

**Service Information System**

Shutdown SIS

[Previous Screen](#)

Product: NO EQUIPMENT SELECTED
 Model: NO EQUIPMENT SELECTED
 Configuration: NO EQUIPMENT SELECTED

Special Instruction

Diagnostic Code Information for Caterpillar® Electronic Control{1901, 1927, 1948, 3168, 4348, 4802, 4808, 4810, 5511, 5701, 7490, 7494, 7601, 7602, 7610, 7610}

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

Articulated Truck: All
 Asphalt Paver: All
 Backhoe Loader: All
 Challenger: All
 Cold Planer: All
 Compact Wheel Loader: ALL
 Earthmoving Compactor: All
 Engine:Commercial All Diesel
 Engine:Truck All
 Excavator: All
 Forest Products: All
 Integrated Toolcarrier: All
 Landfill Compactor: All
 Load Haul Dump: All
 Machine Engines: 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

Introduction

The following diagnostic code information is used with Caterpillar[®] 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 Caterpillar[®] 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 1

MID	Description
9	Handheld Service Tool
10	Digital Diagnostic Tool
11	Communication Adapter
12	Electronic Control Analyzer Programmer
13	Cat [®] Electronic Technician
14	Electronic Ignition System
15	Spark Ignited Engine Timing Control
17	34XX SI Engine Control
18	35XX SI Engine Control
19	36XX SI Engine Control
20	Torsional Control
21	G3600 I/O Module

22	G3600 Pressure Module
23	Detonation Module
25	Ether Aid Control
26	CMS
27	Transmission/Chassis Control
28	Traction Aid Control
29	Computerized Profiler Control
30	Caterpillar® Monitoring System
31	Electronic Scraper Transmission Control
33	Engine Control #2
34	Engine Control #3
35	Engine Control #4
36	Engine Control #1
37	Engine Control #5
38	Engine Control #6
39	Machine Control Module
40	Engine Control #7
41	Engine Control #8
42	Engine Control #9
43	Engine Control #10
47	Backup Engine Control
49	VIMS Main Module
50	VIMS Analysis Module
51	VIDS Main Module
52	Graphical Display Module #2
53	Graphical Display Module
54	Caterpillar® Monitoring System #2
57	Interface Module #1
58	Interface Module #2
59	Interface Module #3

60	Interface Module #4
61	Data Acquisition Module
65	Interface Module #5
66	Interface Module #6
67	Interface Module #7
68	Interface Module #8
73	Auto Ride/2-speed Fan Control
74	Payload Control System
75	All-Wheel Drive Control
76	DeNOx Control
77	DeNOx Display
78	Hitch Control
79	Hydrostatic Transmission Control
81	Transmission Control
82	Electronic Implement Control
83	Automatic Retarder Control
84	Paver Burner Control
85	Engine Fan Control
86	Global Positioning System Interface Module
87	Chassis Control Module
88	Generator Set Control #1
89	Generator Set Control #2
90	Generator Set Control #3
91	Generator Set Control #4
92	Generator Set Control #5
93	Generator Set Control #6
94	Generator Set Control #7
95	Generator Set Control #8
97	Customer Communication Module
98	Customer Communication Module Special

99	Programmable Relay Control Module
100	Engine Vision Display
101	Engine Vision Interface Module
102	Customer Communication Module #2
103	Remote Display #2
104	Group ID for ICSM
105	Hydraulic Pump Control
106	Electro-hydraulic Control Module
107	Integrated Temperature Sensing Module #2/Engine Sensing Module #2
108	Versatile Control Module
109	Integrated Combustion Sensing Module #1
110	Integrated Combustion Sensing Module #2
111	Integrated Temperature Sensing Module/Engine Sensing Module
113	Track Type Tractor (TTT) Transmission Control
114	Grade Slope Control
115	Slope Sensor Module
116	Integrated Brake Control
117	Transmission Shift Lever Module
118	Paver Burner Control #3
119	Paver Burner Control #2
121	Computer Aided Earthmoving System (CAES)
122	Product Link Module
123	Data Link Translation Module
124	Theft Deterrent Module
125	Caterpillar® Monitoring System #3
126	System Master Control Module
127	Data Link Translation Module #2
129	Training Aid #1
130	Training Aid #2
131	Test Cell Computer

132	Wireless Transceiver
133	Security System Key Reader
134	Object Detection System
137	Grade Slope Display #1
138	Grade Slope Display #2
139	Grade Slope Display #3
140	Grade Slope Display #4
141	Grade Slope Display #5
142	Grade Slope Display #6
145	Electronic Implement Control #2
146	Transmission Control #2
147	Electronic Implement Control #3
148	Particulate Matter Control
149	Engine Aftertreatment Control #1
150	Steering
151	Engine Aftertreatment Control #2
153	Alarm Control #1
154	Alarm Control #2
155	Alarm Control #3
156	Operator Station #1 Module
157	Operator Station #2 Module
161	Communication Gateway #1
162	Communication Gateway #2
163	Communication Gateway #3
164	Communication Gateway #4
169	Power Converter #1
170	Power Converter #2
177	Engine Aftertreatment Control #3
178	Engine Aftertreatment Control #4
179	Engine Aftertreatment Control #5

254	Flashing ECM
255	Blank ECM

Component Identifiers (CID)

Table 2

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	Particulate Trap Inlet 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 Lock 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 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	AWD Lamp
397	Charge Pump Pressure Switch
398	Front Wheel Drive Pressure Sensor
399	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 Pressure Sensor
437	Powertrain 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 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 (amps) Limit Relay
547	Ether Injection Lamp
548	Throttle Lock Lamp
549	Throttle Lock 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 [®] Monitoring System
563	Desired Speed Signal Missing
564	Desired Speed Signal Noisy
565	Shutdown Imminent Due To Missing Desired Speed Signal
567	Backup ECM Ready Lamp

568	Backup ECM In Control Lamp
569	Oil Injection Solenoid
570	Temperature Sensor Out of Range
571	Elevator Forward Drive Solenoid
572	Elevator Reverse Drive 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	Monitoring System Display
589	Roading/Earthmoving Switch
590	Engine Control Module
591	Electrically Erasable Programmable Read Only Memory
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 Monitoring 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 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 Keyswitch 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 Auto Shift 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 <switch>
883	Pitch Regenerate Solenoid
884	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	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 <Axle> 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 Take-Off) Switch
1480	Remote Rear PTO (Power Take-Off) Switch
1481	Rear PTO (Power Take-Off) 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	One Way / Two 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	<Implement> 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 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 Counter-Clockwise 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 Counter-Clockwise 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 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 Steer Left Solenoid
2176	Secondary 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 Aux/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	Steering Valve Control Module
2203	Steering Valve Control Module Spool Position Signal Lines
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 Relay
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 Inlet 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 <Raise/Lower> 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 Offset 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 <Axle> 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	Particulate Trap #1 Intake Temperature Sensor
2453	Particulate Trap #1 Intermediate Temperature Sensor
2454	Particulate Trap #1 Outlet Temperature Sensor
2455	Particulate Trap #2 Intake Temperature Sensor

2456	Particulate Trap #2 Intermediate Temperature Sensor
2457	Particulate Trap #2 Outlet Temperature Sensor
2458	Particulate Trap #1 Differential Pressure Sensor
2459	Particulate Trap #2 Differential Pressure Sensor
2460	Aftertreatment Regeneration Device Fuel Pressure Sensor
2461	Aftertreatment Regeneration Device Fuel Pressure Control Actuator
2462	Aftertreatment Regeneration Device Fuel Enable Actuator
2464	Aftertreatment Regeneration Device Air System Relay
2465	Aftertreatment Regeneration Device Ignition Transformer Primary
2466	Aftertreatment Regeneration Device Control
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	Aftertreatment Regeneration Device Intake Temperature Sensor
2479	Aftertreatment Regeneration Device Intermediate Temperature Sensor
2480	Aftertreatment Regeneration Device 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	Aftertreatment Regeneration Device Air Enable Actuator
2486	Aftertreatment Regeneration Device Atomization Air Actuator
2487	Aftertreatment Regeneration Device Purge Air Actuator
2488	Aftertreatment Regeneration Device Supply Air Actuator
2489	Aftertreatment Regeneration Device Air Pressure Control Actuator
2490	Aftertreatment Regeneration Device 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	Aftertreatment Regeneration Device Purge Air Pressure Sensor
2498	Aftertreatment Regeneration Device 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 <Electronic> 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	Screed Left Extender Extend Solenoid
2556	Screed Left Extender Retract Solenoid
2557	Screed Right Extender Extend Solenoid
2558	Screed 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 <Variable> Line Relief Pressure Solenoid
2600	Auxiliary Valve #1 Port B <Variable> 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 ECM Power Supply Output
2651	Lift Kickout Enable/Set 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	<Powertrain> 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	Aftertreatment Regeneration Device 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 Resume/Decel 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 Resolved 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	Alternator Excitation Field Regulator Feedback Line
3009	Alternator 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	Electric Retarding Grid #1 Current Sensor
3046	Electric Retarding Grid #2 Current 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 Diesel Particulate Filter Configuration Identification
3090	Aftertreatment #1 SCR Dosing Reagent Pressure Sensor
3091	Aftertreatment #2 SCR Dosing Reagent Pressure 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 SCR Dosing Reagent Temperature #1 Sensor
3097	Aftertreatment #1 SCR Dosing Reagent Temperature #2 Sensor
3098	Aftertreatment #2 SCR Dosing Reagent Temperature #1 Sensor
3099	Aftertreatment #2 SCR Dosing Reagent Temperature #2 Sensor
3100	Aftertreatment #1 SCR Catalyst Tank Reagent Quality Sensor
3101	Aftertreatment #2 SCR Catalyst Tank Reagent Quality Sensor
3102	Aftertreatment #1 SCR Catalyst Dosing Pump
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 Outlet Gas Temperature Sensor
3106	Aftertreatment #2 SCR Catalyst Outlet Gas Temperature Sensor
3107	Aftertreatment #1 SCR Catalyst Outlet Gas Temperature Sensor

3108	Aftertreatment #2 SCR Catalyst Outlet Gas Temperature Sensor
3109	Aftertreatment #2 SCR Catalyst Dosing Pump
3110	Aftertreatment #1 SCR Catalyst Reagent Line Heater #1
3111	Aftertreatment #1 SCR Catalyst Reagent Line Heater #2
3112	Aftertreatment #1 SCR Catalyst Reagent Line Heater #3
3113	Aftertreatment #1 SCR Catalyst Reagent Line Heater #4
3114	Aftertreatment #2 SCR Catalyst Reagent Line Heater #1
3115	Aftertreatment #2 SCR Catalyst Reagent Line Heater #2
3116	Aftertreatment #2 SCR Catalyst Reagent Line Heater #3
3117	Aftertreatment #2 SCR Catalyst Reagent Line Heater #4
3118	Aftertreatment #1 SCR Catalyst Reagent Pump Motor Speed Sensor (feedback on pump speed)
3119	Aftertreatment #2 SCR Catalyst Reagent Pump Motor Speed Sensor (feedback on pump speed)
3120	Aftertreatment #1 SCR Catalyst Reagent Return Signal
3121	Aftertreatment #2 SCR Catalyst Reagent 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 SCR Catalyst Reagent Tank #1 Heater Coolant Diverter Solenoid

3127	Aftertreatment #1 SCR Catalyst Reagent Tank #2 Heater Coolant Diverter Solenoid
3128	Aftertreatment #1 SCR Catalyst Reagent Tank #1 Heater Coolant Dirveter Solenoid
3129	Aftertreatment #2 SCR Catalyst Reagent Tank #2 Heater Coolant Diverter Solenoid
3130	Aftertreatment #1 SCR Catalyst Reagent Tank #1 Level Sensor
3131	Aftertreatment #1 SCR Catalyst Reagent Tank #2 Level Sensor
3132	Aftertreatment #2 SCR Catalyst Reagent Tank #1 Level Sensor
3133	Aftertreatment #2 SCR Catalyst Reagent Tank #2 Level Sensor
3134	Aftertreatment #1 SCR Catalyst Reagent Tank #1 Temperature Sensor
3135	Aftertreatment #1 SCR Catalyst Reagent Tank #2 Temperature Sensor
3136	Aftertreatment #2 SCR Catalyst Reagent Tank #1 Temperature Sensor
3137	Aftertreatment #2 SCR Catalyst Reagent Tank #2 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	Diesel Particulate Filter Regeneration Force Switch

3184	Diesel Particulate Filter Regeneration Inhibit Switch
3185	Engie 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 Stick 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 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	High Voltage System Energized 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) Rorward 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 <Coolant> Pump Control Module Power Supply
3266	Water <Coolant> 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 Converter Control #1 Enable Feedback Line
3276	Power Converter 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 #2
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	Electric Retarding Grid #3 Current Sensor
3311	Electric Retarding Grid Fan Power Converter
3312	Alternator 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 Object Detection Sensor #1
3318	Medium Object Detection Sensor #2
3319	Medium Object Detection Sensor #3
3320	Medium Object Detection Sensor #4
3321	Medium Object Detection Sensor #5
3322	Medium Object Detection Sensor #6
3323	Medium Object Detection Sensor #7
3324	Medium 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 Supply Relay
3349	Main Air Reservoir 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 Lever
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 Transceiver
3381	Transmission Shifter Selector Switch
3382	Fan/Brake Pump Load Sense Bypass Solenoid
3383	Autoshift Switch
3384	Pilot Supply Disable Signal
3385	Engine Exhaust Gas Recirculation Intake Pressure Sensor
3386	Engine Exhaust Gas Recirculation Temperature Sensor
3387	Engine Exhaust Gas Recirculation Differential Pressure Sensor
3388	Boom Raise Disable Solenoid
3389	Boom Speed Select Solenoid
3390	Boom Speed Select Switch
3391	Aftertreatment Regeneration Device Fuel Pressure #2 Control Actuator
3392	Aftertreatment Regeneration Device Fuel Nozzle Heater

3393	Crankcase Ventilation Filter Differential Pressure Sensor
3394	Intake Valve Actuation System Oil Pressure #2 Solenoid
3395	PTO (Power Take Off) #1 Attachment Pump Flow Control Switch
3396	PTO (Power Take Off) #2 Attachment Pump Flow Control Switch
3397	Diesel Particulate Filter #1 Soot Loading Sensor
3398	Diesel Particulate Filter #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	Engine Exhaust Gas Recirculation #2 Intake Pressure Sensor
3403	Engine Exhaust Gas Recirculation #2 Differential Pressure Sensor
3404	Engine Exhaust Gas Recirculation #2 Temperature Sensor
3405	Engine Exhaust Gas Recirculation Valve Control
3406	Engine Exhaust Gas Recirculation #2 Valve Control
3407	Engine Exhaust Gas Recirculation Valve Position Sensor
3408	Engine Exhaust Gas Recirculation #2 Valve Position Sensor
3409	Engine Exhaust Manifold Bank #1 Flow Balance Valve Actuator
3410	Engine Exhaust Manifold Bank #2 Flow Balance Valve Actuator
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	Aftertreatment Regeneration Device 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	Electric Retarding Grid Fan Power Converter 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	Alternator 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	Alternator Excitation Field Regulator Command Line
3461	Computer Aided Earth Moving System (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 OuterTire 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	Left 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	Alternator Excitation Field Regulator Current Line
3501	Alternator 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 Injector Metering Rail #1 Pressure Valve Solenoid
3509	Engine Injector Metering Rail #2 Pressure Valve Solenoid
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 Valve 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	Blade Lift Compensation 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 SCR Catalyst Reagent Manifold Heater Relay
3605	Aftertreatment #1 SCR Catalyst Reagent Tank Refill Solenoid
3606	Aftertreatment #1 SCR Catalyst Reagent Tank Heater Relay
3607	Aftertreatment #1 SCR Catalyst Reagent 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 NOxLevel 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 Control 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 Inclinator 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 Current Status
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 r
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 Off-board 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 Diesel Exhaust Fluid Dosing Solenoid
3758	Aftertreatment #2 Diesel Exhaust Fluid Dosing Solenoid
3759	Aftertreatment #1 SCR Catalyst Reagent 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 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 Diesel Exhaust Fluid Controller
3821	Aftertreatment #1 Diesel Exhaust Fluid Dosing Valve Actuator
3822	Aftertreatment #1 Diesel Exhaust Fluid Line Heater Relay
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 Direction 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 Diesel Exhaust Fluid Dosing Control Module
3838	Aftertreatment #1 Diesel Exhaust Fluid Dosing Control Module Relay
3839	Aftertreatment #2 Diesel Exhaust Fluid Dosing Control Module Relay
3840	Trolley Cabinet Cooling Fan
3841	Trolley Cabinet Temperature Sensor
3842	Aftertreatment #2 Diesel Exhaust Fluid 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	Wing Lights Relay
3850	Wing Lights 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 Diesel Exhaust Fluid Return Valve Solenoid
3863	Rear Legs Lower Solenoid
3864	Rear Legs Raise Solenoid
3865	Rear Legs Lift Speed Solenoid
3866	Conveyor Raise Solenoid
3867	Conveyor Lower Solenoid

3868	Conveyor Swing Left Solenoid
3869	Conveyor Swing Right Solenoid
3877	Moldboard Raise Solenoid
3878	Moldboard Lower Solenoid
3879	Moldboard Lock 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
3890	Rear Steering 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
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
5854	Arch In Solenoid
5855	Arch Out Solenoid
5856	SAE J1939 Data Link #3
5857	SAE J1939 Data Link #4
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 3

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"
21	"Data Drifted Low"

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 it.

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 4

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	Inlet Air Restriction Derate
32	Inlet Air Restriction Shutdown
33	Loss of Coolant Flow Derate
34	Loss of Coolant Flow Shutdown
35	Loss of Coolant Flow Warning
36	Low Coolant Temperature Derate
37	Low Coolant Temperature Shutdown
38	Low 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 Range
93	Boost Pressure Below Normal Range
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	Turbo 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 Diesel Exhaust Fluid Dosing Unit 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 Temperature Low Warning
124	Jacket Water to Engine Oil Temperature Low Shutdown
125	Engine Oil Pressure High Warning
126	Engine Oil Pressure High Shutdown
127	Engine Oil Filter Differential Pressure Low Warning
128	Engine Oil Filter Differential Pressure Low Shutdown
129	Engine Oil Filter Differential Pressure High Warning
130	Engine Oil Filter Differential 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 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	Injector 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