

Wire Description table with columns: Wire Number, Wire Color, Description, Wire Number, Description. Lists various electrical components and their wiring details.

Component Location table with columns: Component, Machine Location, Component, Machine Location. Lists components like Air Filter, Alternator, and various sensors with their locations on the machine.

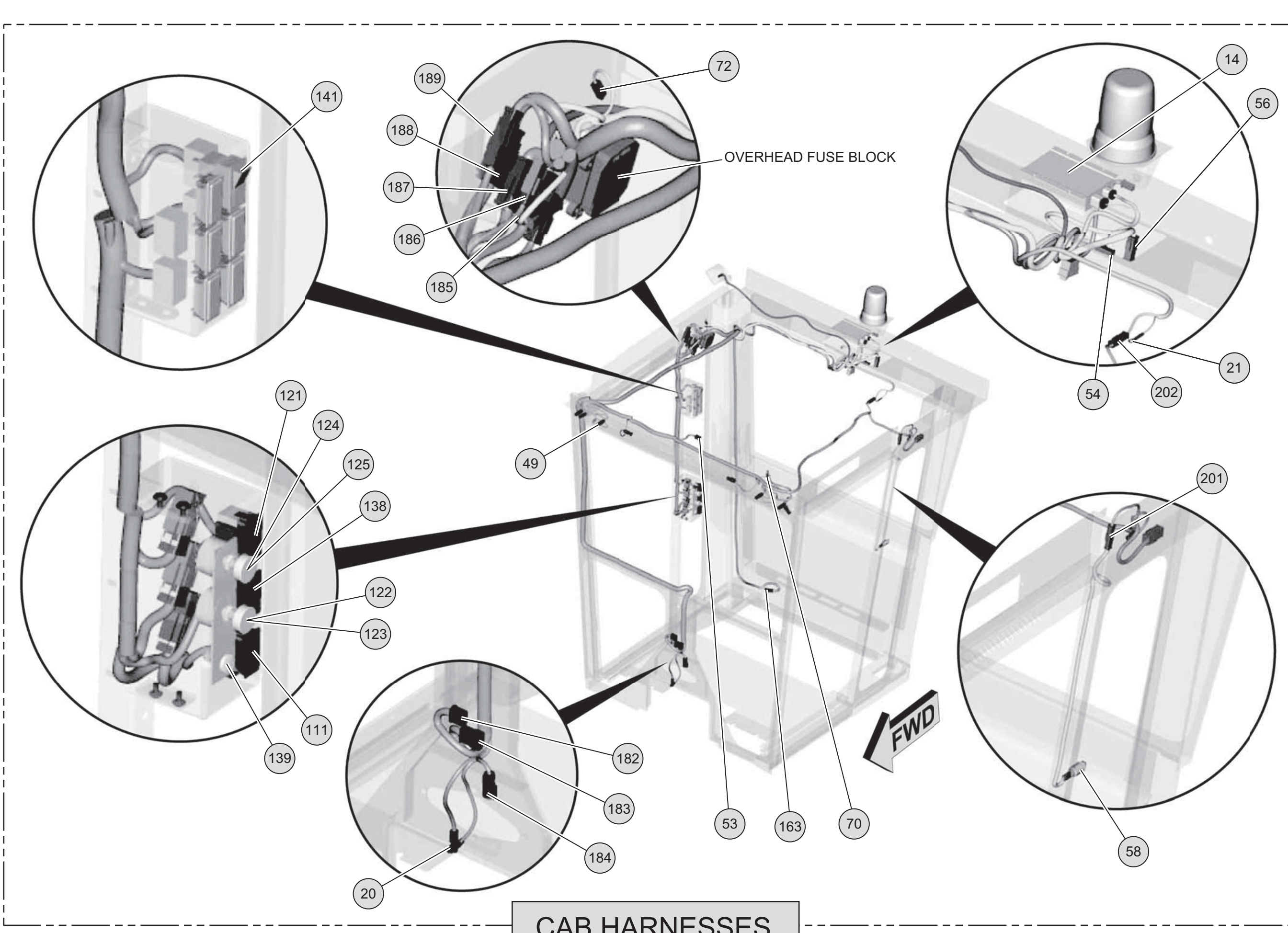
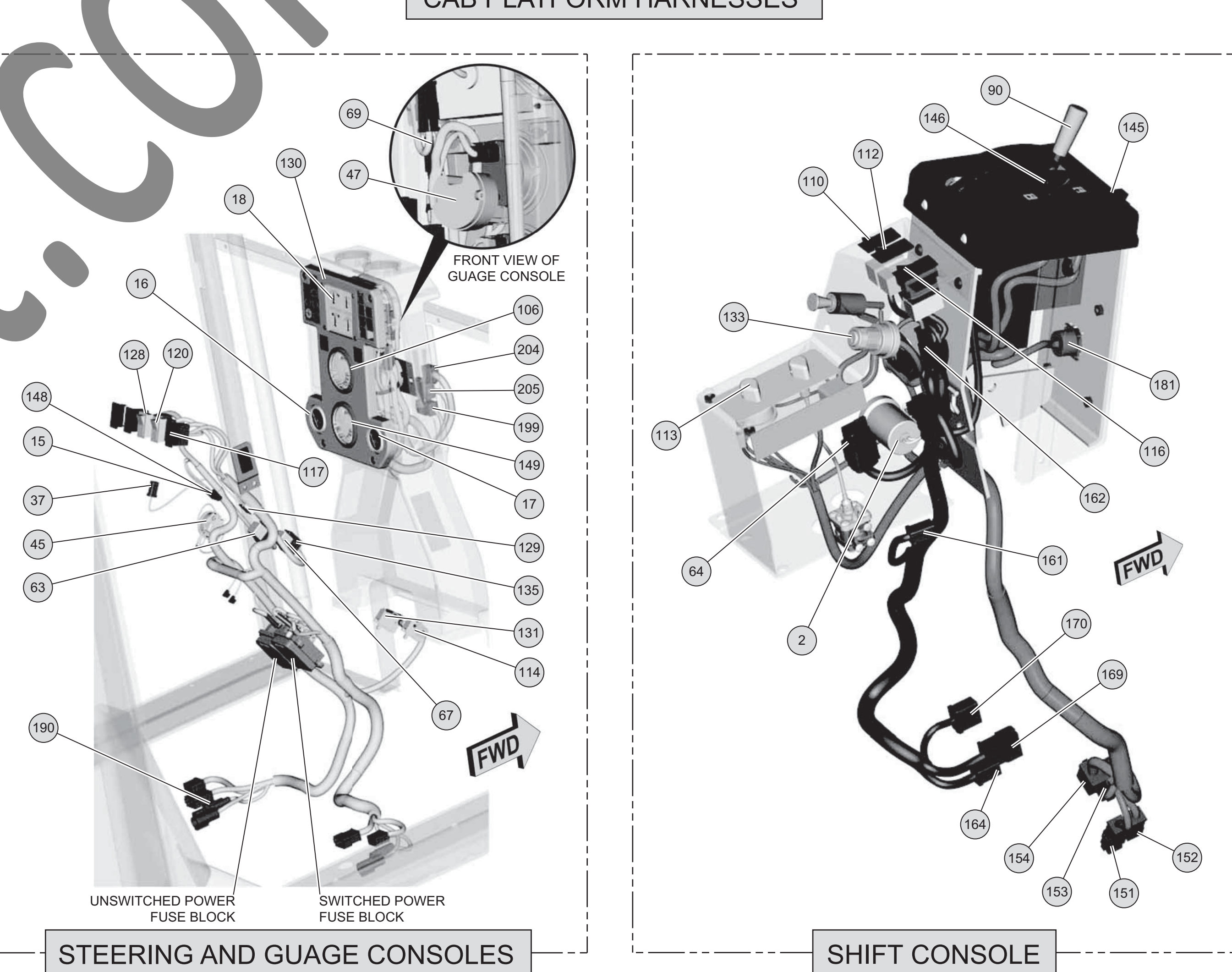
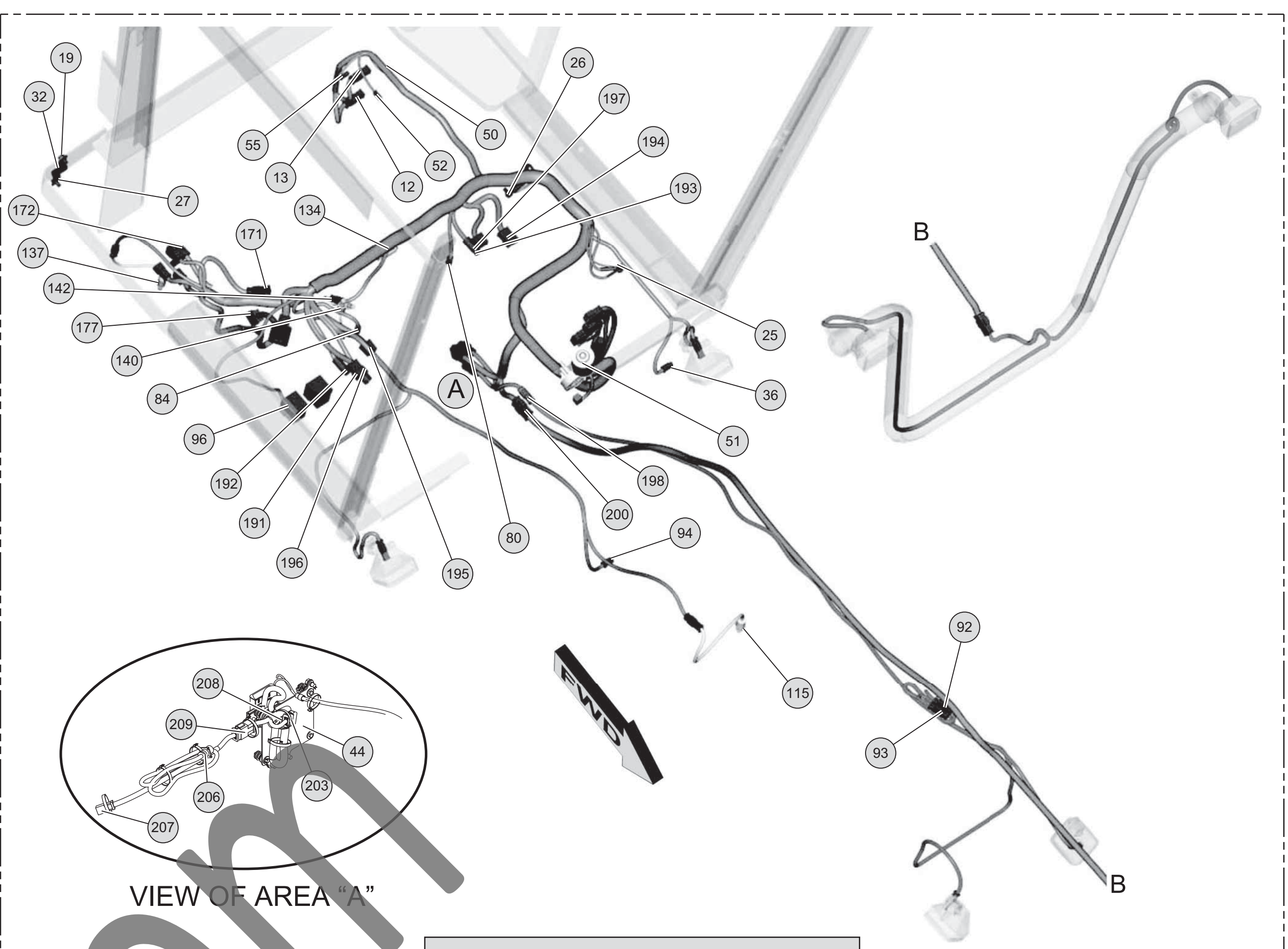
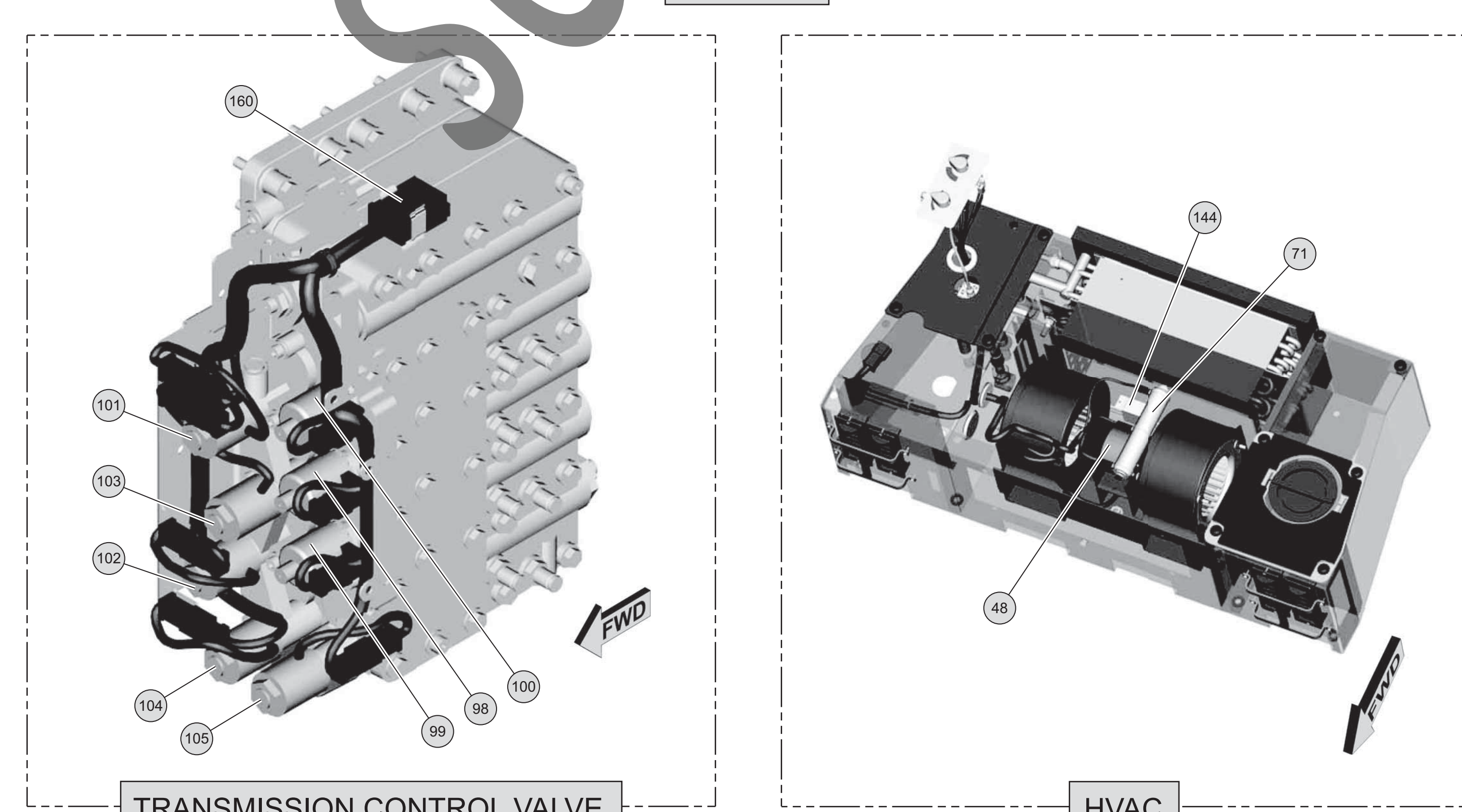
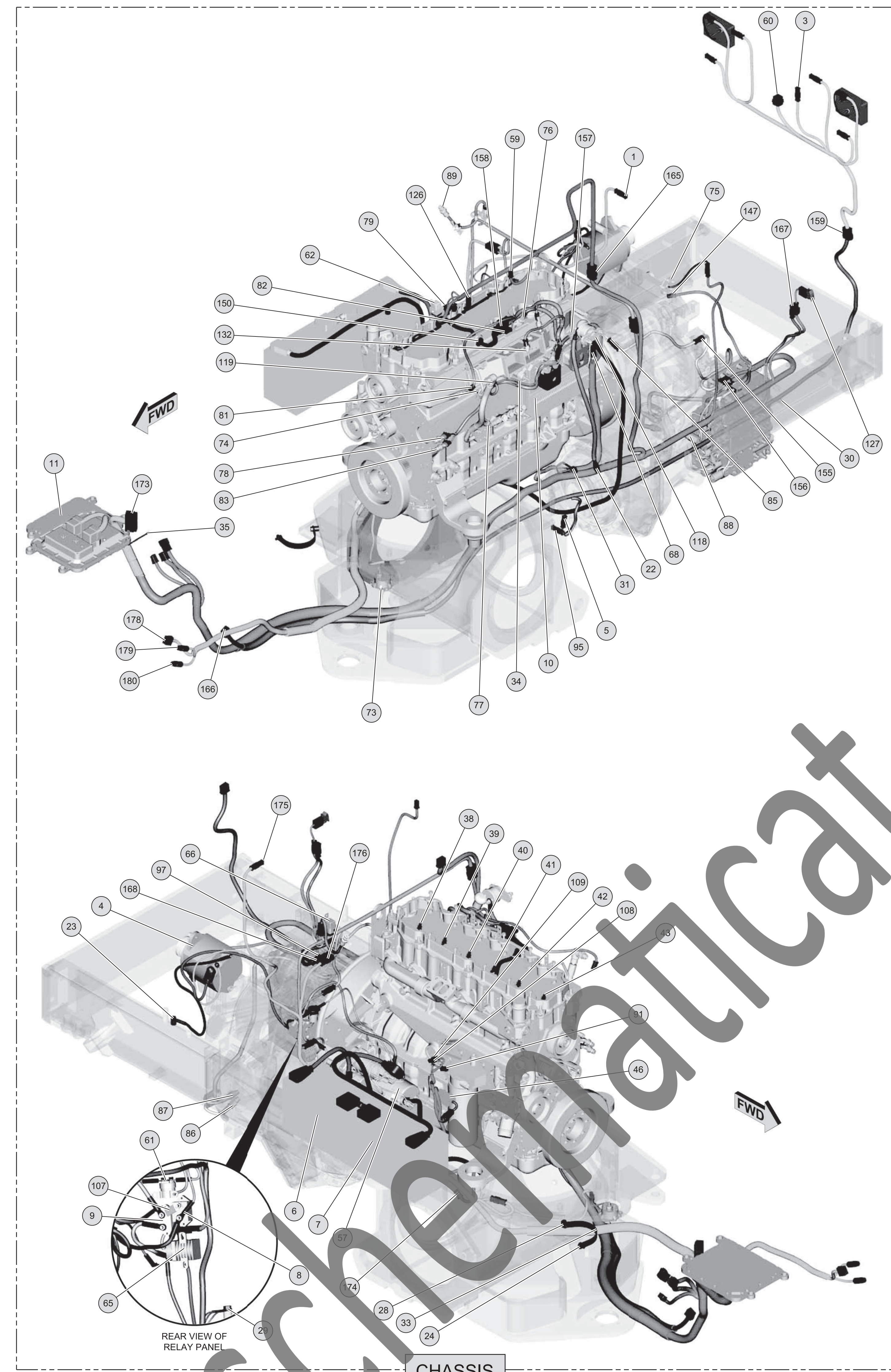
Connector Location table with columns: Connector Number, Machine Location, Connector Number, Machine Location. Lists various electrical connectors and their locations.

Component Identifiers (CID) Module Identifier (MID) table with columns: CID, Component. Lists various engine control components and their identifiers.

Failure Mode Identifiers (FMI) table with columns: FMI No., Failure Description. Lists various failure modes and their descriptions.

Event Codes Engine Control table with columns: Event Code, Description. Lists various engine control event codes and their descriptions.

Component Identifiers (CID) Module Identifier (MID) table with columns: CID, Component. Lists various transmission control components and their identifiers.



Schematic

120K2 and 140K2 Motor Grader Electrical System

120K2: SZ21-488
SZ21-105
140K2: SZW1-158

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Harness and Wire Electrical Schematic Symbols

Symbols and Definitions

- Fuse: A component in an electrical circuit that opens the circuit if too much current flows through it.
- Switch (Normally Open): A switch that will close at a specified point (temp., press., etc.).
- Switch (Normally Closed): A switch that will open at a specified point (temp., press., etc.).
- Ground (Wired): This indicates that the component is connected to a grounded wire. The ground wire is labeled to the machine.
- Ground (Cable): This indicates that the component is connected to a ground wire connected to the ground 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.
- Solenoid: A component that is used with a temperature or pressure gauge. The solenoid 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 actuated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch coil on the relay.
- Solenoid: A solenoid is an electrical component that is actuated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch coil on the relay.
- Magnetic Lock Solenoid: A magnetic lock solenoid is an electrical component that is actuated by electricity and held closed by a permanent magnet. It has two coils (set and unlock) that make an electromagnet when current flows through them. It has two coils (set and unlock) that make an electromagnet when current flows through them. It has two coils (set and unlock) that make an electromagnet when current flows through them.

Harness and Wire Symbols

- Wire, Cable, or Harness: Assembly Identification, Insulation, Harness Identification Letters and Numbers, Color and Stripes.
- Pin Number for Connector Plug: Pin Number for Connector Receptacle.

Off-Harness Switch Specification

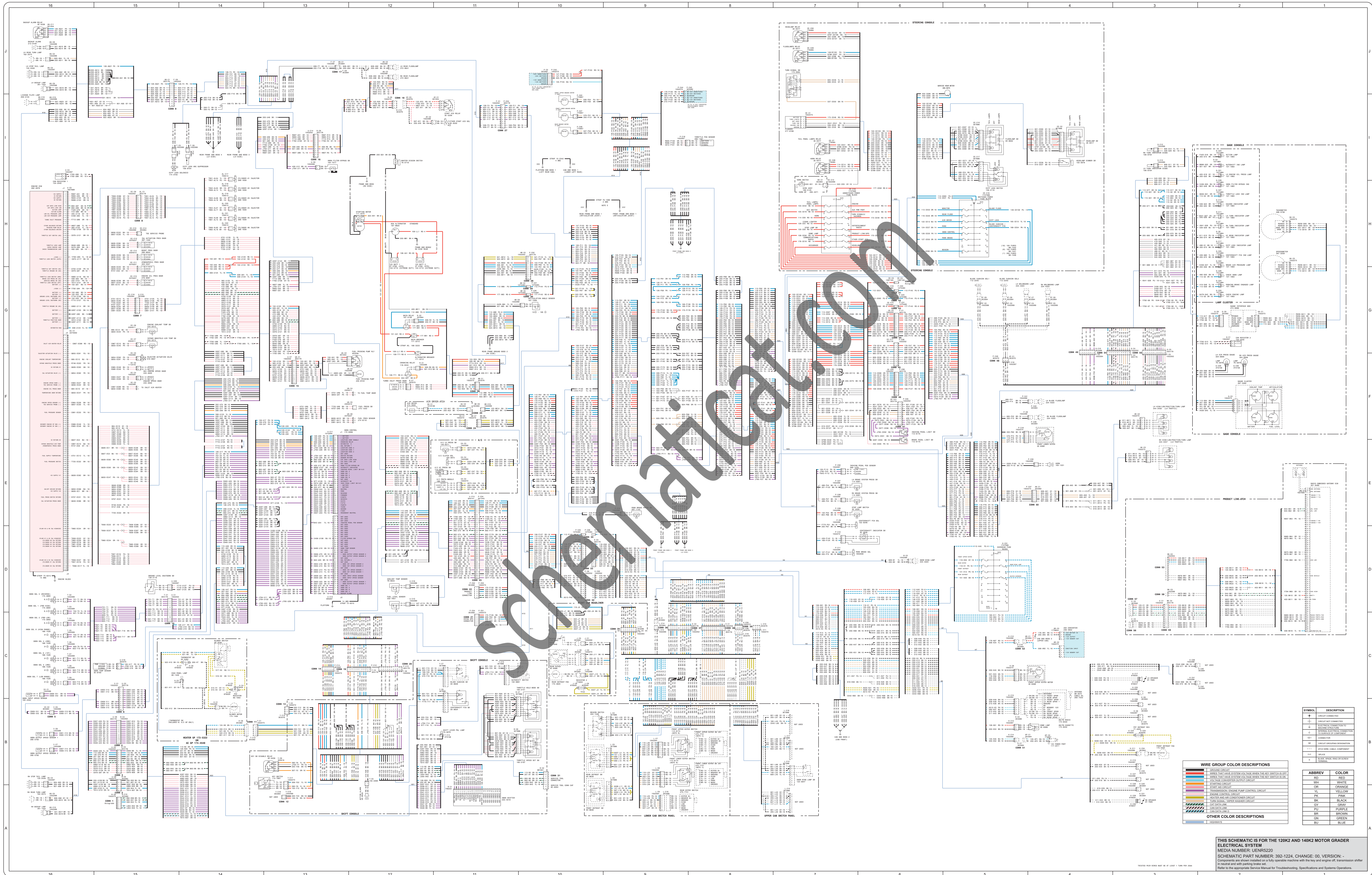
Part No.	Function	Disruptive	Contact Position
114-533	AC High Pressure	High	1/3 Normally Open
114-531	Brake System Pressure (LH)	High	Normally Closed
140-571	AC Low Pressure	High	Normally Open
275-133	Fuel Pressure	High	Normally Closed
201-140	Post Pressure	High	Normally Open

Resistor, Solenoid and Solenoid Specifications

Part No.	Component Description	Resistance (Ohms)
RT-403	Resistor	10 ± 0.5
RS-500	Resistor	10 ± 0.5
114-531	Resistor	10 ± 0.5
70-243	Solenoid	20
332-767	Solenoid	10 ± 0.5
175-389	Solenoid	8.7 ± 0.4
102-636	Solenoid	5.0 ± 0.2
102-637	Solenoid	17 ± 0.8
105-0208	Solenoid	712 ± 2
166-1536	Solenoid	3 ± 0.3
8E-6102	Solenoid	6

Related Electrical Service Manuals

Title	Form Number
Alternator	80-4204 (SMA 4710)
Generator	80-4204 (SMA 4710)
Transmission Control	80-4204 (SMA 4710)
Engine Control	80-4204 (SMA 4710)



WIRE GROUP COLOR DESCRIPTIONS	
[Red line]	GROUND CIRCUIT
[Blue line]	WIRING THAT OPERATES VOLTS WHEN THE KEY SWITCH IS ON
[Green line]	WIRING THAT OPERATES VOLTS WHEN THE KEY SWITCH IS ON
[Yellow line]	STARTING CIRCUIT
[Orange line]	START AND STOP
[Purple line]	TRANSMISSION, ENGINE WATER CONTROL CIRCUIT
[Pink line]	ENGINE CONTROL CIRCUIT
[Black line]	WATER AND AIR CONDITIONER CIRCUIT
[Light Blue line]	ANTI-LOCK BRAKE SYSTEM CIRCUIT
[Dark Blue line]	ANTI-LOCK CIRCUIT
[Light Green line]	ANTI-LOCK CIRCUIT
[Dark Green line]	ANTI-LOCK CIRCUIT
[Light Purple line]	ANTI-LOCK CIRCUIT
[Dark Purple line]	ANTI-LOCK CIRCUIT
OTHER COLOR DESCRIPTIONS	
[Dashed line]	RESERVED

SYMBOL	DESCRIPTION
[Solid line]	WIRE CONNECTED
[Dashed line]	WIRE NOT CONNECTED
[Dotted line]	WIRE NOT CONNECTED
[Dash-dot line]	WIRE NOT CONNECTED
[Cross-hatched]	WIRE NOT CONNECTED
[Diagonal lines]	WIRE NOT CONNECTED
[Vertical lines]	WIRE NOT CONNECTED
[Horizontal lines]	WIRE NOT CONNECTED
[Stippled]	WIRE NOT CONNECTED
[White]	WIRE NOT CONNECTED
[Black]	WIRE NOT CONNECTED
[Red]	WIRE NOT CONNECTED
[Blue]	WIRE NOT CONNECTED
[Green]	WIRE NOT CONNECTED
[Yellow]	WIRE NOT CONNECTED
[Orange]	WIRE NOT CONNECTED
[Purple]	WIRE NOT CONNECTED
[Pink]	WIRE NOT CONNECTED
[Light Blue]	WIRE NOT CONNECTED
[Dark Blue]	WIRE NOT CONNECTED
[Light Green]	WIRE NOT CONNECTED
[Dark Green]	WIRE NOT CONNECTED
[Light Purple]	WIRE NOT CONNECTED
[Dark Purple]	WIRE NOT CONNECTED
[Light Brown]	WIRE NOT CONNECTED
[Dark Brown]	WIRE NOT CONNECTED
[Light Grey]	WIRE NOT CONNECTED
[Dark Grey]	WIRE NOT CONNECTED
[White]	WIRE NOT CONNECTED
[Black]	WIRE NOT CONNECTED

THIS SCHEMATIC IS FOR THE 120K2 AND 140K2 MOTOR GRADER ELECTRICAL SYSTEM
 MEDIA NUMBER: UENR5220
 SCHEMATIC PART NUMBER: 392-1224, CHANGE: 00, VERSION: -
 Components are shown installed on a fully operable machine with the key and engine off, transmission in the neutral and with parking brake set.
 Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations.