SERVICE INFORMATION — XL MODELS

Cam Gear Shaft End Play

Camshaft shims (Part No. 6769 and 6770) used to control maximum cam gear shaft end play have been discontinued in production engines.

Engineering testing has determined that an increase in the maximum allowable cam gear shaft end play does not contribute to an increase in noise nor does it prove to be detrimental to component operation.

When reassembling engines after service or repair, it is not necessary to reinstall camshaft shims. Cam gear shaft end play should be measured following the procedure in the latest applicable Service Manual. Observe the minimum end play specifications of .005 in. for all cam gears, except rear intake which is .004 in. minimum end play. It is not necessary to measure maximum cam gear shaft end play.

New Finish To Cylinder/Cylinder Head Gasket Surfaces

See Figure 1. The gasket surface of cylinders and cylinder heads has been improved with a new finish implemented in production. The finish has an appearance similar to grooves of a phonograph record. The soft copper head gasket conforms to the finish and prevents oil leakage at the oil return passages. Cylinder head bolt torque is unchanged (55-65 ft-lbs).

Figure 1. Cylinder Head Gasket Surface
Gerotor Oil Pump

Design Modification

See Figure 2. Early 1983 and earlier gerotor pump gears had chamfered outer edges. Late 1983 oil pump assemblies contain different gerotor gears that do not have chamfered top and bottom outer diameters. Late 1983 pump bodies and covers have an under-cut or relief as shown to provide the necessary clearances.

These modifications limit interchangeability to the following:

1. Either early style or late style gerotor gears may be used with late style (under-cut) oil pump bodies and covers.

2. Only early style chamfered gerotor gears may be used with early style oil pump bodies and covers.

**WARNING**

Use of late style gerotor gears in early style oil pump bodies and covers could cause the oil pump to bind.

Ignition Module Plugs — 1983

Ignition module plugs are new to prevent intermixing of 1983 ignition components with earlier Magnavox modules and sensors.

See Figure 3. To perform module and sensor checks of 1983 components fabricate a jumper cable as shown. The parts needed are:

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin connectors</td>
<td>74539-83</td>
</tr>
<tr>
<td>Socket connectors</td>
<td>72028-83</td>
</tr>
<tr>
<td>Socket housing</td>
<td>72051-83</td>
</tr>
<tr>
<td>Pin housing</td>
<td>74521-83</td>
</tr>
<tr>
<td>Wire ring terminals</td>
<td>9857</td>
</tr>
<tr>
<td>18 gauge insulated wire (4 ft.)</td>
<td>Electrical tape</td>
</tr>
</tbody>
</table>

Refer to the applicable Service Manual for ignition module and sensor checks.

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**Figure 2. Gerotor Oil Pump**

Feed and scavenge gerotor sets

- .020 x 45° chamfer or .020 radius
- .015 radius max.
  (same radius on oil pump body)

No chamfer

- .010 radius max.
  under-cut for clearance
  (same under-cut on oil pump body)

Oil pump cover

Early 1983 and earlier

Late 1983
Figure 3. Fabricating and Using Jumper Cables — 1983 XL Models