

Dedicated to improving vehicle fun, safety & performance

Installation Instructions

Automatic Transmission Flush Hose

***for all Rear Wheel Drive Volvos
1970-1998***



SUGGESTED TOOLS

- Metric End Wrenches
- Funnel to fit into transmission dipstick / fill tube (ipd Part # 6064 works great)
- Some old rags or paper towels and a container to catch old transmission fluid.
- You'll also want to have on hand 8-12 quarts of the correct trans fluid for your Volvo.

SAFETY WARNINGS



It can be argued that doing this job immediately after the car is at normal operating temperature and driven a few miles is more effective, as more contaminants are suspended in the recently used fluid. However, we strongly advise that you allow at least 1 hour of cool down time to prevent being seriously burned by any hot fluid that might accidentally make its way to your skin during the job. Also, if the fluid in your car is severely burnt (black in color) we have heard of a situation where replacing the fluid can cause the transmission to stop working. Apparently, debris in the dirty fluid acts as a friction enhancer allowing a worn out clutch pack to function. The new fluid removes the debris and the trans may now slip to the point of immobility. This is extremely unusual, but is something you should be aware of if the trans in your Volvo has been neglected for many years.

INSTALLATION

1 **Disconnect upper Transmission Line at Radiator**

For ease of access, disconnect the upper connection at the radiator (see photo). The fitting on the line usually requires a 15 mm open end wrench, use a flare wrench if available. Depending on the radiator, there will usually be a place where you can also hold the fitting in the radiator with another wrench, usually a 14 mm, but this may differ if the radiator has been replaced or has plastic tanks. It is important to prevent the in-tank fitting from moving when disconnecting the transmission line as the fitting in the radiator is usually soldered to a light weight tube inside the radiator tank. If the fitting is moved too much, it is possible to damage the connection internally and it can not be repaired.

When you have the trans line disconnected, carefully bend the line upwards a bit to allow the Flush Hose to be attached to the radiator fitting and to prevent fluid from dripping from the transmission line.

In the factory configuration the transmission fluid path is as follows. Fluid is pumped from the transmission to the transmission cooler in the radiator. The fluid enters the radiator at the bottom connection and exits at the top to return to the transmission. If you notice that the lines on your car have been repaired or modified you may want to test the direction of fluid flow before connecting the hose tool to confirm that the fluid path has not been reversed. If fluid is pumped out of the trans line upon testing, simply connect the free end of the flush hose to the trans line and disconnect the other end of the flush hose from the radiator.



2 **Attach Flush Hose to Upper Radiator Fitting**

It's not necessary to use a wrench to attach the hose to the radiator fitting, just snug it up by hand. At idle, the trans fluid will slowly pump out at about 1-2 psi at a rate of about 1-quart per 30-60 seconds. Do not rev the engine to speed up the process. We advise that you only do 1-2 quarts at a time.



3 **Prepare a Catch Pan or Jug**

Use a container of at least one-gallon capacity or ideally an old 5-gallon plastic bucket. To simplify the job and help you keep track of the progress, mark the container with 1-quart increments. 1-gallon plastic milk jugs also work well, but will require a helper to hold the jug during the process. Have a few old rags available, as you will inevitably spill some fluid in the process.

INSTALLATION

4 Start Flushing!

Remove the transmission dipstick and securely place your funnel into the dipstick tube. Prepare the catch pan and flush hose to begin pumping out the old fluid. An assistant is helpful here to hold the hose and catch pan. Make sure the hose is not resting on the exhaust manifold or interfering with the cooling fan or belts. Start the car and pump out a quart or two and then shut off the engine. At idle, the trans fluid will slowly pump out at about 1-2 psi at a rate of about 1-quart per 30-60 seconds. Do not rev the engine to speed up the process. We advise that you only do 1-2 quarts at a time. Now add an equivalent amount of fresh fluid to the trans. Repeat this process until you've used 8 quarts of fluid or up to 12 quarts if clear fluid is not visible after 8 quarts.

Before starting the car to check the final fluid level, remove the Flush hose from the radiator fitting and reassemble the metal trans cooler line to the radiator fitting.



Note: You'll want to clamp the hose to the bucket with a C-clamp or by other means to keep it out of the dirty tranny fluid and to keep it from flipping out onto the ground.

5 Checking Fluid Level

To properly check the fluid level, the fluid should be at operating temperature as transmission fluid expands quite a bit when hot. When the level is close, drive the car 10-15 miles, stop on a level surface, apply the brake and move the shift lever slowly from park to low and then back to park. Now recheck fluid level and adjust as necessary. Note that if the car has been driven hard or in extreme hot conditions, it may not be possible to get an accurate reading until the car has been allowed to cool for 30 minutes.

6 Clean Up

Check the trans line connection to make sure it is not leaking. Wipe up any spilled fluid in the engine compartment. Prepare the used fluid for proper recycling. Connect the two ends of the flush tool together to prevent residual fluid from leaking in storage. Note in your records the date and mileage of the fluid change. You may also want to make a similar record somewhere in the engine compartment with a permanent felt tip marker as a more visible reminder.

Fluid Types

- From 1970 to 1983* use Type F fluid
- 1984 and newer models use Dexron II D or E

**1982 and 83 models that have had the transmission replaced with a factory rebuilt transmission should use Dexron.*

Capacities

- 1970-1981 models (BW35 and BW 55's) have a total capacity of 6.7 quarts
- 1982 and newer models (AW70-71) have a total capacity of 7.4 quarts

If you are unsure about which fluid to use, Mercon III is a fluid that will work in either application.