

OBD-II Readiness Monitors

Land Rover - 1996-13

AJ133 5.0L V8 & DENSO V8 009-1.0 & 3.0; LR3 2005-9, RANGE ROVER 2006-9, RANGE ROVER SPORT 2005-9

CATALYST MONITOR

1. Start engine and bring to normal operating temperature $> 75 \text{ }^{\circ}\text{C}$ ($167 \text{ }^{\circ}\text{F}$).
2. With the gear selector in Park or Neutral, hold the engine speed at 2500 rpm for 5 minutes.
3. Drive vehicle ensuring that vehicle speed exceeds 15 km/h (10 mph) and the engine speed exceeds 1500 rpm.
4. Stop the vehicle and check for any temporary DTCs.

MISFIRE MONITOR

1. Record flagged DTC(s) and accompanying DTC Monitor freeze frame(s) data.
2. Fuel level $> 25\%$.
3. Start the engine at a coolant temperature lower than the recorded freeze frame value (from Step 1).
4. Drive the vehicle to the recorded freeze frame conditions for 4 minutes. If CHECK ENGINE MIL flashes, lower the engine speed until the flashing stops.

EVAP MONITOR

Evaporative system leak & DMTL module faults

1. Ensure that fuel filler cap is secure (minimum three clicks).
2. Ensure that fuel level is within the range of $15 > 85\%$.
3. Ensure that normal "high range" gears are selected.
4. Ensure that the ambient temperature signal is within the range of $0 > 40 \text{ }^{\circ}\text{C}$ (if not, a short drive may be necessary to overcome the filtering used in this signal).
5. Ensure that any other DTCs have been rectified (especially if they relate to the purge valve or DMTL heater) and then clear them from the CM memory.
6. Leave the vehicle to stand undisturbed for at least 3 hours in an environment with ambient temperature within the range of $0 > 40 \text{ }^{\circ}\text{C}$ and atmospheric pressure above 70 kPa.
7. Start the engine and allow to idle for at least 10 minutes.
8. Switch the engine off and remove the key from the ignition switch.
9. Allow the vehicle to stand undisturbed for at least 10 minutes.

10. Switch the ignition back on, wait for 10 seconds, check for DTCs.
11. If a small leak fault is being investigated this drive cycle will need to be repeated (rough leak check is every drive cycle, small leak check is every other drive cycle).

Purge valve & Purge flow faults

1. Ensure that the ambient temperature signal is above 0 °C (if not, a short drive may be necessary to overcome the filtering used in this signal).
2. Ensure that any other DTCs have been rectified and then clear them from the CM memory.
3. Start the engine and allow to idle for at least 10 minutes.
4. Stop / re-start the engine and allow to idle for a further 5 minutes.
5. Check for DTCs.

FUEL SYSTEM MONITOR

1. Start engine and bring to normal operating temperature > 82 °C (180 °F).
2. Idle for a minimum of 10 minutes.

OXYGEN SENSOR MONITOR

Upstream (Universal) oxygen sensors:

1. Engine OFF; cooling fans inoperative > 20 seconds.
2. Start engine, coolant < 60 °C (140 °F), and bring to normal operating temperature > 82 °C (180 °F).
3. Drive vehicle > 1500 rpm for 5 minutes
4. Bring vehicle to stop and idle for > 60 seconds

Downstream oxygen sensors:

1. Start engine and bring to normal operating temperature > 82 °C (180 °F).
2. Drive the vehicle steadily between 48 - 97 km/h (30 - 60 mph) for 10 minutes.
3. Drive the vehicle above 3000 rpm in 3rd gear at a steady speed. Lift foot completely off accelerator and coast for 30 seconds.

Oxygen sensor heaters:

1. Start engine and bring to normal operating temperature > 82 °C (180 °F).
 2. Idle engine for 3 minutes.
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