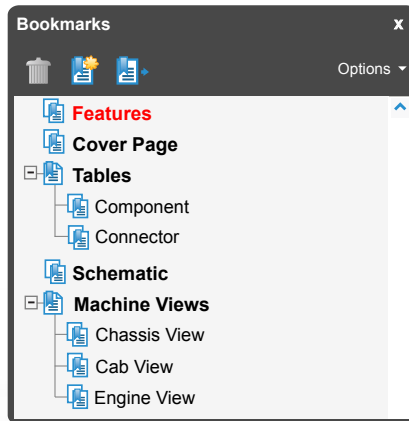


INTERACTIVE SCHEMATIC



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**.

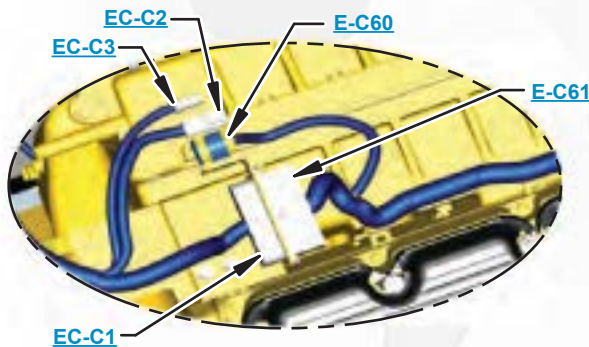
Select **PROPERTIES**.

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.



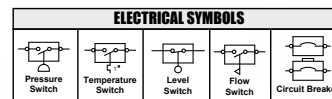
[Click here to save a copy of this interactive schematic to your desktop](#)

VIEW ALL CALLOUTS

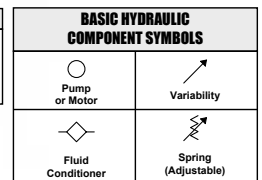
When only one callout is showing on a machine view, clicking on this button will make all of the callouts visible. This button is located in the top right corner of every machine view page.

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"
	Search	"CTRL" / "SHIFT" / "F"

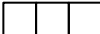
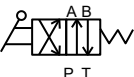
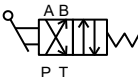
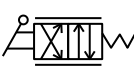


[Click here to view the Schematic Symbols and Definitions page](#)



SCHEMATIC SYMBOLS AND DEFINITIONS



VALVES			
ENVELOPES			
			
One Position	Two Position	Three Position	
PORTS			
			
Two-way	Three-Way	Four-Way	
CONTROL			
			
Normal Position	Shifted Position	Infinite Position	
CHECK			
			
Basic Symbol	Spring Loaded	Shuttle	Pilot Controlled

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

CYLINDERS	
Single Acting	Double Acting

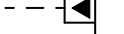
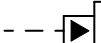
ACCUMULATORS	
Spring Loaded	Gas Charged

PUMPS	
FIXED DISPLACEMENT	
Unidirectional	Bidirectional
VARIABLE DISPLACEMENT NON- COMPENSATED	
Unidirectional	Bidirectional

MOTORS	
FIXED DISPLACEMENT	
Unidirectional	Bidirectional
VARIABLE DISPLACEMENT NON- COMPENSATED	
Unidirectional	Bidirectional

ROTATING SHAFTS	
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 Pneumatic Energy Triangles	

PILOT CONTROL		
RELEASED PRESSURE		
		
External Return	Internal Return	
REMOTE SUPPLY PRESSURE		
		
Simplified	Complete	Internal Supply Pressure

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, ...)	
*Wire gauge is shown in AWG (American Wire Gauge) but could also be shown in metric denoted with mm	
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.	



Schematic

330D and 336D Excavator Electrical System

NBD841-1226
EAH725-1362
FFK326-454
JLP738-863
MEY311-402
PRF1-UP
MPL1-UP
JTN1-UP
JBT1-UP
KKT1-UP
M4T207-UP

Volume 1 of 4: Chassis

Volume 2 of 4: Cab

Volume 3 of 4: Cab

Volume 4 of 4: Engine

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COMPONENT LOCATION

Volume 1 of 4 - CHASSIS



Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Alarm - Travel (Attch)	B-12	1	Sensor - Squeeze Pressure (Attch)	C-7	21
Alternator	F-14	2	Sensor - Water Separator Level (Attch)	I-11	17
Battery - Front	G-5	3	Solenoid - 1 Way / 2 Way Change (Attch)	C-7	22
Battery - Front (Attch)	F-5	3	Solenoid - 1P / 2p Change 1 (Attch)	B-14	12
Battery - Rear	G-6	3	Solenoid - 1P / 2p Change 2 (Attch)	B-14	12
Battery - Rear (Attch)	F-6	3	Solenoid - AC Compressor Clutch	F-14	2
Block - Battery	G-6	3	Solenoid - Boom Check 1 (Attch)	C-5	25
Block - Breaker Box	G-3	A	Solenoid - Boom Check 2 (Attch)	C-5	25
Breaker - Alternator	G-2	A	Solenoid - Boom Down Line Cutoff (Attch)	D-6	F
Breaker - Heater	G-2	A	Solenoid - Double Action (Attch)	B-14	12
Breaker - Main	G-2	A	Solenoid - Ether Start (Attch)	I-10	18
Camera - Rear View	G-16	16	Solenoid - Fine Swing (Attch)	C-5	23
Control - Engine (J1)	G-16	6	Solenoid - Flow Limit (Attch)	A-16	11
Control - Machine	F-2	5	Solenoid - Heavy Lift (Attch)	F-6	F
Control - Product Link	I-14	5	Solenoid - Hydraulic Lock	F-6	F
Diode - Refueling Power (Attch)	B-4	H	Solenoid - Power Shift Pressure	A-16	E
Diode - Start Relay	G-3	A	Solenoid - Quick Coupler (Attch)	B-16	24
Ground - FR 1	F-10	27	Solenoid - Quick Coupler High (Attch)	D-6	20
Ground - FR 2	E-13	28	Solenoid - Quick Coupler Low (Attch)	D-6	20
Ground - FR 3	E-15	6	Solenoid - Radiator Fan Speed	B-16	E
Ground - FR 4	A-8	13	Solenoid - Relief 1 (Attch)	C-7	21
Ground - FR 5 1	F-3	A	Solenoid - Relief 1 Check (Attch)	C-7	21
Ground - FR 5 2	I-16	15	Solenoid - Relief 2 (Attch)	C-7	22
Ground - Product Link Mount	H-14	5	Solenoid - Relief 2 Check (Attch)	C-7	22
Heater - Air	F-15	6	Solenoid - Reversing Fan Change	F-7	F
Indicator - Air Cleaner	I-10	2	Solenoid - Single Action 1 (Attch)	B-7	21
Indicator - Hydraulic Oil Filter	A-12	8	Solenoid - Single Action 2 (Attch)	B-7	22
Motor - AC Condensor Fan	I-10	19	Solenoid - Stem 1 Extend (Attch)	A-13	12
Motor - Lower Washer	F-2	A	Solenoid - Stem 1 Extend (Attch)	A-14	12
Motor - Refueling Pump (Attch)	B-4	H	Solenoid - Stem 1 Retract (Attch)	A-13	12
Motor - Starter	F-15	6	Solenoid - Stem 1 Retract (Attch)	A-14	12
Motor - Washer	F-2	A	Solenoid - Stem 2 Extend (Attch)	A-13	12
Motor- Priming Pump (Attch)	J-11	17	Solenoid - Stem 2 Retract (Attch)	A-13	12
Radio - Product Link	I-16	15	Solenoid - Stem 3 Extend (Attch)	A-16	12
Receptacle - Jump Start	G-5	4	Solenoid - Stem 3 Retract (Attch)	A-16	12
Relay - Air Heater	F-15	7	Solenoid - Swing Brake	F-6	F
Relay - Refueling Power	B-4	H	Solenoid - Travel Speed	F-6	F
Relay - Refueling Start (Attch)	A-4	H	Solenoid - Travel Straight	F-6	F
Relay - Refueling Stop (Attch)	B-4	H	Switch - Boom Down Pressure (Attch)	D-6	F
Relay - Start	G-3	A	Switch - Boom Raise Pressure (Attch)	E-6	F
Resistor - Can Data Link 1	C-3	5	Switch - Boom Up / Down Pressure (Attch)	D-6	F
Resistor - Can Data Link 2	C-3	5	Switch - Coolant Level	I-11	17
Sender - Fuel Level	A-11	10	Switch - Disconnect	F-3	A
Sender - Hydraulic Oil Temperature	A-12	8	Switch - Engine Oil Level	E-15	6
Sensor - Ambient Air Temperature	I-11	26	Switch - Fuel Pressure	J-11	17
Sensor - Engine Speed Pickup	E-15	6	Switch - Hammer Return Filter (Attch)	C-11	22
Sensor - Fuel Pressure	I-11	17	Switch - Hydraulic Oil Level	B-12	9
Sensor - Fuel Temperature	J-11	17	Switch - Priming Pump (Attch)	J-11	17
Sensor - OWLD Pressure (Attch)	C-5	25	Switch - Refueling Level (Attch)	A-11	14
Sensor - Pump Pressure 1	B-16	E	Switch - Refueling Start (N.C.)	A-4	H
Sensor - Pump Pressure 2	B-16	E	Switch - Refueling Start (N.O.)	A-4	H

Machine locations are repeated for components located close together.

A = Located inside or near breaker box.

E = Located on or near hydraulic pumps.

F = Located on or near implement control system.

H = Located on or near refueling pump.

COMPONENT LOCATION

Volume 2 of 4 - CAB



Component	Schematic Location	Machine Location
Coil - Exciter (Attch)	D-3	B
Converter - 12 Volt	F-5	50
Diode - ACC	E-8	G
Diode - Hydraulic Lock	E-8	G
Ground - FR 7	I-15	G
Ground - Platform	H-12	G
Heater - Seat (Attch)	E-6	51
Indicator - Unit	D-3	B
Joystick - Left Hand (3 Sw) (Attch)	H-4	C
Joystick - Left Hand (Attch)	H-4	C
Joystick - Right Hand (3 Sw) (Attch)	E-4	B
Joystick - Right Hand (Attch)	E-3	B
Key Reader - MSS	D-4	B
Motor - Lower Wiper (Attch)	F-1	53
Pedal - Auxilliary LH (Attch)	G-1	52
Suspension - Air Seat (Attch)	H-5	51
Switch - Auxilliary Pump Pressure Stem 4	G-1	54
Switch - Back Up Gov	C-6	B
Switch - Backup EPR Valve	C-6	B
Switch - Foot (Attch)	G-1	52
Switch - High Pressure Stem 1 (Attch)	E-1	54
Switch - Horn	H-4	C
Switch - Implement Pressure	E-7	G
Switch - Key	D-3	B
Switch - Medium Pump Pressure Stem 3	G-1	54
Switch - Neutral Start Limit	I-4	C
Switch - One Touch Low Idle	E-5	B
Switch - Secondary Shut Down	C-15	55
Switch - Throttle Postion	D-3	B
Switch - Travel L Pressure	F-1	53
Switch - Travel R Pressure	F-1	53
Switch - Travel Straight Pressure (Attch)	E-1	54
Unit - Air Conditioner	F-13	56

Machine locations are repeated for components located close together.

A = Located on or near the breaker box.

B = Located inside right console.

C = Located inside left console.

G = Located under cab platform.

COMPONENT LOCATION

Volume 3 of 4 - CAB



Component	Schematic Location	Machine Location
Alarm - Action	F-1	70
Control - Wiper	D-2	73
Converter - 12 Volt Power	B-10	73
Converter - 12 Volt Radio (Attch)	E-10	73
Converter - Radio	B-11	73
Diode - Lamp	H-12	D
Diode - Main Relay	B-13	D
Fuses - Switched Power	E-14	D
Fuses - Un-Switched Power	D-11	D
Ground - Cab 1	D-5	73
Ground - Cab 2	E-9	75
Ground - Cab 3	G-4	78
Meter - Service	E-1	70
Monitor	G-1	79
Motor - Wiper	D-1	70
Panel - Switch	E-3	71
Relay - Beacon (Attch)	F-12	D
Relay - Boom Float / Disable (Attch)	G-14	74
Relay - Boom Lamp	H-12	D
Relay - Cab Lamp	G-12	D
Relay - Chassis Lamp	G-12	D
Relay - Ether (Attch)	E-12	D
Relay - Horn	G-12	D
Relay - LH - Speaker (-) (Attch)	E-16	74
Relay - LH - Speaker (+) (Attch)	F-16	74
Relay - Main	B-14	D
Relay - Neutral Start	F-12	D
Relay - Priming Pump (Attch)	F-14	75
Relay - QC Hydraulic Lock 1 (Attch)	D-16	74
Relay - QC Hydraulic Lock 2 (Attch)	C-16	74
Relay - QC Hydraulic Lock On (Attch)	D-16	74
Relay - QC Hydraulic Lock Priority (Attch)	E-16	74
Relay - RH - Speaker (-) (Attch)	F-16	74
Relay - RH - Speaker (+) (Attch)	F-16	74
Relay - Single (Attch)	F-14	74
Relay - Smart Boom Down (Attch)	G-14	74
Relay - Smart Boom Up / Down (Attch)	H-14	74
Relay - Travel Alarm	F-12	D
Resistor - Backup	H-10	57
Resistor - Can Data Link 1	D-3	71
Resistor - Can Data Link 2	C-8	73
Switch - Beacon (Attch)	B-8	72
Switch - Fine Swing Control (Attch)	B-4	72
Switch - Lower Washer (Attch)	B-6	72
Switch - Lower Wiper (Attch)	B-5	72
Switch - Over Load Warning (Attch)	B-7	72
Switch - Quick Coupler (Attch)	B-3	72
Switch - Radio Mute (Attch)	B-5	72
Switch - Seat Heater (Attch)	B-7	72
Switch - Smart Boom Select (Attch)	B-6	72
Switch - Speaker Exchange (Attch)	B-8	72
Switch - Under Window Limit (Attch)	E-1	77
Switch - Universal Quick Coupler (Attch)	C-2	72
Switch - Window Limit	G-1	80
Timer - Lamp Delay (Attch)	C-14	D

Machine locations are repeated for components located close together.

A = Located in or near breaker box.

D = Located in or near relay / fuse panel.

COMPONENT LOCATION

Volume 4 of 4 - ENGINE



Component	Schematic Location	Machine Location
Control - Engine	E-7	90
Relay - Intake Air Heater	C-3	91
Sensor - (Cam) Lo Speed / Timing	C-3	92
Sensor - (Crank) Hi Speed / Timing	C-3	93
Sensor - Atmospheric Pressure	B-3	94
Sensor - Coolant Temperature	C-3	95
Sensor - Engine Oil Pressure	B-3	96
Sensor - Injector Actuation Pressure	B-3	97
Sensor - Inlet Air Presssure	B-3	98
Sensor - Intake Air Temperature	C-3	99
Solenoid - Injector 1	D-3	100
Solenoid - Injector 2	D-3	101
Solenoid - Injector 3	D-2	102
Solenoid - Injector 4	D-2	103
Solenoid - Injector 5	D-2	104
Solenoid - Injector 6	D-2	105
Valve - IAP Control	B-3	106

CONNECTOR LOCATION

Volume 1 of 4 - CHASSIS



Connector Number	Schematic Location	Machine Location
CONN 1	H-16	5
CONN 2	I-15	5
CONN 3	I-15	5
CONN 4	H-15	5
CONN 5	D-15	6
CONN 6	J-14	A
CONN 7	A-11	10
CONN 8	H-8	5
CONN 9	H-8	5
CONN 10	H-8	5
CONN 11	H-8	5
CONN 12	D-7	27
CONN 13	D-7	27
CONN 14	E-7	27
CONN 15	E-7	27
CONN 16	E-6	F
CONN 17	B-6	23
CONN 18	B-6	25
CONN 19	B-6	25
CONN 20	A-6	13
CONN 21	A-6	13
CONN 22	A-4	H
CONN 23	A-4	H
CONN 24	J-1	A
CONN 25	H-1	A
CONN 26	H-1	A
CONN 27	H-1	A
CONN 28	H-1	A
CONN 29	G-1	A
CONN 30	G-1	A
CONN 31	G-1	A
CONN 32	G-1	A

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.

CONNECTOR LOCATION

Volume 2 of 4 - CAB



Connector Number	Schematic Location	Machine Location
CONN 24	G-16	A
CONN 25	E-16	A
CONN 26	E-16	A
CONN 27	E-16	A
CONN 33	C-14	55
CONN 34	B-14	57
CONN 35	C-13	57
CONN 36	B-12	57
CONN 37	B-11	57
CONN 38	B-10	57
CONN 39	B-9	57
CONN 40	D-11	57
CONN 41	F-10	A
CONN 42A	E-7	B
CONN 42B	E-7	B
CONN 43	D-7	B
CONN 44	D-7	B
CONN 45	D-7	B
CONN 46A	C-7	B
CONN 46A	E-9	B
CONN 46B	C-7	B
CONN 46B	E-8	B
CONN 47	H-7	C
CONN 48	H-7	C
CONN 49	F-5	50
CONN 50	D-5	B
CONN 51	B-4	B
CONN 52	C-4	B

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.

CONNECTOR LOCATION

Volume 3 of 4 - CAB



Connector Number	Schematic Location	Machine Location
CONN 28	H-16	A
CONN 29	H-16	A
CONN 30	H-16	A
CONN 31	H-16	A
CONN 32	I-16	A
CONN 34	I-11	57
CONN 35	I-10	57
CONN 36	I-9	57
CONN 37	I-8	57
CONN 38	I-7	57
CONN 39	I-6	57
CONN 53	D-13	D
CONN 54	D-13	D
CONN 55	B-12	73
CONN 56	E-11	73
CONN 57	B-10	73
CONN 58	D-10	D
CONN 59	D-10	D
CONN 60	H-10	57
CONN 61	C-8	73
CONN 62 ET	D-8	73
CONN 63	C-4	72
CONN 64	C-4	72
CONN 65	C-4	72
CONN 66	D-4	72
CONN 67	D-4	72
CONN 68	B-4	72
CONN 69	C-3	72
CONN 70	H-3	80
CONN 71	H-3	80
CONN 72	H-3	81
CONN 73	H-3	81
CONN 74	H-2	81
CONN 75	H-2	81
CONN 76	H-2	80
CONN 77	H-2	80

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.

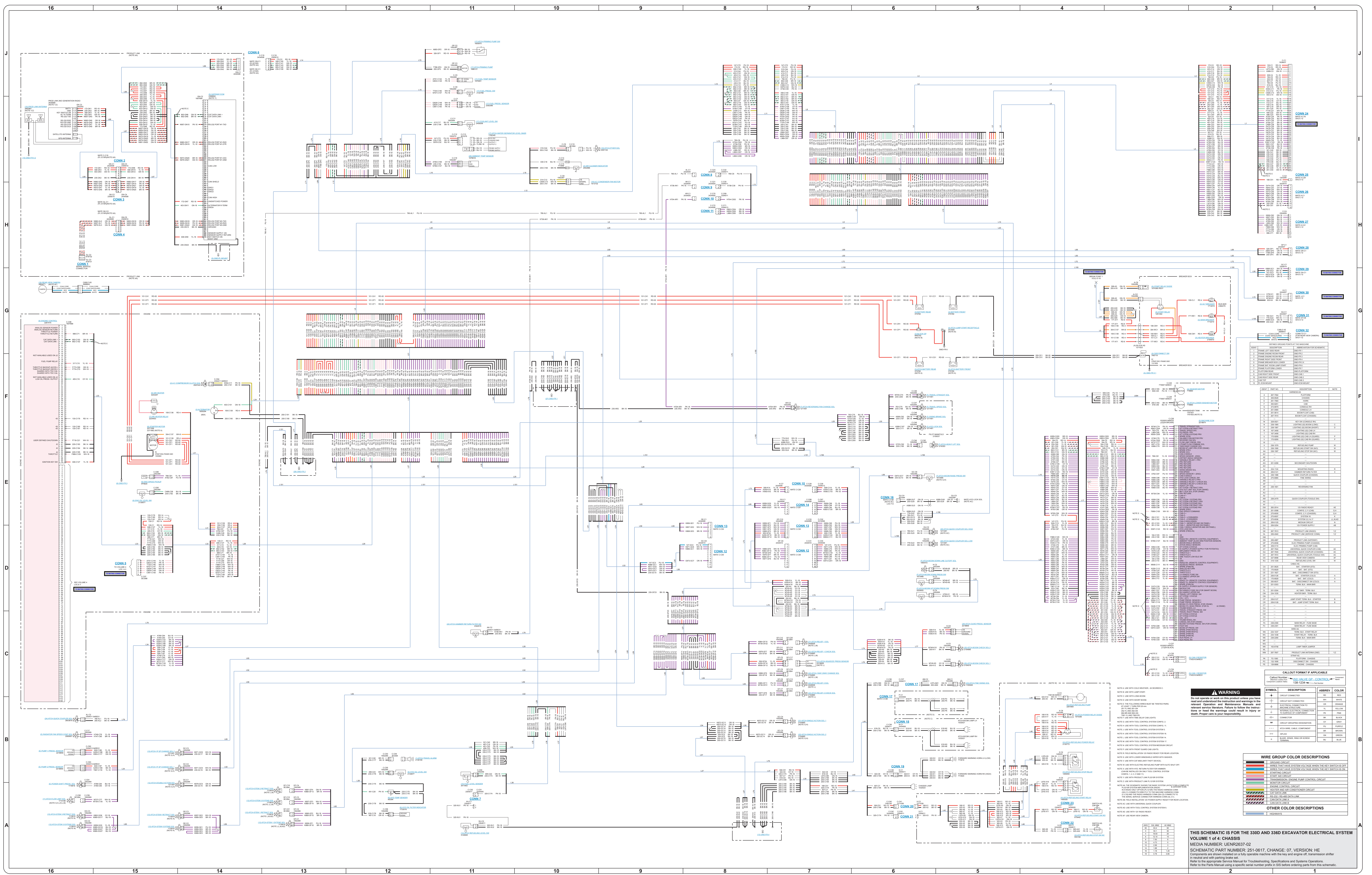
CONNECTOR LOCATION

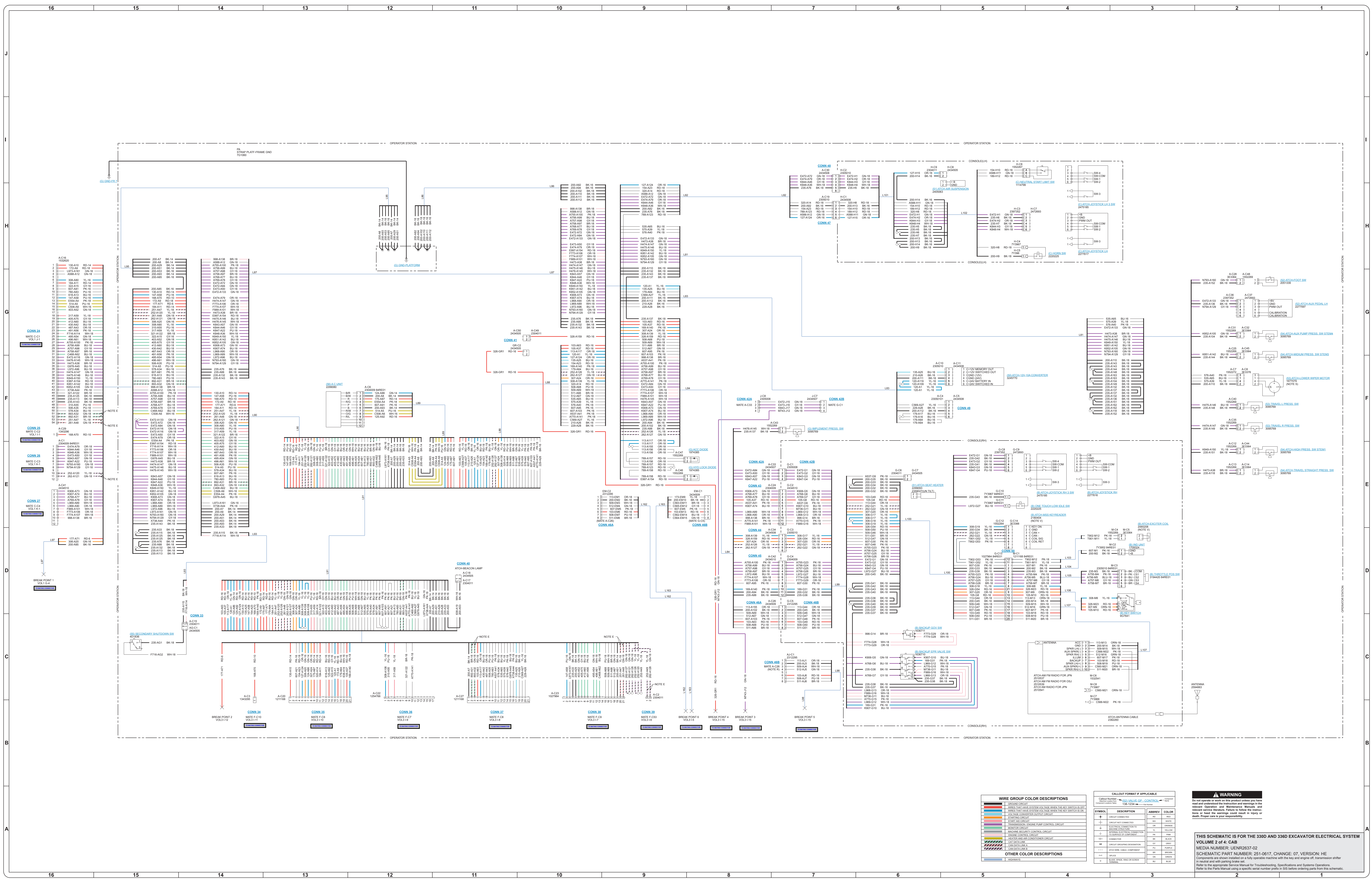
Volume 4 of 4 - ENGINE

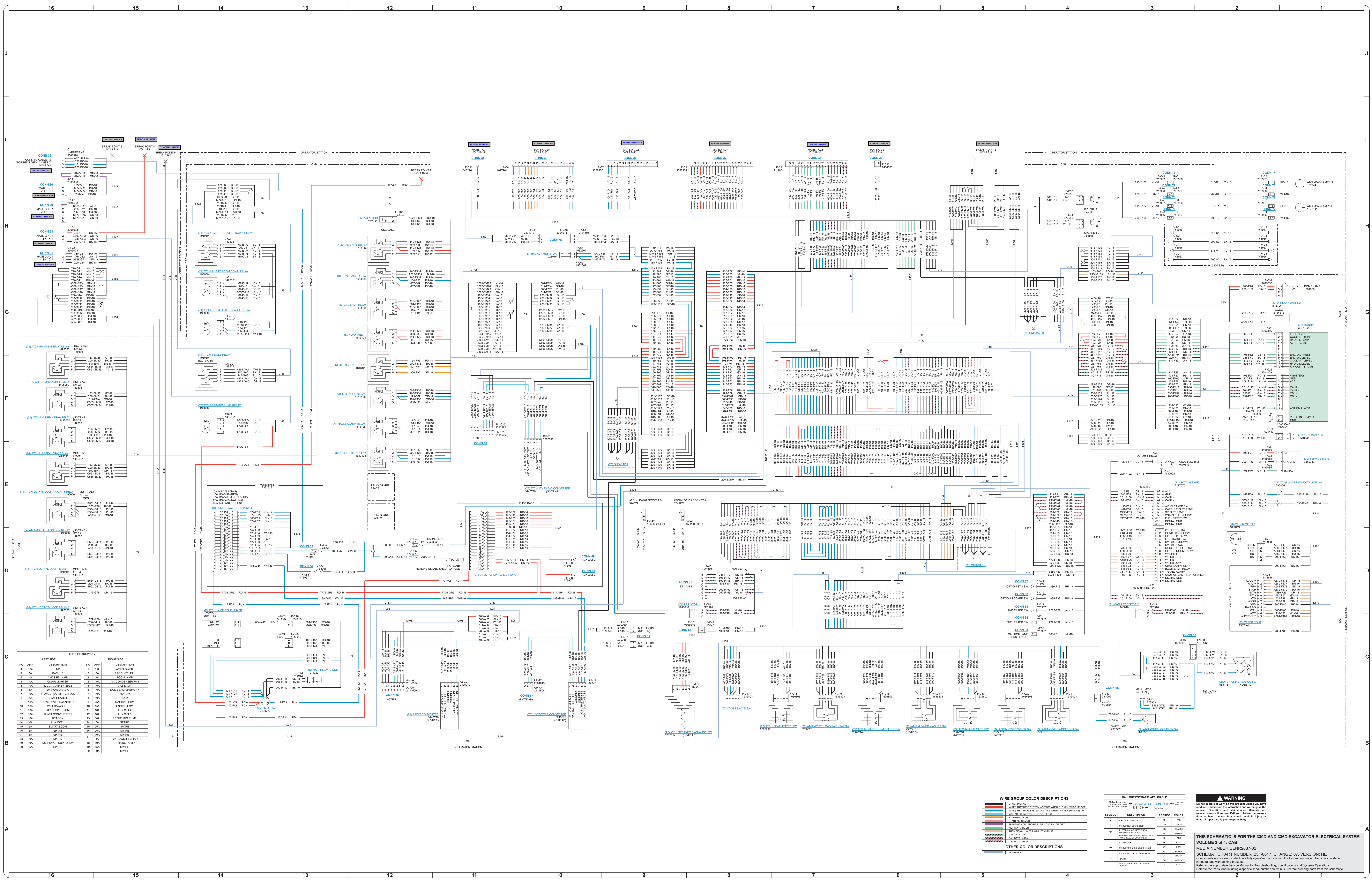


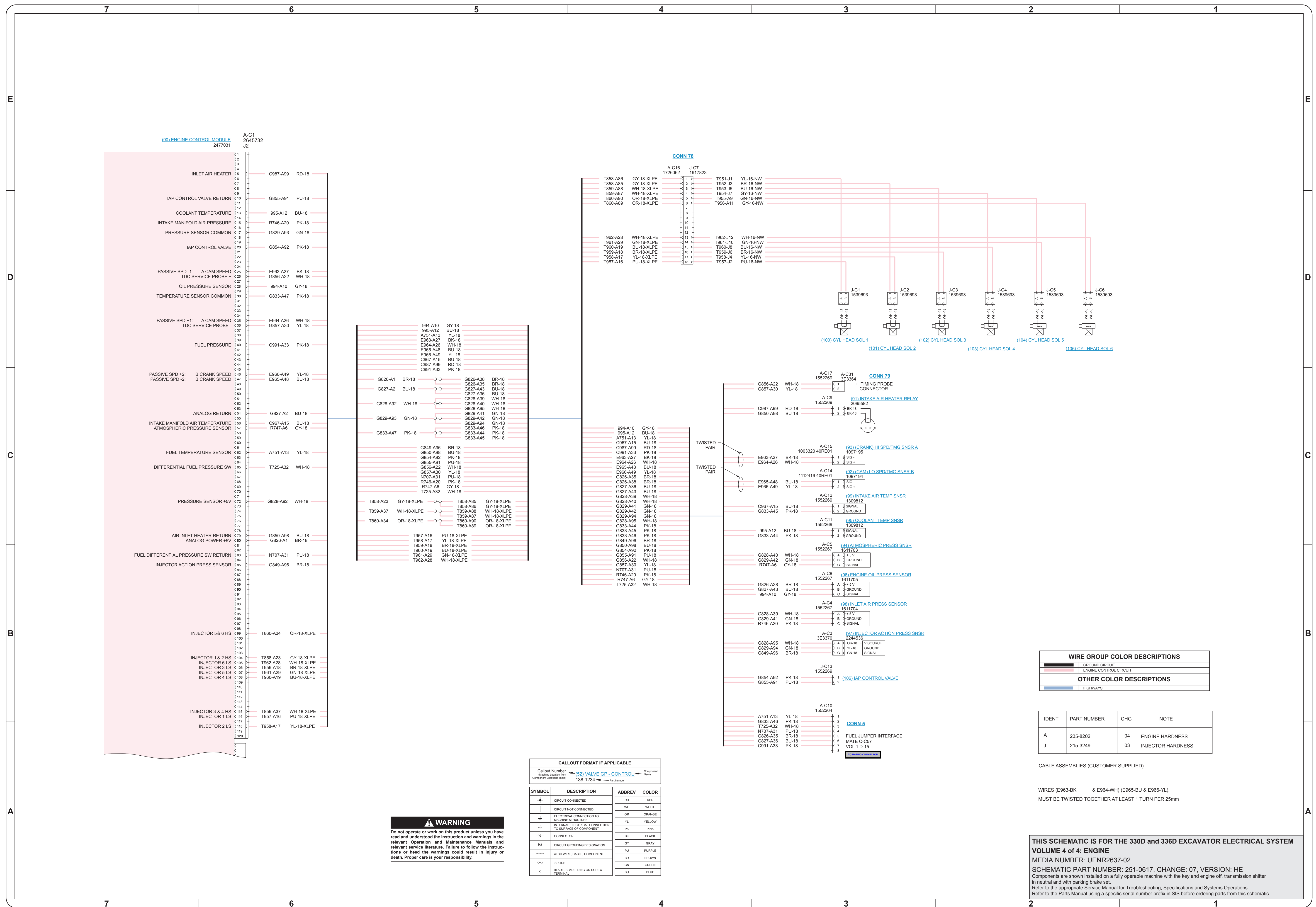
Connector Number	Schematic Location	Machine Location
CONN 5	A-3	107
CONN 78	E-4	108
CONN 79	C-3	109

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.



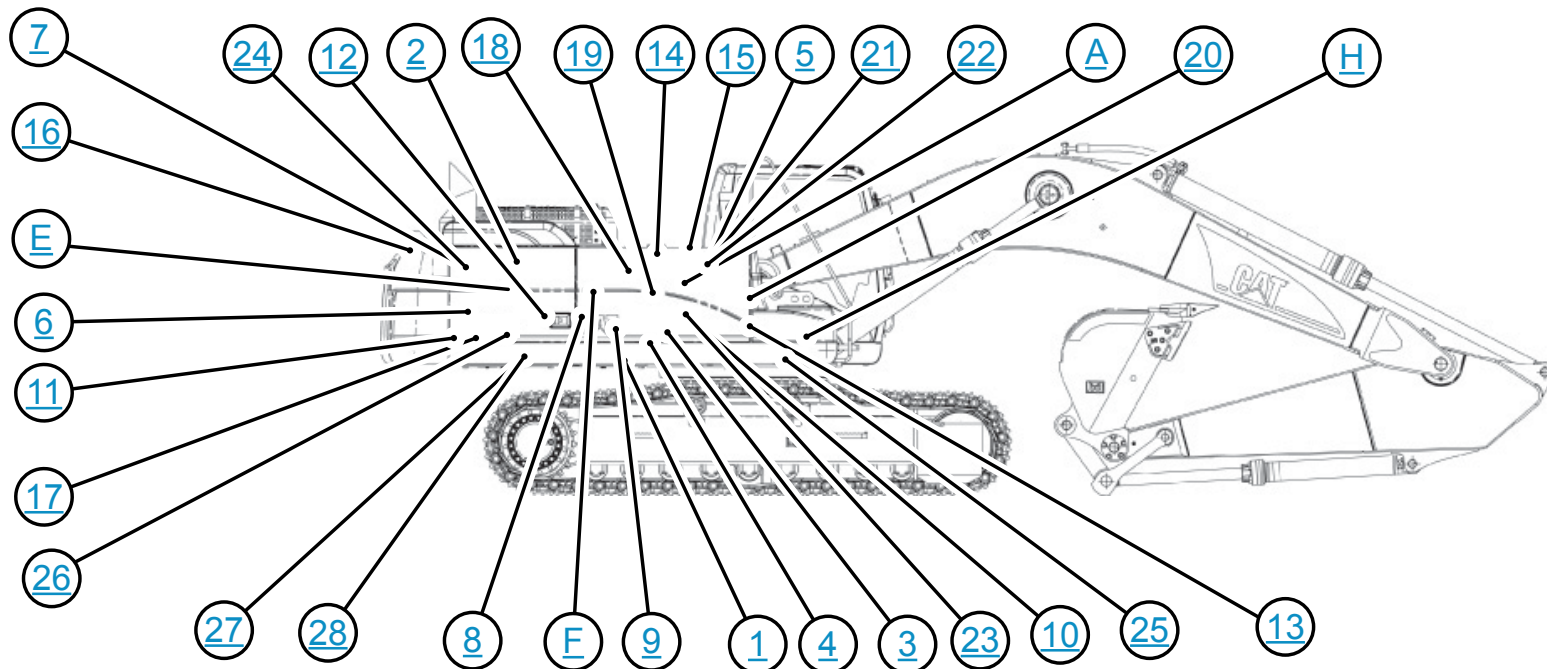
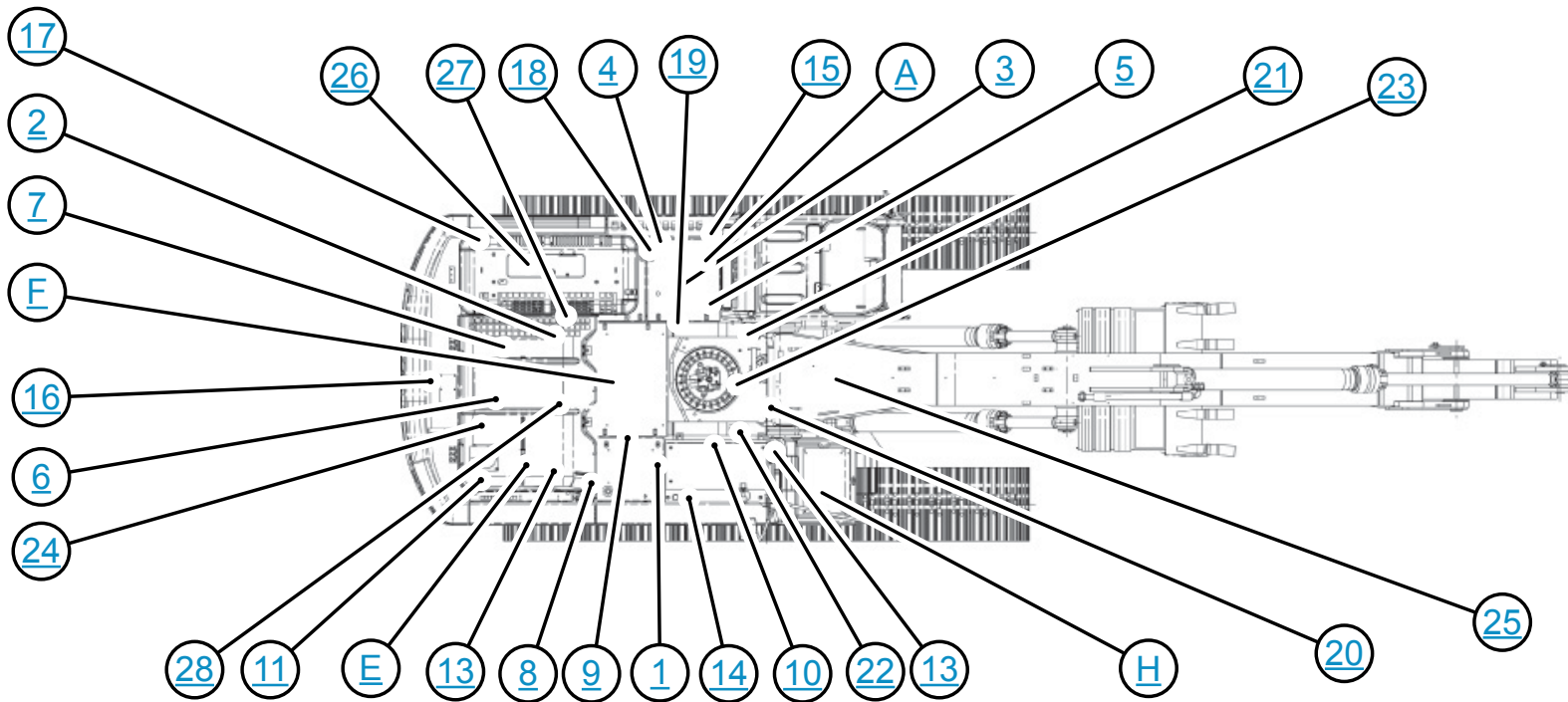






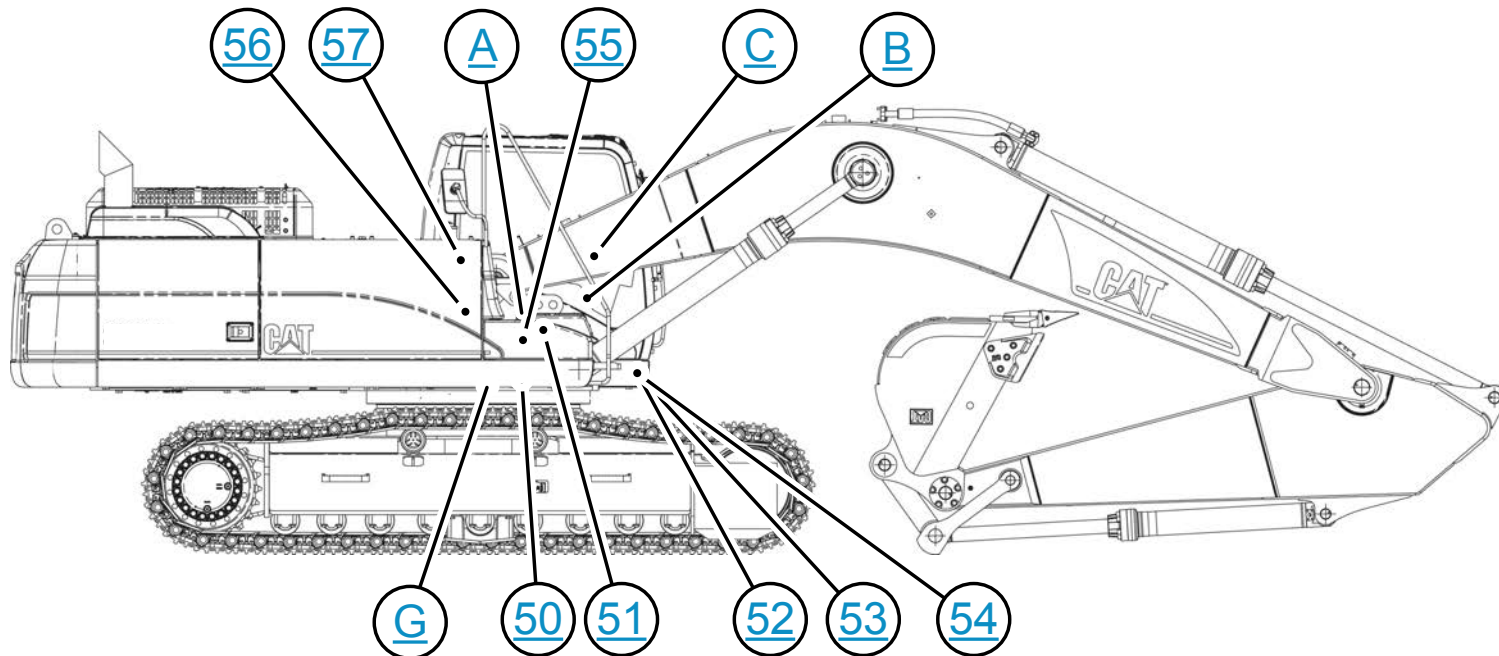
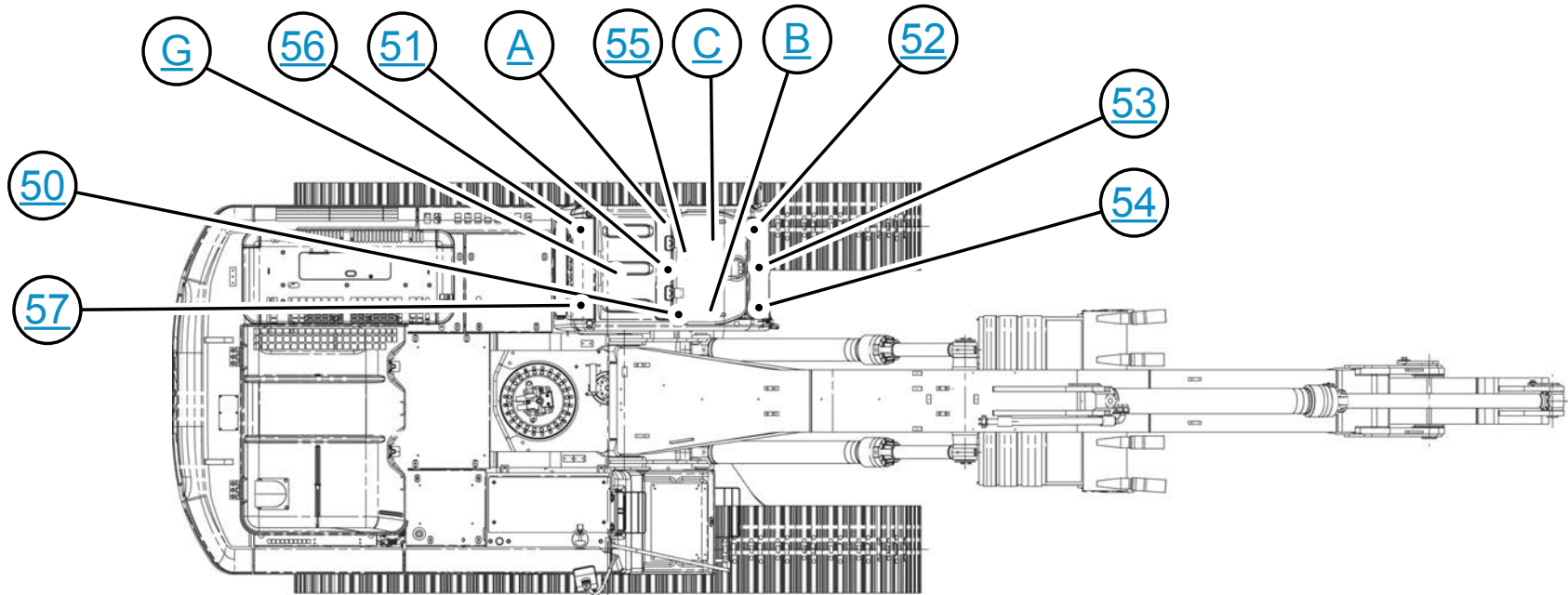
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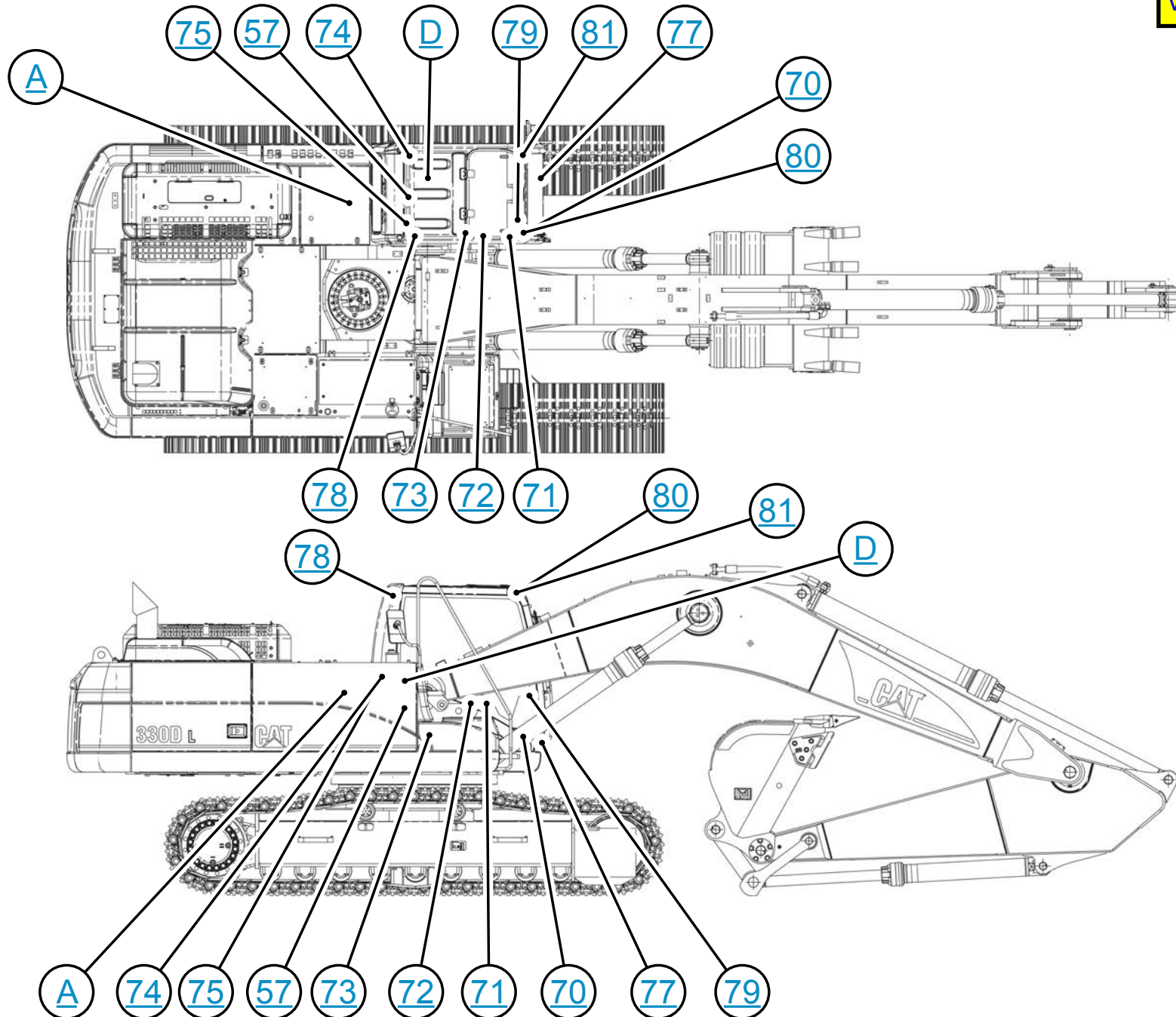
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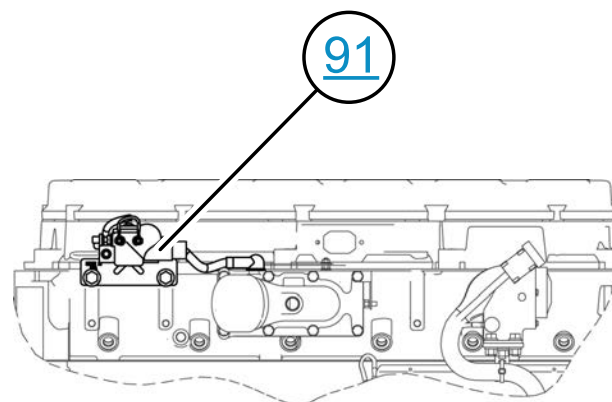


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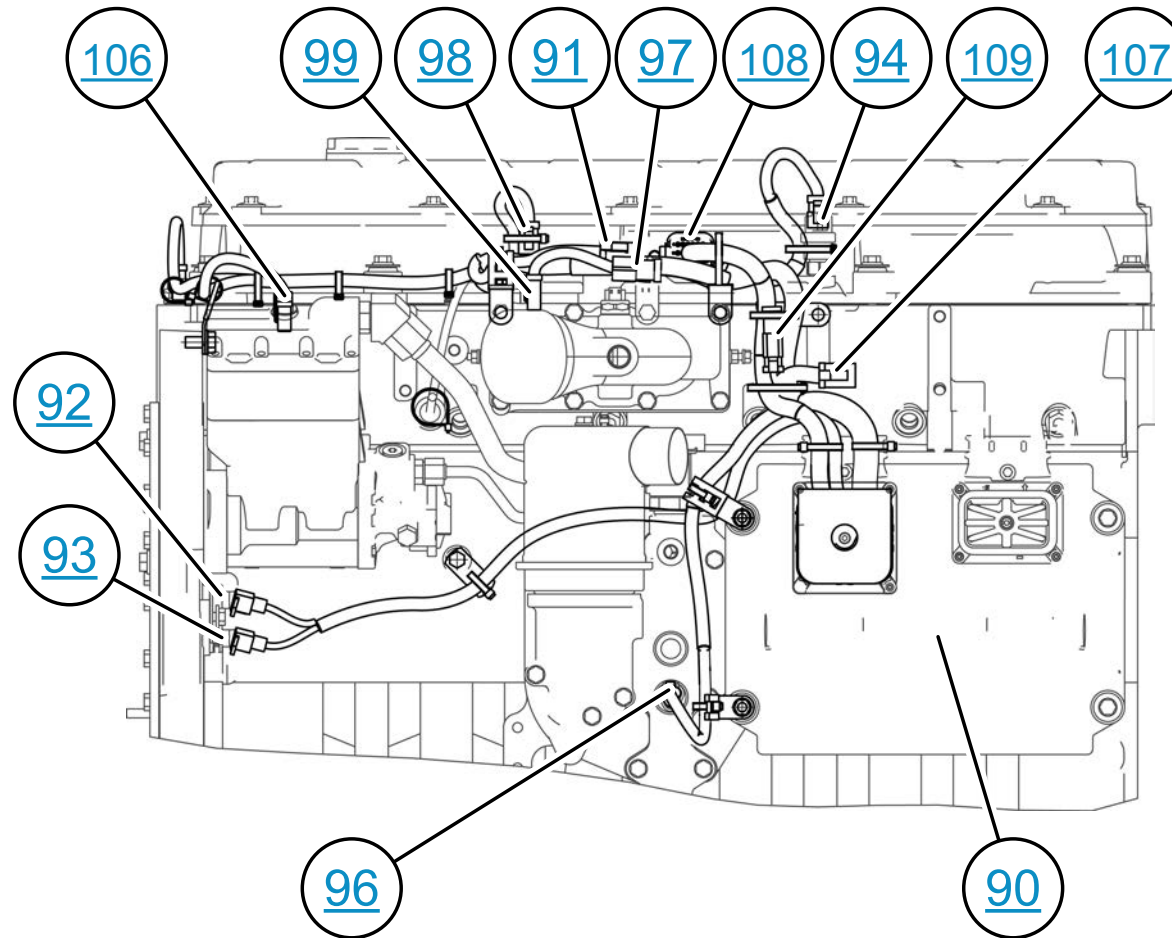
LEFT SIDE VIEW - ENGINE AIR INLET HEATER RELAY



LEFT SIDE VIEW - ENGINE



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TOP VIEW - ENGINE



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