RWRG0016 - Front Countershaft Bearing Failure

Symptom(s)

- Low frequency noise described as a rumble or growl audible at all speeds and in neutral; may change with engine speed
- Fine metal present in oil

Cause

Front box, front countershaft bearing failure

Background

In late fall 2000 a forced lube oiling system was introduced on 1600 lb-ft and above 13/18 speeds (earlier on 2000 and 2200 lb ft units). The Forced Lube System flows lube through the front countershaft bearings extending their life. Failures have dropped in frequency since then. In March 2002 Enhanced Lube kits were developed to install on units in service without the forced lube system.

See service bulletin TMIB0135 for more information on the enhanced lube kits.

Repair Guideline

Failed bearing is partially pitted - contamination is not severe - minor failure.

If race has the entire surface damaged, contamination is severe - major failure.

Severally pitted, race worn down

Repair Guideline - Major:

- Replace 4 C/S bearings.
- Replace input shaft bearing.
- Clean/inspect replace auxiliary drive gear bearing if pitting is found on the races.
- Auxiliary section to be flushed/inspected only not dis-assembled*.
- Mainshaft should be disassembled and damaged parts replaced.
- The input bushing will generally be damaged and can be replaced if bore in the input shaft is not damaged.

Note: If the transmission is not equipped with a forced lube system (prior to fall 2000) install an Enhanced Lube Kit. Warranty recommends use of the minor kits while purchasing the required bearings separately. For more detail on Enhanced Lube Kits see service bulletin TMIB0135.

*Repair Guideline for Auxiliary section:

Visually inspect auxiliary countershaft front bearings for pitting, spalling, or severe debris dent damage (detectable by feel). These bearings are readily visible with the auxiliary removed. If there is no pitting on the rollers or races and the races (cups) have only a dull polish, light scratching or slight debris dents that cannot be detected with a fingernail while going around the race (not across it), they can be reused. If bearings are acceptable based on inspection, flush auxiliary section and reinstall.

When pitting/spalling exists, disassemble auxiliary to replace auxiliary countershaft bearings and inspect remaining components.

See examples of re-use/replace bearings:
Dull polish, light debris dents, no pitting.
Re-use

Spalling on races, pitting on rollers
Replace

Warranty Labor
- Labor to R&R transmission per OEM SRT
- Labor for Mainshaft overhaul per OEM SRT
- OR -
- Labor for Complete overhaul, only if required, per OEM SRT

Warranty Coding
Part: 4304599 (bearing)
Complaint: Noise
Failure: Bearing Failure

Warranty Disclaimer
If the failure is not the result of an accident, damage, negligence, abuse or misuse, improper installation or maintenance or any other conditions described in the Limits and Exclusions section of Warranty Manual TCWY0600, then Roadranger will treat the condition as covered under its warranty. However, this conclusion does not necessarily mean that a defect in fact exists. In all cases, Roadranger shall make the final determination and interpretation as to the warrantability of the Product.