Troubleshooting
247, 257, 267, 277 and 287 Multi Terrain Loaders and 216, 226, 228, 232, 236, 242, 246, 248, 252 and 262 Skid Steer Loaders Auxiliary Hydraulic Electronic Control System

Switch (Interlock Override)

System Operation Description:

Turn on the continuous flow function. See Operation and Maintenance Manual, "Continuous Flow Control" for the proper procedure. After you have turned on the continuous flow function, push the bottom of the interlock override switch. The armrest can be moved to the RAISED position and the auxiliary hydraulic circuits will remain functional. Press on either side of the auxiliary hydraulic control or the continuous flow switch in order to turn off the interlock override function. This will also turn off the continuous flow function.
The schematic is associated with the following machines:
216 (4NZ1-2499)
226 (5FZ1-5199)
228 (6BZ1-699)
236 (4YZ1-3999)
246 (5SZ1-3999)
248 (6LZ1-999)

Illustration 2  
g00778634

Schematic of the switch circuit for the continuous flow and interlock override

The schematic is associated with the following machines:
216 (4NZ2500-UP)
226 (5FZ5200-UP)
228 (6BZ700-UP)
236 (4YZ4000-UP)
246 (5SZ4000-UP)
248 (6LZ1000-UP)
252 (FDG1-UP)
262 (CED1-UP)
267 (CMP1-UP)
277 (CNC1-UP)
287 (CNY1-UP)
Test Step 1. CHECK FOR PROPER OPERATION

A. Enable the machine.
B. Push down on either the A1 switch or the A2 switch.
C. Push the continuous flow switch and then release the continuous flow switch.
D. Immediately release the auxiliary hydraulic switch.

**Note:** If the auxiliary hydraulic switch is not released within one second of releasing the continuous flow switch, the continuous flow function will not be activated.

**Expected Result:**
The auxiliary hydraulics (A1 or A2) should be active.

**Results:**
- **OK** - The auxiliary hydraulics (A1 or A2) are active. Proceed to Test Step 2.
- **NOT OK** - The auxiliary hydraulics (A1 or A2) are not active.

**Repair:** See Troubleshooting, "Switch (Continuous Flow)".

Stop.

Test Step 2. CHECK FOR PROPER OPERATION

A. Push the interlock override switch and then release the interlock override switch.
B. Raise the armrest.

**Expected Result:**
The auxiliary hydraulics (A1 or A2) should be active.

**Results:**
- **OK** - The auxiliary hydraulics (A1 or A2) are active.
  
  **Repair:** There is no problem at this time.

  Stop.

- **NOT OK** - The auxiliary hydraulics (A1 or A2) are not active. Proceed to Test Step 3.

Test Step 3. CHECK THE STATUS OF THE SWITCH

A. Press the interlock override switch.
B. Observe the status on the Caterpillar ET.
C. Release the switch.
D. Observe the status on the Caterpillar ET.

**Expected Result:**

The switch status should have changed from the "CLOSED" status to the "OPEN" status.

**Results:**

- **OK** - The status of the switch changed from the "CLOSED" status to the "OPEN" status.

  **Repair:** The ECM is very unlikely to have failed. Reconnect all connections and visually inspect the wire harness. Verify that the values that are present on the machine configuration screen match the machine's options. Verify that the values that are present on the machine configuration screen are installed correctly. Verify that the diagnostic code still exists. If the diagnostic code still exists perform the test steps again. Replace the ECM, if the cause of the diagnostic code was not found after the second attempt. See Testing and Adjusting, "Electronic Control Module (ECM) - Replace".

  **Stop.**

- **NOT OK** - The switch status did not change from the "CLOSED" status to the "OPEN" status. Proceed to Test Step 4.

**Test Step 4. CHECK THE CONTINUITY OF THE SWITCH**

A. Remove the switch from the headliner.

B. Unplug the switch from the wire harness.

C. Press the switch.

D. Measure the resistance from terminal 2 to terminal 3 for machines that are associated with Illustration 1. Check from terminal 2 to terminal 1 for machines that are associated with Illustration 2.

**Expected Result:**

The resistance should be less than 5 Ohms.

**Results:**

- **OK** - The resistance is less than 5 Ohms. Proceed to Test Step 5.

- **NOT OK** - The resistance is greater than 5 Ohms.

  **Repair:** The switch has failed. Replace the switch.

  **Stop.**

**Test Step 5. CHECK THE SWITCH CIRCUIT**

A. Reinstall the switch.

B. Remove the floorplate in order to get to the ECM.

C. Remove the wire harness from the ECM.
D. Press the switch.

E. Measure the resistance from contact 3 to contact 64 of the wire harness connector.

**Expected Result:**

The resistance should be less than 5 Ohms.

**Results:**

- **OK** - The resistance is less than 5 Ohms.

  **Repair:** The ECM is very unlikely to have failed. Reconnect all connections and visually inspect the wire harness. Verify that the values that are present on the machine configuration screen match the machine's options. Verify that the values that are present on the machine configuration screen are installed correctly. Verify that the diagnostic code still exists. If the diagnostic code still exists perform the test steps again. Replace the ECM, if the cause of the diagnostic code was not found after the second attempt. See Testing and Adjusting, "Electronic Control Module (ECM) - Replace".

  **Stop.**

- **NOT OK** - The resistance is greater than 5 Ohms.

  **Repair:** The circuit is open in the wire harness and/or the connector. Repair the wire harness and/or the connector or replace the wire harness and/or the connector.

  **Stop.**