

Roadranger®

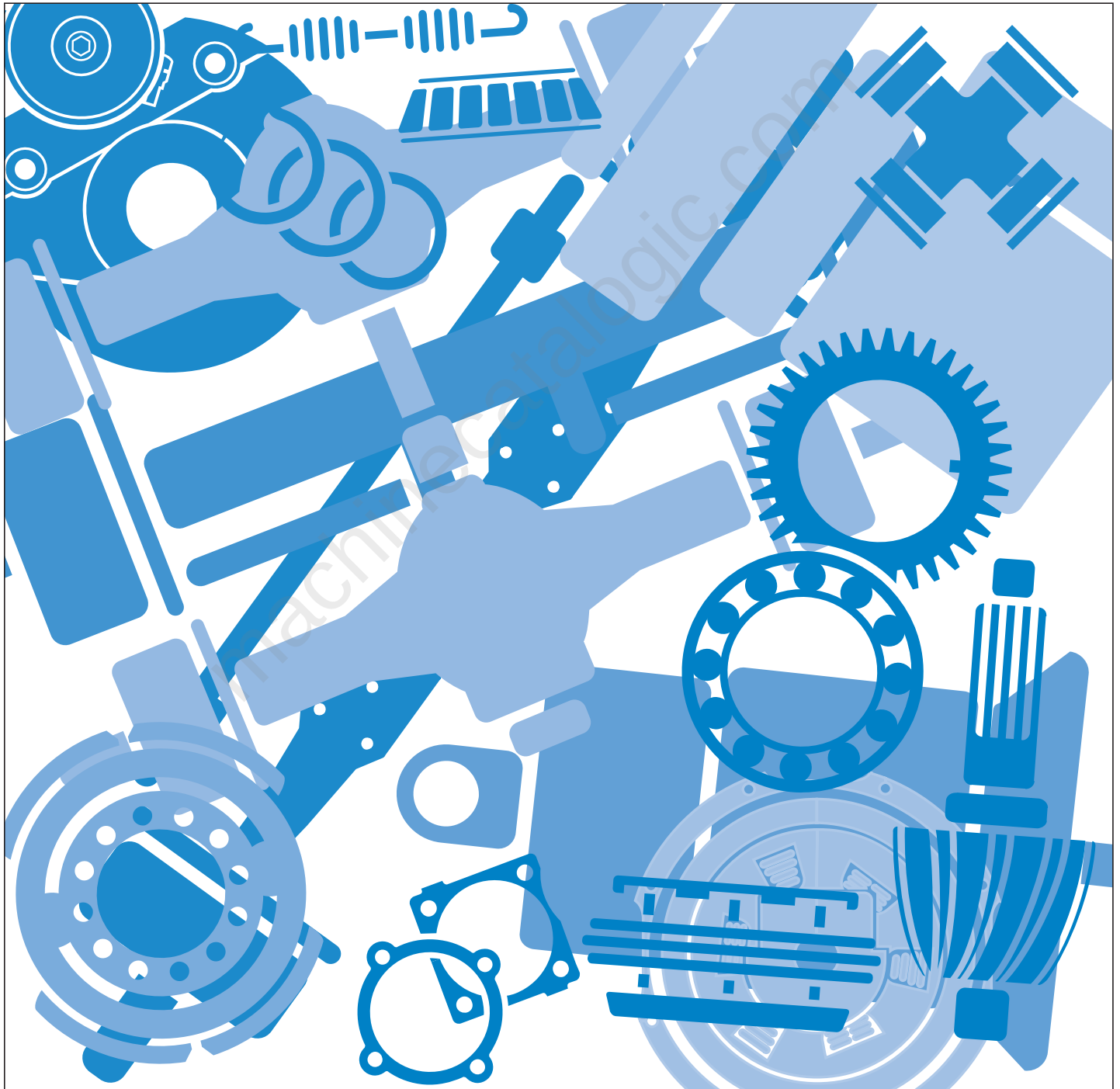
Eaton® Fuller® Heavy Duty Transmissions

RTO-1X707LL/DLL/MLL Models
RTO/X-1X708LL/1X908LL Models
RTO-1XX09MLL Models
RT/O/X-1X715/1X915 Models

**EAT•N**

One Great Drivetrain from Two Great Companies

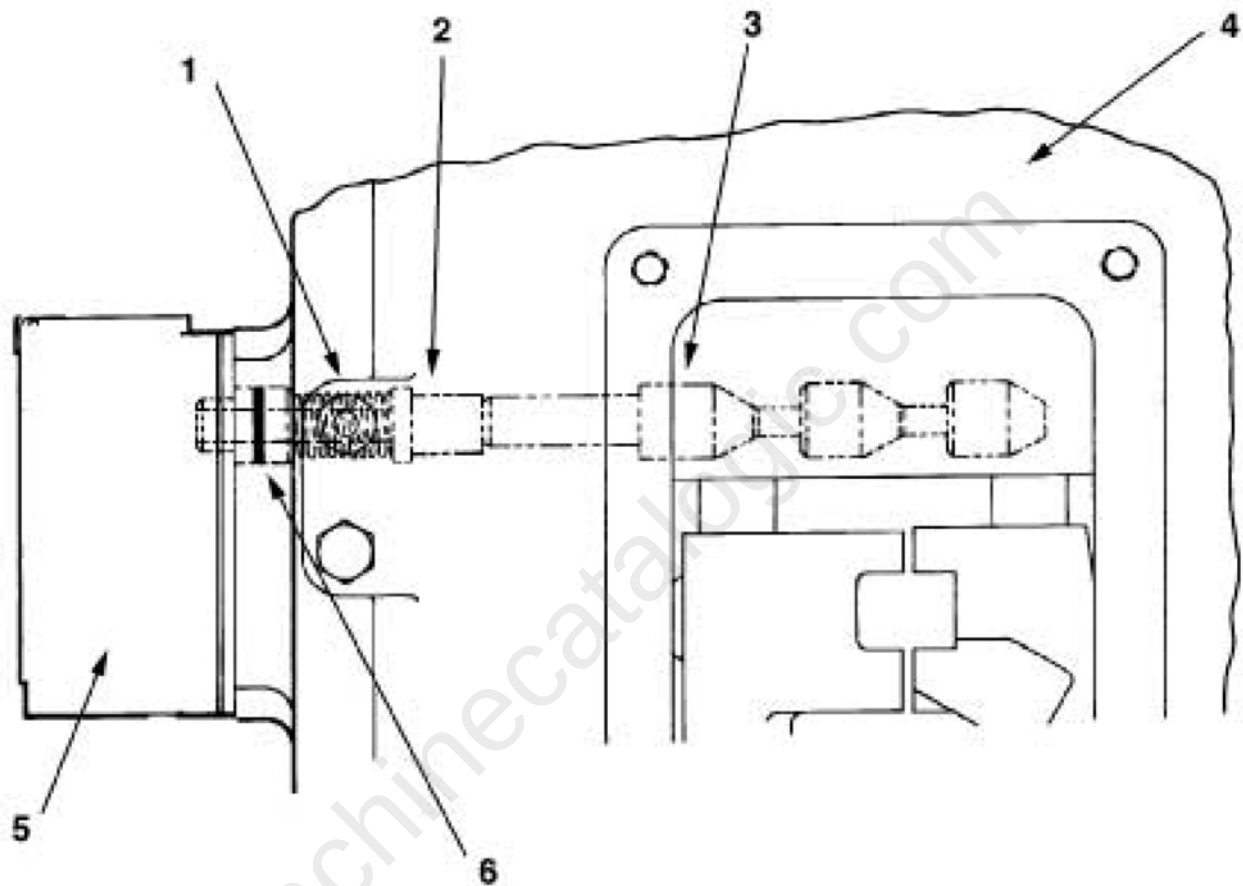
Service Manual TRSM-1500 April 2006



For the most current information, visit the Roadranger web site at www.roadranger.com

Slave Valve Preselection System

This interlock mechanism prevents the slave valve from shifting when the transmission is engaged into gear. The air valve shaft is moved towards the slave valve by the shift rails when the transmission is shifted into gear. A spring pushes the air valve shaft back when the front section is shifted into a neutral position.



Component Nomenclature and Auxiliary Countershaft Sectional View

- | | |
|---------------------|----------------------|
| 1. Actuation Spring | 4. Shift Bar Housing |
| 2. Actuating Pin | 5. Slave Valve |
| 3. Air Valve Shaft | 6. Alignment Sleeve |

3. Remove interlock parts (pin, spring, and sleeve).



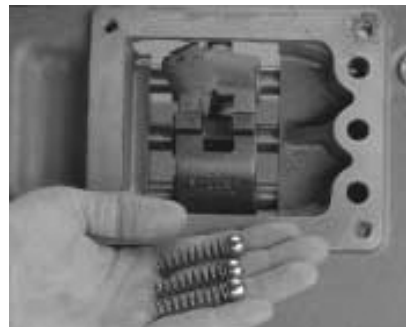
4. From the shift bar housing rim, remove the retaining cap-screws.
5. To break the gasket seal, jar the shift bar housing.



6. Remove the shift bar housing.
7. Inspect the roll pin, replace if damaged.
8. Remove the gasket and clean all mounting surfaces of gasket material.



9. If the three (3) sets of tension springs and balls from the housing top bores are loose, tilt the assembly and remove them.



Transmission Overhaul Procedures-Bench Service

How to Disassemble the Upper Reverse Idler Gear Assembly

Special Instructions

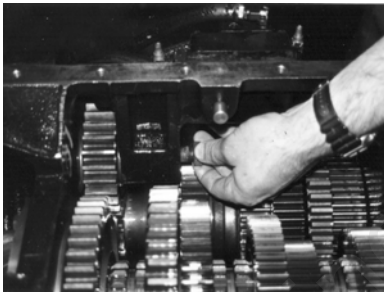
Before the upper reverse idler gear assembly can be removed, mainshaft reverse gear must be positioned forward against the next gear.

While removing the reverse idler shaft, the thrust washer can drop to the transmission case bottom.

The mainshaft reverse gear must be moved in order to remove the upper reverse idler gear.

Special Tools

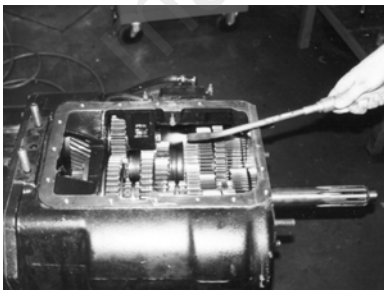
- Typical service tools
- Jaw pullers or impact puller
- Soft bar and maul



Procedure -

1. Remove retaining bolt from the Idler Shaft.

Note: If Idler Shaft spins in case bore, slightly heat bolt with torch to release loctite adhesive.



2. The mainshaft reverse gear must be moved in order to remove the upper reverse idler gear. Remove reverse gear snap ring and slide reverse gear forward over clutch.
3. Remove the loosened bolt and remove washer. Reinstall bolt 3-4 threads.

How to Assemble the Countershaft Assemblies

Special Instructions

Except for the PTO gears, the upper and lower countershaft assemblies are the same. To avoid confusion during installation, mark the upper countershaft (45-tooth PTO gear) with an "U". The lower countershaft has a 47-tooth PTO gear.

Special Tools

- Snap ring pliers
- Press

Procedure -

1. If previously removed, install the keys in each countershaft keyway.
2. Align smallest diameter gear keyway with the countershaft key, long hub to countershaft front, and press the gear on the countershaft.
3. Align 2nd smallest diameter gear keyway with the countershaft key, long hub against 1st speed gear, and press the gear on the countershaft.



Full Version Available

Eaton Fuller Heavy Duty Transmission Service Manual

Eaton RT/O/X-1X715/1X915, RTO-1X707LL/DLL/MLL transmission service manual with repair, timing and rebuild procedures. Instant PDF download.

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