



A Division of Thiessen Products, Inc.

INSTRUCTION SHEET FOR TOOL No.729

INNER PRIMARY HOUSING BEARING AND SEAL REMOVER AND INSTALLER TOOL

Use on all 1985 to Present Big Twin Models

Note: Please read all instructions completely and thoroughly before performing any work.

If you do not know what you are doing, do not attempt job. Take it to a competent repair shop.

No information in this instruction sheet pertaining to motorcycle repair is represented as foolproof or even altogether safe. Even something 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 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.



JIMS TOOLS NEEDED TO PERFORM THIS SERVICE

1. See JIMS catalog for a complete listing of all primary chain locking tools and all other primary and transmission tools.

OTHER HAND TOOLS NEEDED TO PERFORM THIS SERVICE

1. 3/4" wrench for primary drain bolt on early models, or T-40 Torx, 3/16" Allen, or 5/8" hex wrench for later model primary drain screw.
2. 3/16" Allen wrench for primary cover screws on most models.
3. 9/16" socket for early primary chain adjuster or 1/2" socket and zip tie for late self-adjusting tensioners.
4. 13/16" socket to remove compensator bolt on late models, 1-1/2" socket for early compensators.
5. 1-3/16" socket to remove 1990-present clutch hub nut, 1 1/8" for 1985-1989 models.
6. 5/16" socket to remove 1994-2006 starter shaft bolt, 7/16" for 1989-1993 models.
7. Torque wrench reading ft/lbs with 3/4" deep socket to install new bearing and seal.
8. 3/4" box end wrench to install new bearing and seal.
9. Internal retaining ring pliers.

PARTS IDENTIFICATION

NO.	QTY.	DESCRIPTION	PART NO.
1	1	SEAL INSTALLER	967-1
2	1	BEARING RECEIVER CUP	967-2
3	1	REMOVER PLATE	967-3
4	1	BEARING REMOVER/INSTALLER, LATE PRIMARY	967-4
5	1	BEARING REMOVER, LATE PRIMARY	967-5
6	1	SCREW	1211
7	2	WASHER	2038
8	1	BEARING	2010
9	1	NUT	2136
10	1	INSTRUCTION SHEET	729-IS

CAUTION: WEAR SAFETY GLASSES OVER YOUR EYES.
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REMOVAL PROCEDURES

Warning: Disconnect the negative ground cable.

Note: We will refer to early models as 1985 to 2006 except Dyna, and late model will be 2006 Dyna and all 2007 to present Big Twin models.

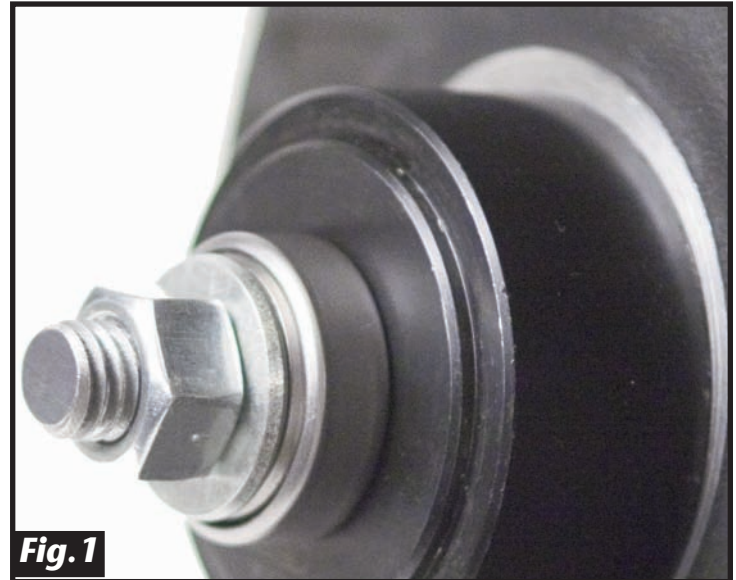
1. Drain primary fluid and remove outer primary cover, primary chain and clutch, and inner primary housing following the H-D service manual for appropriate year and model motorcycle you will be repairing.
2. Place inner primary housing on a clean flat non-marring surface with the backside facing up.

Note: Inspect the direction the old seal was installed. It should have had the open sealing side facing the inside of primary housing.

3. Remove seal with a pry bar or seal puller.

Note: Do not damage the primary seal bore with the seal removal tool.

4. Remove the retaining ring holding the inner primary bearing in bore. Hold a rag over ring as it is being removed to prevent it from flying away. On early models, remove the other retaining ring on the inside of bearing bore.
5. Apply lube to the ID of bearing bore. From the clutch side of inner primary housing, position the bearing remover tool No. **967-3** with shoulder placed inside bearing ID for early models. For late models, use bearing remover No. **967-5**. Next, from the pulley side of housing, place bearing receiver cup No. **967-2**, evenly centered, with laser lettered side facing you, over the bearing bore. On late models, use bearing remover No. **967-4**. Insert No. **1211** screw with a No. **2038** washer through the center hole of the receiver cup and bearing remover. Lube threads of the bolt, add No. 2010 nice bearing, another No. **2038** washer, followed by No. **2136** nut and thread on finger tight until you take up slack on the bolt. **See Fig. 1.**
6. With a 3/4" box end wrench on the bolt and a 3/4" deep socket with ratchet wrench on nut, tighten until bearing is removed from its bore.
7. Inspect the seal and bearing bore. Clean any foreign material, dirt, oil, or grease from bore. Make sure it is in serviceable condition to keep the new bearing and seal from coming out or from leaking around the OD of the new seal.



INSTALLATION PROCEDURES

1. Apply lube to all threads of screw No. **1211** and a small amount of lube on the OD of the new bearing and seal. Lightly lube bearing bore hole. On early models, install a new retaining ring in the ring groove of bearing bore on the clutch side of the inner primary housing.

Note: Inspect to see that the retaining ring is installed and seated 100% in its groove.

2. Place a new bearing over the end of installer tool No. **967-3**.

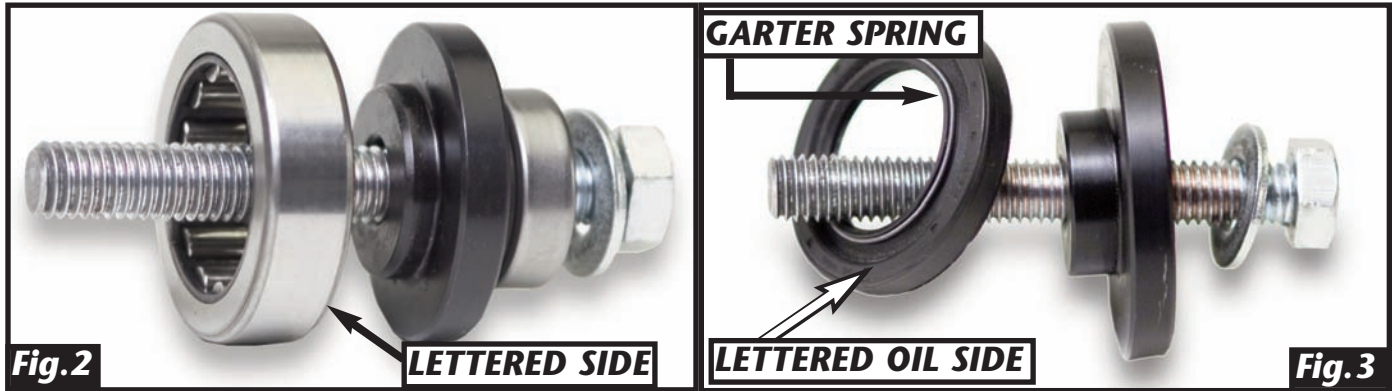
Note: Letter side of bearing must face installer tool, with smaller end of tool inside bearing. **See Fig. 2.**

3. Place washer No. **2038** followed by bearing No. **2010** over bolt, then through the installer plate tool No. **967-3** with new bearing. **See Fig. 2.**

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4. Position this assembly from the pulley side of primary housing into the bearing and seal bore. Next, place receiver cup No. **967-2** from the clutch side of primary housing with laser marked side toward bore, followed by washer No. 2038 and lubed nut No. **2036** for early models. For late models use receiver cup No. **967-4**.
5. Tighten nut with your 3/4" socket and torque wrench set at 30 ft/lbs while holding the bolt with a 3/4" wrench.

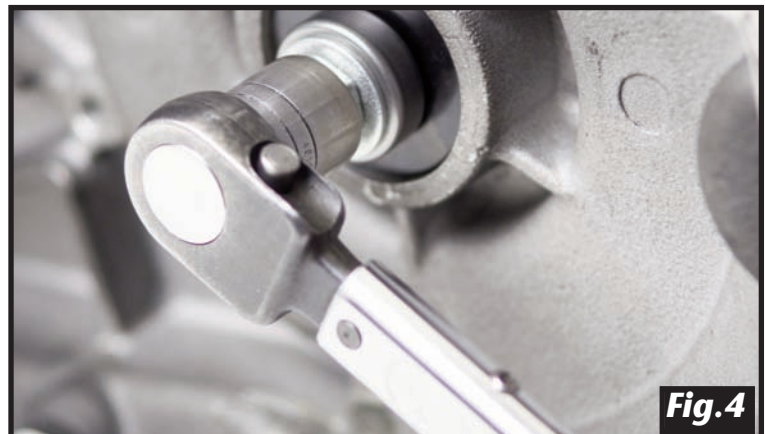
Note: Inspect to see that the bearing is started straight into the bore before you apply torque, and once installed that the bearing is seated against the retaining ring on early models or the cast lip on late models.

6. Install a new retaining ring in the groove next to the bearing you just installed.

Note: Inspect to see that the retaining ring is installed and seated 100% in its groove.

7. Lightly lube ID and OD of new seal. Place over the end of installer tool No. **967-1** with the open side of the seal facing the bearing that is installed. If using an H-D seal, face the side with garter spring (oil side) away from tool. **See Fig. 3.**
8. Place washer No. 2038 followed by bearing No. **2010** over screw No. **1211**, through seal installer plate tool No. **967-1** and new seal. **See Fig. 3.**
9. Position this assembly from the pulley side of the primary housing (same side the seal has been removed from) above seal bore. Next, for early models, place No. **967-3** with step inside bearing stopping at the retaining ring followed by flat washer and nut. **See Fig. 4.** On late models, use tool No. **967-4** with step set into clutch side of bearing bore hole, followed by flat washer and nut.
10. Tighten nut with your 3/4" socket and torque wrench set at 30 ft/lbs while holding the bolt with your 3/4" wrench.

Note: Inspect to see that the seal is started straight into its bore before applying torque and that seal has stopped tight against retaining ring.



11. Reassemble primary housing, clutch and primary chain, and outer cover according to H-D service manual for your particular year and model bike.

Note: Be sure the bearing inner race is in serviceable condition or replace if it has any noticeable wear.

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