SERVICE MANUAL

L213 / L216
Tier 4B (final)
200 Series Skid Steer Loader

L213 PIN NDM458999 and above
L216 PIN NDM477925 and above

Part number 47712044
English
April 2014
Replaces part number 47465733

NEW HOLLAND CONSTRUCTION

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TIER 4B (FINAL)
200 SERIES SKID STEER LOADER

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SERVICE MANUAL
COMPLETE CONTENTS

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47547374

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ENGINE SERVICE MANUAL (sold separately) **47434934**

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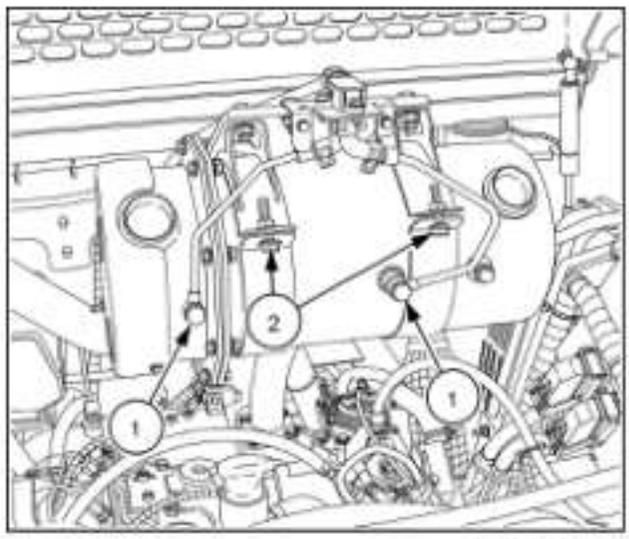
47720735 April 2014
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Diesel Particulate Filters (DPF) - Install

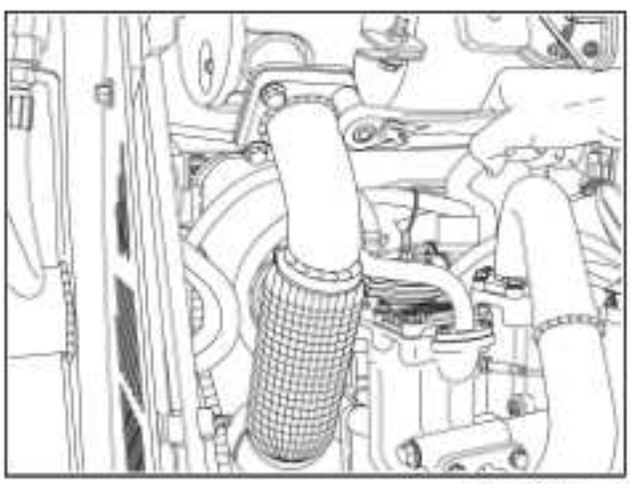
L213 TIER 4 [NDM458999 -]	NA
L216	NA

1. Bolt the DPF assembly to the DPF mount.
2. Connect the pressure sensor tubes **(1)** to the DPF assembly. Torque the bolts **(1)** to **25 - 30 N·m** (**221 - 266 lb in**).



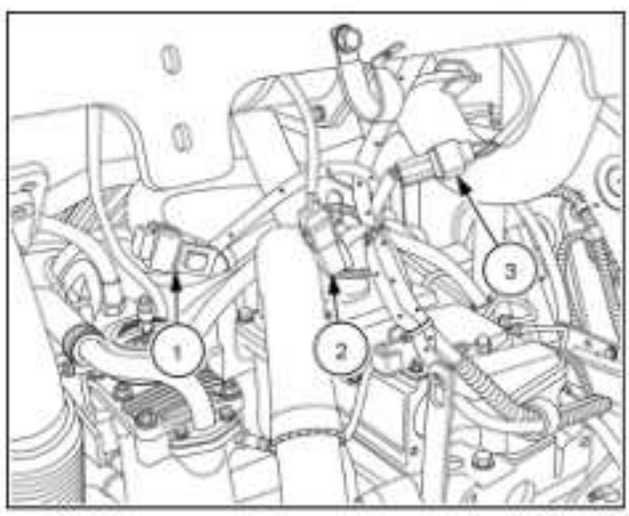
RAIL13SSL034454A 1

3. Bolt the flex pipe to the DPF assembly. Torque the bolts to **27 - 37 N·m** (**20 - 27 lb ft**).



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4. Connect the following sensors:
   - Diesel oxidation catalyst (DOC) inlet temperature sensor (exhaust gas temp sensor #1) **(1)**
   - Diesel particulate filter (DPF) pressure sensor **(2)**
   - DPF outlet temperature sensor (exhaust gas temp sensor #2) **(3)**



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Wire harnesses - Electrical schematic sheet 17 (55.100.DP-C.20.E.17)
Medium EH machines
Wire harnesses - Electrical schematic sheet 19 (55.100.DP-C.20.E.19)
Wire harnesses - Electrical schematic sheet 20 (55.100.DP-C.20.E.20)
Wire harnesses - Electrical schematic sheet 13 (55.100.DP-C.20.E.13)
Wire harnesses - Electrical schematic sheet 14 (55.100.DP-C.20.E.14)
Case machines
Wire harnesses - Electrical schematic sheet 17 (55.100.DP-C.20.E.17)
New Holland machines
Wire harnesses - Electrical schematic sheet 17 (55.100.DP-C.20.E.17)

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5241-Boom Valve (Directional) - Common Solenoid (C) Return Short to Power

L213 TIER 4 [NDM458999 -]	NA Electro hydraulic controls
L216 TIER 4 [NDM477925 -]	NA Electro hydraulic controls

Context:
Fault code 5241 has an error priority of White. White errors are not displayed on the instrument cluster and are not known to the Owner/Operator. They will appear in the EST when the technician checks for active trouble codes. Loader arm functions are disabled while Diagnostic Trouble Code 5241 is active.

Cause:
The UCM has sensed higher than normal voltage on the loader solenoid lines, X-CN3A pin 22 or X-CN3B pin 6. The fault is active when hydraulics are disabled and the solenoid voltage feedback is greater than **5 V**.

Possible failure modes:

1. Shorted wire in the circuit.
2. 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 5241 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. Measure the voltage on the signal wires.

   Turn the ignition switch OFF.

   Disconnect UCM connectors X-CN3A, X-CN2B, and X-CN3B.

   Turn the ignition switch ON.

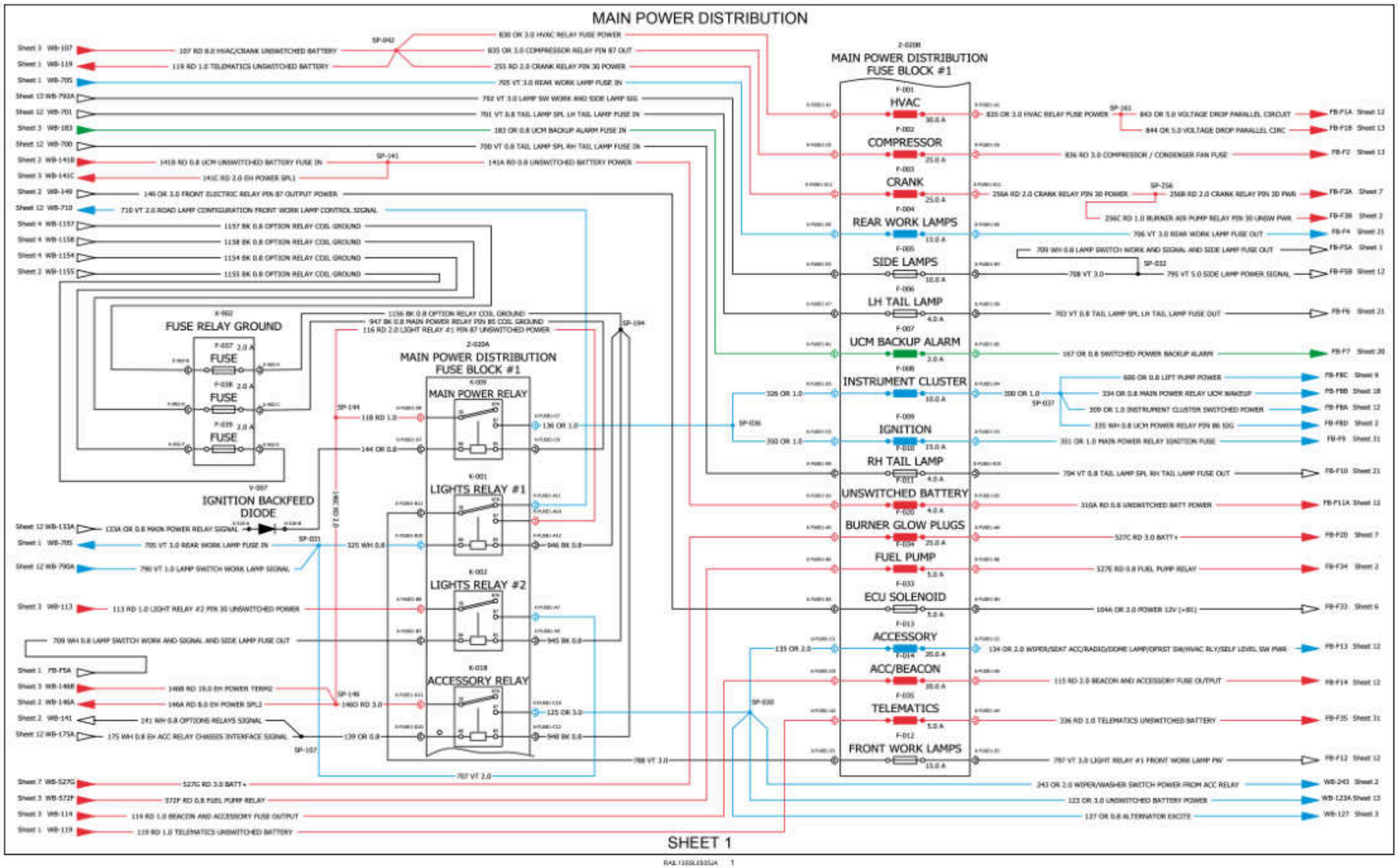
   Measure the voltage between X-CN3A pin 22 and chassis ground. The voltage should be less than **0.5 V**. Wiggle the harness to reveal an intermittent condition.

   Measure the voltage between X-CN2B pin 7 and chassis ground. The voltage should be less than **0.5 V**. Wiggle the harness to reveal an intermittent condition.

   Measure the voltage between X-CN3B pin 6 and chassis ground. The voltage should be less than **0.5 V**. Wiggle the harness to reveal an intermittent condition.

   A. All measured voltages are less than **0.5 V**. Temporarily replace the UCM and retest. Return to step **1** to confirm elimination of the fault.

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MAIN POWER DISTRIBUTION FUSE/ RELAY BOX #1

2 FUSE1

MAIN POWER DISTRIBUTION FUSE BLOCK #1

F-001 HVAC FUSE POWER 30.0 A
- 838 OR 3.0 HVAC RELAY FUSE POWER
- 839 OR 3.0 HVAC FUSE POWER
  - SP-161
    - 843 OR 5.0 HVAC FUSE TO HVAC BOX - VOLTAGE DROP PARALLEL CIRCUIT → FB-F1 Sheet 13
    - 844 OR 5.0 HVAC FUSE TO HVAC BOX - VOLTAGE DROP PARALLEL CIRCUIT → FB-F1A Sheet 14

F-002 COMPRESSOR 25.0 A
- Sheet 1 WB-107 → 107 RD 8.0 BATTERY POWER
  - SP-042
    - 835 RD 3.0 COMPRESSOR RELAY PIN 87 OUTPUT
    - 255 RD 2.0 CRANK RELAY PIN 30
- 836 RD 3.0 COMPRESSOR/CONDENSER FAN FUSE → FB-F2 Sheet 14

F-003 CRANK 25.0 A
- 256A RD 2.0 RELAY BATT+ → FB-F3 Sheet 6

F-004 SIDE LAMPS 10.0 A
- Sheet 14 WB-702A → 702 VT 3.0 LAMP SW WORK AND SIDE LAMP SIGNAL
- 708 VT 3.0 LAMP SWITCH WORK AND SIDE LAMP SIGNAL AND SIDE LAMP FUSE OUT
  - SP-032
    - 709 WH 0.8 LAMP SWITCH WORK AND SIDE LAMP SIGNAL AND SIDE LAMP FUSE OUT → FB-F4 Sheet 4
    - 705 VT 5.0 SIDE LAMP POWER SIGNAL → FB-F4A Sheet 14

F-005 LH TAIL LAMP 5.0 A
- Sheet 14 WB-701 → 701 VT 0.8 TAIL LAMP SPLICE LH TAIL LAMP FUSE IN
- 703 VT 0.8 TAIL LAMP SPLICE LH TAIL LAMP FUSE OUT → FB-F5 Sheet 20

F-006 RH TAIL LAMP 5.0 A
- Sheet 14 WB-700 → 700 VT 0.8 TAIL LAMP SPLICE RH TAIL LAMP FUSE IN
- 704 VT 0.8 TAIL LAMP SPLICE RH TAIL LAMP FUSE OUT → FB-F6 Sheet 20

F-007 INSTRUMENT CLUSTER 10.0 A
- Sheet 4 WB-136 → 136 OR 1.0 UNSWITCHED BATTERY POWER
  - SP-026
    - 326 OR 1.0 UNSWITCHED BATTERY POWER
    - 350 OR 1.0 UNSWITCHED BATTERY POWER
- 300 OR 1.0 MAIN POWER RELAY INSTRUMENT CLUSTER IGNITION FUSE
  - SP-027
    - 600 OR 0.8 LIFT PUMP POWER → WB-600 Sheet 20
    - 309 OR 1.0 INSTRUMENT CLUSTER SWITCHED POWER → FB-F7 Sheet 13
    - 324 OR 0.8 RH GRIP PARK BRAKE SWITCH POWER → FB-F7A Sheet 17

F-008 IGNITION 15.0 A
- 351 OR 1.0 MAIN POWER RELAY IGNITION FUSE
  - SP-039
    - 832 OR 0.8 RIDE CONTROL VALVE SOLENOID SWITCH POWER → FB-F8 Sheet 17
    - 881 OR 0.8 LH GRIP HORN / 2 SSPEED SWITCH POWER → FB-F8A Sheet 16
    - 802 OR 0.8 TELEMATICS IGNITION POWER → FB-F8B Sheet 29
    - 893 WH 0.8 BACKUP ALARM SWITCH POWER → FB-F8C Sheet 16
    - 133B OR 0.75 KEY ON SWITCH → FB-F8D Sheet 10
    - 133C OR 0.75 KEY ON SWITCH → FB-F8E Sheet 10
    - 122 YE 0.75 ENGINE STOP SWITCH → FB-F8F Sheet 10

F-026 TELEMATICS 5.0 A
- Sheet 1 WB-119 → 119 RD 1.0 TELEMATICS UNSWITCHED BATTERY
- 336 RD 1.0 TELEMATICS UNSWITCHED BATTERY → FB-F26 Sheet 29

F-009 ACC/BEACON 20.0 A
- Sheet 1 WB-114 → 114 RD 1.0 BEACON AND ACCESSORY FUSE OUTPUT
- 115 RD 2.0 BEACON AND ACCESSORY FUSE OUTPUT → WB-115A Sheet 14

F-010 ACCESSORY 15.0 A
- Sheet 4 WB-135 → 135 OR 2.0 UNSWITCHED BATTERY POWER
- 134 OR 2.0 UNSWITCHED BATTERY POWER → FB-F10 Sheet 13

F-011 UNSWITCHED BATTERY 5.0 A
- Sheet 1 WB-160 → 160 RD 0.8 UNSWITCHED BATTERY POWER
- 310 RD 0.8 UNSWITCHED BATTERY POWER → FB-F11 Sheet 14

F-012 REAR WORK LAMPS 15.0 A
- Sheet 4 WB-705 → 705 VT 3.0 REAR WORK LAMP FUSE IN
- 706 VT 3.0 REAR WORK LAMP FUSE OUT → FB-F12 Sheet 20

F-013 FRONT WORK LAMPS 15.0 A
- Sheet 4 WB-788 → 788 VT 3.0 LIGHT RELAY #1 PIN 30 TO FUSE (FRONT WORK LAMP POWER)
- 787 VT 3.0 LIGHT RELAY #1 FRONT WORK LAMP POWER
  - SP-199
    - 788 VT 5.0 LIGHT RELAY #1 FRONT WORK LAMP POWER → FB-F13 Sheet 14

F-014 WIPER/WASHER 30.0 A
- Sheet 4 WB-243 → 243 OR 2.0 WIPER/WASHER SWITCH POWER FROM ACC RELAY
- 233 OR 2.0 WIPER/WASHER SW POWER → FB-F14 Sheet 14

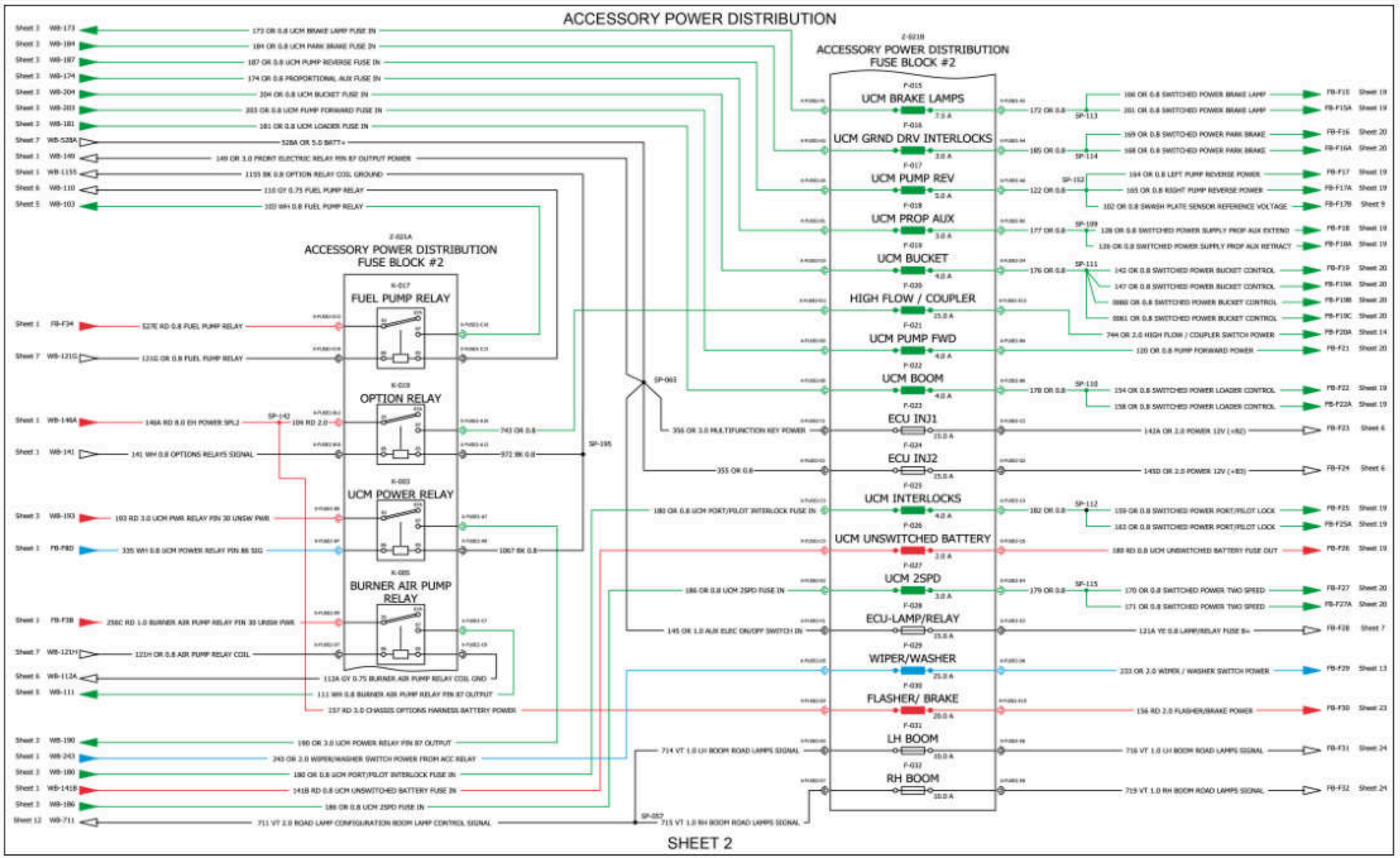
F-024 BURNER GLOW PLUGS 25.0 A
- Sheet 6 WB-527F → 527F RD 2.0 BATT+
- 527D RD 3.0 BATT+ → FB-F24 Sheet 6

F-025 FUEL PUMP 5.0 A
- Sheet 6 WB-527G → 527G RD 0.8 FUEL PUMP RELAY
- 527E RD 0.8 FUEL PUMP RELAY PIN 30 → FB-F25 Sheet 6

SHEET 3

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