

Component Identifiers (CID) ¹		
Module Identifier (MID) ²		
Engine Control		
0001	Injector Solenoid 1st Cylinder	101
0002	Injector Solenoid 2nd Cylinder	102
0003	Injector Solenoid 3rd Cylinder	103
0004	Injector Solenoid 4th Cylinder	104
0005	Injector Solenoid 5th Cylinder	105
0006	Injector Solenoid 6th Cylinder	106
0041	Power Supply	107
0042	Engine Oil Pressure Sensor	108
0091	Throttle Position Switch	109
0092	Temp Sensor Calibration	110
0168	System Voltage	111
0172	Inter Air Temperature Sensor	112
0175	Engine Oil Temperature Sensor	113
0190	Engine Speed Sensor	114
0253	Personality Module	115
0261	Analog Sensor Power Supply Voltage	116
0262	Programmable Parameters	117
0273	Turbocharger Compressor Outlet Pressure Sensor	118
0294	Atmospheric Pressure Sensor	119
0295	RMS Oil Lamp	120
0342	Speed Trimng Sensor	121
0617	Air Heater Relay	122
1627	Fuel Pump Relay	123
1715	Engine Oil Temperature Sensor 2	124
Engine/Pump Control		
(MID No. 69)		
0091	Throttle Position Signal	200
0096	Fuel Level Sensor	201
0110	Engine Coolant Temperature Sensor	202
0167	Alternator	203
0168	Voltage of the Power Supply (Keyswitch)	204
0190	Speed Sensor	205
0286	Signal For Engine Oil Pressure Decrease	206
0374	Travel Brake Solenoid	207
0581	Proportional Reducing Valve For The Power Shift Pressure	208
0598	Engine Speed Dial	209
0657	Feedback sensor for the governor actuator	210
0690	Engine Control	211
0698	Travel Speed Solenoid	212
0900	Hydraulic Oil Temperature Sensor	213
1161	Pump Delivery Pressure Sensor (Drive)	214
1162	Pump Delivery Pressure Sensor 2 (Idle)	215
1625	Straight Travel Solenoid	216
2002	Action Alarm	217
Tool Control		
(MID No. 05A)		
0148	12V DC Power Supply	304
1657	Left Joystick Side Control	305
1658	Right Joystick Side Control	306

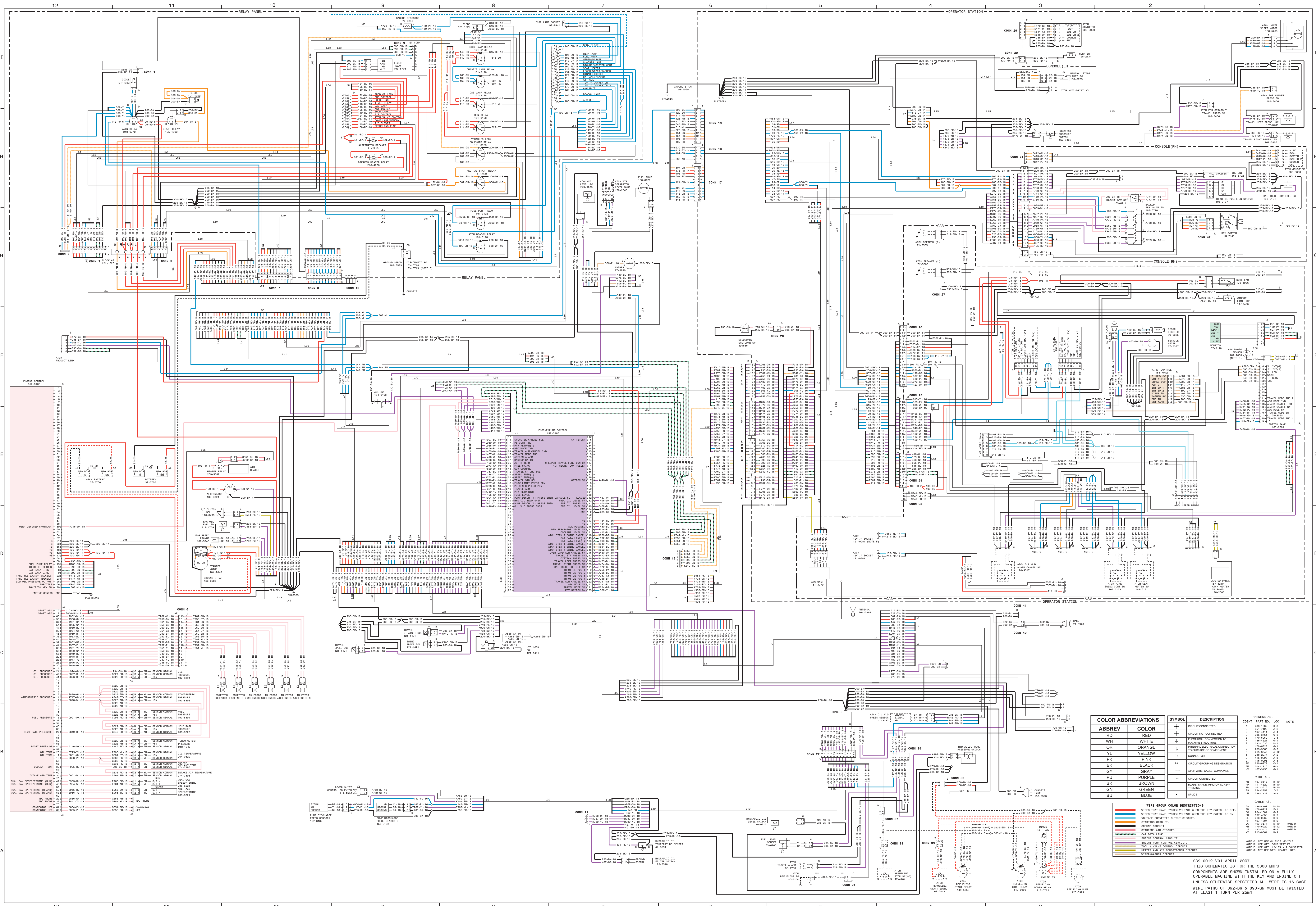
¹ The CID is a diagnostic code that indicates which component is faulty.
² The MID is a diagnostic code that indicates which electronic control module diagnosed the fault.

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

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

Wire Description					
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Power Circuits					
101	RD	Battery (+)	C537	GN	A/C Photo Sensor (VVO) To Sw Panel A/C + Heater
102	WH	Dome Lamp / Memory	C538	OR	A/C Photo Sensor (VVO) To Sw Panel A/C + Heater
103	RD	Key Switch	C566	YL	Relay Control 1 Pressure Sensor
108	RD	Heater	E554	PK	A/C Line To A/C Chush Solenoid
109	RD	Alternator B+ Term	E562	PK	Relay Control 2 Pressure Sensor
110	RD	Timer Relay	E564	PK	Quick Coupler Safety Lever Relays
111	CR	Alarm Panel	E565	BU	Rotary Switch
114	RD	Relay	607	PK	Chassis Lamp Relay Output
115	RD	Cab Lamp Relay	616	BU	Room Lamp (Not Used)
118	GY	Wiper/Washer	638	WH	Alarm Beacon Relay Output
120	YL	12V LIA Converter 1	645	RD	Room Lamp (Sw Panel To Boom Lamp Relay)
124	GN	A/C Line	648	RD	Cab Lamp (Sw Panel To Cab Lamp Relay)
Control Circuits					
130	RD	Engine Control	653	BU	Chassis Lamp Relay To Diode
136	BU	12V Memory Cut	653	BU	Throttle Position 2 Solenoid
137	WH	Backup 12V Memory	653	BU	Throttle Position 3 Solenoid
142	BR	Ach Boom Floor Disable Relay	653	BU	Throttle Position 4 Solenoid
147	PU	Ach Stop	653	BU	Throttle Position 5 Solenoid
148	RD	Boom Lamp	653	BU	Throttle Position 6 Solenoid
150	CR	Quick Coupler	653	BU	Throttle Position 7 Solenoid
151	GN	Hydraulic Lock Solenoid Relay	653	BU	Throttle Position 8 Solenoid
152	BU	Lower Wiper / Washer	653	BU	Throttle Position 9 Solenoid
154	RD	Neutral Start Relay	653	BU	Throttle Position 10 Solenoid
160	PU	Chassis Lamp	653	BU	Throttle Position 11 Solenoid
168	RD	Retracting Pump	653	BU	Throttle Position 12 Solenoid
172	GN	Product Link	653	BU	Throttle Position 13 Solenoid
175	RD	A/C Breaker	653	BU	Throttle Position 14 Solenoid
179	BU	12V LIA Converter 2	653	BU	Throttle Position 15 Solenoid
180	GN	Alarm Chg	653	BU	Throttle Position 16 Solenoid
184	RD	F.P. Control	653	BU	Throttle Position 17 Solenoid
188	WH	Fuel Pump	653	BU	Throttle Position 18 Solenoid
190	RD	Throttle Relay	653	BU	Throttle Position 19 Solenoid
196	BU	INSP Lamp Socket	653	BU	Throttle Position 20 Solenoid
199	CR	Beacon Lamp	653	BU	Throttle Position 21 Solenoid
Ground Circuits					
200	BK	Chassis Ground	653	BU	Throttle Position 22 Solenoid
201	GN	Motor Ground	653	BU	Throttle Position 23 Solenoid
210	BK	Converter 1 Ground	653	BU	Throttle Position 24 Solenoid
211	BK	Converter 2 Ground	653	BU	Throttle Position 25 Solenoid
212	BK	Converter 3 Ground	653	BU	Throttle Position 26 Solenoid
213	BK	Converter 4 Ground	653	BU	Throttle Position 27 Solenoid
216	BK	Fuel Pump Ground	653	BU	Throttle Position 28 Solenoid
Basic Machine Circuits					
304	WH	Start Relay To Motor Starter	653	BU	Throttle Position 29 Solenoid
306	GN	Neutral Start Relay To Start Relay	653	BU	Throttle Position 30 Solenoid
307	OR	Key Switch To Neutral Start Relay	653	BU	Throttle Position 31 Solenoid
308	YL	Key Switch On	653	BU	Throttle Position 32 Solenoid
310	PU	Start Aid Sw To Start Aid Sol	653	BU	Throttle Position 33 Solenoid
320	RD	Hom Switch To Hom Relay	653	BU	Throttle Position 34 Solenoid
321	BK	Travel Alarm	653	BU	Throttle Position 35 Solenoid
322	GY	Hom Relay To Hom	653	BU	Throttle Position 36 Solenoid
323	WH	Alarm Retracting Pump	653	BU	Throttle Position 37 Solenoid
325	PK	Ach Retracting Stop Switch	653	BU	Throttle Position 38 Solenoid
326	RD	Key Switch Off	653	BU	Throttle Position 39 Solenoid
329	YL	Ach Retracting Stop Rly To Retracting Power Relay	653	BU	Throttle Position 40 Solenoid
365	YL	Ach Retracting Stop Switch To Retracting Power Relay	653	BU	Throttle Position 41 Solenoid
Monitoring Circuits					
403	GN	Air R Term To Service Meter And F.P. Cont	653	BU	Throttle Position 42 Solenoid
405	GN	Eng Oil Pressure Switch	653	BU	Throttle Position 43 Solenoid
406	GY	Low Oil Pressure Output	653	BU	Throttle Position 44 Solenoid
410	VH	Action Alarm	653	BU	Throttle Position 45 Solenoid
412	BU	Coolant Level Switch	653	BU	Throttle Position 46 Solenoid
430	BU	Air Cleaner Switch	653	BU	Throttle Position 47 Solenoid
487	CR	Hydraulic Oil Filter Switch	653	BU	Throttle Position 48 Solenoid
491	PK	Hydraulic Oil Temperature Sensor	653	BU	Throttle Position 49 Solenoid
495	GN	Fuel Level	653	BU	Throttle Position 50 Solenoid
496	WH	Hd Oil Level Switch	653	BU	Throttle Position 51 Solenoid
A499	BU	Hd Tank Pressure Switch	653	BU	Throttle Position 52 Solenoid
C468	BU	Eng Oil Level Switch	653	BU	Throttle Position 53 Solenoid
E449	YL	Tool Pressure Sensor	653	BU	Throttle Position 54 Solenoid
E470	BR	Washer Control Pressure Sensor 1	653	BU	Throttle Position 55 Solenoid
E471	BU	Washer Control Pressure Sensor 2	653	BU	Throttle Position 56 Solenoid
E472	GN	+12V Joystick	653	BU	Throttle Position 57 Solenoid
E473	GY	(+) Modulation Joystick (RH)	653	BU	Throttle Position 58 Solenoid
E474	OR	(-) Modulation Joystick (LH)	653	BU	Throttle Position 59 Solenoid
E480	VH	Over Load Alarm Cancel Switch	653	BU	Throttle Position 60 Solenoid
H446	PK	CA/RO Pressure Sensor	653	BU	Throttle Position 61 Solenoid
H465	GN	Action Alarm Cancel Indicator	653	BU	Throttle Position 62 Solenoid
H469	BU	A/C Mode Indicator	653	BU	Throttle Position 63 Solenoid
H467	WH	Travel Mode Indicator	653	BU	Throttle Position 64 Solenoid
H473	BR	Straight Travel Pressure Switch	653	BU	Throttle Position 65 Solenoid
H474	GN	Travel Right Pressure Switch	653	BU	Throttle Position 66 Solenoid
H475	BU	Travel Left Pressure Switch	653	BU	Throttle Position 67 Solenoid
H476	WH	Joystick Pressure Switch	653	BU	Throttle Position 68 Solenoid
Necessary Circuits					
801	GN	Wiper Low	653	BU	Throttle Position 69 Solenoid
808	PU	Wiper Control To Washer Motor	653	BU	Throttle Position 70 Solenoid
808	PU	LH Speaker (+)	653	BU	Throttle Position 71 Solenoid
809	WH	LH Speaker (-)	653	BU	Throttle Position 72 Solenoid
811	BR	RH Speaker (+)	653	BU	Throttle Position 73 Solenoid
812	GN	RH Speaker (-)	653	BU	Throttle Position 74 Solenoid
830	OR	Wiper Speed Switch (Sw Panel To Wiper Control)	653	BU	Throttle Position 75 Solenoid
835	BU	Lower Wiper Motor (+)	653	BU	Throttle Position 76 Solenoid
886	BR	Ach Select Switch Bank	653	BU	Throttle Position 77 Solenoid
890	GY	Wiper W/ (3) Switch Panel To Wiper Control	653	BU	Throttle Position 78 Solenoid
A537	PK	Seat With Seat Heater	653	BU	Throttle Position 79 Solenoid
A579	OR	Wiper Control (Wiper Control To Wiper Motor)	653	BU	Throttle Position 80 Solenoid
A580	BR	Wiper CW (Wiper Control To Wiper Motor)	653	BU	Throttle Position 81 Solenoid
A584	BU	Wiper CCW (Wiper Control To Wiper Motor)	653	BU	Throttle Position 82 Solenoid
A586	OR	Wiper W/ (5) Switch Panel To Wiper Control	653	BU	Throttle Position 83 Solenoid
A588	GN	Hydraulic Lock Solenoid Relay To Solenoid	653	BU	Throttle Position 84 Solenoid

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Action Alarm	F-2	A	Sensor - A/C Photo	F-1	A
Alarm - Alternator	E-10	H	Sensor - Ach Oil/W/ Pressure	E-2	21
Alarm - A/C Line	E-10	A	Sensor - Ach Water Separator Level	H-7	15
Alarm - A/C Line	F-3	28	Sensor - Atmospheric Pressure	C-11	41
Alarm - Battery	E-12	6	Sensor - Engine Coolant Temp	B-11	H
Alarm - Fuel Level	F-3	28	Sensor - Fuel Level	A-4	17
Alarm - Fuel Level	F-3	6	Sensor - Fuel Pressure	B-11	H
Alarm - Hydraulic Oil	E-12	28	Sensor - HD Oil Pressure	B-11	H
Alarm - Joystick (RH)	H-1	6	Sensor - Inake Air Temp	C-11	H
Alarm - Joystick (LH)	C-11	6	Sensor - Oil Temp	B-11	49
Block As	G-11	E	Sensor - Pump Discharge Press 1	A-11	F
Brake - Alternator	H-9	A	Sensor - Pump Discharge Press 2	A-10	F
Brake - Heater Relay	H-9	E	Sensor - Tati. Cooler Pressure	B-11	46
Cap Lamp	F-9	A	Sensor - Tati. Cooler Pressure	F-9	A
Connectivity HEP	A-11	48	Solenoid - A/C Clutch	D-11	50
Control - Engine	F-2	A	Solenoid - Hydraulic Lock	C-8	6
Control - Engine/Pump	E-8	1	Solenoid - Injector 1	C-10	36
Control - Wiper	E-2	A	Solenoid - Injector 2	C-10	37
Dual Cam Speed Trimng (Crank)	E-11	H	Solenoid - Injector 3	C-10	38
Dual Cam Speed Trimng (Idler)	E-11	H	Solenoid - Injector 4	C-10	39
Engine Speed Pickup	E-11	H	Solenoid - Injector 5	C-10	40
Evap	E-2	E	Solenoid - Injector 6	C-10	41
Exhaust	E-11	E	Solenoid - Injector 7	C-10	42
Indicator Light	H-1	B	Solenoid - Injector 8	C-10	43
Lamp - Ach Cab	E-2	9	Solenoid - Injector 9	C-10	44
Lamp - Chassis	E-2	10	Solenoid - Travel Straight	C-9	6
Lamp - Dome	F-9	A	Switch - Ach Cleaner	F-9	26
Monitor - Fuel Pump	F-1	A	Switch - Ach Fine Swing Control	D-2	5
Motor - Fuel Pump	E-11	12	Switch - Ach Reducing Stop (NG)	A-3	19
Motor - Starter	F-2	12	Switch - Backup (PR Valve)	G-2	8
Motor - VFD	E-11	12	Switch - Backup (PR Valve)	G-2	8
Motor - Wiper	H-1	A	Switch - Chassis Lamp	H-3	D
Neutral - A/C Switch	E-11	A	Switch - Chassis Lamp	H-3	D
Neutral - Alarm Beep Switch	E-11	A	Switch - Chassis Lamp	H-3	D
Pump - Ach Retracting	A-2	21	Switch - Chassis Lamp	H-3	D
Pump - Ach Retracting	A-2	21	Switch - Chassis Lamp	H-3	D
Relay - Ach Beacon	C-8	E	Switch - Chassis Lamp	H-3	D
Relay - Ach Retracting Power	A-2	21	Switch - Chassis Lamp	H-3	D
Relay - Ach Retracting Start	A-3	29	Switch - Chassis Lamp	H-3	D
Relay - Ach Retracting Stop	A-2	27	Switch - Chassis Lamp	H-3	D
Relay - Beacon	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Cab Lamp	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Chassis Lamp	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Fuel Pump	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Fuel Pump	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Hom	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Key Switch	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Key Switch	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Key Switch	H-3	E	Switch - Chassis Lamp	H-3	D
Relay - Key Switch	H-3	E</			



ABBREV	COLOR	SYMBOL	DESCRIPTION	IDENT	PART NO.	LOC.	NOTE
RD	RED	+	CIRCUIT CONNECTED	A	231-1002	0-3	
WH	WHITE	+	CIRCUIT NOT CONNECTED	B	231-1004	0-3	
OR	ORANGE	+	REFERENCE CONNECTION TO MACHINE STRUCTURE	C	231-1011	0-3	
YL	YELLOW	+	REFERENCE CONNECTION TO SURFACE OF COMPONENT	D	231-1012	0-3	
PK	PINK	+	CONNECTOR	E	231-1013	0-3	
BK	BLACK	+	GROUPING DESIGNATION	F	231-1014	0-3	
GR	GRAY	+	ACTUATOR CABLE COMPONENT	G	231-1015	0-3	
BY	BROWN	+	CIRCUIT CONNECTED	H	231-1016	0-3	
GN	GREEN	+	WIRE AS	I	231-1017	0-3	
BU	BLUE	+	WIRE AS	J	231-1018	0-3	

WIRE GROUP DESCRIPTIONS	IDENT	PART NO.	LOC.	NOTE
WIRE THAT MUST BE WITHIN VOLTAGE WHEN KEY SWITCH IS OPEN	AA	148-4718	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AB	148-4719	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AC	148-4720	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AD	148-4721	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AE	148-4722	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AF	148-4723	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AG	148-4724	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AH	148-4725	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AI	148-4726	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AJ	148-4727	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AK	148-4728	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AL	148-4729	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AM	148-4730	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AN	148-4731	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AO	148-4732	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AP	148-4733	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AQ	148-4734	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AR	148-4735	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AS	148-4736	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AT	148-4737	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AU	148-4738	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AV	148-4739	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AW	148-4740	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AX	148-4741	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	AY	148-4742	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	AZ	148-4743	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BA	148-4744	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BB	148-4745	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BC	148-4746	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BD	148-4747	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BE	148-4748	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BF	148-4749	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BG	148-4750	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BH	148-4751	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BI	148-4752	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BJ	148-4753	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BK	148-4754	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BL	148-4755	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BM	148-4756	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BN	148-4757	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BO	148-4758	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BP	148-4759	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BQ	148-4760	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BR	148-4761	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BS	148-4762	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BT	148-4763	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BU	148-4764	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BV	148-4765	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BW	148-4766	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BX	148-4767	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	BY	148-4768	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	BZ	148-4769	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CA	148-4770	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CB	148-4771	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CC	148-4772	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CD	148-4773	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CE	148-4774	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CF	148-4775	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CG	148-4776	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CH	148-4777	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CI	148-4778	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CJ	148-4779	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CK	148-4780	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CL	148-4781	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CM	148-4782	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CN	148-4783	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CO	148-4784	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CP	148-4785	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CQ	148-4786	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CR	148-4787	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CS	148-4788	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CT	148-4789	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CU	148-4790	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CV	148-4791	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CW	148-4792	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CX	148-4793	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	CY	148-4794	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	CZ	148-4795	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	DA	148-4796	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	DB	148-4797	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	DC	148-4798	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS CLOSED	DD	148-4799	0-10	
WIRE THAT MUST BE WITHIN VOLTAGE WHEN THE KEY SWITCH IS OPEN	DE	148-4800	0-10	

239-0012 V01 APRIL 2007.
THIS SCHEMATIC IS FOR THE 3800 GM ENGINE. COMPONENTS ARE SHOWN INSTALLED ON A FULLY OPERABLE MACHINE WITH THE KEY AND ENGINE OFF UNLESS OTHERWISE SPECIFIED. ALL WIRE IS 16 GAUGE WIRE. PAIRS OF 800-08 & 893-08 MUST BE TWISTED AT LEAST 1 TURN PER 25MM.