

Transmission Cooling

NOTE: Whenever a transmission has been disassembled to install new parts, a new transmission fluid cooler must be installed and the transmission fluid cooler tubes must be cleaned and backflushed. Refer to Transmission Fluid Cooler Backflushing and Cleaning in [Section 307-01](#).

NOTE: Cleaning and backflushing the transmission fluid cooling system, along with normal cleaning and inspection procedures as outlined in this section during disassembly and reassembly, will keep contamination from re-entering the transmission and causing a repeat repair. Refer to Transmission Fluid Cooler Backflushing and Cleaning in [Section 307-01](#).

When internal wear or damage has occurred in the transmission, metal particles, clutch plate material or band material may have been carried into the torque converter and transmission fluid cooler. These contaminants are a major cause of recurring transmission issues and must be removed from the system before the transmission is put back in use. Refer to Transmission Fluid Cooler Backflushing and Cleaning in [Section 307-01](#).

Inspection and Verification

When transmission fluid leakage is found in the transmission fluid cooler, install a new transmission fluid cooler.

When there is evidence of transmission assembly or transmission fluid contamination due to the following transmission failure modes, install a new transmission fluid cooler.

- Major metallic failure
- Multiple clutches or clutch plate failure
- Sufficient component wear which result in metallic contamination

Symptom Chart — Transmission Cooling

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Condition	Possible Sources	Action
<ul style="list-style-type: none"> • Transmission overheating 	<ul style="list-style-type: none"> • System leaks • Incorrect fluid level • Fluid condition • Damaged, blocked, reversed, leaking or restricted transmission fluid cooler or transmission fluid cooler tubes • Engine concerns causing transmission to overheat 	<ul style="list-style-type: none"> • INSPECT for leaks. REPAIR as necessary. REFER to Leakage Inspection in Section 307-01. • ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check in Section 307-01. • INSPECT transmission fluid condition. REFER to Transmission Fluid Level and Condition under Preliminary Inspection in Section 307-01. • INSPECT transmission fluid cooler and transmission fluid cooler tubes. REPAIR or flush as necessary. REFER to Transmission Fluid Cooler Backflushing and Cleaning in Section 307-01. • INSPECT engine cooling system. REFER to Section 303-03A.

	<ul style="list-style-type: none"> • Excessive towing loads • Incorrect idle or performance 	<ul style="list-style-type: none"> • CHECK GVW. • REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
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Symptom Chart — NVH

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NOTE: NVH symptoms should be identified using the diagnostic tools that are available. For a list of these tools, an explanation of their uses and a glossary of common terms, refer to [Section 100-04](#). Since it is possible any one of multiple systems may be the cause of a symptom, it may be necessary to use a process of elimination type of diagnostic approach to pinpoint the responsible system. If this is not the causal system of the symptom, refer to [Section 100-04](#) for the next likely system and continue diagnosis.

Condition	Possible Sources	Action
<ul style="list-style-type: none"> • Vibration — a high frequency (20-80 Hz) that is felt through the seat or selector lever. Changes with engine speed 	<ul style="list-style-type: none"> • Transmission cooler tubes grounded out 	<ul style="list-style-type: none"> • CHECK the transmission cooler tubes. REPAIR as necessary.
