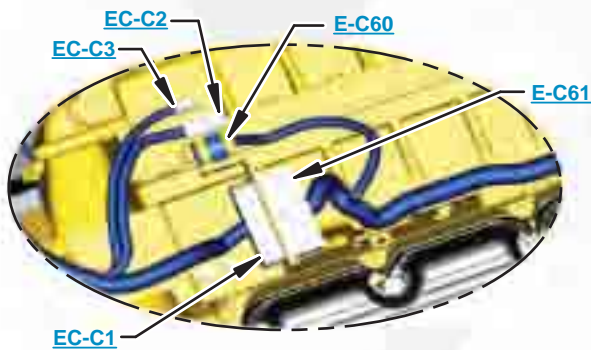


This document is best viewed at a screen resolution of 1024 X 768.

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.

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



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

VIEW ALL CALLOUTS

When only one callout is showing on a machine view 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”



Schematic

TH350B, TH355B, and TH360B Telehandler Electrical System

SLD600-1399
SLE1350-4499
JRK1-UP

COMPONENT LOCATION

Page 1 of 2



Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Accelerator	F-6	27	Sensor - Rear Axle Critical Angle	C-16	71
Accessory Socket	I-13	50	Sensor - Shift Rail 1-3	C-10	E
Alarm - Backup	C-16	1	Sensor - TC Oil Temperature	C-9	E
Alarm - Monitor	G-5	61	Sensor - TC Oil Temperature	C-10	E
Alarm - Platform	H-2	A	Sensor - TCO Speed	D-9	E
Alternator	C-6	2	Sensor - VLPM	D-7	E
Arc Supp - Crab	G-4	3	Sensor - XMSN Int Speed 1	D-9	E
Battery 1-2	A-5	4	Sensor - XMSN Oil Temperature	C-9, D-10	E
Breaker - Alt	B-6	5	Sensor - XMSN Out Speed	D-9, D-10	E
Breaker - Main	B-5	5	Solenoid - 2 Fwd	A-10	E
Breaker - Starter	B-5	5	Solenoid - 2 Rev	A-10	E
Coil - Ferrite	C-1	8	Solenoid - Rev	A-10	E
Control - ECM (Access Platform)	I-1	G	Solenoid - AC Compressor GP	D-5	E
Control - Engine	C-8	E	Solenoid - Aux Div	F-1	14
Control - Joystick	F-4	A	Solenoid - Circle	G-3	3
Control - Machine	D-3	6	Solenoid - Crab	H-3	3
Control - Machine Security Sys	D-1	8	Solenoid - Differential Lock	C-9, C-10	E
Control - PHS Valve SSV2	E-1	9	Solenoid - Forward	A-9	E
Control - PHS Valve SSV4	C-15	10	Solenoid - Frame LVL 1	C-2	18
Control - Product Link	F-5	62	Solenoid - Frame LVL 2	C-2	18
Control - Shifter	H-7	A	Solenoid - Impl Disable	C-15	10
Control - Shuttle	H-7	A	Solenoid - QC	F-1	15
Display Cluster	H-5	C	Solenoid - Rear Axle Lock 1	B-14	16
Flasher	I-12	63	Solenoid - Speed 1	A-9	E
Fuse Block 1	G-14	D	Solenoid - Speed 2	A-9	E
Fuse Block 2	E-14	D	Solenoid - Speed 3	A-9	E
Fuse - Fuel Inj	C-6	E	Solenoid - Speed 4	A-9	E
Heater - Cold Start	A-6	E	Solenoid - Speed 5	A-9	E
Horn	C-2	62	Solenoid - Synch Mod	A-10	E
Lamp - Action	G-1	G	Supressor - Main Power Relay	F-11	68
Lamp - LH_Stop_Tail_Turn_Rev	D-16	11	Switch - AC Hi Pressure	D-6	6
Lamp - RH_Stop_Tail_Turn_Rev	B-16	12	Switch - AC Lo Pressure	D-6	72
Module - AC	D-5	64	Switch - AC On	E-6	B
Motor - Blower	G-10	65	Switch - Air Restriction Indicator	D-6	E
Motor - Front Washer	I-12	50	Switch - Beacon	H-7	C
Motor - Front Wiper	H-4	62	Switch - Blower	E-4	B
Motor - Fuel Lift Pump	B-6	E	Switch - Boom Flood	E-8	B
Motor - Rear Washer	I-12	65	Switch - Cab Flood	E-8	B
Motor - Rear Wiper	G-15	66	Switch - Cab Plat Select	E-9	B
Motor - Roof Washer	I-12	65	Switch - Cont Flow	G-7	C
Motor - Roof Wiper	H-15	67	Switch - Deadman	H-3	G
Motor - Seat Pump	F-10	65	Switch - Differential Lock Foot	I-7	73
Motor - Starter	B-6	13	Switch - Dimmer	H-6	C
Relay - Blower Hi	G-9	63	Switch - Disconnect	A-6	E
Relay - Blower Medium	G-9	63	Switch - Eng Stop	H-3	G

COMPONENT LOCATION

Page 2 of 2



Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Relay - Cold Start	A-6	5	Switch - Engine Start	H-1	G
Relay - Main Power	F-11	68	Switch - Fog Lamps	G-7	C
Relay - Start	B-5	5	Switch - Frame Leveling	G-5	C
Relay Block 1	H-14	D	Switch - Front Washer	E-6	B
Relay Block 2	F-14	D	Switch - Front Wiper	E-6	B
Resistor - Alternator	C-6	2	Switch - Hazard	H-6	C
Resistor - Term Std	D-2	69	Switch - Head/Side	H-6	C
Resistor - Terminating	G-4	C	Switch - Horn	H-5	C
Resistor - Terminating 1A	C-15	70	Switch - Implement Disable	E-9	B
Resistor - Terminating 2A	E-1	9	Switch - Key Start	F-6	C
Resistor - Terminating 2B	D-2	23	Switch - LH Stab	G-6	C
Sender - Fuel	D-13	21	Switch - LH Stab Press	E-1	34
Sensor - Boom Lowered	C-16	71	Switch - Oil Filter Bypass	D-6	E
Sensor - Boom Retracted	J-2	74	Switch - Park Brake	J-12	A
Sensor - Coolant Temperature	C-7	E	Switch - Plat Mode	H-2	G
Sensor - Engine Speed	C-7	E	Switch - Quick Coupler	H-6	C
Sensor - Engine Speed	D-9	E	Switch - Rear Wiper	E-7	B
Sensor - Engine Speed	D-10	F	Switch - RH Stab	G-6	C
Sensor - Fr Align	D-2	23	Switch - RH Stab Press	E-1	33
Sensor - Fuel Inj Pump	D-7	E	Switch - Roof Wiper	E-7	B
Sensor - Intake Manifold Temp	D-7	E	Switch - Service Brake Pressure	J-8	27
Sensor - Intake Manifold Press	D-7	E	Switch - STD Shift Neutralizer	F-10	A
Sensor - Lever Boom Extend/Retract	I-3	G	Switch - Steer Mode Select	H-5	C
Sensor - Lever Boom Raise/Lower	I-3	G	Switch - Stop Lamp	I-7	39
Sensor - Lever Platform Rotate	I-3	G	Switch - Turn Signal	F-7	A
Sensor - LSI Strain	D-15	25	Switch - XMSN Neutral Disable	H-6	C
Sensor - Oil Pressure	C-7	E	Thermostat	G-9	65
Sensor - Rear Axle Center	B-15	25			

Machine locations are repeated for components located close together.

A = Located inside of cab.

B = Located inside of right console.

C = Located in steering console.

D = Located around relay panel.

E = Located under engine cowl.

F = Located on the transmission.

G = Located on the access platform.

COMPONENT LOCATION



Connector Number	Schematic Location	Machine Location
CONN 1	B-16	28
CONN 2	I-16	A
CONN 3	J-16	A
CONN 4	D-15	29
CONN 5 Boom Flood	B-15	30
CONN 6	B-15	30
CONN 7	C-14	30
CONN 8	D-14	30
CONN 9 Service Port	I-13	50
CONN 10	D-11	51
CONN 11	E-11	51
CONN 12	E-11	51
CONN 13	I-12	50
CONN 14	J-12	52
CONN 15	J-11	A
CONN 16	J-11	A
CONN 17	D-9	53
CONN 18	G-9	50
CONN 19	G-9	50
CONN 20	D-8	53
CONN 21	I-7	54
CONN 22	B-5	58
CONN 23	I-4	55
CONN 24	H-4	55
CONN 25	H-3	31
CONN 26	I-3	G
CONN 27	D-2, E-2	56
CONN 28	D-1	57
CONN 29	C-2	59
CONN 30	D-7	E
CONN 31	D-6	60
CONN 32	E-2	10
CONN 33	I-7	39

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.



Component Identifiers (CID¹) Module Identifier (MID²)	
Machine Security (MID No. 124)	
CID	Component
0168	System Voltage
0248	Cat Data Link
0817	Internal Backup Battery
1391	MSS Output Driver No. 1
1392	MSS Output Driver No. 2
Machine ECM (MID No. 039)	
CID	Component
0041	8 V Sensor Supply
0070	Limit switch (parking brake)
0096	Sender (fuel level)
0110	Temperature Sensor (Engine Coolant)
0177	Temperature Sensor (Transmission Oil)
0262	5V Sensor Supply
0271	Action Alarm
0368	Rocker switch (autoshift)
0444	Relay (starter)
0489	Trigger switch (auxiliary) of joystick control
0490	Rocker switch (implement lockout)
0590	Engine ECM
0629	Switch (transmission neutralizer)
0668	Transmission control (shift lever)
0702	Position sensor (shift lever)
0750	Switch (steering mode)
0811	Display module (instrument cluster)
0826	Temperature sensor (torque converter oil)
1127	Position sensor (forward/backward lever) of the joystick control
1128	Position sensor (left and right) of the joystick control
1187	Switch (continuous flow)
1189	Position sensor (auxiliary hydraulics) (right thumb lever) of the joystick control
1251	Alternator R Terminal
1326	Location code (ECM)
1401	Modulating valve (reverse)
1402	Modulating valve (forward)
1403	Modulating valve (No. 3)
1404	Modulating valve (No. 4)
1405	Modulating valve (No. 5)
1406	Modulating valve (No. 6)
1407	Modulating valve (No. 7)
1410	Modulating valve (Transmission Synchronization)
1529	Switch (quick coupler)
1530	Solenoid (quick coupler)
1603	Data Link
1658	Position Sensor (left thumb lever) of the joystick control
1740	Solenoid (crab steer)
1741	Solenoid (circle steer)
1763	Switch (operator station)
1788	Switch (right stabilizer)
1789	Switch (left stabilizer)
1820	Relay (auxiliary diverter valve)
1823	Position sensor (shift rail) (No. 1)
1824	Position sensor (shift rail) (No. 2)
1825	Position sensor (shift rail) (No. 3)

1826	Strain sensor (longitudinal stability)
1827	Longitudinal stability system
1828	Proximity switch (critical angle)
1829	Proximity switch (boom lower)
1830	Proximity switch (boom retract)
1831	Solenoid valve (rear axle lock)
1832	Pressure switch (right stabilizer)
1833	Pressure switch (left stabilizer)
1834	Key start switch
1845	PHS Module 1
1846	PHS Module 2
1847	PHS Module 3
Access Panel ECM (MID No. 082)	
CID	Component
0271	Action alarm
0324	Action lamp
0337	Switch (emergency stop)
1125	Position sensor (handle control) (boom raise/lower)
1127	Position sensor (handle control) (platform rotate)
1763	Switch (Operator Station Select)
1772	Switch (Operator Station Lockout)
1879	Position sensor (handle control) (boom extend/retract)
Shift Lever ECM (MID No. 117)	
CID	Component
0168	System Voltage
0668	Shift lever
Engine ECM (MID No. 036)	
CID	Component
0041	8 V Sensor Supply
0091	Throttle switch
0100	Engine Oil Pressure
0102	Pressure Sensor
0105	Inlet Manifold Temp Sensor
0110	Engine Coolant Temp
0174	Fuel Temp Sensor
0247	Data Link
0253	Personality Module
0262	5 V Sensor Supply
0266	Incorrect Crank
0320	Speed/Timing Sensor
0342	Loss of Secondary Engine Speed
0774	Sec Throttle Position Sensor
1639	Machine Security System Module
1684	Fuel Injection Pump
1743	Engine Mode Selection Switch
1894	Cruise Control Disengage Switch
1895	Cruise Control Speed Toggle Switch

¹ The CID is a diagnostic code that indicates which component is faulty.

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



Event Codes Machine Control	
Event Code	Condition
E015	High Engine Coolant Temperature Derate
E017	High Engine Coolant Temperature Warning
E023	High Hydraulic Temperature Derate
E025	High Inlet Air Temperature Derate
E027	High Inlet Air Temperature Warning
E028	High Transmission Oil Temperature Derate
E030	High Transmission Oil Temperature Derate
E040	Low Engine Oil Pressure Shutdown
E054	High Fuel Temperature Derate
E056	High Fuel Temperature Warning
E100	Low Engine Oil Pressure Warning
E190	Engine Overspeed Warning
E265	User Defined Shutdown
E272	Inlet Air Restriction Warning
E283	Low Hydraulic Charge Pressure
E441	Idle Elevated to Increase Battery Voltage
E442	Engine Failed to Stop with No Fuel Command
E600	High Hydraulic Oil Temperature Warning
E883	Engine Failed to Stop When Fuel Solenoid Disengaged

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.

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

Resistor and Solenoid Specifications

Part No.	Component Description	Resistance (Ohms) ¹
134-2540	Resistors: Terminating	120
177-7807	Solenoids: Shuttle XMSN	2.2 ± 0.2
178-9570	Solenoid: A/C Compressor	17.6 ± 0.6
195-9700	Solenoid: Differential Lock	10 ± 0.5
200-6210	Solenoid: Implement Disable	10 ± 0.5
201- 0315	Solenoids: Rear Axle Lock / Frame Level 1 & 2	10.16 ± 0.3
212-3350	Solenoids: Aux. Div. QC	3.2 ± 0.224

¹ At room temperature unless otherwise noted.

Related Electrical Service Manuals

Title	Form Number
Engine Control:	REN2417
Power Train Control:	REN5185
Machine Control:	REN5195
Access Platform Control:	REN5195
Machine Security System:	REN2462
Monitor:	REN6704

Off Machine Switch Specification

Part No.	Function	Actuate	Deactuate	Contact Position
114-5333	A/C Hi Pressure	275 to 1750 kPa ¹ (40 to 255 psi.)	-- --	Normally Open ²
149-6371	A/C Lo Pressure	103.4 ± 13.8 kPa (15 ± 2 psi.)	34.5 ± 7 kPa (5 ± 1 psi.)	Normally Open
203-7984	Oil Filter Bypass	276 ± 28 kPa (40 to 4 psi.)	179 kPa (26 psi.)	Normally Open
234-4359	LH Stab Pressure RH Stab Pressure	8618 kPa Max (1250 psi.Max)	7584 ± 172 kPa (1100 ± 25 psi.)	NC & NO (SPDT)

¹ With increasing pressure the closed condition can be maintained up to 2800 kpa (405 psi), with decreasing pressure the closed condition can be maintained down to 170 kpa (25psi).

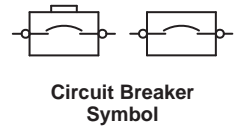
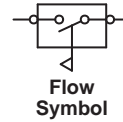
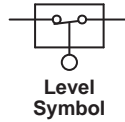
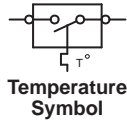
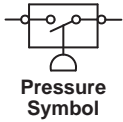
² Contact position at the contacts of the harness connector.

HARNESS and WIRE

Electrical Schematic Symbols



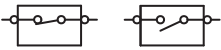
Symbols



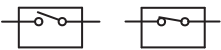
Symbols and Definitions



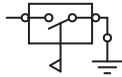
Fuse: A component in an electrical circuit that will open the circuit if too much current flows through it.



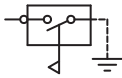
Switch (Normally Open): A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from it.



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.



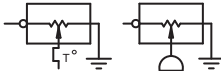
Ground (Wired): This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.



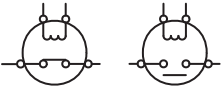
Ground (Case): This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.



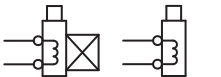
Reed Switch: A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.



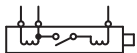
Sender: A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.



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.



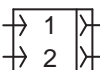
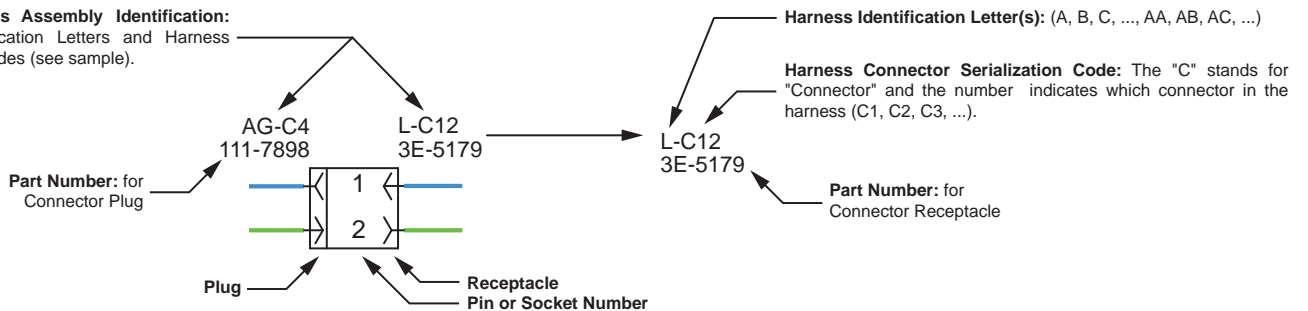
Solenoid: A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.



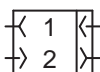
Magnetic Latch Solenoid: A magnetic latch solenoid is an electrical component that is activated by electricity and held latched by a permanent magnet. It has two coils (latch and unlatch) that make electromagnet when current flows through them. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

Harness and Wire Symbols

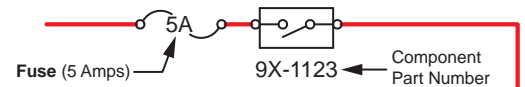
Wire, Cable, or Harness Assembly Identification: Includes Harness Identification Letters and Harness Connector Serialization Codes (see sample).



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.

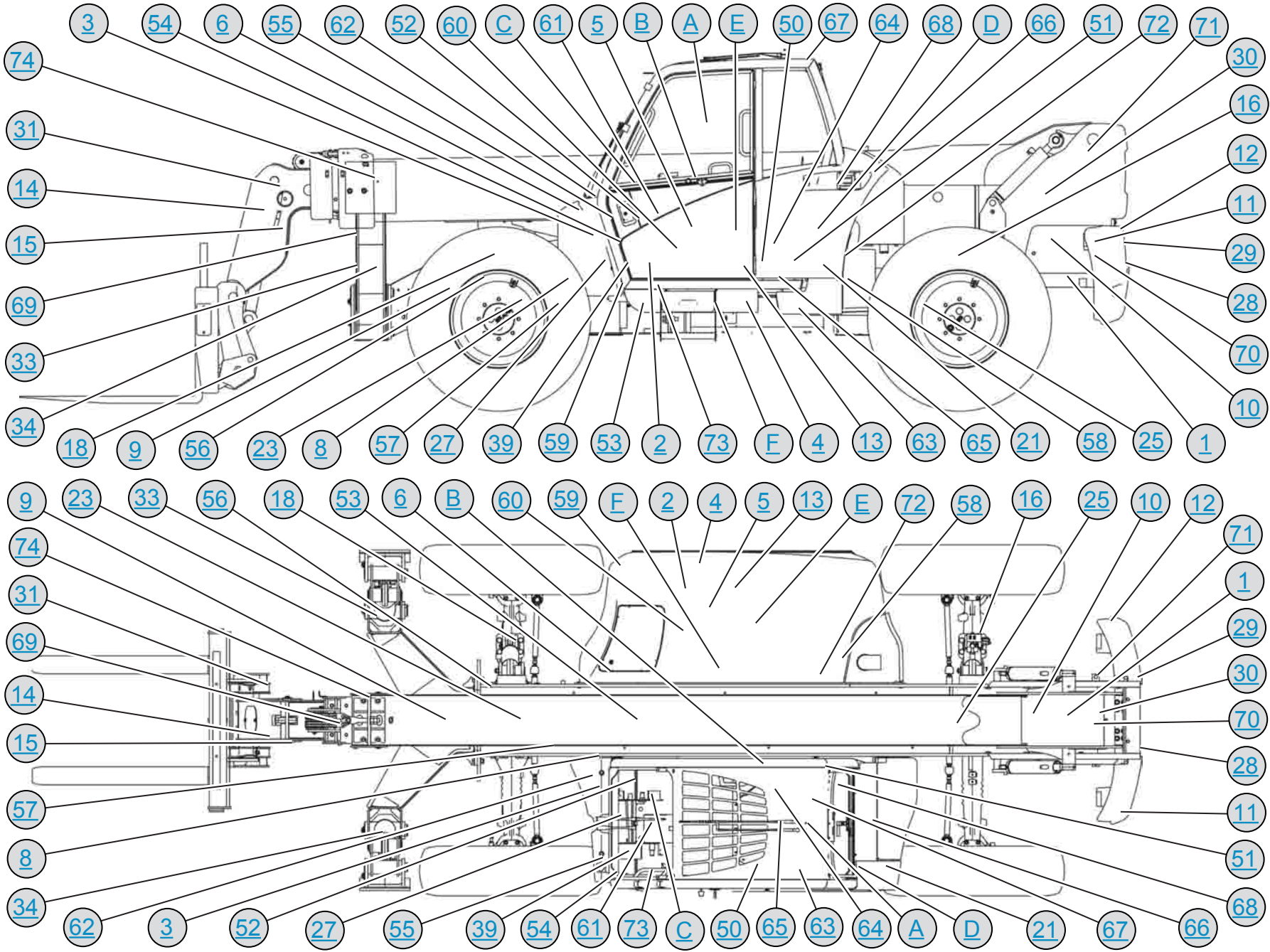


Harness identification code: This example indicates wire group 325, wire 135 in harness "AG".

325-AG135 **PK-14**

Labels include: Fuse (5 Amps), Component Part Number, Wire Gauge, and Wire Color.

MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS



ACCESS PLATFORM

