

O/D Gear Train Failure Immediately After Overhaul

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There have been several calls on the hotline pertaining to overdrive gear train failure immediately after overhaul on 4L80-E units. On each of these calls, the front pump or the case was replaced during overhaul. The gear train failure happens just a few miles into the road test.

The 4L80-E from 1991 through 1996 has the cooler return line in the front of the unit (See Figure 1). In 1997, GM went to the central lube. The return cooler line goes into the center of the case into the center support.

The 4L80-E case from 1997 through 2003, has the area where the return cooler line was for the 1991 through 1996 (See Figure 2), however this area was not drilled. The pump cover from 1997 through 2003 was still drilled for the return cooler line. However when the pump was installed into the case this hole would match up to the case where there was no hole which would block any oil from going into the case.

1991-1996 Case Pump Attachment Surface

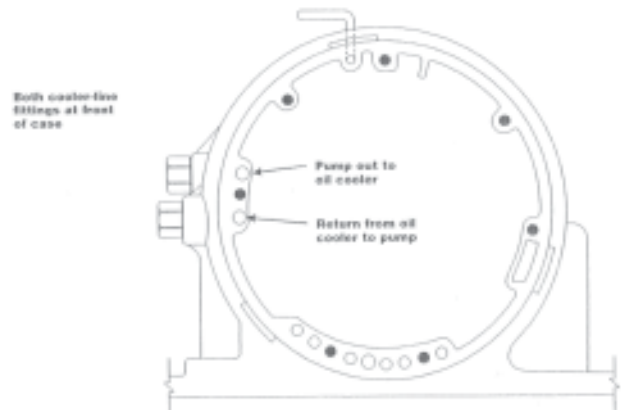


Figure 1

1997-2003 Case Pump Attachment Surface

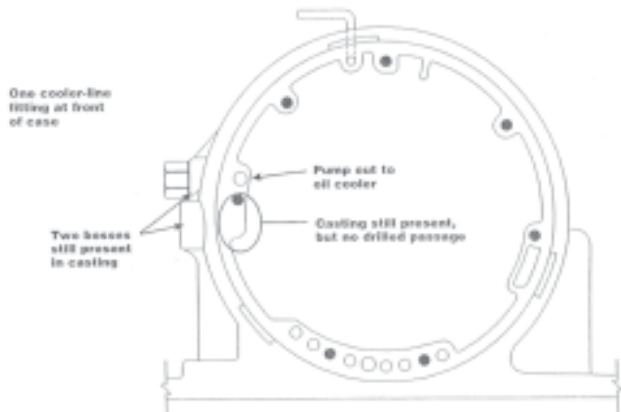


Figure 2

Continued...

GM RWD 4L30-E O/D Gear Train Failure Immediately After Overhaul

In 2004, GM redesigned the case in the area where the cooler feed and cooler return line are located. They also redesigned the pump cover. The area in the case where the return cooler line used to be for the 1991 through 1996 was removed. The hole in the pump cover is not drilled. (See Figure 3).

So, if you install a 1997 through 2003 pump into the 2004 and up case, the front lube oil will exhaust into the inside of the transmission and there will be no front lube. If you use a 2004 and up case on a 1997 through 2003 unit, the same thing will happen. There will be no front lube.

You can modify the 1997 through 2003 oil pump for use with the 2004 case. In order to do this, you will need to purchase GM #24232339. This is a service package that includes an aluminum plug, pump gasket and o-ring, and turbine shaft o-ring as a kit.

Remove the existing cup plug in the oil-pump-cover front lube passage by driving it out with a hammer and a punch, taking care not to damage the pump cover. (See Figure 4).

Insert the aluminum plug into the front lube hole. Seat the plug flush or no more than 1/16 inch below the pump-cover outer diameter. With a small chisel-point tool, stake the plug in a cross pattern. (See Figure 5).

Make sure the plug does not protrude outside the pump cover or move under light pressure.

2004 Case Pump Attachment Surface

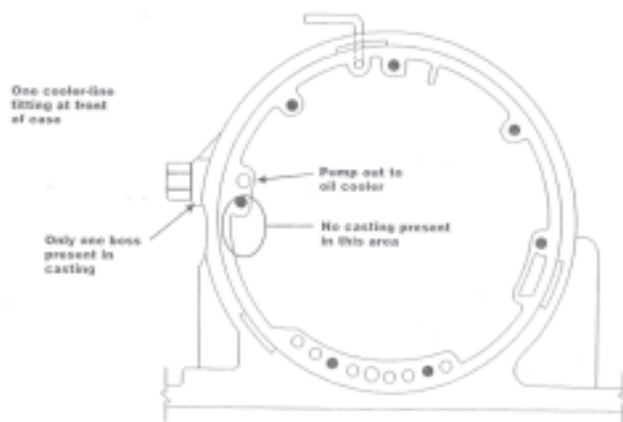


Figure 3

Removing the Existing Cup Plug



Figure 4

Inserting Aluminum Plug

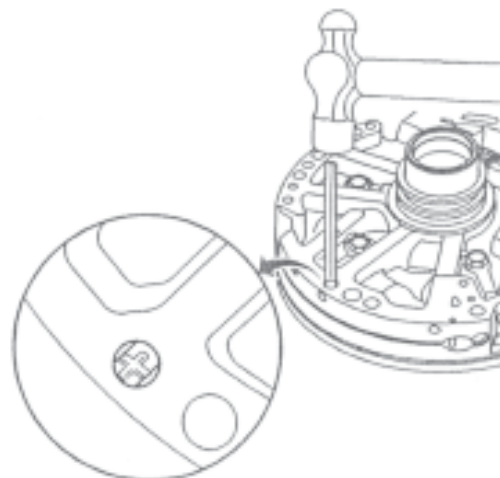


Figure 5