

How to Assemble the Mainshaft Assembly

Special Instructions

The proper Mainshaft Key must always be used with the proper design Mainshaft Washers. If necessary, refer to the Parts Manual for your specific Model to confirm the proper parts.

Previous design levels can be updated to the current design.

Note: Any keyway on Mainshaft may be used for Mainshaft Key location.

Special Tools

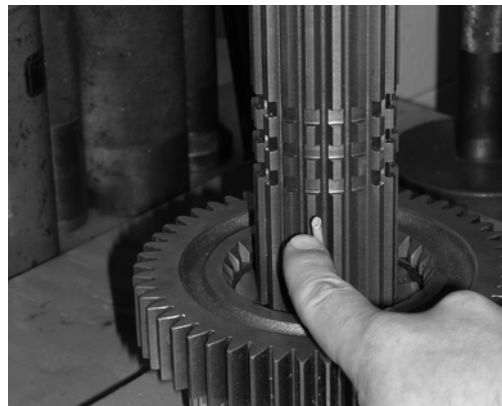
- A piece of 5/32" Plastic Air Line, 1 foot long
- Vise with brass jaws

Procedure -

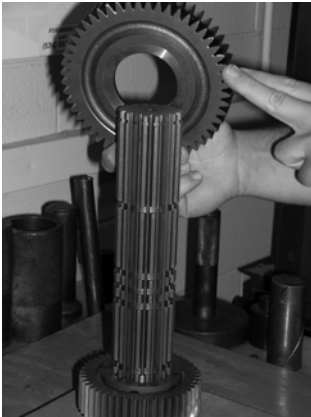
1. With Mainshaft Pilot-end (front) down, secure the Mainshaft in a Vise equipped with brass jaws or wood blocks. Mark one keyway for reference to aid in assembly.

Note: There are seven (7) identical grooves cut around the Mainshaft. Each of these grooves is used to locate the Non-Selective Washers and retain the gearing on the Mainshaft. The last or upper groove position is for the Reverse Gear Washer.

2. Slide the first Non-Selective Washer down the Mainshaft until it is aligned with the lowest groove. Rotate the Washer in the groove until the splines are aligned and support the Washer.
3. After rotating the Washer there will be space for the plastic tubing to be inserted from below the Washer in between the splines. Insert the tubing just far enough to prevent the Washer from turning. After each Step, continue to push the tubing upward just far enough to prevent unintentional rotation of the Washers. During assembly, this tubing will serve as a "Temporary Key" and will be removed as the Mainshaft Key is inserted in Step 17.
4. With Clutching Teeth down, position the Direct/Overdrive Gear on the Mainshaft. Refer to the Illustrated Parts List for correct Gear.
5. Install a Washer. Rotate the Washer until the Washer Splines and Mainshaft Splines align. Push the Plastic Air Line up to lock the Washer on the Mainshaft.

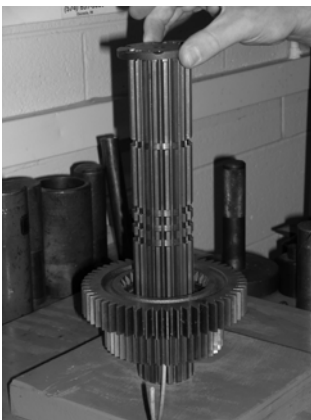


Transmission Overhaul Procedures - Bench Service



6. With Clutching Teeth up, position 3rd Gear on the Mainshaft.

7. Position the Washer against the Gear. Rotate the Washer until the Washer Splines and Mainshaft Splines align. Push up the Plastic Air Line to lock the Washer in place.



8. With the missing Internal Splines aligned with the Plastic Air Line, install the proper Sliding Clutch.



9. Position the next Washer in the next available groove. Rotate the Washer until the Washer Splines and Mainshaft Splines align.

10. With Clutching Teeth down, position the 2nd Gear on the Mainshaft.

11. Position the Washer against the Gear. Rotate the Washer until the Washer Splines and Mainshaft Splines align. Push the Plastic Air Line up to lock the Washer on the Mainshaft.



12. With Clutching Teeth up, install 1st Gear on the Shaft against previously installed Gear.

Transmission Overhaul Procedures - Bench Service

13. Position the Washer against the Gear. Rotate the Washer until the Washer Splines and Mainshaft Splines align. Push the Plastic Air Line up to lock the Washer on the Mainshaft.
14. With the missing Internal Splines aligned with the Plastic Air Line, install the 1st/Reverse Sliding Clutch.
15. From the rear, install the Reverse Gear over the Sliding Clutch teeth with Snap Ring groove facing up.
16. Install the Reverse Gear Washer in the last groove.



17. From the Mainshaft rear, install the Mainshaft Key with raised end pointed up and facing out into the Spline with the Plastic Air Line. Pull the Plastic Air Line from the Spline while installing the Key.
18. Remove the Mainshaft from the Vise and lay on its side.
19. Install the Front Sliding Clutch into position.

