

A/T - Cooler/Line Flushing When Replacing A/T

NO: 43-56

DATE: 4-21-08

MODEL: All

MODEL YEAR: All

CHASSIS: N/A

SUBJECT:

Automatic Transmission Cooler/Lines Flushing

REFERENCE: VIDA, TNN 43-08, TNN 43-48

Note! If this is a printed version of a TNN, first check for the latest online version.

Description:

The purpose of this Tech Net Note is to work as a guideline for technicians when an automatic transmission is being replaced. In order for modern automatic transmissions to properly adapt to transmission wear while maintaining comfortable shift quality, the pressure control is closely monitored. For this reason, the automatic transmission fluid ([ATF](#)) must meet the transmission manufacturer's specifications.

A faulty transmission often has debris in the [ATF](#), the coolers, the lines, and throughout the transmission. This debris must be properly flushed out before a new transmission is installed. Flushing the ATF using the transmission oil pump of the newly installed transmission will not suffice and can possibly cause damage to the new unit. Depending on the condition of the ATF, the [transmission coolers](#) and lines may need to be replaced. The information below is copied directly from VIDA.

Service:

Once a transmission is properly diagnosed to be faulty and needs to be replaced, it is important that the proper procedures are followed for flushing out the used [ATF](#) from the ATF coolers and lines. Note that some vehicles have two coolers; the cooler in the side of the radiator and the auxiliary cooler.

When an automatic transmission is replaced, follow TNN 43-08 to properly fill out the Automatic Transmission Diagnostic Sheet and follow VIDA to reset adaptive memory. Simply disconnecting the [TCM](#) (Transmission Control Module) or power from the TCM does not reset adaptive memory!

On all vehicles, always flush the radiator, coolers, and lines before installing the new transmission. The guidelines and procedures for flushing vary with each model.

There is a procedure for flushing coolers and lines found in a hyperlink in the VIDA transmission/gearbox installation procedure called Transmission, preparations before installing for AW (Aisin Warner) 5- and 6- speed automatics and in the VIDA transmission replacement procedure for the AW 4-speed automatic.

The guidelines for flushing coolers on a GM 4165 4-speed automatic are in VIDA/Information/Repair/Transmission, removing and there is a hyperlink in VIDA/Information/Repair/Transmission, installing for a flushing procedure called Oil cooler;

flush cleaning. The guidelines for the 1999-2005 S80 will be updated to match the XC90. More details about these guidelines can be found below.

On a GM 4165 (2003-2005 XC90 16 and 1999-2005 580 6-cyl), if there is:

^ glycol in the transmission fluid (refer to TNN 43-48 for more information on checking for glycol contamination), this would indicate an internal leak in the radiator requiring radiator replacement and flushing of the auxiliary cooler (if applicable) and cooler lines.



^ metal in the transmission fluid, this would indicate an internal transmission problem.

Note! Metal in the [ATF](#) is nearly impossible to flush out completely. In order to be rid of all metal particles, complete replacement of the ATF cooling system (radiator, auxiliary cooler [if applicable], and cooler lines) is required. See photo. Black sediment on the pan magnet is normal. See photo.



^ dirty oil or oil that has surpassed its temperature limits, this would indicate friction component (band or clutch disc) breakdown and in order to be sure all of the debris is out of the [ATF](#) cooling system, complete replacement of the ATF cooling system (radiator, auxiliary cooler [if applicable], and cooler lines) is required. See photo.

Labor operation code 43720 should be used when the oil pan is removed for diagnostic purposes. Labor operation code 49115 should be used when the [ATF](#) cooling system is flushed, not replaced.

WARRANTY CLAIM INFORMATION		
<u>LABOR OP</u>	<u>LABOR DESCRIPTION</u>	<u>LABOR TIME</u>
43720	Sump automatic gearbox remove-install	See VSTG
49115	Oil cooler and piping clean	See VSTG