Troubleshooting

247B, 257B, 267B, 277B and 287B Multi Terrain Loaders and 216B, 226B, 232B, 236B, 242B, 246B, 248B, 252B, 262B and 268B Skid Steer Loaders Interlock Electronic Control System Media Number -RENR6417-01 Publication Date -01/08/2005 Date Updated -03/08/2005

i03765647

Switch (Hydraulic Lockout)

SMCS - 7332-038-HR

Test Step 1. CHECK FOR PROPER OPERATION

A.Occupy the seat.

B.Place the armrest in the DOWN position.

C.Turn the key start switch to the ON position.

D.Place the hydraulic lockout switch in the OFF position.

E.Shut the door.

F.Press and release the parking brake switch.

Expected Result:

The work tool should function.

Results:

•OK - The work tool is functioning. Proceed to Test Step 2.

•NOT OK - The work tool does not function and the parking brake indicator is off. Proceed to Test Step 5.

•NOT OK - The work tool does not function and the parking brake indicator is on.

Repair: See Troubleshooting, "Switch (Parking Brake)".

STOP

•NOT OK - The work tool does not function and the parking brake indicator is flashing.

Repair: See Troubleshooting, "Parking Brake Indicator Is Flashing ".

STOP

Test Step 2. CHECK FOR PROPER OPERATION

A.Press and release the hydraulic lockout switch.

Expected Result:

The work tool should not function.

Results:

•OK - The work tool does not function.

Repair: There is no problem at this time.

STOP

•NOT OK - The work tool is functioning. Proceed to Test Step 3.

Test Step 3. CHECK THE CIRCUIT FOR THE HYDRAULIC LOCKOUT SWITCH

A.Place the hydraulic lockout switch in the ON position.

B.Turn the key start switch to the OFF position.

Note: Ensure that the door to the cab is closed. This will complete the circuit from the door switch to the hydraulic lockout switch. If the door is NOT mounted to the machine, ensure that the jumper is installed in the circuit.

C.Raise the cab. See Operation and Maintenance Manual, "Cab Tilting".

D.Locate the interlock ECM. The interlock ECM is located on the left side of the machine beneath the access cover on the floor of the machine.

E.Disconnect the wire harness from the ECM.

F.Measure the resistance from contact 60 to contact 3 (wire E918-GN to wire 201-BK) on the wire harness connector.

Expected Result:

The resistance should be greater than 3000 Ohms.

Results:

•OK - The resistance is greater than 3000 Ohms.

Repair: The ECM is very unlikely to have failed. Reconnect all connections and visually inspect the wire harness. Verify that the problem still exists. If the problem still exists, perform the Test Steps again.Replace the ECM, if the cause of the problem was not found after the second attempt. See Testing and Adjusting, "Electronic Control Module (ECM) - Replace".

STOP

•NOT OK - The resistance is less than 3000 Ohms. Proceed to Test Step 4.

Test Step 4. CHECK THE HYDRAULIC LOCKOUT SWITCH

A.Lower the cab.

B.Remove the hydraulic lockout switch.

C.Disconnect the wire harness from the switch.

D.Place the switch in the ON position.

E.Measure the resistance from terminal 3 to terminal 5 of the hydraulic lockout switch.

Expected Result:

The resistance should be greater than 5000 Ohms.

Results:

•OK - The resistance is greater than 5000 Ohms.

Repair: The wire harness has a short. Repair the wire harness and/or the connector or replace the wire harness and/or the connector.

STOP

•NOT OK - The resistance is not greater than 5000 Ohms.

Repair: The hydraulic lockout switch has failed. Replace the switch.

STOP

Test Step 5. CHECK THE CIRCUIT FOR THE HYDRAULIC LOCKOUT SWITCH

A.Turn the key start switch to the OFF position.

B.Raise the cab. See Operation and Maintenance Manual, "Cab Tilting".

C.Locate the interlock ECM. The interlock ECM is located on the left side of the machine beneath the access cover on the floor of the machine.

D.Disconnect the wire harness from the ECM.

E.Measure the resistance from contact 60 to contact 3 (wire E918-GN to wire 201-BK) on 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 problem still exists. If the problem still exists, perform the Test Steps again.Replace the ECM, if the cause of the problem 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. Proceed to Test Step 6.

Test Step 6. CHECK THE HYDRAULIC LOCKOUT SWITCH

A.Lower the cab.

B.Remove the hydraulic lockout switch.

C.Disconnect the wire harness from the switch.

D.Place the switch in the OFF position.

E.Measure the resistance from terminal 1 to terminal 2 of the hydraulic lockout switch.

Expected Result:

The resistance should be less than 5 Ohms.

Results:

•OK - The resistance is less than 5 Ohms.

Repair: The wire harness has an open. Repair the wire harness and/or the connector or replace the wire harness and/or the connector.

STOP

•NOT OK - The resistance is not less than 5 Ohms.

Repair: The switch has failed. Replace the switch.

STOP

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