

## Techline

### 4.4 OIL CONSUMPTION DIAGNOSIS

**DEFINITION:** Excessive oil consumption (not due to leaks) is the use of 0.95 litres or more of engine oil within 2,500 kilometres.

Checks	Action
Preliminary	<ol style="list-style-type: none"><li>1. The causes of excessive oil consumption may include the following conditions:<ul style="list-style-type: none"><li>• External oil leaks. Refer to 4.5 <i>OIL LEAK DIAGNOSIS</i> in this Section.</li><li>• Incorrect oil level or improper reading of the oil level indicator. With the vehicle on a level surface, run the engine for a few minutes, allow adequate drain down time (2-3 minutes) and check for the correct engine oil level.</li><li>• Improper oil viscosity. Refer to the vehicle Owners Manual and use the recommended SAE grade and viscosity for the prevailing temperatures.</li><li>• Continuous high speed driving and/or severe usage.</li><li>• Crankcase ventilation system restrictions or malfunctioning components.</li><li>• Worn valve guides and/or valve stems.</li><li>• Worn or improperly installed valve stem oil seals.</li><li>• Piston rings broken, worn, not seated properly. Allow adequate time for the rings to seat. Replace worn piston rings as necessary.</li><li>• Piston and rings improperly installed or incorrectly fitted to the cylinder bore.</li><li>• Excessive piston to bore clearance.</li></ul></li></ol>

## 4.5 OIL PRESSURE DIAGNOSIS

Conduct an oil pressure check, as detailed in **2.4 ENGINE OIL PRESSURE - CHECK**, in this Section

<b>Checks</b>	<b>Action</b>
Oil Pressure Below Specification	<ol style="list-style-type: none"><li>1. Inspect the engine for one or more of the following:<ul style="list-style-type: none"><li>• Oil pump worn or dirty.</li><li>• Oil pump to engine block bolts loose.</li><li>• Oil pump screen loose, plugged or damaged.</li><li>• Oil pump screen O-ring seal missing or damaged.</li><li>• Malfunctioning oil pump oil pressure relief valve.</li><li>• Excessive bearing clearances.</li><li>• Cracked, porous or restricted oil galleries.</li><li>• Oil gallery plugs leaking, missing or incorrectly installed.</li><li>• Broken/malfunctioning hydraulic valve lifters.</li></ul></li></ol>
Oil Pressure Above Specification	<ol style="list-style-type: none"><li>1. Inspect for one or more of the following:<ul style="list-style-type: none"><li>• Plugged or incorrect oil filter fitted.</li><li>• Malfunctioning oil by-pass valve.</li><li>• Malfunctioning oil pressure gauge or sensor.</li></ul></li></ol>

## 4.6 OIL LEAK DIAGNOSIS

**NOTE:** Most fluid leaks can be repaired by visually locating the leak, repairing or replacing the component, or by resealing the gasket surface.

When a leak has been located, determine the *cause* of the leak. Otherwise the leak will most probably re-occur.

Step	Action	Value(s)	Yes	No
1	<ol style="list-style-type: none"> <li>1. Operate the vehicle until it reaches normal operating temperature.</li> <li>2. Park the vehicle on a level surface, over a large sheet of paper or other clean surface.</li> <li>3. Wait for at least 15 minutes.</li> <li>4. Check for oil drips.</li> </ol> <p>Are oil drips present?</p>	-	Go to Step 2	Go to Step 3
2	<p>Identify the type of fluid and the approximate location of the leak.</p> <p>Can you identify the type of fluid and the approximate location of the leak?</p>	-	Go to Step 10	Go to Step 3
3	<ol style="list-style-type: none"> <li>1. Visually inspect the suspected area. Use a small mirror to assist in looking at hard to see areas.</li> <li>2. Check for leaks at the following locations:                             <ul style="list-style-type: none"> <li>• Sealing surfaces.</li> <li>• Fittings</li> <li>• Cracked or damaged components.</li> </ul> </li> </ol> <p>Can you identify the source of the leak?</p>	-	Go to Step 10	Go to Step 4
4	<ol style="list-style-type: none"> <li>1. Completely clean the entire engine and surrounding components.</li> <li>2. Operate the vehicle for several miles at normal operating temperature and at varying speeds.</li> <li>3. Park the vehicle on a level surface, over a large sheet of paper or other clean surface.</li> <li>4. Wait for at least 15 minutes.</li> <li>5. Identify the type of fluid, and the approximate location of the leak.</li> </ol> <p>Can you identify the type of fluid and the approximate location of the leak?</p>	-	Go to Step 10	Go to Step 5
5	<ol style="list-style-type: none"> <li>1. Visually inspect the suspected area. Use a small mirror to assist in looking at hard to see areas.</li> <li>2. Check for leaks at the following locations:                             <ul style="list-style-type: none"> <li>• Sealing surfaces.</li> <li>• Fittings.</li> <li>• Cracked or damaged components.</li> </ul> </li> </ol> <p>Can you identify the source of the leak?</p>	-	Go to Step 10	Go to Step 6
6	<ol style="list-style-type: none"> <li>1. Completely clean the entire engine and surrounding components.</li> <li>2. Apply an aerosol-type powder (baby powder, foot powder, etc.) to the suspected area.</li> <li>3. Operate the vehicle for several miles at normal operating temperature and at varying speeds.</li> <li>4. Identify the type of fluid, and the approximate location of the leak, from the discolorations in the powder surface.</li> </ol> <p>Can you identify the type of fluid and the approximate location of the leak?</p>	-	Go to Step 10	Go to Step 7
7	<ol style="list-style-type: none"> <li>1. Visually inspect the suspected area. Use a small mirror to assist in looking at hard to see areas.</li> <li>2. Check for leaks at the following locations:                             <ul style="list-style-type: none"> <li>• Sealing surfaces.</li> <li>• Fittings.</li> <li>• Cracked or damaged components.</li> </ul> </li> </ol> <p>Can you identify the source of the leak?</p>	-	Go to Step 10	Go to Step 8