



Drive Clutch Disassembly, Inspection, and Refresh



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STEP 1: Image (1) shows a fully assembled drive clutch next to a drive clutch with bearings and sprag-gear removed from the main shaft. Step 1 is to remove bearings, and sprag-gear from the main shaft in preparation for further disassembly and inspection.



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STEP 2: Inspect the main shaft (image 2) for scratches, gouges, etc. Look inside the sprag mechanism for any damage or obvious defects including scratches or gouges to the brass bushings (image 3). Also note the orientation of bearings and springs (image 3). Spray with brake cleaner or solvent, as needed, to see bearing/spring orientation.

NOTE: The Most Common Failure of Drive clutches is poor quality or old/hardened grease.



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STEP 3: Remove each Spring (image 4) and Bearing (image 5). Quantities vary depending on the clutch model. Springs can be removed by inserting an angled pick and pulling them up and out of their cradle.



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Step 4: Clean springs, bearings, and inner sprag mechanism with brake cleaner or other solvent. Inspect all parts for damage.



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REASSEMBLY

STEP 5: Insert bearing first (image 7) followed by the spring (image 8). Place bearings and springs in the same orientation noted in STEP 2. All bearings and springs **MUST** be in the same orientation or the sprag will not operate or may seize. Add good quality grease before moving to the next step.

NOTE: Not all sprag-gears have the same orientation for bearings and springs. Image 8 shows the bottom of a sprag-gear with bearings on the left and springs on the right. This is the most common orientation, but some have an opposite orientation for a reverse rotation.



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STEP 6: Insert the main shaft by rotating it within the sprag-gear. It will only rotate in one direction due to the bearings and springs. To make rotation easier, use the drive shaft with the bottom inserted first (images 9 & 10).



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STEP 7: Finally, reinstall bearings if they are in good condition, or install new bearings.