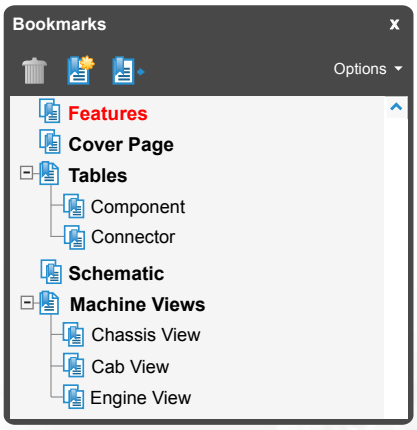
INTERACTIVE SCHEMATIC

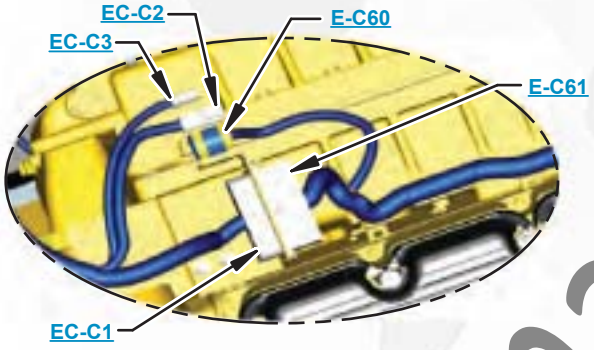


The Bookmarks panel will allow you to quickly navigate to points of interest.

This document is best viewed at a screen resolution of 1024 X 768.

To set your screen resolution do the following:
RIGHT CLICK on the **DESKTOP**.
Select **PROPERTIES**.
CLICK the **SETTINGS TAB**.
MOVE THE SLIDER under **SCREEN RESOLUTION** until it shows **1024 X 768**.
CLICK OK to apply the resolution.

**Due to different monitor sizes and PDF reader preferences there may be some variance in linked schematic locations*



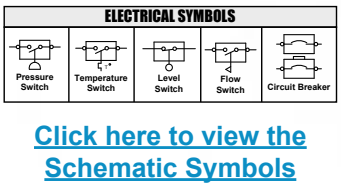
Click on any text that is BLUE and underlined. These are hyperlinks that can be used to navigate the schematic and machine views.

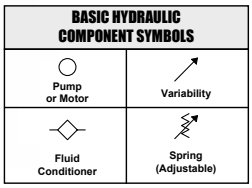
Click here to save a copy of this interactive schematic to your desktop

VIEW ALL CALLOUTS

When only one callout is showing on a machine view, clicking on this button will make all of the callouts visible. This button is located in the top right corner of every machine view page.

HOTKEYS (Keyboard Shortcuts)		
	FUNCTION	**KEYS**
	Zoom In	"CTRL" / "+"
	Zoom Out	"CTRL" / "-"
	Fit to Page	"CTRL" / "0" (zero)
	Hand Tool	"SPACEBAR" (hold down)
	Find	"CTRL" / "F"





Click here to view the Schematic Symbols and Definitions page

SCHEMATIC SYMBOLS AND DEFINITIONS

VALVES

ENVELOPES

One Position | Two Position | Three Position

PORTS

Two-way | Three-Way | Four-Way

CONTROL

Normal Position (A B / P T) | Shifted Position (A B / P T) | Infinite Position

CHECK

Basic Symbol | Spring Loaded | Shuttle | Pilot Controlled

INTERNAL PASSAGEWAYS

FLOW IN ONE DIRECTION	FLOW ALLOWED IN EITHER DIRECTION	PARALLEL FLOW / CROSS FLOW
Infinite Positioning	Two Position	Three Position

CYLINDERS

Single Acting | Double Acting

ACCUMULATORS

Spring Loaded | Gas Charged

PUMPS

FIXED DISPLACEMENT

Unidirectional | Bidirectional

VARIABLE DISPLACEMENT NON- COMPENSATED

Unidirectional | Bidirectional

MOTORS

FIXED DISPLACEMENT

Unidirectional | Bidirectional

VARIABLE DISPLACEMENT NON- COMPENSATED

Unidirectional | Bidirectional

BASIC HYDRAULIC COMPONENT SYMBOLS

Pump or Motor	Variability
Fluid Conditioner	Spring (Adjustable)
Spring	Pressure Compensation
Control Valves	Line Restriction (Variable)
Restriction	Line Restriction (Fixed)
Line Restriction Variable and Pressure Compensated	MAIN AUX. 2-Section Pump
Attachment	Pump: Variable and Pressure Compensated

Hydraulic Energy Triangles | Pneumatic

PILOT CONTROL

RELEASED PRESSURE

External Return | Internal Return

REMOTE SUPPLY PRESSURE

Simplified | Complete | Internal Supply Pressure

ROTATING SHAFTS

Unidirectional | Bidirectional

COMBINATION CONTROLS

Solenoid | Solenoid or Manual | Solenoid and Pilot | Solenoid and Pilot or Manual | Servo | Thermal | Detent

LINES

Crossing | Joining

MEASUREMENT

Pressure | Temperature | Flow

MANUAL CONTROL

Push-pull Lever | Manual Shutoff | General Manual | Push Button | Pedal | Spring

FLUID STORAGE RESERVOIRS

Vented | Pressurized | Return Above Fluid Level | Return Below Fluid Level

HYDRAULIC SYMBOLS - ELECTRICAL

Transducer (Fluid) | Transducer (Gas / Air) | Generator | Electric Motor | Pressure Switch | Pressure Switch (Adjustable) | Temperature Switch | Electrical Wire

ELECTRICAL SYMBOLS

Pressure Switch | Temperature Switch | Level Switch | Flow Switch | Circuit Breaker

BASIC ELECTRICAL COMPONENT SYMBOLS

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 circle indicates that the component has screw terminals and a wire can be disconnected from it.

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 component.

Ground (Wired): 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.

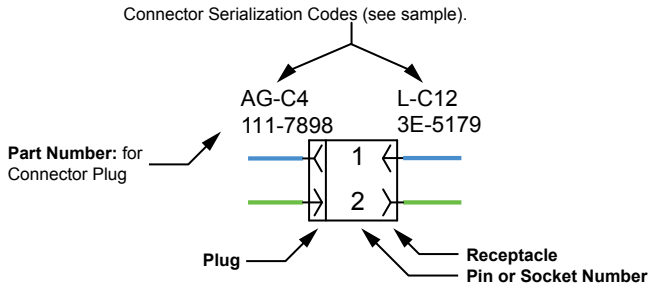
Relay (Magnetic Switch): A relay is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.

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: An electrical component that is activated by electricity and held latched by a permanent magnet. It has two coils (latch and unlatch) that make 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

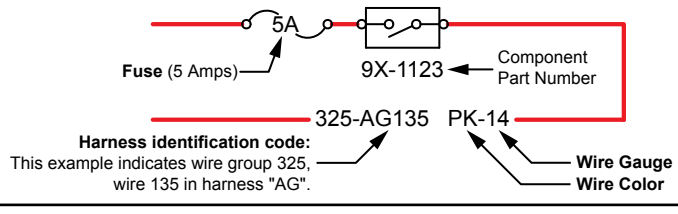
Wire, Cable, or Harness Assembly Identification: Includes Harness Identification Letters and Harness Connector Serialization Codes (see sample).

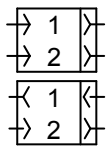


Harness Identification Letter(s): (A, B, C, AA, AB, AC, ...)

Harness Connector Serialization Code: The "C" stands for "Connector" and the number indicates which connector in the harness (C1, C2, C3, ...)

L-C12
3E-5179





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

Sure-Seal connector: Typical representation of a Sure-Seal connector. The plug and receptacle contain both pins and sockets.

CATERPILLAR®

UENR3221-01
September 2012

Schematic

318D2 Excavator
Electrical System

TZS1-UP
XGS1-UP

Printed in U.S.A.

COMPONENT TABLE

Component Location					
Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Travel ATCH	A-12	1	Relay - Main	B-7	65
Alarm - Action	E-1	2	Relay - Neutral Start	E-8	66
Alternator	F-15	3	Relay - Start	J-9	67
Assembly - Holder	J-8	4	Relay - Travel Alarm	D-8	68
Assembly - Block	J-9	5	Resistor - Machine CAN Data Link 1	H-10	69
Bar - Bus	J-8	6	Resistor - Machine CAN Data Link 2	C-2	70
Base - Fuse	E-7	7	Sender - Squeeze Pressure ATCH	D-14	72
Battery - Front	J-13	8	Sender - Coolant Temperature	G-15	73
Battery - Rear	J-14	9	Sender - Fuel Level	A-12	74
Breaker - Alternator	J-8	10	Sender - Hydraulic Oil Temperature	A-14	75
Breaker - Glow	J-8	11	Sensor - Air Filter	I-15	76
Breaker - Main	I-8	12	Sensor - Engine Oil Pressure	E-15	77
Coil - Exciter	H-1	13	Sensor - Fuel Filter Plugged	I-15	78
Control - Wiper	C-1	14	Sensor - Pump Discharge Pressure 1	B-15	79
Converter - 12V Power	B-5	15	Sensor - Pump Discharge Pressure 2	B-15	80
Converter - 12V 10A ATCH	I-3	16	Socket - 12V/10A A	D-5	81
Converter - Radio ATCH	B-5	17	Socket - 12V/10A B	D-5	82
Diode - Alternator	F-5	18	Solenoid - A/C Compressor Clutch	F-15	83
Diode - Lamp	F-8	19	Solenoid - 1P/2P Exchange ATCH	C-14	84
Diode - Main Relay	B-7	20	Solenoid - Two Way Lever Change ATCH	I-15	85
Diode - Start Relay	J-10	21	Solenoid - NFC Limit ATCH	A-15	86
ECM - Machine	H-10	22	Solenoid - Quick Coupler ATCH	C-15	87
Governor	G-15	23	Solenoid - Stem 1 Extend ATCH	C-14	88
Ground - Cab 1	D-3	24	Solenoid - Stem 1 Retract ATCH	C-14	89
Ground - Cab 2	E-3	25	Solenoid - Stem 3 Extend ATCH	C-14	90
Ground - Cab 3	D-6	26	Solenoid - Stem 3 Retract ATCH	B-14	91
Ground - Chassis 1	I-9	27	Solenoid - Engine Shut Off	F-15	92
Ground - Chassis 2	G-14	28	Solenoid - Hydraulic Lock	I-13	93
Ground - Chassis 3	C-13	29	Solenoid - Power Shift Control	B-15	94
Ground - Chassis 4	C-15	30	Solenoid - Swing Brake Cancel	I-13	95
Ground - Chassis 5	D-15	31	Solenoid - Travel Speed Change	H-13	96
Ground - Chassis 6	I-8	32	Solenoid - Variable Relief 1	D-14	97
Ground - Disconnect Strap	I-9	33	Solenoid - Variable Relief 2	D-14	98
Ground - Engine Strap	F-15	34	Suspension - Air ATCH	J-2	99
Ground - Platform 1	I-7	35	Switch - 2nd Shutdown	F-8	100
Ground - Plattform Chassis Strap	I-8	36	Switch - Auxiliary Pump Pressure ATCH	I-1	101
Heater - Seat ATCH	C-8	37	Switch - Two Way Lever Change Press. ATCH	I-15	102
Horn - Forward Warning (High)	A-10	38	Switch - Beacon ATCH	B-4	103
Horn - Forward Warning (Low)	A-10	39	Switch - Boom Priority Pressure ATCH	C-14	104
Joystick - LH ATCH	J-1	40	Switch - Fine Swing Control ATCH	B-2	105
Joystick - LH (Four Switch) ATCH	J-1	41	Switch - Joystick Pressure ATCH	I-3	106
Joystick - RH ATCH	H-1	42	Switch - Lower Washer ATCH	B-3	107
Joystick - RH (Three Switch) ATCH	H-1	43	Switch - Radio Mute ATCH	B-3	108
Junction - Block Group	J-15	44	Switch - Seat Heater ATCH	B-4	109
Keyreader - MSS	H-2	45	Switch - Cold Start Advance	F-15	110
Lighter - Cigar	D-2	46	Switch - Disconnect	I-9	111
Meter - Service	D-1	47	Switch - Horn	I-1	112
Module - Product Link Control (Basic)	C-9	48	Switch - Hydraulic Oil Filter	A-13	113
Module - Product Link Control (PL 300)	E-9	49	Switch - Implement Pressure	G-14	114
Monitor	E-1	50	Switch - Key	G-1	115
Motor - Starting	E-15	51	Switch - Lower Wiper	B-2	116
Motor - Washer	J-12	52	Switch - Neutral Start Limit	J-1	117
Motor - Wiper	D-1	53	Switch - One-Touch Low Idle	H-2	118
Panel - Switch	D-2	54	Switch - Quick Coupler	B-1	119
Pickup - Engine Speed	F-14	55	Switch - Throttle Position	H-1	120
Plugs - Glow	E-15	56	Switch - Travel Pressure	F-14	121
Pump- Lifting	H-15	57	Switch - Under Window Limit	D-1	122
Radio - Product Link 2nd Generation	C-10	58	Switch - Water Separator Level	J-15	123
Relay - Beacon ATCH	E-8	59	Switch - Window Limit	E-2	124
Relay - Boom Lamp	F-8	60	Terminal - Block Assembly	I-9	125
Relay - Cab Lamp	E-8	61	Timer - Lamp Delay ATCH	C-7	126
Relay - Chassis Lamp	E-8	62	Unit - A/C	H-7	127
Relay - Glow	J-9	63	Voltage - Dropper	I-15	128
Relay - Horn	E-8	64			

CONNECTOR TABLE

Connector Number	Schematic Location
CONN 1	D-12, E-13
CONN 2	C-12, E-13
CONN 3	C-13, E-13
CONN 4	H-12
CONN 5	C-10, E-11, J-12
CONN 6	D-11
CONN 7	D-11
CONN 8	D-11
CONN 9	C-11
CONN 10	A-11
CONN 11	A-11
CONN 12	G-8
CONN 13	G-8
CONN 14	H-8
CONN 15	F-7
CONN 16	B-6
CONN 17	F-6
CONN 18	G-6
CONN 19	G-6
CONN 20	G-5
CONN 21 SERVICE CONNECTOR	C-5
CONN 22	B-5
CONN 23	C-4
CONN 24	C-4
CONN 25	G-4
CONN 26	J-3
CONN 27	J-3
CONN 28	H-3
CONN 29	H-3
CONN 30	H-3
CONN 31	H-3
CONN 32	G-3
CONN 33	G-3
CONN 34	F-2
CONN 35	F-2
CONN 36	F-2
CONN 37	G-2, F-2
CONN 38	G-2

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

MID / FMI / EVENT CODES

Machine Control System (MID No. 039)	
CID	**Component**
0041	+8 VDC Sensor Power Supply
0096	Fuel Level Sensor
0110	Engine Coolant Temperature Sensor
0167	Alternator Charging Voltage Sensor
0168	Electrical System Voltage
0190	Engine Speed Sensor
0246	Proprietary CAN Data Link
0247	SAE J1939 Data Link
0248	Cat Data Link
0254	Electronic Control Module
0262	+5 VDC Sensor Power Supply
0271	Action Alarm
0374	Swing Brake Solenoid
0581	Power Shift Solenoid
0586	Engine Speed Dial Switch
0588	Monitoring System Display
0590	Engine Control Module
0598	Travel Speed Solenoid
0600	Hydraulic Oil Temperature Sensor
0697	Priority Valve Solenoid
1129	Left Attachment Pedal Position Sensor
1130	Left Attachment Pedal Position Sensor
1160	Hydraulic Lock Solenoid
1178	Machine Overload Warning Pressure Sensor
1590	Main Pump Flow Limitation Pressure Solenoid
1593	Attachment Valve #1 Extend Pressure Solenoid
1594	Attachment Valve #2 Extend Pressure Solenoid
1595	Attachment Valve #3 Extend Pressure Solenoid
1596	Attachment Valve #1 Retract Pressure Solenoid
1597	Attachment Valve #2 Retract Pressure Solenoid
1598	Attachment Valve #3 Retract Pressure Solenoid
1609	F2 Type Valve Load Sense Pressure Sensor
1615	1-Way / 2-Way Valve Solenoid
1657	Left Joystick Thumbwheel
1658	Right Joystick Thumbwheel
1665	Variable Relief Valve #1 Pressure Solenoid
1666	Variable Relief Valve #2 Pressure Solenoid
1931	Auxiliary Circuit Flow Combining Solenoid
1956	Bucket cylinder Position Sensor
1960	Ignition Key Reader
1968	Boom Cylinder Rod End Pressure Sensor
1969	Boom Cylinder Head End Pressure Sensor
2103	Boom Circuit Regeneration Solenoid
2265	Hydraulic Pump Number 1 Outlet Pressure Sensor
2266	Hydraulic Pump Number 2 Outlet Pressure Sensor
2280	Travel Alarm Relay
2300	Switch Panel
2420	Boom Cylinder Extend Limit Solenoid
2421	Boom Cylinder Retract Limit Solenoid
2422	Stick Cylinder Extend Limit Solenoid
2423	Stick Cylinder Retract Limit Solenoid
2424	Bucket Cylinder Retract Limit Solenoid
2425	Boom Angle Sensor
2426	Stick Angle Sensor
2429	Boom Cylinder Extend Pilot Pressure Sensor
2713	Stick Cylinder Retract Cab Contour Avoidance Solenoid
3042	Bucket Cylinder Extend Limit Solenoid

[1] The CID is a diagnostic code that indicates which circuit is faulty.

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

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

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

Event Codes Machine Control	
Event Code	**Condition**
0015	High Engine Coolant Temperature Derate
0017	High Engine Coolant Temperature Warning
0023	High Hydraulic Oil Temperature Derate
0043	Low System Voltage Warning
0050	High System Voltage Warning
0059	Coolant Level Low
0095	Fuel Filter Plugged
0100	Low Engine Oil Pressure Warning
0119	Low Fuel Level
0171	Low Engine Oil Level
0232	High Fuel/Water Separator Water Level
0235	Low Hydraulic Oil Level
0236	Return Hydraulic Oil Filter Plugged
0237	Machine Overloaded
0252	Loss of Key Table Information
0272	Inlet Air Restriction Warning
0351	Lift Linkage movement detected in the wrong direction.
0600	High Hydraulic Oil Temperature Warning
0862	Attachment Hydraulic Oil Filter Plugged
0863	Abnormal Machine Autolube system Operation
1046	Tooling Overheating

SPECIFICATIONS AND RELATED MANUALS

Resistor and Sender Specifications			
Part No.	**Component Description**		**Resistance (Ohms)[1]**
174-3016	Resistor	Machine CAN	120 ± 10%
4I-5394	Sender	Squeeze Presure	6134 - 7496
341-1842	Sender	Fuel Level	Empty = 83.5 1/4 = 53 1/2 = 33.8 3/4 = 21 Full = 8
342-2924	Sender	Coolant Temperature	6134 - 7496

[1] At room temperature unless otherwise noted.

Off-Machine Switch Specification				
Part No.	**Function**	**Actuate**	**Deactuate**	**Contact Position**
170-9419	Hydraulic Oil Filter	0.15 MPa ± 15% 21.76 psi ± 15%	0.125 MPa ± 15% 1.82 MPa ± 15%	Normally Closed
309-5768	Implement Pressure Travel Pressure	2650 ± 200 kPa 384.35 ± 29.01 psi	2150 ± 200 kPa 311.83 ± 29.01 psi	Normally Open
309-5769	Auxiliary Pump Pressure ATCH Boom Priority Pressure ATCH Joystick Pressure ATCH Two Way Lever Change Press. ATCH	490 ± 49 kPa 71.07 ± 7.11 psi	294 kPa MIN 42.64 psi MIN	Normally Open

Related Electrical Service Manuals	
Title	**Form Number**
Cross Reference for Electrical Connectors:	REHS0970
Machine Control:	KENR5924

UENR3221-01
42 Page, (Dimensions: 56 inches x 35 inches)

The following wire pairs must be twisted at least 1 turn per 25mm:		
892	&	893
251	&	261
252	&	262
T901	&	T902

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
- START AID CIRCUIT
- MACHINE CONTROL CIRCUIT
- MONITOR CIRCUIT
- MACHINE SECURITY CONTROL CIRCUIT
- HEATER AND AIR CONDITIONER CIRCUIT
- TURN SIGNAL / WIPER WASHER CIRCUIT
- CAT DATA LINK
- RS-232 / RS-485 DATA LINK
- CAN DATA LINK A

OTHER COLOR DESCRIPTIONS

- HIGHWAYS

IDENT	PART NO.	LOC.	DESCRIPTION
			HARNESS ASSEMBLY
A	259-5297	H-8	PLATFORM
C	388-6763	H-8	CHASSIS
E	275-6876	A-10	FORWARD WARNING HORN
F	350-8253	F-5	CAB
G	373-8980	H-3	CONSOLE-RH
H	251-0580	J-3	CONSOLE-LH
M	328-0021	G-2	KEY SW (CONSOLE)
N	291-7746	A-11	BOOM LAMP-LH
P	291-7731	A-10	BOOM LAMP-RH
AJ	234-1124	B-5	RADIO CONVERTER
AL	267-7697	C-15	QUICK COUPLER (HIGH PRESSURE)
AW	238-2479	B-1	QUICK COUPLER(SW)(HIGH PRESSURE)
CC	170-6929	J-14	BAT. JUMPER
CE	319-1277	J-9	DISC SW-BAT.
CJ	319-1343	J-8	BLOCK AS.-MAIN BREAKER
CL	251-0304	J-8	TERM. BLOCK-ALT BREAKER
CR	328-0385	J-14	BAT. -BLOCK GP(JUNCTION)
CV	319-1252	J-14	BLOCK GP(JUNCTION)-BLOCK AS.
EC	267-7703	C-13	MEDIUM CIRCUIT (F4/DANFOSS)
EK	373-8965	B-10	PRODUCT LINK (PL-GSM)
FA	238-2390	D-7	MAIN RELAY-FUSE BASE
FC	238-2391	B-7	MAIN RELAY-FUSE BASE
GH	259-5224	B-5	EXTEND WIRE FOR 12V READY
GK	275-7047	C-11	PRODUCT LINK 121SR (RADIO)
GL	259-4940	D-11	PRODUCT LINK (SERVICE CONN)
GN	259-4887	E-9	PRODUCT LINK 321SR (GATEWAY)
GP	299-2838	D-12	AUX READY, SYSTEM 23
GX1	327-9998	F-6	REAR VIEW CAMERA
GY1	306-8590	F-6	REAR VIEW CAMERA
WA	324-5804	I-9	TERM. BLOCK-START RELAY
WC	324-5805	I-9	START RELAY-TERM. BLOCK
WE	238-2280	I-8	MAIN BREAKER-TERM. BLOCK
WK	163-6758	C-7	LAMP DELAY TIMER

NOTE A: USE WITH COLD WEATHER.
NOTE B: USE WITH FRONT GUARD CAB LAMP.
NOTE C: USE WITH LAMP DELAY TIMER.
NOTE D: NOT USE ON THIS VEHICLE.
NOTE E: USE WITH ALL TOOL CONTROL SYSTEMS.
NOTE F: USE WITH SYSTEM 23.
NOTE G: USE WITH PRODUCT LINK 321SR.
NOTE H: USE WITH PRODUCT LINK 121SR.
NOTE J:USE WITH PL-GSM.
NOTE K: USE WITH BLADE.
NOTE L: EXCHANGE TO 5A FUSE AT INSTALL GH HARNESS.

SYMBOL	DESCRIPTION
	CIRCUIT CONNECTED
	CIRCUIT NOT CONNECTED
	ELECTRICAL CONNECTION TO MACHINE STRUCTURE
	INTERNAL ELECTRICAL CONNECTION TO SURFACE OF COMPONENT
	CONNECTOR
H#	CIRCUIT GROUPING DESIGNATION
	ATCH WIRE, CABLE, COMPONENT
	SPLICE
	BLADE, SPADE, 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 318D EXCAVATOR ELECTRICAL SYSTEM
MEDIA NUMBER: UENR3221-01
SCHEMATIC PART NUMBER: 388-6697, CHANGE: 01, VERSION: HE
Components are shown installed on a fully operable machine with the key and engine off, and with parking brake set.
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.

RIGHT REAR COMPARTMENT

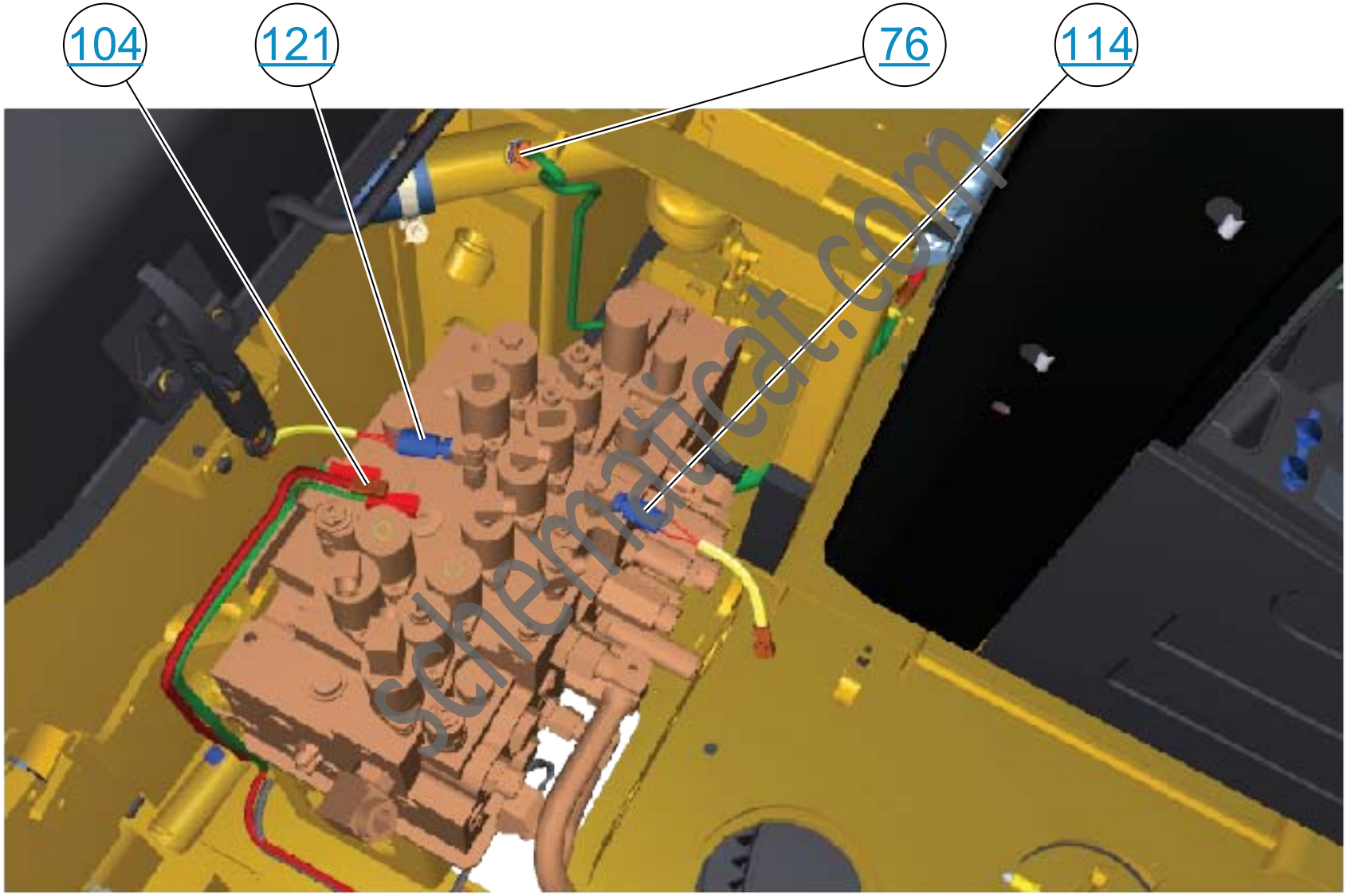
VIEW ALL CALLOUTS

OPERATOR'S SEAT

VIEW ALL CALLOUTS

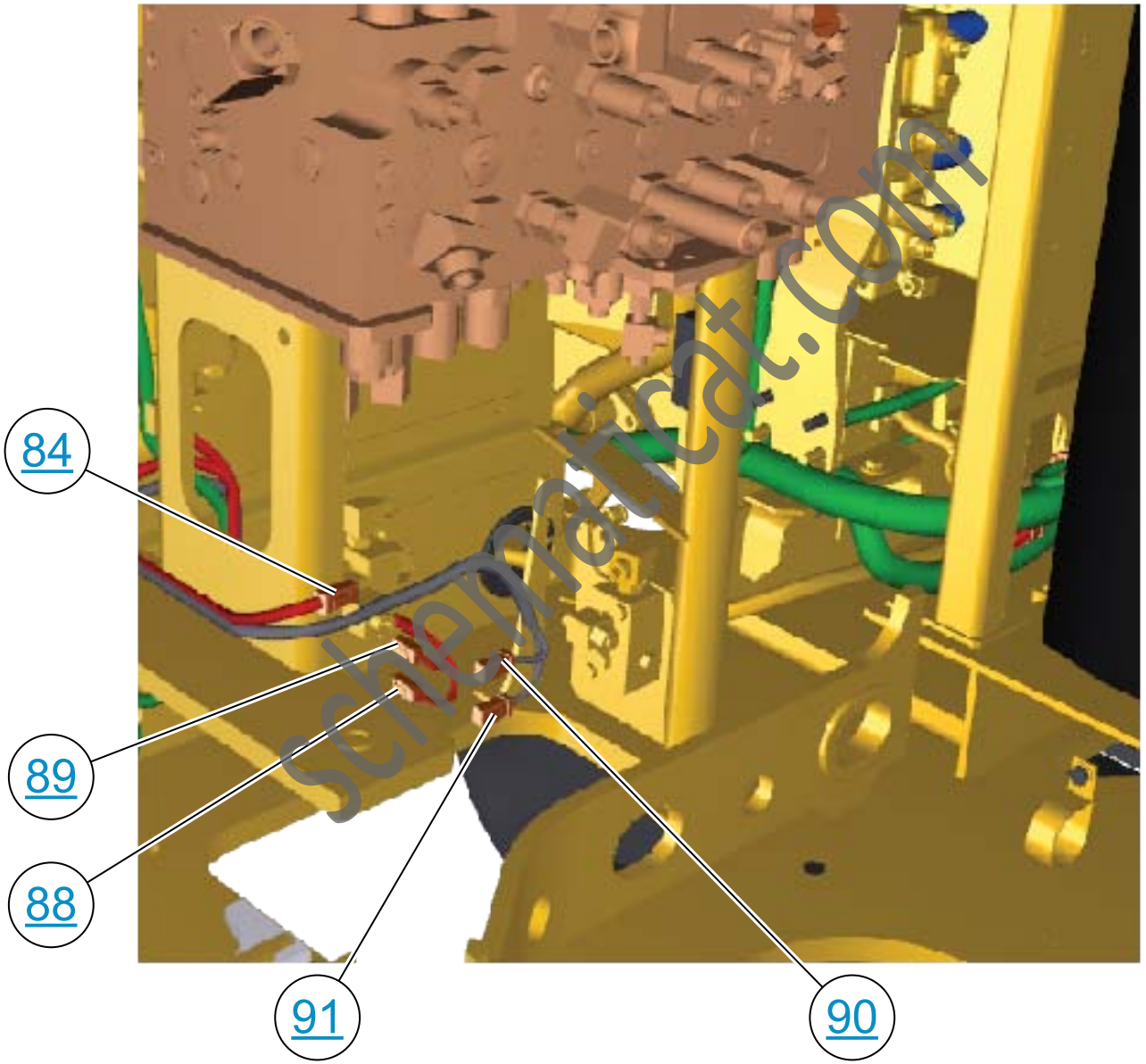
MAIN VALVE TOP

VIEW ALL CALLOUTS



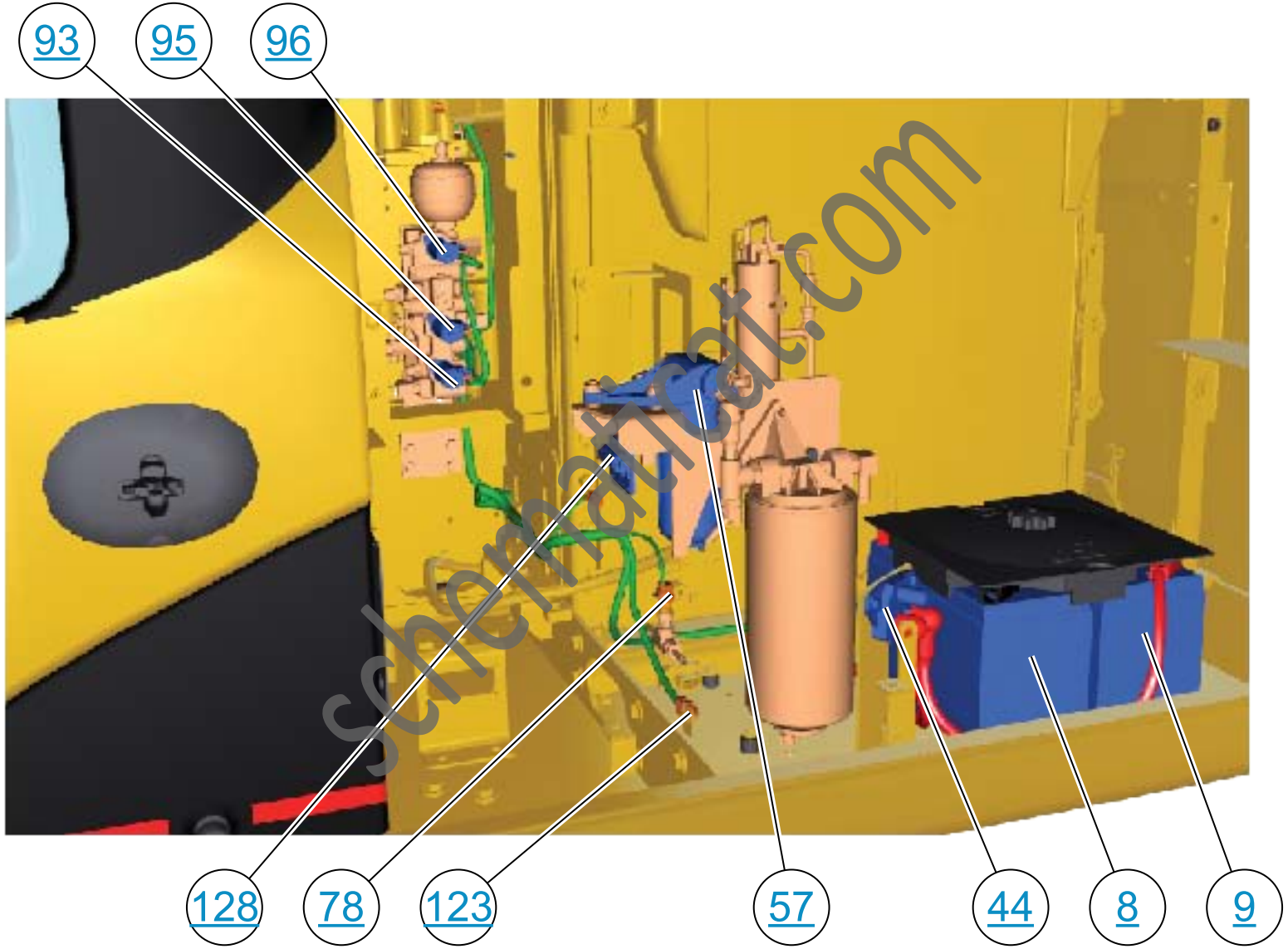
MAIN VALVE LOWER

VIEW ALL CALLOUTS



LEFT REAR COMPARTMENT

VIEW ALL CALLOUTS

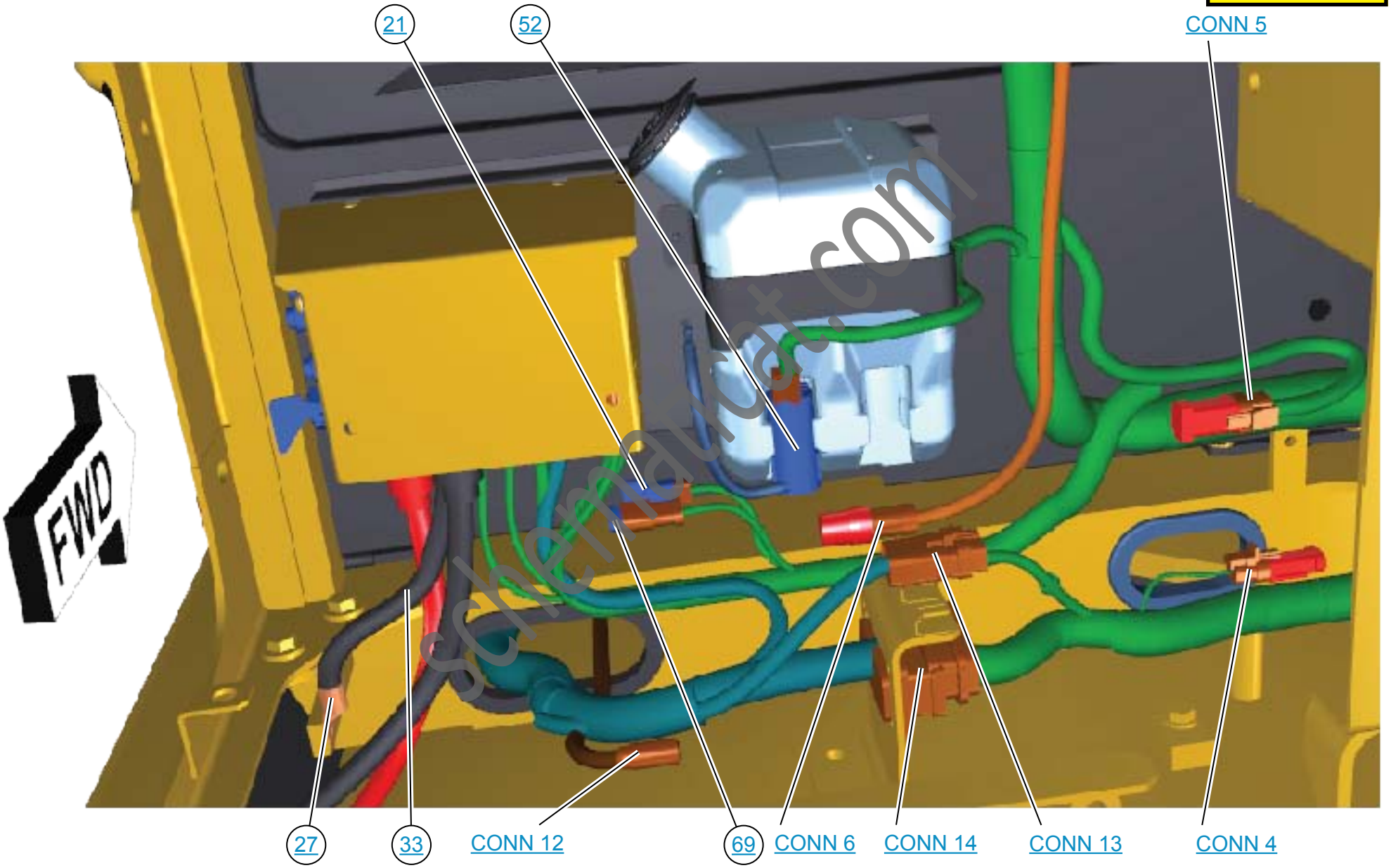


LEFT REAR COMPARTMENT UPPER

VIEW ALL CALLOUTS

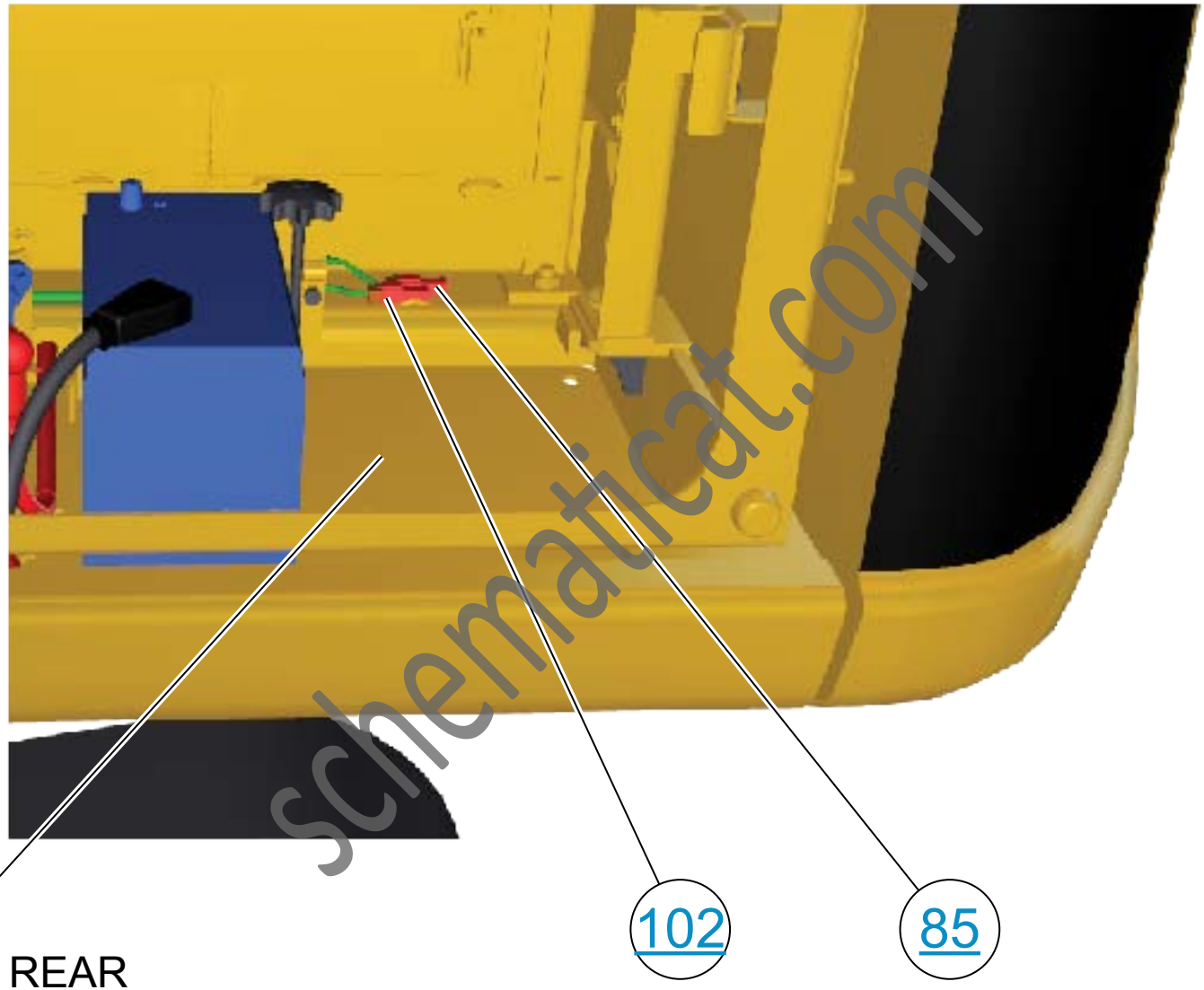
LEFT REAR COMPARTMENT CHASSIS HARNESS

VIEW ALL CALLOUTS



LEFT REAR BATTERY COMPARTMENT

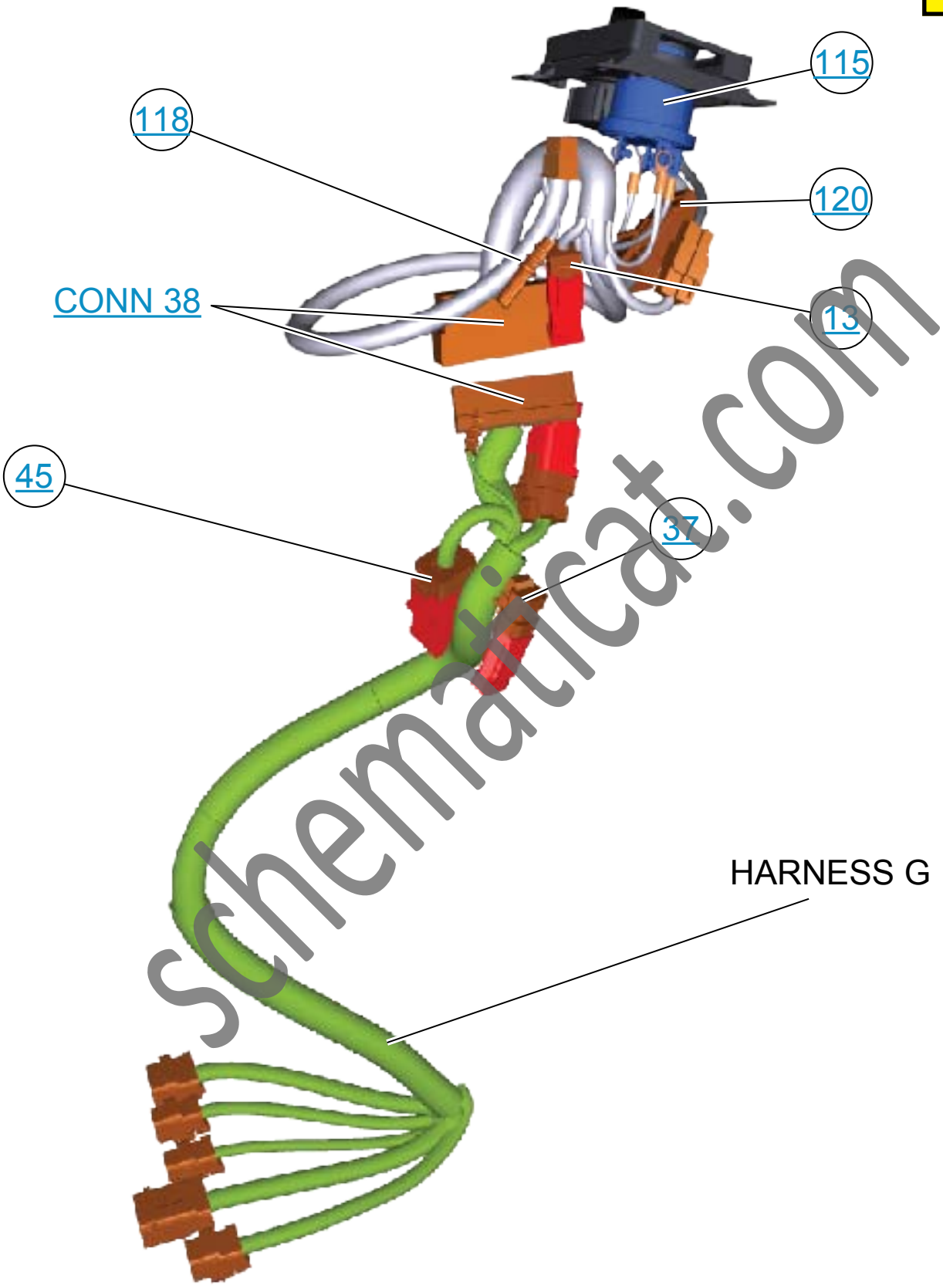
VIEW ALL CALLOUTS



SHOWN WITH REAR
BATTERY REMOVED

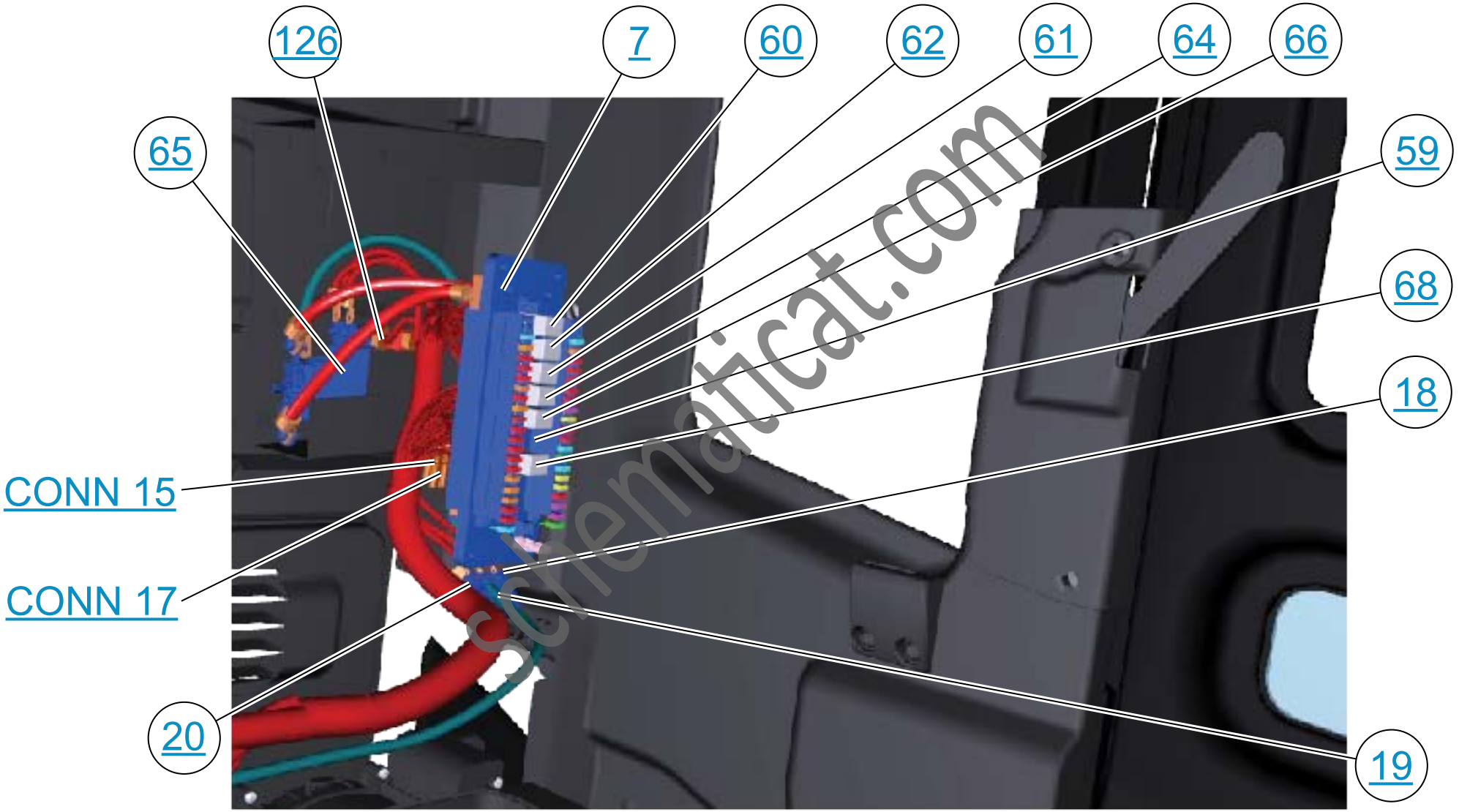
KEYSWITCH AND HARNESS G

VIEW ALL CALLOUTS



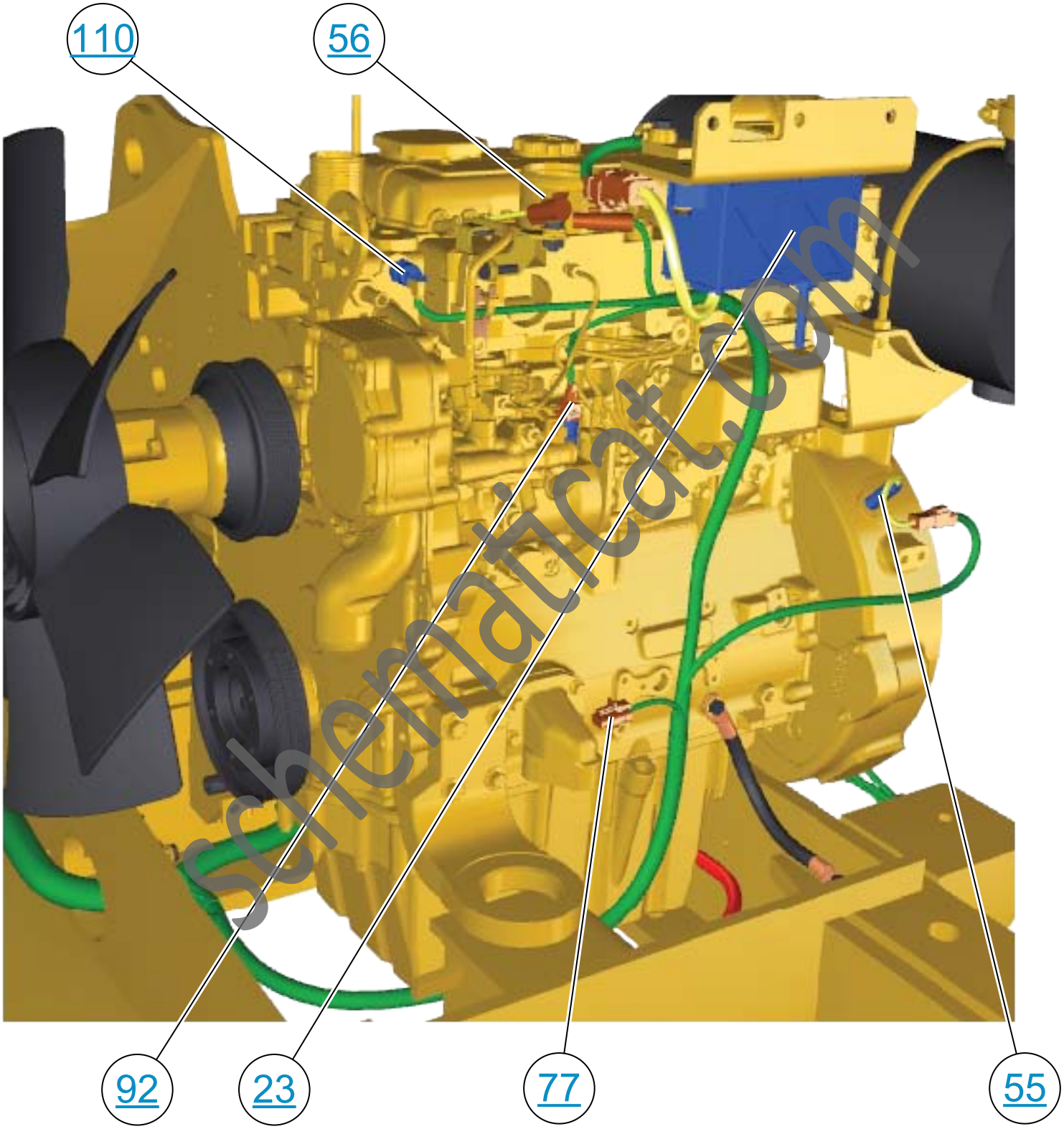
FUSE BASE RIGHT REAR CAB

VIEW ALL CALLOUTS



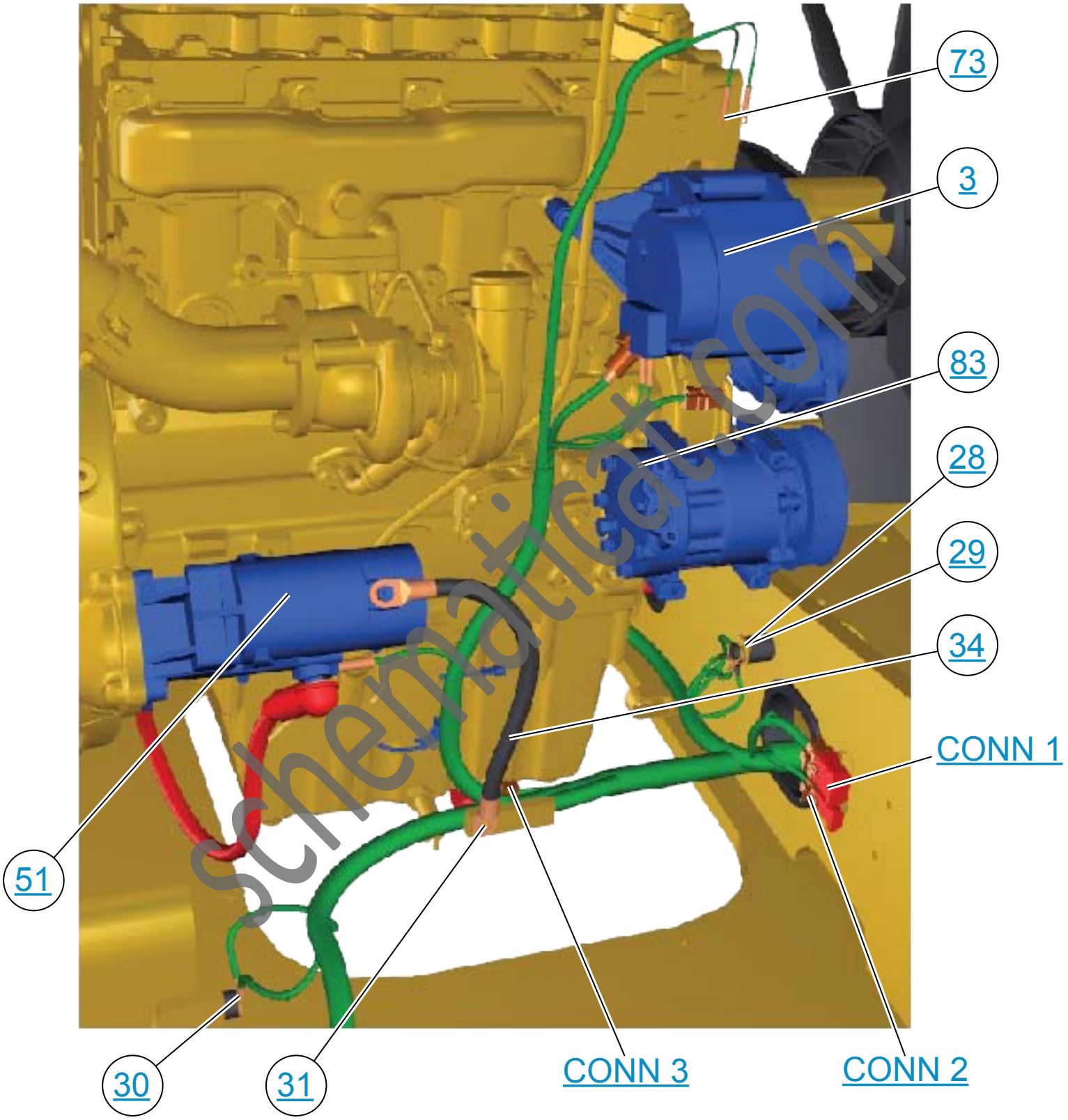
ENGINE REAR

VIEW ALL CALLOUTS



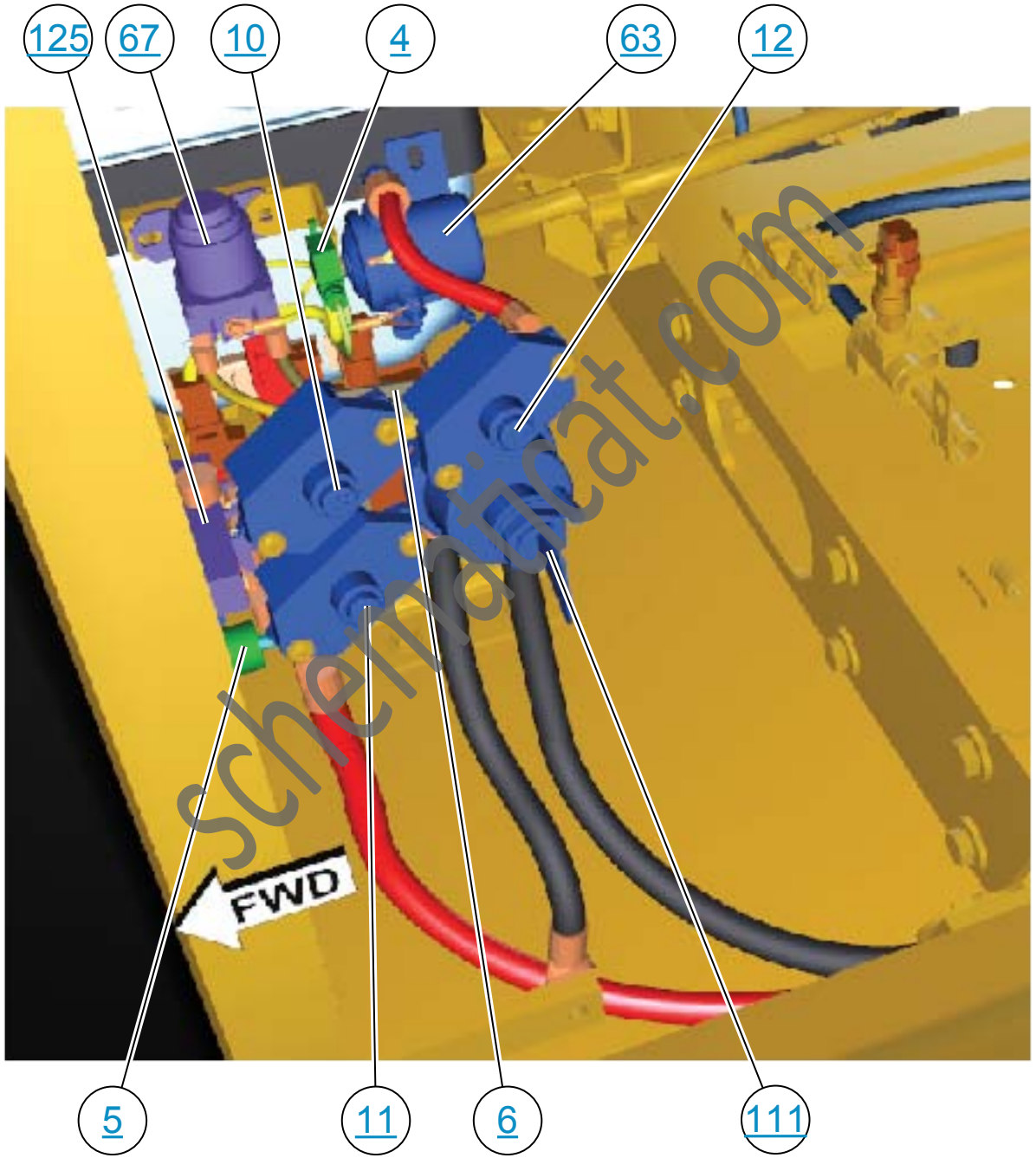
ENGINE FRONT

VIEW ALL CALLOUTS



DISCONNECT SWITCH

VIEW ALL CALLOUTS

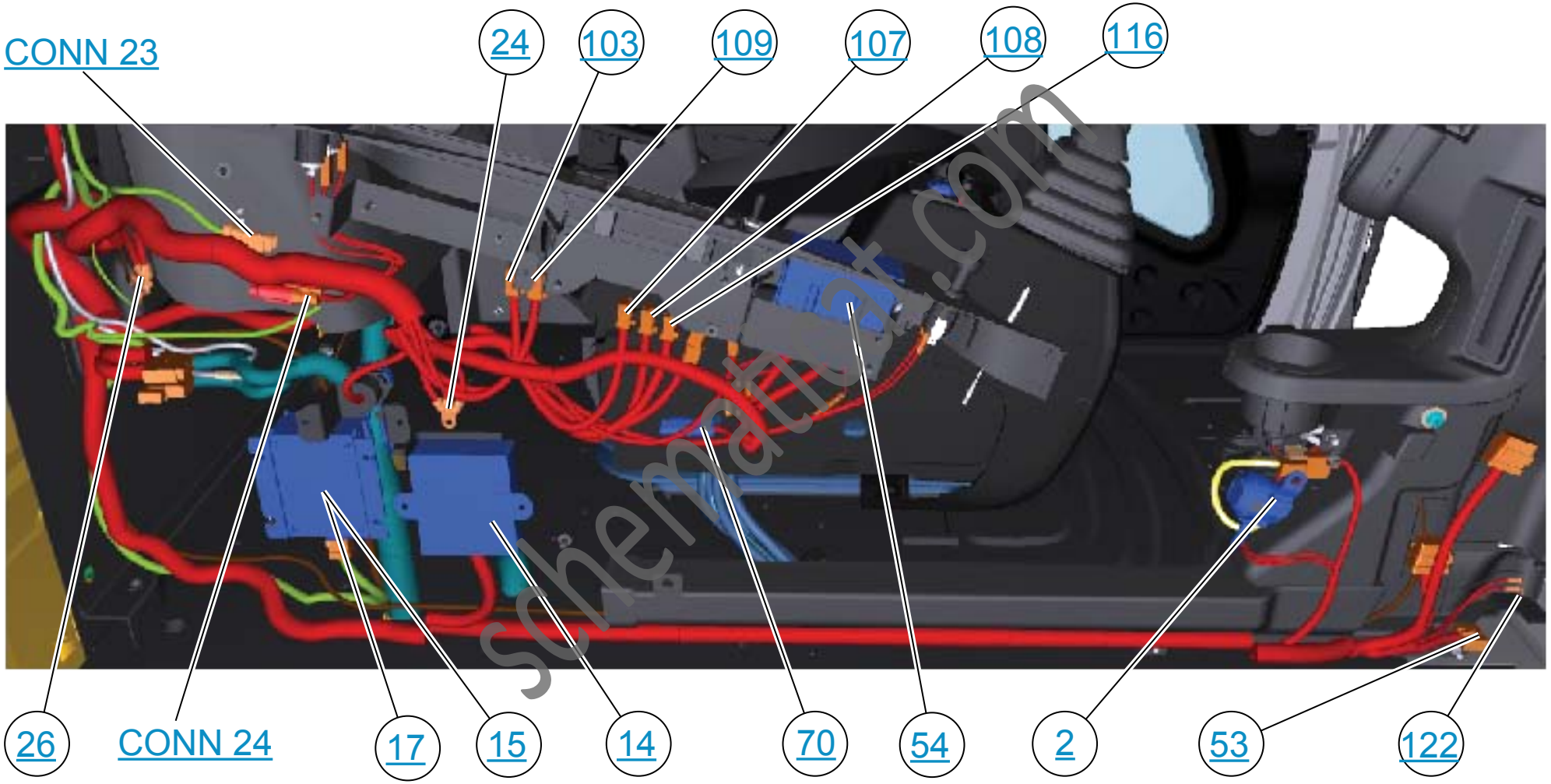


CAB ROOF

VIEW ALL CALLOUTS

CAB RIGHT SIDE CONSOLE

VIEW ALL CALLOUTS

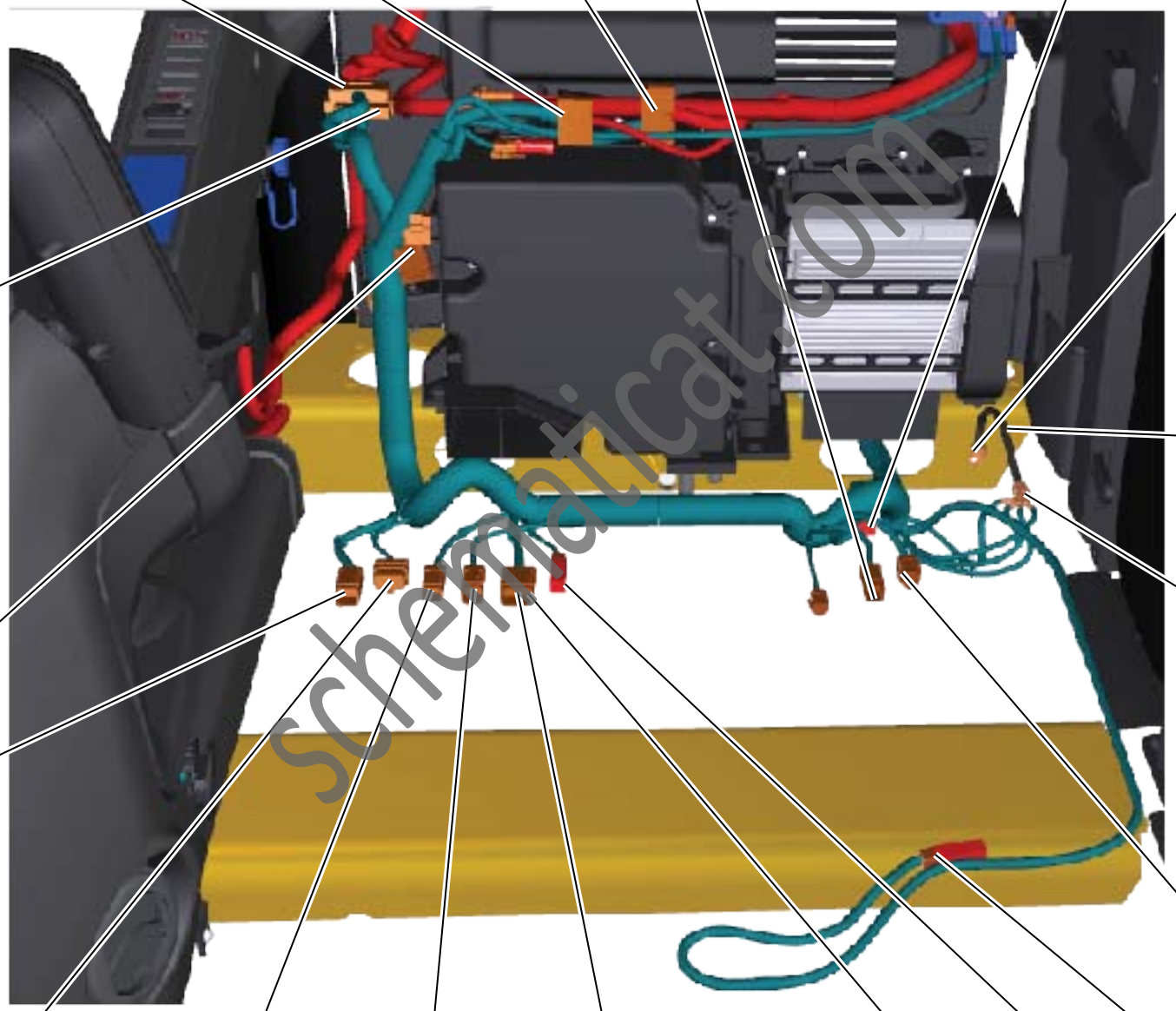


CAB LEFT SIDE

VIEW ALL CALLOUTS

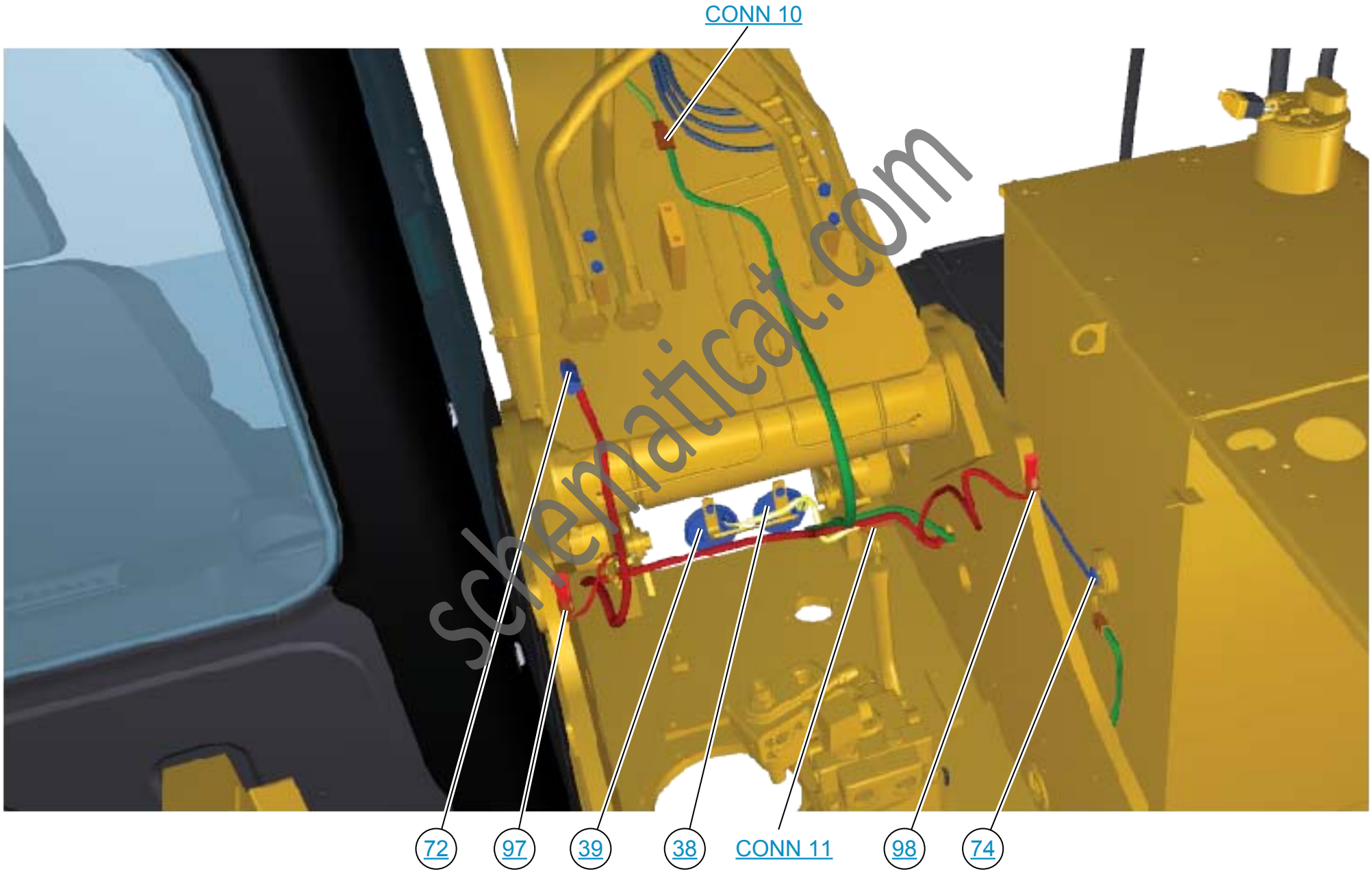
CAB FLOOR BELOW PLATFORM

VIEW ALL CALLOUTS



BOOM AND SWIVEL MOTOR

VIEW ALL CALLOUTS



RIGHT SIDE BELOW FUEL TANK

VIEW ALL CALLOUTS