowest Cell Temperature Module Number
14582	HVESP #10 Lowest Cell Temperature Cell Number
14583	HVESP #10 Highest Cell State of Charge Module Number
14584	HVESP #10 Highest Cell State of Charge Cell Number
14585	HVESP #10 Lowest Cell State of Charge Module Number
14586	HVESP #10 Lowest Cell State of Charge Cell Number
14587	HVESP #10 High-Voltage Bus Active Isolation Test Results
14588	HVESP #10 High-Voltage Bus Passive Isolation Test Results
14589	HVESP #10 Bus Voltage Negative to Chassis Ground Voltage
14590	HVESP #10 Voltage Level Negative to Chassis Ground Voltage
14591	HVESP #10 Actual Charge Rate
14592	HVESP #10 State of Health
14593	HVESP #10 Contactor Open Under Load Count
14594	HVESP #10 Total Energy Throughput
14595	HVESP #10 Total Accumulated Charge
14596	HVESP #10 Total Lifetime Energy Input
14597	HVESP #10 Total Lifetime Energy Output
14600	HVESP #10 Nominal Voltage
14601	HVESP #10 Recommended Minimum Operating Voltage
14602	HVESP #10 Recommended Maximum Operating Voltage
14603	HVESP #10 Recommended Minimum State Of Charge
14604	HVESP #10 Recommended Maximum State Of Charge
14605	HVESP #10 Recommended Maximum Operating Temperature
14606	HVESP #10 Recommended Minimum Operating Temperature
14607	HVESP #10 Cell Maximum Voltage Limit
14608	HVESP #10 Cell Minimum Voltage Limit
14609	HVESS Module #17 Operational Status
14610	HVESS Module #18 Operational Status
14611	HVESS Module #19 Operational Status
14612	HVESS Module #20 Operational Status
14613	HVESS Module #21 Operational Status
14614	HVESS Module #22 Operational Status
14615	HVESS Module #23 Operational Status
14616	HVESS Module #24 Operational Status
14617	HVESS Module #25 Operational Status
14618	HVESS Module #26 Operational Status
14619	HVESS Module #27 Operational Status
14620	HVESS Module #28 Operational Status
14621	HVESS Module #29 Operational Status
14622	HVESS Module #30 Operational Status
14623	HVESS Module #31 Operational Status
14624	HVESS Module #32 Operational Status
14625	HVESP #1 Module #17 Operational Status
14626	HVESP #1 Module #18 Operational Status
14627	HVESP #1 Module #19 Operational Status

14628	HVESP #1 Module #20 Operational Status
14629	HVESP #1 Module #21 Operational Status
14630	HVESP #1 Module #22 Operational Status
14631	HVESP #1 Module #23 Operational Status
14632	HVESP #1 Module #24 Operational Status
14633	HVESP #1 Module #25 Operational Status
14634	HVESP #1 Module #26 Operational Status
14635	HVESP #1 Module #27 Operational Status
14636	HVESP #1 Module #28 Operational Status
14637	HVESP #1 Module #29 Operational Status
14638	HVESP #1 Module #30 Operational Status
14639	HVESP #1 Module #31 Operational Status
14640	HVESP #1 Module #32 Operational Status
14641	HVESP #2 Module #17 Operational Status
14642	HVESP #2 Module #18 Operational Status
14643	HVESP #2 Module #19 Operational Status
14644	HVESP #2 Module #20 Operational Status
14645	HVESP #2 Module #21 Operational Status
14646	HVESP #2 Module #22 Operational Status
14647	HVESP #2 Module #23 Operational Status
14648	HVESP #2 Module #24 Operational Status
14649	HVESP #2 Module #25 Operational Status
14650	HVESP #2 Module #26 Operational Status
14651	HVESP #2 Module #27 Operational Status
14652	HVESP #2 Module #28 Operational Status
14653	HVESP #2 Module #29 Operational Status
14654	HVESP #2 Module #30 Operational Status
14655	HVESP #2 Module #31 Operational Status
14656	HVESP #2 Module #32 Operational Status
14657	HVESP #3 Module #17 Operational Status
14658	HVESP #3 Module #18 Operational Status
14659	HVESP #3 Module #19 Operational Status
14660	HVESP #3 Module #20 Operational Status
14661	HVESP #3 Module #21 Operational Status
14662	HVESP #3 Module #22 Operational Status
14663	HVESP #3 Module #23 Operational Status
14664	HVESP #3 Module #24 Operational Status
14665	HVESP #3 Module #25 Operational Status
14666	HVESP #3 Module #26 Operational Status
14667	HVESP #3 Module #27 Operational Status
14668	HVESP #3 Module #28 Operational Status
14669	HVESP #3 Module #29 Operational Status
14670	HVESP #3 Module #30 Operational Status
14671	HVESP #3 Module #31 Operational Status
14672	HVESP #3 Module #32 Operational Status
14673	HVESP #4 Module #17 Operational Status
14674	HVESP #4 Module #18 Operational Status
14675	HVESP #4 Module #19 Operational Status
14676	HVESP #4 Module #20 Operational Status
14677	HVESP #4 Module #21 Operational Status
14678	HVESP #4 Module #22 Operational Status

14679	HVESP #4 Module #23 Operational Status
14680	HVESP #4 Module #24 Operational Status
14681	HVESP #4 Module #25 Operational Status
14682	HVESP #4 Module #26 Operational Status
14683	HVESP #4 Module #27 Operational Status
14684	HVESP #4 Module #28 Operational Status
14685	HVESP #4 Module #29 Operational Status
14686	HVESP #4 Module #30 Operational Status
14687	HVESP #4 Module #31 Operational Status
14688	HVESP #4 Module #32 Operational Status
14689	HVESP #5 Module #17 Operational Status
14690	HVESP #5 Module #18 Operational Status
14691	HVESP #5 Module #19 Operational Status
14692	HVESP #5 Module #20 Operational Status
14693	HVESP #5 Module #21 Operational Status
14694	HVESP #5 Module #22 Operational Status
14695	HVESP #5 Module #23 Operational Status
14696	HVESP #5 Module #24 Operational Status
14697	HVESP #5 Module #25 Operational Status
14698	HVESP #5 Module #26 Operational Status
14699	HVESP #5 Module #27 Operational Status
14700	HVESP #5 Module #28 Operational Status
14701	HVESP #5 Module #29 Operational Status
14702	HVESP #5 Module #30 Operational Status
14703	HVESP #5 Module #31 Operational Status
14704	HVESP #5 Module #32 Operational Status
14705	HVESP #6 Module #17 Operational Status
14706	HVESP #6 Module #18 Operational Status
14707	HVESP #6 Module #19 Operational Status
14708	HVESP #6 Module #20 Operational Status
14709	HVESP #6 Module #21 Operational Status
14710	HVESP #6 Module #22 Operational Status
14711	HVESP #6 Module #23 Operational Status
14712	HVESP #6 Module #24 Operational Status
14713	HVESP #6 Module #25 Operational Status
14714	HVESP #6 Module #26 Operational Status
14715	HVESP #6 Module #27 Operational Status
14716	HVESP #6 Module #28 Operational Status
14717	HVESP #6 Module #29 Operational Status
14718	HVESP #6 Module #30 Operational Status
14719	HVESP #6 Module #31 Operational Status
14720	HVESP #6 Module #32 Operational Status
15205	Spray Bar Water Pressure
15206	Vehicle Water Delivery System Water Tank Level
15207	Water Spray Head #1 Control Solenoid
15208	Water Spray Head #2 Control Solenoid
15209	Water Spray Head #3 Control Solenoid
15210	Water Spray Head #4 Control Solenoid
15211	Water Spray Head #5 Control Solenoid
15212	Water Spray Head #6 Control Solenoid
15213	Water Spray Head #7 Control Solenoid

15214	Water Cannon Vertical Control Solenoid
15215	Water Cannon Horizontal Control Solenoid
15216	Auxiliary Water Control Solenoid
15224	Blended Dual Fuel Mode Total Diesel Fuel Used
15225	Blended Dual Fuel Mode Total Diesel Fuel Percent Displaced
15226	Blended Dual Fuel Mode Percent Time Active
15227	Blended Dual Fuel Mode Diesel Fuel Percent Displaced
15228	Blended Dual Fuel Mode Estimated Instantaneous Diesel Savings Rate Percentage
15229	Blended Dual Fuel Mode Total Diesel Fuel Displaced by Gaseous Fuel
15230	Blended Dual Fuel Mode Total Diesel Fuel Demand
15231	Blended Dual Fuel Mode Estimated Instantaneous Fuel Savings Rate
15232	Engine Failed to Crank
15233	Hydraulic Propulsion System Disable Solenoid
15234	Vibratory Actuator Selector
15235	Water Spray Mode Selector
15236	Water Spray Pump Relay
15238	Fire Suppression System Warning
15239	Fire Suppression System Disabled
15245	Engine Crankcase Ventilation Heater
15246	Number of Engine Turbochargers Commanded
15294	HVESP #11 Voltage Level
15295	HVESP #11 Current
15296	HVESP #11 Fast Update State of Charge
15299	HVESP #11 Cell Voltage Differential Status
15300	HVESP #11 Highest Cell Temperature
15301	HVESP #11 Lowest Cell Temperature
15303	HVESP #11 Cell Temperature Differential Status
15316	HVESP #11 Temperature
15330	HVESP #11 High-Voltage Bus Connection Status
15436	HVESP #12 Voltage Level
15437	HVESP #12 Current
15438	HVESP #12 Fast Update State of Charge
15441	HVESP #12 Cell Voltage Differential Status
15442	HVESP #12 Highest Cell Temperature
15443	HVESP #12 Lowest Cell Temperature
15445	HVESP #12 Cell Temperature Differential Status
15458	HVESP #12 Temperature
15472	HVESP #12 High-Voltage Bus Connection Status
15578	HVESP #13 Voltage Level
15579	HVESP #13 Current
15580	HVESP #13 Fast Update State of Charge
15583	HVESP #13 Cell Voltage Differential Status
15584	HVESP #13 Highest Cell Temperature
15585	HVESP #13 Lowest Cell Temperature
15587	HVESP #13 Cell Temperature Differential Status
15600	HVESP #13 Temperature
15614	HVESP #13 High-Voltage Bus Connection Status
15720	HVESP #14 Voltage Level
15721	HVESP #14 Current
15722	HVESP #14 Fast Update State of Charge
15725	HVESP #14 Cell Voltage Differential Status

15726	HVESP #14 Highest Cell Temperature
15727	HVESP #14 Lowest Cell Temperature
15729	HVESP #14 Cell Temperature Differential Status
15742	HVESP #14 Temperature
15756	HVESP #14 High-Voltage Bus Connection Status
15862	HVESP #15 Voltage Level
15863	HVESP #15 Current
15864	HVESP #15 Fast Update State of Charge
15867	HVESP #15 Cell Voltage Differential Status
15868	HVESP #15 Highest Cell Temperature
15869	HVESP #15 Lowest Cell Temperature
15871	HVESP #15 Cell Temperature Differential Status
15884	HVESP #15 Temperature
15898	HVESP #15 High-Voltage Bus Connection Status
16004	HVESP #16 Voltage Level
16005	HVESP #16 Current
16006	HVESP #16 Fast Update State of Charge
16009	HVESP #16 Cell Voltage Differential Status
16010	HVESP #16 Highest Cell Temperature
16011	HVESP #16 Lowest Cell Temperature
16013	HVESP #16 Cell Temperature Differential Status
16026	HVESP #16 Temperature
16040	HVESP #16 High-Voltage Bus Connection Status
16146	HVESP #17 Voltage Level
16147	HVESP #17 Current
16148	HVESP #17 Fast Update State of Charge
16151	HVESP #17 Cell Voltage Differential Status
16152	HVESP #17 Highest Cell Temperature
16153	HVESP #17 Lowest Cell Temperature
16155	HVESP #17 Cell Temperature Differential Status
16168	HVESP #17 Temperature
16182	HVESP #17 High-Voltage Bus Connection Status
16288	HVESP #18 Voltage Level
16289	HVESP #18 Current
16290	HVESP #18 Fast Update State of Charge
16293	HVESP #18 Cell Voltage Differential Status
16294	HVESP #18 Highest Cell Temperature
16295	HVESP #18 Lowest Cell Temperature
16297	HVESP #18 Cell Temperature Differential Status
16310	HVESP #18 Temperature
16324	HVESP #18 High-Voltage Bus Connection Status
16430	HVESP #19 Voltage Level
16431	HVESP #19 Current
16432	HVESP #19 Fast Update State of Charge
16435	HVESP #19 Cell Voltage Differential Status
16436	HVESP #19 Highest Cell Temperature
16437	HVESP #19 Lowest Cell Temperature
16439	HVESP #19 Cell Temperature Differential Status
16452	HVESP #19 Temperature
16466	HVESP #19 High-Voltage Bus Connection Status
16572	HVESP #20 Voltage Level

16573	HVESP #20 Current
16574	HVESP #20 Fast Update State of Charge
16577	HVESP #20 Cell Voltage Differential Status
16578	HVESP #20 Highest Cell Temperature
16579	HVESP #20 Lowest Cell Temperature
16581	HVESP #20 Cell Temperature Differential Status
16594	HVESP #20 Temperature
16608	HVESP #20 High-Voltage Bus Connection Status
16714	HVESP #21 Voltage Level
16715	HVESP #21 Current
16716	HVESP #21 Fast Update State of Charge
16719	HVESP #21 Cell Voltage Differential Status
16720	HVESP #21 Highest Cell Temperature
16721	HVESP #21 Lowest Cell Temperature
16723	HVESP #21 Cell Temperature Differential Status
16736	HVESP #21 Temperature
16750	HVESP #21 High-Voltage Bus Connection Status
16856	HVESP #22 Voltage Level
16857	HVESP #22 Current
16858	HVESP #22 Fast Update State of Charge
16861	HVESP #22 Cell Voltage Differential Status
16862	HVESP #22 Highest Cell Temperature
16863	HVESP #22 Lowest Cell Temperature
16865	HVESP #22 Cell Temperature Differential Status
16878	HVESP #22 Temperature
16892	HVESP #22 High-Voltage Bus Connection Status
16998	HVESP #23 Voltage Level
16999	HVESP #23 Current
17000	HVESP #23 Fast Update State of Charge
17003	HVESP #23 Cell Voltage Differential Status
17004	HVESP #23 Highest Cell Temperature
17005	HVESP #23 Lowest Cell Temperature
17007	HVESP #23 Cell Temperature Differential Status
17020	HVESP #23 Temperature
17034	HVESP #23 High-Voltage Bus Connection Status
17140	HVESP #24 Voltage Level
17141	HVESP #24 Current
17142	HVESP #24 Fast Update State of Charge
17145	HVESP #24 Cell Voltage Differential Status
17146	HVESP #24 Highest Cell Temperature
17147	HVESP #24 Lowest Cell Temperature
17149	HVESP #24 Cell Temperature Differential Status
17162	HVESP #24 Temperature
17282	HVESP #25 Voltage Level
17283	HVESP #25 Current
17284	HVESP #25 Fast Update State of Charge
17287	HVESP #25 Cell Voltage Differential Status
17288	HVESP #25 Highest Cell Temperature
17289	HVESP #25 Lowest Cell Temperature
17291	HVESP #25 Cell Temperature Differential Status
17304	HVESP #25 Temperature

17318	HVESP #25 High-Voltage Bus Connection Status
17424	HVESP #26 Voltage Level
17425	HVESP #26 Current
17429	HVESP #26 Cell Voltage Differential Status
17430	HVESP #26 Highest Cell Temperature
17431	HVESP #26 Lowest Cell Temperature
17433	HVESP #26 Cell Temperature Differential Status
17446	HVESP #26 Temperature
17460	HVESP #26 High-Voltage Bus Connection Status
20169	Engine Charge Air Cooler #2 Outlet Pressure
20170	Engine Charge Air Cooler #2 Differential Pressure
20456	HV ESS Thermal Management System Coolant Flow Rate Request
20471	Power Converter #1 Control Setpoint Request
20478	Power Converter #2 Control Setpoint Request
20546	Power Converter #1 Control Setpoint Mode
20547	Power Converter #1 HVIL Status
20550	Power Converter #1 Limits Active Electrical Power Maximum
20551	Power Converter #1 Limits Active Electrical Power Minimum
20553	Power Converter #1 Limits Active DC Energy Source #1 Power Minimum
20571	Power Converter #2 Control Setpoint Mode
20572	Power Converter #2 HVIL Status
20575	Power Converter #2 Limits Active Electrical Power Maximum
20576	Power Converter #2 Limits Active Electrical Power Minimum
20675	Power Converter #2 DC Energy Source #1 Voltage
20697	Power Converter #1 DC Energy Source #1 Voltage
20703	Power Converter #1 Power Converter Phase U Current
20704	Power Converter #1 Power Converter Phase V Current
20705	Power Converter #1 Power Converter Phase W Current
20706	Power Converter #2 Power Converter Phase U Current
20707	Power Converter #2 Power Converter Phase V Current
20708	Power Converter #2 Power Converter Phase W Current
20709	Power Converter #1 Power Converter Phase U Voltage
20710	Power Converter #1 Power Converter Phase V Voltage
20711	Power Converter #1 Power Converter Phase W Voltage
20712	Power Converter #2 Power Converter Phase U Voltage
20713	Power Converter #2 Power Converter Phase V Voltage
20714	Power Converter #2 Power Converter Phase W Voltage
20715	Power Converter #1 Power Converter Phase U Power Module Switch Temperature
20716	Power Converter #1 Power Converter Phase V Power Module Switch Temperature
20717	Power Converter #1 Power Converter Phase W Power Module Switch Temperature
20718	Power Converter #2 Power Converter Phase U Power Module Switch Temperature
20719	Power Converter #2 Power Converter Phase V Power Module Switch Temperature
20720	Power Converter #2 Power Converter Phase W Power Module Switch Temperature
20731	Transformer #1 Phase U Temperature
20732	Transformer #1 Phase V Temperature
20733	Transformer #1 Phase W Temperature
20734	Transformer #2 Phase U Temperature
20735	Transformer #2 Phase V Temperature
20736	Transformer #2 Phase W Temperature
20744	Power Converter #1 Power Converter Phase V Power Module Switch
20745	Power Converter #1 Power Converter Phase W Power Module Switch

20746	Power Converter #2 Power Converter Phase U Power Module Switch
20747	Power Converter #2 Power Converter Phase V Power Module Switch
20748	Power Converter #2 Power Converter Phase W Power Module Switch
20751	Power Converter #1 Power Converter DC Isolation Resistance
20752	Power Converter #2 Power Converter DC Isolation Resistance
20792	DEF Tank #1 Empty Count
20793	DEF Quality Malfunction Count
20794	Aftertreatment SCR Malfunction Count
20795	DEF Frozen Count
20796	Aftertreatment #1 SCR Intake High Temperature Count
20797	Aftertreatment #1 Total Event Count With No DEF Delivery
20807	Engine Aftercooler Coolant Temperature
20808	Engine Desired Aftercooler Coolant Intake Temperature
20810	Engine Aftercooler Coolant Pump Control
20811	Engine Radiator 1 Control Temperature
20812	Desired Engine Radiator 1 Control Temperature
20813	Engine Radiator 1 Fan 1 Status
20814	Engine Radiator 1 Fan 2 Status
20815	Engine Radiator 1 Fan 3 Status
20816	Engine Radiator 1 Fan 4 Status
20817	Engine Radiator 1 Fan 5 Status
20818	Engine Radiator 1 Fan 6 Status
20819	Engine Radiator 1 Fan 7 Status
20820	Engine Radiator 1 Fan 8 Status
20821	Engine Radiator 2 Control Temperature
20822	Desired Engine Radiator 2 Control Temperature
20823	Engine Radiator 2 Fan 1 Status
20824	Engine Radiator 2 Fan 2 Status
20825	Engine Radiator 2 Fan 3 Status
20826	Engine Radiator 2 Fan 4 Status
20827	Engine Radiator 2 Fan 5 Status
20828	Engine Radiator 2 Fan 6 Status
20829	Engine Radiator 2 Fan 7 Status
20830	Engine Radiator 2 Fan 8 Status
20831	Genset Enclosure Intake Air Temperature
20832	Genset Enclosure Outlet Air Temperature
20833	Genset Enclosure Fan Requested Percent Speed
20834	Heat Exchanger #1 Primary Intake Temperature
20835	Heat Exchanger #1 Primary Outlet Temperature
20850	Engine Exhaust Heat Exchanger Outlet Temperature
20851	Engine Exhaust Heat Exchanger Bypass Actuator 1 Desired Position
20852	Engine Exhaust Heat Exchanger Bypass Actuator 1 Position
20854	Genset Enclosure Ventilation Louver Actuator 1 Position
20856	Genset Enclosure Ventilation Louver Actuator 2 Position
20858	Genset Enclosure Ventilation Recirculation Louver Actuator Position
20859	Heating Circuit Supply Outlet Coolant Temperature
20860	Heating Circuit Return Coolant Temperature
20861	Desired Heating Circuit Thermostat Opening
20862	Heating Circuit Thermostat Opening
20864	Heating Circuit Pump Control
20865	Desired Engine Coolant Temperature

20905	Operator Start Request Inhibit Indicator
20913	Desired Engine Charge Air Cooler Outlet Temperature
20922	Engine Starting System #1 Failed to Crank Engine
20923	Engine Starting System #2 Failed to Crank Engine
20924	HVESP #1 Module Fan
20925	HVESP #2 Module Fan
20926	HVESP #3 Module Fan
20927	HVESP #4 Module Fan
20928	HVESP #5 Module Fan
20929	HVESP #6 Module Fan
20930	HVESP #7 Module Fan
20931	HVESP #8 Module Fan
20932	HVESP #9 Module Fan
20933	HVESP #10 Module Fan
20934	HVESP #11 Module Fan
20935	HVESP #12 Module Fan
20936	HVESP #13 Module Fan
20937	HVESP #14 Module Fan
20938	HVESP #15 Module Fan
20939	HVESP #16 Module Fan
20940	HVESP #17 Module Fan
20941	HVESP #18 Module Fan
20942	HVESP #19 Module Fan
20943	HVESP #20 Module Fan
20944	HVESP #21 Module Fan
20945	HVESP #22 Module Fan
20946	HVESP #23 Module Fan
20947	HVESP #24 Module Fan
20948	HVESP #25 Module Fan
20949	HVESP #26 Module Fan
20950	HVESP #1 Battery Protection Unit Fan
20951	HVESP #2 Battery Protection Unit Fan
20952	HVESP #3 Battery Protection Unit Fan
20953	HVESP #4 Battery Protection Unit Fan
20954	HVESP #5 Battery Protection Unit Fan
20955	HVESP #6 Battery Protection Unit Fan
20956	HVESP #7 Battery Protection Unit Fan
20957	HVESP #8 Battery Protection Unit Fan
20958	HVESP #9 Battery Protection Unit Fan
20959	HVESP #10 Battery Protection Unit Fan
20960	HVESP #11 Battery Protection Unit Fan
20961	HVESP #12 Battery Protection Unit Fan
20962	HVESP #13 Battery Protection Unit Fan
20963	HVESP #14 Battery Protection Unit Fan
20964	HVESP #15 Battery Protection Unit Fan
20965	HVESP #16 Battery Protection Unit Fan
20966	HVESP #17 Battery Protection Unit Fan
20967	HVESP #18 Battery Protection Unit Fan
20968	HVESP #19 Battery Protection Unit Fan
20969	HVESP #20 Battery Protection Unit Fan
20970	HVESP #21 Battery Protection Unit Fan

20971	HVESP #22 Battery Protection Unit Fan
20972	HVESP #23 Battery Protection Unit Fan
20973	HVESP #24 Battery Protection Unit Fan
20974	HVESP #25 Battery Protection Unit Fan
20975	HVESP #26 Battery Protection Unit Fan
20976	HVESP #1 Power
20977	HVESP #2 Power
20978	HVESP #3 Power
20979	HVESP #4 Power
20980	HVESP #5 Power
20981	HVESP #6 Power
20982	HVESP #7 Power
20983	HVESP #8 Power
20984	HVESP #9 Power
20985	HVESP #10 Power
20986	HVESP #11 Power
20987	HVESP #12 Power
20988	HVESP #13 Power
20989	HVESP #14 Power
20990	HVESP #15 Power
20991	HVESP #16 Power
20992	HVESP #17 Power
20993	HVESP #18 Power
20994	HVESP #19 Power
20995	HVESP #20 Power
20996	HVESP #21 Power
20997	HVESP #22 Power
20998	HVESP #23 Power
20999	HVESP #24 Power
21000	HVESP #25 Power
21001	HVESP #26 Power
21002	HVESP #1 Module
21003	HVESP #2 Module
21004	HVESP #3 Module
21005	HVESP #4 Module
21006	HVESP #5 Module
21007	HVESP #6 Module
21008	HVESP #7 Module
21009	HVESP #8 Module
21010	HVESP #9 Module
21011	HVESP #10 Module
21012	HVESP #11 Module
21013	HVESP #12 Module
21014	HVESP #13 Module
21015	HVESP #14 Module
21016	HVESP #15 Module
21017	HVESP #16 Module
21018	HVESP #17 Module
21019	HVESP #18 Module
21020	HVESP #19 Module
21021	HVESP #20 Module

21022	HVESP #21 Module
21023	HVESP #22 Module
21024	HVESP #23 Module
21025	HVESP #24 Module
21026	HVESP #25 Module
21027	HVESP #26 Module
21054	HVESS Power
21055	Power Converter #1 Controller Supply Voltage
21056	Power Converter #2 Controller Supply Voltage
21057	Power Converter #1 Circuit Breaker Status
21058	Power Converter #2 Circuit Breaker Status
21060	HVESS Battery Gas Detected
21143	Blended Dual Fuel Mode Operating Status
21144	Blended Dual Fuel Mode Status Reason
21154	Generator Trip kVAr Hours Import
21162	Engine Fuel Actuator #2
21163	Engine Turbocharger Compressor Bypass Actuator #2
21257	Engine Filtered Fuel Sensor Module
21258	Engine Oil Sensor Module
21259	DPF Pressure Sensor Module
21260	Engine Intake Air Sensor Module
21261	Engine Exhaust Differential NOx
21810	Engine Cylinder #1 Gaseous Fuel Valve Power Supply
21811	Engine Cylinder #2 Gaseous Fuel Valve Power Supply
21812	Engine Cylinder #3 Gaseous Fuel Valve Power Supply
21813	Engine Cylinder #4 Gaseous Fuel Valve Power Supply
21814	Engine Cylinder #5 Gaseous Fuel Valve Power Supply
21815	Engine Cylinder #6 Gaseous Fuel Valve Power Supply
21816	Engine Cylinder #7 Gaseous Fuel Valve Power Supply
21817	Engine Cylinder #8 Gaseous Fuel Valve Power Supply
21818	Engine Cylinder #9 Gaseous Fuel Valve Power Supply
21819	Engine Cylinder #10 Gaseous Fuel Valve Power Supply
21820	Engine Cylinder #11 Gaseous Fuel Valve Power Supply
21821	Engine Cylinder #12 Gaseous Fuel Valve Power Supply
21822	Engine Cylinder #13 Gaseous Fuel Valve Power Supply
21823	Engine Cylinder #14 Gaseous Fuel Valve Power Supply
21824	Engine Cylinder #15 Gaseous Fuel Valve Power Supply
21825	Engine Cylinder #16 Gaseous Fuel Valve Power Supply
21826	Engine Cylinder #1 Gaseous Fuel #2 Valve
21827	Engine Cylinder #2 Gaseous Fuel #2 Valve
21828	Engine Cylinder #3 Gaseous Fuel #2 Valve
21829	Engine Cylinder #4 Gaseous Fuel #2 Valve
21830	Engine Cylinder #5 Gaseous Fuel #2 Valve
21831	Engine Cylinder #6 Gaseous Fuel #2 Valve
21832	Engine Cylinder #7 Gaseous Fuel #2 Valve
21833	Engine Cylinder #8 Gaseous Fuel #2 Valve
21834	Engine Cylinder #9 Gaseous Fuel #2 Valve
21835	Engine Cylinder #10 Gaseous Fuel #2 Valve
21836	Engine Cylinder #11 Gaseous Fuel #2 Valve
21837	Engine Cylinder #12 Gaseous Fuel #2 Valve
21838	Engine Cylinder #13 Gaseous Fuel #2 Valve

21839	Engine Cylinder #14 Gaseous Fuel #2 Valve
21840	Engine Cylinder #15 Gaseous Fuel #2 Valve
21841	Engine Cylinder #16 Gaseous Fuel #2 Valve
22137	Engine Shutdown Due To High Exhaust Temperature
22145	Engine Throttle Actuator 2
22157	Hydraulic Oil Flow Bypass Valve
22158	Steering Control Module 2
22159	Implement Control Module 2
22160	Engine Fan Blade Pitch Solenoid 1
22161	Engine Fan Blade Pitch Solenoid 2
22162	Engine Compression Brake Output #4
22163	Engine Coolant Flow Switch
22164	Engine Fan Pump Pressure
22165	Engine Protection Speed Derate Due to Temperature
22166	All Wheel Drive Control Module
22167	Implement Control Module 1
22168	Information Monitoring Module
22169	Brake Control Module
22170	Steering Control Module 1
22171	Engine Coolant Pump Control Module
22172	Supplemental Fan Control Module
22173	Chassis Control Module 1
22174	Chassis Control Module 2
22175	Display Module 1
22176	Display Module 2
22177	Engine Cylinder 1 Gaseous Fuel Valve Temperature
22178	Engine Cylinder 2 Gaseous Fuel Valve Temperature
22179	Engine Cylinder 3 Gaseous Fuel Valve Temperature
22180	Engine Cylinder 4 Gaseous Fuel Valve Temperature
22181	Engine Cylinder 5 Gaseous Fuel Valve Temperature
22182	Engine Cylinder 6 Gaseous Fuel Valve Temperature
22183	Engine Cylinder 7 Gaseous Fuel Valve Temperature
22184	Engine Cylinder 8 Gaseous Fuel Valve Temperature
22185	Engine Cylinder 9 Gaseous Fuel Valve Temperature
22186	Engine Cylinder 10 Gaseous Fuel Valve Temperature
22187	Engine Cylinder 11 Gaseous Fuel Valve Temperature
22188	Engine Cylinder 12 Gaseous Fuel Valve Temperature
22189	Engine Cylinder 13 Gaseous Fuel Valve Temperature
22190	Engine Cylinder 14 Gaseous Fuel Valve Temperature
22191	Engine Cylinder 15 Gaseous Fuel Valve Temperature
22192	Engine Cylinder 16 Gaseous Fuel Valve Temperature
22198	Well Stimulation Pump Drive Type
22309	Engine Throttle Valve 1 Outlet Pressure
22310	Engine Throttle Valve 1 Outlet Absolute Pressure
22311	Engine Throttle Valve 2 Outlet Pressure
22312	Engine Throttle Valve 2 Outlet Absolute Pressure
516107	Electronic Ignition Driver Module Temperature
516108	Electronic Ignition Driver Main Power
516110	Electronic Ignition Driver Module Internal Voltage
516111	Electronic Ignition Driver Boost
516121	Engine Cylinder #1 Ignition Output (+)

516122	Engine Cylinder #2 Ignition Output (+)
516123	Engine Cylinder #3 Ignition Output (+)
516124	Engine Cylinder #4 Ignition Output (+)
516125	Engine Cylinder #5 Ignition Output (+)
516126	Engine Cylinder #6 Ignition Output (+)
516151	Engine Cylinder #1 Ignition Output (-)
516152	Engine Cylinder #2 Ignition Output (-)
516153	Engine Cylinder #3 Ignition Output (-)
516154	Engine Cylinder #4 Ignition Output (-)
516155	Engine Cylinder #5 Ignition Output (-)
516156	Engine Cylinder #6 Ignition Output (-)
516201	Knock Module CAN #1 Status
516207	Knock Module Temperature
516208	Knock Module Main Power
516210	Knock Module Internal Voltage
516217	Knock Module Analog Output #1
516218	Knock Module Analog Output #2
516304	Primary EEPROM
516305	Main Module Memory
516306	Secondary EEPROM
516319	Analog Output #1
516320	Analog Output #2
516400	Intake Throttle #1
516405	Compressor Bypass
516411	Electronic Ignition Driver Module
516412	Knock Input Module
516413	Thermocouple Module
516420	Engine Fuel Valve #1
516500	Electronic Ignition Driver Internal Data Link
516511	Electronic Ignition Driver Crankshaft Signal
516512	Electronic Ignition Driver Crankshaft Signal Configuration Error
516513	Electronic Ignition Driver Crankshaft Synchronization Error
516514	Electronic Ignition Driver Crankshaft Signal Loss Error
516515	Electronic Ignition Driver Camshaft Signal
516517	Electronic Ignition Driver Camshaft Synchronization Error
516518	Electronic Ignition Driver Camshaft Signal Loss Error
516519	Electronic Ignition Driver Synchronization Signal
516520	Electronic Ignition Driver Synchronization Configuration Error
516540	Electronic Ignition Driver Overspeed
516541	Electronic Ignition Driver Shutdown
516542	Electronic Ignition Driver Not Active
516543	Electronic Ignition Driver Timing or Duration
516546	Electronic Ignition Driver Configuration Fault
516601	Electronic Ignition Driver Data Link
516700	Knock Module Internal Data Link
516710	Knock Module Timing Pattern
516711	Knock Module Crankshaft Signal
516712	Knock Module Crankshaft Configuration Error
516713	Knock Module Crankshaft Synchronization Error
516714	Knock Module Crankshaft Signal Loss Error
516715	Knock Module Camshaft Signal

516716	Knock Module Camshaft Signal Configuration Error
516717	Knock Module Camshaft Synchronization Error
516718	Knock Module Camshaft Signal Loss Error
516719	Knock Module Top Dead Center Sensor
516740	Engine Overspeed
516741	Knock Shutdown
516742	Knock Sensor
516901	J1939 Network #1
516905	Modbus Data Link
516940	Auxiliary Module Engine Overspeed
516943	Methane Gas Sensor
516944	Remote Speed Input
516945	Speed Bias Input
516949	Electronic Ignition Driver
516952	Biogas Not Available
516955	Fuel Blending System - Throttle at Maximum Position
516959	Engine Failed to Crank
516960	No Ignition Detected
516961	Engine Failed to Ignite
516962	Engine Failed to Start
516963	Engine Failed to Control Speed
516964	Engine Stalled During Start Attempt
516965	Ignition Stopped During Start
516966	Failure to Build Oil Pressure During Start
516967	Start Attempt Failed Shutdown
516968	Engine Stalled During Running
516969	Ignition Stopped During Run
516970	Ignition Stopped During Cooldown
516971	Fail to Shutdown
516972	Emergency Stop Fail to Shutdown
516973	Emergency Stop Fail to Drop Speed
516978	Cooling Input
516979	Engine Emergency Shutdown Switch
516980	Torque Limited
516981	Power Limited
516982	Load Exceeded
516983	Uncontrolled Overpower
516984	ECU Unexpected Reboot
516985	I/O Lockout Shutdown
516986	NOx Control Fail to Close Loop on Gas Quality
516987	Engine NOx Correction Factor
516988	NOx Parts Per Million
520192	Accelerator Pedal Position #1 & #2
520192	CGI Mass Flow
520193	CGI Gas Temperature
520194	CGI Control Valve
520195	CGI Actuator Internal Temperature
520196	CGI Differential Pressure
520197	CAN2 Node
520197	CGI Absolute Pressure
520198	CAN Message from ABS

520198	OBD Torque Limiter
520199	CAN Message from Automatic Transmission
520200	CAN Message from DCU
520201	CAN Message from TCO1
520203	Engine Stop/Start Button
520204	Flash Area Checksum Error
520208	Exhaust Flap Valve
520210	Fuel Injector Wear
520211	ECU Capacitor Charge Circuit Malfunction (Insufficient Charge)
520213	Main CPU Fault
520214	Crankshaft & Camshaft Sensor No Pulse
520215	ECU Capacitor Charge Circuit Malfunction (Excessive Charge)
520217	CAN-Receive-Frame TRF1
520218	Immobilizer
520221	Engine Fuel Injection Pump Fuel Control Valve #1 & #2
520221	Gear
520223	High-Pressure Test
520225	Engine Injector QR Code Error
520226	Engine Injector QR Code Not Written
520228	Watchdog Timer Fault
520237	Idle Manual Control Volume
520238	Global Positioning System (GPS)
520240	CGI #2 Mass Flow Rate
520241	CGI #2 Gas Temperature
520241	Rail Pressure Release Valve
520242	CGI #2 Actuator Shaft Position
520243	CGI #2 Actuator Internal Temperature
520243	Rail Pressure
520244	CGI #2 Differential Pressure
520245	CGI #2 Absolute Pressure
520246	Emission Control System Inducement Information
520250	Water In Fuel Lamp
520252	Accelerator Pedal
520253	T50 Switch
520261	Fuel Heater Relay
520264	Water In Fuel Sensor
520277	Remote Accelerator Pedal Signal #1
520278	Remote Accelerator Pedal Signal #2
520282	EGR Valve H-Bridge
520289	Fuel Filter
520457	Seat Controller
520705	Valve Position Sensor
520707	Thermistor
520708	Sensor Power Supply
520709	Seat Position Sensor
520713	Voice Coil
520716	Voice Coil Current Sensor
520721	Voice Coil Voltage Sensor
520741	Cylinder Position Sensor
521217	Seat Air Pressure Sensor
521219	System Voltage

521249	Cushion Hitch Air Pressure Sensor
521728	Seat Shock Absorber
521760	Valve
521761	Seat Position Sensor: Out of Ride Zone
522000	Controller Area Network
522006	CAN-Receive-Frame AT1IG1
522007	CAN-Receive-Frame AT1IGC1
522008	CAN-Receive-Frame AT1IGC2
522009	CAN-Receive-Frame AT1O1
522010	CAN-Receive-Frame AT1OGC1
522011	CAN-Receive-Frame AT1OGC2
522012	Dosing Control Unit (DCU) Error
522013	CAN-Receive-Frame EBC1
522014	Remote Lock Mode
522015	CAN-Receive-Frame EBC2
522020	CAN-Receive-Frame Temp2
522021	CAN-Receive-Frame ERC1DR
522022	CAN-Receive-Frame ETC1
522023	CAN-Receive-Frame ETC2
522027	Downstream NOx Sensor
522030	CAN-Receive-Frame RxCCVS
522034	CAN-Receive-Frame TimeDate
522035	CAN-Receive-Frame TSC1AE
522036	CAN-Receive-Frame TSC1AR
522037	CAN-Receive-Frame TSC1DE
522038	CAN-Receive-Frame TSC1DR
522039	CAN-Receive-Frame TSC1PE
522040	CAN-Receive-Frame TSC1TE
522041	CAN-Receive-Frame TSC1TR
522042	CAN-Receive-Frame TSC1VE
522043	CAN-Receive-Frame TSC1VR
522050	CAN-Receive-Frame AMCON
522051	CAN-Receive-Frame HRVD
522052	CAN-Receive-Frame DashDspl
522053	CAN-Receive-Frame EGF1
522054	CAN-Receive-Frame DM13
522056	CAN-Receive-Frame CM1
522060	CAN-Receive-Frame DM19
522062	CAN-Receive-Frame DEC1
522063	CAN-Receive-Frame ETC7
522064	CAN-Receive-Accelerator Pedal Signal
522065	CAN-Receive-Remote Accelerator Pedal Signal
523003	Urea Heater Relay
523004	NOx Emission
523470	Pressure Relief Valve Mechanism
523471	Actual Dosed Urea Message from Dosing Control Unit (DCU)
523472	SCR State Message from Dosing Control Unit (DCU)
523523	Engine Injector Cylinder #1 and Cylinder #4
523524	Engine Injector Cylinder #2 and Cylinder #3
523525	Engine Injector Charge Capacitor Supply Voltage
523527	ECU CPU

523535	Engine Injector Charge Voltage
523536	EGR Response
523537	EGR Motor Temperature Sensor
523538	Engine Injector Code
523539	Fuel Pump Pressure
523540	Fuel Pump Pressure
523541	EGR Lift Sensor
523543	Accelerator Pedal Position Sensor
523544	Engine Start Aid
523547	CAN Data Link
523548	CAN Data Link
523572	EGR Position Sensor
523574	EGR Actuator Coil Low Side Driver
523575	EGR Actuator
523576	EGR Actuator Temperature
523577	EGR Actuator Temperature Sensor
523578	EGR Actuator Data Link
523580	Intake Throttle
523582	Intake Throttle Lift Sensor
523589	Engine Coolant Temperature during Stationary Regeneration
523590	Stationary Regeneration Duration
523591	CAN Data Link
523592	CAN Data Link
523593	CAN Data Link
523594	CAN Data Link
523595	CAN Data Link
523596	CAN Data Link
523598	CAN Data Link
523599	All Exhaust Gas Temperature Sensors Failure
523600	Fuel Pump Calibration Not Completed
523601	Exhaust Gas Temperature
523602	Aftertreatment Regeneration Frequency
523603	Engine Coolant Temperature
523604	CAN Data Link
523607	Pre-Stroke Control Valve or Pressure Relief Valve Drive Line
523608	High-Pressure Delivery System
523609	Pre-Stroke Control Valve Coil
523610	Pre-Stroke Control Valve Coil
523611	High-Pressure Pump
523612	Pre-Stroke Control Valve Line
523614	Internal Integrated Circuit Failure
523616	Tank Sensor Communication
523617	Pre-NOx Sensor Communication
523618	Post-NOx Sensor Communication
523619	Engine ECU
523621	Stop Lamp
523622	Low Oil Pressure Lamp
523624	Overheat Lamp
523625	TSC1 Priority Reception
523626	Software Version
523627	Pre-Stroke Control Valve Driving Circuit

523631	Mass Air Flow data per Cylinder
523632	EGR System
523700	EEPROM Checksum

Failure Mode Identifier (FMI) Codes on J1939 data link

The FMI is used along with the SPN to provide specific information that relates to a diagnostic trouble code (DTC). The FMI may indicate that a problem with an electronic circuit or an electronic component has been detected. The FMI may also indicate that an abnormal operating condition has been detected.

The codes are displayed in the form "SPN - FMI". The ECM / ECU also attaches a text description to the message that is transmitted over the J1939 data link. This text description is used to describe the SPN - FMI.

The failure mode of the DTC is determined by evaluating the electronic signal from the suspect circuit. The failure mode identifiers can be divided into two categories:

- Codes that indicate that a problem with an electronic circuit or an electronic component has been detected
- Codes that indicate that a system event has been detected

Typically, the first category of code is generated when the signal for the circuit is outside the range of the sensor.

The second category of code indicates that the sensor signal is OK, but the signal is outside the normal operating range of the parameter.

Refer to the troubleshooting guide for the specific product. The troubleshooting guide procedure will help determine the root cause of a DTC.

Table 7

FMI	Description
0	High - most severe (3)
1	Low - most severe (3)
2	Erratic, Intermittent, or Incorrect
3	Voltage Above Normal
4	Voltage Below Normal
5	Current Below Normal
6	Current Above Normal
7	Not Responding Properly
8	Abnormal Frequency, Pulse Width, or Period
9	Abnormal Update Rate
10	Abnormal Rate of Change
11	Other Failure Mode
12	Failure
13	Out of Calibration
14	Special Instruction
15	High - least severe (1)
16	High - moderate severity (2)
17	Low - least severe (1)
18	Low - moderate severity (2)
19	Data Error
20	Data Drifted High
21	Data Drifted Low
31	-

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