



## INSTRUCTION SHEET FOR TOOL #957

### BALANCER BEARING SERVICE TOOL KIT

USE ON 2007 TO PRESENT FXST

**NOTE: PLEASE READ ALL INSTRUCTIONS COMPLETELY & THOROUGHLY BEFORE PERFORMING ANY WORK.**

**IF YOU DO NOT KNOW WHAT YOU ARE DOING, DO NOT DO IT!**

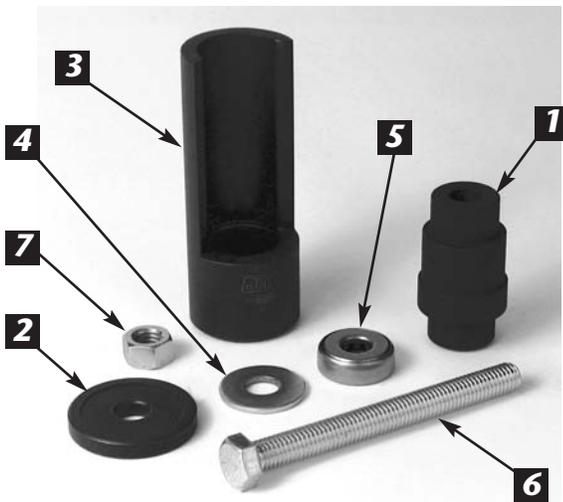
No information in this instruction sheet pertaining to motorcycle repair is represented as foolproof or even altogether safe, done incorrectly or incompletely can and will backfire. You and only you are responsible for the safety of your repair work and for your understanding the application and use of repair equipment, components, methods and concepts.

Each and every step that this tool is designed to do must be carefully and systematically performed safely by you. All information listed in this instruction sheet has been tested, re-tested and used daily in JIMS Research and Development Department.

**ALWAYS WEAR SAFETY GLASSES OR OTHER FACE AND EYE PROTECTION SUCH AS 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.**

#### JIM'S TOOLS NEEDED TO PERFORM THIS SERVICE:

- 1) #994 Cam Locking Tool
- 2) #2315 Primary Chain Locker Tool
- 3) #995 Case Splitter
- 4) #975 Engine Rotator
- 5) #973 Sprocket Shaft Race and Timken Bearing Installer
- 6) #963 Bearing Puller
- 7) #960 Balancer Shaft Removal Tool



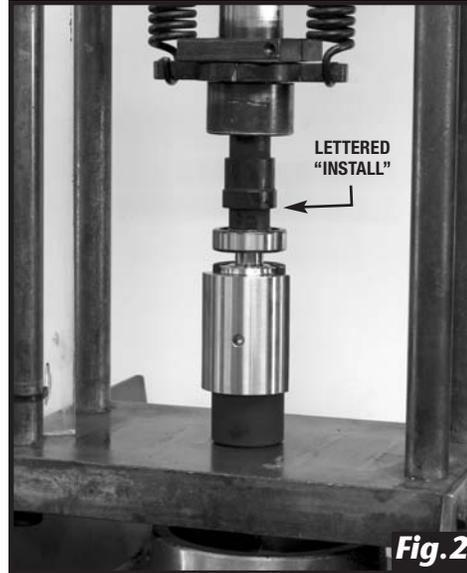
#### PARTS AVAILABLE SEPARATELY

No.	Qty.	Description	Part No.
1	1	Outer Bearing Remover/Installer	961-1
2	1	Outer Support	961-2
3	1	Installer	962
4	1	Washer	2038
5	1	Bearing	2010
6	1	Screw	1221
7	1	Nut	2136
8	1	Instruction Sheet	957-IS

**CAUTION: WEAR SAFETY GLASSES. EXCESSIVE FORCE MAY DAMAGE PARTS!  
SEE JIMS® CATALOG FOR HUNDREDS OF TOP QUALITY PROFESSIONAL TOOLS.  
THE LAST TOOLS YOU WILL EVER NEED TO BUY.**

*Performance Parts For Harley-Davidson® Motorcycles*

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### Balancer shaft remover and balancer bearing installation and remover procedures for JIMS Tool No. 957.

**Warning:** Disconnect the negative ground cable at the battery.

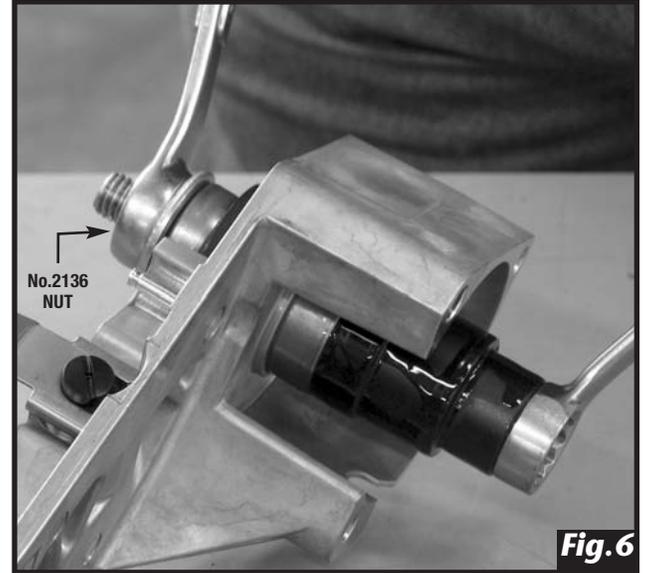
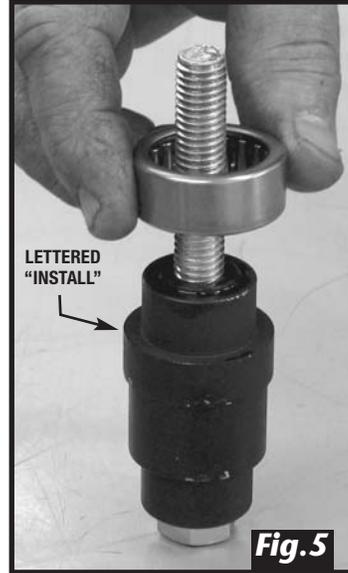
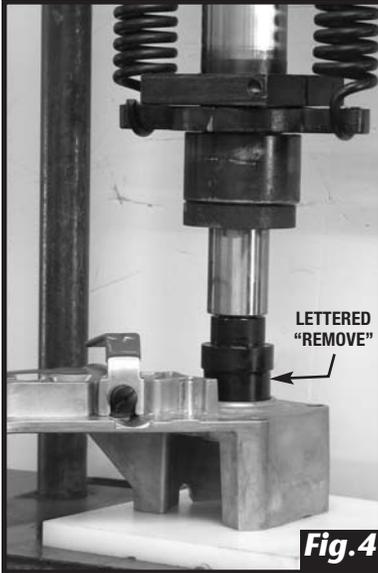
**Note:** Check that all the bearing bores and bearing journals are in good serviceable condition before installing any new parts.

1. Disassemble the engine per H-D service manual for appropriate year and model for the motorcycle you will be repairing.
  2. Place one of the two (both are the same) balancer shafts, with the larger of the two bearing diameters surface inserted inside tool No.962 first. See **FIG 1**.
  3. Apply lube to the smaller bearing diameter of the balancer shaft and the I.D. of new bearing. Place the new bearing on the lubed end of balancer shaft with the part numbers on bearing facing down to balancer shaft. You will be pressing on the inner race of the bearing. See **FIG 2**.
  4. Place the laser marked, "INSTALL" on the side of bearing installer tool No. 961-1 with the small diameter over to top of new bearing. See **FIG 2**.
  5. Place the above assembly in a suitable press. Press on the end of tool No. 961-1 until bearing is fully seated on the balancer shaft. See **FIG 2**. Repeat lines 2,3,4 and 5 for the other balancer shaft.
  6. Lightly lube the O.D. of installed bearing on shaft and the I.D. of bearing bore of left case. Place the balancer / bearing assembly flipped, over and position the front or rear balancer shaft bore in left engine case. See **FIG 3**.
- Caution:** Support the case under the bearing bore for the side you will be installing the balancer shaft into. Use a non-marring material to support the backside of case, square to the ram of press.
- Note:** Tool No. 962 has a raised surface, higher then the balancer shaft. This is used as a pressing surface. All pressing force is applied to the outside bearing race, eliminating any damage to the bearing.
7. Press on the top of Tool No. 962 until the above assembly is installed in left case. See **FIG 3**.
  8. Repeat lines 6 and 7 for the other balancer shaft assembly.

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### Support Bearing Removal Procedures

1. Remove retaining ring from the inside of balancer shaft housing.  
**Caution:** Cover retaining ring with a clean shop rag to control the retaining ring as it is being removed.
2. Place balancer housing with the retaining ring groove facing down on the press. See FIG 4. Protect the machined surfaces of housing.
3. Place Tool No. 961-1 with the laser marked "REMOVER" side into the bearing being removed. Press bearing from housing. See FIG 4.
4. Repeat lines 1 thru 3 for the other bearing.

### Bearing Support Installation Procedures

1. Apply lube to all threads of No.1221 screw and the I.D. of balancer housing bearing bore screw.
2. Insert screw No.1221 into Tool 961-1 and then place new housing bearing on tool on the, "INSTALL" laser lettered side of tool. Place bearing on tool with lettering facing away from tool. See FIG 5.
3. From the inside of balancer housing, place this tool with bearing up to the bearing bore of housing. See FIG 6.
4. On the other side of housing (outside) place tool support plate Tool No. 961-2 with stepped side facing the housing, over screw No.1221, followed by tool bearing No. 2010 and washer No.2038. Next, thread on nut tool No.2136. See FIG 6.
5. Thread nut No. 2136 by hand until all slack is taken up and new bearing is aligned with it's bore. Tighten nut until the new bearing is installed all the way into it's bore.  
**Note:** It takes about 25 to 30 ft-lbs of torque to install the bearing.
6. Install new retaining ring, repeat lines 1 thru 5 for the other housing bearing.

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