

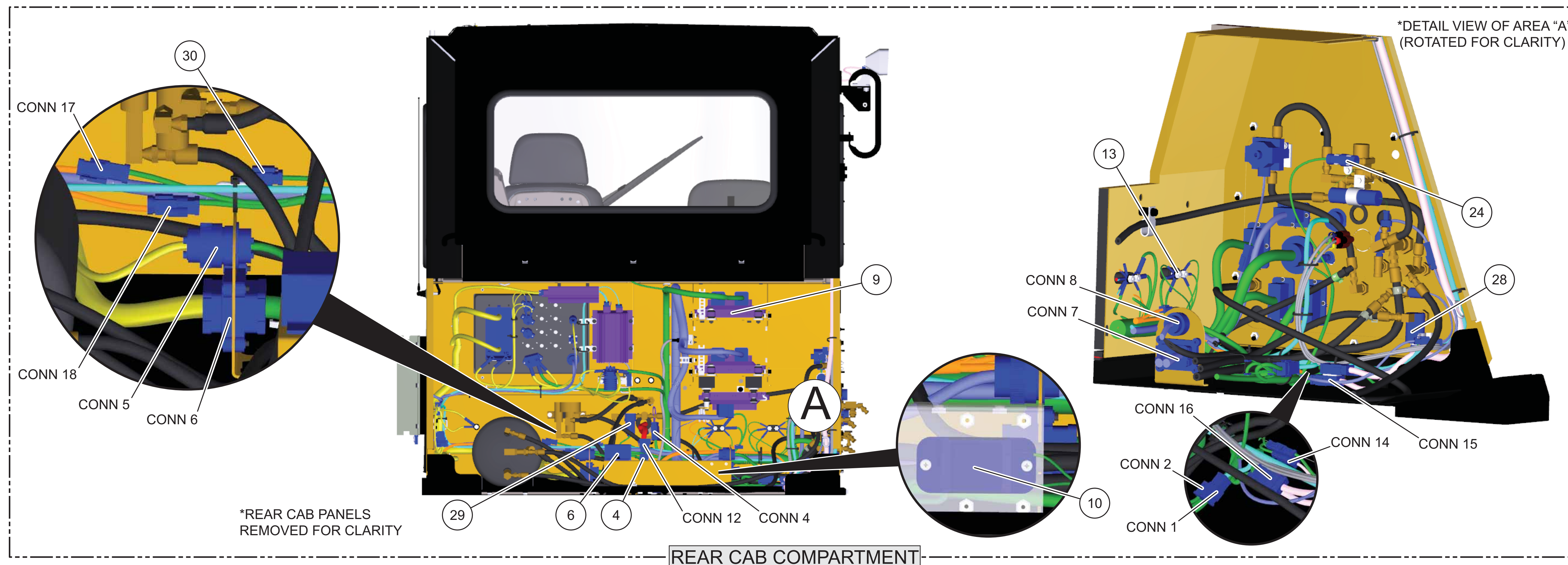
Schematic

785C Off-Highway Truck Electrical System

APX2034-UP

Volume 1 of 5: Cab (Interior and Brake Control)

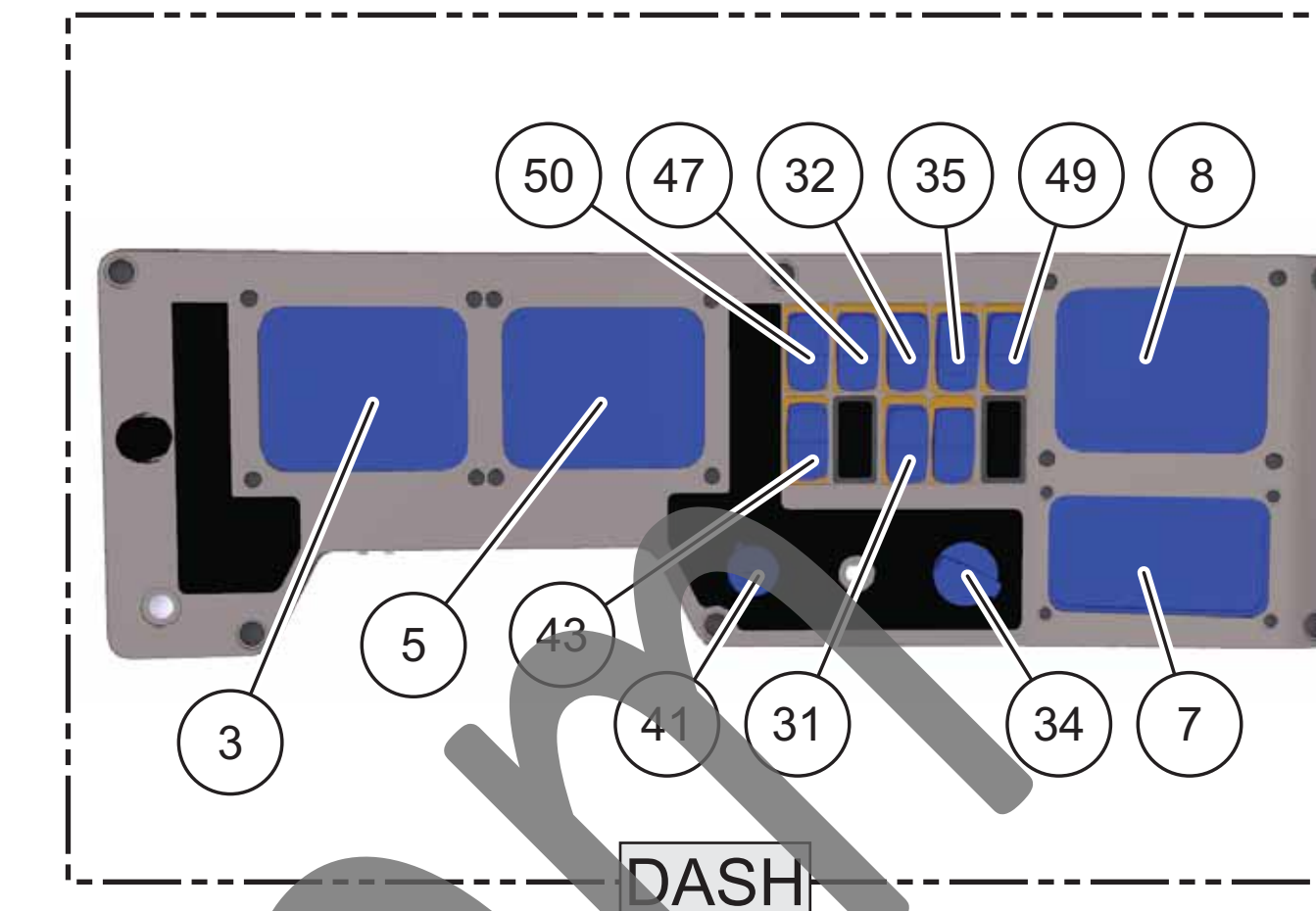
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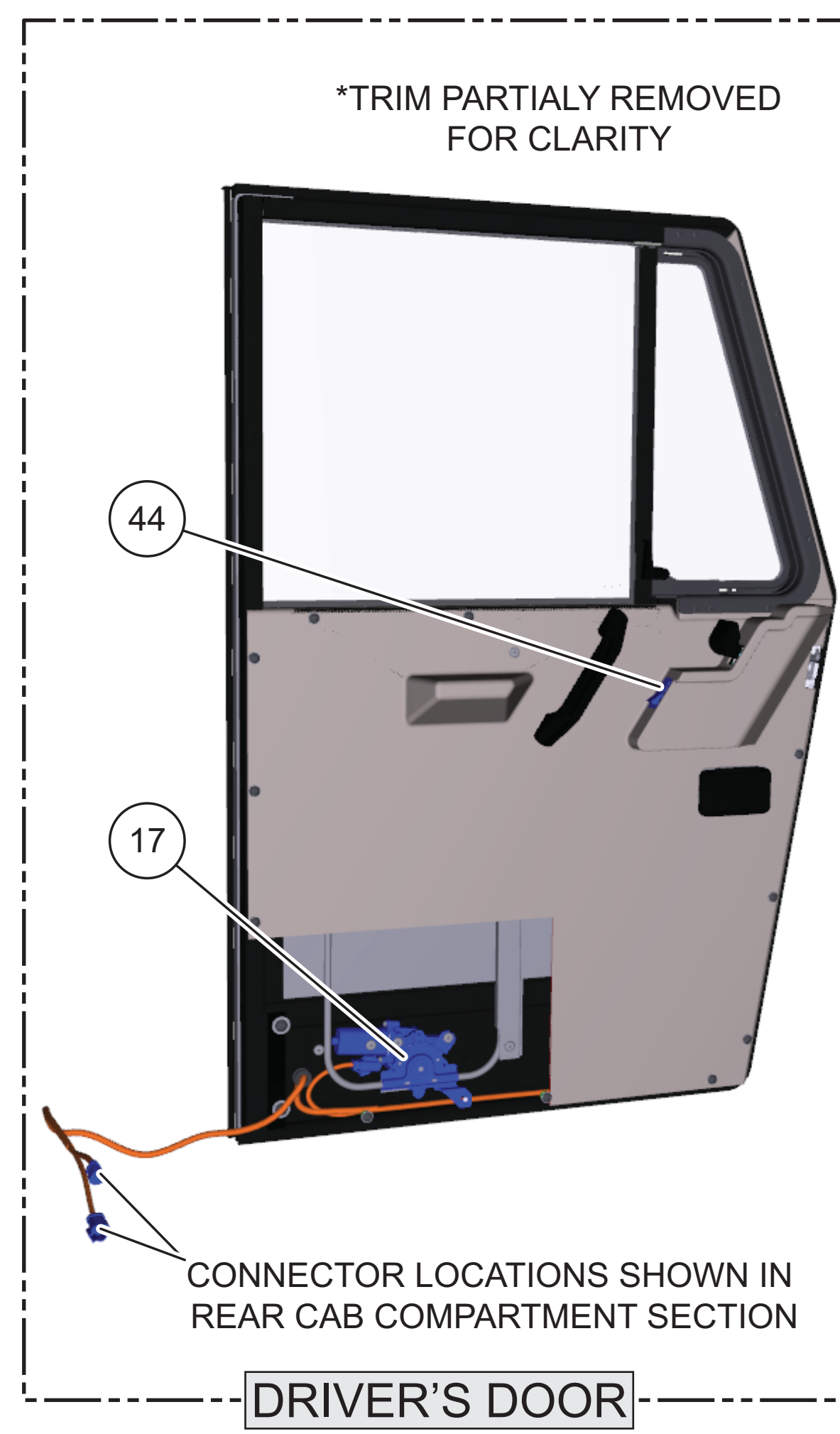
Off-Machine Switch Specification				
Part No.	Function	Adjust	Deactivate	Contact Position
103-4877	Retarder Pressure	60 kPa MAX (8.70 psi)	28 kPa ± 15 kPa (4.00 psi ± 2.20 psi)	Normally Open Below Deactivation Pressure

Resistor and Solenoid Specifications		
Part No.	Component Description	Resistance (Ohms)
126-6740	Resistor - Blower	R/C 2 Ohms ± 5%
185-0058	Solenoid - Jam	7.5 Ohms ± 2 Ohms
185-1661	Solenoid - Front Brake Cooling Chamber	4.24 Ohms ± 2.1 Ohms

Related Electrical Service Manuals		
Title	Form Number	
Cross Reference for Electrical Connectors	REH50870	
Blower Control	16N1933	

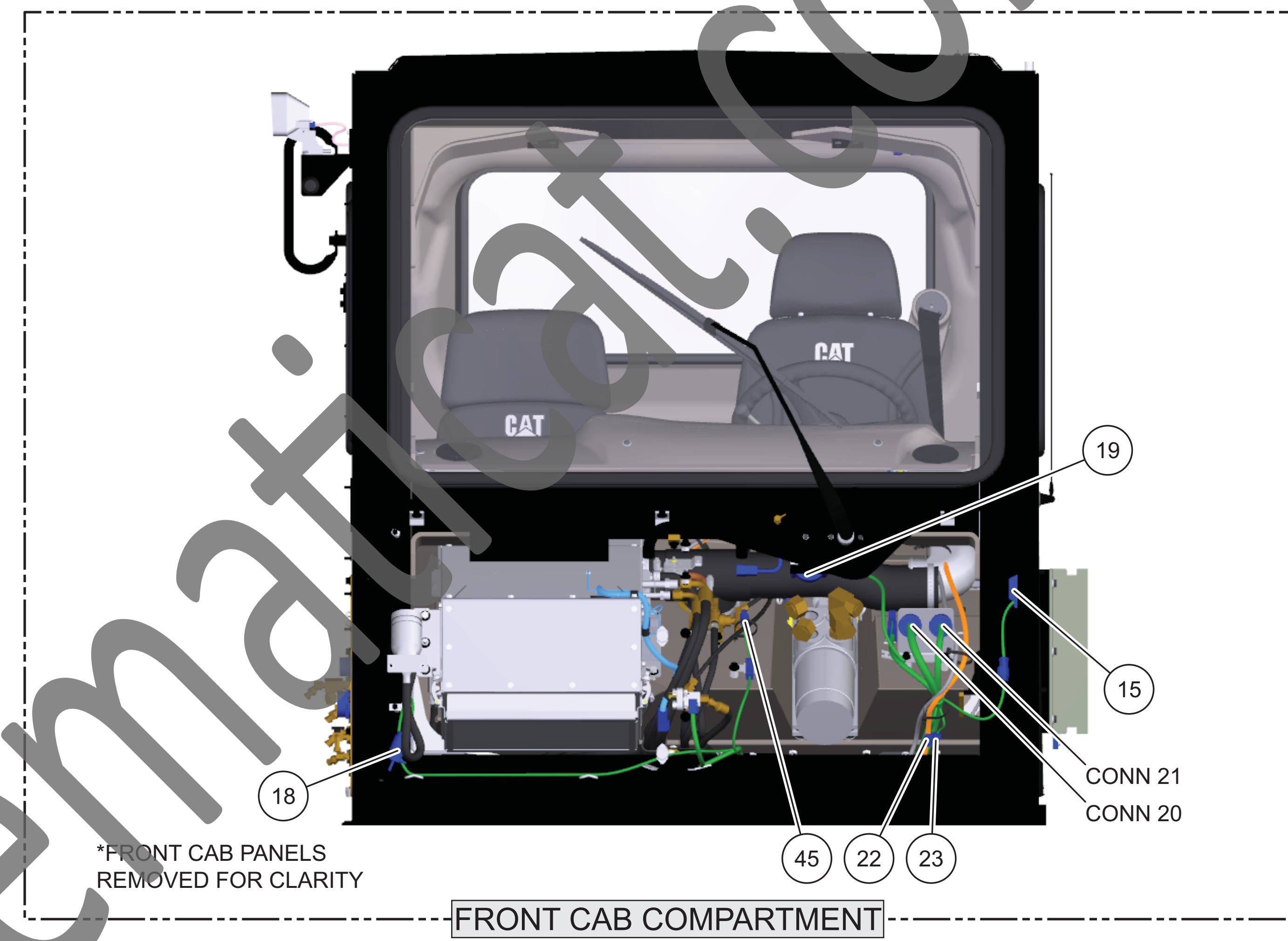


Component Identifiers (CID) Module Identifier (MID)	
CID	Component
0001	Speed Sensor (Motor Ground Speed)
0004	Position Sensor (Pressure)
0100	Electrical System Voltage
0200	Speed Sensor (Original)
0348	CAT Data Link
0350	Speed Sensor (Original)
0351	Speed Sensor (Engine Cooling Fan)
0352	Speed Sensor (Transmission/Chassis ECM)
0353	Pressure Sensor (Oil Pressure)
0354	Speed Sensor (Engine Cooling Fan)
0355	Pressure Sensor (Oil Pressure)
0356	Speed Sensor (Engine Cooling Fan)
0357	Speed Sensor (Left Wheel)
0358	Speed Sensor (Right Wheel)
0359	Speed Sensor (Left Wheel)
0360	Speed Sensor (Right Wheel)
0361	Speed Sensor (Left Wheel)
0362	Speed Sensor (Right Wheel)
0363	Speed Sensor (Left Wheel)
0364	Speed Sensor (Right Wheel)
0365	Speed Sensor (Left Wheel)
0366	Speed Sensor (Right Wheel)
0367	Speed Sensor (Left Wheel)
0368	Speed Sensor (Right Wheel)
0369	Speed Sensor (Left Wheel)
0370	Speed Sensor (Right Wheel)
0371	Speed Sensor (Left Wheel)
0372	Speed Sensor (Right Wheel)
0373	Speed Sensor (Left Wheel)
0374	Speed Sensor (Right Wheel)
0375	Pressure Sensor (Pressure)
0376	Pressure Sensor (Pressure)
0377	Pressure Sensor (Pressure)
0378	Pressure Sensor (Pressure)
0379	Pressure Sensor (Pressure)
0380	Pressure Sensor (Pressure)
0381	Pressure Sensor (Pressure)
0382	Pressure Sensor (Pressure)
0383	Pressure Sensor (Pressure)
0384	Pressure Sensor (Pressure)
0385	Pressure Sensor (Pressure)
0386	Pressure Sensor (Pressure)
0387	Pressure Sensor (Pressure)
0388	Pressure Sensor (Pressure)
0389	Pressure Sensor (Pressure)
0390	Pressure Sensor (Pressure)
0391	Pressure Sensor (Pressure)
0392	Pressure Sensor (Pressure)
0393	Pressure Sensor (Pressure)
0394	Pressure Sensor (Pressure)
0395	Pressure Sensor (Pressure)
0396	Pressure Sensor (Pressure)
0397	Pressure Sensor (Pressure)
0398	Pressure Sensor (Pressure)
0399	Pressure Sensor (Pressure)
0400	Pressure Sensor (Pressure)
0401	Pressure Sensor (Pressure)
0402	Pressure Sensor (Pressure)
0403	Pressure Sensor (Pressure)
0404	Pressure Sensor (Pressure)
0405	Pressure Sensor (Pressure)
0406	Pressure Sensor (Pressure)
0407	Pressure Sensor (Pressure)
0408	Pressure Sensor (Pressure)
0409	Pressure Sensor (Pressure)
0410	Pressure Sensor (Pressure)
0411	Pressure Sensor (Pressure)
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0437	Pressure Sensor (Pressure)
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0439	Pressure Sensor (Pressure)
0440	Pressure Sensor (Pressure)
0441	Pressure Sensor (Pressure)
0442	Pressure Sensor (Pressure)
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0445	Pressure Sensor (Pressure)
0446	Pressure Sensor (Pressure)
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0450	Pressure Sensor (Pressure)

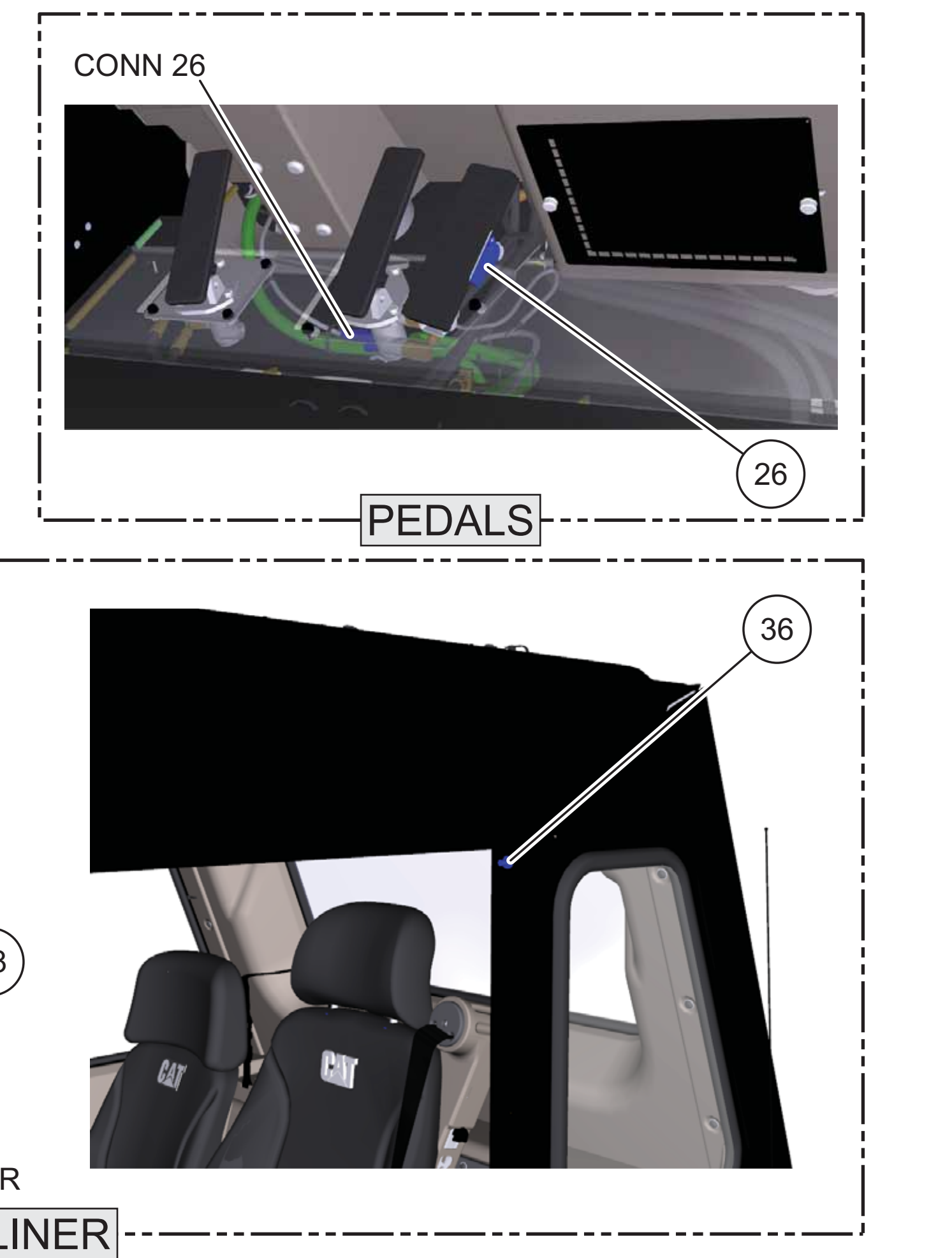
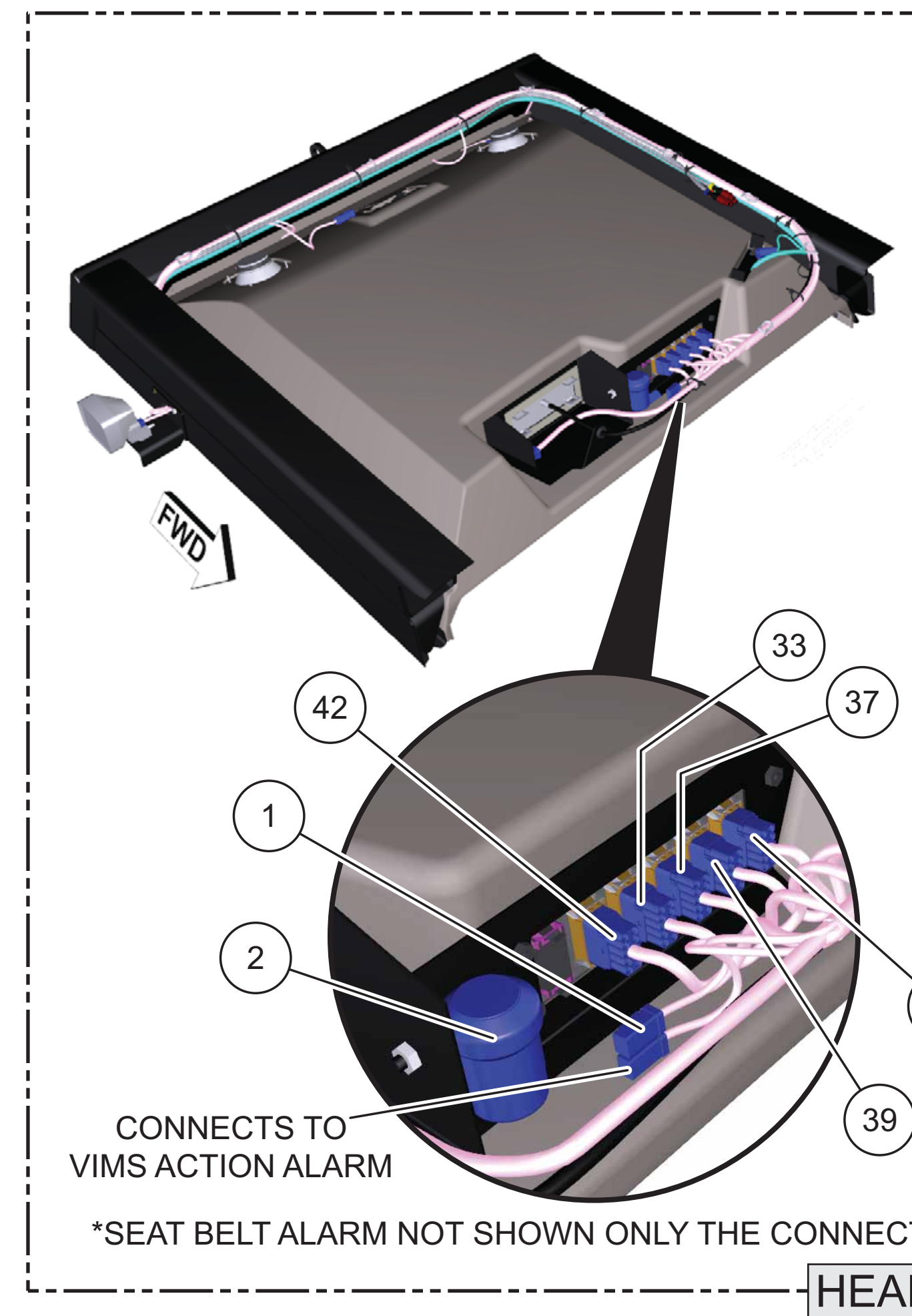
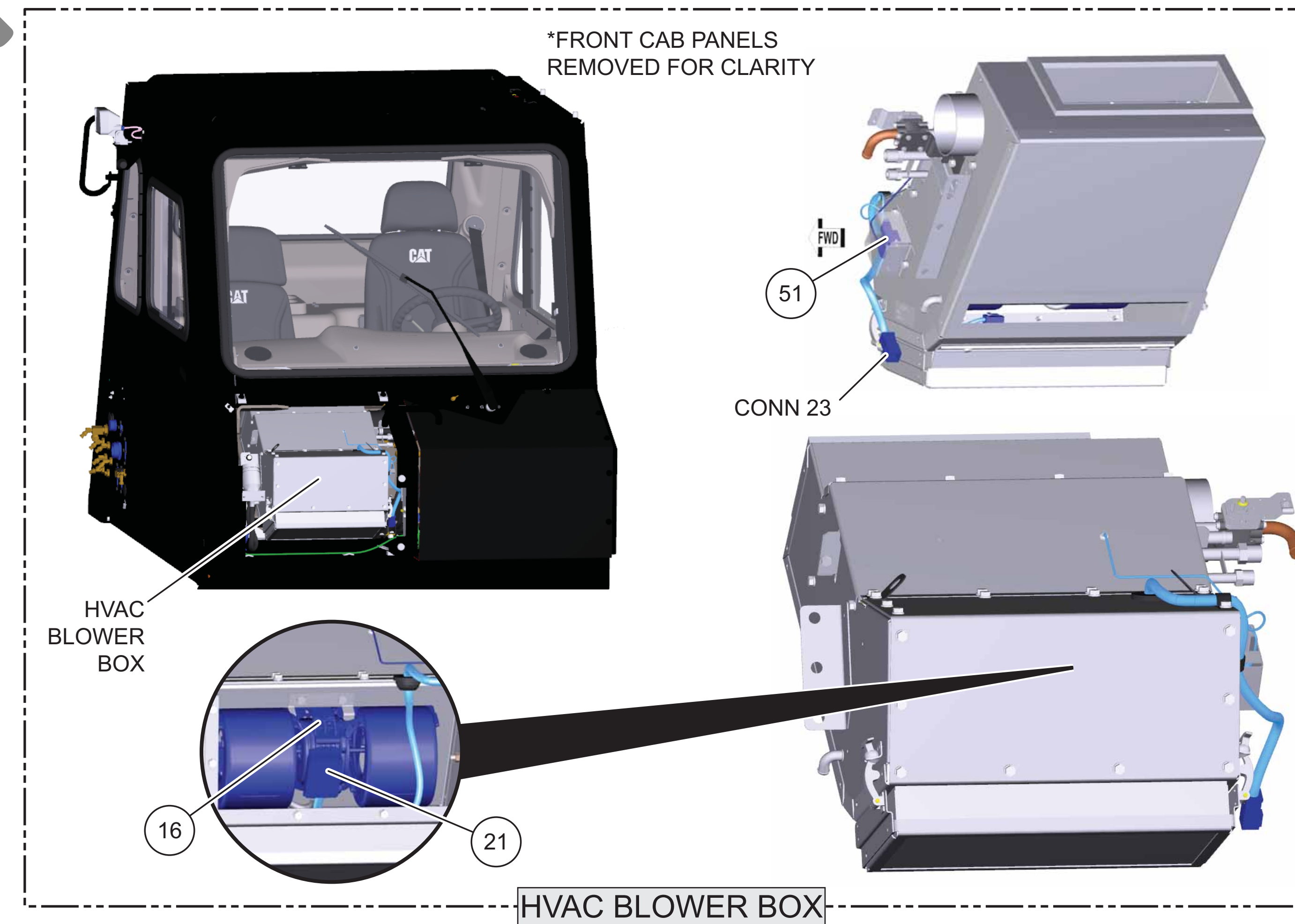
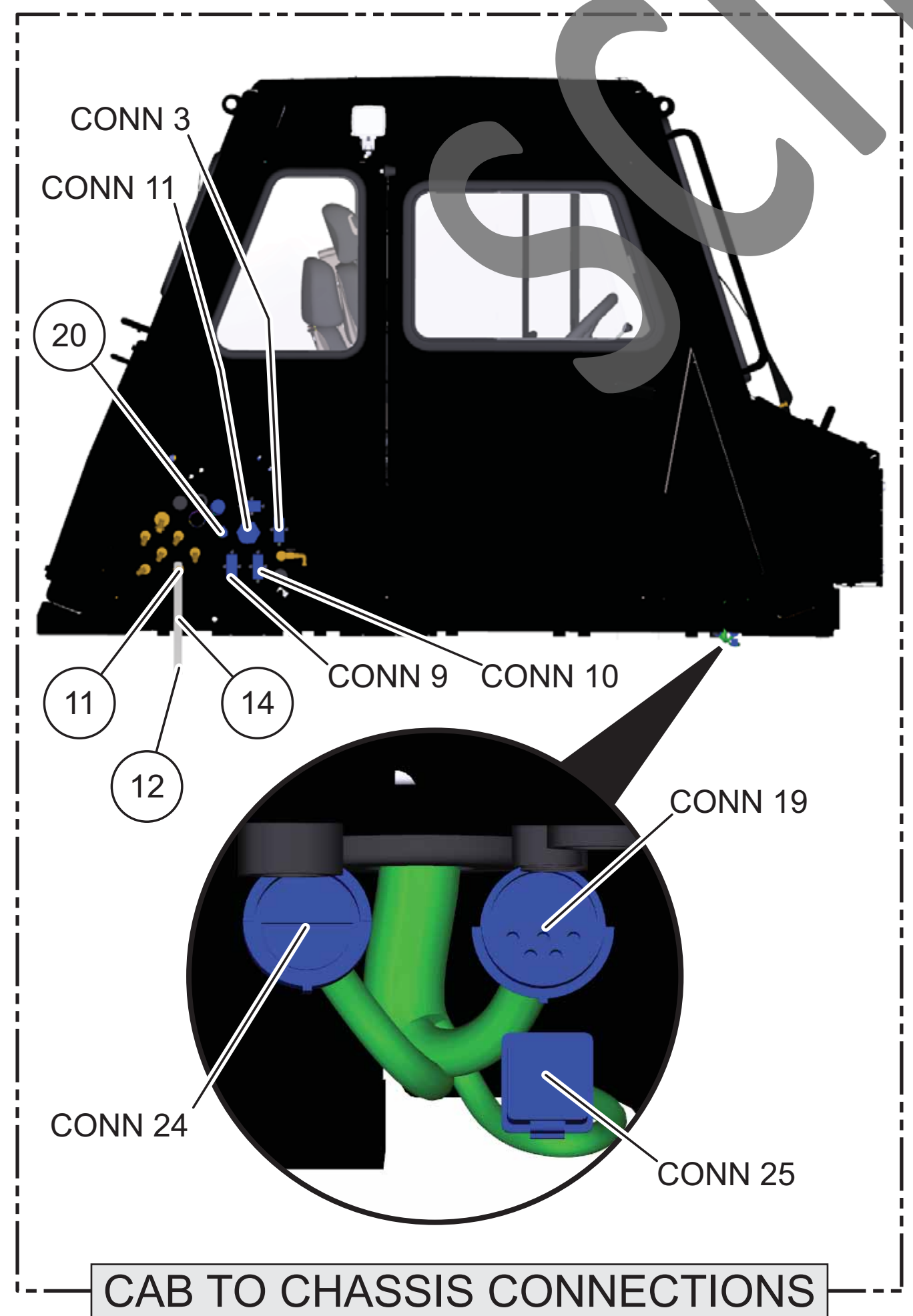
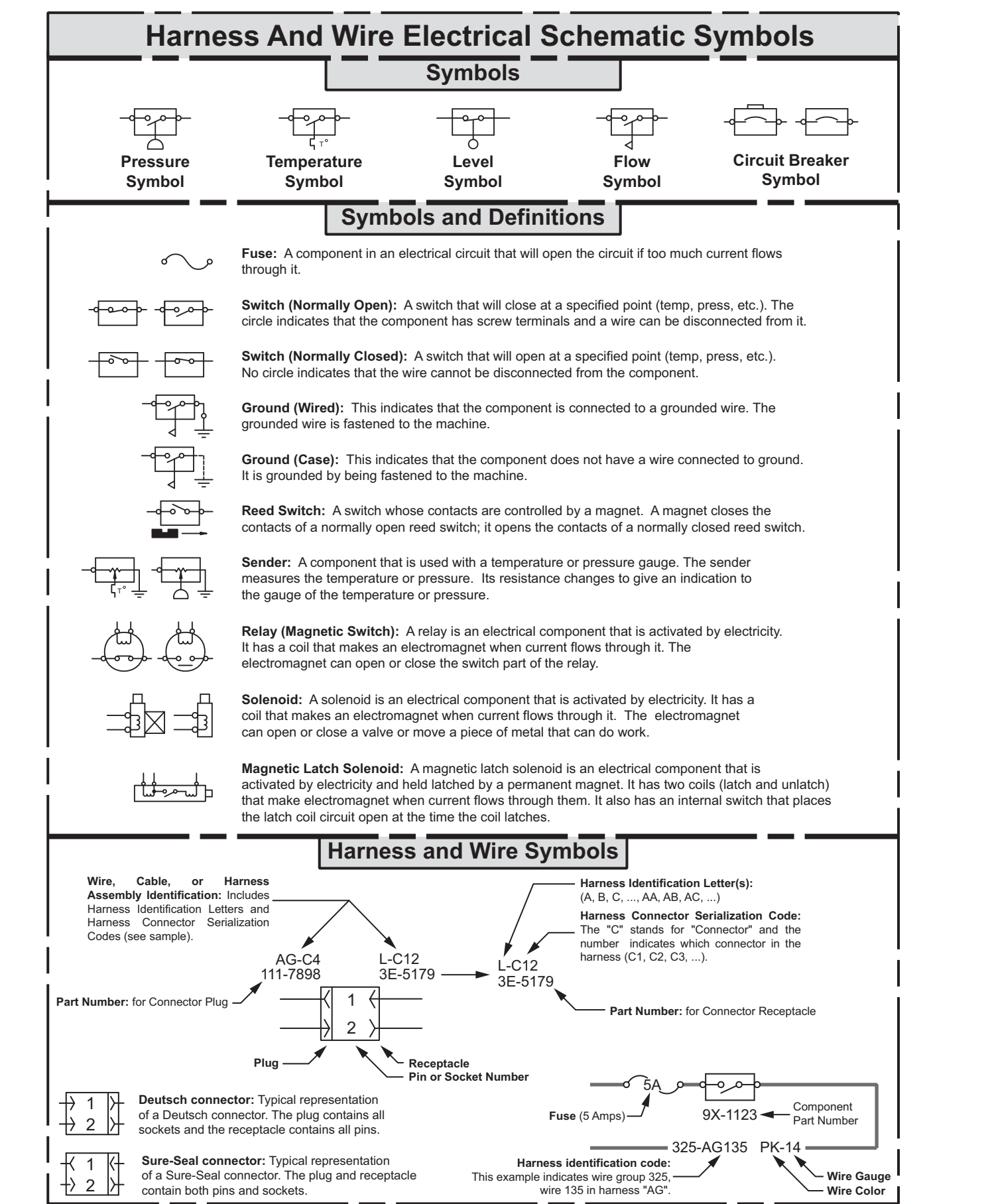


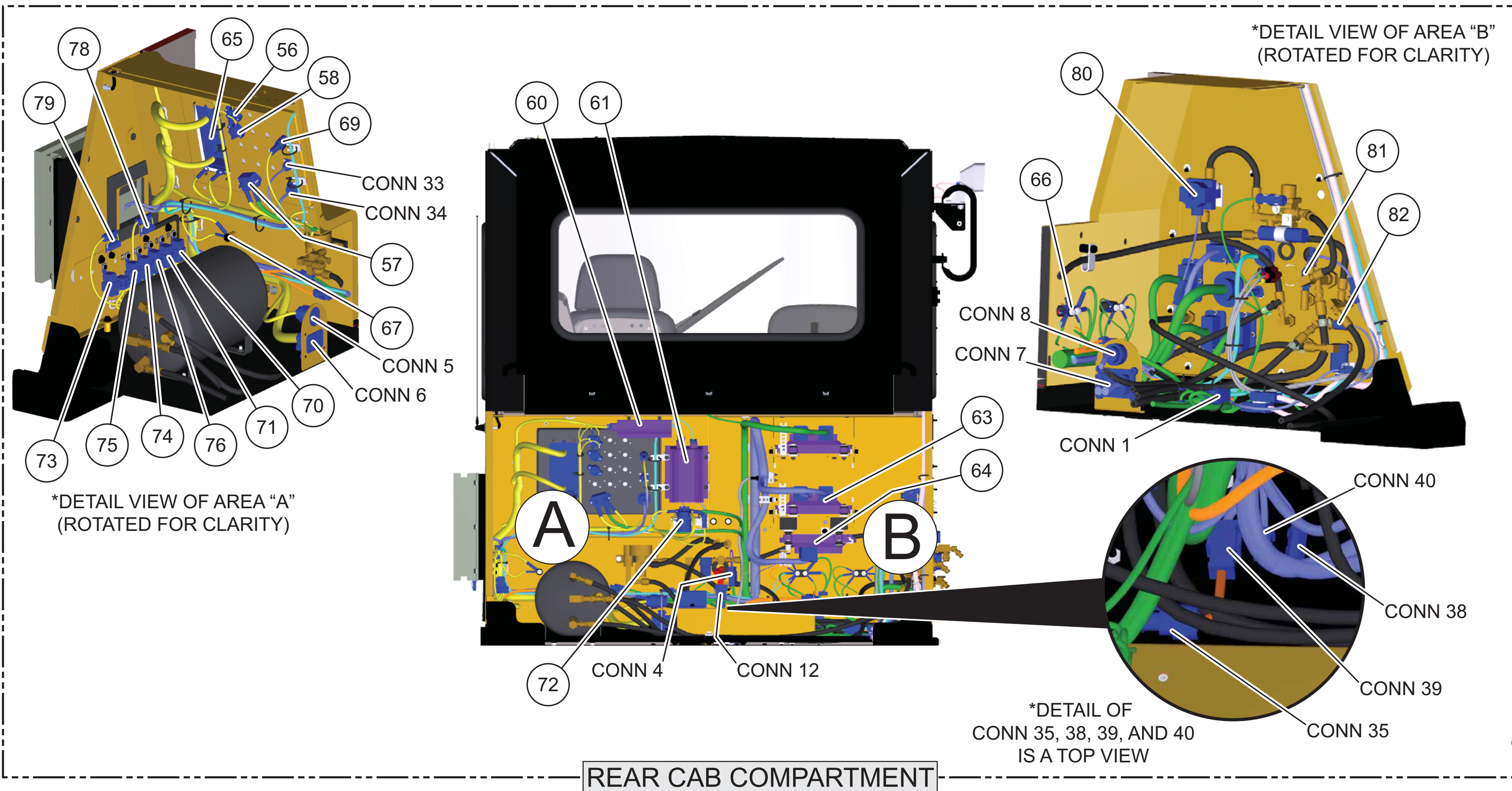
Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Start Bell	D-5	1	Sensor - Transmission Level Position	A-7	27
Alarm - VIMS Action	D-5	2	Sensor - Front Brake Cooling Chamber	E-16	28
Control - Gauge Cluster	D-1	1	Solenoid - Jam	F-1	29
Control - Meter Air Pump	H-16	4	Suppressor - Meter Solenoid Act	F-11	30
Control - Speedometer / Transmission	D-1	5	Switch - A/C Control	E-1	31
Control - Steering Wheel	H-16	6	Switch - A/C	E-1	32
Control - VIMS Control	D-5	7	Switch - Reverse Lamp	C-5	33
Control - VIMS Message Center	D-1	8	Switch - Blower	F-1	34
ECM - Base	D-12	9	Switch - Brake Release	E-1	35
Flame AD	G-19	10	Switch - Down Lamp	D-F	36
Ground - Chassis	A-16	12	Switch - Hood Lamp	B-2	38
Ground - Rear Cab	A-16	13	Switch - VIMS Jam	C-2	39
Ground - Stop AD	A-16	14	Switch - Horn	L-1	40
Motor - Water Delay	L-1	15	Switch - Wiper	F-1	41
Motor - Blower	B-3	16	Switch - Under Lamp	D-5	42
Motor - Power Window	L-3	17	Switch - Power Window	F-1	43
Motor - Wiper	L-1	18	Switch - Power Window	D-3	44
Motor - Wiper	L-1	19	Switch - Blower Pressure	F-1	45
Resistor - VIMS	A-1	20	Switch - Start Bell	E-16	46
Resistor - VIMS	B-3	21	Switch - Starting AD	F-1	47
Resistor - VIMS	A-1	22	Switch - Steering Column	H-1	48
Resistor - VIMS	A-1	23	Switch - TCS Test	E-1	49
Sensor - Brake Air Pressure	E-16	24	Switch - Throttle Lockout (T/L)	F-1	50
Sensor - Brake Air Pressure	E-16	25	Throttle - (T/LAC)	B-3	51
Sensor - Throttle Position	B-2	26			

Connector Location		
Connector Number	Schematic Location	Machine Location
CONN 1	E-1	18
CONN 2	E-1	19
CONN 3	A-15	10
CONN 4	E-1	20
CONN 5	E-1	21
CONN 6	E-1	22
CONN 7	E-1	23
CONN 8	E-1	24
CONN 9	C-5	33
CONN 10	A-13	36
CONN 11	A-14	37
CONN 12	B-9	38
CONN 13	C-2	39
CONN 14	B-7	40
CONN 15	C-2	41
CONN 16	E-1	42
CONN 17	F-1	43
CONN 18	E-1	44
CONN 19	A-5	45
CONN 20	D-3	46
CONN 21	F-1	47
CONN 22	F-1	48
CONN 23	B-4	49
CONN 24	E-1	50
CONN 25	B-3	51



Failure Mode Identifiers (FMI)	
FMI No.	Failure Description
1	Open coil for solenoid control circuit
2	Short circuit for solenoid control circuit
3	Open coil for solenoid control circuit
4	Short circuit for solenoid control circuit
5	Open coil for solenoid control circuit
6	Short circuit for solenoid control circuit
7	Open coil for solenoid control circuit
8	Short circuit for solenoid control circuit
9	Open coil for solenoid control circuit
10	Short circuit for solenoid control circuit
11	Open coil for solenoid control circuit
12	Short circuit for solenoid control circuit
13	Open coil for solenoid control circuit
14	Short circuit for solenoid control circuit
15	Open coil for solenoid control circuit
16	Short circuit for solenoid control circuit
17	Open coil for solenoid control circuit
18	Short circuit for solenoid control circuit
19	Open coil for solenoid control circuit
20	Short circuit for solenoid control circuit
21	Open coil for solenoid control circuit
22	Short circuit for solenoid control circuit
23	Open coil for solenoid control circuit
24	Short circuit for solenoid control circuit
25	Open coil for solenoid control circuit
26	Short circuit for solenoid control circuit





UENR2627
July 2012

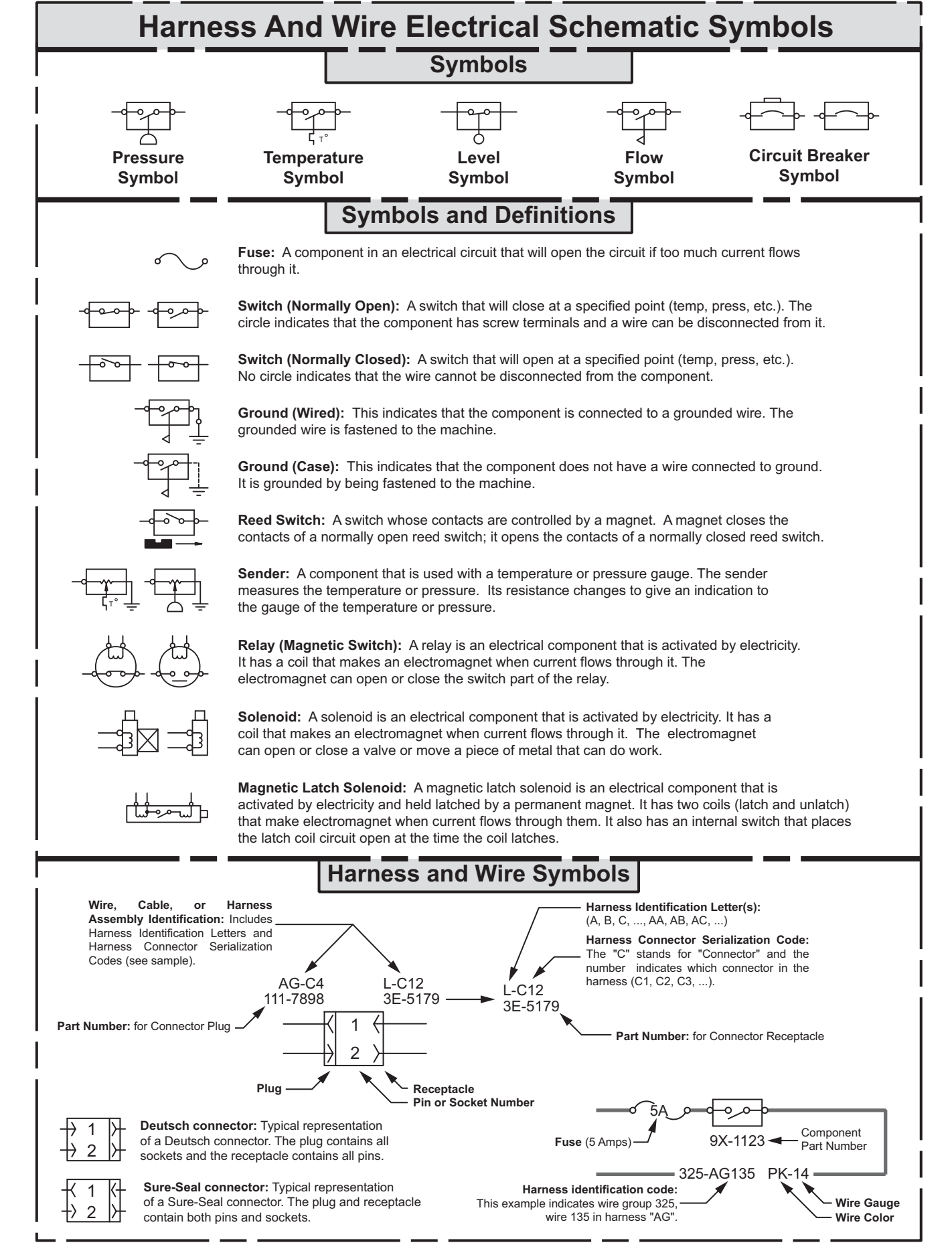
Schematic

785C Off-Highway Truck Electrical System

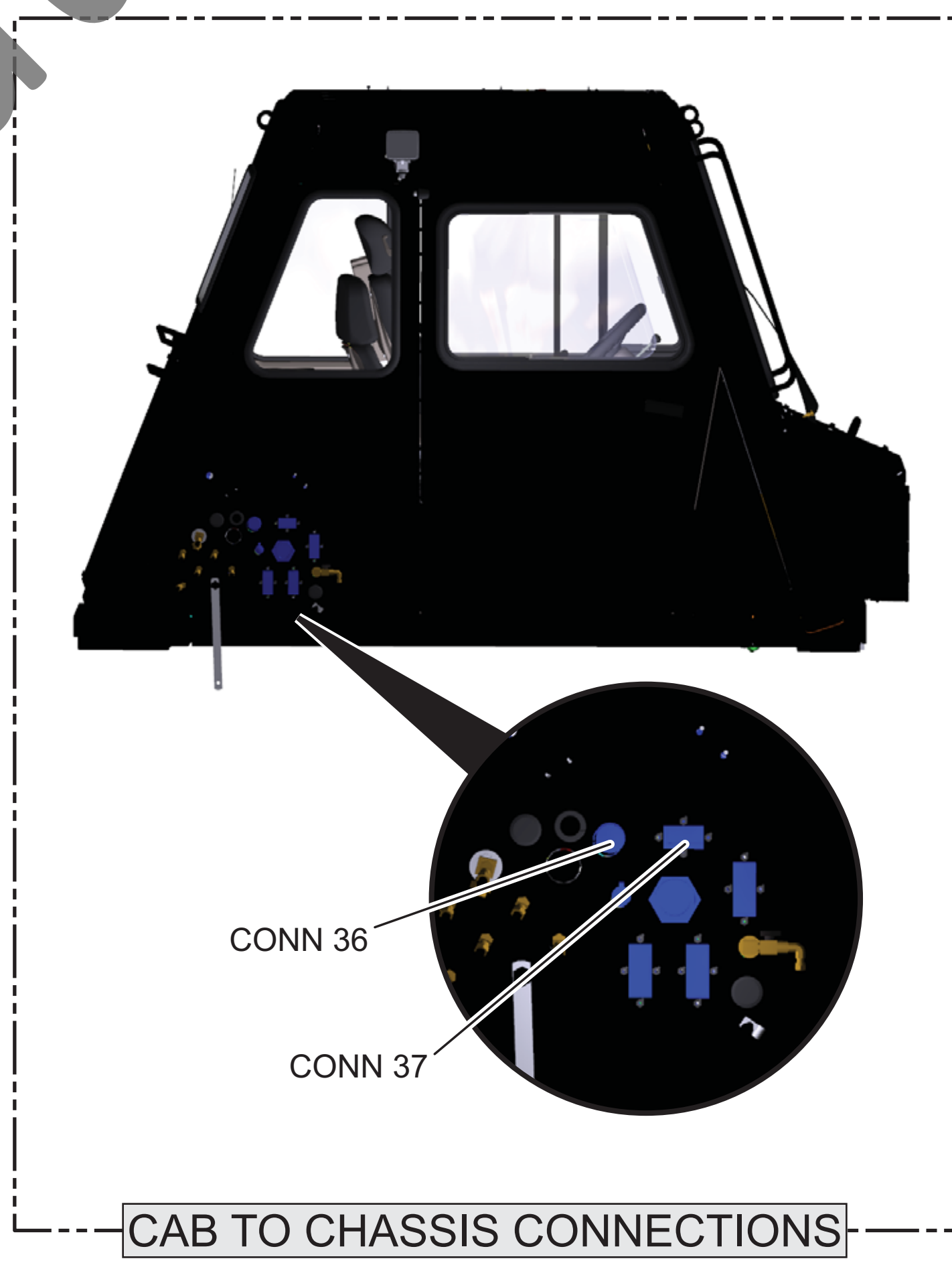
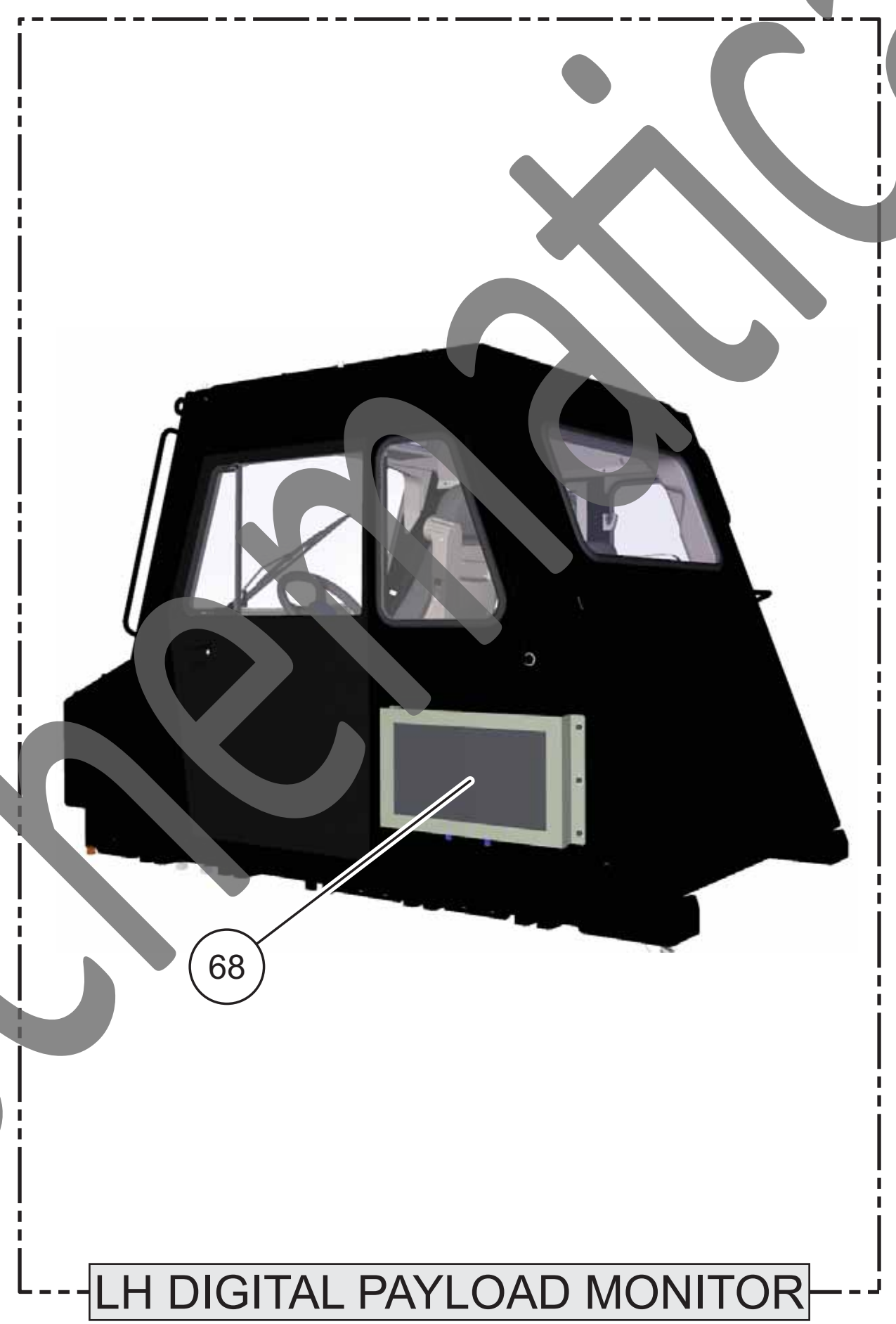
APX2034-UP

Volume 2 of 5: Cab Transmission/Chassis Control and Relay/Breaker Panel

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Component Identifiers (CID) Module Identifier (MID) [†]	
VIMS ECM (MID No. 049)	
0041	Sensor Power Supply (+8 Volt)
0075	Steering Oil Temperature Sensor
0096	Fuel Level Sensor
0171	Ambient Air Temperature Sensor
0248	Oil Data Link
0267	Remote Shutdown Input
0271	Adviser Alarm
0279	Front Aftercooler Coolant Temperature Sensor
0286	Transmission Electronic Control Module
0324	Lamp (Action)
0379	Auto Lube Pressure Sensor
0431	Steering Oil Level Sensor
0533	Auto Retarder Electronic Control Module
0580	Engine Electronic Control Module
0554	Trailer Right Brake Oil Temperature Sensor
0656	Trailer Left Brake Oil Temperature Sensor
0658	Trailer Brake Cooler Inlet Temperature Sensor
0657	Trailer Brake Cooler Outlet Temperature Sensor
0658	Trailer Right Strut Pressure Sensor
0659	Trailer Left Strut Pressure Sensor
0703	Trailer Door Position Sensor
0809	Speedometer/Tachometer Module (No. 1)
0810	Speedometer/Tachometer Module (No. 2)
0811	Gauge Cluster (No. 1)
0812	Gauge Cluster (No. 2)
0813	Gauge Cluster (No. 3)
0814	Gauge Cluster (No. 4)
0815	Message Center (No. 1)
0816	Message Center (No. 2)
0817	ECM Backup Battery
0819	Display Data Link
0820	Keypad Data Link
0821	Display Power Supply (12 Volts)
0823	Lamp (Service Indicator)
0824	Lamp (Truck Payload) (Green)
0825	Lamp (Truck Payload) (Red)
0833	Rear Brake Oil Temperature Sensor
0838	Left Front Suspension Cylinder Pressure Sensor
0839	Right Front Suspension Cylinder Pressure Sensor
0840	Left Rear Suspension Cylinder Pressure Sensor
0841	Right Rear Suspension Cylinder Pressure Sensor
0852	Right Front Brake Oil Temperature Sensor
0853	Left Front Brake Oil Temperature Sensor
0854	Right Rear Brake Oil Temperature Sensor
0855	Left Rear Brake Oil Temperature Sensor
0890	Telemetry Data Link
1421	Rear Engine Electronic Control Module
1422	Front Engine Electronic Control Module
Transmission / Chassis ECM (MID No. 030)	
CID	
0168	Electrical System
0177	Temperature Sensor (Transmission Oil)
0190	Speed Sensor (Engine)
0248	CAT Data Link
0269	Sensor Power Supply
0378	Solenoid Valve (Automatic Lubrication)
0444	Start Relay
0585	Speed Sensor (Transmission Output 1)
0590	Electronic Control Module (Engine)
0627	Brake Switch (Parking)
0672	Speed Sensor (Torque Converter Output)
0673	Speed Sensor (Transmission Output 2)
0681	Solenoid Valve (Parking Brake)
0700	Sensor (Transmission Gear)
0701	Speed Sensor (Transmission Output)
0702	Position Sensor (Shift Lever)
0704	Pressure Switch (Service Brake)
0707	Solenoid Valve (Upshift)
0708	Solenoid Valve (Downshift)
0709	Solenoid Valve (Lockup Clutch)
0718	Transmission System
0724	Solenoid Valve (Body Raise)
0725	Solenoid Valve (Body Lower)
0773	Rotary Position Sensor (Host Lever)
0800	Vital Information Management System (VIMS)
0805	Temperature Sensor (Torque Converter Oil)
0967	Machine Application
1175	Body Position Sensor
1236	Lamp (Body Up Indicator)
1326	Location Code
1427	Lamp (Machine Lockout)



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	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

Related Electrical Service Manuals	
Title	Form Number
Cross Reference for Electrical Connectors	REHS0970
VIMS Control	REN2631
Transmission/ Chassis Control	SEN1932

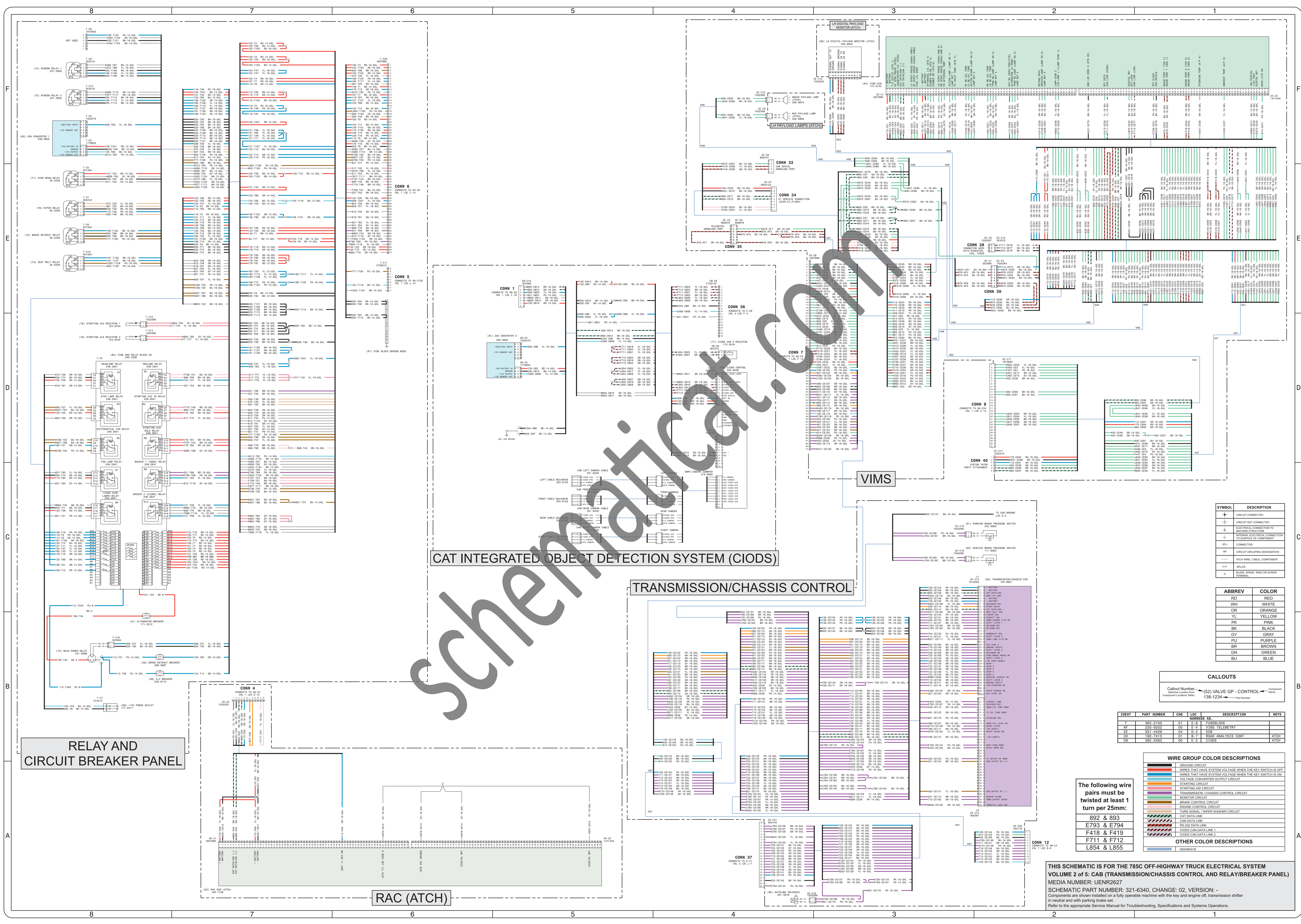
Off-Machine Switch Specification				
Part No.	Function	Actuate	Deactuate	Contact Position
111-9563	Service Brake Pressure	80 kPa MAX (11.60 psi)	55 kPa ± 20 kPa (7.98 psi ± 2.90 psi)	Normally Closed Below Deactuation Pressure
242-8903	Parking Brake Pressure	517 kPa ± 35 kPa (74.98 psi)	448 kPa ± 35 kPa (64.98 psi ± 5.08 psi)	Normally Open

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Breaker - AC	B-8	56	Relay - Brake Retract	E-8	70
Breaker - Alternator	B-8	57	Relay - High Beam	E-8	71
Breaker - Brake Retract	B-8	58	Relay - Main Power	E-8	72
Converter - 20A 1	F-8	60	Relay - Seat Belt	E-8	73
Converter - 20A 2	F-8	61	Relay - Window 1	F-8	74
ECM - RAG (ATCH) NOT SHOWN	A-7	62	Relay - Window 2	F-8	75
ECM - Transmission / Chassis	C-2	63	Resistor - Chassis CAN 2	D-4	77
ECM - VIMS	F-3	64	Resistor - Starting Aid 1	D-8	78
Fuse and Relay Block AS	D-8	65	Resistor - Starting Aid 2	D-8	79
Ground - Cab	D-5	66	Solenoid - Autolube	A-4	80
Ground Boss - Fuse Block	D-8	67	Switch - Parking Brake Pressure	C-2	81
Monitor - LH Digital Payload (ATCH)	F-3	68	Switch - Service Brake Pressure	C-2	82
Outlet - +12V Power	B-8	69			

Connector Location	
Connector Number	Schematic Location
CONN 1	E-5
CONN 4	E-7
CONN 5	E-6
CONN 6	E-6
CONN 7	D-4
CONN 8	A-2
CONN 12	A-2
CONN 33 - Cab Serial Download Port	E-4
CONN 34 - E-Service Connection	E-4
CONN 35	E-4
CONN 36	E-4
CONN 37	A-4
CONN 38 - Ministar, XM, TC900	E-2
CONN 39	E-2
CONN 40 - Custom Third Party Atch	C-2

Resistor Specifications		
Part No.	Component Description	Resistance (Ohms) [†]
174-3976	Resistor - CIODS CAN 2	120 (Ohms) ± 1%

[†] At room temperature unless otherwise noted.



RELAY AND CIRCUIT BREAKER PANEL

CAT INTEGRATED OBJECT DETECTION SYSTEM (CIODS)

TRANSMISSION/CHASSIS CONTROL

RAC (ATCH)

VIMS

SYMBOL	DESCRIPTION
+	CIRCUIT CONNECTED
-	CIRCUIT NOT CONNECTED
+	ELECTRICAL CONNECTION TO MACHINERY COMPONENT
-	INTERNAL ELECTRICAL CONNECTION TO MACHINERY COMPONENT
+	CONNECTOR
-	CIRCUIT GROUPING DESIGNATION
---	ATCH WIRE CABLE COMPONENT
o	SPLICE
o	BLADE, SPRING, RING OR SCREW TERMINAL

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

CALLOUTS

Callout Number: Machine Location (e.g., 138-1234) Component Name (e.g., VALVE GP - CONTROL)

IDENT	PART NUMBER	CHS	LOC	DESCRIPTION	NOTE
T	382-2150	01	E-1	TURBIDLOCK	
AF	230-9202	00	E-4	VIMS TELEMETRY	
CE	331-4840	00	D-4	ECB	
CR	192-7413	01	B-2	ROAD ANALYSIS CONT	ATCH
CM	382-2583	00	E-5	CIODS	ATCH

WIRE GROUP COLOR DESCRIPTIONS

- GROUND CIRCUIT
- WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
- WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
- VOLTAGE CONVERTER OUTPUT CIRCUIT
- STARTING CIRCUIT
- STARTING AID CIRCUIT
- TRANSMISSION/CHASSIS CONTROL CIRCUIT
- MONITOR CIRCUIT
- BRAKE CONTROL CIRCUIT
- ENGINE CONTROL CIRCUIT
- TURN SIGNAL/WIPER WASHER CIRCUIT
- CAT DATA LINK
- CAN DATA LINK
- PS-252 DATA LINK
- COOSE CAN DATA LINK 1
- COOSE CAN DATA LINK 2

OTHER COLOR DESCRIPTIONS

- HIGHWAYS

The following wire pairs must be twisted at least 1 turn per 25mm:

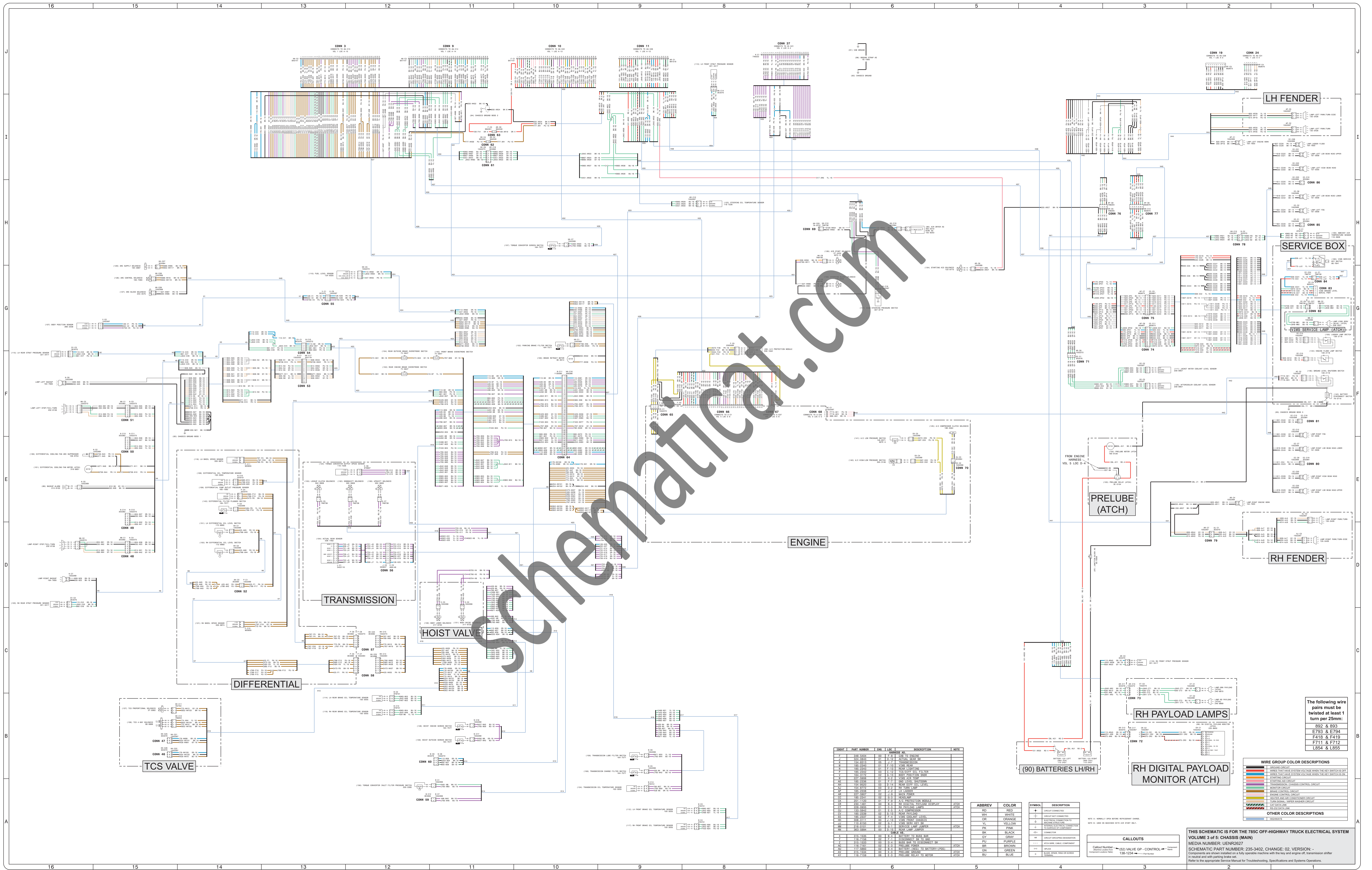
- 892 & 893
- E793 & E794
- F418 & F419
- F711 & F712
- L854 & L855

THIS SCHEMATIC IS FOR THE 785C OFF-HIGHWAY TRUCK ELECTRICAL SYSTEM VOLUME 2 of 5: CAB (TRANSMISSION/CHASSIS CONTROL AND RELAY/BREAKER PANEL) MEDIA NUMBER: UENR2627

SCHEMATIC PART NUMBER: 321-6340, CHANGE: 02, 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 Operation.



SchematicCat.com

WIRE	PART NUMBER	CH	LOC	DESCRIPTION	NOTE
1	308-1544	00	F 2.3	IGN TO ENGINE	
2	308-1544	00	F 2.3	IGN TO ENGINE	
3	134-8113	00	F 1.1	TRANSMISSION	
4	134-8113	00	F 1.1	TRANSMISSION	
5	134-8113	00	F 1.1	TRANSMISSION	
6	134-8113	00	F 1.1	TRANSMISSION	
7	134-8113	00	F 1.1	TRANSMISSION	
8	134-8113	00	F 1.1	TRANSMISSION	
9	134-8113	00	F 1.1	TRANSMISSION	
10	134-8113	00	F 1.1	TRANSMISSION	
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30	134-8113	00	F 1.1	TRANSMISSION	
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47	134-8113	00	F 1.1	TRANSMISSION	
48	134-8113	00	F 1.1	TRANSMISSION	
49	134-8113	00	F 1.1	TRANSMISSION	
50	134-8113	00	F 1.1	TRANSMISSION	
51	134-8113	00	F 1.1	TRANSMISSION	
52	134-8113	00	F 1.1	TRANSMISSION	
53	134-8113	00	F 1.1	TRANSMISSION	
54	134-8113	00	F 1.1	TRANSMISSION	
55	134-8113	00	F 1.1	TRANSMISSION	
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65	134-8113	00	F 1.1	TRANSMISSION	
66	134-8113	00	F 1.1	TRANSMISSION	
67	134-8113	00	F 1.1	TRANSMISSION	
68	134-8113	00	F 1.1	TRANSMISSION	
69	134-8113	00	F 1.1	TRANSMISSION	
70	134-8113	00	F 1.1	TRANSMISSION	
71	134-8113	00	F 1.1	TRANSMISSION	
72	134-8113	00	F 1.1	TRANSMISSION	
73	134-8113	00	F 1.1	TRANSMISSION	
74	134-8113	00	F 1.1	TRANSMISSION	
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78	134-8113	00	F 1.1	TRANSMISSION	
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83	134-8113	00	F 1.1	TRANSMISSION	
84	134-8113	00	F 1.1	TRANSMISSION	
85	134-8113	00	F 1.1	TRANSMISSION	
86	134-8113	00	F 1.1	TRANSMISSION	
87	134-8113	00	F 1.1	TRANSMISSION	
88	134-8113	00	F 1.1	TRANSMISSION	
89	134-8113	00	F 1.1	TRANSMISSION	
90	134-8113	00	F 1.1	TRANSMISSION	

ABBREV	COLOR	SYMBOL	DESCRIPTION
ED	BROWN	+	GROUND CONNECTED
DN	WHITE	-	GROUND NOT CONNECTED
OR	ORANGE	+	WIRE GROUP ORANGE
YL	YELLOW	+	WIRE GROUP YELLOW
PK	PINK	+	WIRE GROUP PINK
BLK	BLACK	+	WIRE GROUP BLACK
GRY	GRAY	+	WIRE GROUP GRAY
PLU	PURPLE	+	WIRE GROUP PURPLE
BRN	BROWN	+	WIRE GROUP BROWN
GRN	GREEN	+	WIRE GROUP GREEN
BLU	BLUE	+	WIRE GROUP BLUE

WIRE GROUP COLOR DESCRIPTIONS
ORANGE
YELLOW
PINK
BLACK
GRAY
PURPLE
BROWN
GREEN
BLUE

OTHER COLOR DESCRIPTIONS
RED
GREEN
YELLOW
PINK
BLACK
GRAY
PURPLE
BROWN
GREEN
BLUE

The following wire pairs must be twisted at least 1 turn per 25mm:
892 & 893
E793 & E794
F418 & F419
F711 & F712
L854 & L855

CALLOUTS
Callout Number: 138-1234
Component Location: 138-1234

THIS SCHEMATIC IS FOR THE 785C OFF-HIGHWAY TRUCK ELECTRICAL SYSTEM
VOLUME 3 of 5: CHASSIS (MAIN)
MEDIA NUMBER: UENR2627
SCHEMATIC PART NUMBER: 235-3402, CHANGE: 02, VERSION -
Components are shown installed on a fully operable machine with the key and engine off, transmission in shift
to neutral and with parking brake set.
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Camera - Front	D-2	166	Sensor - LH Front Radar	E-1	174
Camera - Left	F-2	167	Sensor - LH Radar	F-1	175
Camera - Rear	A-7	168	Sensor - LH Rear Lower Radar	B-7	176
Camera - Right	C-2	169	Sensor - LH Rear Upper Radar	B-7	177
Ground Boss - Chassis	F-5	170	Sensor - RH Front Radar	E-1	178
Resistor - CIODS CAN 1 "A"	E-1	171	Sensor - RH Radar	C-1	179
Resistor - CIODS CAN 1 "B"	C-1	172	Sensor - RH Rear Lower Radar	B-7	180
Resistor - CIODS CAN 2	A-7	173	Sensor - RH Rear Upper Radar	B-7	181

Connector Location	
Connector Number	Schematic Location
CONN 36	F-4
CONN 92	E-5
CONN 93	B-5
CONN 94	B-4
CONN 95	E-3
CONN 96	E-3
CONN 97	C-3

Resistor Specifications		
Part No.	Component Description	Resistance (Ohms)*
174-3016	Resistor CIODS CAN 1 A CIODS CAN 1 B CIODS CAN 2	120 ± 10%

* At room temperature unless otherwise noted.

Schematic

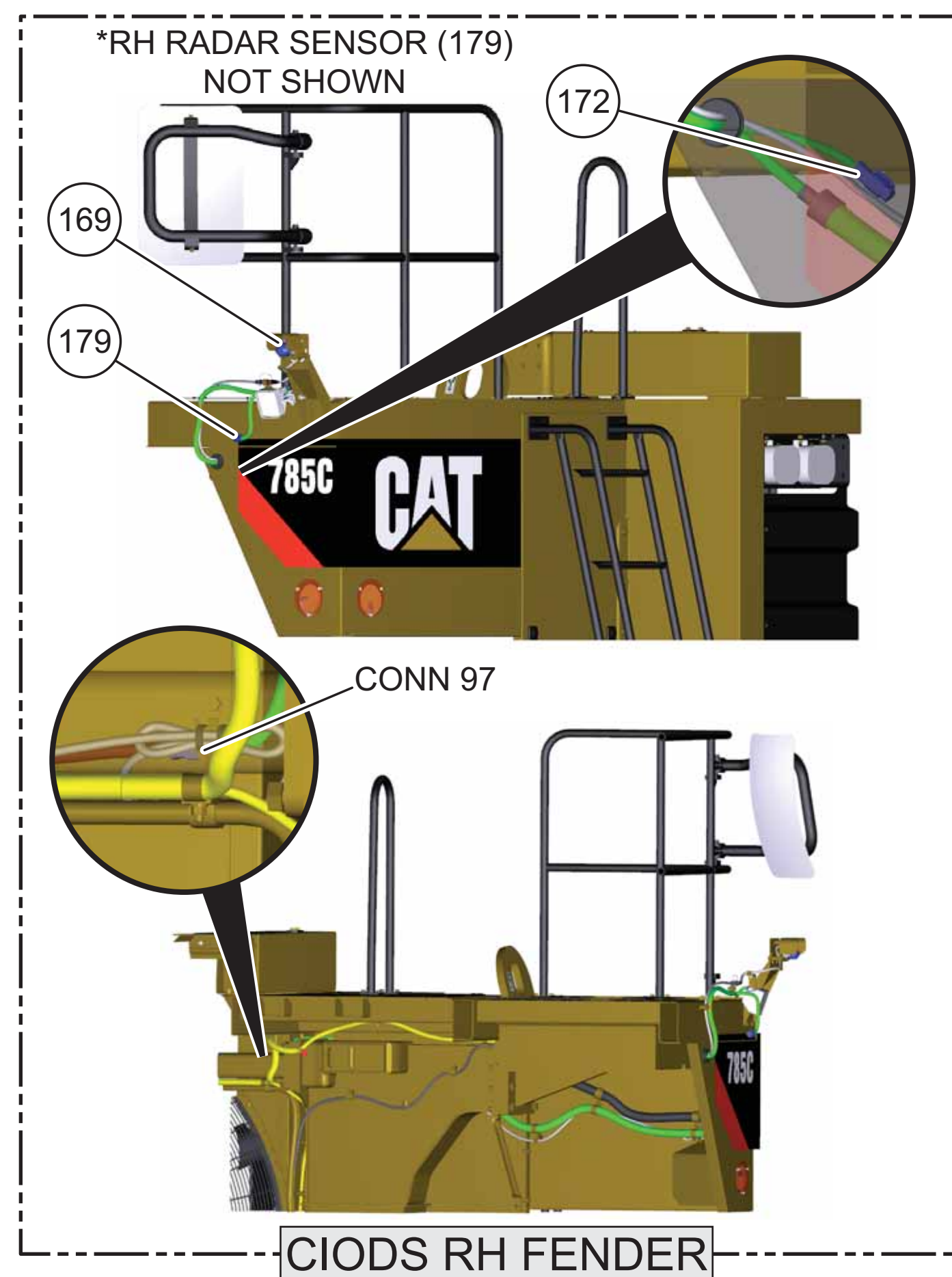
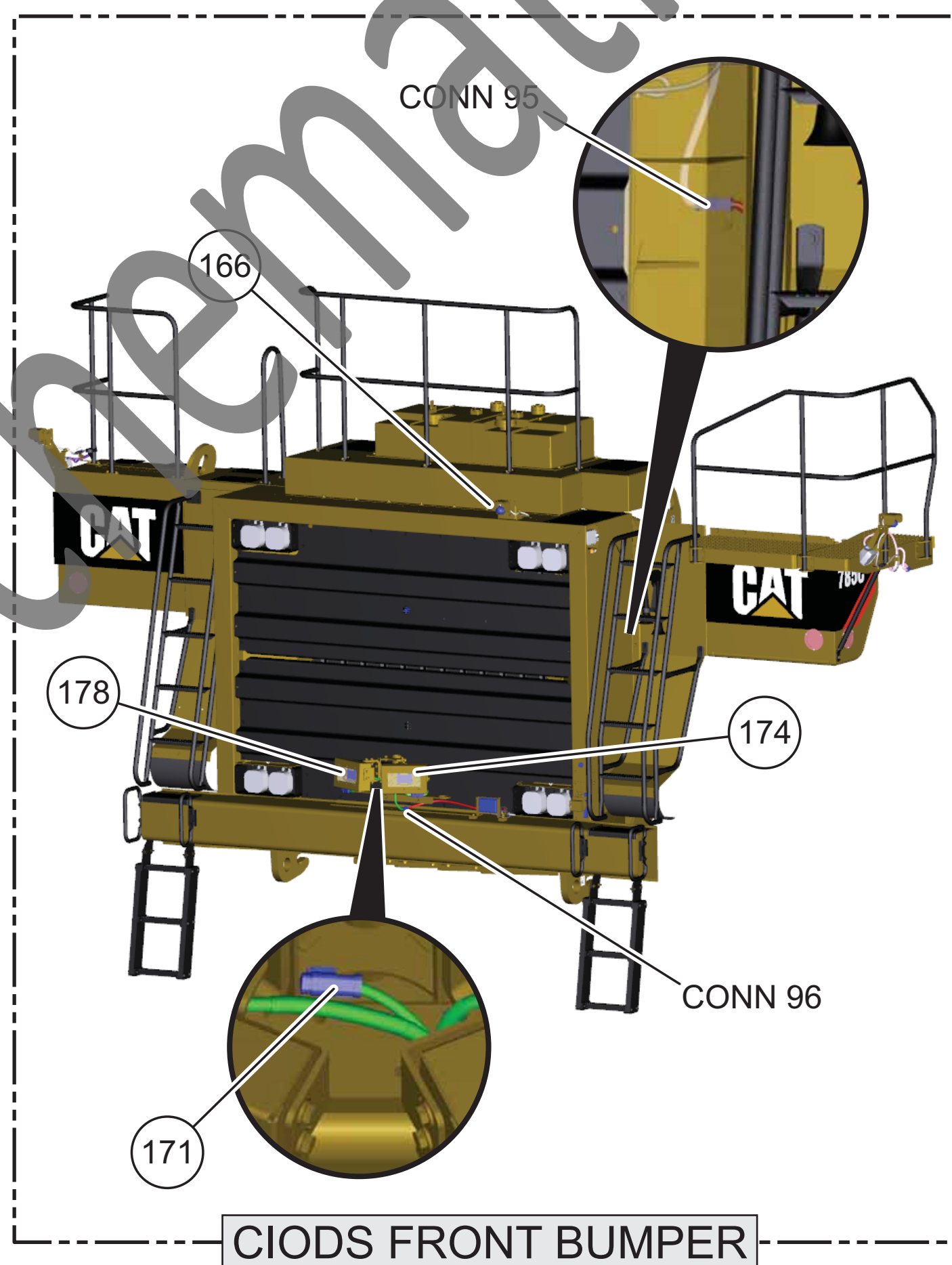
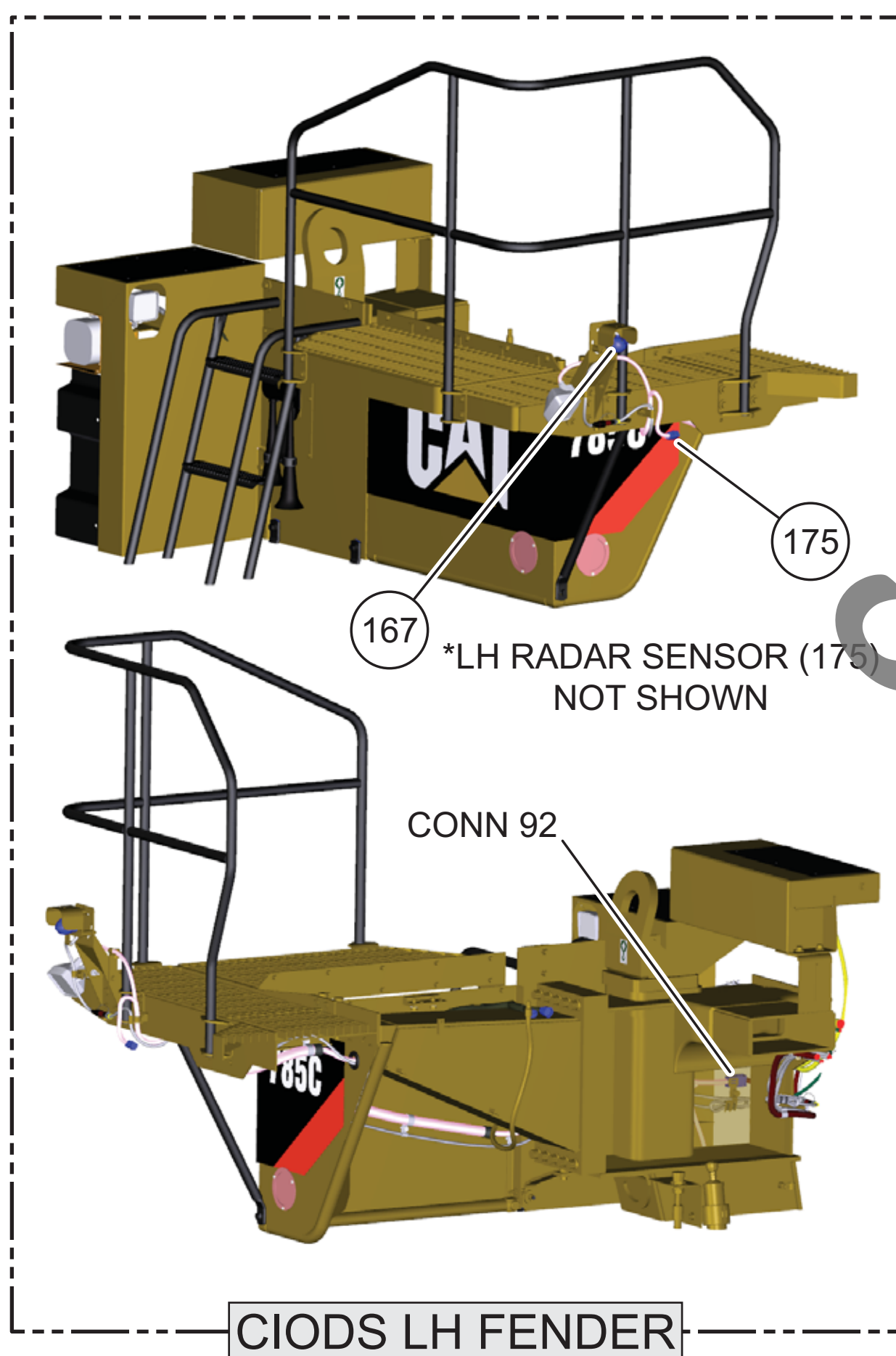
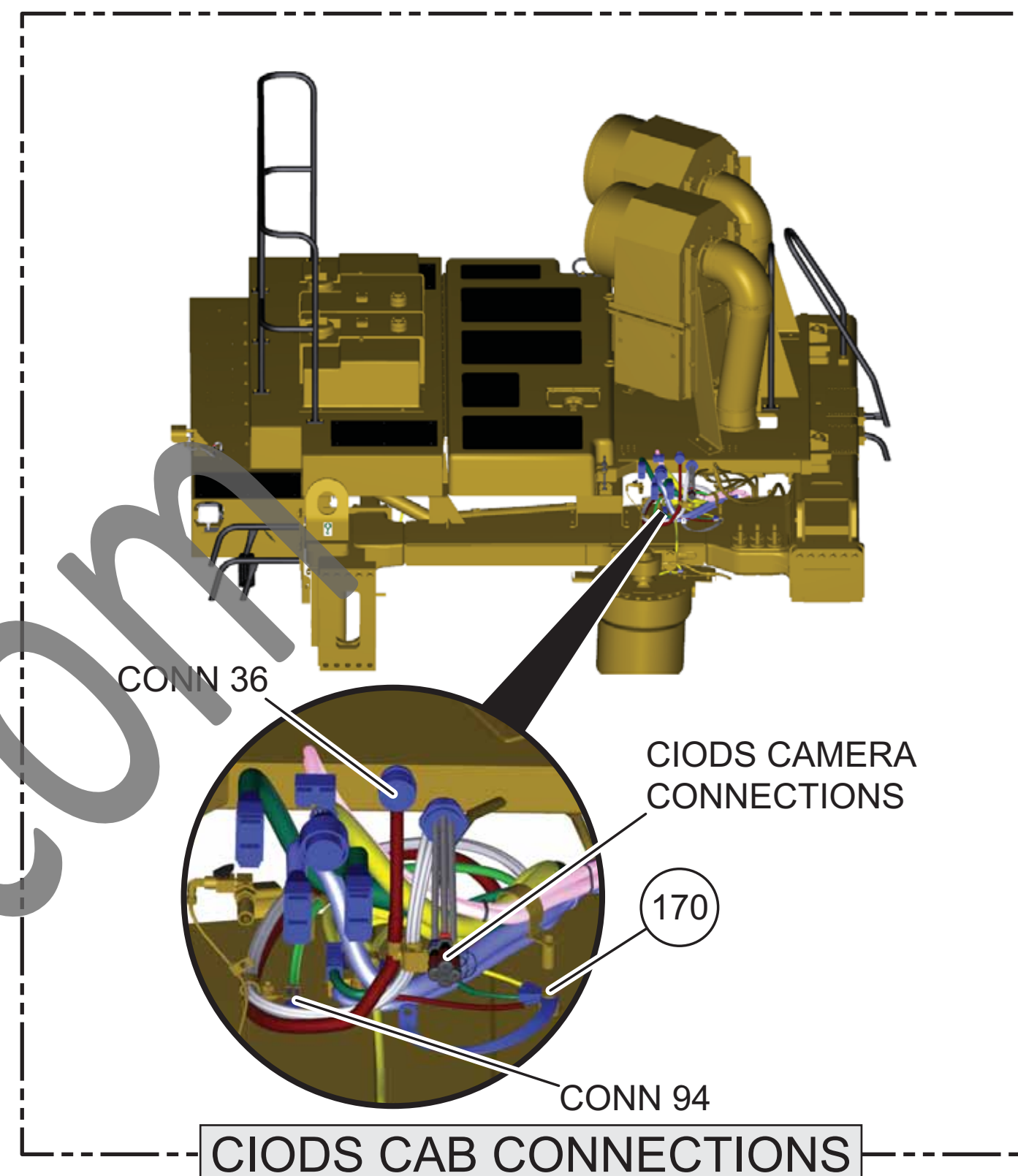
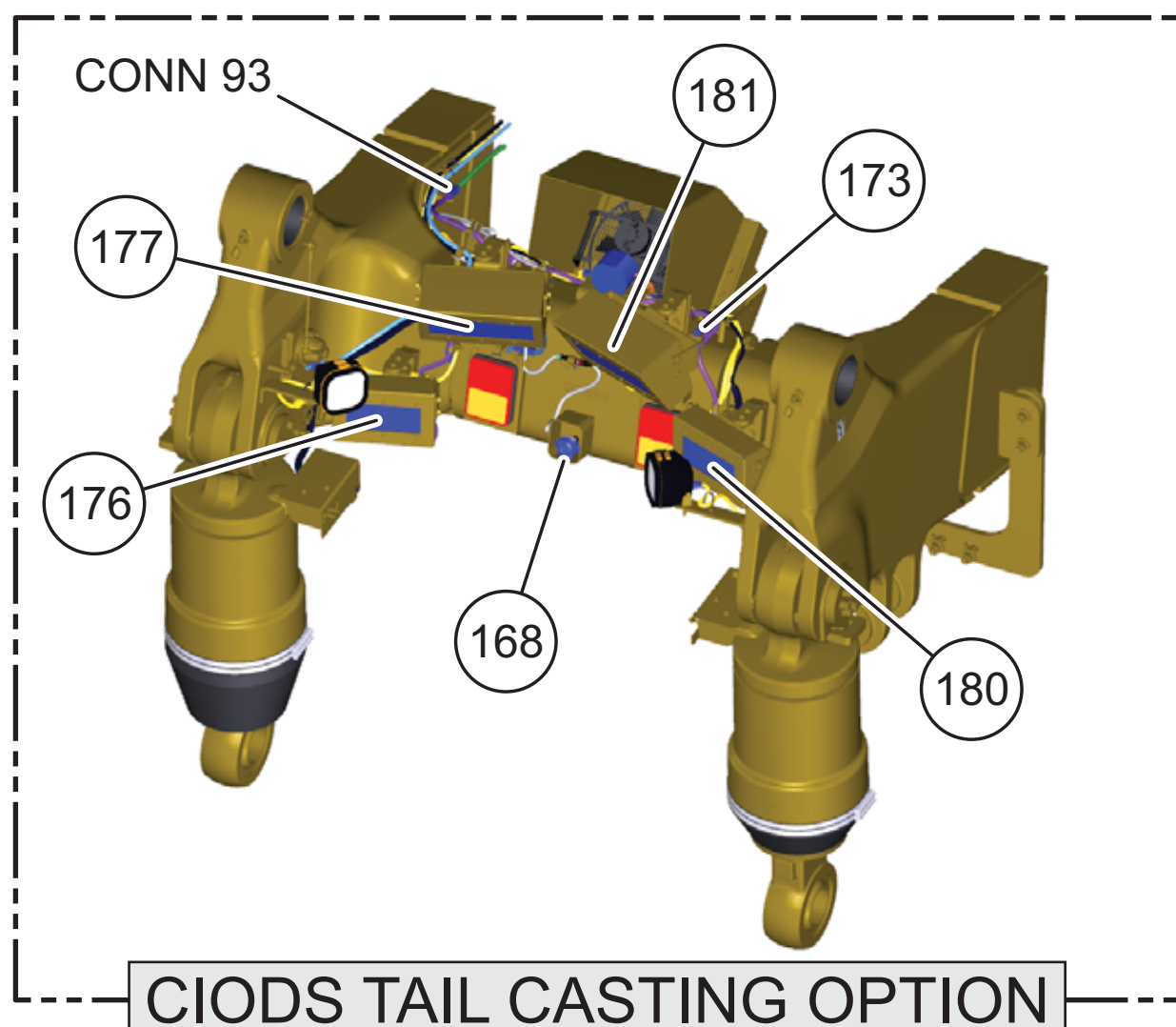
785C Off-Highway Truck Electrical System

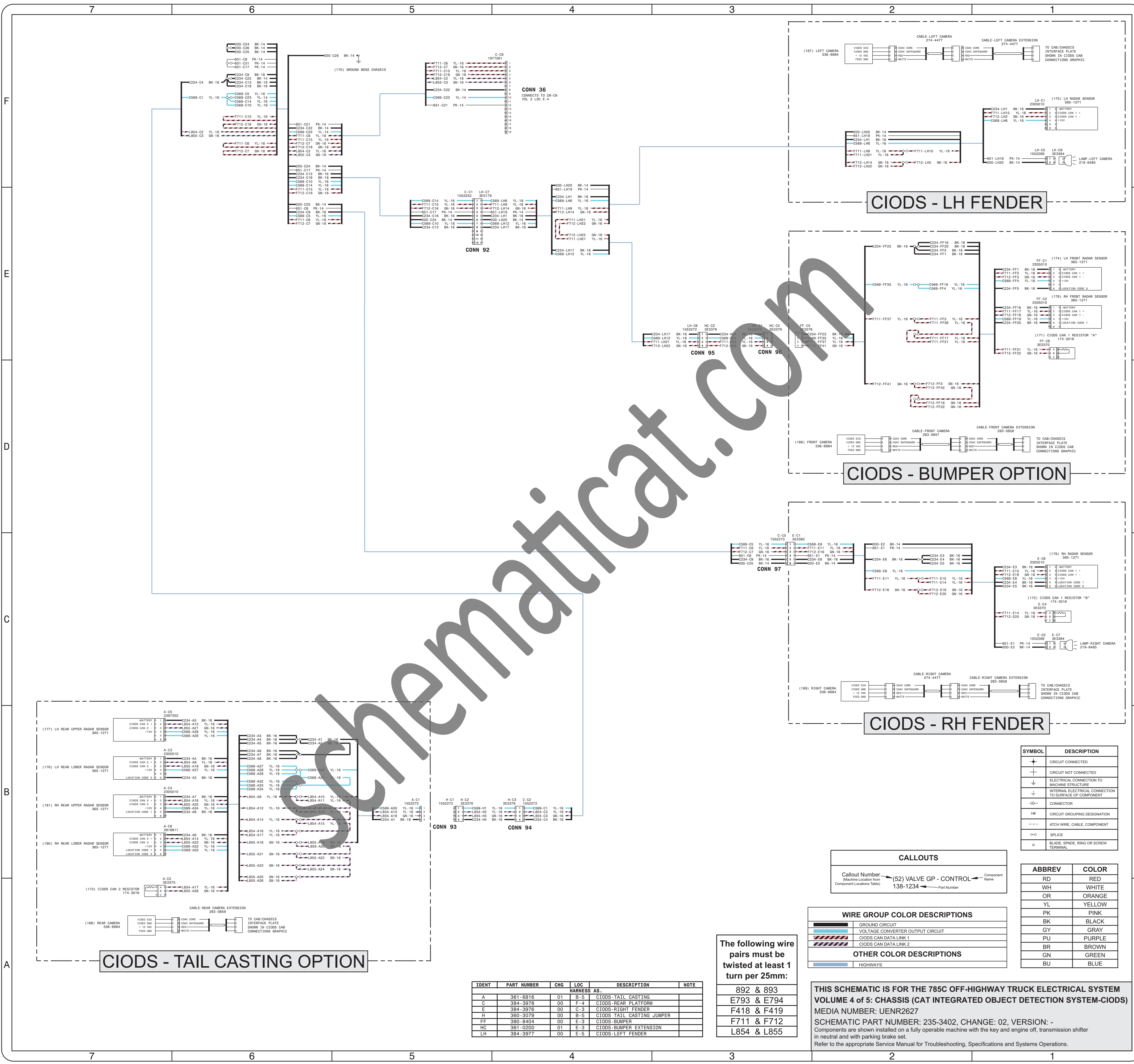
APX2034-UP

Volume 4 of 5: Chassis (CAT Integrated Object Detection System-CIODS)

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IDENT	PART NUMBER	CHG	LOC	DESCRIPTION	NOTE
A	361-6816	01	B-5	CIODS-TAIL CASTING	
C	384-3978	00	F-4	CIODS-REAR PLATFORM	
E	384-3976	00	G-3	CIODS-RIGHT FENDER	
H	380-3079	00	B-5	CIODS-TAIL CASTING JUMPER	
FF	380-8404	00	E-3	CIODS-BUMPER	
HC	361-0200	01	E-3	CIODS-BUMPER EXTENSION	
LH	384-3977	00	E-5	CIODS-LEFT FENDER	

The following wire pairs must be twisted at least 1 turn per 25mm:

892 & 893
E793 & E794
F418 & F419
F711 & F712
L854 & L855

CALLOUTS

Callout Number (Machine Location from Component Locations Table) → (52) VALVE GP - CONTROL → Component Name

138-1234 → Part Number

WIRE GROUP COLOR DESCRIPTIONS

Ground Circuit	Ground Circuit
Voltage Converter Output Circuit	Voltage Converter Output Circuit
CIODS CAN DATA LINK 1	CIODS CAN DATA LINK 1
CIODS CAN DATA LINK 2	CIODS CAN DATA LINK 2

OTHER COLOR DESCRIPTIONS

Highways	Highways
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SYMBOL DESCRIPTION

+	CIRCUIT CONNECTED
-	CIRCUIT NOT CONNECTED
+	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
-	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
~	CONNECTOR
HR	CIRCUIT GROUPING DESIGNATION
---	ATCH WIRE, CABLE, COMPONENT
o	SPLICE
o	BLADE, SPRING, RING OR SCREW TERMINAL

ABBREV COLOR

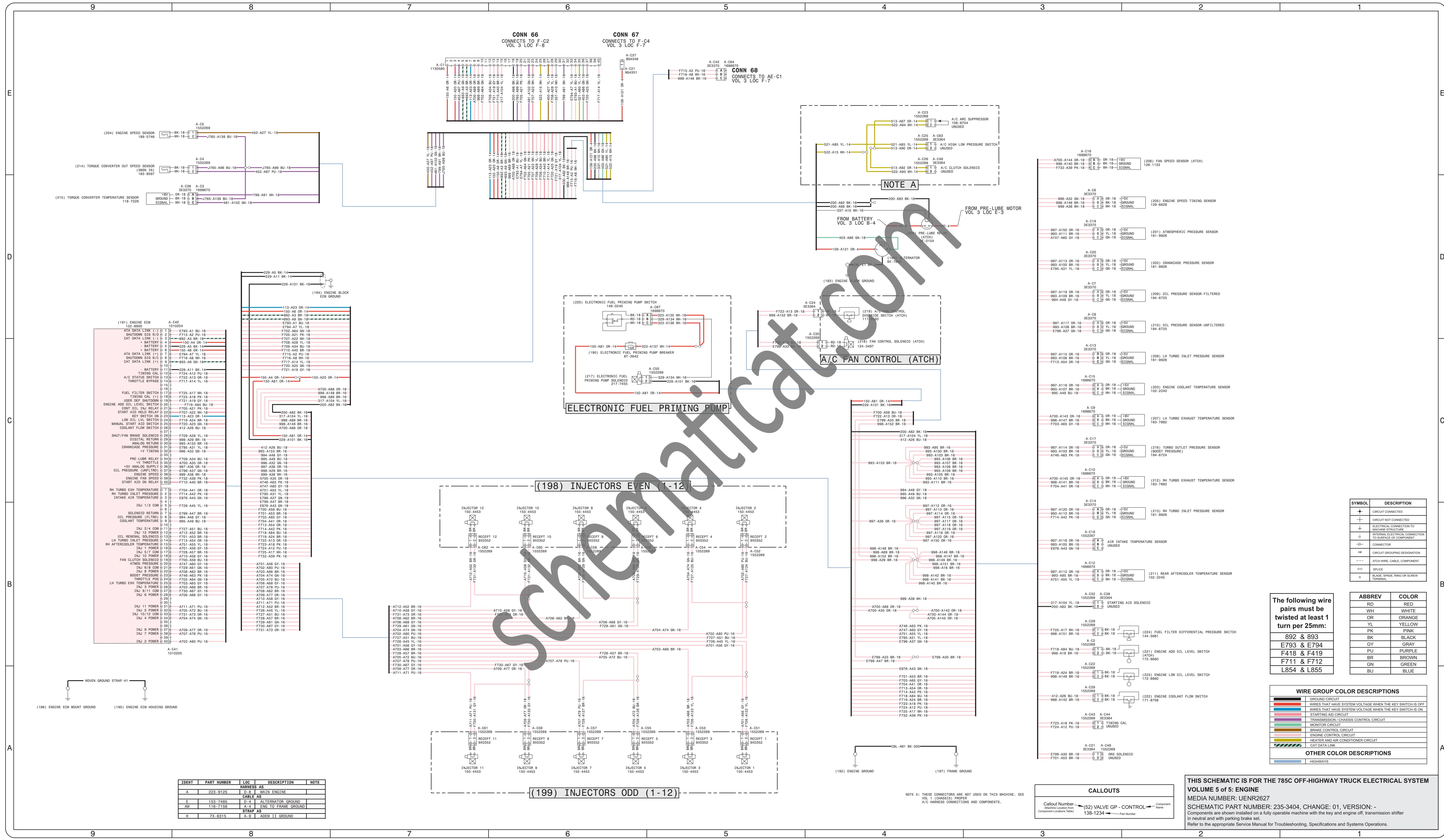
RD	RED
WH	WHITE
OR	ORANGE
YL	YELLOW
PK	PINK
BK	BLACK
GY	GRAY
PU	PURPLE
BR	BROWN
GN	GREEN
BU	BLUE

THIS SCHEMATIC IS FOR THE 785C OFF-HIGHWAY TRUCK ELECTRICAL SYSTEM VOLUME 4 of 5: CHASSIS (CAT INTEGRATED OBJECT DETECTION SYSTEM-CIODS) MEDIA NUMBER: UENR2627

SCHEMATIC PART NUMBER: 235-3402, CHANGE: 02, 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.



IDENT	PART NUMBER	LOC	DESCRIPTION	NOTE
A	223-8125	D-8	MAIN ENGINE	
E	163-7485	D-4	ALTERNATOR GROUND	
AW	118-7156	A-4	ENG TO FRAME STRAP A	
H	7X-6315	A-9	ADEN T1 GROUND	

The following wire pairs must be twisted at least 1 turn per 25mm:
892 & 893
E793 & E794
F418 & F419
F711 & F712
L854 & L855

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

WIRE GROUP COLOR DESCRIPTIONS	
(Symbol)	GROUND CIRCUIT
(Symbol)	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS OFF
(Symbol)	WIRES THAT HAVE SYSTEM VOLTAGE WHEN THE KEY SWITCH IS ON
(Symbol)	STARTING AID CIRCUIT
(Symbol)	MONITOR CIRCUIT
(Symbol)	TRANSMISSION / CHASSIS CONTROL CIRCUIT
(Symbol)	BRAKE CONTROL CIRCUIT
(Symbol)	ENGINE CONTROL CIRCUIT
(Symbol)	HEATER AND AIR CONDITIONER CIRCUIT
(Symbol)	CAT DATA LINK

OTHER COLOR DESCRIPTIONS	
(Symbol)	HIGHWAYS

THIS SCHEMATIC IS FOR THE 75C OFF-HIGHWAY TRUCK ELECTRICAL SYSTEM VOLUME 5 of 5: ENGINE
MEDIA NUMBER: UENR2627
SCHEMATIC PART NUMBER: 235-3404, 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.

CALLOUTS	
Callout Number (Mechanical Location from Component Location Table)	(52) VALVE GP - CONTROL (Component Name)
138-1234	Part Number

NOTE 1: THESE CONNECTORS ARE NOT USED ON THIS MACHINE. SEE VOL 3 (CHASSIS) PROPER A/C HARNESS CONNECTIONS AND COMPONENTS.