

Transmission Overhaul Procedures - Bench Service

How to Install the Upper Reverse Idler Gear Assembly

Special Instructions

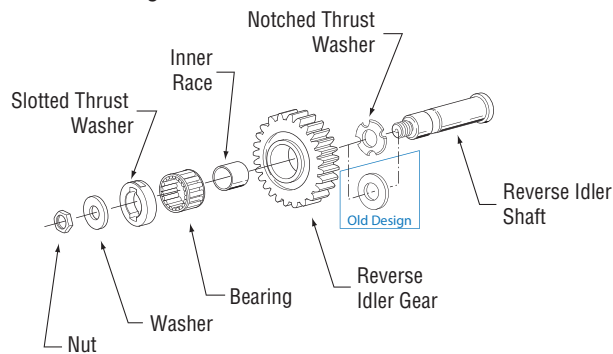
The FR-series Transmission has three different versions of Reverse Idler Retainers, reference the next page for specific installation instructions.

The new Reverse Idler Shaft uses a Snap Ring in place of the capscrew.

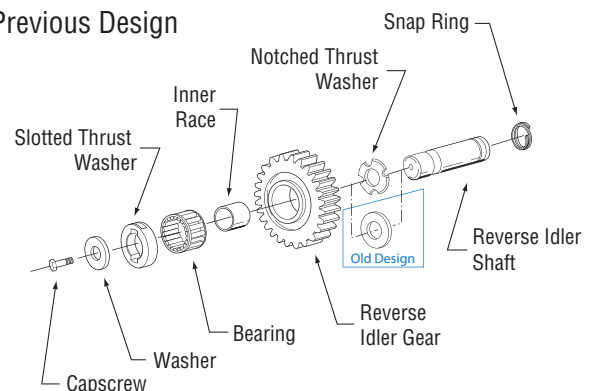
Special Tools

- RR1019TR Hand Maul
- RR1020TR Soft Bar
- Torque Wrench, 100 lb. ft. capacity

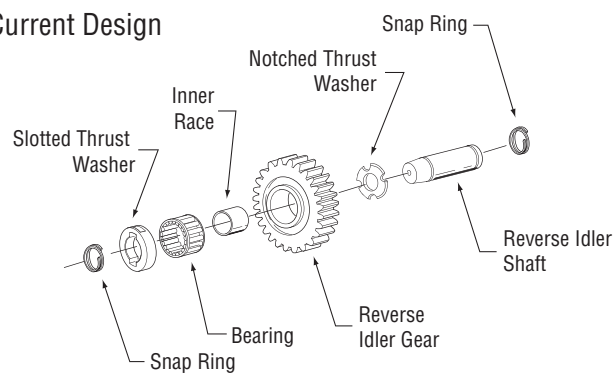
Previous Design



Previous Design



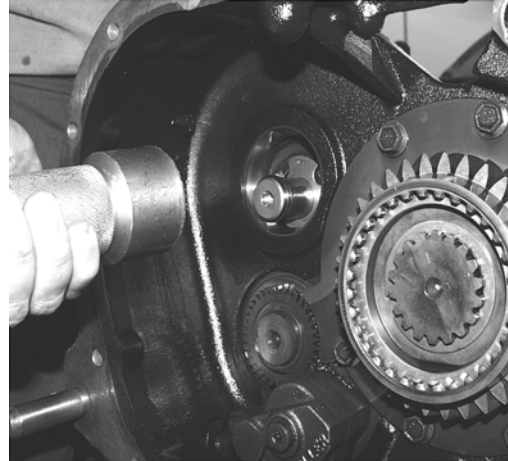
Current Design



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Procedure -

1. Lift the Mainshaft Reverse Gear to allow the Reverse Idler Gear to drop into mesh and into the proper position.
2. Place and hold the Idler Flat Thrust Washer at the back of the Gear.
3. While holding the Gear and Washer in position, feed the Reverse Idler Shaft through the Flat Thrust Washer and Gear.
4. Position the Slotted Thrust Washer in front of the Reverse Idler Gear with one of the slots facing up, and continue to feed the Idler Shaft forward. Make sure the word FRONT faces the front of the Main Case.
5. Use RR1019TR Hand Maul and RR1020TR Soft Bar to drive the Reverse Idler until it is fully seated.



6. Secure the shaft in position according to one of the procedures below:

Note: For Nut Fastener Design: Inspect the nylon locking insert in the nut, and replace the nut if it is excessively worn. After inspecting and/or replacing the nut, install the nut and washer on shaft front. Tighten the nut to 67–75 lb. ft. (90–101 N•m) of torque.

Note: For Capscrew Fastener Design: Apply Eaton®Fuller® Thread Sealant #71205 or equivalent to the capscrew threads, and install the capscrew and washer. Torque the capscrews to 67–75 lb. ft. (90–101 N•m).

Note: For Retainer Ring design: Install the washer and Snap Ring on Idler Shaft using socket. Place Retainer Ring over front of Reverse Idler Shaft seal, snapping into place by using a large socket. Tap lightly into place.

