DIAGNOSIS AND TESTING (Continued)

Check the bulkhead connectors to chain cover. Replace bulkhead assembly, if necessary.

Check the fluid filler tube connection at the transaxle case. If leakage is found here, install a new grommet.

CAUTION: Do not try to stop the oil leak by increasing the torque beyond specification. This may cause damage to the case threads.

Check the fluid lines and fittings between the transaxle and the cooler in the radiator tank for looseness, wear, or damage. If leakage cannot be stopped by tightening a fluid line tube nut, replace the damaged parts. Refer to Oil Cooler and Steel Lines. When oil is found to be leaking between the case and the cooler line fitting, tighten the fitting to maximum specification. If the leak continues, replace the cooler line fitting and tighten to specification. The same procedure should be followed for oil leaks between the radiator cooler and cooler line fittings.

Check the engine coolant in the radiator. If transaxle fluid is present in the coolant, the cooler in the radiator is probably leaking.

The cooler can be further checked for leaks by disconnecting the lines from the cooler fittings and applying 345-517 kPa (50-75 psi) air pressure to the fittings. Remove the radiator cap to relieve the pressure buildup at the exterior of the oil cooler tank. If the cooler is leaking and/or will not hold pressure, the cooler must be replaced.

If leakage is found at either the throttle control cable grommet or the manual lever shaft, replace either or both seals.

Oil-soluble aniline or fluorescent dyes premixed at the rate of 2.5ml (1/2 teaspoon) of dye powder to 0.23L (1/2 pint) of transmission fluid have proven helpful in locating the source of fluid leakage. Such dyes may be used to determine whether an engine oil or transmission fluid leak is present, or if the fluid in the oil cooler leaks into the engine coolant system. A black light must be used with the fluorescent dye solution.

Check the power steering gear system. The power steering gear system is positioned over the rear of the transaxle and is filled with transmission fluid. Leaks from the power steering gear may pool on the transaxle before dripping onto the ground, thus giving the appearance of a transaxle fluid leak.

Inspect both components carefully before disassembling either. If the power steering system is found to be leaking, refer to Section 11-02. After an engine oil filter change, some residual oil may blow back on the transaxle giving the appearance of transaxle fluid leakage. The area should be cleaned and checked after running the engine.

Oil Cooler Tube Leakage

When fluid leakage is found at the oil cooler, the cooler must be replaced. Refer to Section 03-03.

When one or more of the fluid cooler steel tubes must be replaced, each replacement tube must be fabricated from the same size steel tubing as the original line.

Using the old tube as a guide, bend the new tube as required. Add the necessary fittings and install the tube.

After the fittings have been tightened, add fluid as needed and check for fluid leaks.

Fluid Leakage in Converter Area

In diagnosing and correcting fluid leaks in the converter area, use the following procedures to locate the exact source of the leakage. Leakage at the front of transaxle, as evidenced by fluid around the converter housing, may have several sources. By careful observation, it is possible in many instances to pinpoint the source of the leak before removing the transaxle from the vehicle. The paths which the fluid can take to reach the bottom of the converter housing are as follows:

1. Fluid leaking by the converter hub seal lip will tend to move along the drive hub and onto the back of the impeller housing. Except in the case of a total seal failure, fluid leakage by the lip of the seal will be deposited on the inside of the converter housing only, near the outside diameter of the housing.
2. Fluid leakage by the outside diameter of the converter hub seal and the case will follow the same path which the leaks by the inside diameter of the seal follow.
3. Fluid leakage from the converter-to-flywheel stud weld will appear at OD of converter on back face of flywheel and in the converter housing only near the flywheel. If a converter-to-flywheel stud leak is suspected, remove converter and pressure check as outlined.
4. Engine oil leaks are sometimes improperly diagnosed as transaxle front pump seal leaks. The following areas of possible leakage should also be checked to determine if engine oil leakage is causing the concern.
   a. Leakage at the rocker arm cover may allow oil to flow over the converter housing or seep down between the converter housing and cylinder block causing oil to be present in or at the bottom of the converter housing.
   b. Oil gallery plug leaks will allow oil to flow down the rear face of the block to the converter housing.
   c. Leakage at the crankshaft seal will work back to the flywheel and then into the converter housing.