DIAGNOSIS AND TESTING

Leakage Inspection

NOTE: An ultraviolet light must be used to detect the fluorescent dye solution.

1. Add UV Fluorescent Tracer dye (164-R3706 or equivalent specifically for ATF) to the automatic transmission fluid. Use 30 ml (1 oz) of dye solution for every 3.8L (4 quarts) of ATF capacity. Add any additional transmission fluid designated for this transmission/transaxle to bring the unit to the correct fluid level.
2. Start and run the engine. Shift the transmission through all gears several times to make sure that the fluorescent dye has had time to circulate. Observe the back of the engine cylinder block and the top of the converter housing part of the case for evidence of fluid leakage. Turn OFF the engine.
3. Raise the vehicle on a hoist.
4. **NOTE:** The leak source will probably be above and/or forward of the actual leak indication, due to airflow and/or gravity.

   Using an ultraviolet light, observe the transmission for possible leaks. Following the leak back to its source point, repair the leak as required.

External Fluid Leaks

Leak Path	Possible Source
Leaks at the fluid pan to case	• Pan bolts not tightened to specification. • Pan gasket damaged. • Case pan rail damaged.
Fluid cooler lines or fittings leaking	• Cooler line(s), cooler line fitting(s) damaged. Refer to Section 307-02. • Cooler line fitting to case union damaged. Refer to Section 307-02. • Case damage at case fitting.
Fluid cooler line nut-to-case fittings leaking	• Damaged or missing O-ring seals. Refer to Section 307-02. • Fitting(s) not tightened to specifications. Refer to Section 307-02.
Leaks at the fluid cooler	• Fluid cooler damage. Refer to Section 307-02. • Fitting(s) damaged or not tightened to specifications. Refer to Section 307-02.
Leaks at external sensors	• Damaged or missing O-ring seals. • Screw not tightened to specification.
Leaks at the manual control lever seal	• Damaged or missing lever seal.
Leaks at the solenoid body harness connector	• Solenoid body harness connector O-ring seal(s), either on the harness end or the solenoid body, damaged or missing.
Fluid leakage in torque converter area	• For possible sources, refer to Fluid Leakage in the Torque Converter Area Chart.

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DIAGNOSIS AND TESTING (Continued)

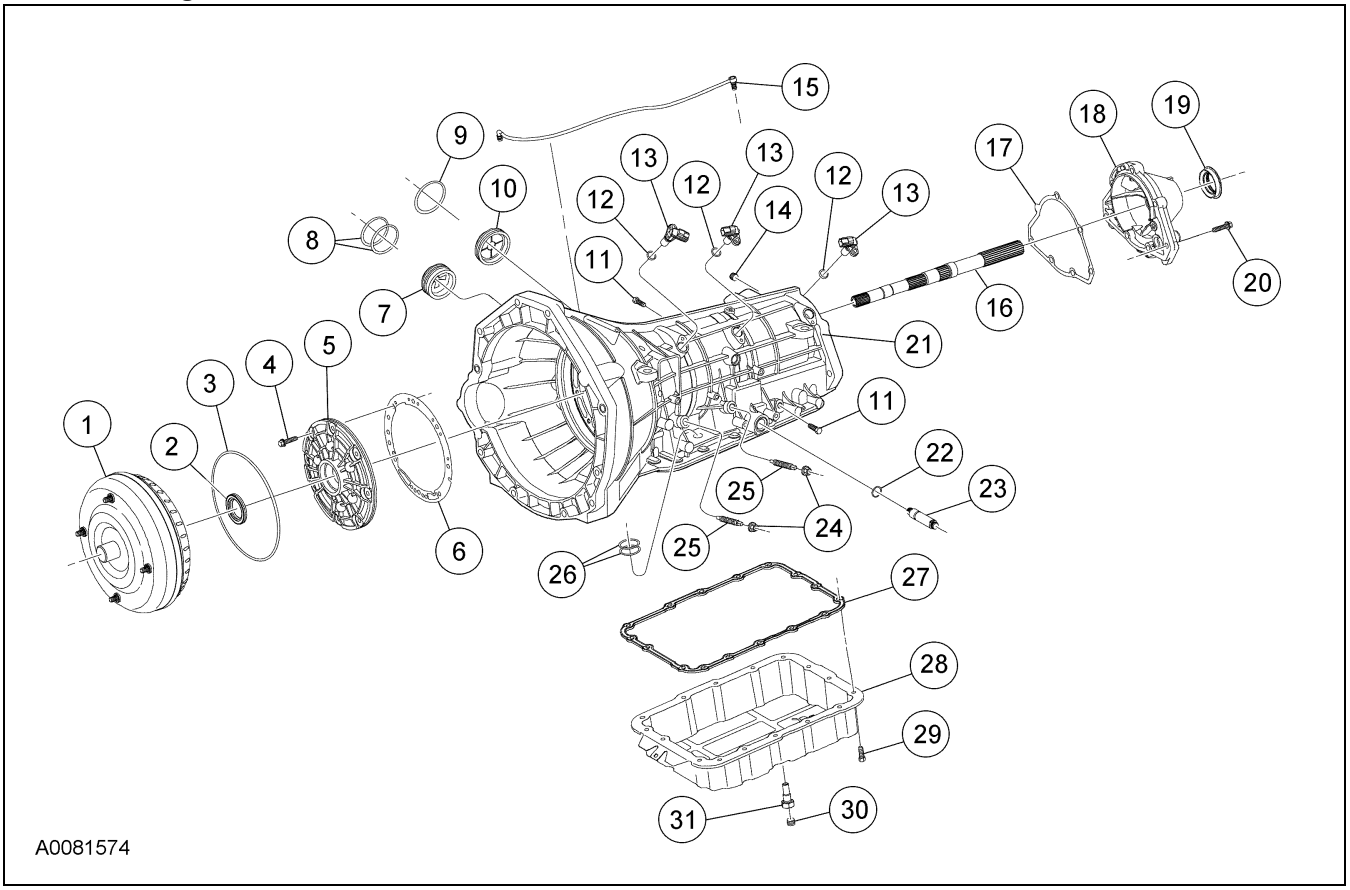
External Sealing

⚠ CAUTION: Do not try to stop a fluid leak by increasing the torque beyond specifications. This may cause damage to the transmission case threads.

The transmission has the following parts to prevent external fluid leakage:

- Gaskets
- Lip-type seals
- O-ring seals
- Seal rings
- Seal grommets
- Seal washers
- Thread sealant

External Sealing



Item	Part Number	Description
1	7902	Torque converter assembly
2	7A248	Seal assembly — front fluid pump
3	7A248	Seal — front fluid pump
4	W704892-S300	Screw and washer assembly (8 required)
5	7G187	Fluid pump
6	7A136	Gasket — fluid pump
7	7D027	Cover — overdrive servo
8	W703119-S300	Seal — overdrive servo cover (2 required)

(Continued)

Item	Part Number	Description
9	W702969-S300	Seal — intermediate servo cover
10	7D027	Cover — intermediate servo
11	390318-S2	Plug — pipe (2 required)
12	W702981-S300	O-ring seal — sensor-to-case (3 required)
13	7H103	Sensor assembly — (3 required)
14	6026	Plug — case
15	7034	Vent assembly
16	7060	Shaft — output

(Continued)

DIAGNOSIS AND TESTING (Continued)

Item	Part Number	Description
17	7086	Gasket — extension housing
18	7A039	Extension housing assembly
19	7052	Seal — extension housing
20	W500311-S309	Screw — extension housing (7 required)
21	7005	Case assembly
22	7B498	Seal — manual lever
23	7A256	Manual lever
24	7C492	Screw — band adjuster (2 required)
25	71000-S100	Nut — band adjuster (2 required)
26	W705928-S300	O-ring seal (2 required)
27	7A191	Gasket — fluid pan
28	7A194	Fluid pan
29	W500213-S309	Screw — fluid pan (16 required)
30	W704999	Plug — short hex
31	7A101	Plug — fluid drain

External Sealing

⚠ CAUTION: Do not try to stop a fluid leak by increasing the torque beyond specifications. This may cause damage to the transmission case threads.

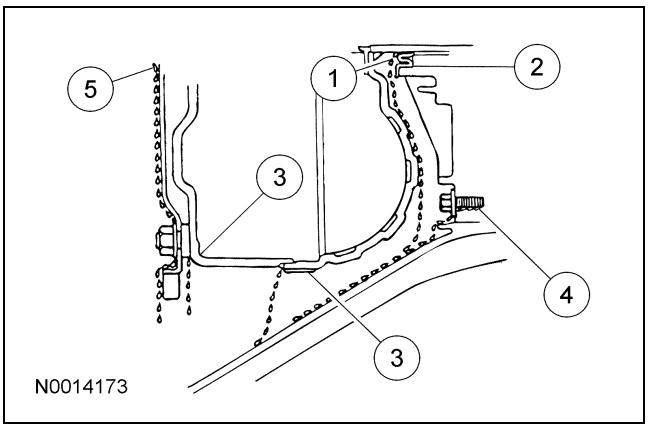
The transmission has the following parts to prevent external fluid leakage:

- Gaskets
- Lip-type seals
- O-ring seals
- Seal rings
- Seal grommets
- Seal washers
- Thread sealant

Fluid Leakage In Torque Converter Area

Leakage at the front of the transmission, as evidenced by fluid around the torque converter housing part of the case, may have several sources. By careful observation, it is possible in many instances to pinpoint the source of the leak before removing the transmission from the vehicle.

The paths, which the fluid takes to reach the bottom of the torque converter housing part of the case, are shown in the illustration. The 5 numbers in the illustration correspond with the 5 flow path steps.



Leak Path	Symptom	Possible Source
1, 2 and 4	Leak at the front of the transmission	Pump lip seal
1, 2 and 4	Leak at the front of the transmission	Vent
1, 2 and 4	Leak at the front of the transmission	Converter hub weld
1, 2 and 4	Leak at the front of the transmission	External pump seal (large)
1, 2 and 4	Leak at the front of the transmission	Pump-to-case screws
1, 2 and 4	Leak at the front of the transmission	Pump gasket
3	Leak at the front of the transmission	Torque converter seal weld
3	Leak at the front of the transmission	Torque converter stud
5	Leak at the front of the transmission	Engine oil leak; rear main seal
5	Leak at the front of the transmission	Engine valve cover

DIAGNOSIS AND TESTING (Continued)

Leak Path	Symptom	Possible Source
5	Leak at the front of the transmission	Oil galley
5	Leak at the front of the transmission	Engine oil pressure sensor