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Instruction Sheet For Tool #739

5 & 6 SPEED COUNTERSHAFT BEARING REMOVER & INSTALLER TOOL

No. **739** – This JIMS® Tool will remove and install the countershaft bearing to the proper depth on all H-D Cruise Drive 6-speeds, H-D 5-speeds from 1980-2006, and aftermarket 6-speed and right side drive transmissions using the 5 speed case.

PARTS AVAILABLE SEPARATELY			
NO.	QTY.	DESCRIPTION	PART NO
1	1	PULLER BAR	739-1
2	1	DRIVER, 5-SPEED	739-2
3	1	DRIVER, CRUISE DRIVE	739-3
4	1	STOP COLLAR	739-4
5	1	TOOL, SCREW	1024
6	1	SPUD	2190
7	1	BEARING	2010
8	1	O-RING	2310
9	1	INSTRUCTION SHEET	739-IS

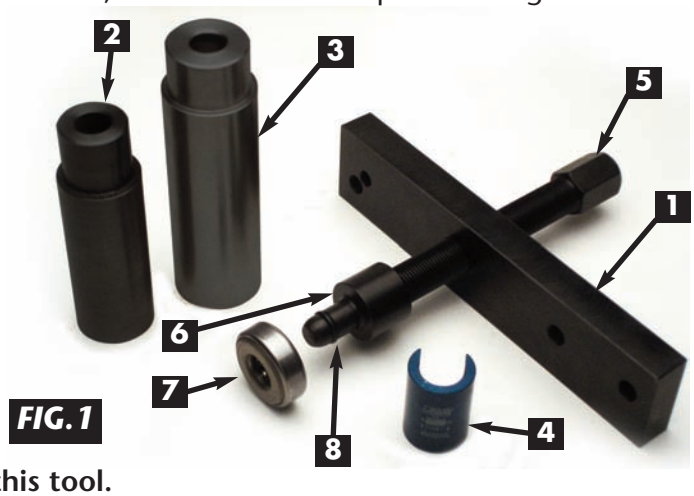


FIG.1

Read the instructions completely before using this tool.

Always wear safety glasses or full face shield. JIMS is not responsible for damage, injury, or your work. JIMS is not responsible for the quality and safety of your work. If you are unsure of how to do this job, STOP! Take your bike to a qualified H-D repair shop.

Recommended Tools and Supplies

- 3/4" combination wrench or socket
- 1/4" and 3/16" Allen wrenches
- New countershaft bearing
- H-D or Clymer Service Manual for year and model of bike serviced
- Light oil for thread lubricant
- Assembly lubricant

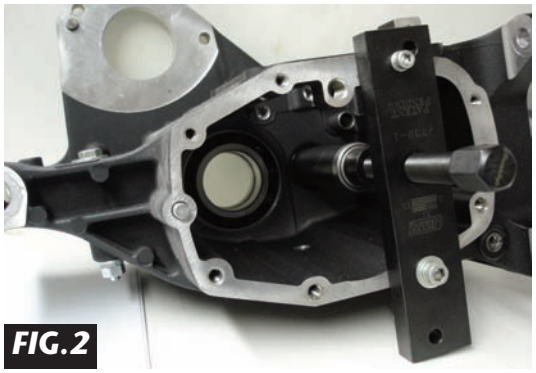


FIG.2

Prior to using this tool the transmission must be disassembled to the point where the shift drum, shift shaft(s), shift forks, and trap door gearset are removed. Once the bike is in this state proceed with instructions. Always refer to the Harley-Davidson service manual for the year and model of the bike you are working on. The puller bar No. **739-1** is used on both 5 and 6 speed cases. When using on a H-D Cruise Drive mount the tool to the case using stock fasteners through the outermost two 5/16" holes. When mounting on a 5 speed case the JIMS logo will be inverted, with the 1/4" hole toward the top. Use the inner 5/16" hole to mount the lower case bolt through. See **Fig. 2**

CAUTION: Wear safety glasses over your eye's.
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Performance Parts For Harley-Davidson® Motorcycles

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For Countershaft Bearing Removal

1. Prepare the Puller Bar No. **739-1** with the driver screw No. **1024** threaded through it so the hex end of the driver screw is on the same side as the JIMS® logo. Thread the Spud No. **2190** onto the driver screw until it bottoms out. Slide the bearing No. **2010** onto the spud past the O-ring with the writing on the bearing facing the hex head of the driver screw. Locate the driver that fits whichever countershaft bearing you will be removing and install the stepped end into the countershaft bearing.
2. Mount the Puller Bar no. **739-1** onto the case with two 5/16-18 Allen bolts for Cruise Drive or one 5/16-18 and one 1/4-20 Allen bolt for 5 speeds. Position the driver screw so it is centered over the countershaft bearing and driver. Use existing trap door hardware to mount the puller bar to the case. See **Fig. 2**
3. Hand tighten the driver screw No. **1024** until the spud fits into the bearing driver and everything is lined up.
4. Lubricate the threads of the driver bolt and tighten with a ¾" wrench until the countershaft bearing is pressed out of the case.

For Countershaft Bearing Installation

1. Back the driver Screw No. **1024** out of the Puller Bar No. **739-1** so you have room for the new countershaft bearing, driver, and Spud with bearing No. **2010** installed. The screw should be backed out enough so you can mount the puller bar to the case without pressing on the countershaft bearing and driver. Install the two screws to mount the puller bar to the case. The Cruise Drive will use two 5/16-18 screws to mount and the 5 speed will use one 5/16-18 and one 1/4-20 screw to mount the puller bar to the case. Hand tighten the driver screw until the bearing is flush with the bore in the case. Verify that the threads of the driver screw are lubricated.
2. Using a ¾" wrench, begin tightening the driver screw while observing that the bearing is lined up with the case bore. Lubricate the case bore and countershaft bearing before installing.
3. Tighten driver screw until the bearing is about half way into the case bore.
4. Using the Stop Collar No. **739-4** on the driver screw No. **1024**, insert tool between the hex head of the driver screw and the puller bar and continue tightening.
5. When the head of the driver screw butts up to the Stop Collar, stop. Your countershaft bearing will be set to an approximate depth.
6. Measure the closed end of the countershaft bearing to the outside of the case. The bearing is properly positioned when it is driven inward flush with the outside surface of the case or to a maximum depth of 0.030". Continue driving the bearing using quarter turns until this depth is achieved.
7. Reassemble the transmission, primary, starter, and exhaust system following the H-D Service Manual for the proper year and model.

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