

meter test lead to Wire 86. The DMM should indicate CONTINUITY. If CONTINUITY was not measured repair or replace Wire 86 between the LOP switch and the controller harness connector.

- c. With Wire 86 still disconnected from the LOP switch and the controller harness connector, connect one meter test lead to disconnected Wire 86 and the other meter test lead to an engine ground. The DMM should indicate INFINITY. If CONTINUITY was measured a short to ground exists on Wire 86. Repair or replace as needed.

Results

1. If the switch operated properly and proper oil pressure was measured, and Wires 86 and 0 tested good, and/or the Input would not change on the controller, replace the controller.

Test 62 – Check High Oil Temperature Switch (E-Code 1400)

General Theory

If the temperature switch contacts have failed in a closed position, the engine will fault out on “OVERTEMP”. If the unit is in an overheated condition, the switch contacts will close at 310 °F (154 °C) This is normally caused by inadequate airflow through the generator.

NOTE: Evolution 1.0 high oil temperature switch is Normally Open (N.O.) with no high oil temperature condition. Evolution 2.0 is Normally Closed (N.C.) with no high oil temperature condition.

Procedure

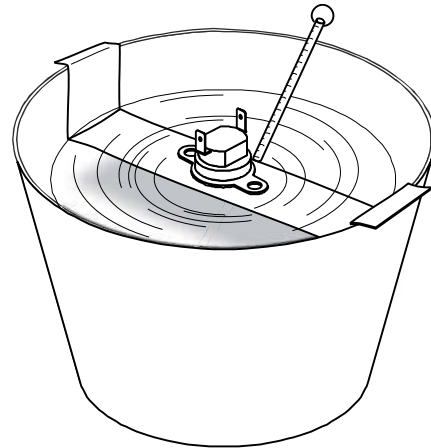
1. Verify that the engine has cooled down (engine block is cool to the touch). This will allow the contacts in the High Oil Temperature Switch to open.
2. Check the installation and area surrounding the generator. There should be at least three feet of clear area around the entire unit. Make sure that there are no obstructions preventing cooling air from entering or exiting the enclosure.
3. Disconnect Wire 85 and Wire 0 from the High Oil Temperature Switch.
4. Set a DMM to measure resistance. Connect the test leads across the switch terminals. The meter should read INFINITY (0L).
5. If the switch tested good in Step 4, and a true overtemperature condition has not occurred, proceed to step 6.
6. Remove harness connector from the controller.
7. Set the DMM to measure resistance.
8. Connect one test lead to Wire 85 (disconnected from High Oil Temperature Switch). Connect the other test lead to an engine ground. INFINITY should be measured.

Testing High Oil Temperature Switch

9. Remove the High Oil Temperature Switch.
10. See *Figure 4-76*. Immerse the sensing tip of the switch in oil, along with a suitable thermometer.
11. Set a DMM to measure resistance. Then, connect the DMM test leads across the switch terminal and the switch body. The meter should read INFINITY.
12. Heat the oil in the container. When the thermometer reads approximately 299-321 °F (148-160 °C), the DMM should indicate CONTINUITY.

Results

1. If the switch fails Step 4, or Steps 11-12, replace the switch.
2. If INFINITY was not measured in Step 8, repair or replace Wire 85 between the Circuit Board and the High Oil Temperature Switch.



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Figure 4-76. Testing the Oil Temperature Switch

Test 63 – Check and Adjust Valves

General Theory

Improperly adjusted valves can cause various engine related problems including, but not limited to, hard starting, rough running and lack of power. The valve adjustment procedures for single cylinder and V-twin engines are different and vary according to engine displacement.

Check Valve Clearance

⚠ DANGER

Automatic start-up. Disconnect utility power and render unit inoperable before working on unit. Failure to do so will result in death or serious injury.

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NOTE: The engine should be cool before checking the valve clearance. Adjustment is not needed if valve clearance is within the dimensions provided in Section 1.1 *Specifications*.