# SR175 / SV185
# Tier 4B (final)

## Alpha Series Skid Steer Loader

*SR175 PIN NDM465633 and above; SV185 PIN NDM466611 and above*

# SERVICE MANUAL

**Part number 47851947**
English
May 2015
*Replaces part number 47712041*

CASE CONSTRUCTION



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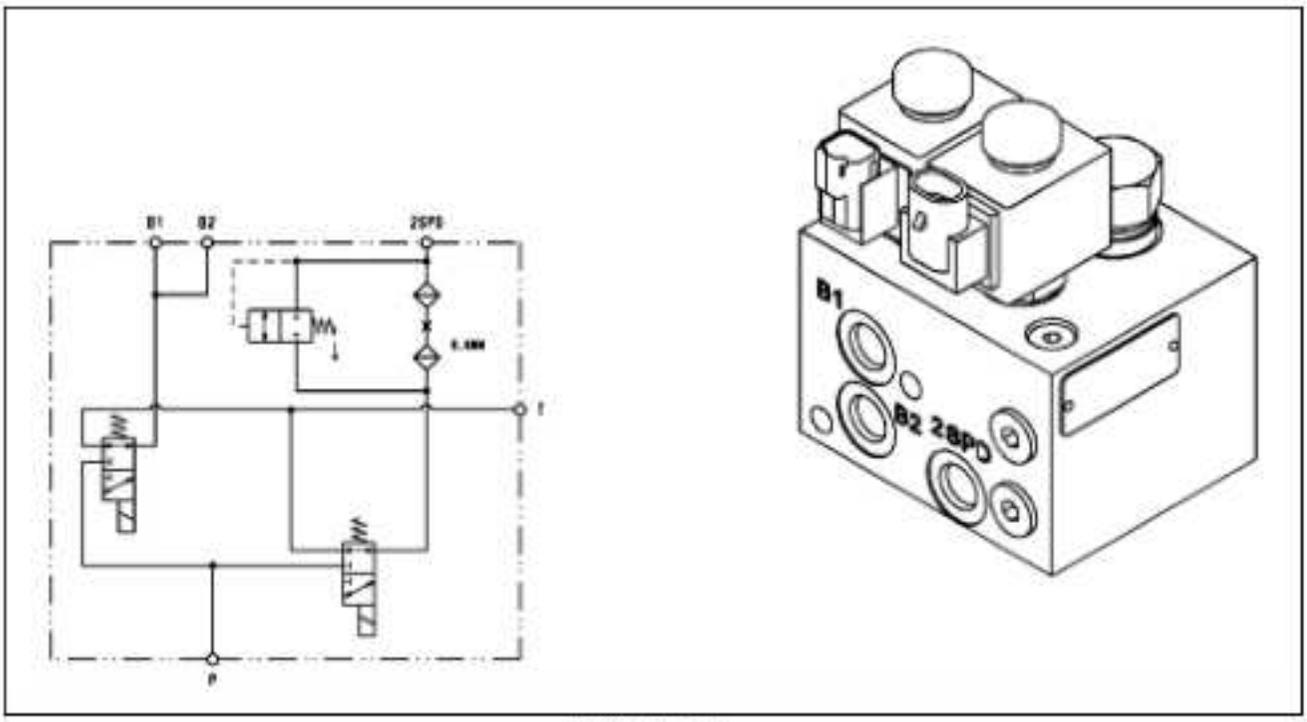
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# Control valve - General specification

| | |
|---|---|
| SR175<br>SV185 | |




**Brake, two speed valve**

| | |
|---|---|
| Hydraulic requirements: | Charge pressure = **24 - 25.5 bar** (**350 - 370 psi**) |
| | Brake release pressure = **15 bar** (**218 psi**) |
| Sequence valve setting | **12 bar** (**174 psi**) |
| Filter rating | 40 – 50 microns |
| Port identification | P - Supply inlet |
| | T - Tank return |
| | 2SPD - Two speed shift |
| | B1 - Brake motor 1 |
| | B2 - Brake motor 2 |
| | PS2 - Brake pressure switch |

# Control valve - General specification

| | |
|---|---|
| SR175<br>SV185 | |



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# 5232-Loader Arm Valve (Directional) - Solenoid Lower B Supply Short to Ground

| | |
|---|---|
| SR175 TIER 4B Final [NDM465633 - ] | NA Electro hydraulic controls |
| SV185 TIER 4 [NDM466611 - ] | NA Electro hydraulic controls |

**Context:**
Diagnostic Trouble Code 5232 has an error priority of Red.
The loader arm functions are disabled while Diagnostic Trouble Code 5232 is active.

**Cause:**
The UCM has sensed that the loader retract solenoid current is too high. The fault is active when hydraulics are enabled and solenoid output current, X-CN3A pin 22 is greater than **3 A**.

**Possible failure modes:**

1. Short circuit in the solenoid wiring.
2. The loader valve solenoid has failed.
3. The UCM has an internal failure.

**Solution:**

1. Verify that the fault code is active.

   Connect the Electronic Service Tool to the service tool connector.

   To check for fault code: Start and operate the machine.

   A. The fault code is not recorded again. OK to return the machine to service.

   B. Fault code 5232 is recorded again. Go to step **2**.
2. Verify that the wiring and connectors are free of damage.

   Inspect the UCM and the loader solenoid connections. All connections should be secure, tight, free of corrosion, abrasion, and damage.

   Inspect the harness from the UCM to the loader solenoids. Verify that the harness is free of damage, corrosion, abrasion, and incorrect attachment.

   A. The connectors are secure and the harness is free of damage. Go to step **3**.

   B. The connectors or the harness has damage. Repair or replace the harness or connectors as required. Return to step **1** to confirm elimination of fault.
3. Test the UCM.

   Turn the ignition switch OFF.

   Disconnect solenoid connector X-27.

   Turn the ignition switch ON.

   Use the electronic service tool and access the fault code screen. Fault code 5232 should no longer be active. Fault code 5231 is now active.

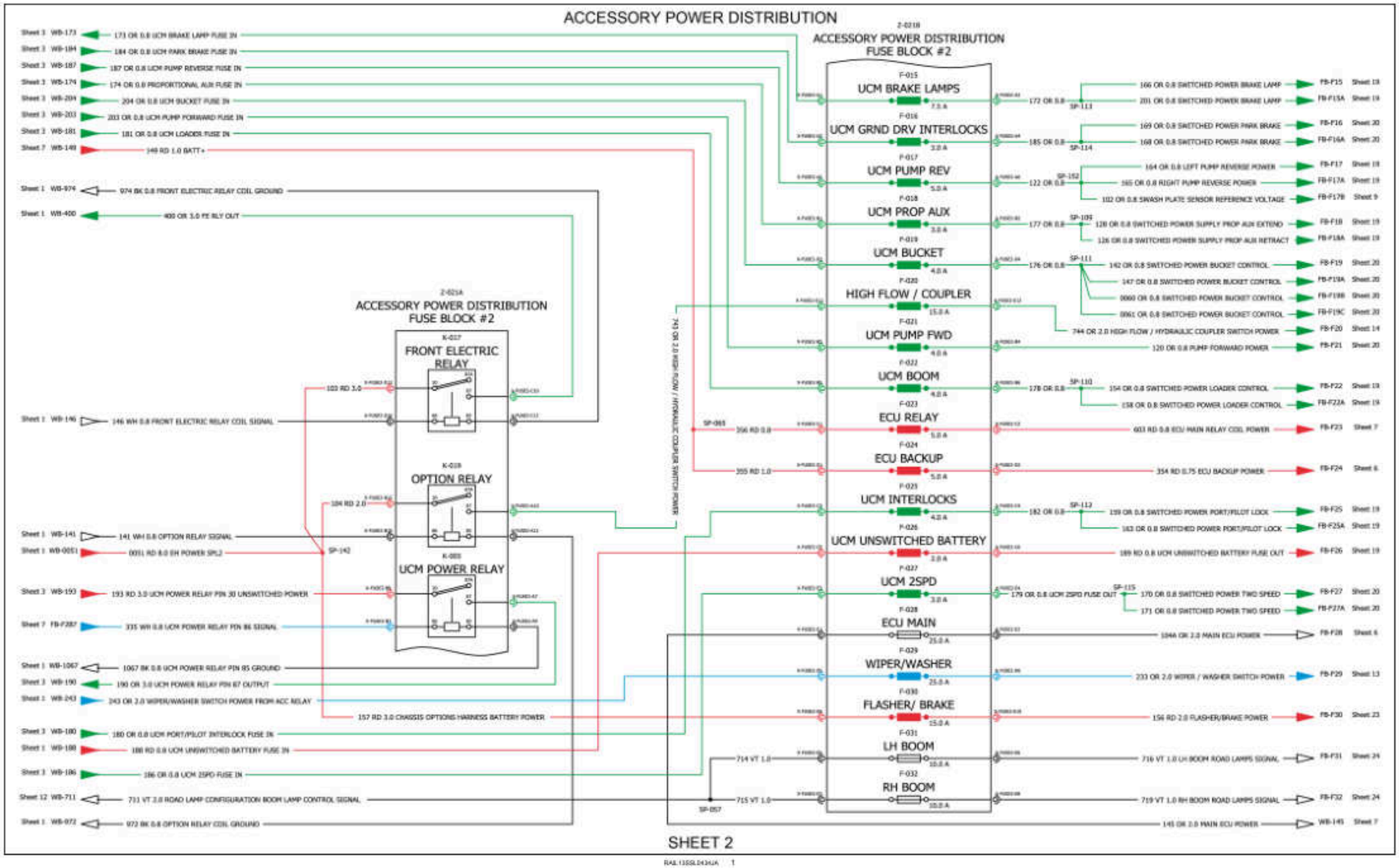
   A. Fault code 5232 is no longer active. Fault code 5231 is now active. Replace the solenoid and retest. Return to step **1** to confirm elimination of the fault.

   B. Fault code 5232 is active. Fault code 5231 did not become active. Go to step **4**.
4. Measure the resistance of the solenoid wire to chassis ground.

   Turn the ignition switch OFF.

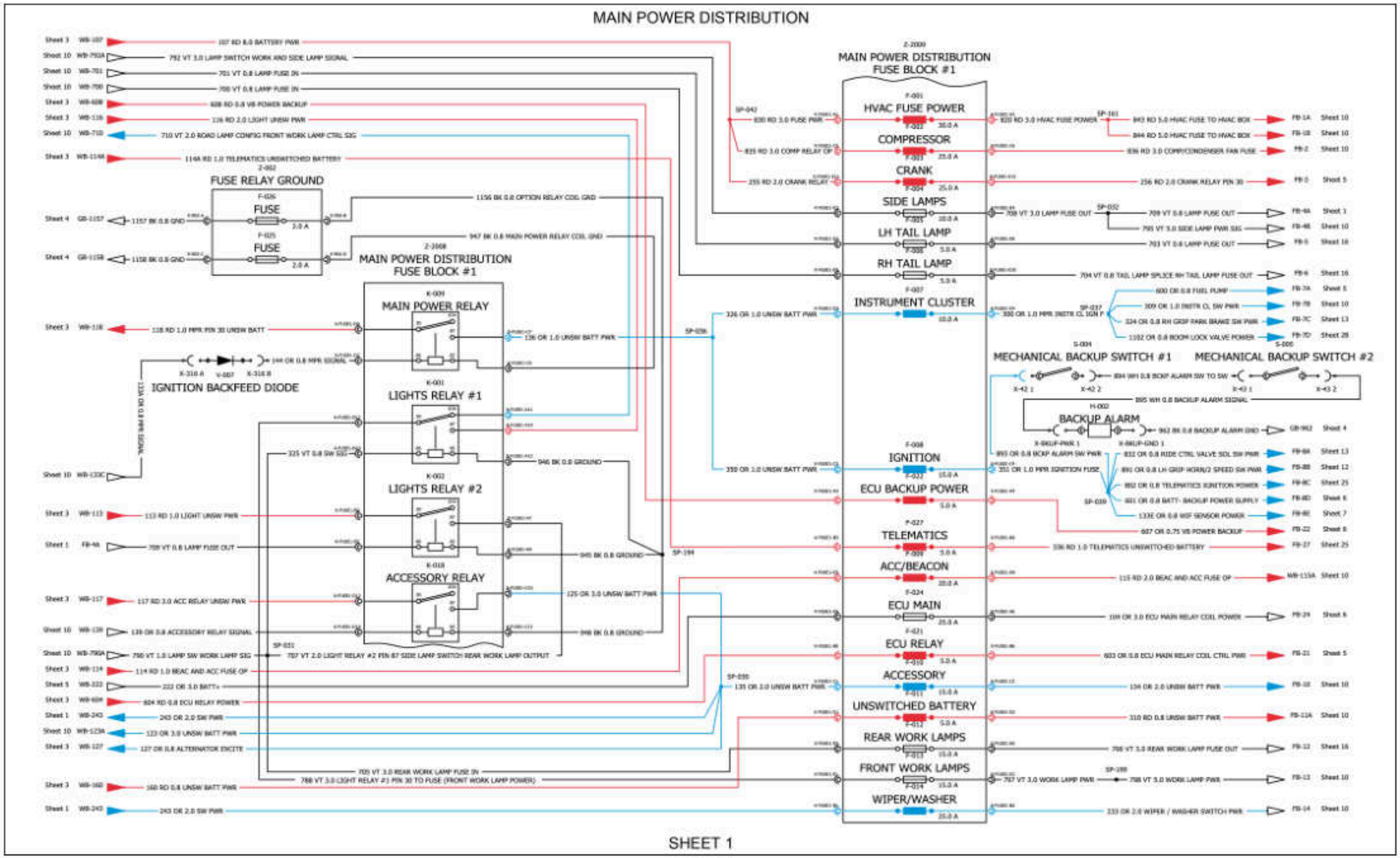


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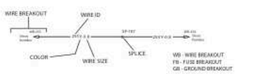



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## SYMBOLS

PRESSURE SWITCH · LAMP · MOTOR · DIODE · PRESSURE · TEMPERATURE · SPEAKER · LIGHT EMITTING DIODE (LED) · VARIABLE RESISTOR · RESISTOR · COIL · S.P. S.T. · S.P. D.T. · D.P. S.T. · D.P. D.T. · FUSE · RELAY · GROUND · BATTERY

## CIRCUIT DIAGRAM LEGENDS



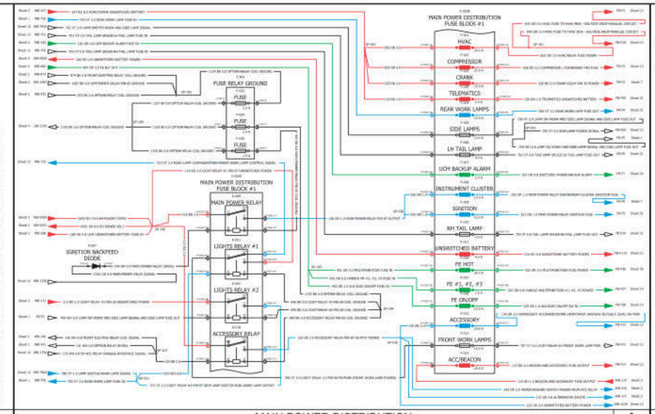

| COLOR | ABBREVIATION |
|---|---|
| BLACK | BK |
| BLUE | BL |
| LIGHT BLUE | LB |
| BLACK/WHITE | BK/WH |
| GREEN | GN |
| LIGHT GREEN | LG |
| ORANGE | OR |
| PINK | PK |
| VIOLET | VT |
| RED | RD |
| GREY | GY |
| TAN | TN |
| WHITE | WH |
| YELLOW | YE |

**WIRE SIZE CHART**

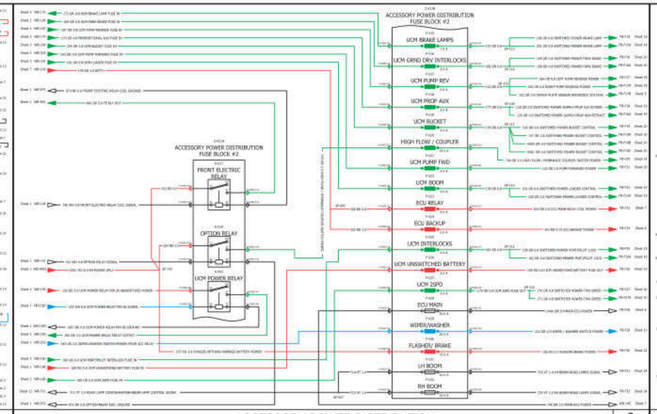
| Sq. mm | AWG |
|---|---|
| 0.5 | 20 |
| 0.8 | 18 |
| 1.0 | 16 |
| 2.0 | 14 |
| 3.0 | 12 |
| 5.0 | 10 |
| 8.0 | 8 |

**SUB SYSTEM DESCRIPTION**

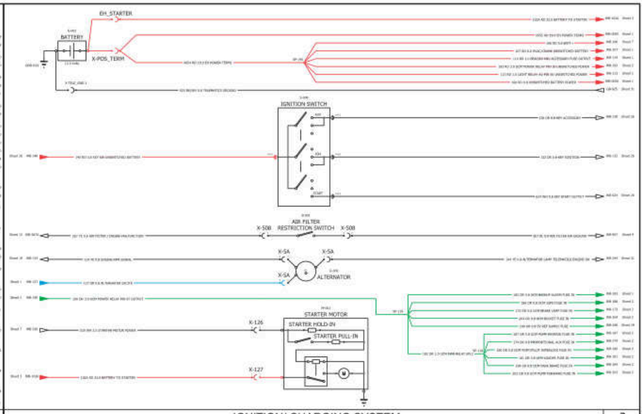

| | |
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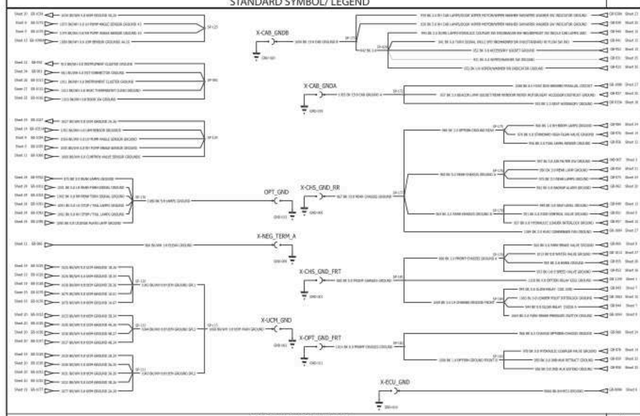



ACCESSORY POWER DISTRIBUTION 2

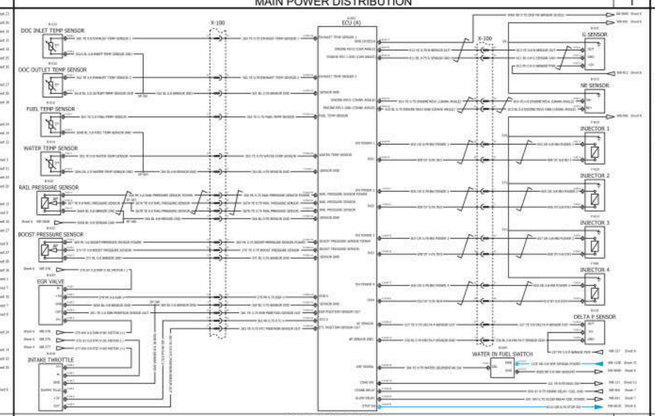



IGNITION/ CHARGING SYSTEM 3

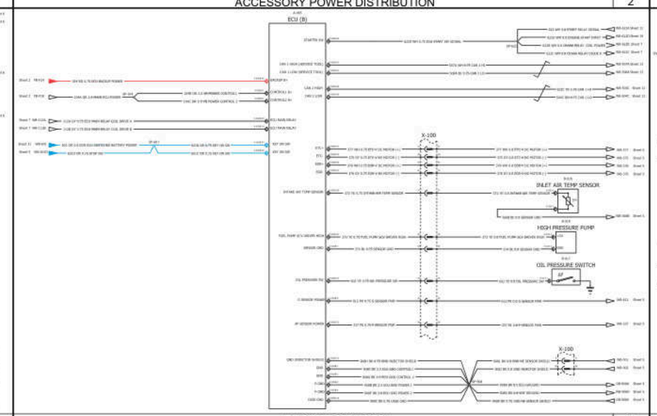
STANDARD SYMBOL/ LEGEND 4



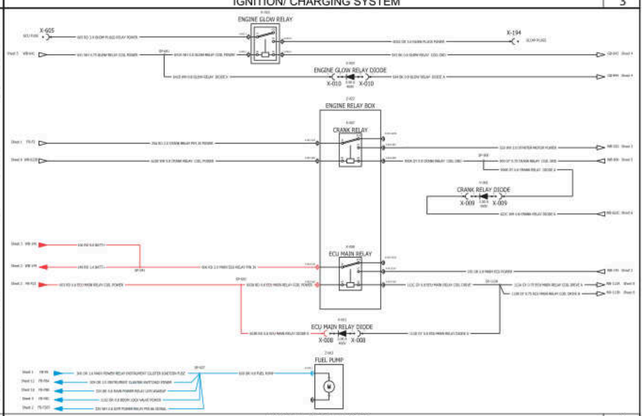

GROUNDING SYSTEM 4



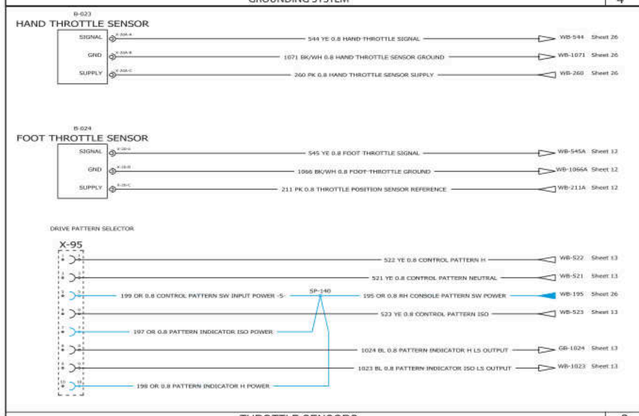

ENGINE ISM HPCR 5



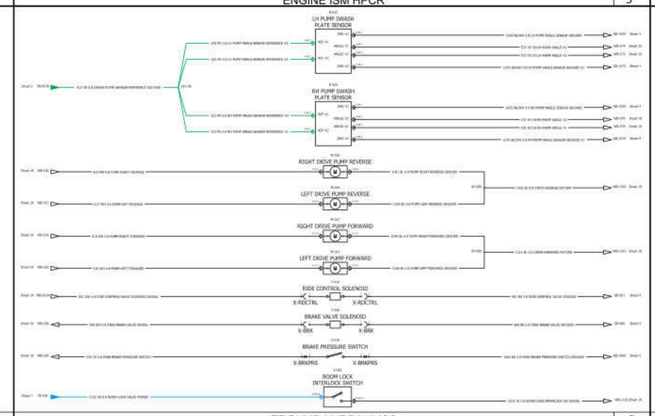

ENGINE ISM HPCR 6



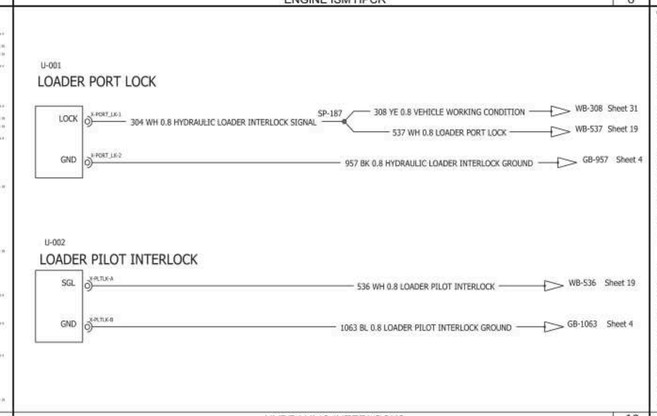

ENGINE ISM HPCR 7



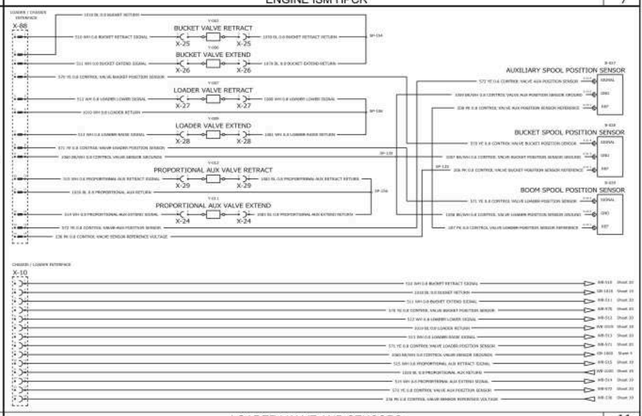

THROTTLE SENSORS 8



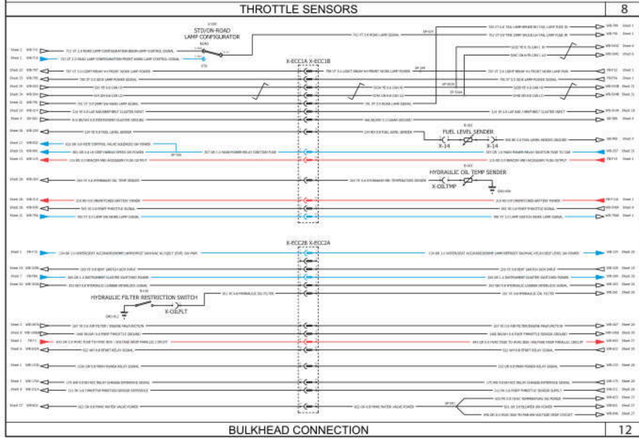

ET PUMP HYDRAULICS 9



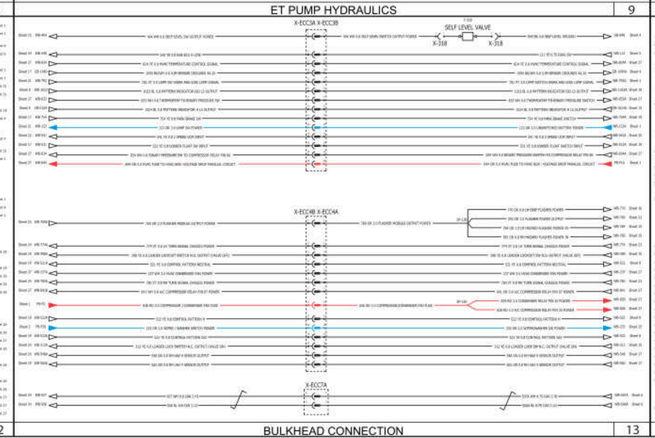

HYDRAULIC INTERLOCKS 10



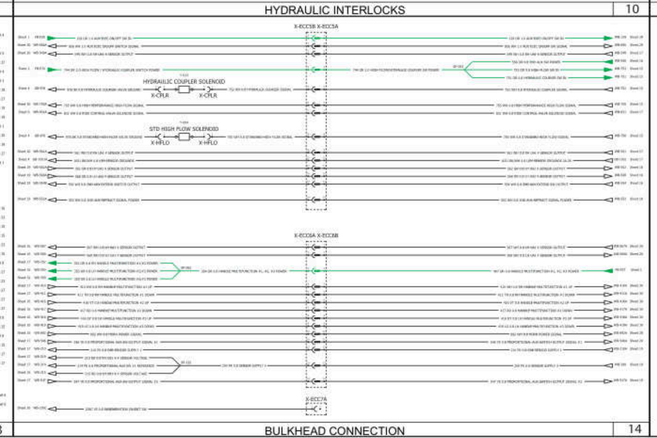

LOADER VALVE AND SENSORS 11




BULKHEAD CONNECTION 12




BULKHEAD CONNECTION 13




BULKHEAD CONNECTION 14

# SR175/ SV185
# ISM TIER 4 EH MACHINES
# ELECTRICAL SCHEMATIC
# RAC 47547365

UNSWITCHED BATTERY
MAIN POWER FUSE BLOCK 1
ACCESSORY POWER DISTRIBUTION

RAC 47547365 S1S1



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