RWRG0018 - Front Section Countershaft Loose Gears

Symptom(s)
- Auxiliary jump out complaints
- Hard lever shift in the front box
- Input bushing destroyed

Cause
During recent years RTW has noticed transmissions built with a countershaft to gear fitness issue. This is typically a high mileage failure.

Repair Guideline
If the auxiliary jump out complaint is verified and air system defects have been ruled out, the auxiliary section should be removed for inspection. With the auxiliary pulled inspect all clutching parts. If there is fretting on hi range side of the range clutch and the mating gear (see figures 1 & 3) some extra steps must be taken to verify if this damage is a result of external vibration or possibly a loose C/S gear.

Note: Fretting wear to auxiliary clutching teeth may be the result of an external vibration or a loose front box countershaft gear.

When fretting damage is present both PTO covers (and/or PTO) should be removed to check for loose countershaft drive or overdrive gears. A failed input shaft bushing is another indication of loose gears.

If a loose C/S gear is found, the front box must be disassembled to press the gears off each countershaft and check for a broken/worn countershaft key, gear hub or countershaft assembly (figure 2). All damaged parts should be replaced.

Check the rear end of the front box mainshaft splines (see figure 4).

Secondary Damage From Loose Gears

Figure 1: Fretting damage on the auxiliary drive gear clutching teeth.

Figure 2: Fretting damage (wear) on countershaft from a loose gear.
Complaint: Various (Noise, Vibration, Oil Leak or Grinds/ Rakes)

Failure: Loose

**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.

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**Warranty Labor**

- Transmission R&R per OEM SRT
- Bench labor for front box overhaul repairs per OEM SRT
  - OR -
  - Bench labor for complete trans overhaul per OEM SRT

**Warranty Coding**

Part: 19673 (C/S Key)