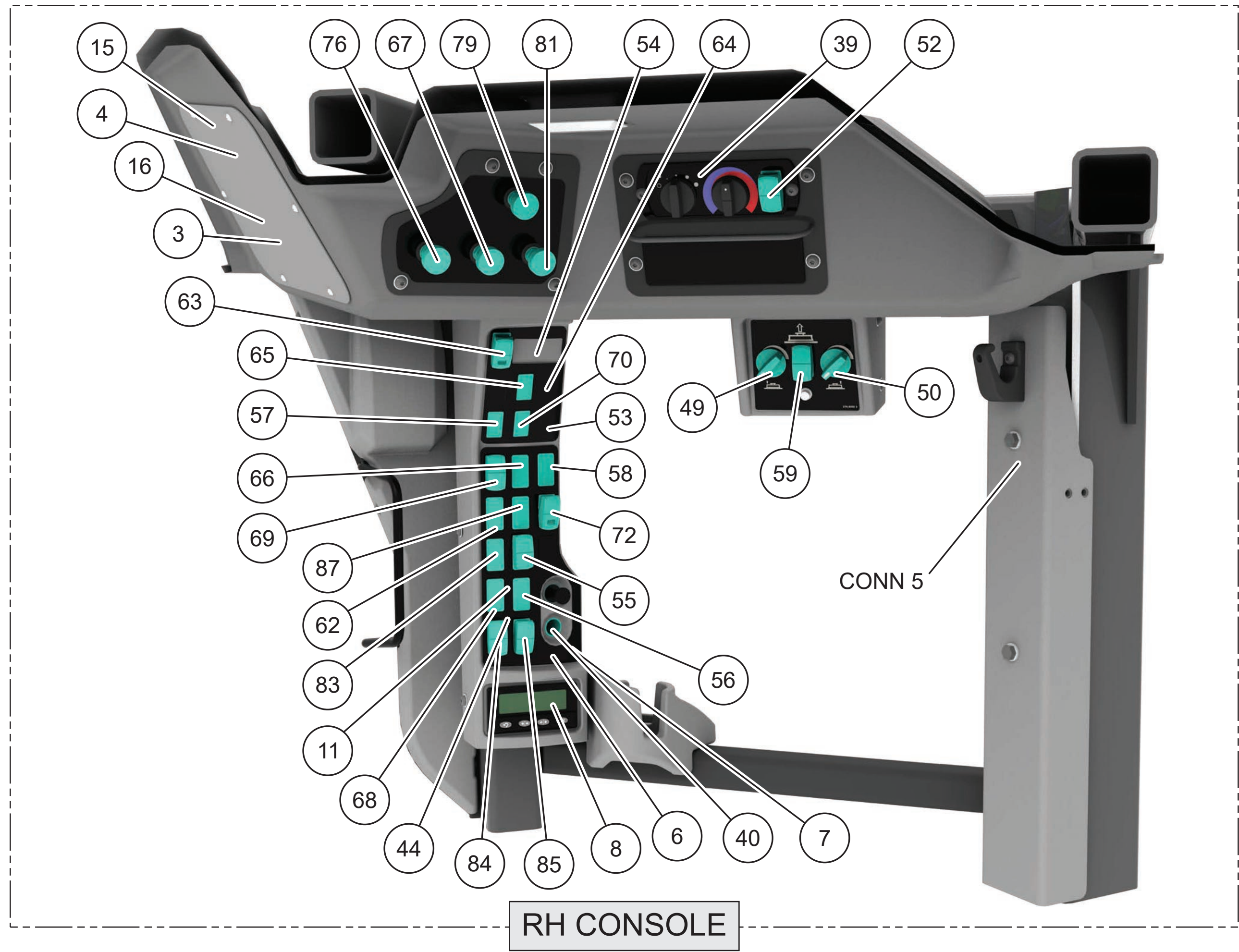
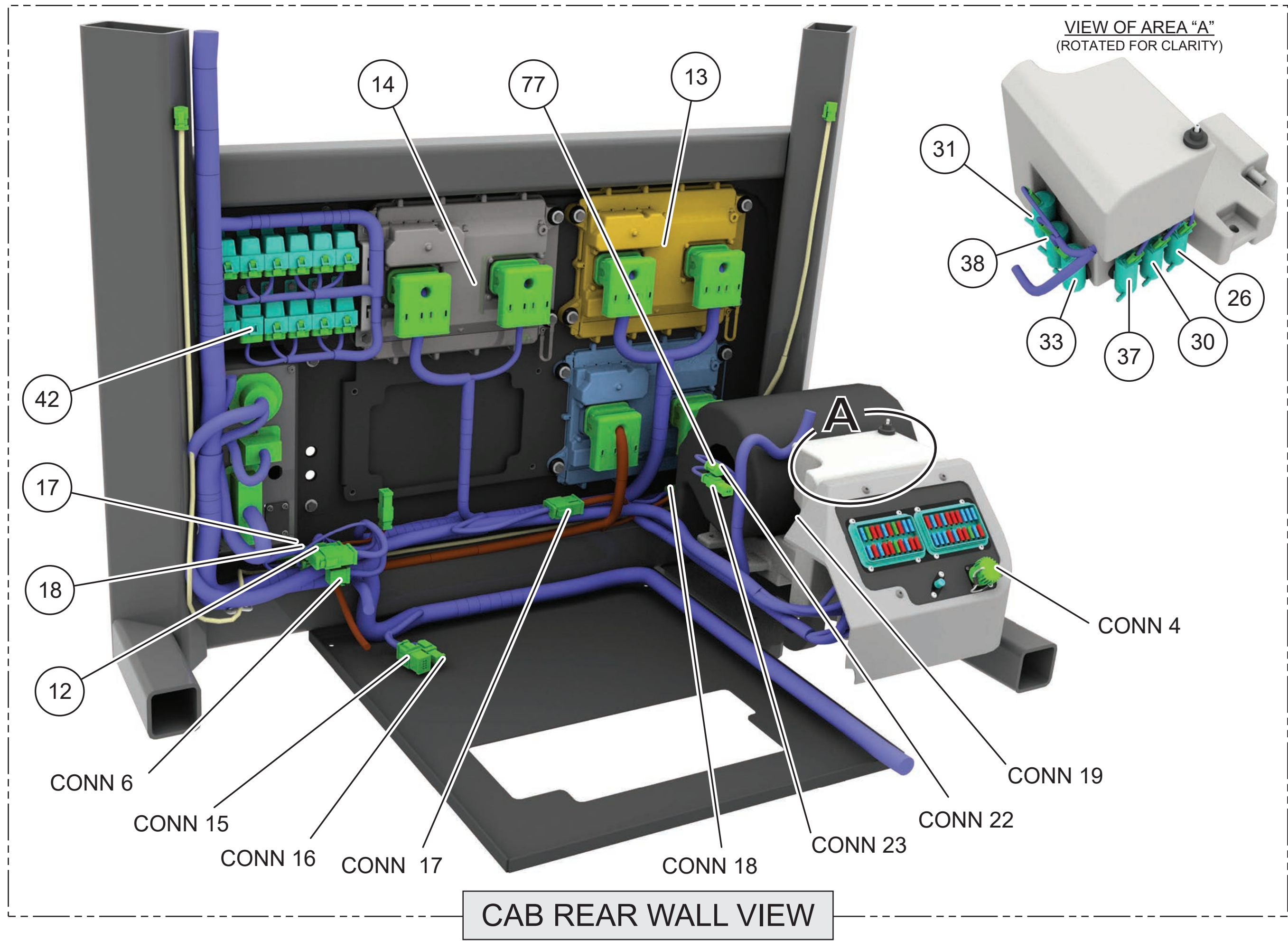
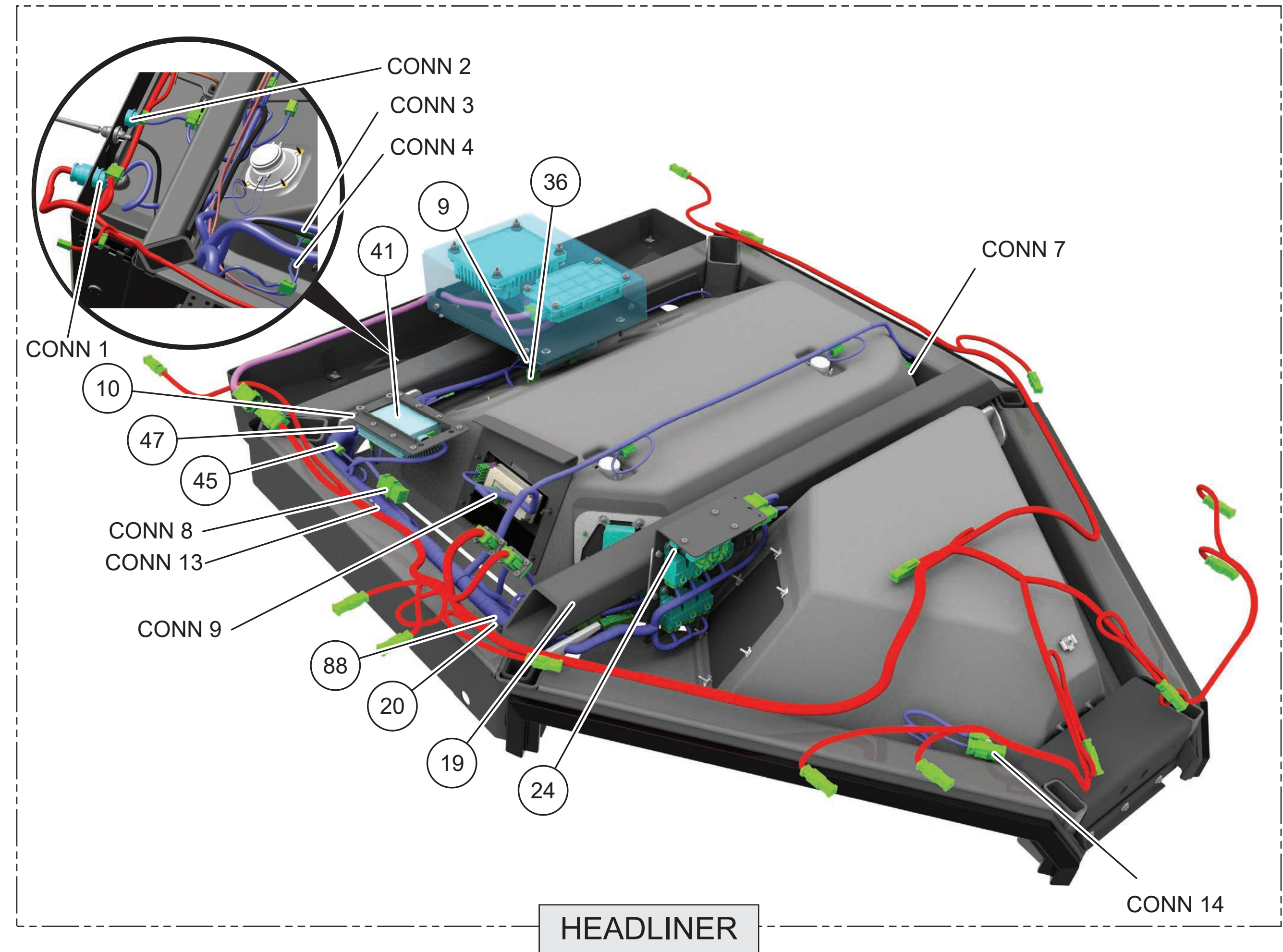




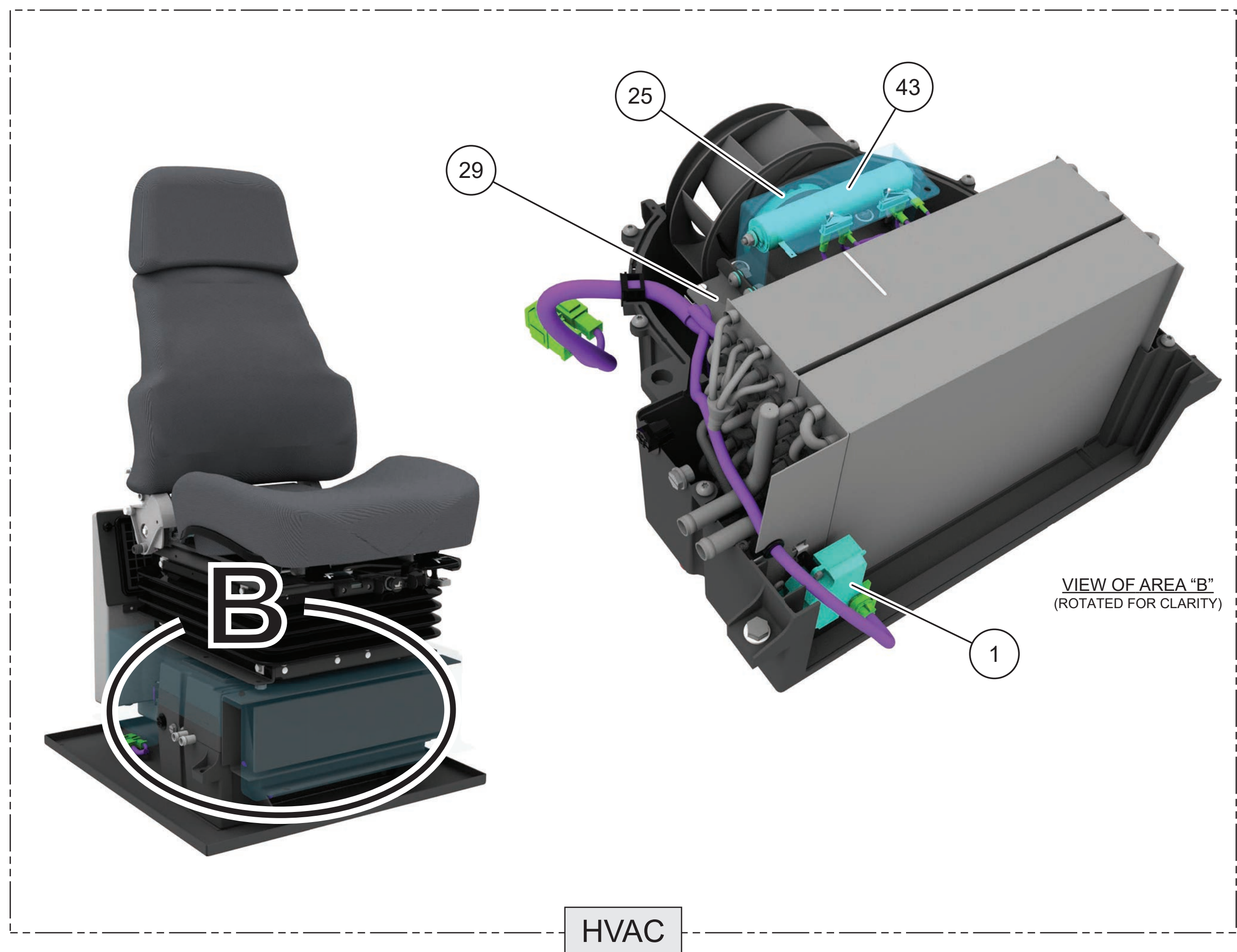
RH CONSOLE



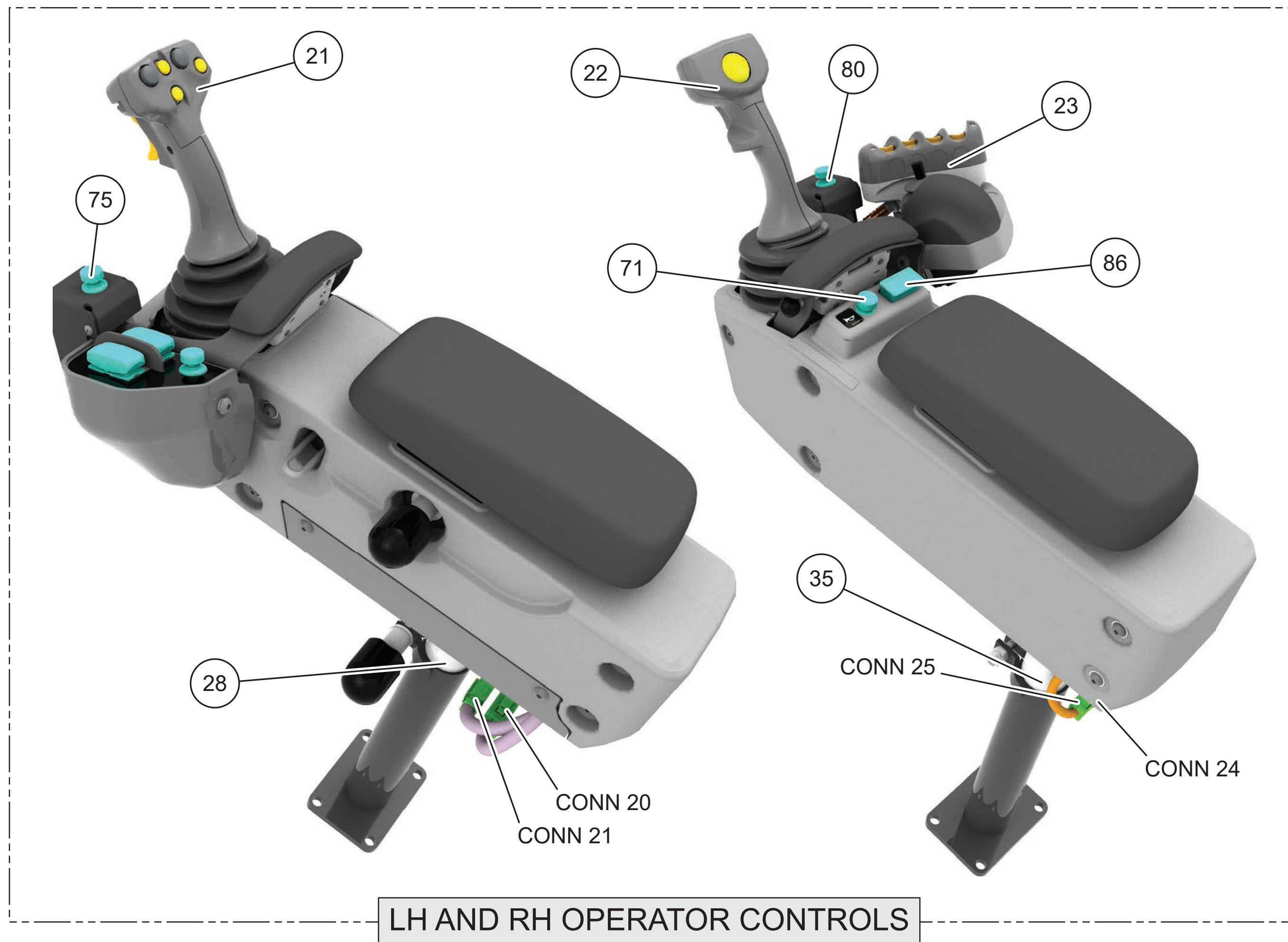
CAB REAR WALL VIEW



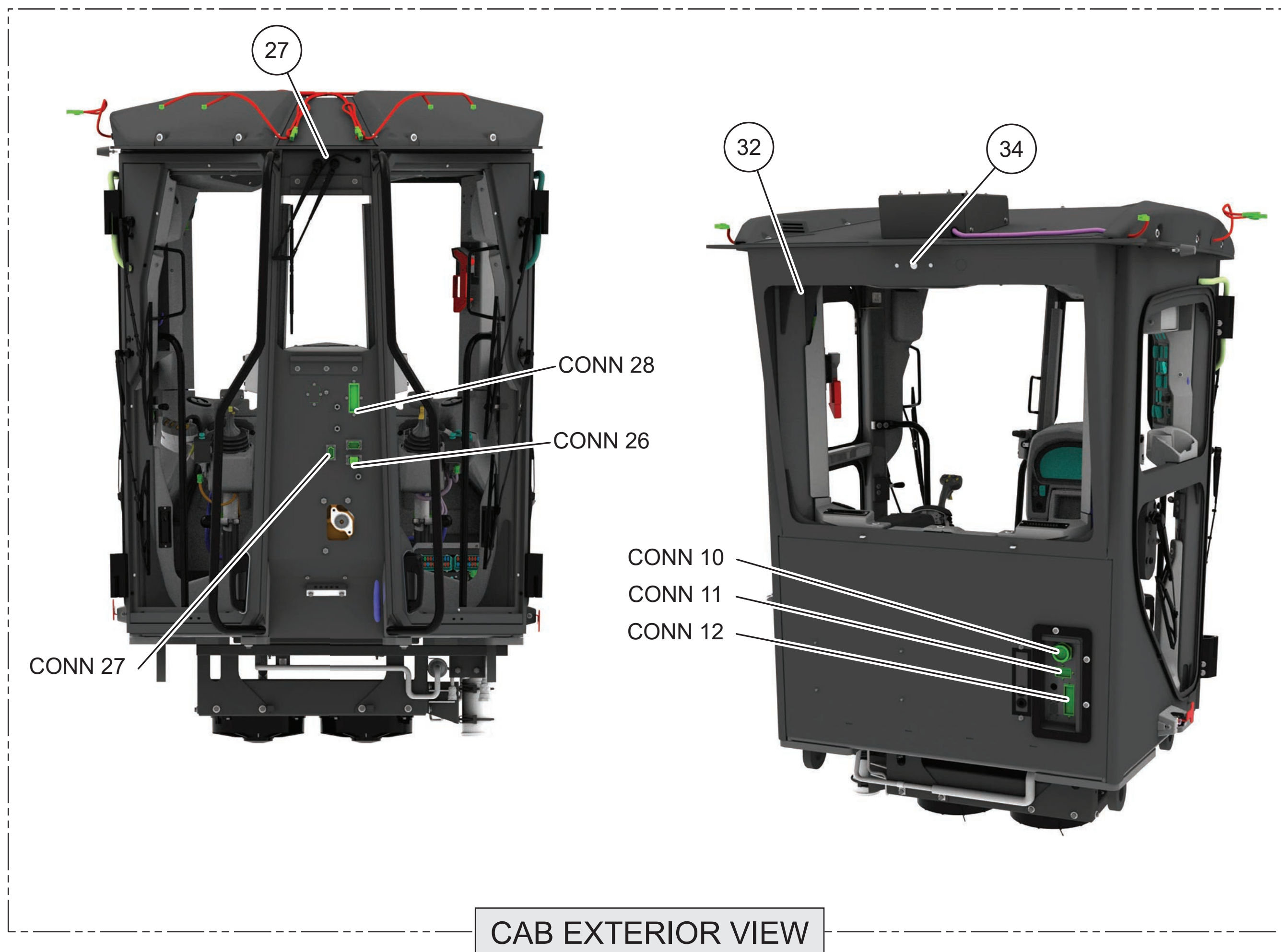
HEADLINER



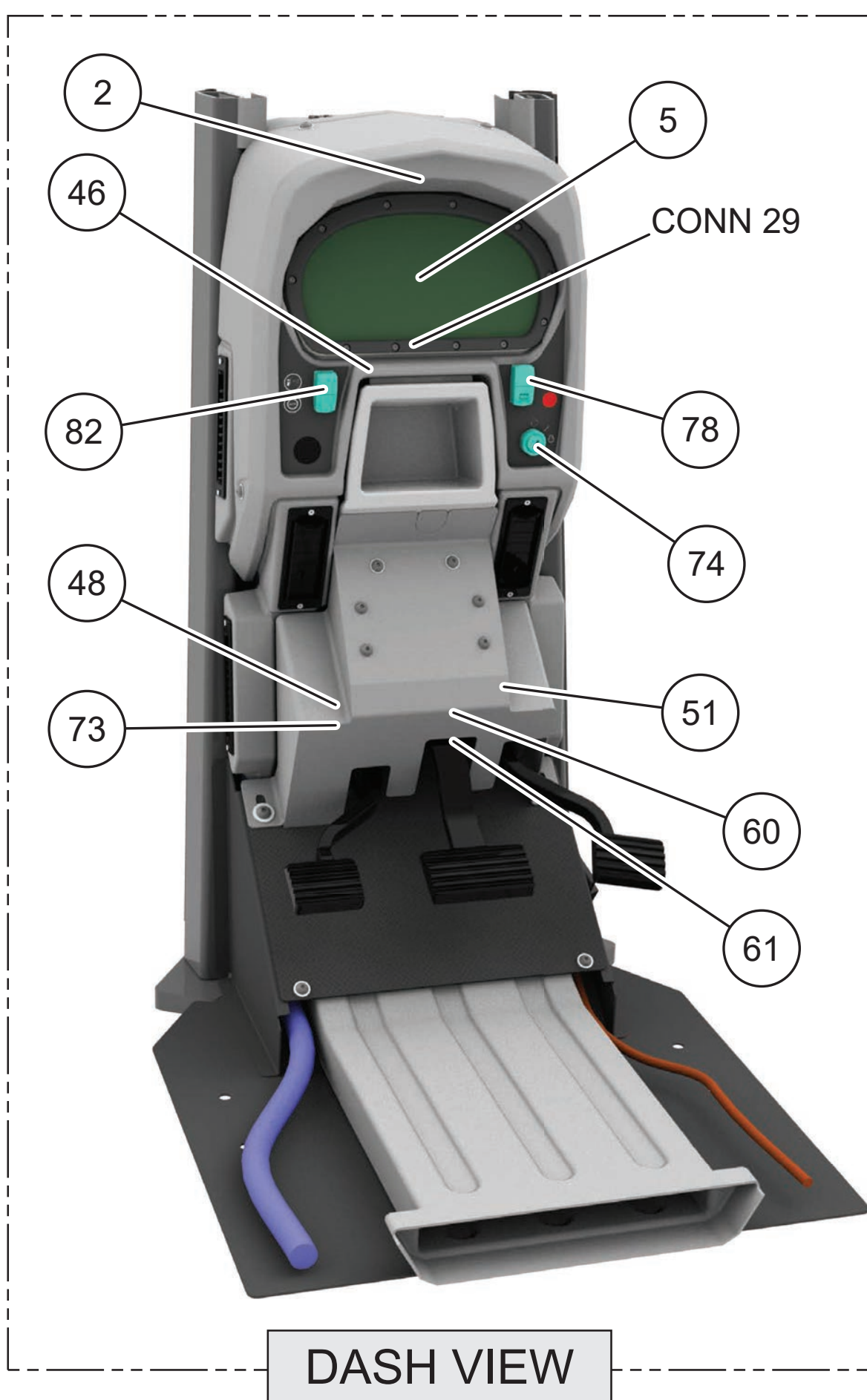
HVAC



LH AND RH OPERATOR CONTROLS



CAB EXTERIOR VIEW



DASH VIEW

| Component Location - Volume 1 |                    |                  |                                      |                    |
|-------------------------------|--------------------|------------------|--------------------------------------|--------------------|
| Component                     | Schematic Location | Machine Location | Component                            | Schematic Location |
| Actuator - Vision Valve       | B-7                | 1                | Resistor - DC CAN 2                  | D-11               |
| Alarm - Action                | I-1                | 2                | Resistor - DC CAN 3                  | I-13               |
| Blue Bar B                    | D-13               | 3                | Resistor - Defrost Fan               | J-14               |
| Blue Bar C                    | G-13               | 4                | Sensor - Hitching Pedal              | E-1                |
| Cluster - Dash                | F-1                | 5                | Sensor - LH Blade Down Force Control | A-13               |
| Control - Aux Lever 6         | B-11               | 6                | Sensor - RH Blade Down Force Control | A-13               |
| Control - Aux Lever 7         | B-11               | 7                | Sensor - Throttle Position           | F-1                |
| Control - Messenger           | C-11               | 8                | Switch - A/C Engine                  | B-13               |
| Converter - Comm              | I-14               | 9                | Switch - Access Light                | J-11               |
| Converter - Voltage           | C-13               | 10               | Switch - Auto Differential Lock      | E-11               |
| Diode - Rear Cab Interlock    | C-11               | 11               | Switch - Auto Differential Lock      | E-11               |
| Diode - Rear Flood Interlock  | H-8                | 12               | Switch - Auto Differential Lock      | E-11               |
| ECM - Implement 1             | J-7                | 13               | Switch - Blade Control               | G-11               |
| ECM - Implement 2             | F-7                | 14               | Switch - Blade Control               | G-11               |
| Fuse Block AS 1               | I-13               | 15               | Switch - Brake Force                 | B-13               |
| Fuse Block AS 2               | F-13               | 16               | Switch - Brake Light                 | E-1                |
| Ground - Cab 1                | C-1                | 17               | Switch - Brake Pedal                 | E-1                |
| Ground - Cab 2                | C-6                | 18               | Switch - Cab Flood                   | F-11               |
| Ground - Roof                 | J-14               | 19               | Switch - Compression Brake           | H-11               |
| Ground - Cab Roof             | D-1                | 19               | Switch - Defrost Fan                 | I-1                |
| Ground - Rear                 | H-8                | 20               | Switch - Defrost Fan                 | I-1                |
| Joystick - LH                 | I-3                | 21               | Switch - Heater                      | D-11               |
| Joystick - RH                 | C-3                | 22               | Switch - Front Wiper                 | H-15               |
| Module - Auxiliary Control    | B-3                | 23               | Switch - Heater                      | D-11               |
| Module - Flasher              | A-6                | 24               | Switch - Head/Fog Lamps              | G-11               |
| Motor - Blower                | B-7                | 25               | Switch - Head/Fog Lamps              | G-11               |
| Motor - Front Washer          | J-2                | 26               | Switch - Horn                        | B-3                |
| Motor - Front Wiper           | H-8                | 27               | Switch - Implement Lockout           | F-1                |
| Motor - LH Armrest            | J-3                | 28               | Switch - Hitching Pedal              | E-1                |
| Motor - LH Door Washer        | J-12               | 29               | Switch - Key                         | F-1                |
| Motor - LH Window Washer      | J-2                | 30               | Switch - LH Armrest                  | J-3                |
| Motor - Rear Defogger Fan     | J-14               | 31               | Switch - LH Door Wiper               | F-10               |
| Motor - Rear Washer           | J-2                | 32               | Switch - Operator Present            | H-2                |
| Motor - Rear Wiper            | G-16               | 33               | Switch - Parking Brake               | C-1                |
| Motor - RH Armrest            | A-2                | 34               | Switch - Rear Wiper                  | F-10               |
| Motor - RH Door Washer        | G-8                | 35               | Switch - RH Armrest                  | A-3                |
| Motor - RH Window Washer      | A-2                | 36               | Switch - RH Door Wiper               | E-10               |
| Panel - HVAC Control          | C-12               | 37               | Switch - Secondary Steering Test     | E-1                |
| Port - 12V Aux                | C-11               | 38               | Switch - Snow Way Flood              | E-11               |
| Radio - LH Radio AM FM W/Head | B-12               | 39               | Switch - Throttle Lock Mode          | D-11               |
| Relay - Headed Mirror         | H-8                | 40               | Switch - Throttle Set                | G-11               |
| Resistor - Blower             | B-7                | 41               | Switch - Turn Signal                 | B-3                |
| Resistor - C/CT CAN Resistor  | I-14               | 42               | Switch - Work Light Floodlamps       | F-11               |
| Resistor - DC CAN             | B-11               | 43               | Thermistor - HVAC                    | B-7                |

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

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



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## Schematic

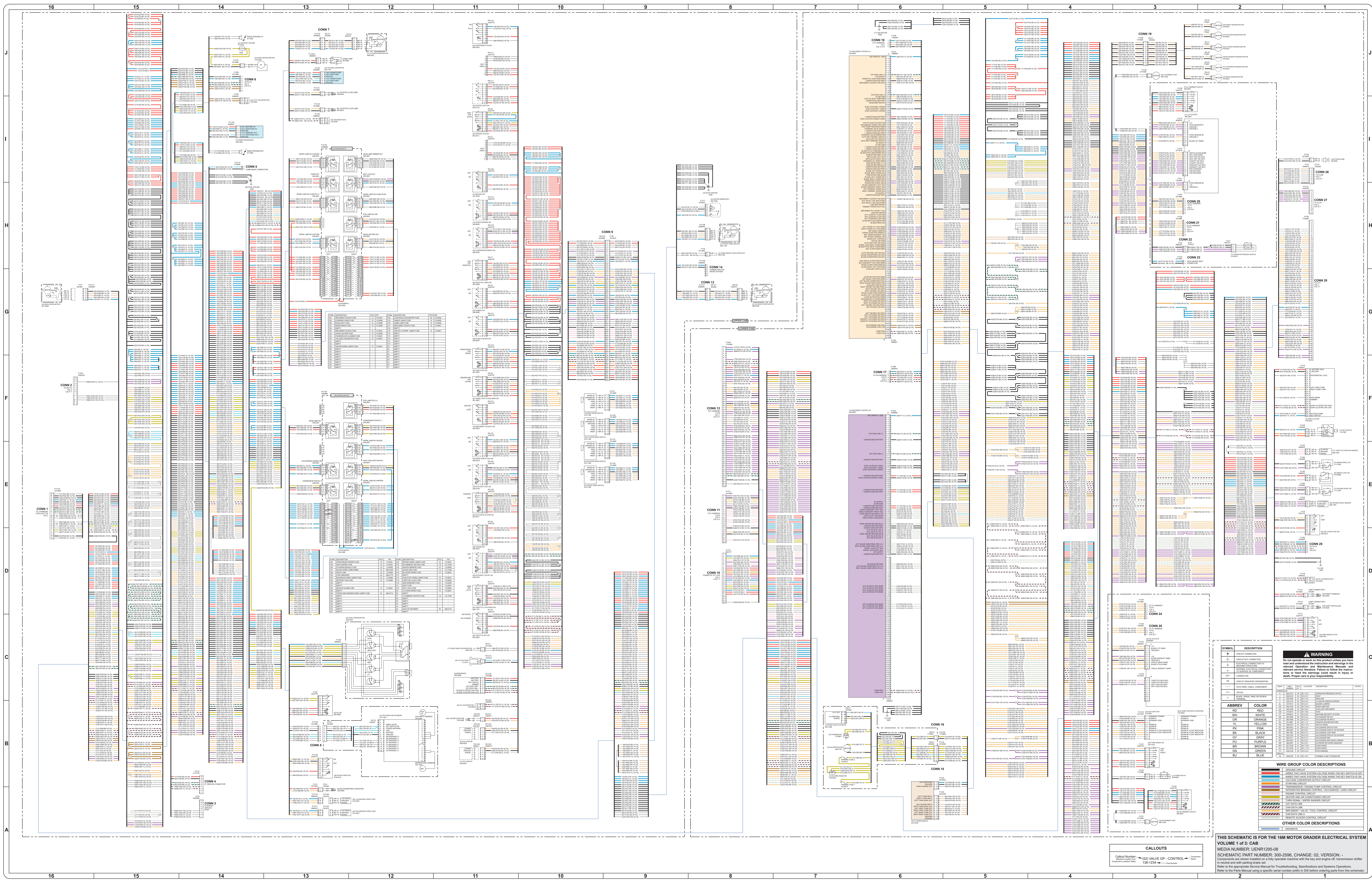
### 16M Motor Grader Electrical System

B9H75-1-UP  
R9H1-1-UP

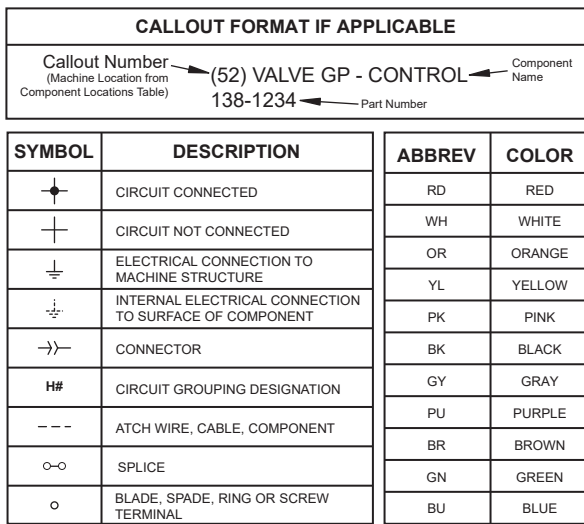
Volume 1 of 3: Cab

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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                                                                                                                                                                                                                                                                                                                                           |                    |              |             |                        |
| <b>Fuse:</b> A component in an electrical circuit that will open the circuit if too much current flows through it.                                                                                                                                                                                                                                                |                    |              |             |                        |
| <b>Switch (Normally Open):</b> 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.                                                                                                                                                             |                    |              |             |                        |
| <b>Switch (Normally Closed):</b> A switch that will open at a specified point (temp, press, etc.). No circle indicates that the wire cannot be disconnected from the component.                                                                                                                                                                                   |                    |              |             |                        |
| <b>Ground (Wired):</b> This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.                                                                                                                                                                                                                           |                    |              |             |                        |
| <b>Ground (Case):</b> This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.                                                                                                                                                                                                                |                    |              |             |                        |
| <b>Read Switch:</b> A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open read switch. It opens the contacts of a normally closed read switch.                                                                                                                                                                      |                    |              |             |                        |
| <b>Sender:</b> A component that is used with a temperature or pressure gauge. The sender produces the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.                                                                                                                                          |                    |              |             |                        |
| <b>Relay (Magnetic Switch):</b> 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 a valve or move a piece of metal that can do work.                                                                                              |                    |              |             |                        |
| <b>Solenoid:</b> 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.                                                                                                          |                    |              |             |                        |
| <b>Magnetic Latch Solenoid:</b> 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 electromagnets 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                                                                                                                                                                                                                                                                                                                                          |                    |              |             |                        |
| <b>Wires, Cables, or Harness:</b> Assembly identification includes harness identification letters and harness connector designation (see wire number).                                                                                                                                                                                                            |                    |              |             |                        |
| <b>Terminal Identification Letters:</b> (H, B, C, ... AA, AB, AC, ...)                                                                                                                                                                                                                                                                                            |                    |              |             |                        |
| <b>Harness Connector Designation:</b> Code: The "C" stands for "Connectors" and the number indicates which connector in the harness (C1, C2, C3, ...).                                                                                                                                                                                                            |                    |              |             |                        |
| <b>Part Number for Connector Plug:</b> 111-7096                                                                                                                                                                                                                                                                                                                   |                    |              |             |                        |
| <b>Part Number for Connector Receptacle:</b> 9X-1123                                                                                                                                                                                                                                                                                                              |                    |              |             |                        |
| <b>Wiring Diagram:</b> The diagram shows a plug and a receptacle. The plug is labeled 111-7096 and the receptacle is labeled 9X-1123. The plug is connected to the receptacle. The plug is labeled 111-7096 and the receptacle is labeled 9X-1123. The plug is connected to the receptacle.                                                                       |                    |              |             |                        |
| <b>Wire Gauge:</b> Wire gauge is shown in AWG (American Wire Gauge) and mm² (square millimeters). The example shows wire 22 AWG (0.64 mm²).                                                                                                                                                                                                                       |                    |              |             |                        |
| <b>Wire Group:</b> Wire groups are shown in AWG (American Wire Gauge) and mm² (square millimeters). The example shows wire 22 AWG (0.64 mm²).                                                                                                                                                                                                                     |                    |              |             |                        |







**⚠ WARNING**

Do not operate or work on this product unless you have read and understood the instruction and warnings in the relevant Operation and Maintenance Manuals and relevant service literature. Failure to follow the instructions or heed the warnings could result in injury or death. Proper care is your responsibility.

**THIS SCHEMATIC IS FOR THE 16M MOTOR GRADER ELECTRICAL SYSTEM  
VOLUME 2 of 3: CAB (PRODUCT LINK, MSS, IMPLEMENT 3 AND ROOF)  
MEDIA NUMBER: UENR1295-08  
SCHEMATIC PART NUMBER: 300-2596, CHANGE: 02, VERSION: -  
Components are shown installed on a fully equipped machine with the key and engine off, transmission shifter  
in neutral and parking brake set.  
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.  
Refer to the Parts Manual using a specific serial number prefix in SIS before ordering parts from this schematic.**



| Component Location - Volume 5                         |                    |                  |                                                     |                    |                  |
|-------------------------------------------------------|--------------------|------------------|-----------------------------------------------------|--------------------|------------------|
| Component                                             | Schematic Location | Machine Location | Component                                           | Schematic Location | Machine Location |
| Alarm - Battery                                       | C-1                | G-12             | Sensor - Transmission Oil Temperature               | F-12               | F-17             |
| Alarm - Backlog                                       | C-1                | G-12             | Sensor - Transmission Oil Speed                     | F-12               | F-17             |
| Alarm - Retard                                        | B-13               | B-16             | Sensor - Transmission Out Speed 2                   | E-13               | F-17             |
| Alarm - Retard Distribution                           | B-13               | B-16             | Sensor - Transmission Retard Pressure               | F-13               | F-17             |
| Blade Cycle                                           | C-9                | C-10             | Sensor - AC Cycles                                  | E-8                | F-17             |
| Blade Cycle Distribution                              | C-9                | C-10             | Sensor - AC Cycles Distribution                     | F-8                | F-17             |
| Breaker - Load                                        | A-7, 10            | B-18             | Solenoid - Actuator RH                              | F-4                | F-18             |
| Breaker - Motor                                       | B-13               | B-19             | Solenoid - Auxiliary Valve 1 Port A                 | C-10               | F-18             |
| Bus Bar - Main                                        | B-13               | B-19             | Solenoid - Auxiliary Valve 1 Port B                 | C-10               | F-18             |
| Bus Bar - 2                                           | E-12               | E-21             | Solenoid - Auxiliary Valve 2 Port A                 | C-10               | G-5              |
| Bus Bar - 2 Distribution                              | E-12               | E-21             | Solenoid - Auxiliary Valve 2 Port B                 | C-10               | G-5              |
| Clutch - Differential Lock                            | A-4                | A-23             | Solenoid - Auxiliary Valve 3 Port A                 | C-10               | F-18             |
| Clutch - Differential Lock Release                    | A-4                | A-23             | Solenoid - Auxiliary Valve 3 Port B                 | C-10               | F-18             |
| ECM - Transmission Temperature                        | F-14               | E-25             | Solenoid - Auxiliary Valve 4 Port A                 | D-10               | F-18             |
| ECM - Transmission Temperature Distribution           | F-14               | E-25             | Solenoid - Auxiliary Valve 4 Port B                 | D-10               | F-18             |
| Ground - Engine ECM                                   | B-11               | B-127            | Solenoid - Auxiliary Valve 5 Port A                 | E-4                | F-18             |
| Ground - Engine ECM Distribution                      | B-11               | B-127            | Solenoid - Auxiliary Valve 5 Port B                 | E-4                | F-18             |
| Ground - Rear Frame 1                                 | E-10               | E-20             | Solenoid - Auxiliary Valve 6 Port A                 | D-10               | F-18             |
| Ground - Rear Frame 2                                 | E-10               | E-20             | Solenoid - Auxiliary Valve 6 Port B                 | D-10               | F-18             |
| Ground - Starter Frame                                | E-12               | E-21             | Solenoid - Auxiliary Valve 7 Port A                 | C-10               | F-18             |
| Ground - Starter Frame Distribution                   | E-12               | E-21             | Solenoid - Auxiliary Valve 7 Port B                 | C-10               | F-18             |
| Head - Air                                            | F-13               | S-30             | Solenoid - Blade Lift Release                       | F-4                | F-19             |
| Head - Air Distribution                               | F-13               | S-30             | Solenoid - Blade Lift Release Distribution          | F-4                | F-19             |
| Head - Air 2                                          | G-9                | G-34             | Solenoid - Blade Pitch Forward                      | F-12               | F-19             |
| Head - Air 2 Distribution                             | G-9                | G-34             | Solenoid - Blade Pitch Forward Distribution         | F-12               | F-19             |
| Lift - Battery                                        | D-12               | D-36             | Solenoid - Blade Pitch Release                      | F-4                | F-19             |
| Machine - Steering/Drive Control                      | D-12               | D-36             | Solenoid - Blade Pitch Release Distribution         | F-4                | F-19             |
| Motor - Auxiliary Pump                                | E-3                | E-37             | Solenoid - Blade Stop With RH                       | H-12               | G-20             |
| Motor - Auxiliary Pump Distribution                   | E-3                | E-37             | Solenoid - Blade Stop With RH Distribution          | H-12               | G-20             |
| Motor - Compensator 2 Port A                          | F-7                | F-39             | Solenoid - Cyclic Lift LH                           | G-2                | G-20             |
| Motor - Compensator 2 Port B                          | F-7                | F-39             | Solenoid - Cyclic Lift RH                           | G-2                | G-20             |
| Motor - Compensator Distribution                      | F-7                | F-39             | Solenoid - Cyclic Lift Distribution                 | G-2                | G-20             |
| Motor - Steering                                      | E-8                | E-41             | Solenoid - Cyclic Stop Shift LH                     | G-2                | G-20             |
| Motor - Steerer                                       | E-8                | E-41             | Solenoid - Cyclic Stop Shift RH                     | G-2                | G-20             |
| Relay - Main                                          | D-10               | D-50             | Solenoid - Fan                                      | C-12               | G-20             |
| Relay - Secondary                                     | J-9                | J-44             | Solenoid - Fan Control                              | C-12               | G-20             |
| Relay - Fan                                           | D-10               | D-50             | Solenoid - Fan Pressure Supply                      | C-12               | G-20             |
| Relay and Fan Back Stop                               | A-13               | A-36             | Solenoid - Fan Pressure Supply Distribution         | C-12               | G-20             |
| Relay and Fan Back Stop Distribution                  | A-13               | A-36             | Solenoid - LH Blade Down Control                    | J-13               | G-20             |
| Relay - CAN Data Line A                               | C-14               | C-48             | Sensor - Penetration Blade                          | F-12               | F-21             |
| Relay - CAN Data Line B                               | C-14               | C-48             | Sensor - Penetration Blade Distribution             | F-12               | F-21             |
| Resistor - TE CAN                                     | E-1                | E-50             | Solenoid - RH Blade Down Control                    | J-13               | F-21             |
| Sensor - Air Pressure                                 | E-1                | E-50             | Solenoid - RH Blade Down Control Distribution       | J-13               | F-21             |
| Sensor - Air Pressure Distribution                    | E-1                | E-50             | Solenoid - RH Blade Down Control Distribution       | J-13               | F-21             |
| Sensor - Articulation                                 | H-8                | H-52             | Solenoid - Secondary Steering RH                    | E-6                | F-21             |
| Sensor - Atmospheric Pressure                         | E-1                | E-50             | Solenoid - Steering RH                              | E-6                | F-21             |
| Sensor - Atmospheric Pressure Distribution            | E-1                | E-50             | Solenoid - Steering RH Distribution                 | E-6                | F-21             |
| Sensor - Engine Coolant Temperature                   | D-10               | D-50             | Solenoid - Transmission 2 (PVO) Load                | G-12               | F-21             |
| Sensor - Engine Coolant Temperature Distribution      | D-10               | D-50             | Solenoid - Transmission 2 (PVO) Load Distribution   | G-12               | F-21             |
| Sensor - Fuel Pressure                                | D-10               | D-57             | Solenoid - Transmission 4 (D)                       | G-12               | F-21             |
| Sensor - Fuel Pressure Distribution                   | D-10               | D-57             | Solenoid - Transmission 4 (D) Distribution          | G-12               | F-21             |
| Sensor - Hydraulic Oil Cooler Inlet Temp              | A-14               | A-39             | Solenoid - Transmission 5 (I)                       | F-12               | F-22             |
| Sensor - Hydraulic Oil Cooler Inlet Temp Distribution | A-14               | A-39             | Solenoid - Transmission 5 (I) Distribution          | F-12               | F-22             |
| Sensor - Hydraulic Oil Pressure                       | E-10               | E-61             | Solenoid - Transmission 5 (High Range)              | F-12               | F-22             |
| Sensor - Hydraulic Oil Pressure Distribution          | E-10               | E-61             | Solenoid - Transmission 5 (High Range) Distribution | F-12               | F-22             |
| Sensor - LH Steering Cylinder Pressure                | F-1                | F-63             | Solenoid - Wheel Lift RH                            | H-12               | F-22             |
| Sensor - LH Steering Cylinder Pressure Distribution   | F-1                | F-63             | Solenoid - Wheel Lift RH Distribution               | H-12               | F-22             |
| Sensor - Park Brake Distribution                      | F-12               | F-65             | Switch - AC High Line Pressure                      | E-6                | F-22             |
| Sensor - RH Steering Cylinder Pressure                | F-1                | F-66             | Switch - AC Low Pressure                            | E-6                | F-22             |
| Sensor - RH Steering Cylinder Pressure Distribution   | F-1                | F-66             | Switch - AC Low Pressure Distribution               | E-6                | F-22             |
| Sensor - Speed/Torque (Cam)                           | D-10               | D-58             | Switch - Fuel Pressure                              | D-12               | F-22             |
| Sensor - Speed/Torque (Cam) Distribution              | D-10               | D-58             | Switch - Fuel Pressure Distribution                 | D-12               | F-22             |
| Sensor - Steering Oil Temperature                     | E-2                | E-70             | Switch - Hydraulic Pilot Supply                     | F-15               | F-23             |
| Sensor - Steering Oil Temperature Distribution        | E-2                | E-70             | Switch - Hydraulic Pilot Supply By-Pressure         | F-15               | F-23             |
| Sensor - Transmission Input Speed 1                   | E-13               | E-72             | Switch - Pallet Loading                             | A-15               | F-23             |

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December 2019

## 16M Motor Grader Electrical System

B9H751-UP  
R9H1-UP

**Volume 3 of 3: Chassis and Engine**

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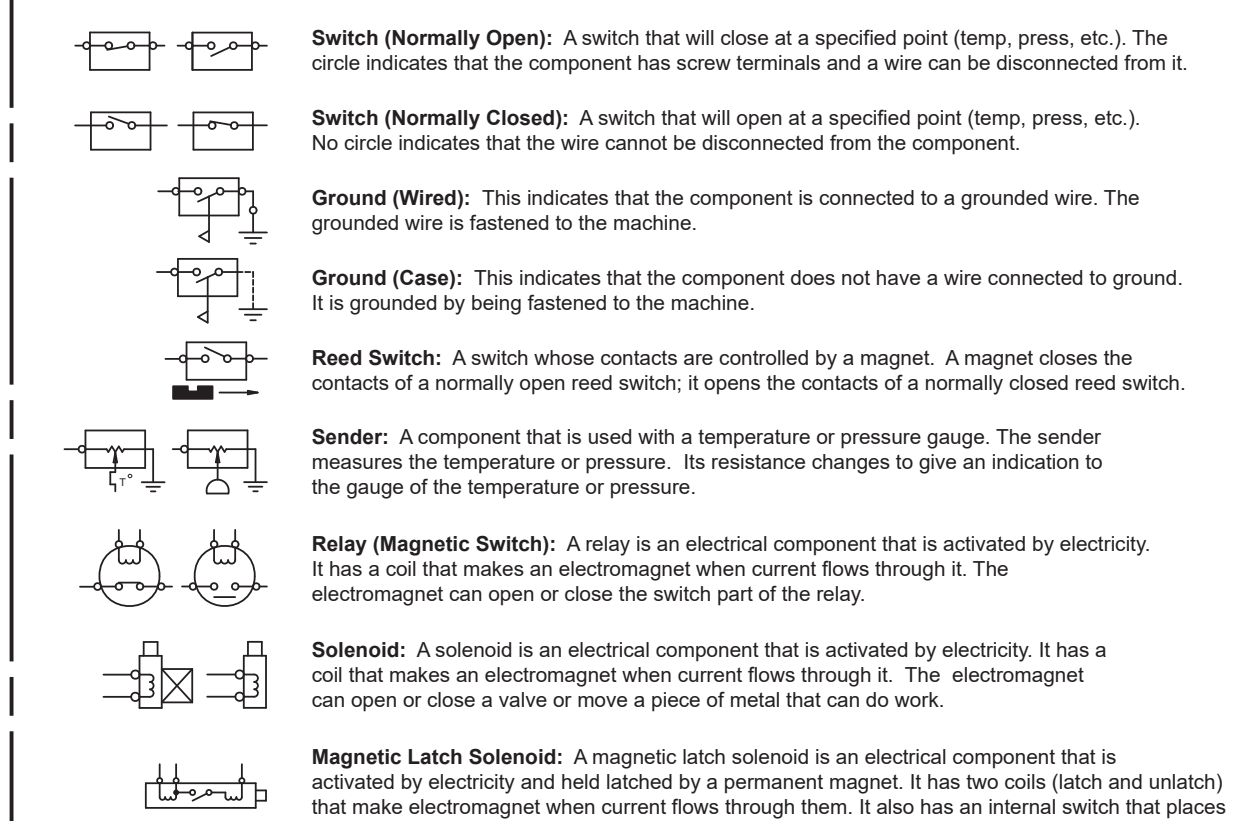
| Connector Location - Volume 3 |                    |  |
|-------------------------------|--------------------|--|
| Connector Number              | Schematic Location |  |
| CORR 41                       | F-10               |  |
| CORR 42                       | A-14               |  |
| CORR 43                       | B-14               |  |
| CORR 44                       | F-14               |  |
| CORR 45                       | F-14               |  |
| CORR 46                       | D-10               |  |
| CORR 47                       | F-14               |  |
| CORR 48                       | J-13               |  |
| CORR 49                       | J-13               |  |
| CORR 50                       | E-10               |  |
| CORR 51                       | D-10               |  |
| CORR 52                       | D-10               |  |
| CORR 53                       | D-10               |  |
| CORR 54                       | D-10               |  |
| CORR 55                       | B-18               |  |
| CORR 56                       | B-18               |  |
| CORR 57                       | G-8                |  |
| CORR 58                       | G-8                |  |
| CORR 59                       | J-7                |  |
| CORR 60                       | J-7                |  |
| CORR 61                       | J-4                |  |
| CORR 62                       | I-2                |  |
| CORR 63                       | I-2                |  |
| CORR 64                       | D-2                |  |
| CORR 65                       | F-2                |  |
| CORR 66                       | F-2                |  |
| CORR 67                       | F-2                |  |
| CORR 68                       | F-2                |  |
| CORR 69                       | E-2                |  |
| CORR 70                       | E-2                |  |

| CONN 70                                                                                                                                                                                                          | E-2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <p>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.</p> |     |

## Symbols



A component in an electrical circuit that will open the circuit.



## Harness and Wire Symbols

