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REV

MODEL AFFECTED: 206 A/B Series

SUBJECT: TRANSMISSION OIL PUMP P/N 206-040-184-001
/-101 BEARING REPLACEMENT PROCEDURE,
INTRODUCTION OF.

HELICOPTERS AFFECTED: 206A Helicopters serial number 004 through 660
and 672 through 715.

206A Helicopters converted to 206B as per
Service Instruction 206-80.

206B Helicopters serial number 661 through 671
and 716 and subsequent.

206B (TH-67) Helicopters serial number 5101 and
subsequent.

COMPLIANCE: At Customer's Option

DESCRIPTION:

This bulletin is issued to provide replacement instructions for the transmission oil pump bearings.

APPROVAL:

The engineering design aspects of this bulletin are TCCA approved.

MANPOWER:

No additional man-hours are required when the bearings are replaced at transmission overhaul.

WARRANTY:

There is no warranty credit applicable for parts or labor associated with this bulletin.

MATERIALS:

Required Material:

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
36-04503-0043-1	Bearing	2

Consumable Material:

The following material is required to accomplish this bulletin; however this material is considered consumable (bench stock) material and may not require ordering depending on the operator's consumable material stock levels. This material may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>	<u>Reference</u>
P-P-101	Fine grit emery cloth	1	C-423

SPECIAL TOOLS:

WORKAIDS #1, #2, #3, and #4, refer to Figure 1 of this TB.
REAMER 0.5000 TO 0.5005 IN (12.7 to 12.713 mm)

WEIGHT AND BALANCE:

Not Affected

ELECTRICAL LOAD DATA:

Not Affected

REFERENCES:

BHT-206A/B-Series-IPB, Illustrated Parts Breakdown
BHT-206-MM, Maintenance Manual

BHT-206A/B-M&O, Maintenance and Overhaul Manual
BHT-206B3-CR&O, Component Repair and Overhaul

PUBLICATIONS AFFECTED:

BHT-206A/B-Series-IPB, Illustrated Parts Breakdown
BHT-206A/B-M&O, Maintenance and Overhaul Manual
BHT-B3-CR&O, Component Repair and Overhaul

ACCOMPLISHMENT INSTRUCTIONS:

PART I: Replacement of bearing P/N 36-04503-0043-1 in pumps P/N 206-040-184-001/-101

-NOTE-

Pump P/N 206-040-184-101 is a direct replacement for the pump P/N 206-040-184-001.

1. Remove transmission oil pump (BHT-206A/B-MM, Chapter 63)(BHT-206A/B-M&O, Section VI).

CAUTION

THE PUMP P/N 206-040-184-001 CANNOT BE UPGRADED TO THE -101 CONFIGURATION. PARTS ARE NOT INTERCHANGEABLE.

2. Disassemble the transmission oil pump (BHT-206B3-CR&O) (BHT-206A/B-M&O, Section VI).
3. Prepare workaids (#1, #2, #3, and #4, Figure 1).

-NOTE-

It is not necessary to replace both bearings at the same time.

4. Use workaids #1 and #2 to remove bearing (1, Figure 2) from head assembly (2) and housing body (3) of transmission oil pump.
5. Inspect bearing bores of head assembly (2) and housing body (3). Refer to Figure 4 of this TB.

6. Install bearing (1, Figure 3) into head assembly (2) and housing body (3) as follow:
 - a. Apply heat to head assembly (2) and housing body (3). Do not exceed 200° F (93.33° C).
 - b. Coat the OD of bearing (1) and bearing bores of head assembly (2) and housing body (3) with transmission oil.

CAUTION

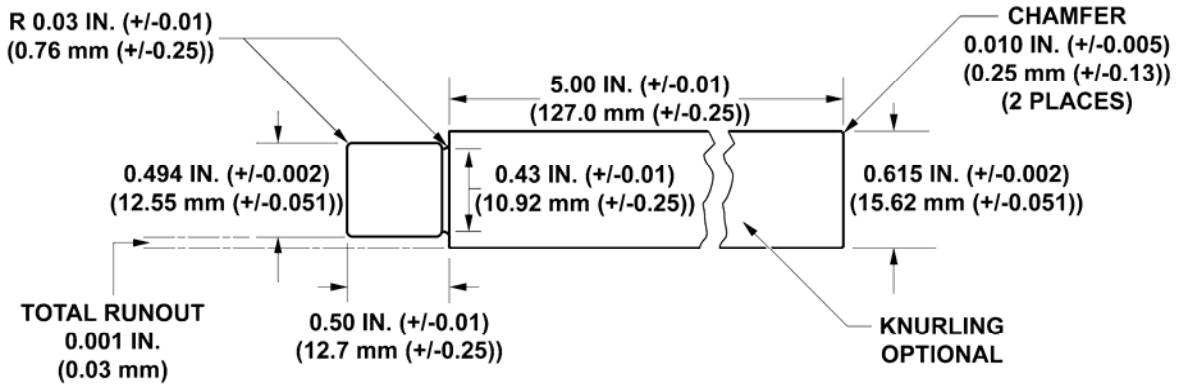
ALIGN OIL FEED HOLE IN BEARING (1) WITH OIL FEED HOLES IN HEAD ASSY (2) AND HOUSING BODY PRIOR TO INSTALLING BEARINGS. FAILURE TO DO SO WILL RESULT IN INADEQUATE OIL FLOW TO THE BEARING (1) AND WILL CAUSE DAMAGE TO THE PUMP.

- c. Use workaids #2 and #3 to press bearing (1) into head assembly (2). Use workaids #2 and #4 to press bearing (1) into housing body (3).
 - d. Inspect bearing (1) to ensure no damage has resulted from bearing installation.

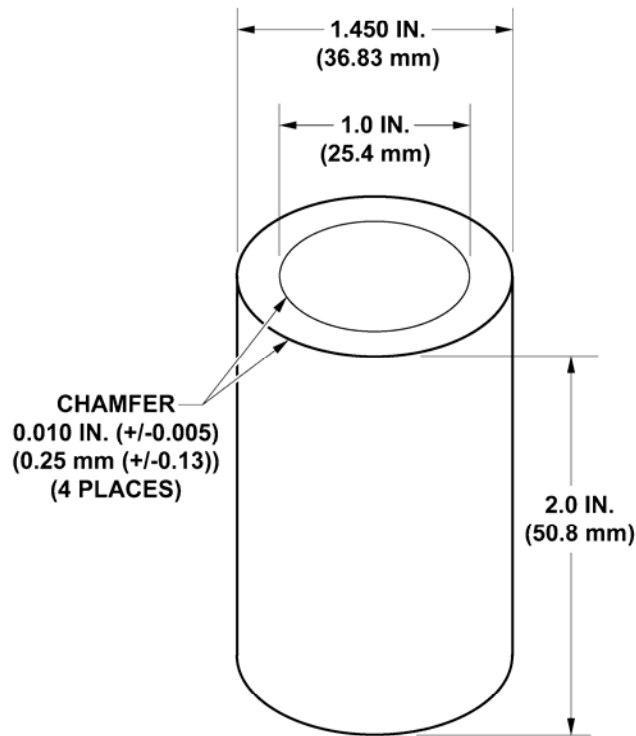
-NOTE-

After deburring and clean up the surface finish must be 32 RMS or smoother.

- e. Final machine or ream inside diameter of the bearing (1) to 0.5000 to 0.5005 inch (12.7 to 12.713 mm). Perform a Fluorescent Penetrant Inspection to the head assembly (2) and housing body (3) (BHT-ALL-SPM, Chapter 6). No cracks allowed.
 - f. Inject transmission oil through oil feed holes of head assembly (2) and housing body (3) and observe for oil flow at the bearing inside diameter.
7. Reassemble the transmission oil pump (BHT-206A/B-M&O, Section VI) (BHT-206B3-CR&O).
8. Install transmission oil pump (BHT-206A/B-M&O, Section VI) (BHT-206A/B-MM, Chapter 63).
9. Make an entry in the helicopter Historical Record to show that this Technical Bulletin is completed.



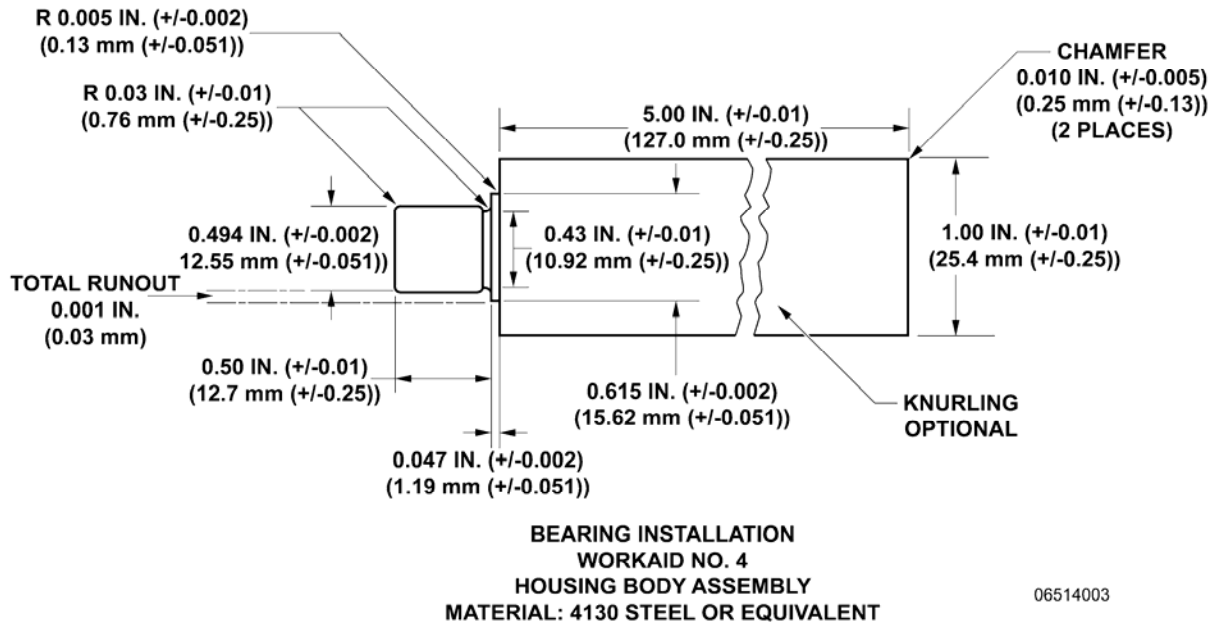
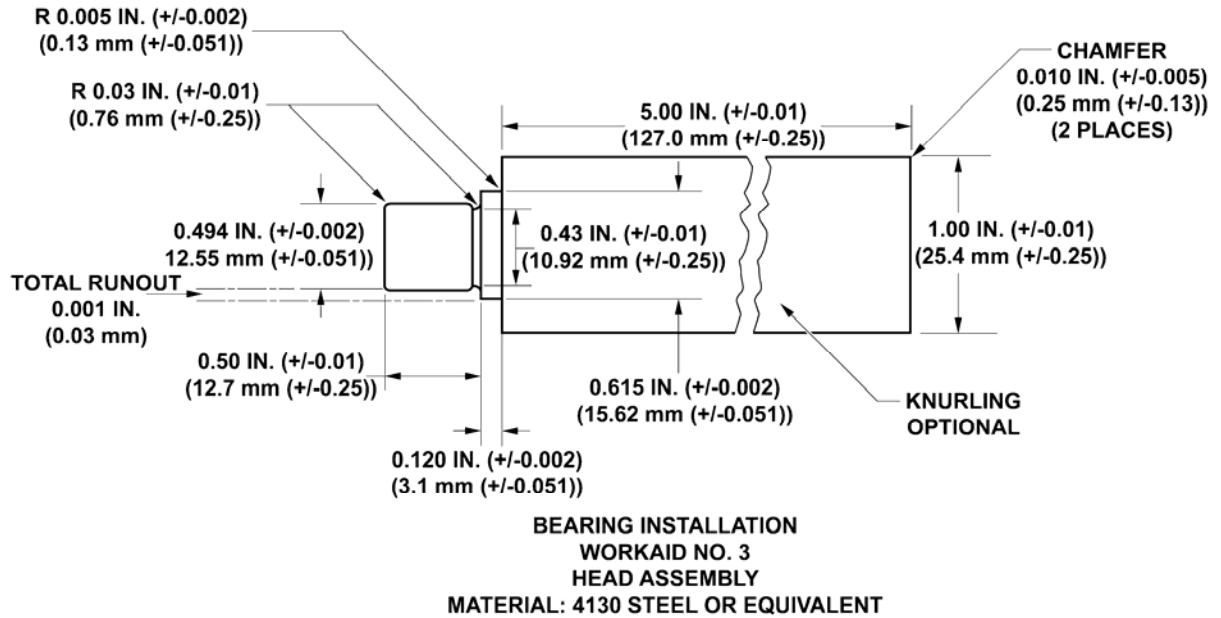
**BEARING REMOVAL
WORKAID NO. 1
MATERIAL: 4130 STEEL OR EQUIVALENT**



**BEARING REMOVAL/INSTALLATION
WORKAID NO. 2
MATERIAL: ALUMINUM**

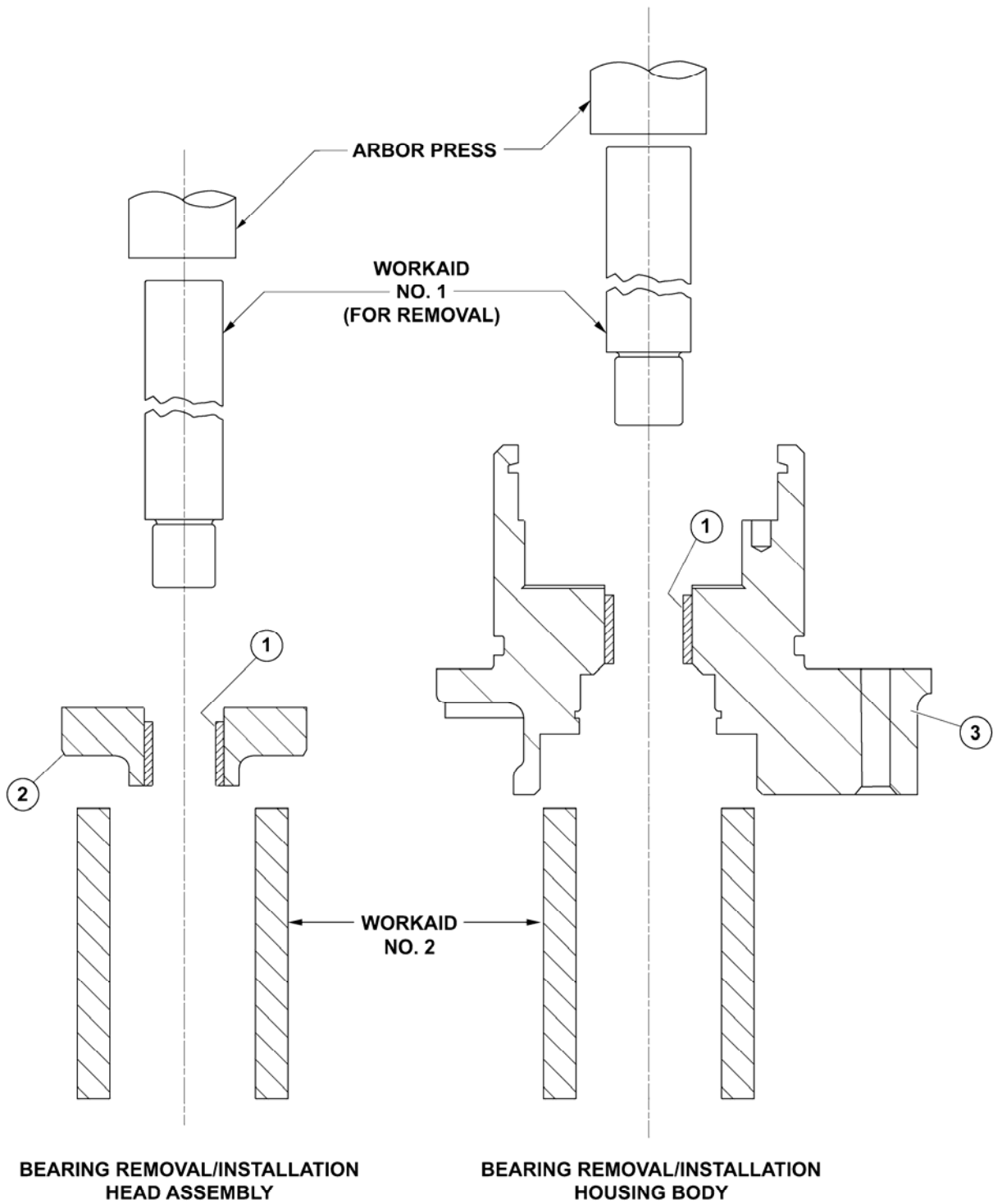
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Figure 1. Built up instructions of Work Aids (sheet 1 of 2)



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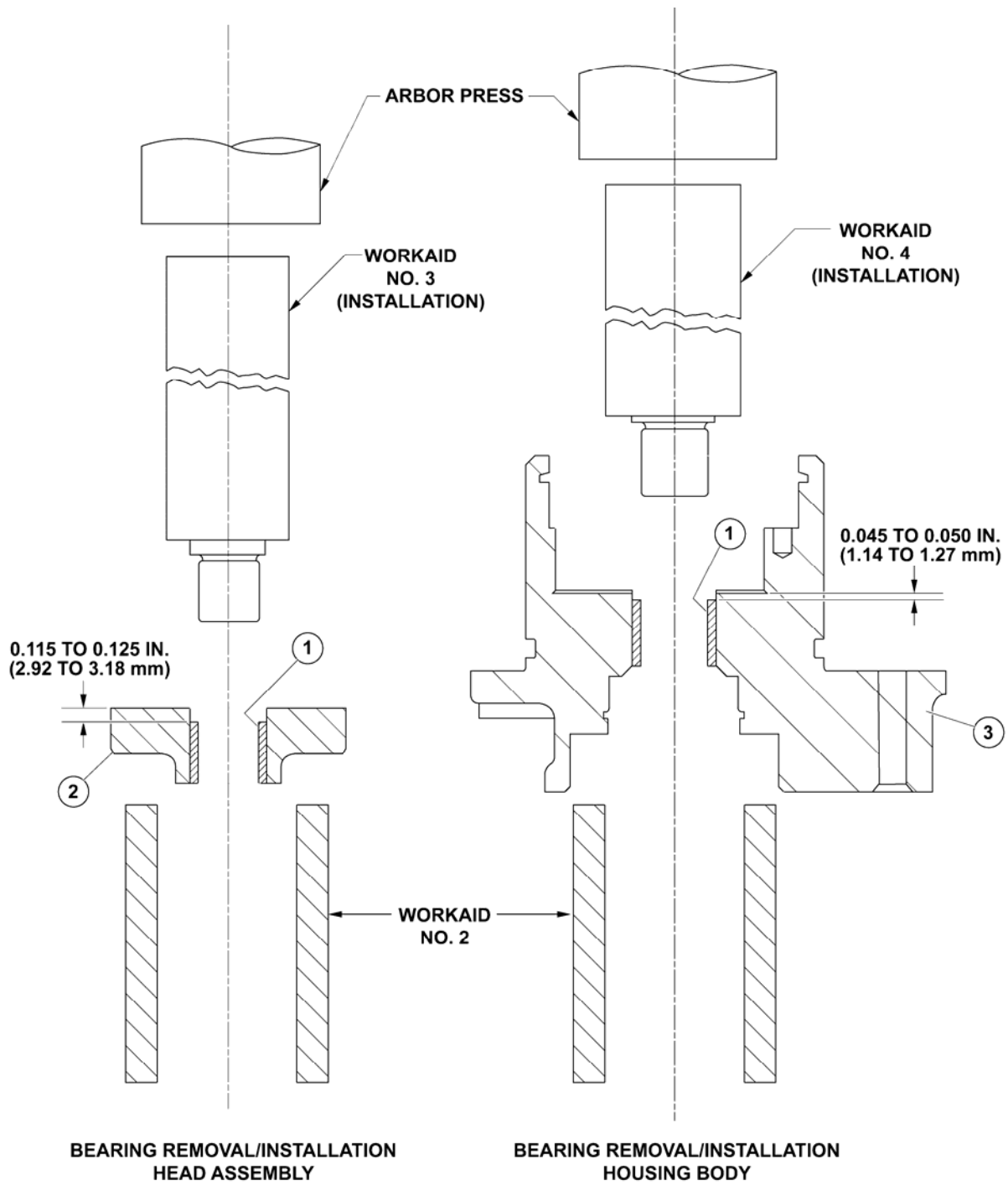
Figure 1. Built up instructions of Work Aids (sheet 2)



- 1. Bearing
- 2. Head assembly
- 3. Housing body

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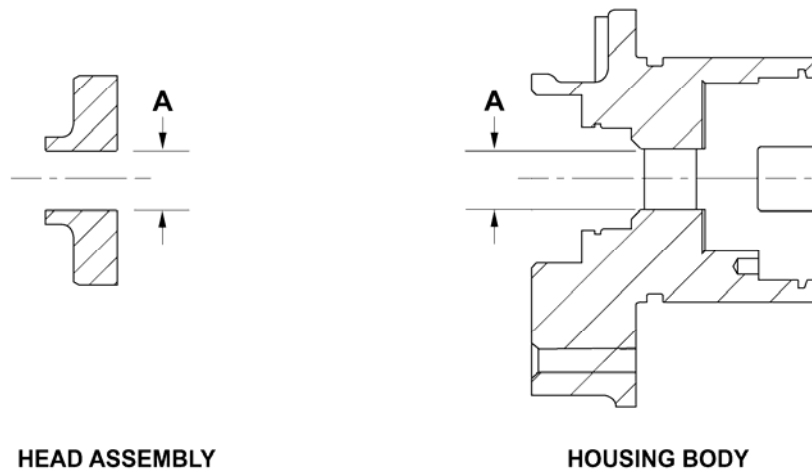
Figure 2. Bearing removal from Head Assembly and housing body



- 1. Bearing
- 2. Head assembly
- 3. Housing body

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Figure 3. Bearing installation on Head Assembly and housing body



NO.	REF LTR	CHARACTERISTIC	INSPECTION METHOD	LIMIT
1	A	Inside diameter	Measure	0.6250 inch (15.875 mm) maximum diameter.
2	A	Mechanical damage	Visual/measure	Permitted if damage cannot be felt with a 0.020 inch (0.508 mm) spherical radius probe. △ 1
3	A	Mechanical damage	Visual/measure	10% of total surface is permitted for repair.

NOTE

△ 1 Mechanical damage may be polished smooth with a fine Emery cloth (C-423). Treat repaired area with chemical film treatment (C-100).

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Figure 4. Inspection and repair of head assembly and housing body bores.