

Component Identifiers (CID) Module Identifier (MID) Traction Control System (MID No. 028)	
CID	Component
0168	Electrical System Voltage
0248	Data Link
0263	Lighter Sensor Power Supply (8V)
0270	Harmonizer
0296	Transmission Control
0605	Left Front Speed Sensor
0606	Right Front Speed Sensor
0607	Left Rear Speed Sensor
0608	Right Rear Speed Sensor
0609	Left Front Brake Solenoid
0610	Right Front Brake Solenoid
0611	Left Rear Brake Solenoid
0612	Right Rear Brake Solenoid
0613	Front Brakes Pilot Solenoid
0615	Vehicle Articulation Angle Sensor
0616	Yaw/Steer Switch
0653	Traction Control ECM
0687	Options Code Code
Engine Control (MID No. 036)	
CID	Component
0001	Injector Cylinder #1
0002	Injector Cylinder #2
0003	Injector Cylinder #3
0004	Injector Cylinder #4
0005	Injector Cylinder #5
0006	Injector Cylinder #6
0041	ECM (Electronic Control Module) & Volt DC Supply
0042	Injector Actuation Valve
0091	Throttle Position Sensor
0094	Fuel Delivery Pressure Sensor
0100	Engine Oil Pressure Sensor
0110	Engine Coolant Temperature Sensor
0154	Injector Actuation Pressure Sensor
0158	Electrical System Voltage
0162	Intake Manifold Air Temperature Sensor
0167	OR TCS
0175	Engine Oil Temperature Sensor
0190	Engine Speed Sensor
0248	CAT Data Link
0253	Parameter Identification
0254	Electronic Control Module
0281	Engine Timing Calibration
0282	5 Volt Sensor Power Supply
0287	Removal Shutdown Pin 4
0288	Programmed Parameter Fault
0273	Turbocharger Outlet Pressure Sensor
0274	Atmospheric Pressure Sensor
0291	Engine Cooling Fan Solenoid
0296	Transmission Control
0342	Secondary Engine Speed Sensor
0562	Second Generation Electronic Monitoring System
0600	Hydraulic Oil Temperature Sensor
0617	Inlet Air Heater Relay
Payload Control System (MID No. 074)	
CID	Component
0168	Electrical System Voltage
0254	Electronic Control Module
0350	Left Linage Position Sensor
0364	Lift Cylinder Head Pressure Sensor
0769	Lift Cylinder Rod End Pressure Sensor
0817	ECM Internal Backup Battery
0820	Keyboard Data Link
Powertrain Control System (MID No. 081)	
CID	Component
0041	ECM (Electronic Control Module) & Volt DC Supply
0070	Parking Brake Switch
0146	Ride Control Solenoid
0168	Electrical System Voltage
0177	Transmission Oil Temperature Sensor
0190	Engine Speed Sensor
0248	CAT Data Link
0363	Ride Control Solenoid Valve
0387	Ride Control Bypass Switch
0388	Transmission Auto / Manual Switch
0444	Start Relay Magnetic Switch
0585	Transmission Oil Pressure Sensor 1
0590	Electronic Engine Control Module
0672	Torque Converter Output Speed Sensor
0673	Transmission Oil Pressure Sensor 2
0674	Transmission Intermediate Speed Sensor 1
0675	Transmission Intermediate Speed Sensor 2
0753	Primary Steering Oil Pressure Switch
0754	Secondary Steering Oil Pressure Switch
0756	Secondary Steering Intermediate Relay
1237	Ride Control Proportional Sensor
1401	Transmission Solenoid 1
1402	Transmission Solenoid 2
1403	Transmission Solenoid 3
1404	Transmission Solenoid 4
1405	Transmission Solenoid 5
1406	Transmission Solenoid 6
1521	Variable Shift Control Solenoid Switch
1716	Reason/Lower Defect Electromagnet
1721	Reason/Upper Defect Electromagnet
Machine Security System (MID No. 124)	
CID	Component
0168	Electrical System Voltage
0248	Data Link
0617	ECM Internal Backup Battery
1391	MSS Output Driver No. 1
1392	MSS Output Driver No. 2

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

Event Codes Machine Control	
Event Code	Condition
E915	High Engine Coolant Temperature Derate
E917	High Engine Coolant Temperature Warning
E925	High Inlet Air Temperature Derate
E927	High Inlet Air Temperature Warning
E939	Low Engine Oil Pressure Derate
E938	High Fuel Pressure
E100	Low Engine Oil Pressure Warning
E190	Engine Overspeed Warning
E272	Inlet Air Restriction Warning

Failure Mode Identifiers (FMI)	
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	Not 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.

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

Wire Description - Vol 1 & 2					
Wire Number	Wire Color	Description	Description		
Power Circuits		Control Circuits (Cont'd)			
101	RD	Start In	800	PU	Transmission Shift Sol No. 4 - 2nd Gear
102	RD	Running Lamp Switch	901	WH	Transmission Shift Sol No. 6 - 1st Gear
104	YL	MSS/Product Link Switched Buss	944	OR	CAT Data Link +
105	RD	Key Switch	945	BR	CAT Data Link -
108	PK	Clear Brake	951	PK	MSS LED Return
109	RD	AI Output (+) Term	961	BR	Electro-Imag Tilt Positioner
110	RD	Engine ECM	962	DR	Variable Shift Control Switch - Pos 1
112	PU	Switched Buss	964	BU	Fork Position Select
113	RD	Clutch Lighter	973	BR	Auto/Manual SW 2
114	RD	Hom (Forward)	975	WH	Transmission Shift Sol No. 4 - 2nd Gear
115	PK	Converter Switch In	976	DR	Ride Control Solenoid 1
116	GY	Gage Cluster Switched	977	YL	Auto/Manual SW 1
118	RD	MSS Power	987	WH	4th Function Switch
120	RD	Stop Lamps	995	BU	Coolant Temperature
122	RD	Converter Memory	A223	BR	CHI Harness Code 0
123	WH	Aux Oil Cooler 1	A224	BR	CHI Harness Code 1
124	GN	AC Blower Switched	A225	BR	CHI Harness Code 2
126	PK	Xmtr Cnt	A226	BR	CHI Harness Code 3
127	OR	Secondary Star Switched	A274	BR	Product Link
130	RD	Stop Lamp Switch	A279	BR	CHI Harness Code 4
131	BR	Key Switch Input to Flasher	A280	BR	CHI Harness Code 5
133	OR	Turn Signal Flasher	A281	BR	CHI Harness Code 6
134	YL	Rear Flood Relay	A282	BR	Switch/Sensor Ground
136	BU	Clutch Lighter	A300	GN	Hood Lower
138	GN	Traction Control System (TCS)	A501	WH	Hood Raise
139	RD	Lift Tail Lamp	A513	GY	Converter Memory Output
141	PK	Removal Shutdown Pin 4	A701	GY	Injector #1
142	BU	4th Function	A702	PU	Injector #2
144	BU	4th Function	A703	BR	Injector #3
146	GY	Gage Cluster Switched	A704	GN	Injector #4
147	RD	Engine ECM - Battery	A705	BU	Injector #5
150	OR	Engine ECM	A706	GY	Injector #6
164	WH	Lift Brake Pedal Sensor	A893	OR	Fuel Priming Pump
167	OR	TCS	A892	DR	Throttle Position Sensor
168	GN	Clutch Coupler Switch	C520	GY	Lift Post Coupler Switch
170	RD	Product Link ECM	C530	BU	Lift Position Sensor
174	RD	Unswitched Buss	C587	RD	AH Relay Return
175	RD	Running Lamp	C590	DR	Oil Pressure Sensor
177	RD	Clutch Lighter	C591	PK	Fuel Pressure Sensor
180	YL	Radio - Battery +	E116	PU	Tilt Pressure Sensor
188	WH	Playload Control System	E735	PU	Operator Select Switch
199	RD	Hood Acceptor	E900	WH	Trans Output SPD +
200	BK	Main Chassis	E901	GN	Trans Output SPD -
201	BK	Axle Coolers	E902	PU	Trans Intermediate SPD +
202	OR	Lift Frame	E903	YL	Trans Intermediate SPD -
250	BK	Playload Mon - Customer GND	E904	BR	Intermediate SPD C
251	BK	Playload Mon - System GND	E905	BU	Trans Intermediate SPD Q+
A219	BK	Cab GND	E906	DR	Trans Output SPD Q-
A273	BK	Transmission ECM	E907	GY	Trans Output SPD Q
A275	BK	MSS ECM	E908	WH	Trans Input SPD -
304	WH	Start Relay No. 1 Output	E923	PK	Front Left Wheel Proportional Solenoid
306	GN	Not Used	E924	WH	Rear Right Wheel Proportional Solenoid
307	OR	Key Switch - Start	E925	OR	Rear Left Wheel Proportional Solenoid
308	YL	TCS Key Switch - On	E926	BU	Rear Right Wheel Proportional Solenoid
311	BR	Gage Alarm	E927	GN	TCS Test Switch (NC)
322	GY	Warning Horn (Forward)	E928	WH	TCS Test Switch (NO)
326	RD	Fuel Priming Pump Motor	E929	GY	Articulation Angle Sensor
397	OR	Hood Raise Motor	E930	BU	TCS Test Switch LED
398	BU	Hood Raise Motor	E932	PK	Front Left Wheel Speed Sensor
403	GN	Alternator (R) Term	E933	YL	Front Right Wheel Speed Sensor
410	WH	Action Alarm	E934	OR	Rear Left Wheel Speed Sensor
415	OR	Secondary Steer Pressure Switch	E935	GN	ETAC Rear Right Wheel Speed Sensor
417	GY	Primary Steer Switch	E936	WH	TCS Test Switch LED
419	YL	Park Brake Switch - Off	E965	OR	Keypad Data (PCS)
426	BR	Transmission Filter Bypass Switch	E963	BK	Engine Speed/Timing A - (Crank)
432	PK	Brake Pressure	E964	WH	Engine Speed/Timing A - (Crank)
433	BU	Low Brake Pressure	E965	BU	Engine Speed/Timing B - (Crank)
442	GY	Hyd System Temp Gage	E966	WH	Engine Speed/Timing B - (Crank)
443	YL	Power Train Temp Gage	F411	GN	Engine Oil Temperature
447	PK	Fuel Level Sender	F766	WH	Tilt Position Switch +24 V
450	YL	Tach Sender (r)	F781	BR	Overhaul SW (NO)
453	PK	Secondary Steer Pressure Switch	F846	PU	LED Driver (MSS)
464	YL	Primary Steer Pressure Switch	G454	PK	Axle Oil Cooler Temperature
A307	GY	Throttle Position	G476	WH	Action Lamp
500	BR	Wiper - Front (Park)	G485	BU	Front Axle Oil Temperature
501	GN	Wiper - Front (Low)	G746	WH	Lift Brake Pedal Sensor
502	OR	Wiper - Front (Hi)	G750	BU	Trans Control FWD Switch to GND
503	BR	Wiper - Rear (Park)	G756	GY	Trans Control REV Switch to GND
504	YL	Wiper - Rear (Low)	G760	WH	Trans Control Speed Switch to GND
505	BU	Wiper - Rear (Hi)	G761	YL	Trans Control Speed Switch to GND
506	PU	Washer - Front	G762	BR	Trans Control Speed Switch to GND
507	WH	Washer - Rear	G763	WH	Ride Control Switch (Auto)
508	PK	Radio Speaker - Left	G767	GN	Ride Control Switch (On)
509	WH	Radio Speaker - Right (Common)	G768	GN	Trans Control Remote FWD Switch to GND
511	BR	Radio Speaker - Right	G788	YL	Trans Control Remote REV Switch to GND
512	GN	Radio Speaker - Right (Common)	G826	BR	Oil Pressure Sensor
513	OR	Radio Speaker - Left (Common)	G827	BU	Oil Pressure Sensor Common
515	GY	Blower Motor (Hi)	G828	WH	Injection Actuation Pressure Sensor
516	GN	Blower Motor (Medium)	G829	GN	Injection Actuation Pressure Sensor Common
517	BU	Blower Motor (Low)	G833	PK	Engine Oil Temperature Common
518	OR	Hazard Flasher To SW	G836	WH	MSS LED Driver
521	YL	AC Compressor	G848	BR	Implement Detent Override Switch
522	WH	AC Clutch To Thermostat SW	G849	BR	Injector Actuation Pressure Sensor Signal
527	GN	Turn Signal SW To Flasher	G850	BU	Inlet Air Heater (24V)
538	BR	Hazard Indicator	G853	OR	Engine Inlet Manifold Air Temp
539	BU	Turn Signal Indicator Basic/Right	G854	PK	Injector Actuation Sol
540	WH	Turn Signal Indicator Left	G855	PU	Injector Actuation Pressure Sol
567	WH	AC Blower Switch	G868	WH	TDC Probe
603	PK	Rotary Beacon Switch	G878	GY	Traction Control System (TCS) Calibrate
604	OR	Stop Lamp Switch	G879	OR	Engine ECM +5V Output
605	YL	Turn Lamp - Left	H730	BR	Auto/Manual Switch
606	GY	Turn Lamp - Right	H748	YL	Variable Speed Fan SW
608	GN	Flood Lamp - Rear	H747	BR	Variable Speed Fan SW Return
610	OR	Head Lamp Basic	H786	YL	Implement Detent SW
611	PU	Park/Flash/Lamp	H795	PK	Operator Mode Select Switch
612	GY	Backup Alarm	J843	PU	Operator Select Switch
614	PU	Park/Flash/Lamp	K900	YL	Instrument Cluster - CAN HI
615	YL	Lift Front Flood/Cab Flood Lamp/Roos	K907	PK	Trans Oil Temp Sensor
617	BR	Running Lamp Switch	K909	GN	CAN Data Link Resistor
619	GN	Dimmer Switch	L863	WH	Injector Common 1 & 2
633	BU	Alert Lighting On	L864	DR	Injector Common 3 & 4
646	OR	Light SW To Front Flood Relay	L865	YL	Injector Common 5 & 6
647	GN	Light SW To Rear Flood Relay	L990	OR	Air Inlet Heater Relay Coil
691	GY	Key Switch Input to Flasher	N939	GN	Ride Control Solenoid 2
A541	RD	Flasher In Indicator Lights	N980	OR	RS-232 Port 1 DCD (Product Link)
			N970	YL	RS-232 Port 1 DTR (Product Link)
			N973	BR	RS-232 Port 1 DCD (Product Link)
			N975	PK	RS-232 Port 1 TXD (Product Link)
			N979	GN	RS-232 Port 1 GND (Product Link)
			P910	BR	Secondary Steering Test SW Input
			P916	DR	Trans Neutral Switch
			P976	BR	Quick Coupler SW to Low Pressure Sol
			R746	PK	Turbo Outlet Pressure Sensor
			R747	GY	Atmospheric Pressure Sensor
			T901	YL	MSS Exciter Coil In
			T902	PK	MSS Exciter Coil Out
			X918	PU	Grid Level Shutdown (NC)
			X919	WH	Grid Level Shutdown (NC)
			X972	GN	Variable Shift Control Switch - Pos 2
			X973	BU	Variable Shift Control Switch - Pos 3
			X974	BR	Variable Shift Control Switch - Pos 4

Vol 1 - Cab - Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Air Seat	E-8	16	Relay - Front Flood	F-2	A
Audible Alarm	J4, H-7	A	Resistor - CAN DataLink Term 2	F-2	A
Backlight - Blower Switch (2)	C-8	D	Resistor - HVAC	F-13	88
Backlight - Front Wiper Switch (2)	F-5	D	Sensor - Throttle Position	E-6	46
Backlight - Rear Wiper Switch	E-5	D	Sensor - LH Brake Pedal	G-4, F-7	46
Backlight - Running Lamp 1	G-7	A	Socket - 12V AUX	E-8	D
Backlight - Running Lamp 2	H-4	A	Solenoid - Pilot Shutoff	B-9	D
Beacon - LH	I-13	11	Switch - AC Compressor	F-9	D
Beacon - RH	I-13	6	Switch - Auto/Manual	H-4, G-7	B
Beacon - Switch	I-15	A	Switch - Beacon	H-7, I-4	B
Breaker - Air Seat	B-6	C	Switch - AC Blower	G-8	D
Breaker - HVAC	B-6	C	Switch - Bucket / Fork Select	C-9	D
Cluster - Instrument	G-2	A	Switch - Dimmer	E-2	A
Control - Transmission ECM	B-11	7	Switch - Overdrive	G-10	B
Control - Playload Control System	E-1	12	Switch - Front Wiper	G-5	A
Control - Machine Security System (ATCH)	F-13	7	Switch - Front Int Wiper/Washer	F-5	D
Converter - 12VDC	B-6	34	Switch - Rear Int Wiper/Washer (ATCH)	E-5	D
Diodes - (EURO)	G-1	A	Switch - Fuel Horn	B-9	D
Diodes - Turn Signal (EURO)	H-13	10	Switch - Hazard Lamp	H-4, H-7	A
Filter - Machine Security System (ATCH)	G-12	A	Switch - Implement Detent Override	F-10	D
Flasher - 12V Japanese	F-1	A	Switch - Key Start	E-5	A
Flasher - (EURO)	G-1	A	Switch - Kickover On / Off	B-9	D
Flasher - US (NACD)	F-1	A	Switch - Operator Mode Select	H-4, H-7	A
Fuse Panel	B-6	E	Switch - Parking Brake	H-13	54
Ground - Cab 1	B-13	7	Switch - Quick Coupler	B-9	D
Ground - Cab 2	F-15	30	Switch - Secondary Steering	B-8	D
Group - Pilot Valve (Electro-Mag)	F-10	D	Switch - Remote FNR	G-10	D
Lamp - Dome	I-9	65	Switch - Ride Control	C-8	D
Lamp - Rear Cab Flood LH	I-13	69	Switch - Running Lamp	H-4, G-7	A
Lamp - Rear Cab Flood RH	A-13	67	Switch - Secondary Steering	B-8	D
Lamp - Roof Flood LH	I-3	49	Switch - Stop Lamp	G-4, F-7	46
Lamp - Roof Flood RH	C-12	29	Switch - TCS Test	B-9	A
Lamp - Front Cab LH	I-3	49	Switch - Thermostat	F-13	68
Lamp - Front Cab RH	I-3	29	Switch - Turn Signal (EURO)	G	

Component Identifiers (CID)*		Module Identifier (MID)*	
Traction Control System (MID No. 028)			
CID	Component	Wire Number	Wire Color
0168	Electrical System Voltage	101	RD
0245	ECM Internal Backup Battery	102	RD
0263	Digital Sensor Power Supply (SV)	105	RD
0270	Harness Code	108	BU
0296	Transmission Control	109	RD
0605	Left Front Speed Sensor	110	RD
0606	Right Front Speed Sensor	112	PU
0607	Left Rear Speed Sensor	113	RD
0608	Right Rear Speed Sensor	114	RD
0609	Left Front Brake Solenoid	115	PK
0610	Right Front Brake Solenoid	116	PK
0611	Left Rear Brake Solenoid	117	PK
0612	Right Rear Brake Solenoid	118	PK
0613	Front Brake Piston Solenoid	119	RD
0615	Vehicle Articulation Angle Sensor	122	RD
0616	Test/Enable Switch	123	WH
0653	Traction Control ECM	124	GN
0687	Options Code Code	126	PK

Engine Control (MID No. 036)	
CID	Component
0001	Injector Cylinder #1
0002	Injector Cylinder #2
0003	Injector Cylinder #3
0004	Injector Cylinder #4
0005	Injector Cylinder #5
0006	Injector Cylinder #6
0041	ECM (Electronic Control Module) 8 Volt DC Supply
0042	Injection Actuation Valve
0091	Throttle Position Sensor
0094	Fuel Delivery Pressure Sensor
0100	Engine Oil Pressure Sensor
0110	Engine Coolant Temperature Sensor
0164	Injector Actuation Pressure Sensor
0188	Electrical System Voltage
0172	Intake Manifold Air Temperature Sensor
0175	Engine Oil Temperature Sensor
0189	Engine Speed Sensor
0248	CAT Data Link
0253	Performance Module
0254	Electronic Control Module
0301	Engine Timing Calibration
0302	5 Volt Sensor Power Supply
0307	Remote Shutdown Input
0308	Programmable Parameter Fault
0373	Turbosupercharger Outlet Pressure Sensor
0374	Atmospheric Pressure Sensor
0391	Engine Cooling Fan Solenoid
0396	Transmission Control
0443	Secondary Engine Air Temperature Sensor
0502	Second Generation Electronic Monitoring System
0600	Hydraulic Oil Temperature Sensor
0617	Water In Fuel Relay

Payload Control System (MID No. 074)	
CID	Component
0188	Electrical System Voltage
0254	Electronic Control Module
0350	Lift Luggage Position Sensor
0364	Lift Cylinder Head Pressure Sensor
0769	Lift Cylinder Rod End Pressure Sensor
0817	ECM Internal Backup Battery
0920	Knock Pad Data Link

Powertrain Control System (MID No. 081)	
CID	Component
0044	ECM (Electronic Control Module) 8 Volt DC Supply
0070	Parking Brake Switch
0149	Ride Control 3-Way Solenoid
0168	Electronic System Voltage
0177	Engine Speed Sensor
0190	Engine Speed Sensor
0248	CAT Data Link
0363	Ride Control Solenoid Valve
0367	Ride Control Rocker Switch
0368	Transmission Control / Manual Switch
0444	Start Relay Magnetic Switch
0585	Transmission Output Speed Sensor 1
0590	Electronic Engine Control Module
0672	Torque Converter Output Speed Sensor
0673	Transmission Output Speed Sensor 2
0674	Transmission Intermediate Speed Sensor 1
0675	Transmission Intermediate Speed Sensor 2
0793	Primary Steering Oil Pressure Switch
0794	Secondary Steering Oil Pressure Switch
0795	Secondary Steering Intermediate Relay
1327	Left Brake Pedal Position Sensor
1501	Transmission Solenoid 1
1504	Transmission Solenoid 2
1504	Transmission Solenoid 3
1504	Transmission Solenoid 4
1505	Transmission Solenoid 5
1506	Transmission Solenoid 6
1521	High Inlet Air Pressure Warning
1716	Raise/Lower Detent Electromagnet
1721	Knock Pad Data Link

Monitoring Circuits	
CID	Component
403	Alternator (RT) Term
410	Action Alarm
416	Secondary Steer Pressure Switch
417	GV
419	Park Brake Switch - Off
426	Transmission Filter Bypass Switch
432	ECM Internal Backup Battery
433	Low Brake Pressure
442	GV Hyd System Temp Gage
443	Power Train Temp Gage
447	PK Warning Horn (Forward)
450	YK Tach Sender (+)
453	PK Secondary Steer Pressure Switch
464	YL Primary Steer Pressure Switch
A307	GV

Accessory Circuits	
CID	Component
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 (High)
506	PU Washer - Front
507	WH Washer - Rear
508	PU Radio Speaker - Left
509	WH Radio Speaker - Left (Common)
511	BR Radio Speaker - Right
512	GN Radio Speaker - Right (Common)
513	OR A/C Clutch Sol
515	GV Blower Motor (Hi)
516	GN Blower Motor (Medium)
517	BU Blower Motor (Low)
518	OR Hazard Flasher To SW
521	YL A/C Clutch Sol
522	WH A/C Clutch To Thermostat SW
537	GN Turn Signal SW To Flasher
538	BR Hazard Indicator
539	BU Turn Signal Indicator Base/Right
540	WH Turn Signal Indicator Left
567	WH A/C Blower Switch

Machine Security System (MID No. 124)	
CID	Component
0188	Electrical System Voltage
0248	CAT Data Link
0817	ECM Internal Backup Battery
1391	MSS Output Driver No. 1
1392	MSS Output Driver No. 2

Lighting Circuits	
CID	Component
603	PK Rotary Beacon Switch
604	OR Stop Lamp Switch
605	YL Turn Lamp - Left
606	GV Turn Lamp - Right
608	GN Flood Lamp - Rear
610	OR Head Lamp Basic
611	PU Head Lamp Hi
612	GV Backup Alarm
614	PU Park/Tail/Brake Lamp
615	YL LH Front Flood/Cab Flood Lamp/Roos
617	BR Running Lamp Switch
619	GN Dimmer Switch
633	BU Alaback Lighting Ckt
646	OR Light SW To Front Flood Relay
647	GN Light SW To Rear Flood Relay
691	GV Key Switch Input to Flasher
A541	RD Flasher to Indicator Lights

Control Circuits	
CID	Component
700	PK Detent Enable Switch
709	OR Sensor Power Supply
720	PU Neutralizer Override Switch
727	GN Secondary Steer Motor Relay
728	BU Suppl Steer Cvt SW
751	GN Transmission Shift Sol No. 3 - REV
752	YL Transmission Shift Sol No. 1 - FWD Lo
754	BU Transmission Shift Sol No. 3 - FWD H
755	OR Transmission Shift Sol No. 5 - 3rd Gear
761	YL LH Kickout Sol SW
762	YL Bucket Positioner Sol SW
779	WH Inlet Air Restriction Warning
799	WH Sensor Power (10V)
818	BR Serial Data (Transmit)
819	GV Serial Data (Receive)

Event Codes	
Event Code	Condition
E015	High Engine Coolant Temperature Warning
E017	High Engine Coolant Temperature Warning
E025	High Inlet Air Temperature Warning
E027	High Inlet Air Temperature Warning
E039	Low Inlet Air Pressure Warning
E053	Low Fuel Pressure Warning
E096	High Fuel Pressure
E100	Low Engine Oil Pressure Warning
E190	Engine Overspeed Warning
E270	Inlet Air Restriction Warning

Failure Mode Identifiers (FMI)*	
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 address.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Bad device or component.
13	Out of calibration.
14	Parameter failures.
15	Parameter not available.
16	Parameter not responding.
17	Module not responding.
18	Sensor supply fault.
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15	Parameter not available.
16	Parameter not responding.
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18	Sensor supply fault.
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Event Codes	
Event Code	Condition
E015	High Engine Coolant Temperature Warning
E017	High Engine Coolant Temperature Warning
E025	High Inlet Air Temperature Warning
E027	High Inlet Air Temperature Warning
E039	Low Inlet Air Pressure Warning
E053	Low Fuel Pressure Warning
E096	High Fuel Pressure
E100	Low Engine Oil Pressure Warning
E190	Engine Overspeed Warning
E270	Inlet Air Restriction Warning

Failure Mode Identifiers (FMI)*	
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 address.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Bad device or component.
13	Out of calibration.
14	Parameter failures.
15	Parameter not available.
16	Parameter not responding.
17	Module not responding.
18	Sensor supply fault.
19	Condition not met.
20	Parameter failures.

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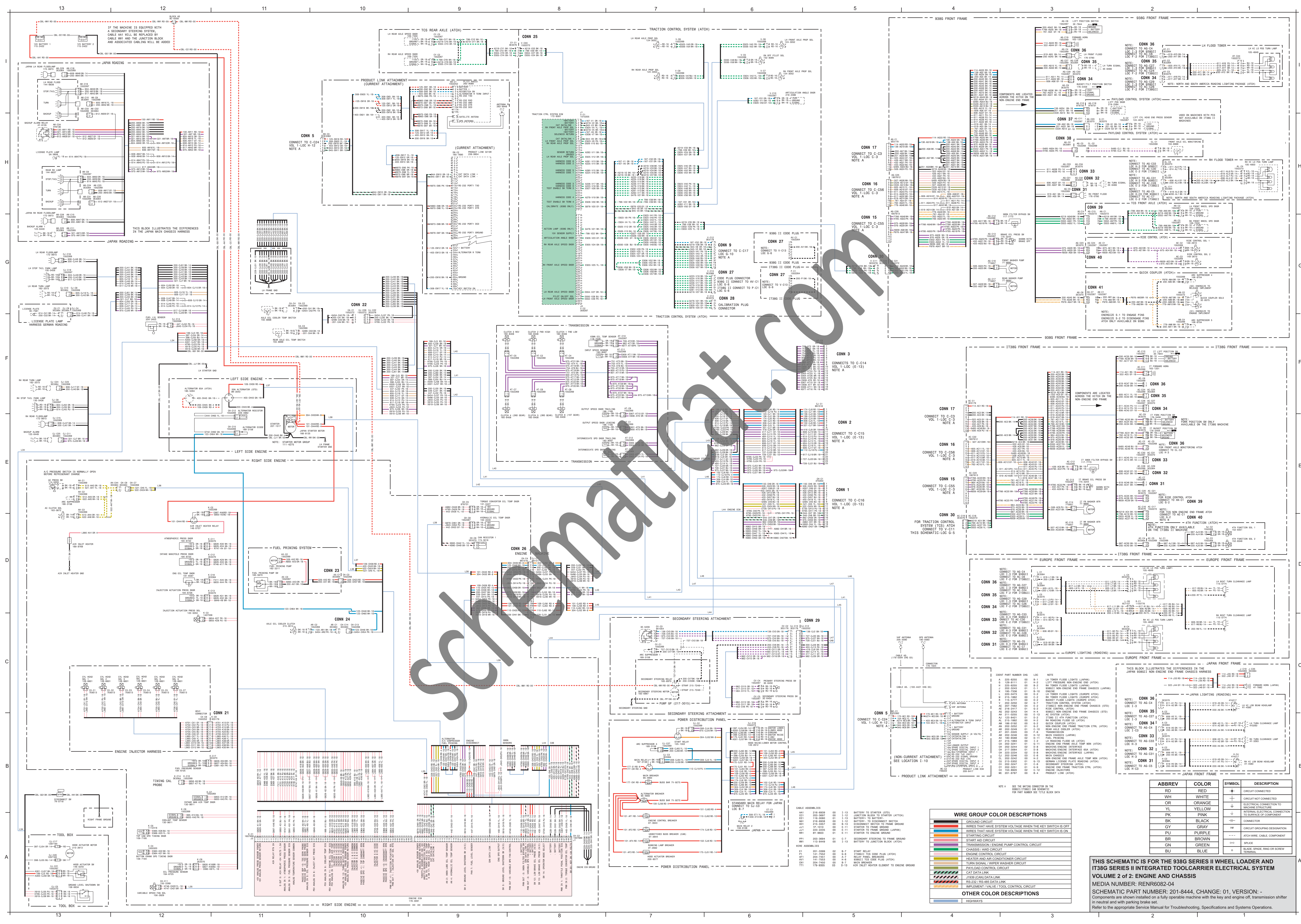
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WIRE GROUP COLOR DESCRIPTIONS

[Red line]	GROUND CIRCUIT
[White line]	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
[Orange line]	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
[Yellow line]	STARTING CIRCUIT
[Green line]	TRANSMISSION ENGINE PUMP CONTROL CIRCUIT
[Blue line]	START AND CIRCUIT
[Purple line]	ENGINE CONTROL CIRCUIT
[Brown line]	HEATER AND AIR CONDITIONER CIRCUIT
[Black line]	TURNO SIGNAL WIPER WASHER CIRCUIT
[Pink line]	ENGINE CONTROL CIRCUIT
[Light Blue line]	CAT DATA LINK
[Light Green line]	FRONT DATA LINK
[Light Purple line]	REAR DATA LINK
[Light Orange line]	IMPLEMENT VALVE TOOL CONTROL CIRCUIT

OTHER COLOR DESCRIPTIONS

[Red]	HEADLIGHTS
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ABBREV COLOR SYMBOL DESCRIPTION

RD	RED	+	CIRCUIT CONNECTED
WH	WHITE	-	CIRCUIT NOT CONNECTED
OR	ORANGE	+	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
YL	YELLOW	-	INTERNAL ELECTRICAL CONNECTION TO MACHINERY COMPONENT
PK	PINK	+	CONNECTOR
BK	BLACK	-	CONNECTOR
GY	GRAY	+	CIRCUIT GROUPING DESIGNATION
PJ	PURPLE	-	ATTACH WIRE CABLE COMPONENT
BR	BROWN	+	BLACK SPINDLE RING OR SCREW TERMINAL
GN	GREEN	-	SPRUE
BU	BLUE	-	BLACK SPINDLE RING OR SCREW TERMINAL

THIS SCHEMATIC IS FOR THE 938G SERIES II WHEEL LOADER AND 1T380 SERIES II INTEGRATED TOOL-CARRIER ELECTRICAL SYSTEM VOLUME 2 of 2: ENGINE AND CHASSIS
 MEDIA NUMBER: REN6082-04
 SCHEMATIC PART NUMBER: 201-8444, CHANGE: 01, VERSION: -
 Components are shown installed on a fully operable machine with the key and engine off, transmission shifter in neutral and with parking brake set.
 Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.