SERVICE MANUAL

L221 / L228
Tier 4B (final) and Stage IV
200 Series Skid Steer Loader

L221 PIN NEM479941 and above; L228 PIN NFM401134 and above

C227 / C232
Tier 4B (final) and Stage IV
200 Series Compact Track Loader

C227 PIN NDM471837 and above; C232 PIN NFM402195 and above

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NEW HOLLAND CONSTRUCTION

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Wiring harnesses - Electrical schematic sheet 32 Enhanced High Flow

C227 TIER 4B (FINAL) [NDM471837 -]	WE Electro hydraulic controls
C232 TIER 4B (FINAL) [NFM402195 -]	WE Electro hydraulic controls
L221 TIER 4B (FINAL) [NEM479941 -]	WE Electro hydraulic controls
L228	WE Electro hydraulic controls

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3157-ECM Not Detected On CAN Bus - The Engine Dataset Registration Information Was Not Available From The Engine Within The Time Required.

C232 TIER 4B (FINAL) [NFM402195 -]	WE
L221 TIER 4B (FINAL) [NEM479941 -]	WE
L228	WE

Cause:
Engine configuration does not match the instrument cluster configuration stored.

Possible failure modes:

1. Configuration error
2. Problem in the CAN bus wiring.

Solution:

1. Verify the harness is not damaged.

   Turn the ignition switch OFF.

   Verify the connections to the ECU, the instrument cluster, the diagnostic connector, the UCM (if installed) and the optional Telematics unit are tight and secure.

   Verify the harness is free of damage, abrasion, corrosion, and incorrect attachment from the ECU to the instrument cluster. Verify all data link drops are free of damage, abrasion, corrosion, and incorrect attachment.

   Verify the ground circuits to the control modules are tight and secure. Inspect the rear engine relay box.

   A. The CAN bus harness is not damaged and all connections are secure. Go to step **1**.

   B. The harness is damaged or the connectors are loose or damaged. Repair or replace the harness as required. Go to step **2** to confirm elimination of fault.

2. Verify that the fault code is active.

   Connect the Electronic Service Tool to the service tool connector.

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

   A. Fault code 3157 and/or 3158 are active. No other fault codes are active. The engine configuration does not match the instrument cluster configuration stored. Correct the configuration error.
   Verify all modules on the CAN bus have the latest software versions.

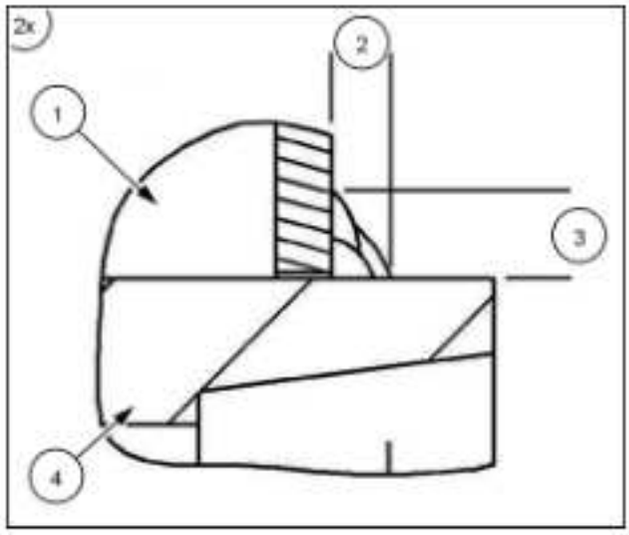
   B. Fault code 3157 and other CAN Data Link fault codes such as 9151 - 9154, 9405, 9406, 9410, or 1051 through 1059 are present and ACTIVE. This is an indication of a problem in the CAN Data Link circuit.
   Refer to **1051-No CAN Communication With Engine Controller (55.408)**, step 3.

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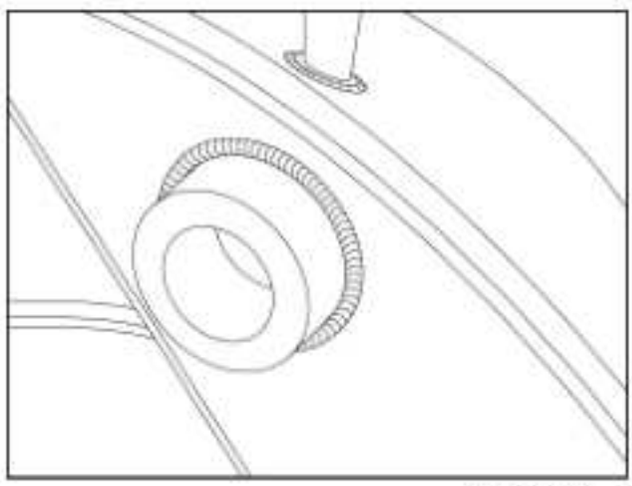
Weld specifications and locations

1. Loader arm
2. **10 mm (25/64 in)**
3. **15 mm (19/32 in)**
4. Upper boss

NOTE: *Triple pass weld requirement.*



11. Inspect the new weld, and paint the loader arm.



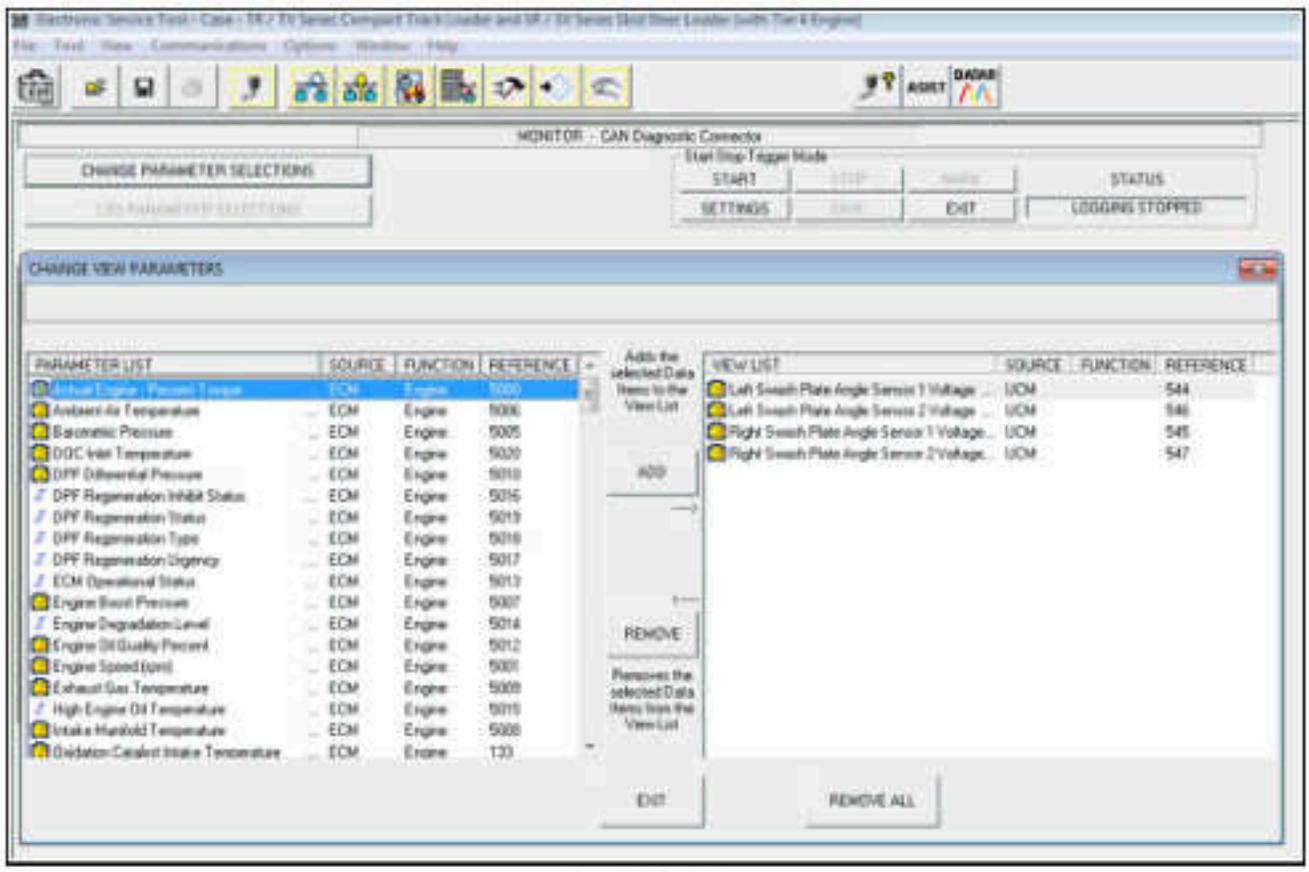
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Hydrostatic drive control sensors - Test - Swash plate angle sensor test and centering procedure

C227	WE
C232	WE
L221 TIER 4B (FINAL) [NEM479941 -]	WE
L228 TIER 4B (FINAL) [NFM401134 -]	WE

Prior operation:
Confirm that the joysticks are returning to the neutral position and there are no electrical issues with the joystick harness before checking the swash plate angle sensors.
Prior operation:
Place the machine on blocks or ensure that the machine is in an open area with adequate clearance to other objects.

NOTE: *This procedure is done using the Electronic Service Tool (EST) 'monitor' function.*

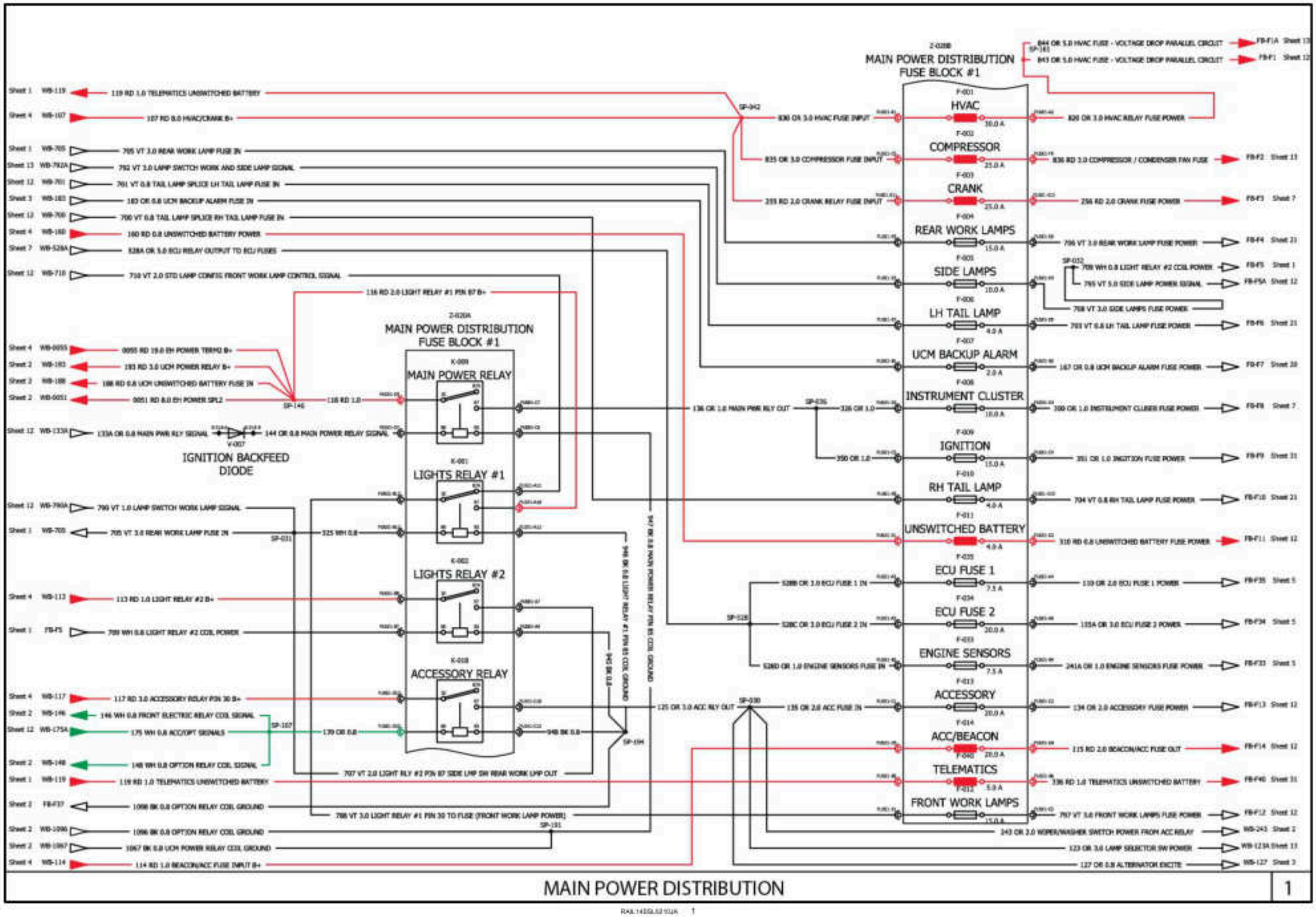


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EST View Parameters List

1. Connect the EST diagnostic connector to the test port of the machine to monitor the four Electro-Hydraulic (EH) parameters shown in the right-hand column of Figure **1**.

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