

## A/T - Cooler Flushing Service Tips

[Notes](#)

Article No.  
03-14-8

07/21/03

TRANSMISSION - NEW TRANSMISSION COOLER  
FLUSHER - SERVICE TIPS

### FORD:

1992-1997 CROWN VICTORIA, PROBE, THUNDERBIRD  
1992-2003 ESCORT, MUSTANG, TAURUS  
1994-1997 ASPIRE  
1995-2000 CONTOUR  
2000-2003 FOCUS  
2002-2003 THUNDERBIRD  
1992-1996 BRONCO  
1992-1997 AEROSTAR, F SUPER DUTY, F-250 HD, F-350  
1992-1999 F-250 LD  
1992-2003 ECONOLINE, EXPLORER, F-150, RANGER  
1995-2003 WINDSTAR  
1997-2003 EXPEDITION  
1999-2003 SUPER DUTY F SERIES  
2000-2003 EXCURSION  
2001-2003 ESCAPE, EXPLORER SPORT TRAC, EXPLORER SPORT

### LINCOLN:

1992-1997 TOWN CAR  
1992-2002 CONTINENTAL  
1993-1998 MARK VIII  
2000-2003 LS  
1998-2003 NAVIGATOR  
2002-2003 BLACKWOOD  
2003 AVIATOR

### MERCURY:

1992-1997 COUGAR, GRAND MARQUIS  
1992-2000 TRACER  
1992-2003 SABLE  
1995-2000 MYSTIQUE  
1999-2002 COUGAR  
1993-2002 VILLAGER  
1997-2003 MOUNTAINEER

This article supersedes TSB 00-1-5.

### ISSUE

The number one cause for repeat transmission repairs is that contamination from

the transmission cooler system (lines and tank) will work their way back into the rebuilt or new transmission. For this reason a new transmission cooler flusher has been released, "Turbo-Tank Heated Cooler Line Flusher" Rotunda Tool number 22-00001.

#### ACTION

The transmission cooling system (cooler and lines) **MUST** be flushed every time the transmission is overhauled or replaced in order to minimize the likelihood of repeat repairs. The use of this new "Turbo-Tank Heated Cooler Line Flusher" (222-00001) is the most effective way to remove contamination from its cooling system. Refer to the following Service Procedure and Equipment instructions (supplied with the "Turbo-Tank Heated Cooler Line Flusher").

#### SERVICE PROCEDURE

Prior methods of cooler flushing have not obtained the level of cooler cleaning and contaminant removal that is required to prevent repeat repairs. The "Turbo-Tank Heated Cooler Line Flusher" uses heated Automatic Transmission Fluid ([ATF](#)) and a pulsating action to loosen system contamination.

Previous equipment used solvents to clean & flush coolers, lines and torque-converters. There are 2 issues with this method:

- ^ Residual solvent contamination can cause damage to friction bonding materials within the transmission (Clutches and Bands).
- ^ Lack of fluid heating and agitation prevents this method from completely removing contamination from lines, in-radiator coolers and auxiliary coolers.

Aerosol Solvents should never be used for several reasons.

- ^ They do not provide the volume necessary to remove heavy contaminants.
- ^ They evaporate quickly and essentially leave contaminants in pockets, bends, or wherever they are as the solvent dries.

**NOTE** YOU MUST IDENTIFY THE RETURN COOLER LINE TO START THE BACK FLUSHING PROCEDURE.

A quick way to identify the return cooler line (fluid coming out of the cooler and returning to the transmission) is to locate the return cooler line fitting on the transmission [case](#). Refer to the following lists:

#### Rear Wheel Drive

- ^ TORQSHIFT, 4R100, E40D, C6 - The REAR transmission [case](#) filling receives the return line.
- ^ 4R70W, AODE, AOD - The TOP transmission [case](#) filling receives the return line.
- ^ A4LD, 4R44/55E, 5R55E, 5R55N, 5R55W, 5R55S

- The TOP transmission [case](#) fitting receives the return line.

#### Front Wheel Drive

- ^ CD4E - The REAR or Pump End transaxle [case](#) fitting receives the return line.
- ^ 4F27E - The REAR or Cover End transaxle [case](#) fitting receives the return line.
- ^ AXOD, AXODE, AX4S, AX4N, 4F50N - The BOTTOM transaxle cooler line fitting receives the return line.

**NOTE** IF AN IN-LINE FILTER HAS BEEN INSTALLED IN THE COOLER LINE, IT MUST BE REMOVED BEFORE FLUSHING THE COOLER OR COOLER LINES.

Purge the cooler and cooler line before flushing:

Located on the "Turbo-Tank Heated Cooler Line Flusher" is a fluid transfer and purge valve. This valve can be used to purge the cooler and cooler lines of contaminated fluid before starting the back flush procedure of the fluid cooling system (refer to step 5a of this Service Procedure or Equipment instructions, supplied with the "Turbo-Tank Heated Cooler Line Flusher").

#### Flush Procedure

1. Check and top off fluid level of the "Turbo-Tank Heated Cooler Line Flusher" tank with transmission fluid.
2. Allow the fluid in the flusher 15-30 minutes to heat up to 140°F (60°C) before using.
3. Install line adapters into the transmission cooler lines.
4. Attach the flusher's blue line to the transmission return cooler line quick disconnect.
5. Attach the flusher's red line to the transmission outlet cooler line quick disconnect.
  - a. Follow equipment instructions, to purge cooler lines and cooler prior to starting flushing procedure (using factory installed purge valve and clear hose on "Turbo-Tank Heated Cooler Line Flusher").
6. Allow the cooling system to back-flush for 10-15 minutes, then flush the cooler in a forward/normal flow direction for an additional 10-15 minutes.