

Component Identifiers (CID) ¹	
Module Identifier (MID) ²	
ADEM III ECM	
(MID No. 036)	
CID	Component
0001	Fuel Injector Solenoid #1
0002	Fuel Injector Solenoid #2
0003	Fuel Injector Solenoid #3
0004	Fuel Injector Solenoid #4
0005	Fuel Injector Solenoid #5
0006	Fuel Injector Solenoid #6
0041	ECM BV DC Supply
0091	Throttle Sensor
0094	Fuel Pressure Sensor
0100	Oil Pressure Sensor
0110	Engine Coolant Temperature Sensor
0168	Electrical Power Supply
0172	Inlet Air Temperature Sensor
0174	Fuel Temperature Sensor
0253	Personality Module mismatch
0254	ADEM III ECM
0261	Engine Speed Sensor
0262	5 Volt Sensor Supply
0267	Engine Shutdown Switch
0268	Crack Programmed Parameters
0273	Turbo Outlet Pressure Sensor
0274	Atmospheric Pressure Sensor
0291	Engine Cooling Fan Solenoid
0296	Transmission ECM
0320	Crankshaft Position Sensor
0342	Camshaft Position Sensor
0345	Start Aid Relay
0562	Caterpillar Monitoring System
0617	Air Inlet Heater Relay
1582	Trans Lube Oil Temperature Sensor
1589	Turbo Inlet Air Pressure Sensor

Product Link ECM	
(MID No. 122)	
CID	Component
0168	Electrical Power Supply
0254	Electronic Control Module (Product Link)
0269	Sensor Power Supply
1251	Alternator Rn Terminal Signal

¹The CID is a diagnostic code that indicates which component is faulty.

²The MID is a diagnostic code that indicates which electronic control module diagnosed the fault.

Wire Description		
Wire Number	Wire Color	Description
101	RD	BATTERY+
102	RD	RUNNING LAMP PWR
104	YL	PRODUCT LINK PWR (SWITCHED)
106	WH	LIFT/LIFT POSITION SENSOR PWR
109	RD	ALTERNATOR PWR
116	RD	ENGINE ECM PWR (SWITCHED)
112	PU	MAIN RELAY OUTPUT PWR
114	GN	FORWARD HORN PWR
129	BU	ETHER INJECT PWR
136	GN	SECONDARY STEERING PWR
138	GN	PAYLOAD MONITOR SYSTEM PWR
150	OR	ENGINE ECM PWR (UNSWITCHED)
170	RD	PRODUCT LINK PWR (UNSWITCHED)
174	RD	UNSWITCHED BUSS PWR
175	RD	HOOD MOTOR PWR
177	RD	MAIN CIRCUIT BREAKER PWR
199	RD	HOOD CONTROL PWR
Ground Circuits		
200	BK	MAIN CHASSIS GND
201	BK	OPERATOR MONITOR GND
229	BK	ENGINE ECM GND
251	BK	PAYLOAD MONITOR SYSTEM GND
A274	BK	PRODUCT LINK ECM GND
Basic Machine Circuits		
304	WH	STARTER SOL START TERMINAL
306	GN	START RELAY COIL+
308	YL	MAIN POWER RELAY COIL+
317	YL	ETHER INJECT SOLENOID-
321	BR	BACKUP ALARM
322	GY	FORWARD HORN
326	RD	FUEL PRIMING PUMP
387	OR	HOOD MOTOR LOWER
388	BU	HOOD MOTOR RAISE
A300	GN	HOOD CONTROL LOWER
A301	WH	HOOD CONTROL RAISE
A307	GY	THROTTLE LEAD, POS SENS
Revolving Circuits		
403	GN	ALTERNATOR (R) TERMINAL
416	OR	SEC STR PRESS SW (NO)
417	GY	PRIMARY STR PRESS SW (NO)
419	YL	PARKING BRAKE SW (OFF)
426	BR	XMSN FILTER BYPASS SWITCH
430	BU	AIR FILTER RESTRICTED IND
432	PK	BRAKE OIL PRESS SWITCH (ON)
442	GY	HYD TANK OIL TEMP SENSOR
443	YL	TC OUTLET TEMP SENSOR
447	PK	FUEL LEVEL SENSOR
450	YL	ENGINE ECM (ENGINE SPD)
453	PK	SEC STR PRESS SW (NO)
464	YL	PRIMARY STR PRESS SW (NO)
466	WH	HYD TANK OIL LEVEL SENS
E455	BR	HYDRAULIC FILTER BYPASS SW
F421	YL	FUEL TEMPERATURE
G479	WH	SERVICE ENGINE INDICATOR
G485	BU	FRONT AXLE OIL TEMP SW
G486	GN	REAR AXLE OIL TEMP SW
Accessory Circuits		
506	PU	FRONT WASHER PUMP+
507	WH	REAR WASHER PUMP+
513	OR	A/C CLUTCH SOLENOID+
521	YL	A/C SELECT SW (A/C POSITION)
522	WH	A/C CLUTCH SOLENOID-
C526	GY	LIFT CYL. RE PRESS SENS
C530	BU	LIFT POSITION SENSOR
Lighting Circuits		
603	PK	ROTARY BEACON
604	OR	STOP LAMP
605	YL	LH TURN LAMPS
606	GY	RH TURN LAMPS
608	GN	REAR FLOOD LAMPS
611	PU	HEAD LAMP (HORN)
612	GY	BACKUP LAMP
614	PU	LICENSE PLATE/RH TAILDASH LAMPS
615	YL	FORWARD CAB FLOOD LAMPS
617	BR	LH TAIL/CLEARANCE LAMPS
618	GN	RWD FLOOD/O. BEAM LAMPS
Control Circuits		
709	BU	XMSN ECM SENS (IND +HVOLTS)
727	GN	SEC STR RELAY COIL+

Failure Mode Identifiers (FMI) ¹	
FMI No.	Failure Description
0	Data valid but above normal operational range.
1	Data valid but below normal operational range.
2	Data erratic, intermittent, or incorrect.
3	Voltage above normal or shorted high.
4	Voltage below normal or shorted low.
5	Current below normal or open circuit.
6	Current above normal or grounded circuit.
7	Mechanical system not responding properly.
8	Abnormal frequency, pulse width, or period.
9	Abnormal up/down.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Bad device or component.
13	Out of calibration.
14	Parameter failures.
15	Parameter failures.
16	Parameter not available.
17	Module not responding.
18	Sensor supply fault.
19	Condition not met.
20	Parameter failures.

¹The FMI is a diagnostic code that indicates what type of failure has occurred.

Event Codes For ADEM III ECM	
Event Code	Condition
E015	High Engine Coolant Temperature Derate
E017	High Engine Coolant Temperature Warning
E025	High Inlet Air Temperature Derate
E027	High Inlet Air Temperature Warning
E039	Low Engine Oil Pressure Derate
E065	Fuel Filter Restriction Warning
E086	High Fuel Pressure
E100	Low Engine Oil Pressure Warning
E190	Engine Overspeed Warning

Related Electrical Service Manuals	
Title	Form Number
Alternator	REN1091
Electric Steering Motor	REN1130
Consult	(Select 42MT type 400)
ADEM III ECM	REN1085
Product Link System	REBU1051

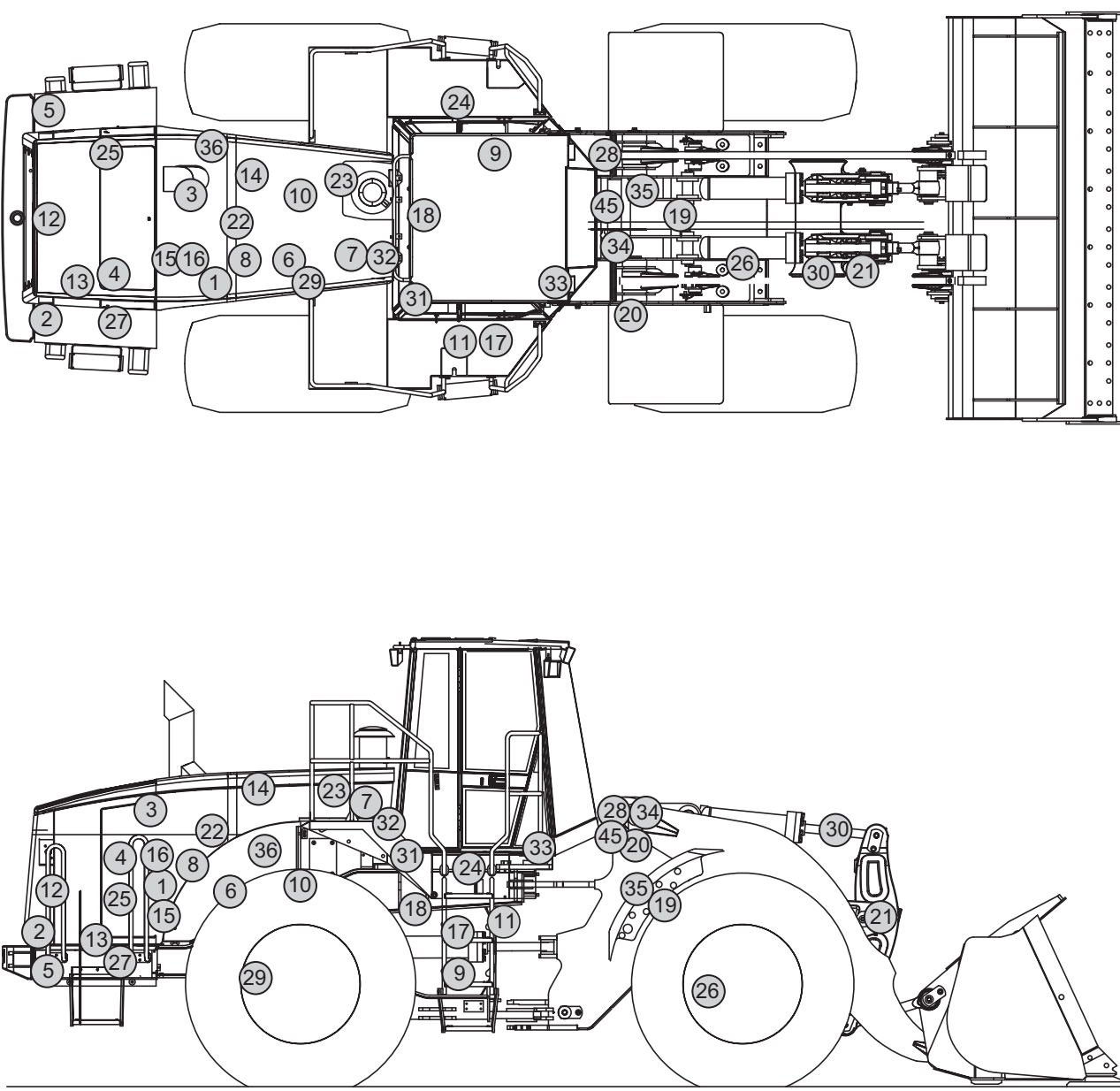
Wire Description		
Wire Number	Wire Color	Description
728	BU	SEC STR INTER RELAY COIL+
731	GN	CLUTCH 1 REVERSE
752	YL	CLUTCH 2 FORWARD
754	BU	CLUTCH 3 FOURTH
755	OR	CLUTCH 4 THIRD
781	GY	LIFT POS SENSOR
782	YL	BUCKET/TEL POS SW
779	WH	QUICK COUPLER (ENGAGE SOL)
A701	GY	FUEL INJECTOR CYLINDER 1
A702	PU	FUEL INJECTOR CYLINDER 2
A703	BR	FUEL INJECTOR CYLINDER 3
A704	GN	FUEL INJECTOR CYLINDER 4
A705	BU	FUEL INJECTOR CYLINDER 5
A706	GY	FUEL INJECTOR CYLINDER 6
A745	WH	FUEL PRESSURE SENSOR
F713	OR	TURBO INLET PRESS SENSOR
F762	GY	ETHER INJECT RELAY COIL+
F766	WH	DETENT ENABLE INTER LOCK
G154	PK	PARKING BRAKE SW (ON)
H113	PK	LIFT PROPORTIONAL SOL
H114	OR	LOWER PROPORTIONAL SOL
H116	WH	IMPLEMENT ECM SOLENOID RETURN
H117	BR	PILOT SOLENOID
H118	GY	BUCKET TEL POSITION SENS (SG)
H146	YL	VARIABLE SPD FAN SOLENOID+
H147	BR	VARIABLE SPD FAN SOLENOID-
H795	PK	ENGINE ECM (SENSOR/SW RETURN)
J701	GN	ENGINE RETARDER SOL. CYL. 1
J701	GN	ENGINE RETARDER SOL. 3
J702	BK	ENGINE RETARDER SOL. COMMON
R146	PK	TURBO OUTLET PRESSURE SENSOR
R147	OR	ATMOSPHERIC PRESSURE SENSOR
A993	OR	FUEL PRIMING PUMP MOTOR
G628	WH	SENSOR PRESSURE +5V
G629	GN	SENSOR PRESSURE COMMON
G633	PK	ENGINE TEMP SENSOR COMMON
G634	BU	AIR INLET HEATER RELAY COIL+
G653	OR	ENGINE INTAKE MANIFOLD AIR TEMP #2
G656	WH	TDC PROBE+
G657	YL	TDC PROBE-
J843	PU	ENGINE ECM ANALOG SENSOR RTN
J844	GY	ENGINE ECM ANALOG SENS BVOLTS
800	PU	CLUTCH 5 SECOND
901	WH	CLUTCH 6 FIRST
844	OR	CAT DATA LINK
945	BR	CAT DATA LINK
953	GY	IMPLEMENT ECM SENSOR RTN
962	OR	TRANSMISSION ECM SENSOR RTN
975	WH	XMSN ECM SOLENOID/INDICATOR RTN
976	OR	RISE CONTROL ON SOLENOID
994	GY	OIL PRESSURE (FILTERED)
995	BU	Coolant Temperature
A882	BR	ENGINE ECM THROTTLE/IND BVOLTS
E900	WH	XMSN OUTPUT SPD SENS LEADING+
E901	GN	XMSN OUTPUT SPD SENS LEADING-
E906	OR	XMSN OUTPUT SPD SENS TRAILING+
E907	GY	XMSN OUTPUT SPD SENS TRAILING-
E908	BR	XMSN INPUT SPD SENSOR+
E909	WH	XMSN INPUT SPD SENSOR-
E919	YL	AUX LIFT PROPORTIONAL SOL
E920	BR	AUX LOWER PROPORTIONAL SOL
E921	PK	MACHBACK PROPORTIONAL SOL
E922	GN	PLUM PROPORTIONAL SOL
E963	BK	CRANK RPM SENSOR-
E964	WH	CRANK RPM SENSOR+
E985	BU	CAM RPM SENSOR-
E986	YL	CAM RPM SENSOR+
K933	GN	OPERATOR MONITOR SENSOR PWR
K977	PK	XMSN OIL TEMP SENSOR
L983	WH	FUEL INJECTOR RTN CYL. 1-2
L984	OR	FUEL INJECTOR RTN CYL. 3-4
L985	YL	FUEL INJECTOR RTN CYL. 5-6
N939	GN	RISE CONTROL AUTO SOLENOID
P976	BR	QUICK COUPLER RELEASE SOLENOID
R971	YL	XMSN LUBE OIL TEMP SENSOR
R974	OR	ETHER INTER SWITCH
X918	PU	GN LEVEL SHUTDOWN SW (NO)
X919	WH	GN LEVEL SHUTDOWN SW (NC)

Connector Location	
Connector Number	Machine Location
CONN 1	L15 12
CONN 2	D-15 22
CONN 3	F-15 8
CONN 4	E-15 8
CONN 5	D-15 16
CONN 6	K-13 6
CONN 7	K-13 1
CONN 8	L-8 4
CONN 9	A-15, B-15 15
CONN 10	G-11 6
CONN 11	E-3, F-3, 23 19
CONN 12	F-3, 23 19
CONN 13	F-3, 23 20
CONN 14	F-3, 23 20
CONN 15	F-3, 23 20
CONN 16	D-3, 23 34
CONN 17	D-3, 23 34
CONN 18	D-3, 23 34
CONN 19	G-3, 23 34
CONN 20	D-4, G-4, K-4 33
CONN 21	C-10 31
CONN 22	C-10 31
CONN 23	C-6 32
CONN 24	F-3, 23 35
CONN 25	F-3 34
CONN 26	F-3 34
CONN 27	D-3 45
CONN 28	F-3 34
CONN 29	G-7 32
CONN 30	G-7 32
CONN 31	F-7 32
CONN 32	D-7 32

The connectors shown in this chart are for harness to harness connections. Connectors that pin a harness to a component are generally located at or near the component. See the Component Location Chart.

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Backstop	D-16 2	2	Sensor - Oil Pressure	F-15 8	8
Alternator	K-15 3	3	Sensor - Tire Position	L-2 21	21
Arc Suppressor	K-13 4	4	Sensor - Trans. Lube Oil Temperature	F-10 7	7
Batteries	L-13/14 5	5	Sensor - Trans. Output Speed (Leading)	G-10 18	18
Breaker - ADEM Engine Control	B-15 4	4	Sensor - Trans. Output Speed (Trailing)	H-10 18	18
Breaker - Alternator	B-15 4	4	Sensor - Trans. Oil Temp	H-10 18	18
Breaker - Hood	C-15 4	4	Sensor - Turbo Inlet Pressure	G-13 14	14
Breaker - Main	B-14 4	4	Solenoid - A/C Clutch	K-13 3	3
Breaker - Running Lamp	C-15 4	4	Solenoid - Aux Lift Prop	J-1 19	19
Breaker - Unswitched Bus (Cab)	C-15 4	4	Solenoid - Aux Lower Prop	J-1 19	19
Control - ADEM III	D-12 6	6	Solenoids - Cylinder Head (1 - 6)	H-16 22	22
Control - Hood Raise / Lower	C-13 4	4	Solenoid - Dump Prop	J-1 19	19
Control - Product Link	A-5 7	7	Solenoid - Start Aid	K-8 23	23
Motor - Actuator	C-16 2	2	Solenoid - Lift Prop	L-1 19	19
Motor - Fuel Priming Pump	B-14 4	4	Solenoid - Lower Prop	J-1 19	19
Motor - Secondary Steer	K-10 9	9	Solenoid - On / Off Pilot	L-2 19	19
Motor - Starter	K-12 10	10	Solenoids - Quick Coupler	H-1 19	19
Motors - Washers	A-6 11	11	Solenoid - Rack Back Prop	J-2 19	19
Relay - Back Up Alarm	K-18 12	12	Solenoids - Trans. Clutch	H-11 18	18
Relay - Start Aid	B-14 4	4	Solenoid Valves - Ride Control	J-1 19	19
Relay - Main	A-15, B-15 4	4	Solenoid - Variable Speed Fan	H-13 15	15
Relay - Secondary Steering	K-10 4	4	Switch - A/C Refrigerant	K-14 3	3
Relay - Secondary Steering Intermediate	L-11 9	9	Switch - Brake Oil Pressure	L-6 24	24
Relay - Start	A-15 4	4	Switch - Blower	L-13 25	25
Sensor - Fuel Level	E-17 13	13	Switch - Front Axle Temperature	H-2 26	26
Sensor - Tongue Converter Oil Temp	C-10 8	8	Switch - Fuel Priming Pump	K-15 8	8
Sensor - Atmospheric Pressure	F-15 14	14	Switch - Ground Level Shutdown	C-16 27	27
Sensor - Cam Shaft Speed Timing	E-15 15	15	Switch - Hood Actuator	C-16 27	27
Sensor - Coolant Temperature	F-15 8	8	Switch - Hydraulic Filter Bypass Pressure	L-8 24	24
Sensor - Crank Shaft Speed Timing	D-15 16	16	Switch - Hydraulic Oil Level	A-6 17	17
Sensor - Fuel Pressure	F-15 8	8	Switch - Lift Kickout Proximity	L-2 28	28
Sensor - Fuel Temperature	E-15 8	8	Switch - Park Brake Pressure	L-8 24	24
Sensor - Hydraulic Oil Temperature	A-6 17	17	Switch - Primary Steer	K-8 9	9
Sensor - Inlet Air Temp	H-10 19	19	Switch - Rear Axle Temp	C-10 10	10
Sensor - Inlet Manifold Air Temp	E-15 14	14	Switch - Secondary Steering	K-8 9	9
Sensor - Intake Manifold Air Temp	F-15 8	8	Switch - Tire Kickout Proximity	L-1 30	30
Sensor - Lift Cylinder Head End Pressure	H-2, L-2 19	19	Switch - Trans Filter Bypass	K-8 24	24
Sensor - Lift Position	L-2 20	20			

Machine locations are repeated for components located close together.



Machine Harness Connector And Component Locations



Component Identifiers (CID) ¹	
Module Identifier (MID) ²	
Caterpillar Monitoring System (MID No. 030)	
CID	Component
0095	Fuel Level Sender
0100	Engine Oil Pressure Sensor
0110	Engine Coolant Temperature Sensor
0177	Torque Converter Oil Temperature Sensor
0248	Data Link
0263	Sensor Power Supply
0271	Action Alarm
0324	Front/Rear Wiper Washer
0427	Temp Sensor (Front Axle Oil)
0428	Temp Sensor (Rear Axle Oil)
0680	Hydraulic Oil Temperature Sensor
0819	Display Data Link
0821	Display Power Supply
0826	Temp Sensor (Torque Converter Oil)
0830	Brake Oil Temperature Sensor
Payload Control System (MID No. 074)	
CID	Component
0168	Electrical System Voltage
0254	Hydraulic Electronic Control Module
0350	Lift Linkage Position Sensor
0364	Head End Lift Cylinder Pressure Sensor
0769	Rod End Lift Cylinder Pressure Sensor
0817	Internal Backup Battery
0820	Keypad Data Link
Transmission Control (MID No. 081)	
CID	Component
0041	*8 Yells Sensor Supply
0070	Parking Brake Switch
0149	Ride Control Solenoid 2
0168	Electrical System Voltage
0177	Transmission Oil Temperature Sensor
0190	Engine Speed Sensor
0270	Cat Monitor System Harness Code
0363	Ride Control Solenoid 1
0367	Ride Control Solenoid 3
0368	Transmission Auto/Manual Switch
0444	Start Relay
0562	Cat Monitoring System
0585	Transmission Output Speed Sensor 1
0621	Downshift Switch
0622	Upshift Switch
0623	Directional Switch
0631	Transmission Clutch 1 Solenoid
0632	Transmission Clutch 2 Solenoid
0633	Transmission Clutch 3 Solenoid
0634	Transmission Clutch 4 Solenoid
0635	Transmission Clutch 5 Solenoid
0636	Transmission Clutch 6 Solenoid
0638	Starter Solenoid
0668	Transmission Shift Lever
0672	Torque Converter Output Speed Sensor
0673	Speed Sensor (Transmission Output 2)
0763	Pressure Switch (Primary Steering)
0784	Pressure Switch (Secondary Steering)
0785	Secondary Steering Intermediate Relay
1327	Position Sensor (Lift Brake Pedal)
1521	Part-Throttle AutoShift Selector Switch
Theft Deterrent Module (MID No. 124)	
CID	Component
0168	Voltage Above Normal
0248	Cat Data Link Error
0817	Real Time Clock Not Running
1391	MSS Output Driver #1
1392	MSS Output Driver #2

¹ The CID is a diagnostic code that indicates which component is faulty.

² The MID is a diagnostic code that indicates which electronic control module diagnosed the fault.

Failure Mode Identifiers (FMI) ¹	
FMI No.	Failure Description
0	Data valid but above normal operational range.
1	Data valid but below normal operational range.
2	Data erratic, intermittent, or incorrect.
3	Voltage above normal or shorted high.
4	Voltage below normal or shorted low.
5	Current below normal or open circuit.
6	Current above normal or grounded circuit.
7	Mechanical system not responding properly.
8	Abnormal frequency, pulse width, or period.
9	Abnormal update.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Bad device or component.
13	Out of calibration.
14	Parameter failures.
15	Parameter failures.
16	Parameter not available.
17	Module not responding.
18	Sensor supply fault.
19	Condition not met.
20	Parameter failures.

¹ The FMI is a diagnostic code that indicates what type of failure has occurred.

Related Electrical Service Manuals		
Title	Form Number	
Caterpillar Monitoring System	SENR1394	
Machine Security System	REN2462	
Payload Control System	SENR614	
Transmission Control System	REN2105	

Wire Description			
Wire Number	Wire Color	Description	Machine Location
102	RD	Running/Hazard Lamps	540 WH Turn Signal Indicator Left
104	YL	MSS/Product Link	550 GY HVAC Blower
105	RD	Key Sw	567 WH HVAC Blower On
106	WH	Lift/RT Sensor Power	A513 PK DC/DC Converter Memory Output
108	BU	Seat Power	A523 PU Blend Door (Low Side)
112	FU	Main Power Rly Output	A524 BR Blend Door (Low Side)
113	OR	Cat Mon System	A525 GN Blend Door (High Side)
114	RD	W arming Horn (Forward)	A541 PU Turn Signal Indicators
115	PK	Voltage Conv 24V Radio	C529 GY Lift Press Sensor
116	GY	Front/Rear Wiper Washer	C530 BU Lift Position Sensor
120	RD	Voltage Conv Memory	
121	RD	Back Alarm To Lamp	603 PK Rotary Beacon
122	RD	Dome Lamps	604 OR Stop Lamp
123	WH	Axle Oil Cooler	605 YL Turn Lamp - Left
124	GN	A/C	606 GY Turn Lamp - Right
126	PK	Xmen ECM	608 GN Flood Lamp - Dimmer
127	OR	Front Cab Floodlights	610 OR Running Lamp Dimmer
128	PK	Detent Pwr	611 PU Head Lamp Hi
129	BU	Start Aid	614 PU Park/Tail/Dash Lamp
130	RD	Stop Lamp/Backup Alarm	615 YL Forward Cab Floodlamps
131	BR	Turn Signal Flasher	617 BR Tail/Clearance Lamps - Left
132	RD	Center Dash Indicator Panel	619 GN Forward Flood/Lo Beam Lamps
133	OR	LH/RH Dash Indicator Panel	633 BU Bucket Lamps
134	YL	Rear Machine Floods	646 OR Forward Cab Floodlamps
135	BU	12V Accessory	647 GN Rear Floodlamps
136	GN	Secondary Steer	661 GN Dimmer Tachometer Lamp
138	GN	PCS	662 YL Dimmer Speedometer Lamp
139	RD	LH Tail Clearance Lamps	663 GY Dimmer Gauge Lamps
142	BU	Fourth Function Grapple	691 GY Turn Signal Flasher Pwr
144	PK	Beacon Pwr	
147	RD	ECAP Pwr	
150	OR	Engine ECM Power (*)	
164	WH	Xmen ECM/LH Brake Pedal Sensor	
168	GN	Quick Coupler	
170	RD	Product Link (Unswitched)	
174	RD	Unswitched Bus	
188	WH	PCS ECM	
199	RD	Hood Control	
Ground Circuits			
200	BK	Main Chassis	
201	BK	Cat Mon System	
250	BK	Payload Mon - Customer GND	
251	BK	Payload Mon - System GND	
290	BK	Service Mode Service	
291	BK	Service Mode Clear	
A273	BK	Transmission ECM GND	
A274	BK	Product Link GND	
A275	BK	MSS GND	
Basic Machine Circuits			
306	GN	Starter Relay CK	
307	OR	Key SW To Neutral Start SW	
308	YL	Main Power Relay Coil	
320	OR	Horn Relay Coil To SW	
321	BR	Backup Alarm 24V	
322	GY	W arming Horn (Forward)	
326	RD	Key SW "C" (On) Terminal	
A307	GY	Throttle Position Sensor	
Monitoring Circuits			
403	GN	Alternator (R) Term	
410	WH	Action Alarm	
411	PK	Action Indicator Lamp	
413	BR	Fuel Pressure Indicator	
416	OR	Secondary Steer SW	
417	GY	Primary Steer SW	
419	YL	Parking Brake SW (Off)	
426	BR	XMSN Filter Bypass Indicator	
430	BU	Air Filter Restricted Indicator	
432	PK	Brake Oil Pressure Indicator	
436	OR	XMSN Filter Bypass Indicator	
442	GY	Hyd Oil Tank Temp Gauge	
443	YL	T/C Outlet Temp Sensor	
447	PK	Fuel Level Sensor	
450	YL	Engine Speed (RPM) from ADEM	
453	PK	Secondary Steering Pressure SW (NC)	
464	YL	Primary Steering Pressure SW (NC)	
496	WH	Hyd Tank Oil Level Sensor	
C413	YL	Cat Mon Sys Display Data	
C414	BU	Cat Mon Sys Display Lead	
E455	BR	Hydraulic Oil Filter Bypass SW	
G479	WH	Service Engine Indicator	
G480	GN	Fuel Level/Temp Indicator	
G485	BU	Front Axle Oil Temp SW	
G486	GN	Rear Axle Oil Temp SW	
Accessory Circuits			
500	BR	Wiper - Front (Park)	
501	GN	Wiper - Front (Low)	
502	OR	Wiper - Front (Hi)	
503	BR	Wiper - Rear (Park)	
504	YL	Wiper - Rear (Low)	
505	BU	Wiper - Rear (Hi)	
506	PU	Front Washer Pump +V	
507	WH	Rear Washer Pump +V	
509	PU	Radio Speaker - Left (Common)	
511	BR	Radio Speaker - Right	
512	GN	Radio Speaker - Right (Common)	
515	GY	Blower Motor (Hi)	
516	GN	Blower Motor (Medium)	
517	BU	Blower Motor (Low)	
518	OR	Hazard Flasher To SW	
521	YL	A/C SW (Select Position)	
522	WH	A/C Clutch Solenoid -V	
523	GN	Turn Signal Indicators	
536	BR	Hazard Indicator	
539	BU	Turn Signal Indicator Basic/Right	
Accessories Circuits (continued)			
540	WH	Turn Signal Indicator Left	
550	GY	HVAC Blower	
567	WH	HVAC Blower On	
A513	PK	DC/DC Converter Memory Output	
A523	PU	Blend Door (Low Side)	
A524	BR	Blend Door (Low Side)	
A525	GN	Blend Door (High Side)	
A541	PU	Turn Signal Indicators	
C529	GY	Lift Press Sensor	
C530	BU	Lift Position Sensor	
Lighting Circuits			
603	PK	Rotary Beacon	
604	OR	Stop Lamp	
605	YL	Turn Lamp - Left	
606	GY	Turn Lamp - Right	
608	GN	Flood Lamp - Dimmer	
610	OR	Running Lamp Dimmer	
611	PU	Head Lamp Hi	
614	PU	Park/Tail/Dash Lamp	
615	YL	Forward Cab Floodlamps	
617	BR	Tail/Clearance Lamps - Left	
619	GN	Forward Flood/Lo Beam Lamps	
633	BU	Bucket Lamps	
646	OR	Forward Cab Floodlamps	
647	GN	Rear Floodlamps	
661	GN	Dimmer Tachometer Lamp	
662	YL	Dimmer Speedometer Lamp	
663	GY	Dimmer Gauge Lamps	
691	GY	Turn Signal Flasher Pwr	
Control Circuits			
700	PK	Implement Interlock	
709	OR	XMSN Sensor Power Supply	
720	PU	Neutralizer Override SW	
727	GN	Secondary Steer Relay Coil +V	
728	BU	Secondary Steer Intermediate Relay	
751	GN	Clutch 1 Solenoid (Reverse)	
752	YL	Clutch 2 Solenoid (Forward)	
754	BU	Clutch 3 Solenoid 4th	
755	OR	Clutch 4 Solenoid 3rd	
761	GY	Lift Position Detent Solenoid	
762	YL	Bucket/Fork Position Select SW	
779	WH	Quick Coupler Engage Sol	
E701	PK	Auto Ride Control Indicator	
E702	OR	Ride Control On Indicator	
E707	GN	PCS Display +V	
E708	PK	PCS Display Clock	
E735	PU	Operator SW In	
F766	WH	Implement Detent Interlock	
F767	BR	Downshift SW (N.C.)	
G246	BR	LH Pedal Position Sensor Signal	
G750	BU	XMSN Forward SW	
G755	GY	XMSN Reverse SW	
G760	WH	Upshift SW (NO) (HMU 2nd Gear)	
G761	YL	Downshift SW (NC) (HMU 3rd Gear)	
G762	BR	Downshift SW (NO) (HMU 4th Gear)	
G763	PU	Neutral SW	
G764	PK	Park Brake SW (On)	
G766	GN	Rise Control SW (Auto)	
G767	WH	Rise Control SW (On)	
G768	GN	Upshift SW (NC) (HMU 1st Gear)	
G769	WH	FNR Forward SW	
G788	YL	FNR Reverse SW	
H730	PK	AutoMan (Auto 1-4)	
H735	PK	Engine ECM (Sensor SW Return)	
I818	BR	Serial Data (Transmit)	
I819	GY	Serial Data (Receive)	
F846	PU	MSS LED Source Driver	
G836	WH	MSS LED Source Driver	
G850	BU	Inlet Air Heater Indicator	
900	PU	Clutch 5 Solenoid 2nd	
901	WH	Clutch 6 Solenoid 1st	
910	YL	Neutralizer Disable Indicator	
944	OR	CAT Data Link +	
945	BR	CAT Data Link -	
951	PK	MSS LED Return	
961	BR	TR Position Detent Solenoid	
962	OR	Transmission ECM GND	
F964	OR	Fork Position Select	
973	BR	AutoMan (Manual)	
975	WH	XMSN Input SPD -	
976	OR	XMSN Input SPD +	
977	YL	AutoMan (Auto 4)	
987	WH	Fourth Function Select SW	
A982	BR	Engine ECM Throttle Position Sensor +V	
E900	WH	XMSN Output SPD +	
E901	GN	XMSN Output SPD -	
E906	OR	XMSN Output SPD Trail +	
E907	GY	XMSN Output SPD Trail -	
E908	BR	XMSN Input SPD -	
E909	WH	XMSN Input SPD +	
E905	OR	PCS Keypad Data	
K933	GN	Operator Monitor Sensor PWR	
X977	PK	XMSN Oil Temperature	
N939	GN	Rise Control Off Solenoid	
P910	BR	Secondary Steer Test Solenoid	
P916	OR	FNR Neutral SW	
P931	GN	Grapple Enable SW	
P976	BR	Quick Coupler Release Solenoid	
R974	OR	Start Aid SW	
T901	YL	MSS Exciter Coil In	
T902	PK	MSS Exciter Coil Out	
X972	GN	Variable Shift Control (Max)	
X973	BU	Variable Shift Control (Mid)	
X974	BR	Variable Shift Control (Min)	

Connector Location		
Connector Number	Schematic Location	Machine Location
CONN 28	G-18	32
CONN 29	F-19	32
CONN 30	E-18	32
CONN 31	D-18	32
CONN 32	C-18	32
CONN 33	F-15	C
CONN 34	E-15	C
CONN 35	Service Mode Plug	E-15 C
CONN 36	F-8, G-10	D
CONN 37	G-8, G-10	D
CONN 38	Customer Data Connection	B-9 B
CONN 39	B-9	D
CONN 40	L-14	42
CONN 41	F-3	A
CONN 42	G-3	A
CONN 43	A	A
CONN 44	Service Tool Connector	F-3 A
CONN 45	G-1	43
CONN 46	H-1	43

The connectors shown in this chart are for harnesses to be connected to. Connectors that join a harness to a component are generally located at or near the component. See the Component Location Chart.

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Action	E-15	C	Resistor 2	L-15	42
Am. Suppressor	D-15	C	Sensor - Left Hand Brake Pedal	G-1	43
Assembly - Handle For Downshift	G-8	D	Sensor - Throttle Position	G-1	43
Blower - HVAC	A-15	C	Solenoid - Auxiliary	G-9	D
Blower - Seat	A-15	C	Solenoid - Float	G-9	D
Compressor - Seat	H-10	37	Solenoid - Lift Positioner	G-9	D
Control - Dimmer	H-10	C	Solenoid - TR Positioner	G-9	D
Control - EMS III	C-10	B	Switch - A/C Selector	D-6	B
Control - Machine Security System	E-16	C	Switch - Auto / Manual Select	D-6	B
Control - Payload Control System	B-10	38	Switch - Beacon	I-3	A
Control - Transmission	J-18	39	Switch - Blower	D-8	B
Converter - Voltage (15A)	E-15	C	Switch - Bucket / Fork Select	D-4	B
Converter - Voltage (20A)	F-15	C	Switch - Dimmer	H-1	A
Flasher - 24V	D-15	C	Switch - Down Shift	G-9	D
Fuse - Thermal Couple	K-15	42	Switch - EMS Mode Select	C-8	B
Fuse Block	A-16	C	Switch - Forward Horn	H-3	A
Gauge - Fuel	I-1	A	Switch - Forward Horn 2	F-9	D
Ground - Cab 1	C-13	C	Switch - Fourth Function Select	F-7	D
Ground - Cab 2	B-13	C	Switch - Front Intermittent Wiper/Washer	D-7	B
Ground - Cab 4	L-18	40	Switch - Grapple Enable	F-7	D
Ground - Engine End Frame	L-18	40	Switch - Implement Detent Override Limit	F-9	D
Ground - Upper Cab	A-3	41	Switch - Key Start	F-3	A
Ground - Wind Wiper	J-5	A	Switch - Start Aid	J-3	A
Indicator - Left Hand Panel	K-1	A	Switch - Neutralizer Override	C-3	B
Indicator - Right Hand Panel	J-1	A	Switch - Quick Coupler	D-2	B
Keypad - Payload Control System	B-10	38	Switch - Rear Wiper/Washer	D-6	B
Lights - Fog	I-3	43	Switch - Ride Control	B-4, C-4	B
Motor - Blend Door Actuator	L-16	42	Switch - Running Lamp	K-2	A
Motor - Blower	L-16	42	Switch - Secondary Steering Test	C-3	B
Motor - Rear Wiper	K-14	C	Switch - Stop Lamp	G-1	43
Outlet - 12V Accessory	F-3	43	Switch - Temperature Select	D-7	B
Relay - Forward Cab Floodlamp	C-15	C	Switch - Transmission Gear Selector	H-3	A
Relay - Forward Horn	C-15	C	Switch - Turn Signal	H-2	A
Relay - Rear Floodlamp	G-15	C	Switch - Variable Shift Control	D-6	B
Resistor - Blower Motor Speed	K-16	42	Tachometer Speedometer		

