

Component Identifiers (CID)*
Electronic Transmission Control System
(MID No. 627)

CID	Component
1558	System Voltage
1559	Transmission Oil Temperature Sensor
1560	Engine Output Speed (ECS) Signal
1561	CAT Data Link
1562	Reverse Supply Voltage
1563	Autoshift Solenoid
1564	Start Relay
1565	Transmission Output Speed Sensor #1
1566	Engine Coolant
1567	Parking Brake Switch
1568	Converter Output Speed (COS)
1569	Transmission Output Speed Sensor #2
1570	Parking Brake Solenoid
1571	Transmission Gear Sensor
1572	Gear Selector Lever - Model Sensor
1573	Service Brake Pressure Switch
1574	Downhill Retard Valve
1575	Lockup Solenoid
1576	Transmission System
1577	Body Return Solenoid Valve
1578	Body Lower Solenoid Valve
1579	Hyd Level Return Pressure Switch
1580	Vital Information Management System (VIMS)
1581	Machine Application
1582	Body Position Sensor
1583	Rock On Start Lamp
1584	Location Code (Hydrom)
1585	Machine Control Lamp
1586	Solenoid - First Brake Clap Driver

Event Codes
Engine Control

Event Code	Condition
E017	High Engine Coolant Temperature Warning
E018	High Exhaust Temperature Warning
E019	Loss of Coolant Flow Warning
E020	Low Engine Coolant Temperature Warning
E021	Oil Level Low Warning
E022	Oil Filter Differential Pressure High
E023	Oil Filter Differential Pressure High (2nd Trip)
E024	Buror Pressure Above Normal
E025	Buror Pressure Below Normal
E026	Fuel Filter Restriction Warning
E027	Engine Throttle Switch
E100	Low Engine Oil Pressure Warning
E101	High Oil Pressure Pressure Warning
E102	Engine Overheat Warning
E103	Water In Fuel Warning
E277	VMC AD Restriction Warning
E278	VMC AD Restriction Warning
E279	High Ambient Temperature Warning

Resistor, Sender and Solenoid Specifications

Part No.	Component Description	Resistance (Ohms)
125-9140	Resistor	100 ± 2.5%
188-0028	Solenoid - Hyd	6.0 ± 1.0% 0.1 ± 0.3%
188-0029	Solenoid - First Brake Clap Driver	7.8 ± 2.5% 42.4 ± 2.1%

Off-Machine Switch Specification

Part No.	Function	Activate	Deactivate	Contact Position
3E-5464	Thermostat	11.1 ± 0.1°C (52.0 ± 0.2°F)	10.0 ± 0.1°C (50.0 ± 0.2°F)	Normally Closed
103-4977	Retarder Pressure	RDPS (1.5 ± 0.1) MPa (21.7 ± 1.4) PSI	20.1 ± 0.2 MPa (291.3 ± 2.9) PSI	Normally Open

Related Electrical Service Manuals

Title	Form Number
Chase Reference for Electrical Connectors	98100007
Alternator - 6V 7503	SEN7503
Brake Control	SEN1503
Engine Control	SEN1508
Transmission Control	SEN1502
VMS Control	REN2031

Volume 1 Component Location

Component	Schematic Location	Machine Location
Alarm - VMS Action	E-4	1
Control - Integrated Solenoid	E-11	2
Control - Steering Wheel	H-14	3
Control - VMS Message Center	D-7	4
Control - VMS Chime	H-14	5
Diode - Horn Solenoid	G-9	6
Module - Logic Control	H-2	7
Module - Speedometer/Tachometer	H-2	8
Module - VMS Display	D-2	9
Motor - Blower	C-3	11
Motor - Power Window	C-3	12
Motor - Washer	H-1	13
Motor - Wiper	H-1	14
Resistor - Blower	C-3	15
Sensor - Brake Air Pressure	F-14	16
Sensor - Load Level Division	G-6	17
Sensor - Throttle Position	D-2	18
Solenoid - First Brake Clap Driver	F-14	19
Solenoid - Horn	G-9	20
Switch - ABC	E-1	21
Switch - ABS	E-1	22
Switch - Backup Lamp	E-1	23
Switch - Blower	C-3	24
Switch - Brake Retard	E-1	25
Switch - Chime Lamp	E-6	26
Switch - Fog Lamp	D-4	27
Switch - Headlamp	C-4	28
Switch - Headlamp	D-4	29
Switch - Horn	E-1	30
Switch - Key	C-3	31
Switch - Ladder Lamp	E-4	32
Switch - Power Window	D-1	33
Switch - Power Windows	A-3	34
Switch - Reverse	E-1	35
Switch - Start	E-1	36
Switch - Steering Column	E-1	37
Switch - TCS	F-1	38
Switch - Throttle Retard Lock	C-3	39
Switch - Throttle Retard Lock	E-1	40
Switch - Transmission Lock Position	G-6	41

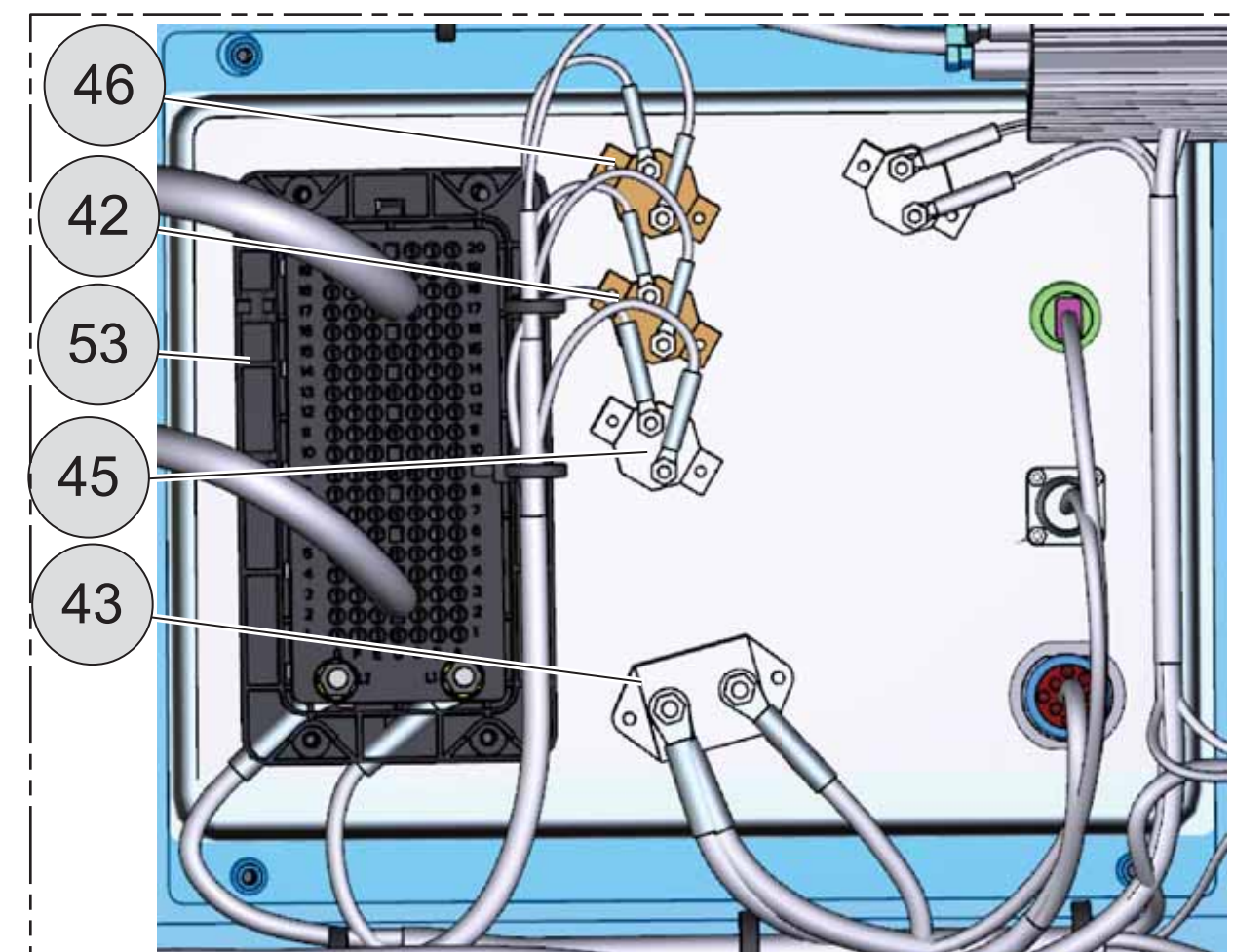
Volume 1 Connector Location

Connector Number	Schematic Location
CONN 1	B-13
CONN 2	B-13
CONN 3	B-13
CONN 4	B-13
CONN 5	B-14
CONN 6	B-14
CONN 7	B-13
CONN 8	B-13
CONN 9	B-13
CONN 10	B-12
CONN 11	B-12
CONN 12	C-8
CONN 13	D-7
CONN 14	D-7
CONN 15	J-5
CONN 16	J-5
CONN 17	B-4
CONN 18	B-4
CONN 19	C-4
CONN 20	H-3
CONN 21	C-3

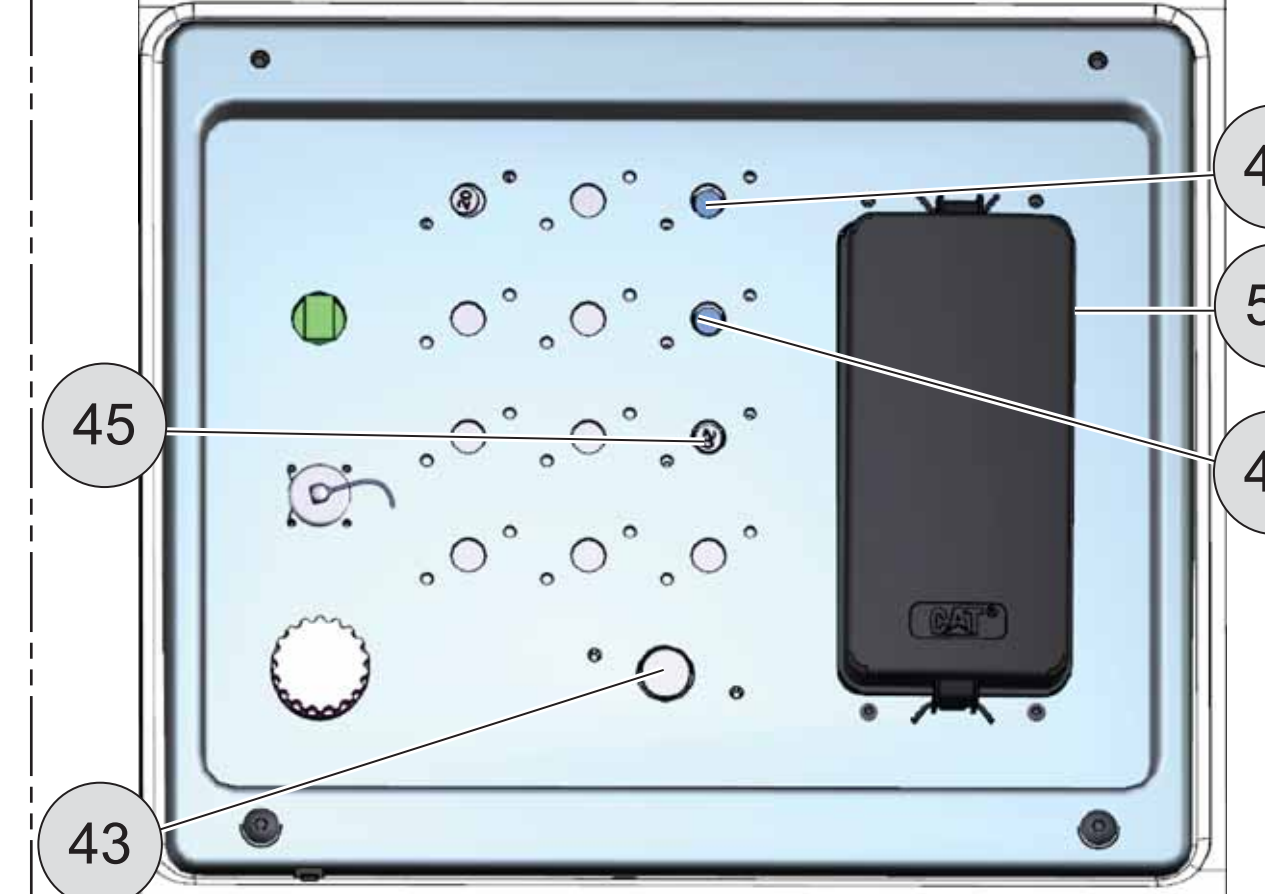
Failure Mode Identifiers (FMI)*

FMI No.	Failure Description
0	Data valid but above normal operational range
1	Data valid but below normal operational range
2	Intermittent intermittent or no signal
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	Electrical system not responding properly
8	Abnormal frequency, pulse width, or period
9	Abnormal amplitude
10	Abnormal rate of change
11	Failure mode not identifiable
12	Self-diagnosed or unexplained
13	Out of calibration
14	Parameter failure
15	Parameter failure
16	Parameter not available
17	Module not responding
18	Sender supply fault
19	Condition not met
20	Parameter failure

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

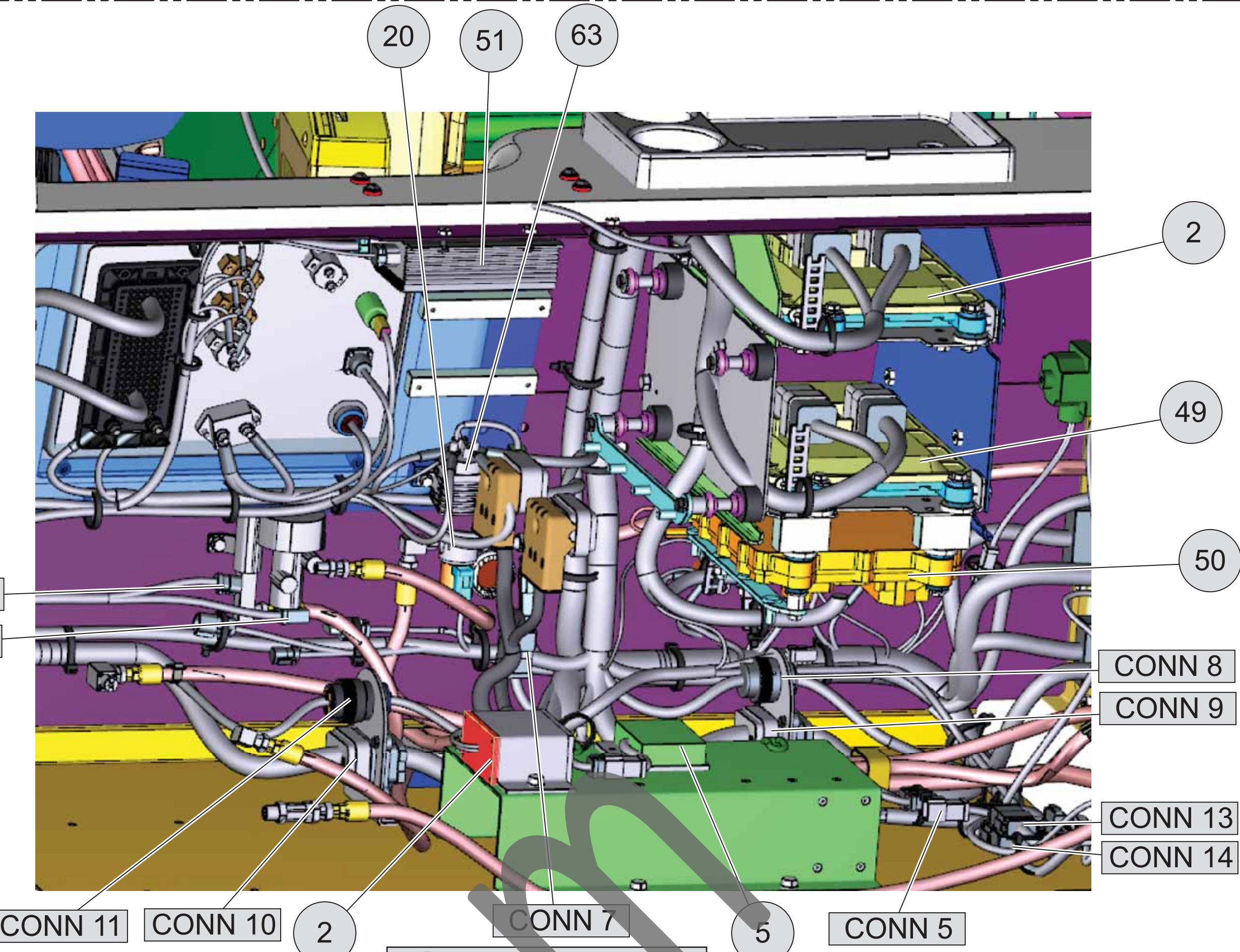


BREAKER/FUSE PANEL

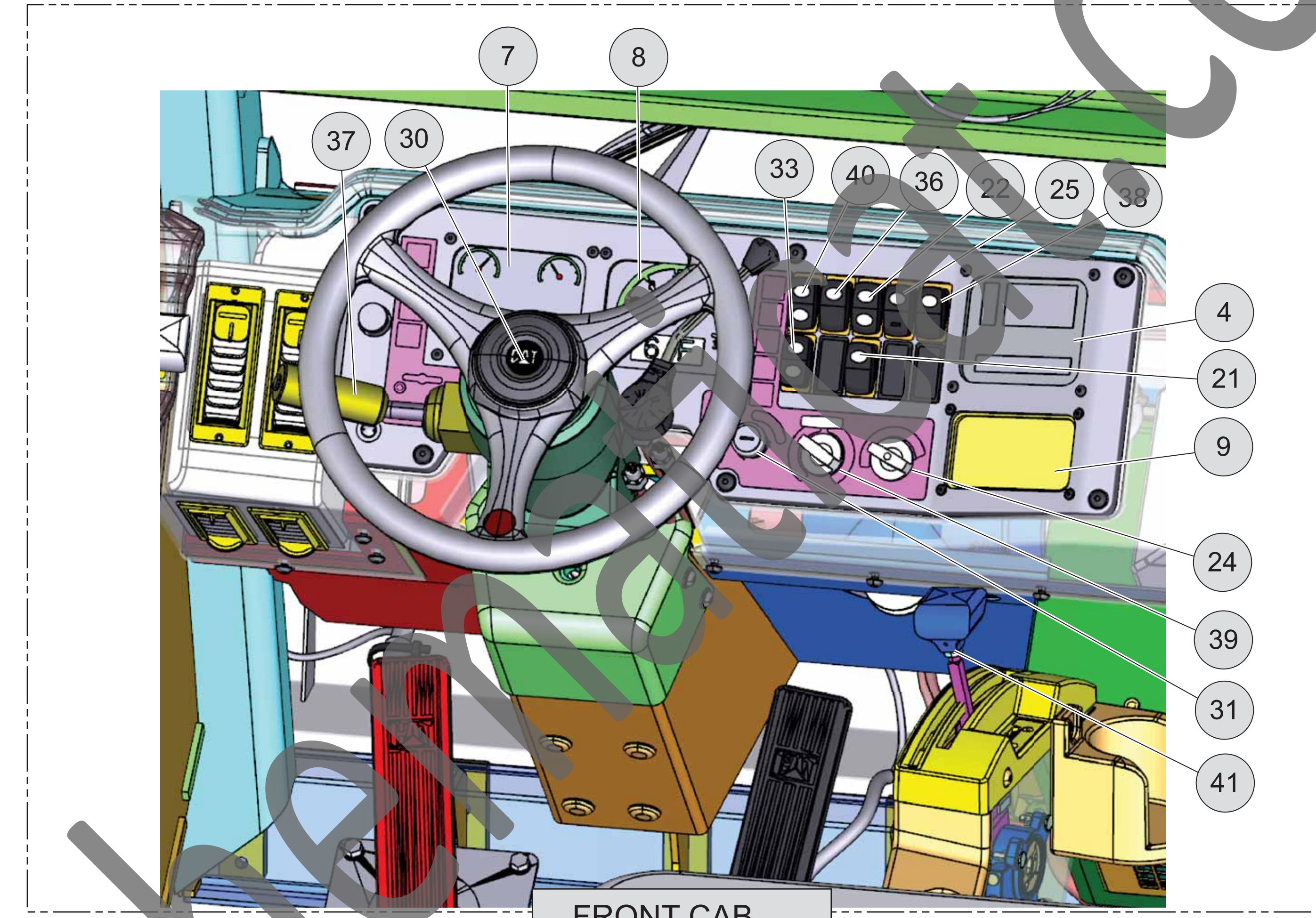


CONN 15

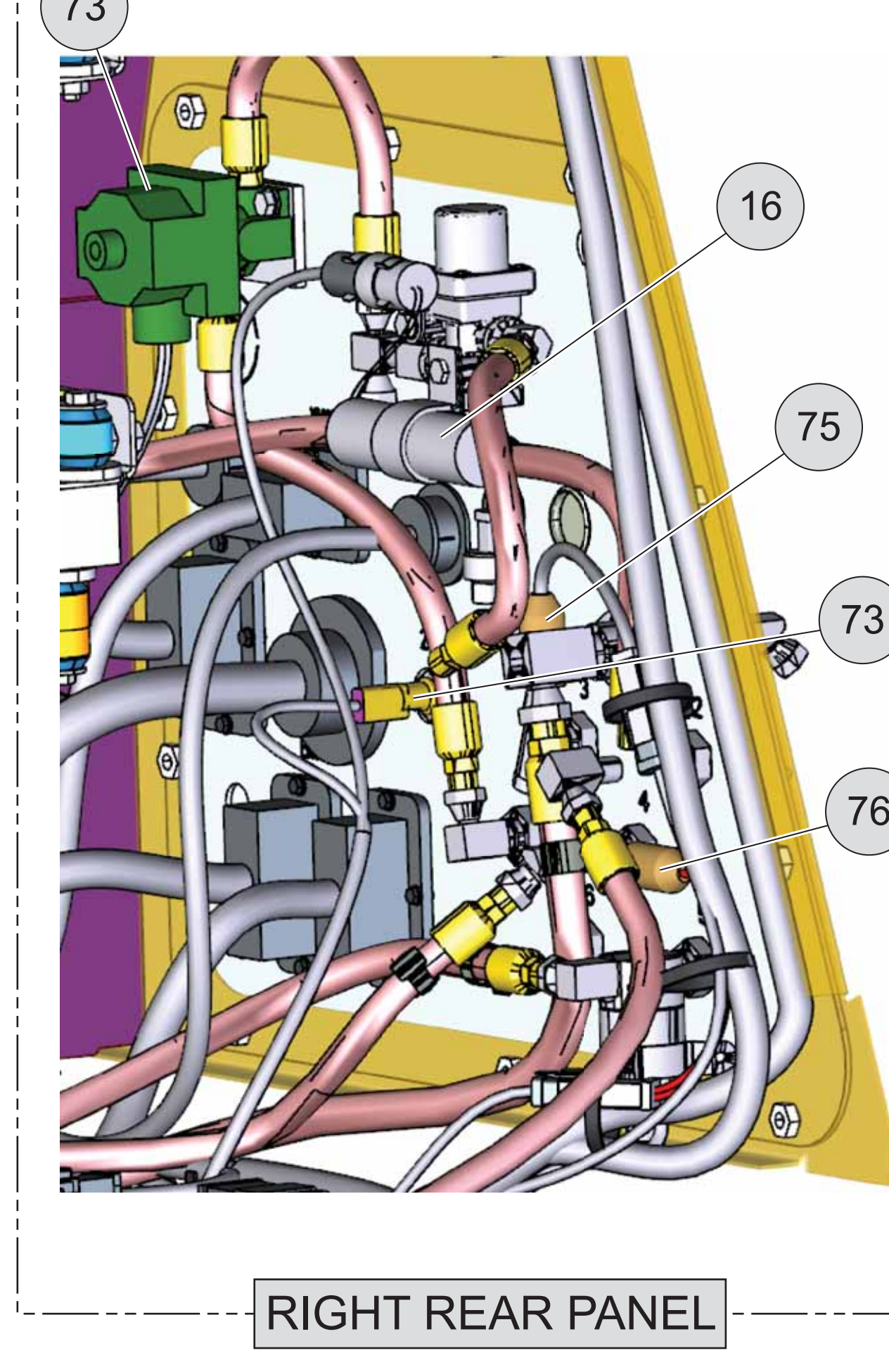
CONN 16



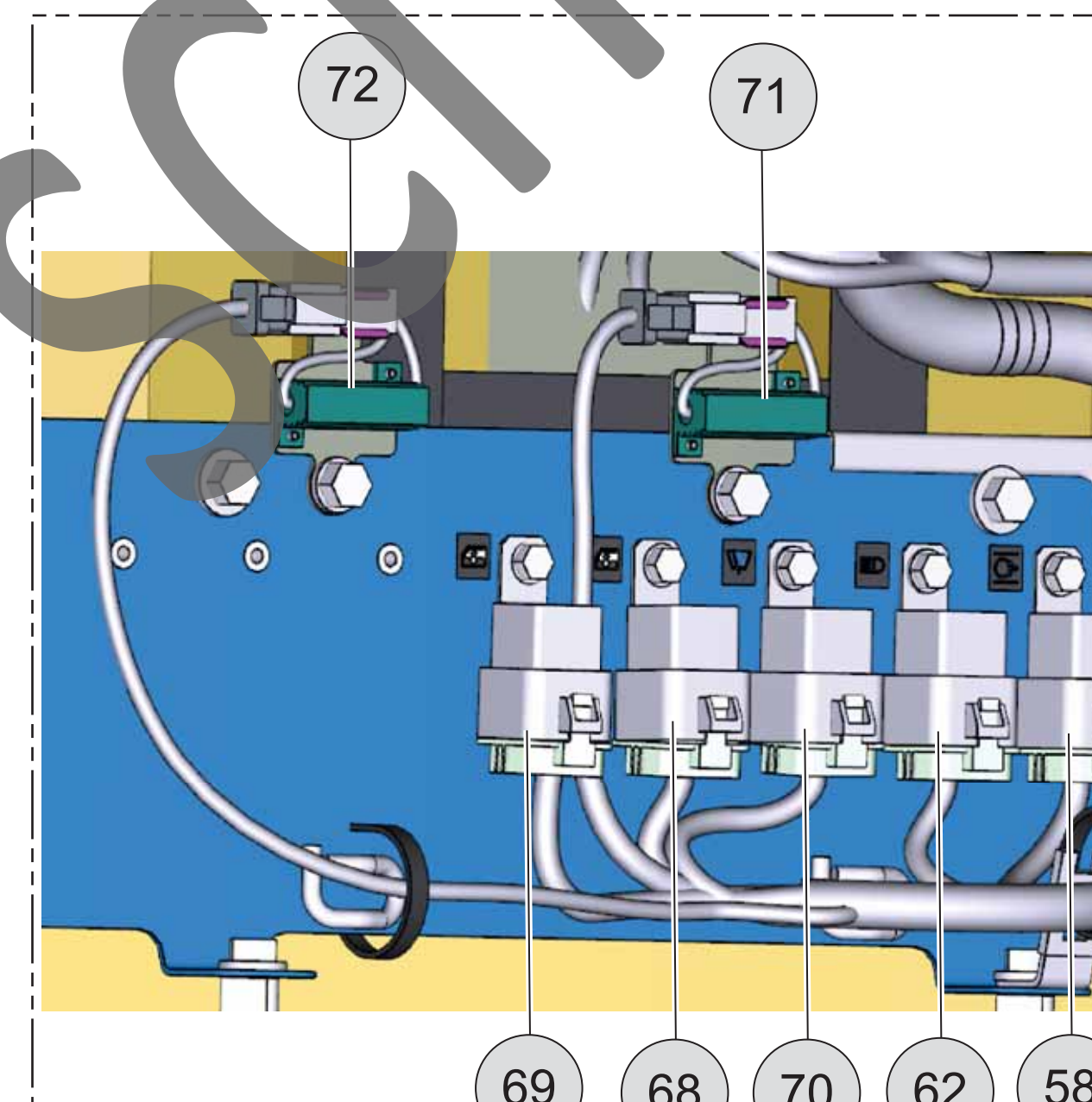
REAR CAB



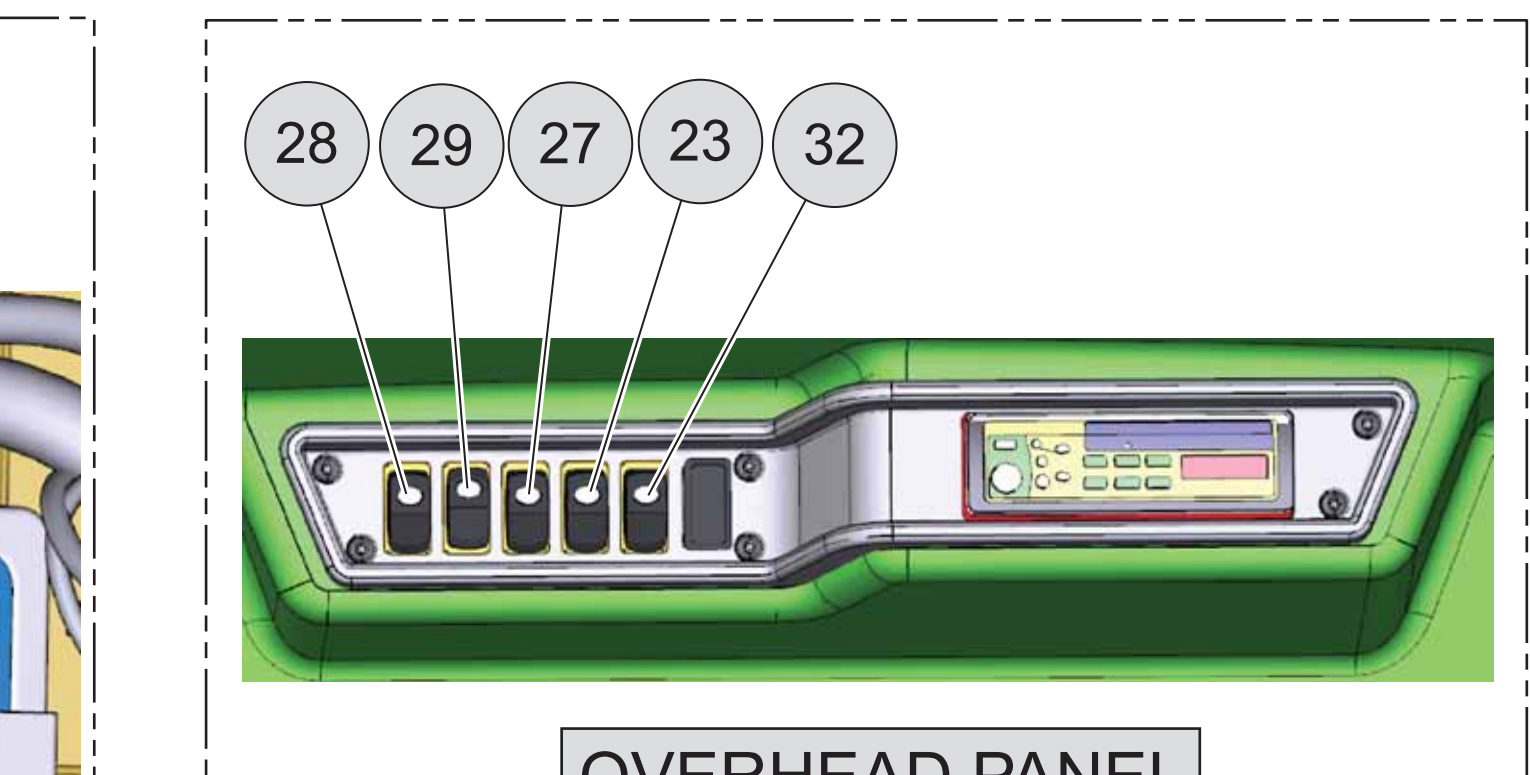
FRONT CAB



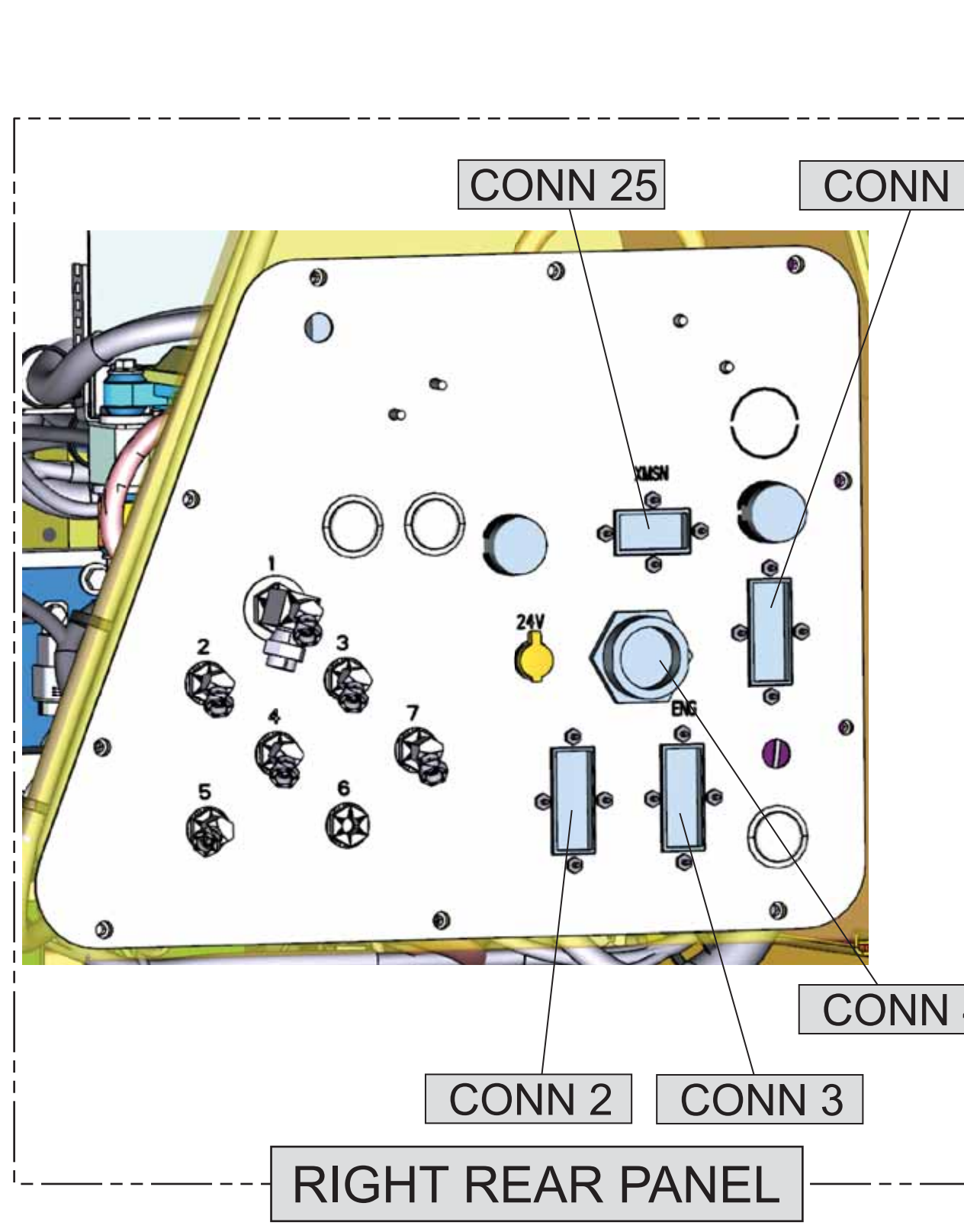
RIGHT REAR PANEL



LEFT REAR RELAY PANEL



OVERHEAD PANEL



RIGHT REAR PANEL

Schematic
785D Off-Highway Truck
Electrical System

DMC155-301
MSY124-254

Volume 1 of 4: Cab Wiring

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Harness and Wire Electrical Schematic Symbols

Symbols

- Pressure Symbol
- Temperature Symbol
- Level Symbol
- Flow Symbol
- Circuit Breaker Symbol

Symbols and Definitions

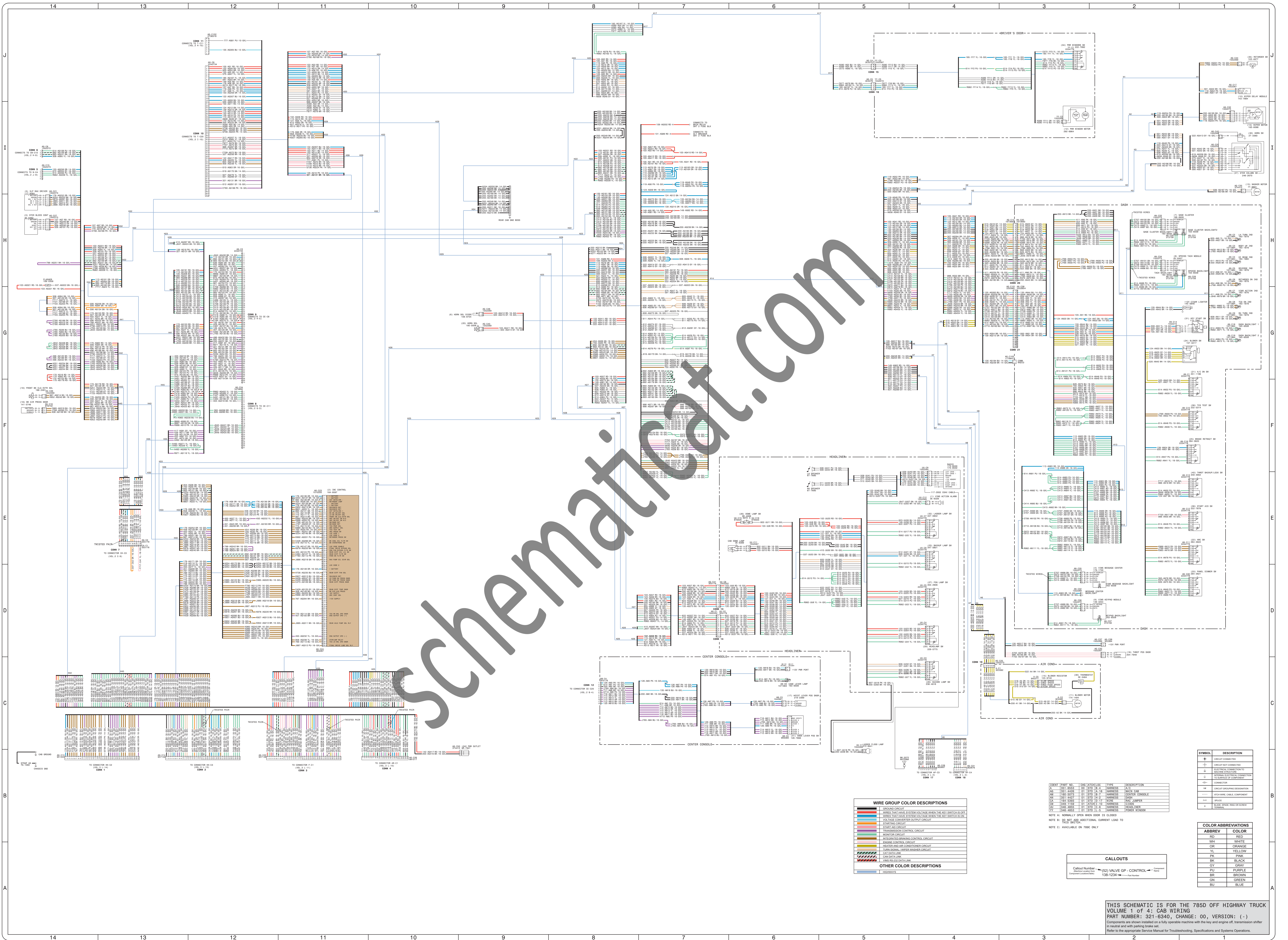
- Fuse:** A component in an electrical circuit that will open the circuit if too much current flows through it.
- Switch (Normally Open):** A switch that will close at a specified point (temp, press, etc.). The circuit indicates that the component has been sensed and a wire can be disconnected from it. No circuit indicates that the wire cannot be disconnected from the component.
- Switch (Normally Closed):** A switch that will open at a specified point (temp, press, etc.). No circuit indicates that the wire cannot be disconnected from the component.
- Ground (Weld):** This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.
- Ground (Case):** This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.
- Reed Switch:** A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.
- Sender:** A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.
- Relay (Magnetic Switch):** A relay is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.
- Solenoid:** A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.
- Magnetic Latch Solenoid:** A magnetic latch solenoid is an electrical component that is activated by electricity and held locked by a permanent magnet. It has two coils (latch and unlatch) that make an electromagnet when current flows through them. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

Harness and Wire Symbols

Wires, Cables, or Harness
Assembly Identification: Includes
Harness Identification Letters
(A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

Part Number for Connector Plug: AG-24 111-7999
Part Number for Connector Receptacle: LC-12 3E-5179
Part Number for Connector Plug or Receptacle: 3E-5179
Part Number for Connector Plug or Receptacle: 3E-5179

Detach connector: Typical representation of a Deutch connector. The plug contains all contacts and the receptacle contains all wires.
Wires: Wires are represented by a line with a number in the middle. The number indicates the wire number.
Wires: Wires are represented by a line with a number in the middle. The number indicates the wire number.



WIRE GROUP COLOR DESCRIPTIONS

[Red line]	STARTER CIRCUIT
[Blue line]	STARTER CIRCUIT
[Green line]	STARTER CIRCUIT
[Yellow line]	STARTER CIRCUIT
[Orange line]	STARTER CIRCUIT
[Purple line]	STARTER CIRCUIT
[Brown line]	STARTER CIRCUIT
[Pink line]	STARTER CIRCUIT
[Grey line]	STARTER CIRCUIT
[Black line]	STARTER CIRCUIT
[White line]	STARTER CIRCUIT
[Light Blue line]	STARTER CIRCUIT
[Light Green line]	STARTER CIRCUIT
[Light Yellow line]	STARTER CIRCUIT
[Light Orange line]	STARTER CIRCUIT
[Light Purple line]	STARTER CIRCUIT
[Light Brown line]	STARTER CIRCUIT
[Light Pink line]	STARTER CIRCUIT
[Light Grey line]	STARTER CIRCUIT
[Light Black line]	STARTER CIRCUIT
[Light White line]	STARTER CIRCUIT

OTHER COLOR DESCRIPTIONS

[Red line]	RED
[Blue line]	BLUE
[Green line]	GREEN
[Yellow line]	YELLOW
[Orange line]	ORANGE
[Purple line]	PURPLE
[Brown line]	BROWN
[Pink line]	PINK
[Grey line]	GRAY
[Black line]	BLACK
[White line]	WHITE
[Light Blue line]	LIGHT BLUE
[Light Green line]	LIGHT GREEN
[Light Yellow line]	LIGHT YELLOW
[Light Orange line]	LIGHT ORANGE
[Light Purple line]	LIGHT PURPLE
[Light Brown line]	LIGHT BROWN
[Light Pink line]	LIGHT PINK
[Light Grey line]	LIGHT GRAY
[Light Black line]	LIGHT BLACK
[Light White line]	LIGHT WHITE

SYMBOL DESCRIPTION

[Symbol]	WIRE CONNECTED
[Symbol]	WIRE NOT CONNECTED
[Symbol]	ELECTRICAL CONNECTION TO
[Symbol]	ELECTRICAL CONNECTION FROM
[Symbol]	CONNECTION
[Symbol]	CIRCUIT GROUPING DESIGNATION
[Symbol]	GROUNDING CABLE COMPONENT
[Symbol]	GROUNDING CABLE COMPONENT
[Symbol]	FUSED CIRCUIT BREAKER
[Symbol]	RELAY
[Symbol]	SWITCH
[Symbol]	DIODE
[Symbol]	TRANSISTOR
[Symbol]	INDUCTOR
[Symbol]	CAPACITOR
[Symbol]	RESISTOR
[Symbol]	DIODE
[Symbol]	TRANSISTOR
[Symbol]	INDUCTOR
[Symbol]	CAPACITOR
[Symbol]	RESISTOR

CALLOUTS

Callout Number	Component Location	Component Name
138-1234	Valve GP - CONTROL	Valve GP - CONTROL

THIS SCHEMATIC IS FOR THE 7850 OFF HIGHWAY TRUCK
VOLUME 1 of 4: CAB WIRING
PART NUMBER: 321-6340, CHANGE: 00, VERSION: (-)
Components are shown installed on a fully operable machine with the key and engine off, transmission in neutral and with parking brake set.
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.

Component Identifiers (CID) Electronic Transmission Control System (MID No. 027)	
CID	Component
0168	System Voltage
0177	Transmission Oil Temperature Sensor
0190	Engine Output Speed (COS) Signal
0244	CAT Data Link
0269	Sensor Supply Voltage
0279	Accelerator Pedal
0284	Start Relay
0285	Transmission Output Speed Sensor #1
0290	Engine Control
0292	Engine Control Module
0292	Converter Output Speed (COS)
0293	Transmission Output Speed Sensor #2
0301	Pressure Brake Switch
0302	Transmission Gear Sensor
0303	Transmission Output Speed Sensor
0304	Gear Selector Lever
0304	Pressure Brake Pressure Switch
0307	Upshift Solenoid Valve
0308	Downshift Solenoid Valve
0309	Lockup Solenoid
0318	Transmission Solenoid
0324	Body Raise Solenoid Valve
0325	Body Lower Solenoid Valve
0373	Host Level Retray Position Switch
0600	Vital Information Management System (VIMS)
1114900	Service Brake Pressure
1176	Machine Application
1236	Body Lift Switch Lamp
1262	Location Code Lamp
1427	Machine Lockout Lamp

Event Codes Engine Control	
Event Code	Condition
E017	High Engine Coolant Temperature Warning
E024	High Exhaust Temperature Warning
E035	Loss of Coolant Flow Warning
E036	Low Engine Coolant Temperature Warning
E037	Oil Level Low Warn
E072	Oil Filter Differential Pressure High
E074	Oil Filter Differential Pressure Very High
E082	Boost Pressure Above Normal
E093	Boost Pressure Below Normal
E094	Fuel Filter Restriction Warning
E098	Engine Pressure Overhaul
E100	Low Engine Oil Pressure Warning
E101	High Crankcase Pressure Warning
E130	Engine Overheat Warning
E206	Low Engine Exhaust Temperature Warning
E272	Host Air Restriction Warning
E273	High Aftercooler Temperature Warning

Off-Machine Switch Specification			
Part No.	Function	Actuate	Contact Position
242-8903	Park Brake Pressure	11.0 psi (0.76 bar)	Normally Closed

Resistor, Sender and Solenoid Specifications		
Part No.	Component Description	Resistance (Ohms)
1242016	Resistor Start Aid (2)	20 ± 0.2

Related Electrical Service Manuals	
Table	Form Number
Crack Reference for Electrical Connections	RS100070
Alternator - 6K-7803	SE8R7008
Brake Control	SE8R1003
Engine Control	SE8R1109
Transmission Control	SE8R1502
VMS Control	R99Q001

Volume 2 Component Location

Component	Reference	Machine Location
Breaker - A/C	D-13	42
Breaker - Alternator	D-13	43
Breaker - DCOG	G-9	44
Breaker - Converter	D-13	45
Breaker - DPF Fan	G-13	46
Control - CAMPS S/SOS	8-7	47
Control - RAC	8-8	48
Control - Transmission	8-3	49
Control - VMS	7-2	50
Converter - 20A	1-14	51
Converter - 25A	5-9	52
Fuse Block	D-13	53
Fuel Block Control Box	10-10	54
Monitor - Rear Vision	J-4	56
Relay - Backup	8-15	57
Relay - Brake Retract	14-14	58
Relay - DPF Fan	8-13	59
Relay - Fog Lamp	8-13	60
Relay - High Beam	1-14	62
Relay - Main	14-13	63
Relay - Preheat	8-13	64
Relay - Start Aid Hold	8-13	65
Relay - Start Aid	8-13	66
Relay - Stop Lamp	1-13	67
Relay - Windows (1)	1-14	68
Relay - Windows (2)	1-14	69
Relay - Wiper	1-14	70
Resistor - Start Aid (1)	8-13	71
Resistor - Start Aid (2)	8-13	72
Solenoid - All-Shift	8-3	73
Switch - DCOG	7-2	74
Switch - Park Brake	7-3	75
Switch - Service Brake	7-3	76
Switch - VMS	2-8	77

Volume 2 Connector Location	
Connector Number	Schematic Location
CONN 5	49
CONN 6	49
CONN 7	49
CONN 8	53
CONN 9	53
CONN 10	53
CONN 11	53
CONN 12	53
CONN 13	53
CONN 14	53
CONN 15	53
CONN 16	53

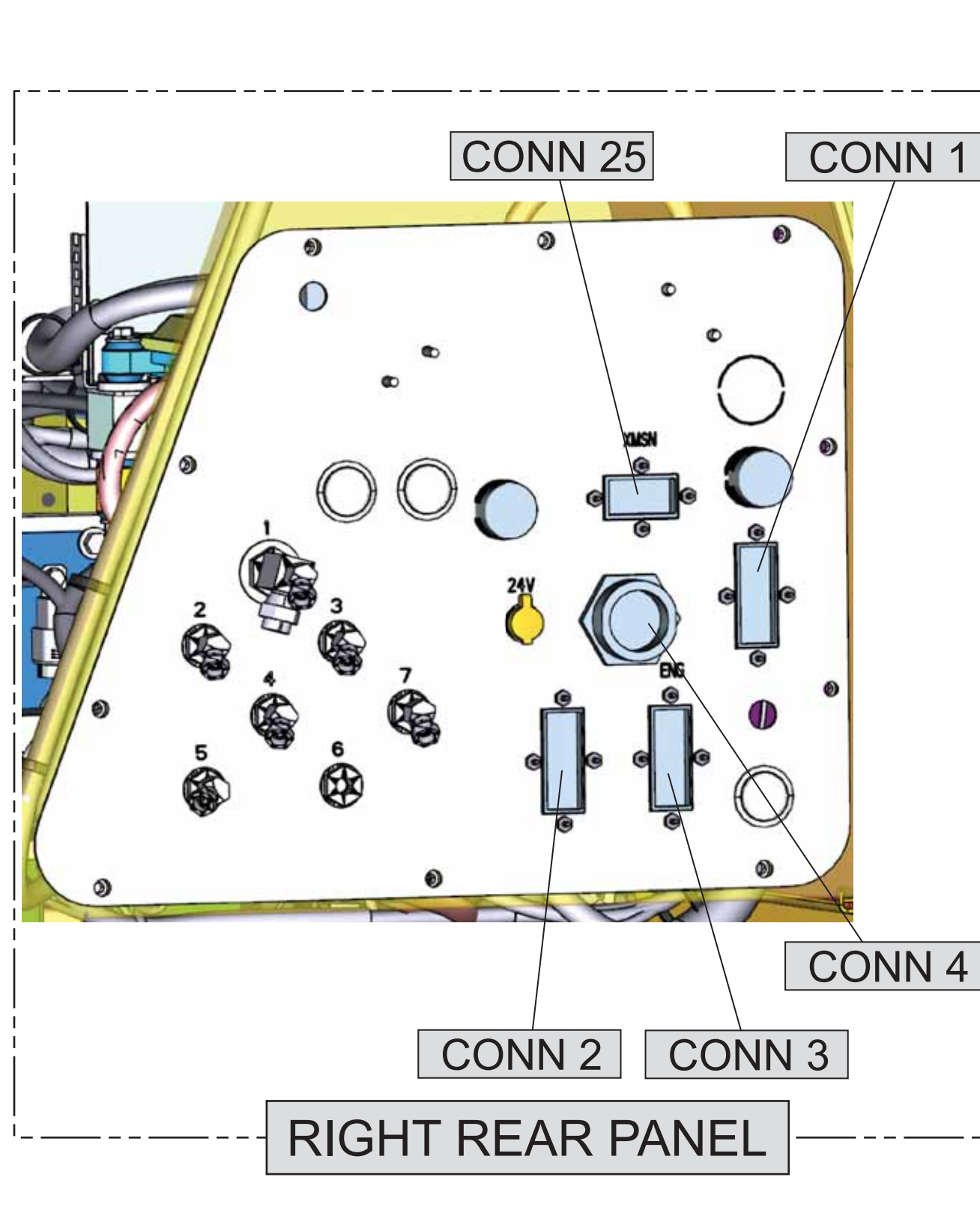
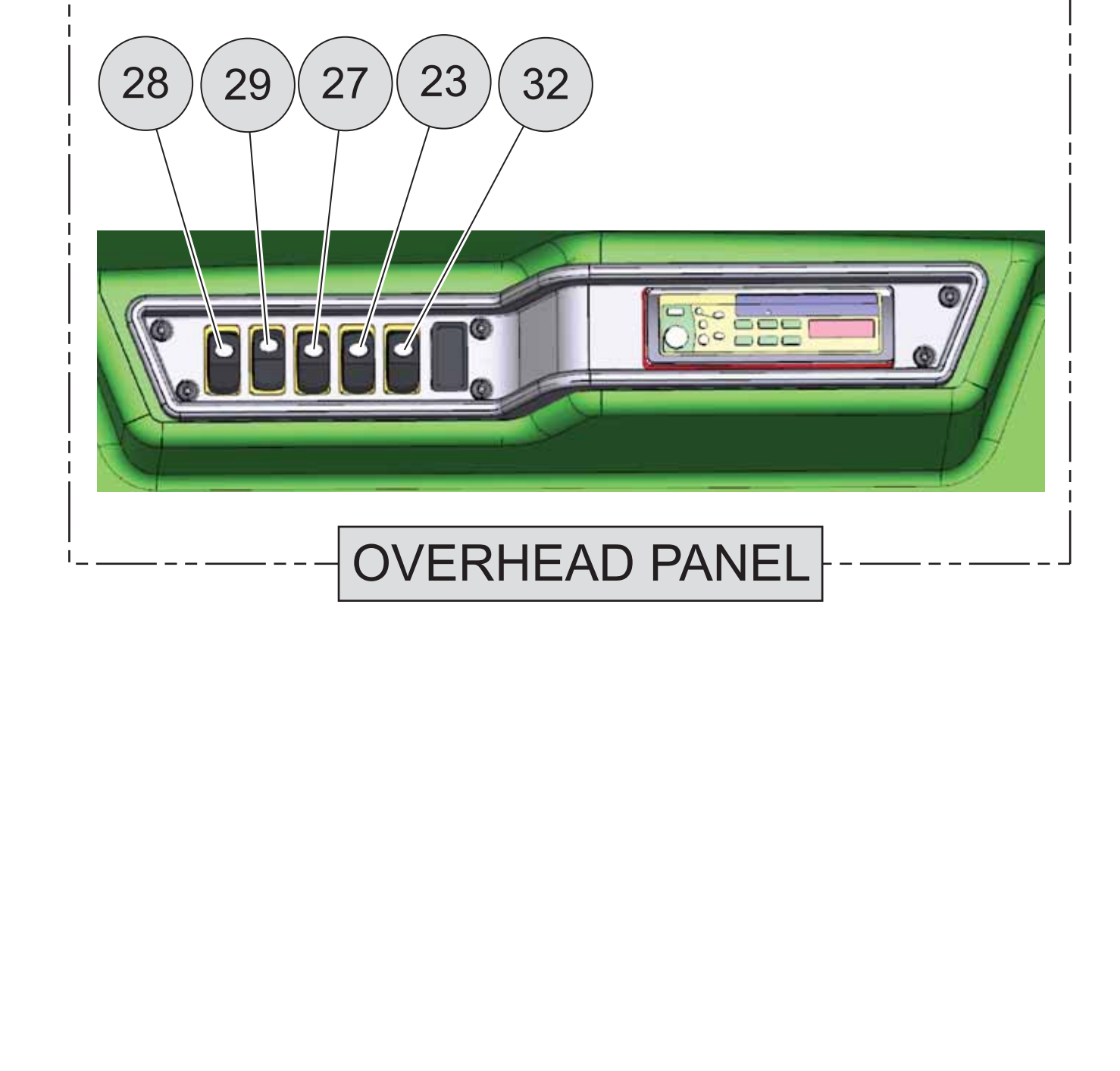
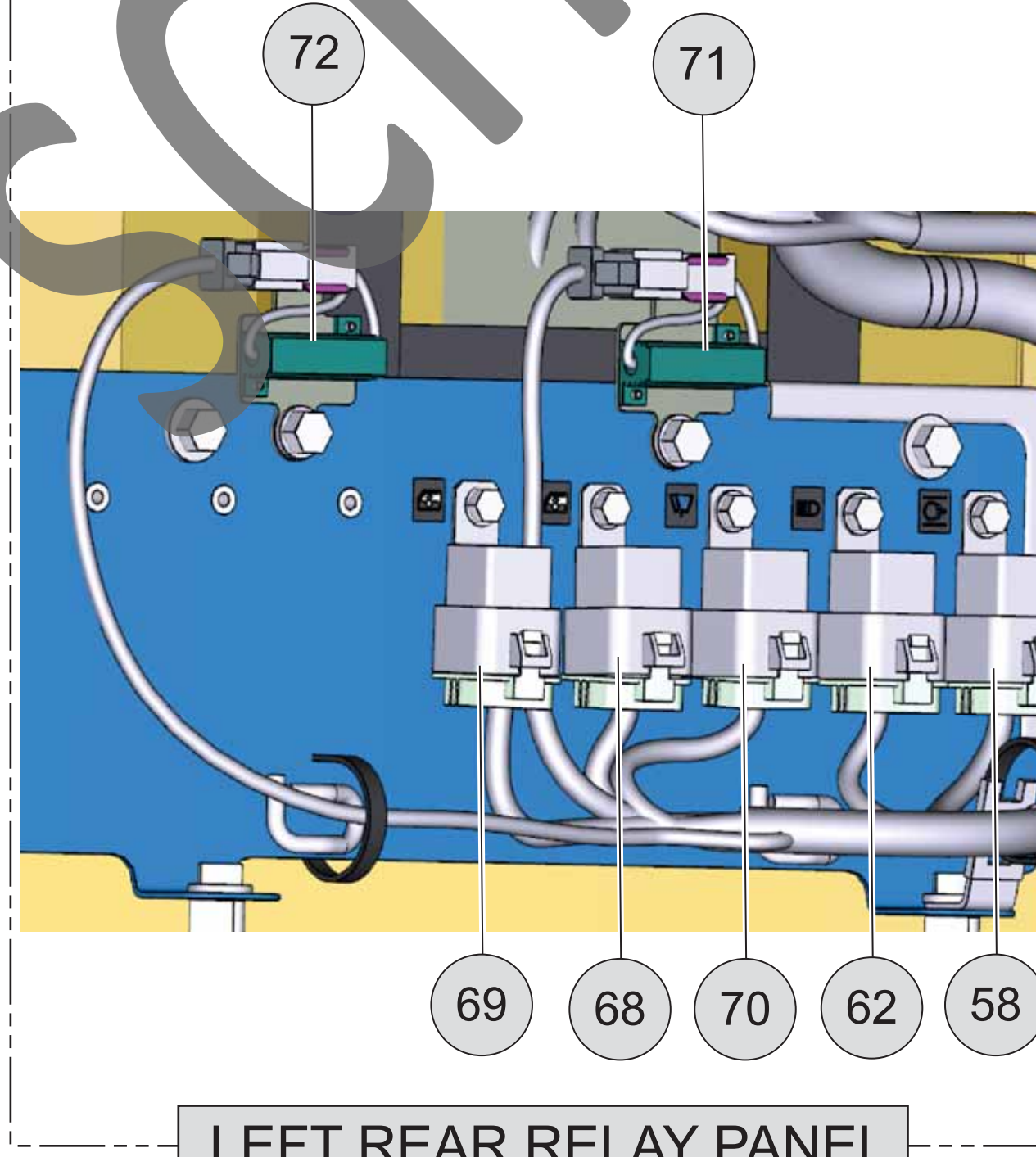
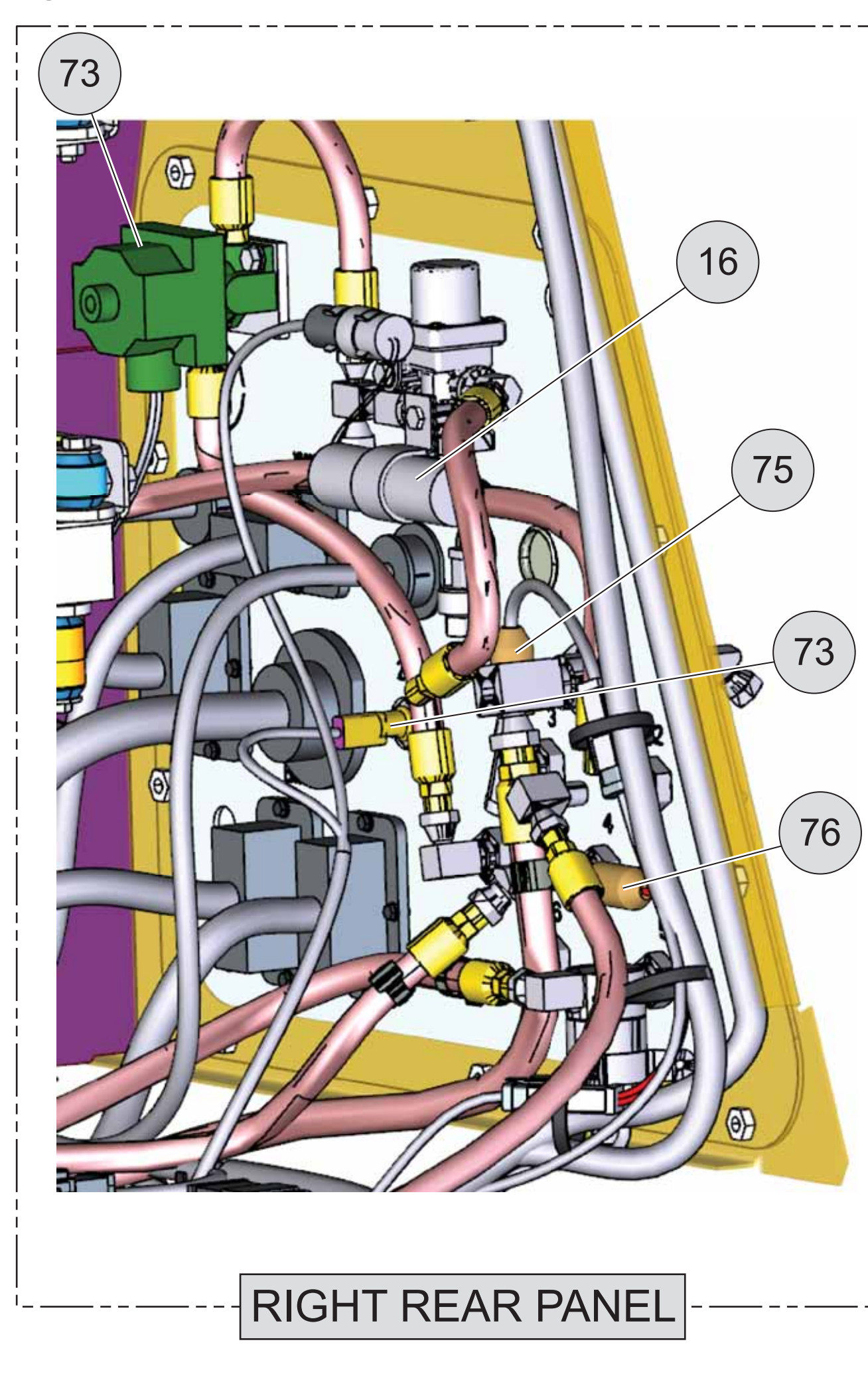
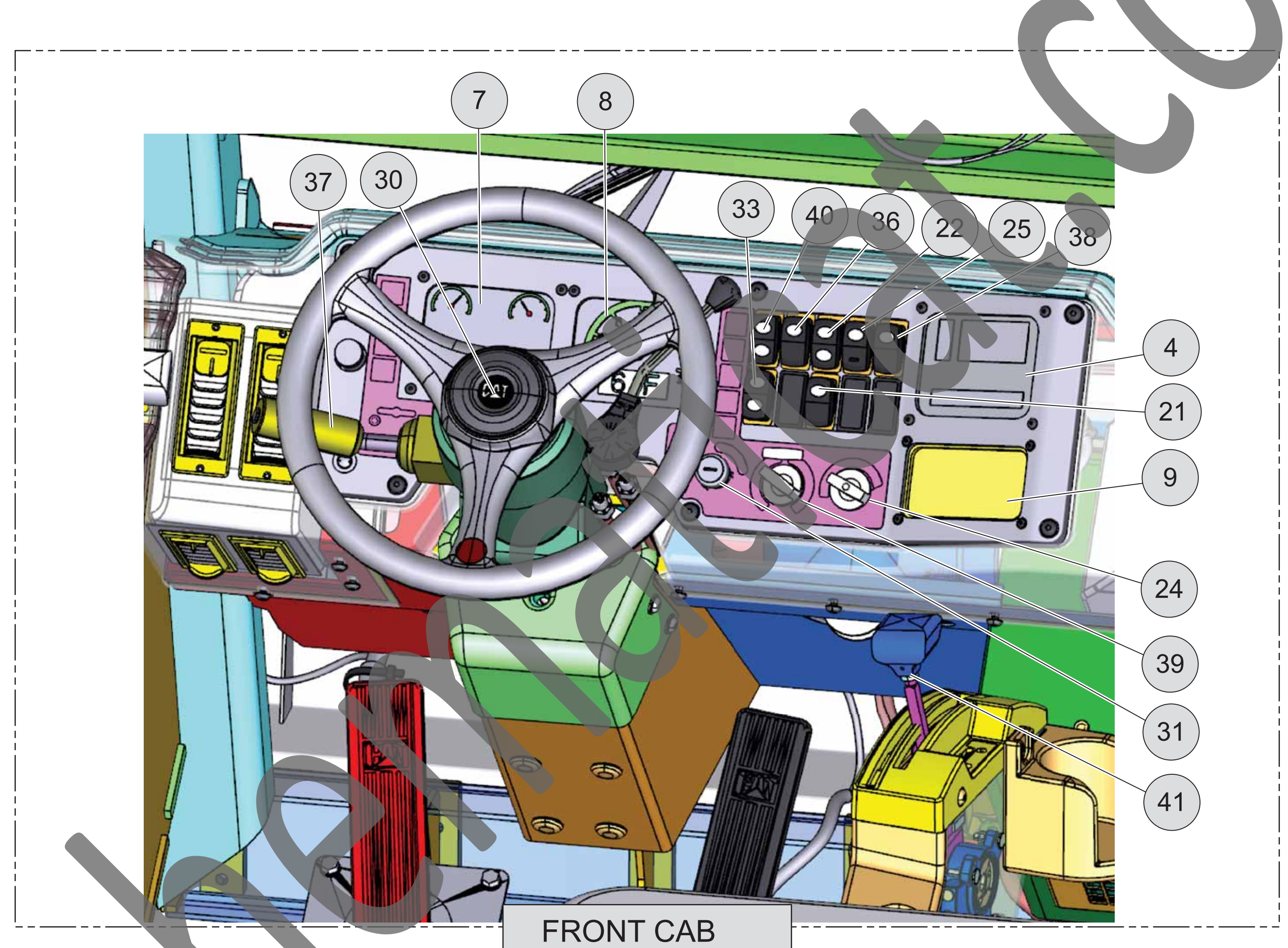
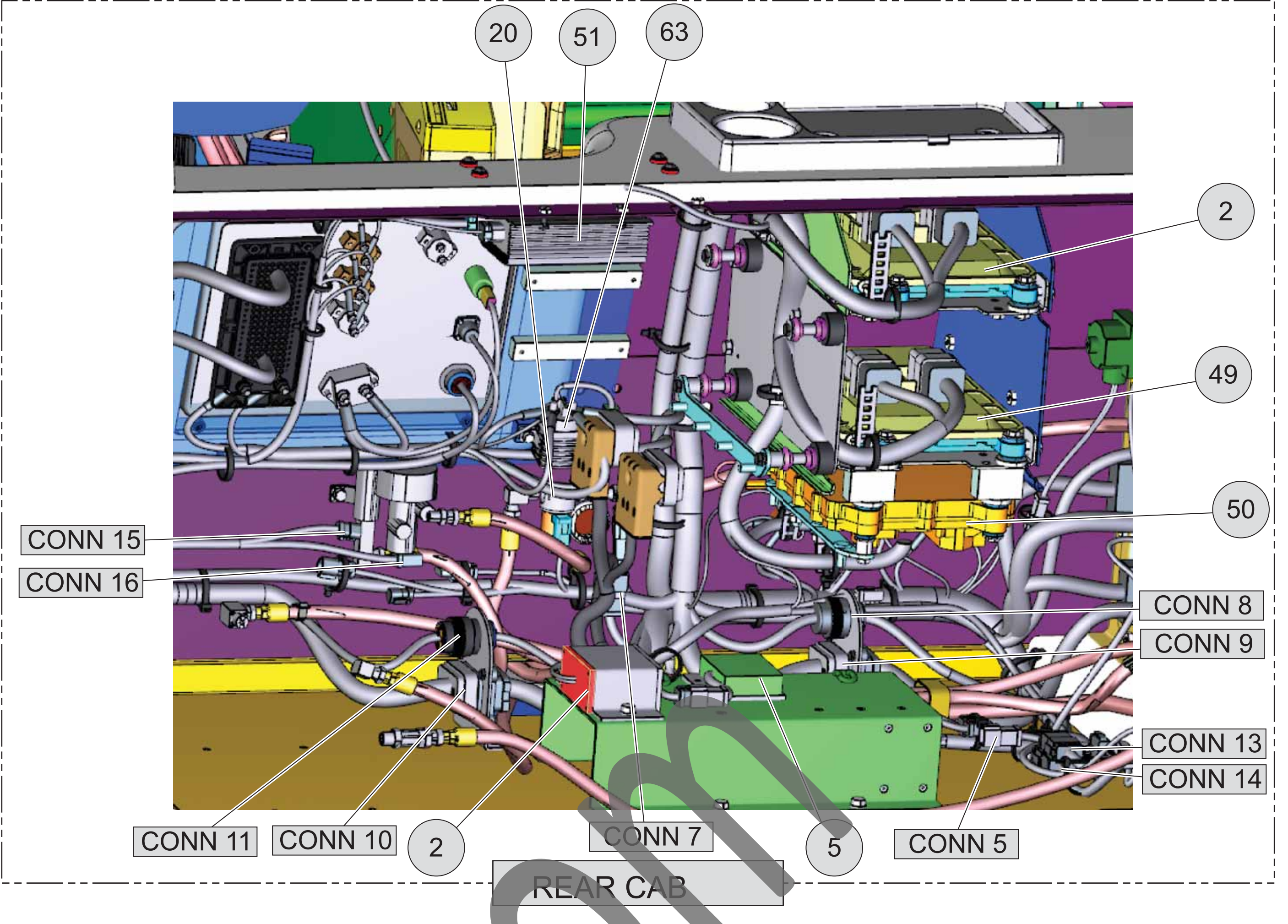
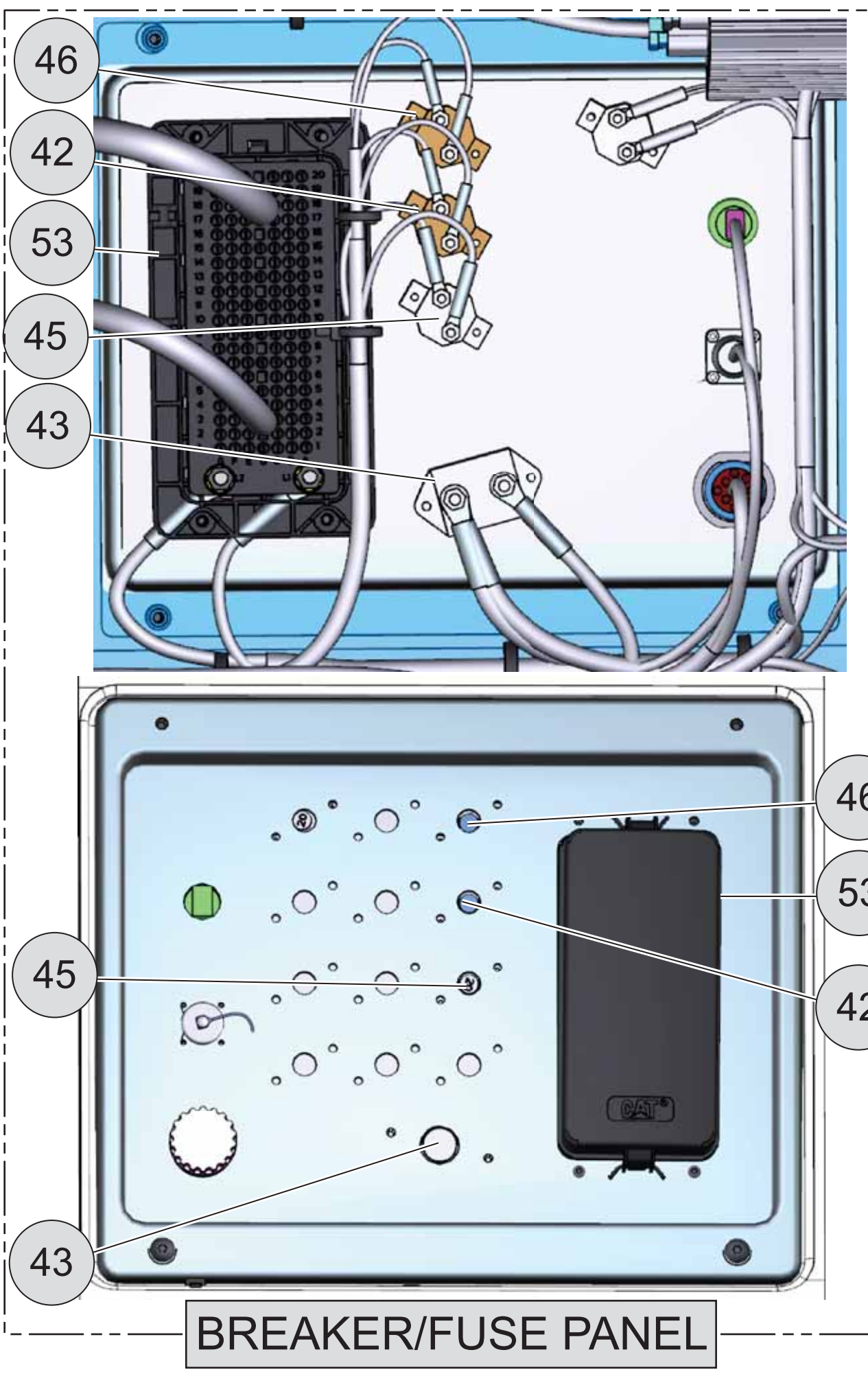
Volume 2 Connector Location	
Connector Number	Schematic Location
CONN 5	49
CONN 6	49
CONN 7	49
CONN 8	53
CONN 9	53
CONN 10	53
CONN 11	53
CONN 12	53
CONN 13	53
CONN 14	53
CONN 15	53
CONN 16	53

Volume 2 Connector Location	
Connector Number	Schematic Location
CONN 5	49
CONN 6	49
CONN 7	49
CONN 8	53
CONN 9	53
CONN 10	53
CONN 11	53
CONN 12	53
CONN 13	53
CONN 14	53
CONN 15	53
CONN 16	53

Engine Control (MID No. 036)	
CID	Component
0001	Cylinder 1 Injector Solenoid
0002	Cylinder 2 Injector Solenoid
0003	Cylinder 3 Injector Solenoid
0004	Cylinder 4 Injector Solenoid
0005	Cylinder 5 Injector Solenoid
0006	Cylinder 6 Injector Solenoid
0007	Cylinder 7 Injector Solenoid
0008	Cylinder 8 Injector Solenoid
0009	Cylinder 9 Injector Solenoid
0010	Cylinder 10 Injector Solenoid
0011	Cylinder 11 Injector Solenoid
0012	Cylinder 12 Injector Solenoid
0013	Cylinder 13 Injector Solenoid
0014	Cylinder 14 Injector Solenoid
0015	Cylinder 15 Injector Solenoid
0016	Cylinder 16 Injector Solenoid
0021	Throttle Position Sensor
0022	Engine Oil Pressure
0101	Crankshaft Position Sensor
0110	Coolant Temperature
0110	System Voltage
0190	Engine Speed Sensor
0244	CAT Data Link
0303	Personality Module
0304	Engine ECM
0304	Timing Calculator
0302	Speed Sensor
0303	Digital Sensor Supply
0304	Throttle Switch
0308	System Parameters
0324	Intercharger Cooler Pressure
0325	Intercharger Pressure
0373	Right Turbocharger Inlet Pressure
0374	Left Turbocharger Inlet Pressure
0391	Engine Cooling Fan Solenoid
0392	Pressure Pump Relay
0393	Nonreturn Solenoid
0394	Unfiltered Oil Pressure Signal
0395	Engine Fan Speed Sensor Signal
0396	Start Aid Relay
0397	Start Aid Control
0398	Unable to Communicate with Caterpillar Monitoring System
0399	Oil Pressure Sensor
0399	Unable to Communicate with VMS
0397	Left Exhaust Temp Sensor
0398	Right Exhaust Temp Sensor
0399	Rear Aftercooler Coolant Temperature Sensor
0400	Host

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 inconsistent.
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 position.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Bad device or component.
13	Oil or lubrication.
14	Parameter failure.
15	Parameter failure.
16	Parameter not available.
17	Module not responding.
18	Sensor supply fault.
19	Coil/shorted coil.
20	Parameter failure.

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



Schematic

785D Off-Highway Truck Electrical System

DMC155-301
MSY124-254

Volume 2 of 4: Cab Wiring

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Harness And Wire Electrical Schematic Symbols

Symbols

- Pressure Symbol
- Temperature Symbol
- Level Symbol
- Flow Symbol
- Circuit Breaker Symbol

Symbols and Definitions

- Fuse:** A component in an electrical circuit that will open the circuit if too much current flows through it.
- Switch (Normally Open):** A switch that will close at a specified point (temp, press, etc.). The circuit indicates that the component has some terminals and a wire can be disconnected from it. No circle indicates that the wire cannot be disconnected from the machine.
- Switch (Normally Closed):** A switch that will open at a specified point (temp, press, etc.). No circle indicates that the wire cannot be disconnected from the machine.
- Ground (Weld):** This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.
- Ground (Case):** This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.
- Reed Switch:** A switch whose contacts are controlled by a magnet. A magnet closes the contacts when a normally open reed switch. Its resistance changes to give an indication to the group of the temperature or pressure.
- Sender:** A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the group of the temperature or pressure.
- Relay (Magnetic Switch):** A relay is an electrical component that is actuated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.
- Solenoid:** A solenoid is an electrical component that is actuated by electricity. It has a coil that makes an electromagnet when current flows through it. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

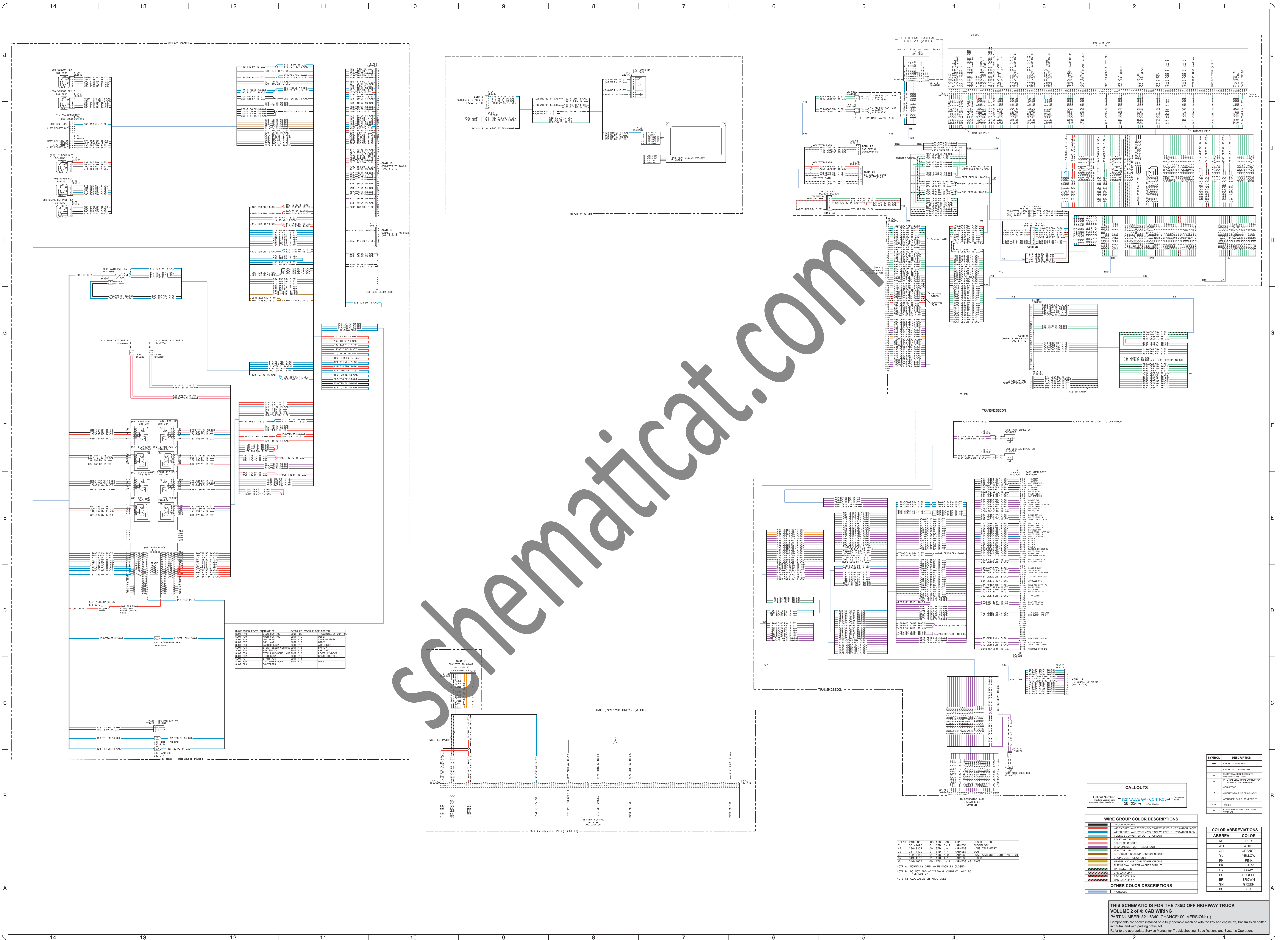
Harness and Wire Symbols

Wires, Cables, or Harness
 Assembly Identification
 Harness Identification Letters
 and Numbers
 Connector Identification
 Codes
 Color Use

Part Number for Connector Plug
 Part Number for Connector Receptacle

Detach connector: Typical representation of a Deutsch connector. The plug contains all contacts and the receptacle contains all pins.

Sure-Seal connector: Typical representation of a Sure-Seal connector. The plug contains all contacts and the receptacle contains all pins and sockets.



SchematicCat.Com

SYMBOL	DESCRIPTION
+	GROUND CONNECTION
+	CIRCUIT NOT CONNECTED
+	ELECTRICAL CONNECTION TO WIRELESS DEVICE
+	INTERNAL WIRE GROUP CONNECTION TO WIRELESS DEVICE
+	CONNECTOR
+	IDENTIFY WIRING IDENTIFICATION
+	ATTACHMENT CABLE COMPONENT
+	SPRINGS
+	BLACK WIRE, WIRE OR BATTERY

CALLOUTS

Callout Number: 132 VALVE GP - CONTROL

Component Location: 138-1234

Part Number: _____

WIRE GROUP COLOR DESCRIPTIONS

ABBREV	COLOR
RD	RED
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
BLK	BLACK
GRY	GRAY
FLU	PURPLE
BRN	BROWN
GRN	GREEN
BLU	BLUE

OTHER COLOR DESCRIPTIONS

ABBREV	COLOR
RD	RED
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
BLK	BLACK
GRY	GRAY
FLU	PURPLE
BRN	BROWN
GRN	GREEN
BLU	BLUE

IDENT PART NO. | QTY | UNIT | DOC. | TYPE | DESCRIPTION

132	1	VALVE GP - CONTROL	138-1234	VALVE GP - CONTROL	VALVE GP - CONTROL
138	1	VALVE GP - CONTROL	138-1234	VALVE GP - CONTROL	VALVE GP - CONTROL
138	1	VALVE GP - CONTROL	138-1234	VALVE GP - CONTROL	VALVE GP - CONTROL
138	1	VALVE GP - CONTROL	138-1234	VALVE GP - CONTROL	VALVE GP - CONTROL
138	1	VALVE GP - CONTROL	138-1234	VALVE GP - CONTROL	VALVE GP - CONTROL

NOTE A: NORMALLY OPEN WHEN DOOR IS CLOSED
NOTE B: 50% OF THE ADDITIONAL CURRENT LOAD TO
NOTE C: AVAILABLE ON P95C ONLY

THIS SCHEMATIC IS FOR THE 7850 OFF-HIGHWAY TRUCK
VOLUME 2 of 4: CAB WIRING
PART NUMBER: 321-6340, CHANGE: 00, 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.

Schematic 785D Off-Highway Truck Electrical System

DMC155-301 MSY124-254

Volume 3 of 4: Chassis

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Component Identifiers (CID) Module Identifier (MID) Transmission / Chassis Control (MID No. 027)

Failure Mode Identifiers (FMI) FMI No. Failure Description

Event Codes Transmission Control

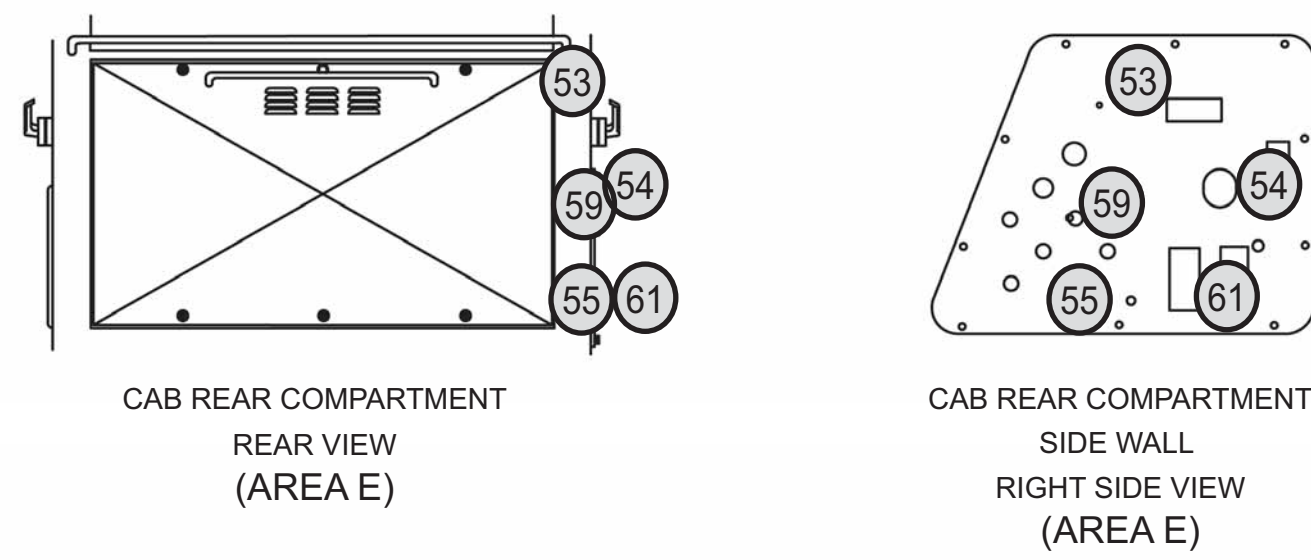
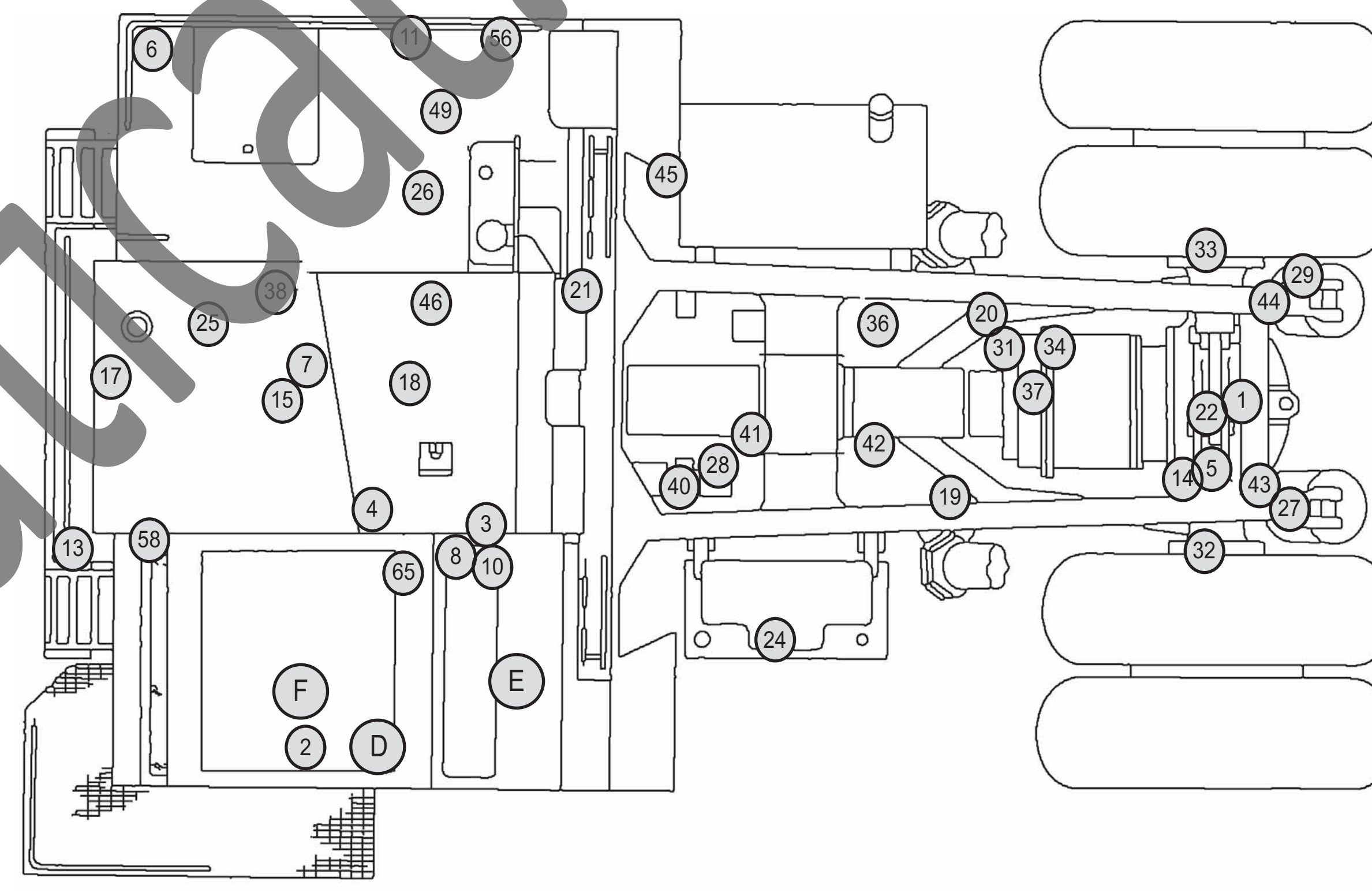
Component Identifiers (CID) Module Identifier (MID) VIMS Main Module (MID No. 049)

Component Identifiers (CID) Module Identifier (MID) Brake Control (MID No. 116)

Wire Description (Chassis Vol 2) Wire Number Wire Color Description Wire Color Description

Component Location (Chassis Vol 2) Component Location Schematic Location Machine Location Component Schematic Location Machine Location

Connector Location (Chassis Vol. 2) Connector Number Schematic Location Machine Location



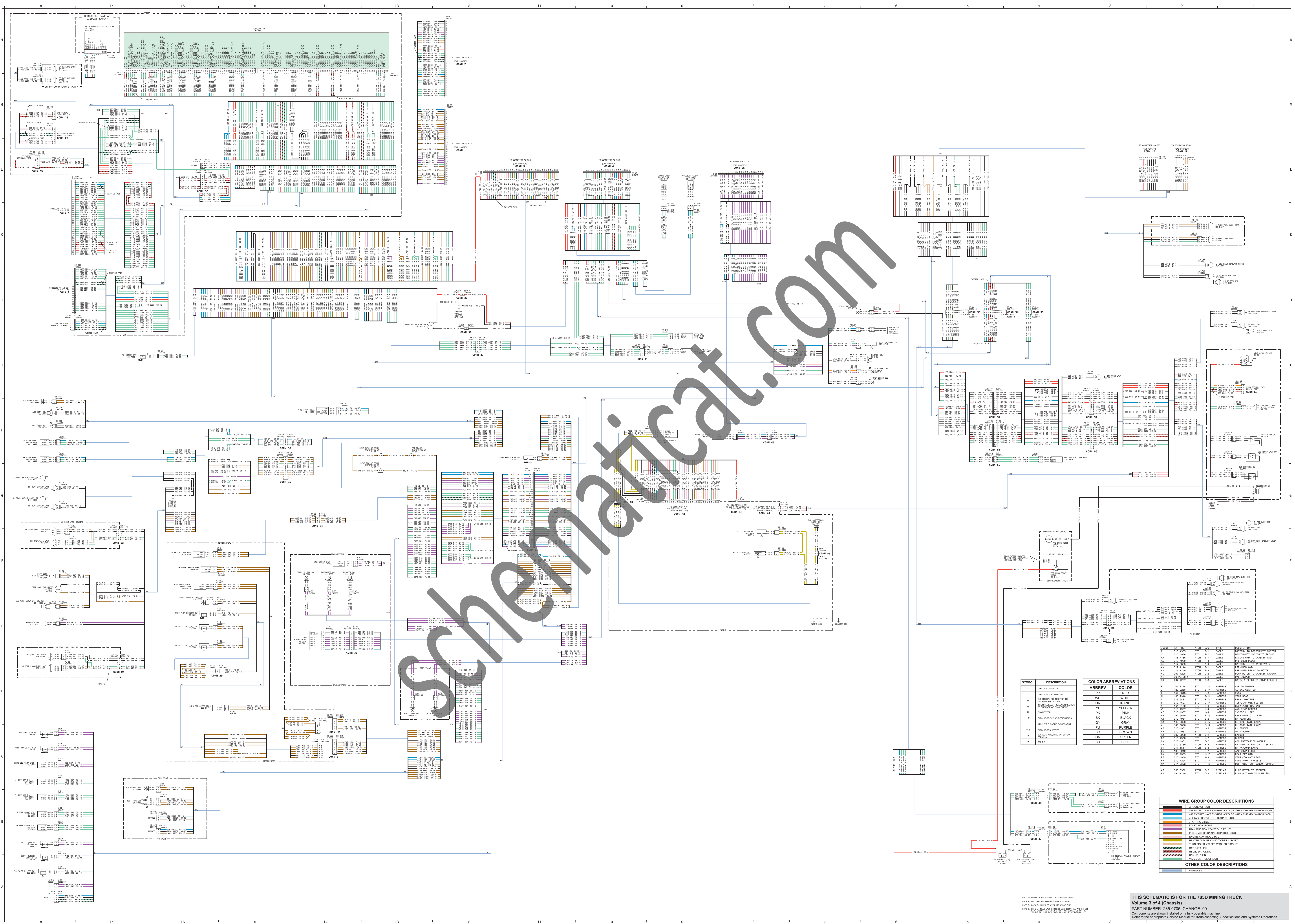
Resistor, Solenoid and Solenoid Specifications (Chassis Vol.2) Part No. Component Description Resistance (Ohms)

Off Machine Switch Specification (Chassis Vol.2) Part No. Function Actuate Deactuate Contact Position

Harness And Wire Electrical Schematic Symbols Symbols and Definitions Harness and Wire Symbols

Related Electrical Service Manuals Title Form Number

Machine Harness Connector And Component Locations



SYMBOL DESCRIPTION		COLOR ABBREVIATIONS	
+	CIRCUIT CONNECTED	RD	RED
-	CIRCUIT NOT CONNECTED	WH	WHITE
+	WIRING DISCONNECT	OR	ORANGE
+	WIRING DISCONNECT	YL	YELLOW
+	WIRING DISCONNECT	PK	PINK
+	WIRING DISCONNECT	BK	BLACK
+	WIRING DISCONNECT	GR	GRAY
+	WIRING DISCONNECT	PL	PURPLE
+	WIRING DISCONNECT	BR	BROWN
+	WIRING DISCONNECT	GN	GREEN
+	WIRING DISCONNECT	BU	BLUE

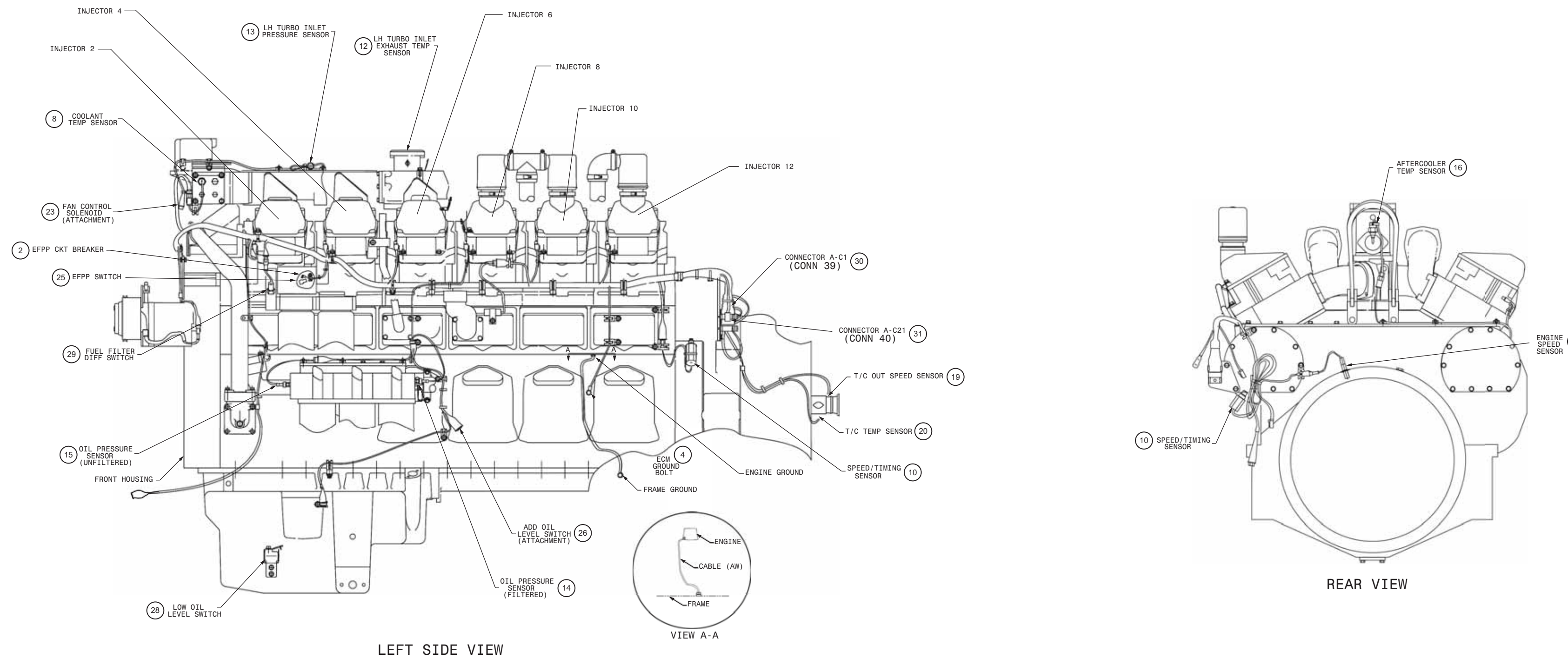
IDENT	PART NO.	RANGE	TYPE	DESCRIPTION
1	151-9999	ETS	L-14	WARRANTY
2	151-9999	ETS	L-14	WARRANTY
3	151-9999	ETS	L-14	WARRANTY
4	151-9999	ETS	L-14	WARRANTY
5	151-9999	ETS	L-14	WARRANTY
6	151-9999	ETS	L-14	WARRANTY
7	151-9999	ETS	L-14	WARRANTY
8	151-9999	ETS	L-14	WARRANTY
9	151-9999	ETS	L-14	WARRANTY
10	151-9999	ETS	L-14	WARRANTY
11	151-9999	ETS	L-14	WARRANTY
12	151-9999	ETS	L-14	WARRANTY
13	151-9999	ETS	L-14	WARRANTY
14	151-9999	ETS	L-14	WARRANTY
15	151-9999	ETS	L-14	WARRANTY
16	151-9999	ETS	L-14	WARRANTY
17	151-9999	ETS	L-14	WARRANTY
18	151-9999	ETS	L-14	WARRANTY
19	151-9999	ETS	L-14	WARRANTY
20	151-9999	ETS	L-14	WARRANTY
21	151-9999	ETS	L-14	WARRANTY
22	151-9999	ETS	L-14	WARRANTY
23	151-9999	ETS	L-14	WARRANTY
24	151-9999	ETS	L-14	WARRANTY
25	151-9999	ETS	L-14	WARRANTY
26	151-9999	ETS	L-14	WARRANTY
27	151-9999	ETS	L-14	WARRANTY
28	151-9999	ETS	L-14	WARRANTY
29	151-9999	ETS	L-14	WARRANTY
30	151-9999	ETS	L-14	WARRANTY
31	151-9999	ETS	L-14	WARRANTY
32	151-9999	ETS	L-14	WARRANTY
33	151-9999	ETS	L-14	WARRANTY
34	151-9999	ETS	L-14	WARRANTY
35	151-9999	ETS	L-14	WARRANTY
36	151-9999	ETS	L-14	WARRANTY
37	151-9999	ETS	L-14	WARRANTY
38	151-9999	ETS	L-14	WARRANTY
39	151-9999	ETS	L-14	WARRANTY
40	151-9999	ETS	L-14	WARRANTY
41	151-9999	ETS	L-14	WARRANTY
42	151-9999	ETS	L-14	WARRANTY
43	151-9999	ETS	L-14	WARRANTY
44	151-9999	ETS	L-14	WARRANTY
45	151-9999	ETS	L-14	WARRANTY
46	151-9999	ETS	L-14	WARRANTY
47	151-9999	ETS	L-14	WARRANTY
48	151-9999	ETS	L-14	WARRANTY
49	151-9999	ETS	L-14	WARRANTY
50	151-9999	ETS	L-14	WARRANTY
51	151-9999	ETS	L-14	WARRANTY
52	151-9999	ETS	L-14	WARRANTY
53	151-9999	ETS	L-14	WARRANTY
54	151-9999	ETS	L-14	WARRANTY
55	151-9999	ETS	L-14	WARRANTY
56	151-9999	ETS	L-14	WARRANTY

WIRE GROUP COLOR DESCRIPTIONS	
RED	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
ORANGE	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
YELLOW	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
GREEN	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
BLUE	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
PINK	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
BLACK	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
GRAY	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
PURPLE	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
BROWN	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
WHITE	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
UNCONNECTED	WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON

OTHER COLOR DESCRIPTIONS

- RED: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
- ORANGE: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- YELLOW: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- GREEN: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- BLUE: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- PINK: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- BLACK: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- GRAY: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- PURPLE: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- BROWN: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- WHITE: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- UNCONNECTED: WIRE THAT HAS SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON

THIS SCHEMATIC IS FOR THE 785D MINING TRUCK
Volume 3 of 4 (Chassis)
PART NUMBER: 285-0705, CHANGE: 00
Components are shown installed on a fully operable machine.
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.

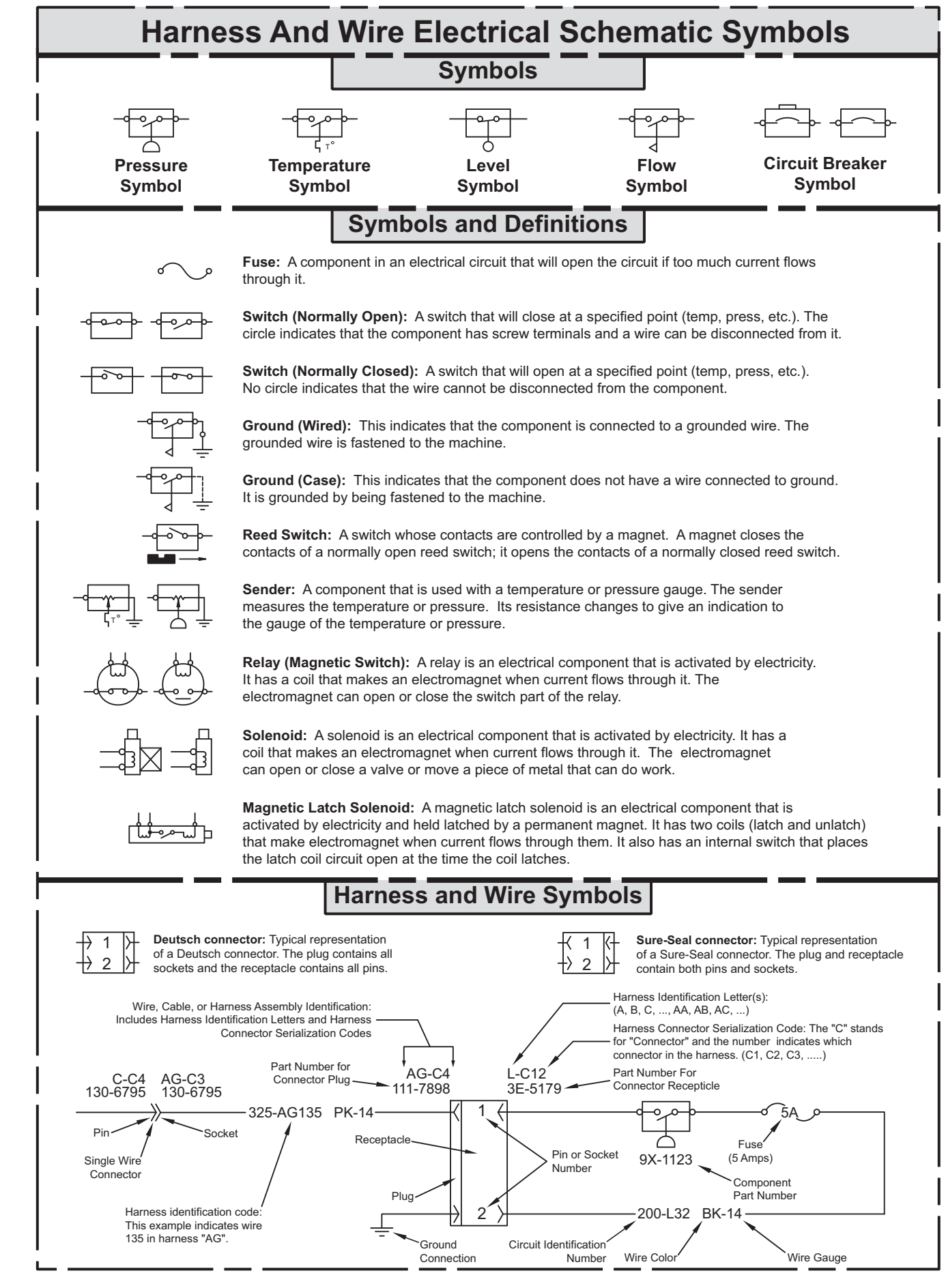


Schematic

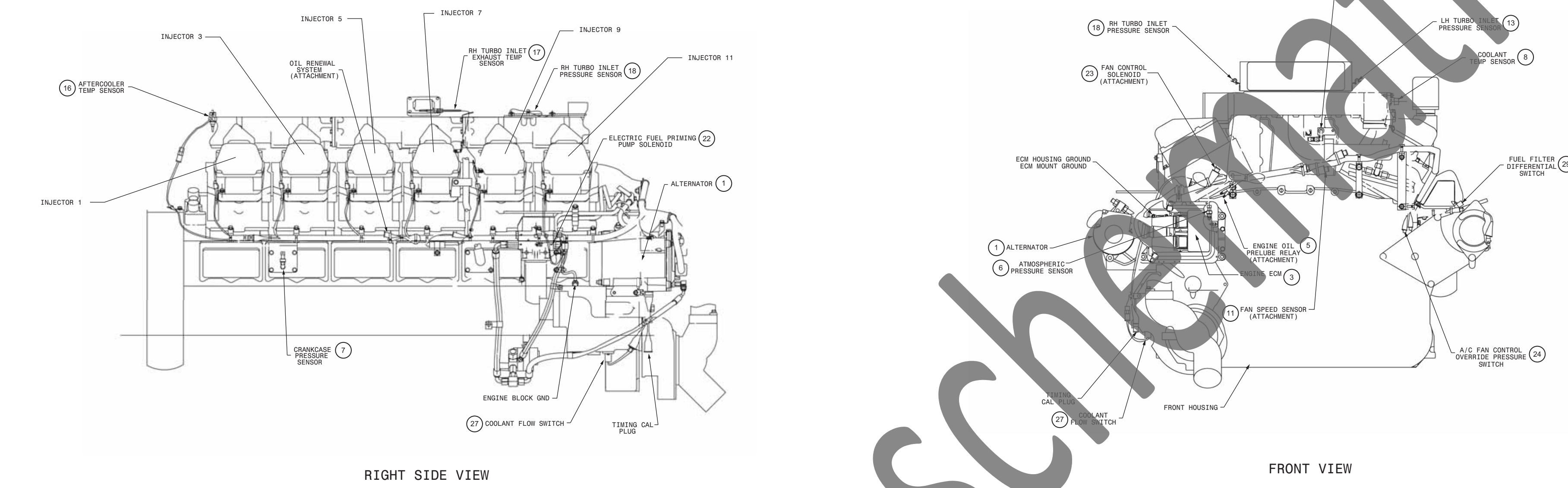
785D Off-Highway Truck Electrical System

DMC155-301
MSY124-254

Volume 4 of 4: Engine



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Component Identifiers (CID) ¹	
Module Identifier (MID) ²	
Engine Control (MID No. 036)	
CID	Component
0001	Cylinder 1 Injector Solenoid
0002	Cylinder 2 Injector Solenoid
0003	Cylinder 3 Injector Solenoid
0004	Cylinder 4 Injector Solenoid
0005	Cylinder 5 Injector Solenoid
0006	Cylinder 6 Injector Solenoid
0007	Cylinder 7 Injector Solenoid
0008	Cylinder 8 Injector Solenoid
0009	Cylinder 9 Injector Solenoid
0010	Cylinder 10 Injector Solenoid
0011	Cylinder 11 Injector Solenoid
0012	Cylinder 12 Injector Solenoid
0013	Cylinder 13 Injector Solenoid
0014	Cylinder 14 Injector Solenoid
0015	Cylinder 15 Injector Solenoid
0016	Cylinder 16 Injector Solenoid
0081	Throttle Position Signal
0100	Engine Oil Pressure
0101	Crankcase Pressure Signal
0102	Boost Pressure
0103	Coolant Temperature
0168	System Voltage
0190	Engine Speed Signal
0248	CAT Data Link
0253	Proprietary Module
0254	Engine ECM
0261	Timing Calibration
0262	Analog Sensor Supply
0263	Digital Sensor Supply
0268	Shutdown Inputs
0269	System Parameters
0273	Turbocharger Outlet Pressure
0274	Atmospheric Pressure
0275	Right Turbocharger Inlet Pressure
0276	Left Turbocharger Inlet Pressure
0291	Engine Cooling Fan Solenoid
0296	Unable to Communicate with Transmission ECM
0338	PreLube Pump Relay
0326	Wastegate Solenoid
0542	Unfiltered Oil Pressure Signal
0543	Filtered Oil Pressure
0544	Engine Fan Speed Sensor Signal
0545	Start Aid Relay
0546	Start Aid Hold Relay
0562	Unable to Communicate with Caterpillar Monitoring System
0569	Oil Renewal Solenoid
0771	Shutter Relay
0799	Service Tool
0800	Unable to Communicate with VIMS
0827	Left Exhaust Temp Signal
0828	Right Exhaust Temp Signal
0829	Rear Aftercooler Coolant Temperature Signal
1495	Injector Codes
0830	Brake Oil Temperature

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.

Connector Location (Engine Vol.3)		
Connector Number	Schematic Location	Engine Location
CONN 43 (Mates to Vol.2 Connector)	F-5	30
CONN 43 (Mates to Vol.2 Connector)	F-5	31

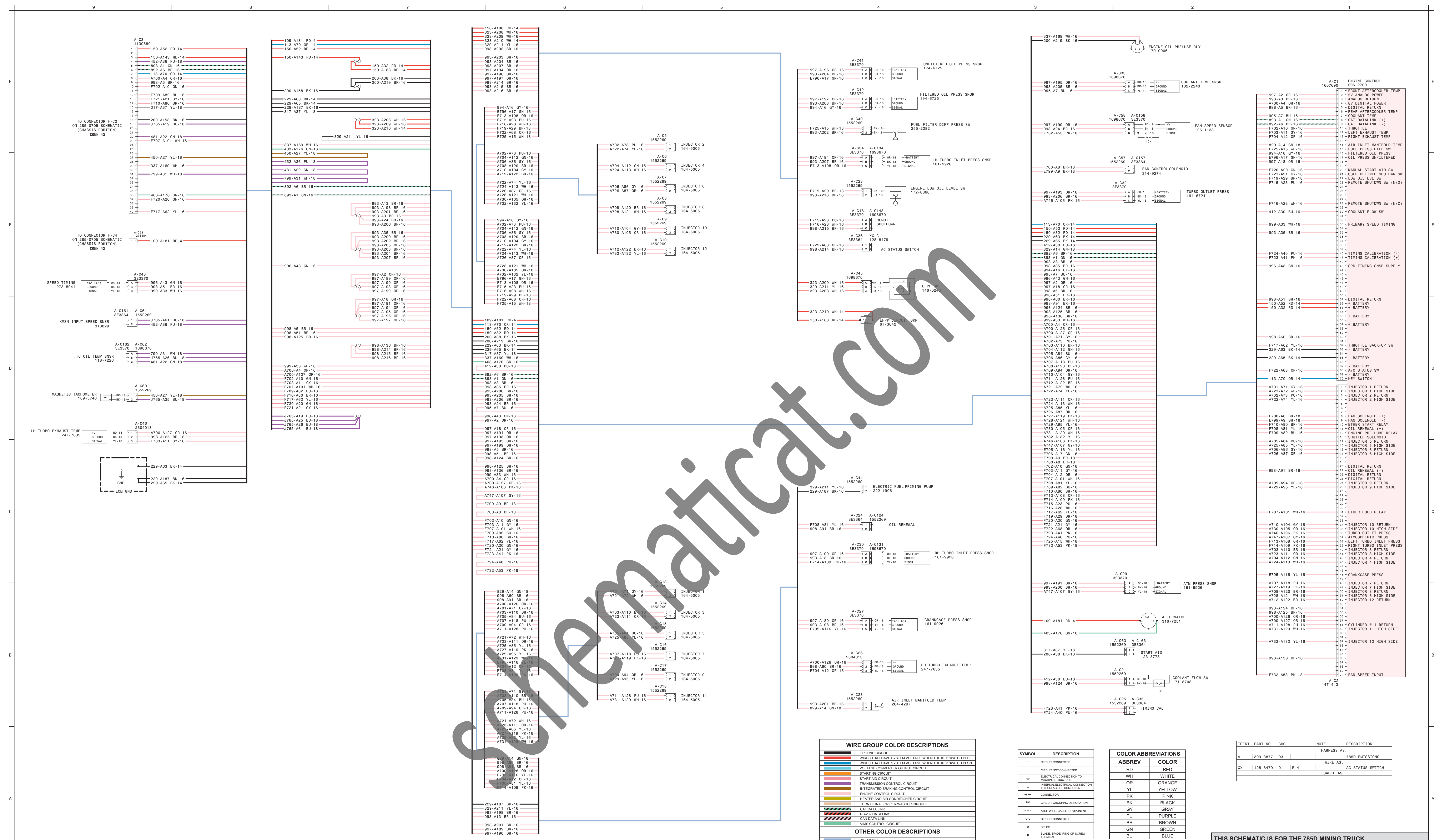
Component Location (Engine Vol.3)					
Component	Schematic Location	Engine Location	Component	Schematic Location	Engine Location
Alternator	E-4	1	Sensor - Rear Aftercooler Temp	B-2	16
Breaker - Electric Fuel Priming Pump	D-5	2	Sensor - RH Turbo Exhaust Temp	B-2	17
Control - Engine	C-9	3	Sensor - RH Turbo Inlet Pressure	B-2	18
Ground - ECM	E-7	4	Sensor - TIC Out Speed	E-8	19
Relay - Pre Lubrication	E-3	5	Sensor - TIC Temp (VIMS)	E-9	20
Sensor - Atmospheric Pressure	E-2	6	Sensor - Turbo Outlet Pressure	C-2	21
Sensor - Crankcase Pressure	E-2	7	Solenoid - Electric Fuel Priming Pump	C-2	22
Sensor - Engine Cool Temp	D-2	8	Solenoid - Fan Control	D-4	23
Sensor - Engine Speed	F-5	9	Switch - A/C Fan Control Override Switch	C-2	24
Sensor - Engine Speed Timing	E-2	10	Switch - Electric Fuel Priming Pump	C-2	25
Sensor - Fan Speed	E-2	11	Switch - Engine Add Oil Level	B-2	26
Sensor - LH Turbo Exhaust Temp	D-2	12	Switch - Engine Cool Flow	A-2	27
Sensor - LH Turbo Inlet Pressure	D-2	13	Switch - Engine Low Oil Level	B-2	28
Sensor - Oil Pressure - Filtered	D-2	14	Switch - Fuel Filter Diff Pressure	B-2	29
Sensor - Oil Pressure - Unfiltered	D-2	15			

Event Codes Engine Control		
Event Code	Condition	
E017	High Engine Coolant Temperature Warning	
E021	High Exhaust Temperature Derate	
E035	Loss of Coolant Flow Warning	
E038	Low Engine Coolant Temperature Warning	
E072	Oil Level Low Mark	
E073	Oil Filter Differential Pressure High	
E095	Fuel Filter Restriction Warning	
E098	Engine PreLube Override	
E099	Engine Oil Filter Restriction Warning	
E100	Low Engine Oil Pressure Warning	
E101	High Crankcase Pressure Warning	
E190	Engine Overspeed Warning	
E265	User Defined Shutdown	
E272	Inlet Air Restriction Warning	
E530	High Inlet Manifold Air Temperature	

Wire Description					
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Power Circuits					
109	OR	AH Chldr (+) Term	A730	OR	Injector #10 High Side
113	OR	Key Switch On	A731	WH	Injector #11 High Side
150	OR	Battery + (Engine Control)	A732	YL	Injector #12 High Side
Ground Circuits					
200	BK	Main Chassis	A747	GY	Atmospheric Pressure Sensor
229	BK	Bal - (Engine Control)	E755	YL	Crankcase Pressure Sensor
Basic Machine Circuits					
317	YL	Start Aid Relay to Start Aid Solenoid	E756	GN	Oil Pressure Sensor (Unfiltered)
323	WH	EFPP SW to EFPP Breaker	E759	BK	Fan Control Solenoid Return
329	WH	EFPP SW to EFPP Solenoid	F700	BU	Fan Control Solenoid
337	WH	Injector Positioning SW to PreLube Timer	F702	GN	Throttle Position Sensor
Monitoring Circuits					
403	GN	Alternator (R) Term	F703	GN	LH Turbo Exhaust Temperature Sensor
412	BU	Engine Control to Engine Coolant Flow SW	F704	OR	RH Turbo Exhaust Temperature Sensor
450	YL	Engine Speed Sensor	F707	WH	Start Aid Hold Relay
452	PL	Torque Converter Out Speed Sensor	F708	YL	Shutter Relay
481	GN	Converter Temp SW to Brake oil Temp SW	F709	BU	PreLube Relay
Control Circuits					
799	WH	Sensor Power	F710	BR	Start Aid On relay
A700	OR	Digital Sensor Power (+5V)	F713	OR	Left Turbo Inlet Pressure Sensor
A701	GY	Injector #1	F714	PK	Right Turbo Inlet Pressure Sensor
A702	PU	Injector #2	F715	PU	Shutdown Signal (N/C)
A703	BR	Injector #3	F716	WH	Shutdown Signal (N/C)
A704	GN	Injector #4	F717	YL	Throttle Bypass SW
A705	BU	Injector #5	F719	BR	Engine Low Oil Level SW
A706	GY	Injector #6	F720	GN	Start Aid SW
A707	PU	Injector #7	F721	GY	User Def Shutdown
A708	BR	Injector #8	F722	OR	A/C Fan Control Override SW
A709	OR	Injector #9	F723	PK	Timing Cal (+)
A710	GY	Injector #10	F724	PU	Timing Cal (-)
A711	PU	Injector #11	F725	WH	Fuel Filter Differential Pressure SW
A712	BR	Injector #12	F732	PK	Fan Speed Sensor
A721	WH	Injector #1 High Side	F765	BU	Engine Speed Sensor
A722	YL	Injector #2 High Side	829	GN	Air Inlet Manifold Temp Sensor
A723	OR	Injector #3 High Side	892	BR	CAT Data Link (-)
A724	WH	Injector #4 High Side	893	GN	CAT Data Link (+)
A725	YL	Injector #5 High Side	903	BY	Analogue Sensor Common
A726	OR	Injector #6 High Side	994	GY	Oil Pressure Sensor (Filtered)
A727	PK	Injector #7 High Side	995	BU	Engine Coolant Temperature Sensor
A728	WH	Injector #8 High Side	996	GN	Engine Speed Temp Sensor
A729	YL	Injector #9 High Side	997	OR	Analogue Sensor Power (+5V)
			998	BR	Digital Sensor Return
			999	WH	Engine Speed Timing Sensor

Off Machine Switch Specification (Engine Vol. 3)					
Part No.	Function	Actuate	Deactuate	Contact Position	
255-2282	Fuel Filter Differential Pressure Switch	AT 21 ±3°C (21.6 ± 3.00ppm)	145.9 ± 21.6kPa (10.6 ± 1.60ppm)	AT -40°C to +12°C 69 kPa MIN (10.0kPa)	Normally Closed
171-8708	Engine Coolant Flow Switch	AT 100 ±3°C (100.0 ± 4.00ppm)	137.9 ± 27.6kPa (20.00 ± 4.00ppm)	362 ± 28 mm (1.3 ± 0.1 in) at port X	Normally Open

Related Electrical Service Manuals	
Title	Form Number
Engine Control	REN88866



WIRE GROUP COLOR DESCRIPTIONS

[Red]	GROUND CIRCUIT
[Blue]	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
[Green]	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
[Black]	VOLTAGE CONVERTER OUTPUT CIRCUIT
[White]	STARTING CIRCUIT
[Yellow]	START AID CIRCUIT
[Orange]	ELECTRONIC CONTROL CIRCUIT
[Purple]	TRANSMISSION CONTROL CIRCUIT
[Pink]	INTEGRATED BRAKING CONTROL CIRCUIT
[Brown]	ENGINE CONTROL CIRCUIT
[Light Blue]	HEATER AND AIR CONDITIONER CIRCUIT
[Dark Blue]	TURBINE SIGNAL / WIPER WASHER CIRCUIT
[Light Green]	DATA LINK
[Dark Green]	RS-232 DATA LINK
[Light Yellow]	DATA LINK
[Light Purple]	WAS CONTROL CIRCUIT

OTHER COLOR DESCRIPTIONS

[Red]	HIGHWAYS
-------	----------

SYMBOL DESCRIPTION

[Solid Line]	CIRCUIT CONNECTED
[Dashed Line]	CIRCUIT NOT CONNECTED
[Circle with X]	ELECTRONIC CONNECTOR TO MACHINE STRUCTURE
[Circle with +]	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
[Circle with -]	CONNECTOR
[Circle with H]	CONNECTOR GROUPING DESIGNATION
[Circle with A]	ATOH WIRE CABLE COMPONENT
[Circle with G]	CIRCUIT CONNECTED
[Circle with B]	BLADE SPACE NAIL OR SCREW TERMINAL

COLOR ABBREVIATIONS

ABBREV	COLOR
RD	RED
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
BK	BLACK
GY	GRAY
PU	PURPLE
BR	BROWN
GN	GREEN
BU	BLUE

IDENT PART NO CHG NOTE DESCRIPTION

IDENT	PART NO	CHG	NOTE	DESCRIPTION
A	309-3877	03		HARNESS AS
XX	128-8479	01	E-4	WIRE AS
				CABLE AS
				AC STATUS SWITCH

THIS SCHEMATIC IS FOR THE 785D MINING TRUCK VOLUME 4 OF 4 (ENGINE)
 PART NUMBER: 309-3875, CHANGE: 00
 Components are shown installed on a fully operable machine with keyswitch in off position. Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.