

# Transmission Overhaul Procedures - Bench Service

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## How to Remove the Countershaft Bearings and Countershaft Assemblies

### Special Instructions

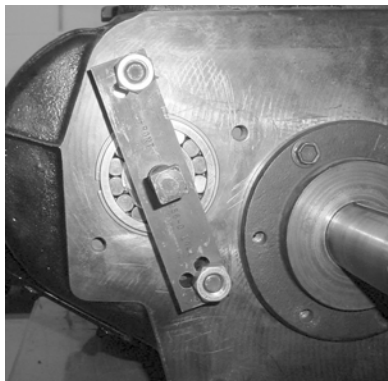
The following instructions are used to remove the Upper and Lower Countershaft Bearings. To remove the Mainshaft Assembly, only the Upper Countershaft Bearings need to be removed.

Performing the following instructions will damage the bearings and should not be done unless bearing replacement is planned.

The Bearing Inner Race remains pressed on the Countershaft after removal of the Front Bearings.

### Special Tools

- RR1017TR Countershaft Pusher
- RR1014TR Bearing Puller
- RR1019TR Hand Maul
- RR1020TR Soft Bar
- RR1022TR Countershaft Support Tool



### Procedure -

1. To keep the Mainshaft Pilot from falling out of the Input Shaft pocket, temporarily install the Auxiliary Drive Gear on the Mainshaft.
2. Remove Snap Ring from rear of Countershaft.
3. Remove the Bearing Retainer Bolts on the Front Countershaft and install the RR1017TR Countershaft Pusher and push Countershaft back until it stops.

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4. Use RR1019TR Hand Maul and RR1020TR Soft Bar to remove Rear Countershaft Bearing.

**CAUTION**

**Damage will likely occur to this bearing during removal. It is strongly recommended that this bearing is discarded.**

5. Remove RR1017TR Pusher Tool.
6. Use RR1019TR Hand Maul to drive Countershaft forward to expose External Snap Ring on Front Bearing.



7. Install RR1014TR Bearing Puller and remove Front Countershaft Bearing.
8. Install RR1022TR Countershaft Support Tool to hold the Upper Countershaft in place during Mainshaft Assembly removal.
9. With Mainshaft Assembly removed, both the Upper and Lower Countershafts can be removed from the Main Case.

