

# 8M0050018

## IMPELLER SHAFT BEARING KIT BRASS SEAWATER PUMP

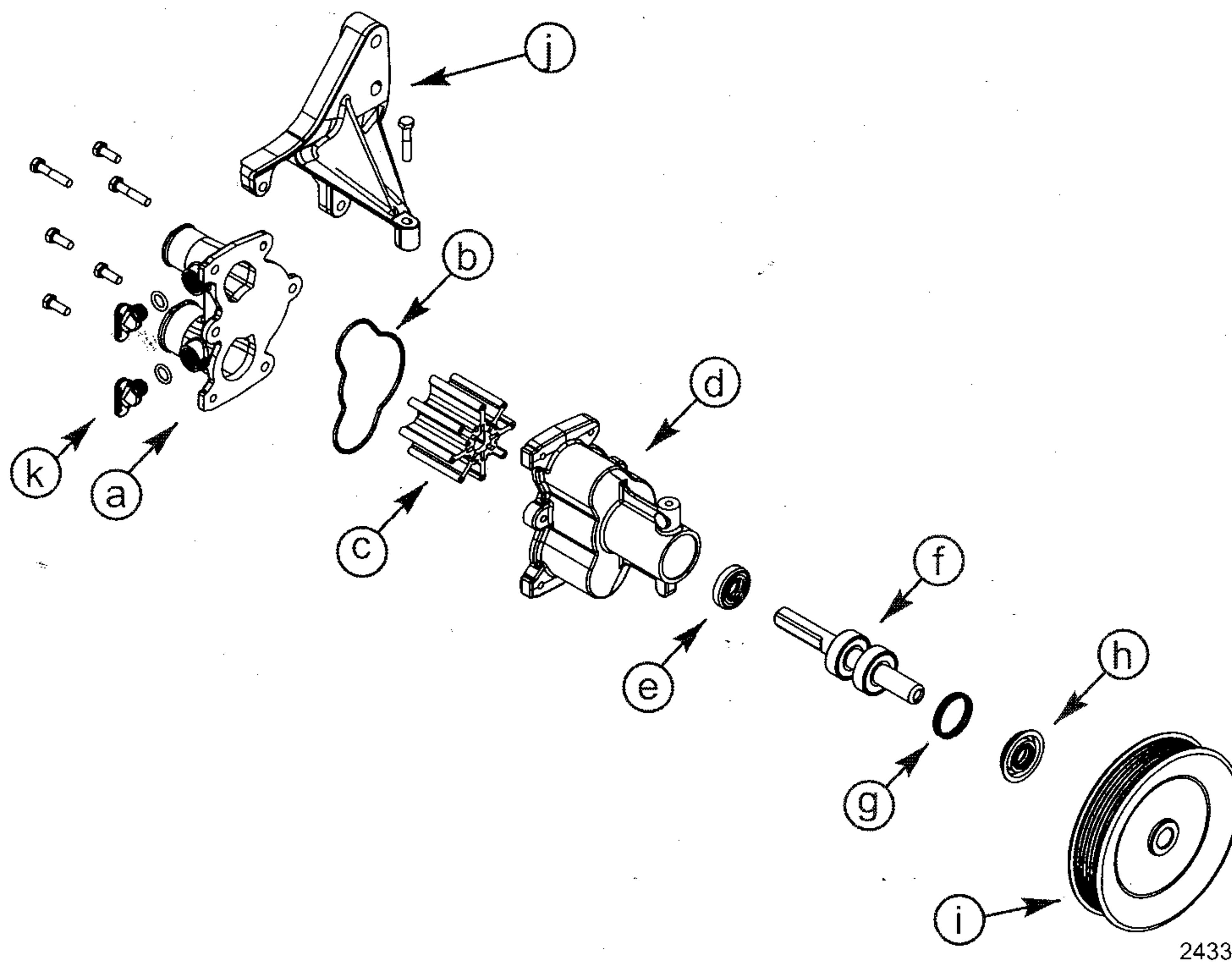
**IMPORTANT:** This document guides our dealers, boatbuilders, and company service personnel in the proper installation or service of our products. If you have not been trained in the recommended servicing or installation procedures for these or similar Mercury Marine products, have the work performed by an authorized Mercury Marine dealer technician. Improper installation or servicing of the Mercury product could result in damage to the product or personal injury to those installing or operating the product.

**NOTE:** After completing installation, place these instructions with the product for the owner's future use.

### Components Contained in Kit

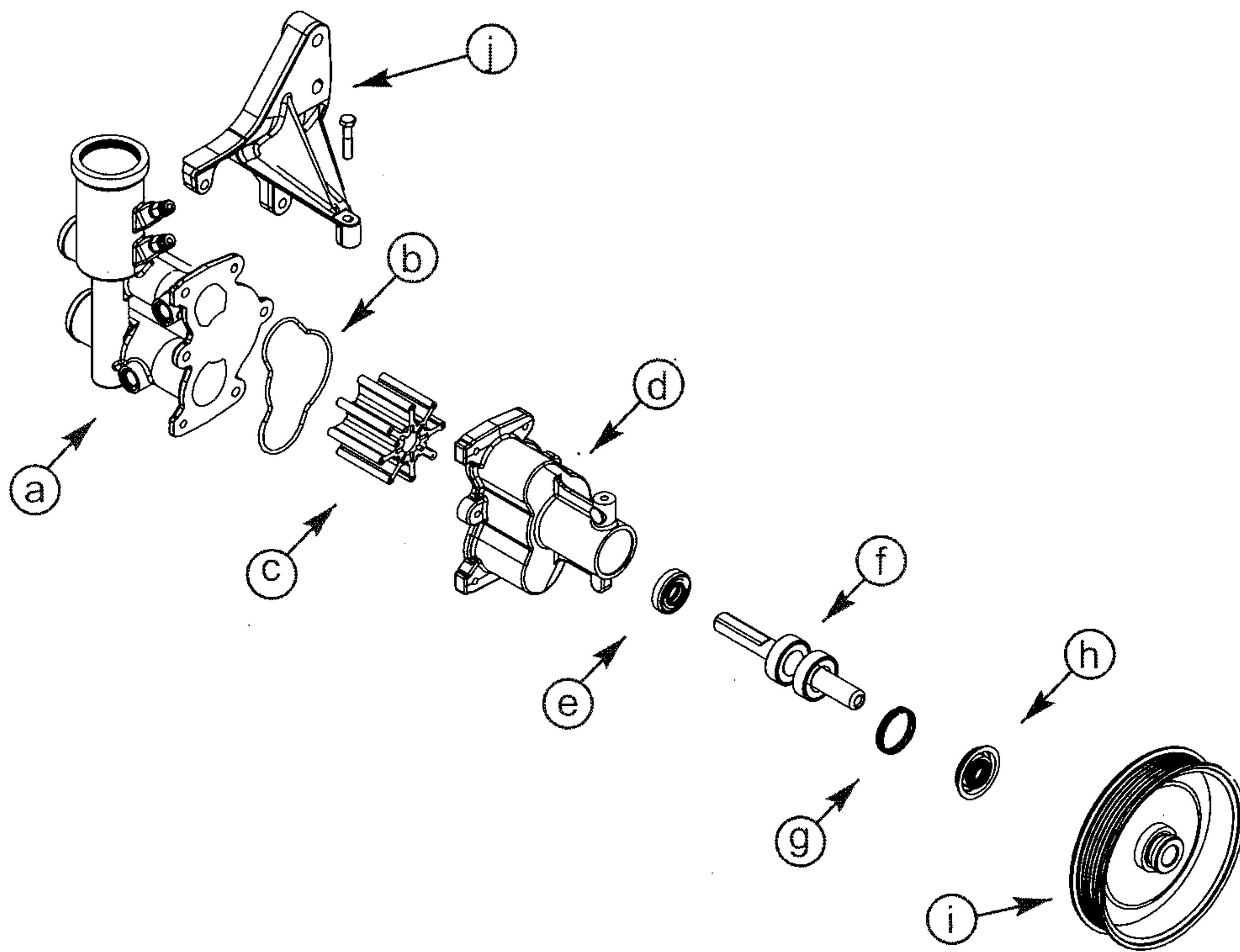
Qty.	Description	Part Number
1	Bearing shaft assembly	862235A1
1	Seal	26-8M2001645
1	Seal, lip	26-862040
1	Tolerance ring	862039
1	Retainer ring	NSS

### Seawater Pump Exploded View



Seawater pump without  
air actuator

- a - Seawater pump impeller housing cover
- b - O-ring
- c - Impeller
- d - Seawater pump impeller housing
- e - Rear oil seal
- f - Bearing shaft assembly
- g - Tolerance ring (early style housing) or retainer ring (later style housing).
- h - Front seal
- i - Pulley
- j - Seawater pump bracket
- k - Blue drain plug



24331

Seawater pump with air actuator

- a - Seawater pump air actuator housing
- b - O-ring
- c - Impeller
- d - Seawater pump impeller housing
- e - Rear oil seal
- f - Bearing shaft assembly
- g - Tolerance ring (early style housing) or retainer ring (later style housing).
- h - Front seal
- i - Pulley
- j - Seawater pump bracket

MER P SEAWATER PUMP

#8629140

Removal

1. Drain the seawater section of the cooling system.
2. Remove both of the hoses from the aft side of the seawater pump.
3. For models equipped with an air-actuated drain valve:
  - a. Disconnect the vent hose from the top of the drain valve.
  - b. Disconnect the air hoses from the drain valve, by pushing in and holding the plastic ring around the air hose, and pulling the air hose out of the fitting.

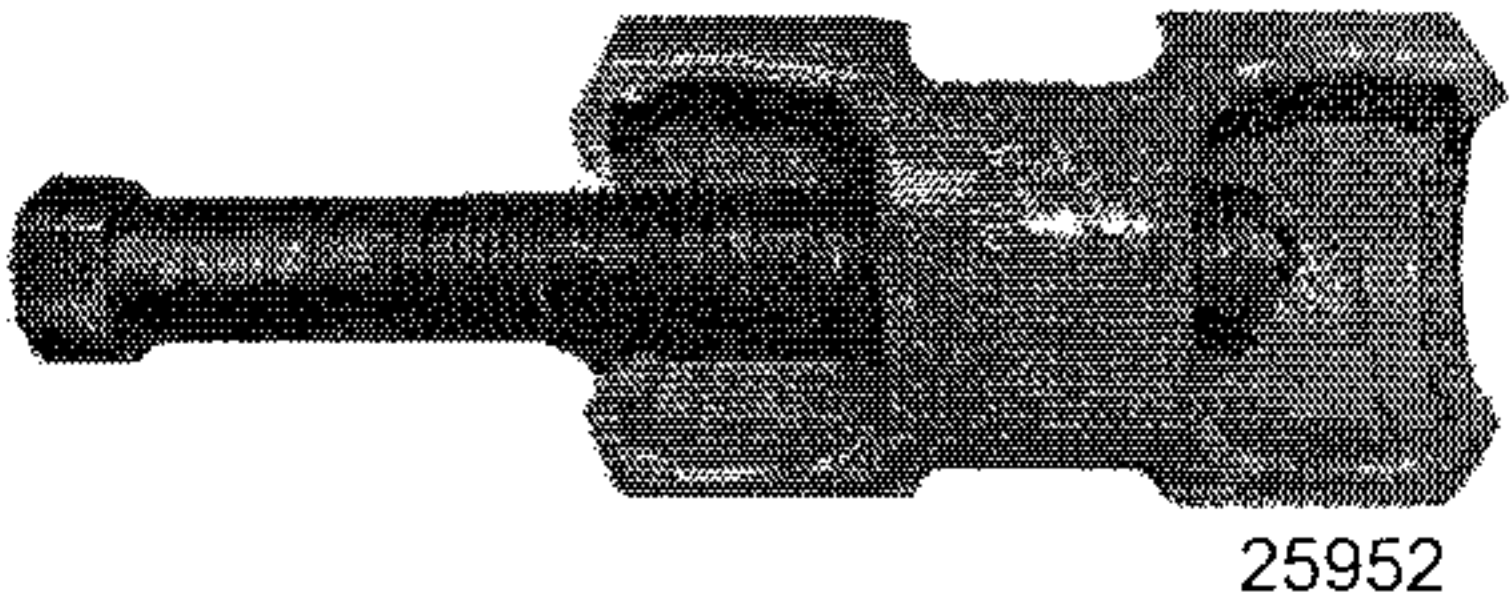
IMPORTANT: If a belt is to be reused, it should be installed in the same direction of rotation.
4. Remove the serpentine drive belt.
5. Remove the seawater pump and bracket assembly.

Disassembly

**▲ CAUTION**

Removing the snap ring from the top of the air-actuated drain valve can allow the components to come apart forcefully, resulting in injury or product damage. Do not try to repair the valve or remove the snap ring.

1. Remove the seawater pump mounting bracket.
2. Remove the seawater pump pulley using an appropriate puller.

Power Steering Pump Pulley Remover	Kent Moore J-21239
	Removes the pulley on the DHB power steering pumps and water pumps with smaller shafts.

3. Remove the seawater pump impeller housing cover or the seawater pump actuator housing if equipped.
4. Remove the O-ring.
5. Remove the impeller.
6. Remove the seal from the front of the seawater pump housing.
7. Remove the tolerance ring (early style pumps) or retainer ring (later style pumps).
8. Press the bearing shaft assembly out of the housing from the impeller side.
9. Remove the rear oil seal.

## Cleaning and Inspection

### ⚠ WARNING

Spin-drying bearings with compressed air can cause serious injury or death. The bearings can explode, even if spun at very slow speeds. Do not allow the bearings to spin when drying with compressed air.

1. Clean the metal parts in solvent and dry with compressed air.
2. Clean the gasket material and sealant from the sealing surfaces.
3. Inspect the bearing housing. Examine the surfaces (where the bearings contact the housing) for evidence of the bearing outer races turning in the housing.
4. Inspect the seals in the bearing housing for signs of damage or leaks.
5. Inspect the impeller housing and impeller housing cover surfaces where the impeller rides. Replace the impeller housing if significant grooves exist.

*NOTE: A revised housing cover assembly is available as a service replacement. The assembly is a composite material with a replaceable stainless steel wear plate. (Only available for brass seawater pumps without air actuator.)*

6. Inspect the face of the impeller housing cover for grooves. Replace the impeller housing cover if worn.
7. Inspect the pump impeller and replace if any of the following conditions exist:
  - wear on the ends and tips of the blades
  - cracks in the area where the blades flex
  - cracks in the impeller hub
  - blade set (blades remain curved)
8. Inspect the pump pulley for bends or cracks.
9. Inspect the serpentine belt for excessive wear.

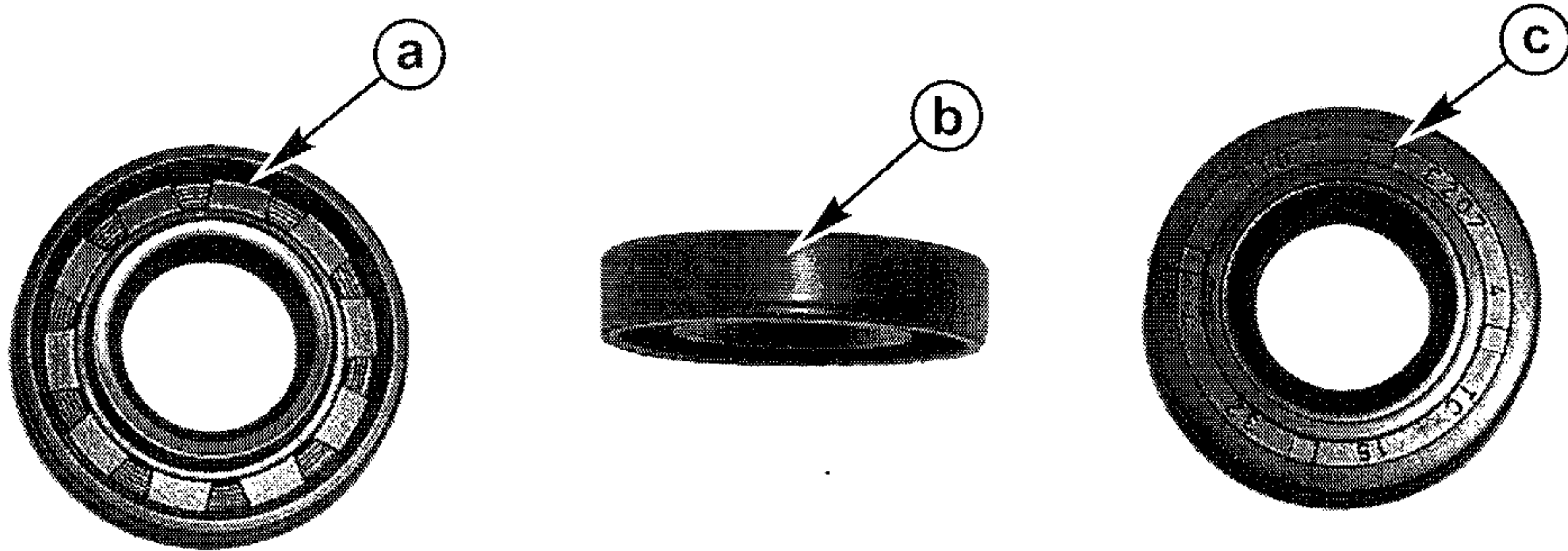
## Assembly

1. On models with the serial number 0M024999 and below, Install the rear seal with the spring toward the impeller cavity.  
**IMPORTANT:** Models with the serial number 0M025000 and above use one of two rear oil seal types. Identify the rear oil seal to be installed and follow the specific instructions for correct seal orientation.



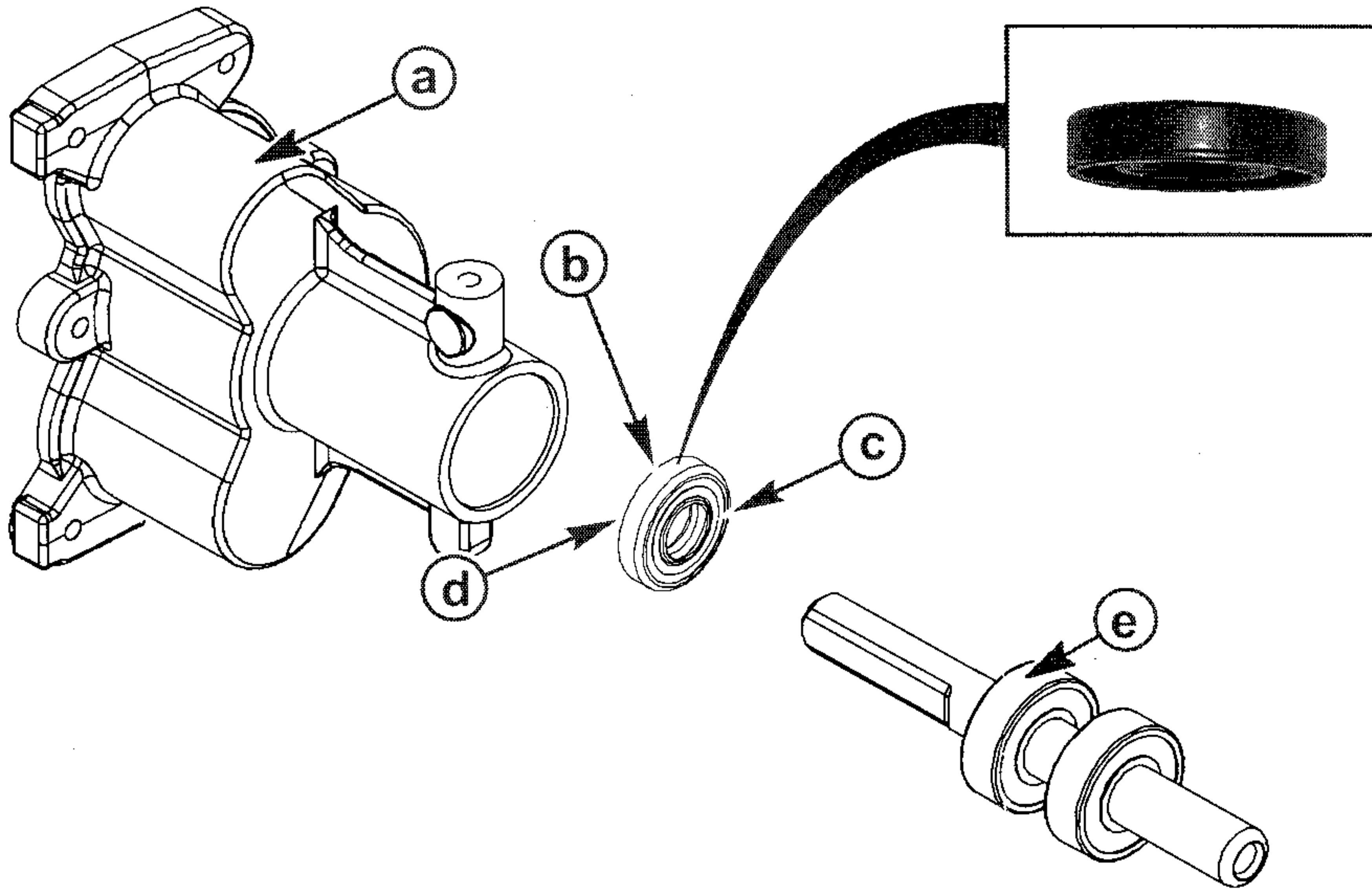
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2. Models with the serial number 0M025000 and above, and using the rear oil seal (26-862037). Orient the front of the seal toward the bearing shaft assembly.



- Rear oil seal (26-862037)**  
 a - Back of seal (spring side)  
 b - Smooth outside diameter  
 c - Front of seal

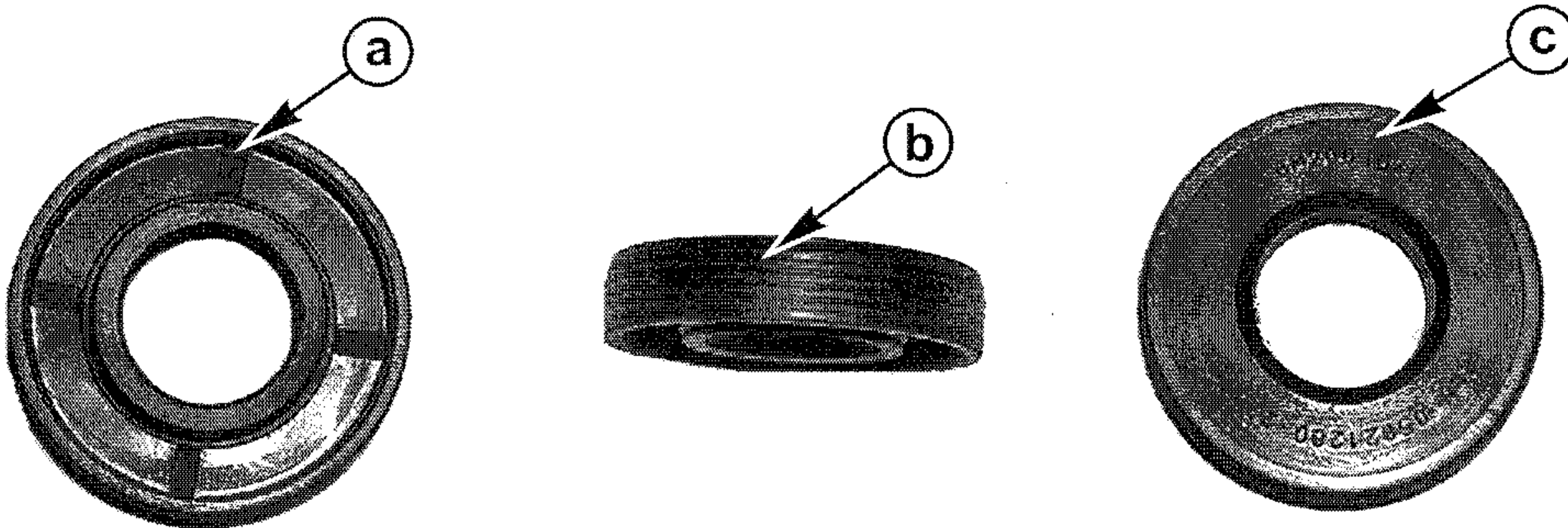
29827



- Orientation of the rear oil seal (26-862037)**  
 a - Seawater pump impeller housing  
 b - Smooth outside diameter of rear oil seal  
 c - Front of rear oil seal  
 d - Back of seal (spring side)  
 e - Bearing shaft assembly

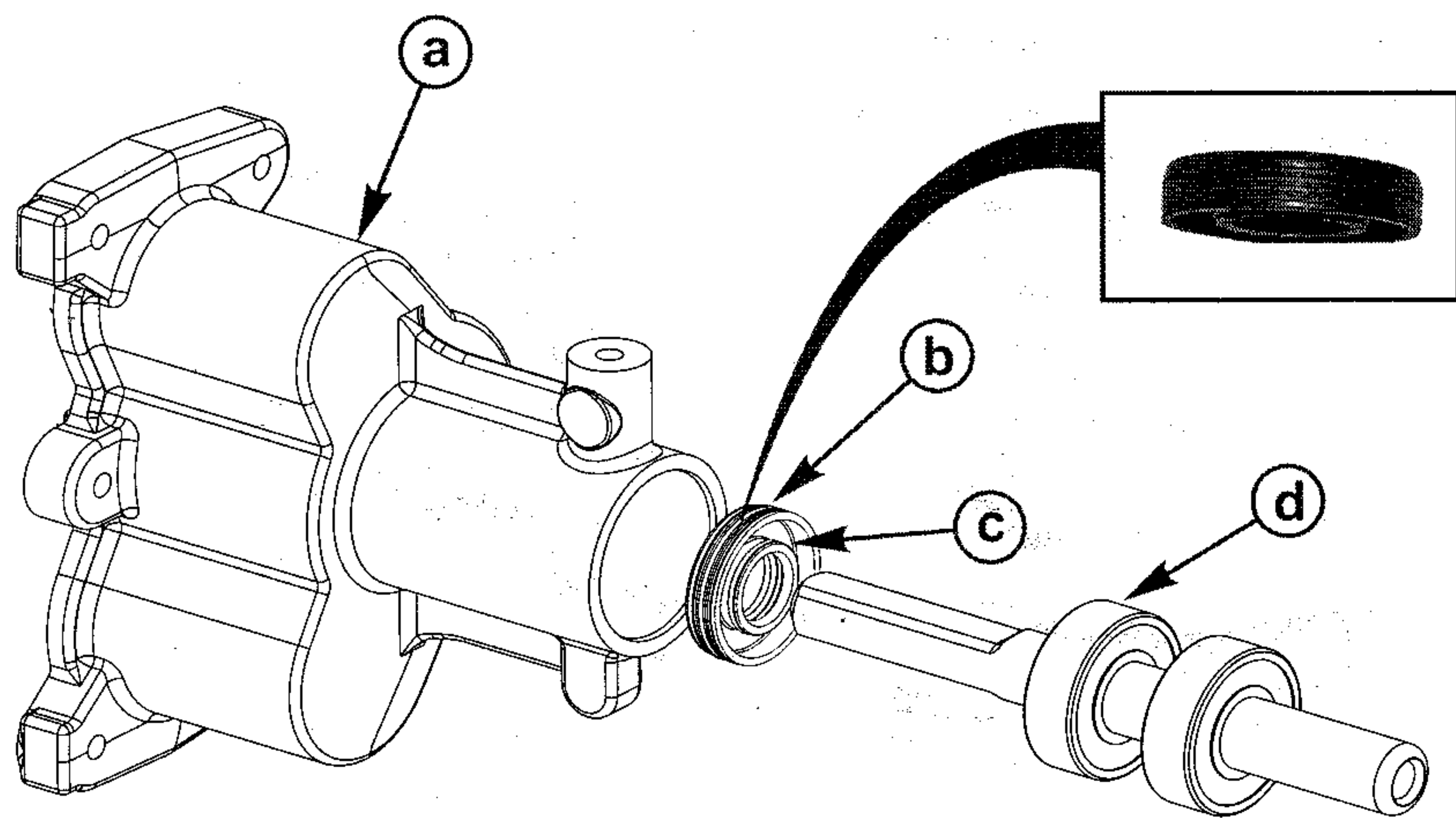
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3. Models with the serial number 0M025000 and above, and using the rear oil seal (26-8M2001645). Orient the back of the seal (spring side) toward the bearing shaft assembly.



- Rear oil seal (26-8M2001645)**  
 a - Back of seal (spring side)  
 b - Grooved outside diameter  
 c - Front of seal

29828



Orientation of the rear oil seal  
(26-8M2001645)

- a - Seawater pump impeller housing
- b - Grooved outside diameter of rear oil seal
- c - Back of rear oil seal (spring side)
- d - Bearing shaft assembly

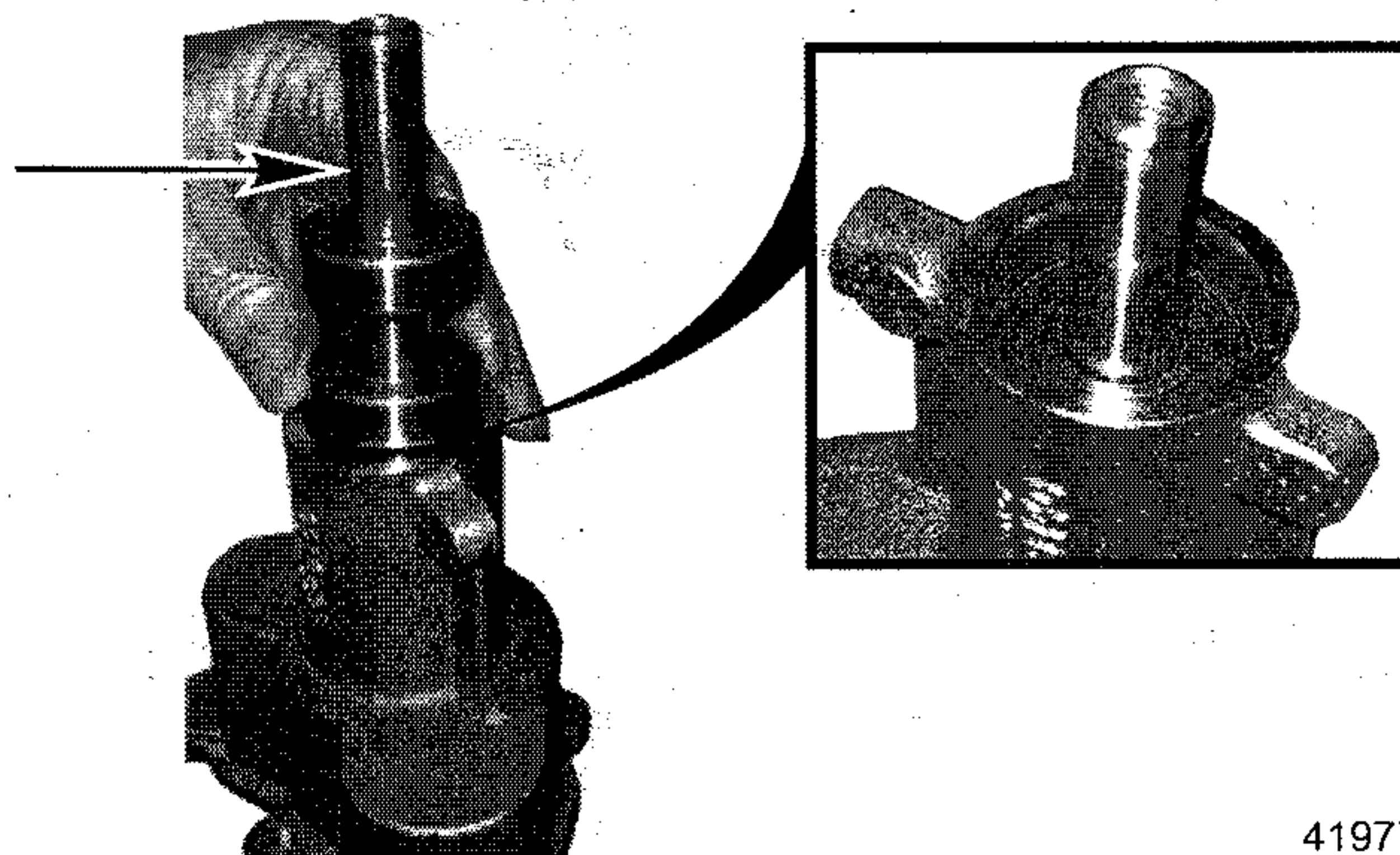
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4. Lubricate the bearing shaft and the outer diameter of the bearings.

Tube Ref No.	Description	Where Used	Part No.
80	SAE Engine Oil 30W	Outer diameter of the bearings	Obtain Locally

**IMPORTANT:** The bearing shaft assembly is a slip fit in the bearing housing. Minimal force is required to install the bearing shaft assembly into the housing.

5. Install the bearing shaft assembly into the impeller housing. The end of the shaft with flat surfaces should extend into the impeller cavity. Clean any assembly lube or oil from the forward end of the impeller housing.

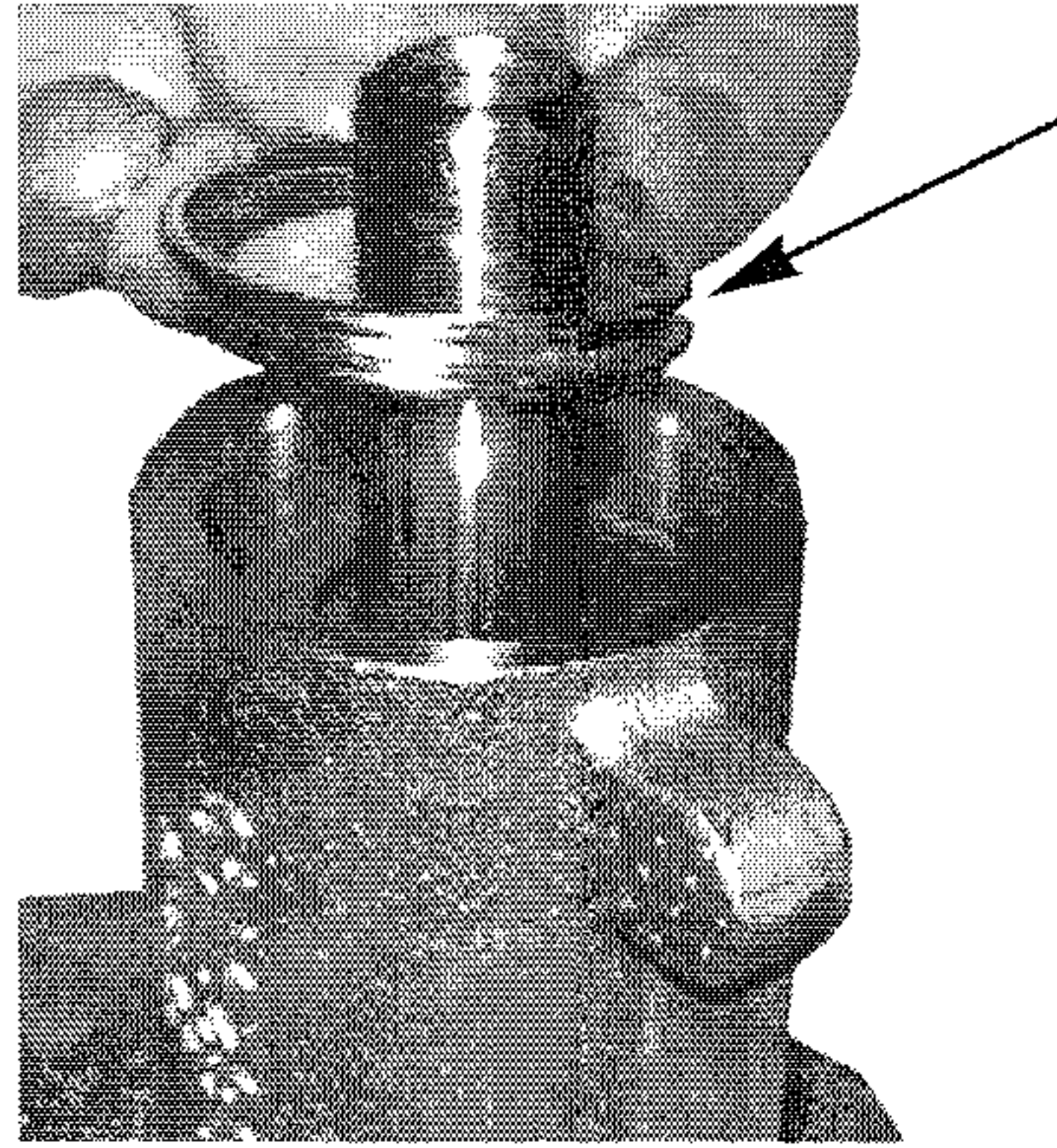


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Bearing shaft assembly

**IMPORTANT:** Early style impeller housings without a machined groove for a retaining ring must use the supplied tolerance ring. Later style impeller housings with a machined groove for a retaining ring must use the supplied retaining ring.

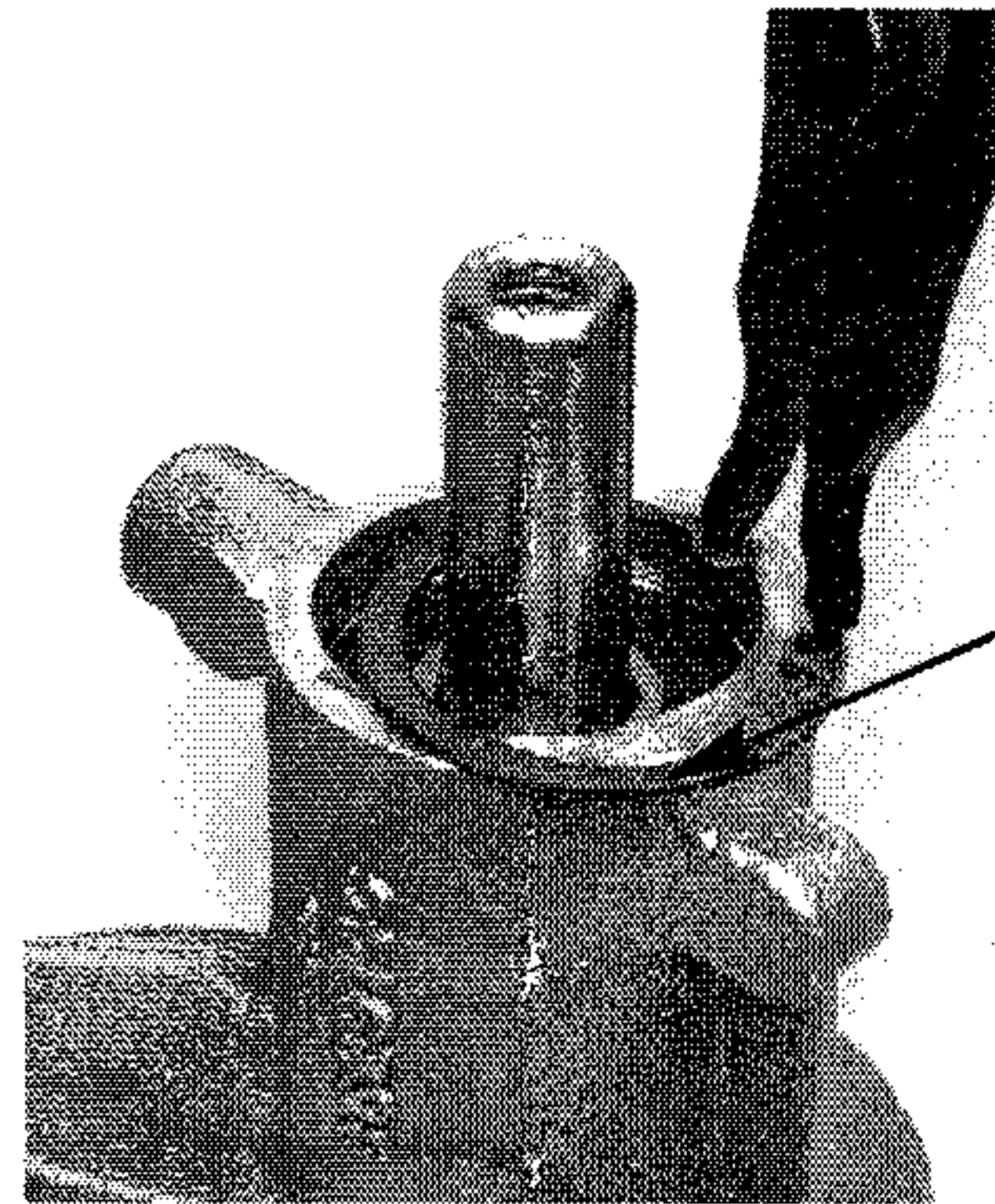
6. Insert the tolerance ring into the impeller housing. (Early style housing.)



41978

Impeller housing with tolerance ring

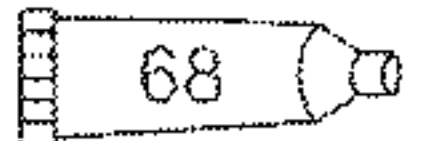
7. Use snap-ring pliers to Insert the retainer ring into the impeller housing. (Later style housing.)



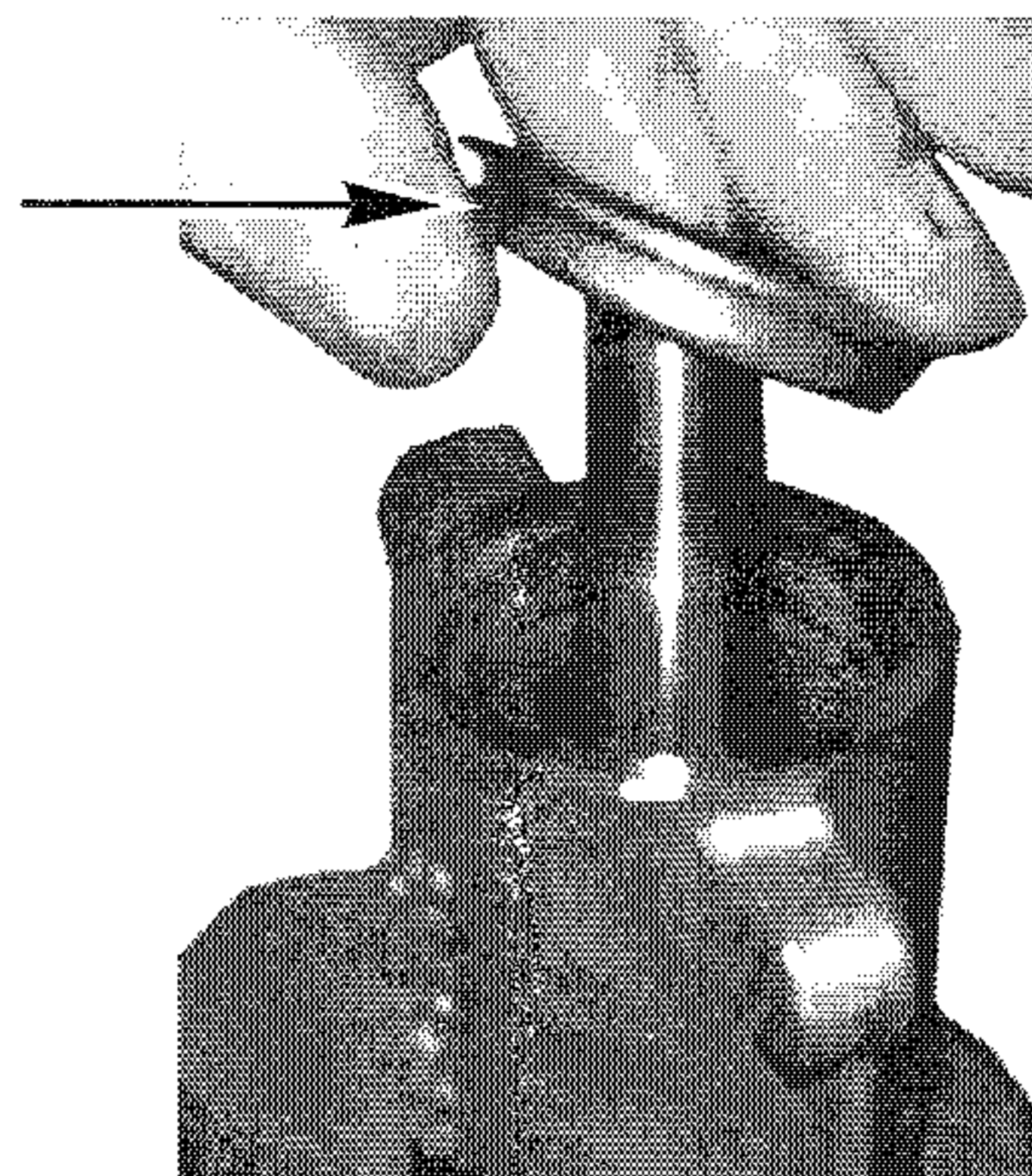
45485

Impeller housing with retainer ring

8. Apply adhesive to the outer diameter of front seal. Do not allow adhesive to contact the seal portion or the bearing shaft assembly.

Tube Ref No.	Description	Where Used	Part No.
 68	Loctite 609	Front seal	Obtain Locally

9. Install the front seal onto the bearing shaft assembly and slide it down until it contacts the end of the impeller housing.



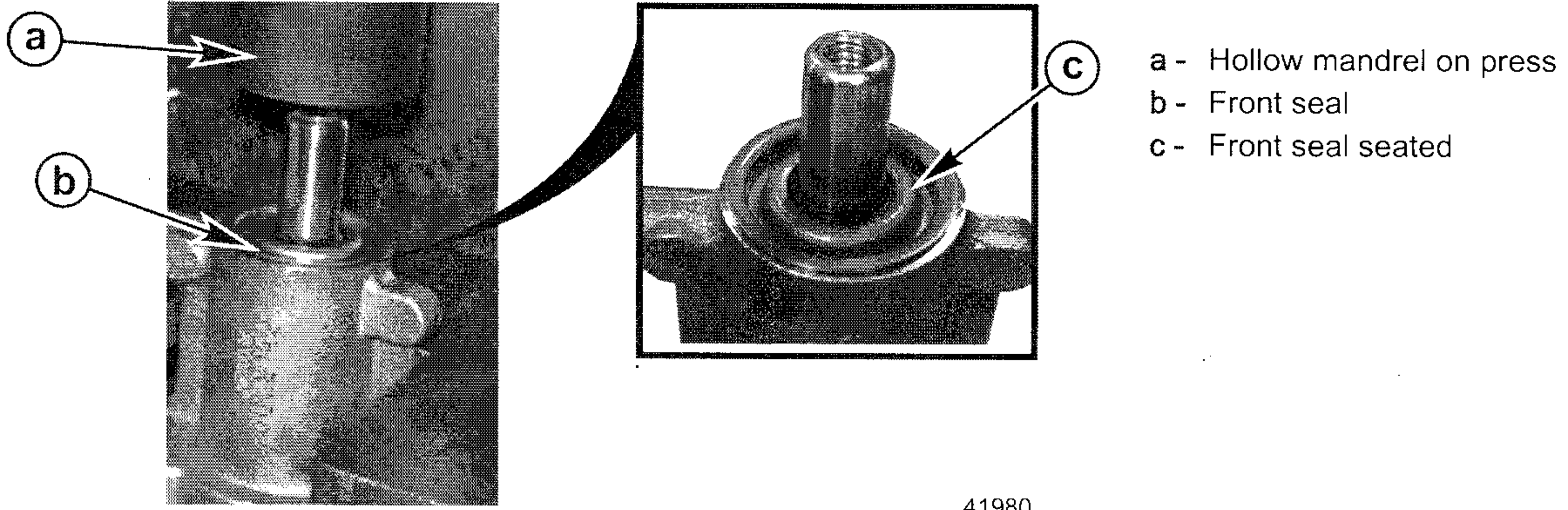
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Front seal



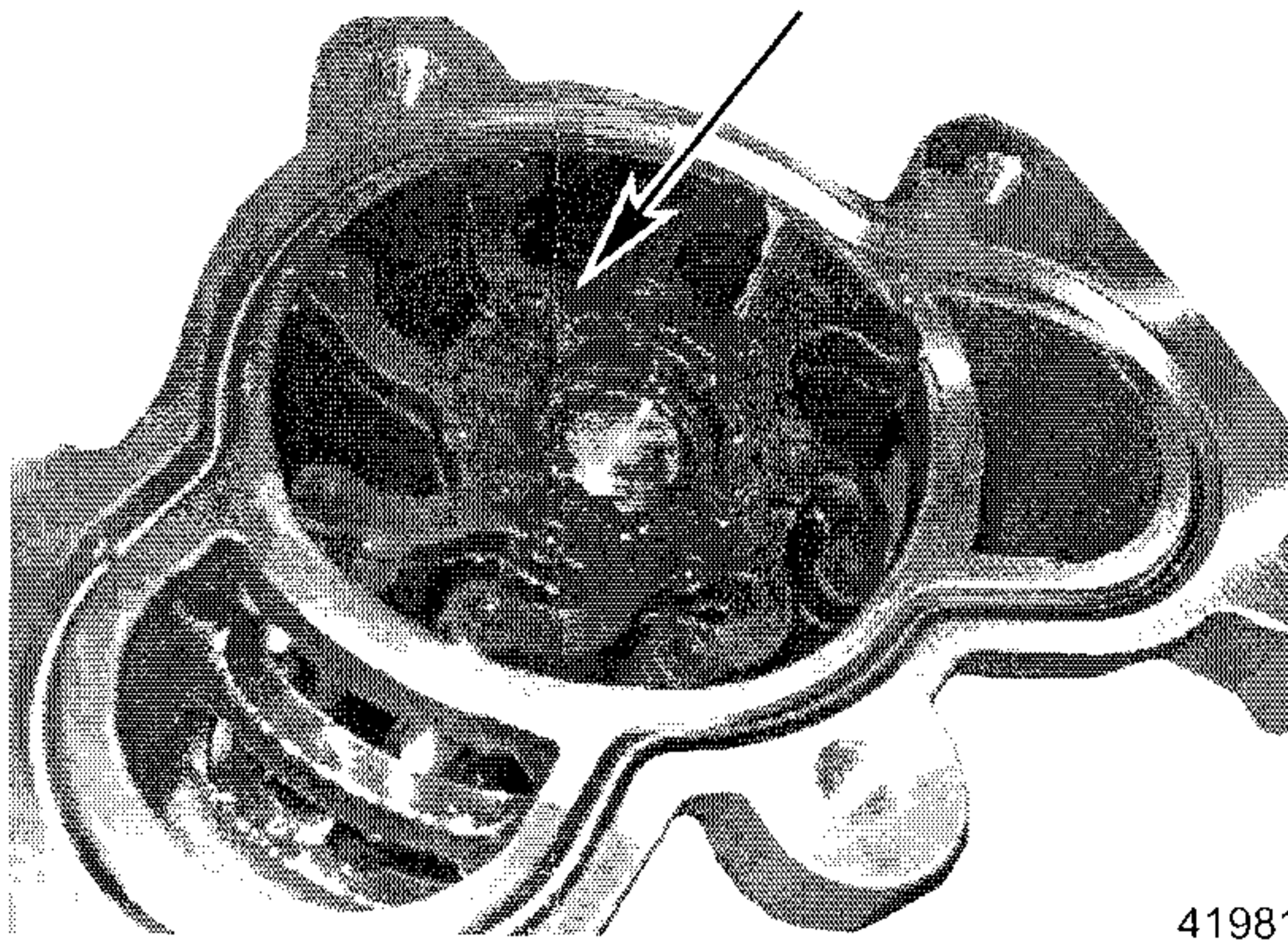
**IMPELLER SHAFT BEARING KIT**

10. Use a suitable mandrel that will press the front seal without contacting the bearing shaft. Press the front seal into place. Wipe away excess adhesive.



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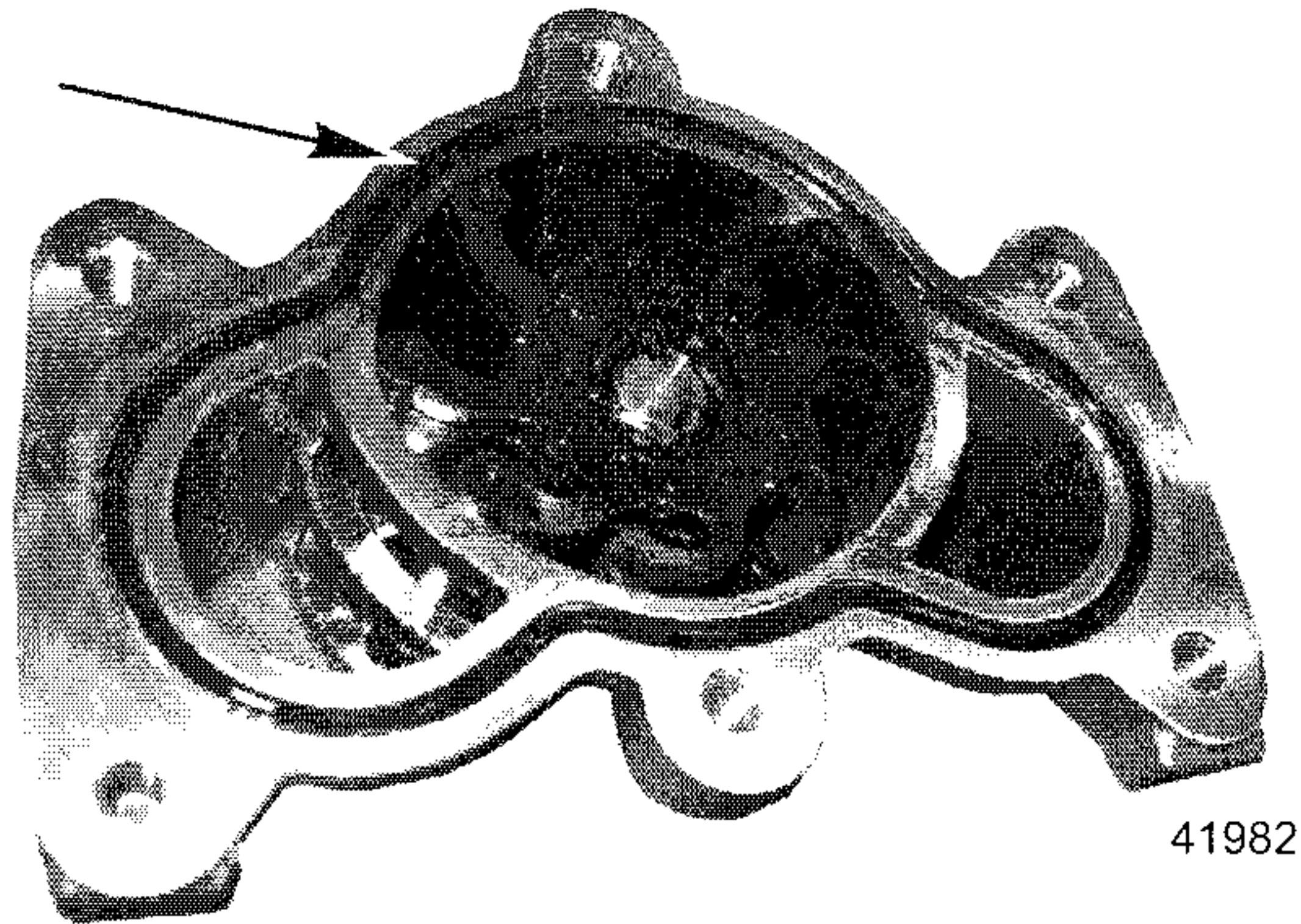
11. Lubricate the impeller with soapy water. Align the flat surfaces of the impeller hub and bearing shaft and install the impeller into the impeller cavity.



41981

Impeller installed

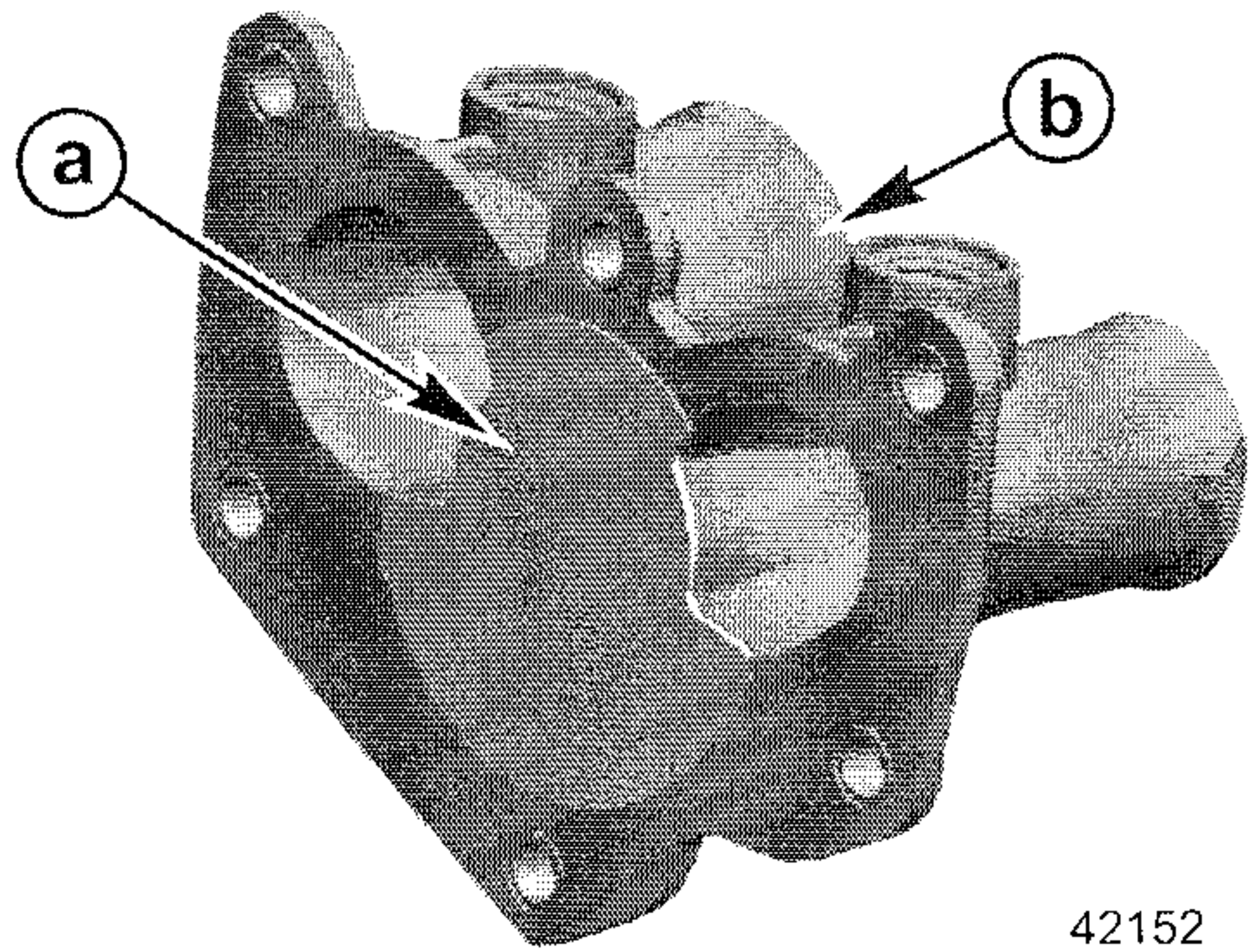
12. Install the O-ring into the groove in the impeller housing rear face.



41982

O-ring installed in groove

13. If you are installing the composite housing cover, Install the stainless steel wear plate if not already installed.

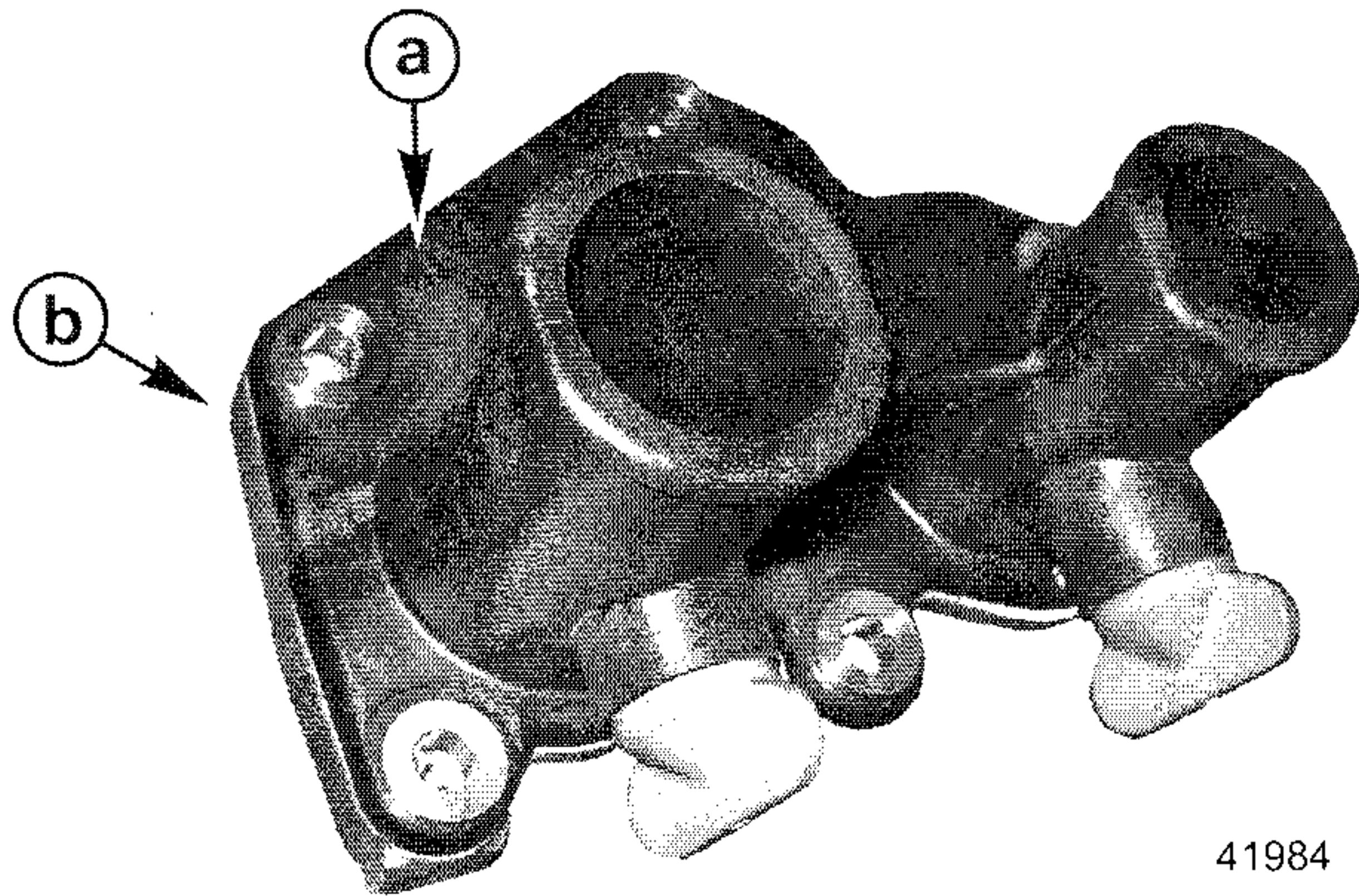


- a - Stainless steel wear plate
- b - Composite housing cover

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**IMPORTANT:** Brass housing covers (with or without air actuator) do not use a stainless steel wear plate.

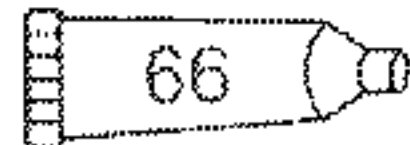
14. Align and install the impeller housing cover (or the seawater pump air actuator housing, if equipped) onto the impeller housing assembly.



- Seawater pump air actuator housing is not shown
- a - Impeller housing cover
  - b - Seawater pump

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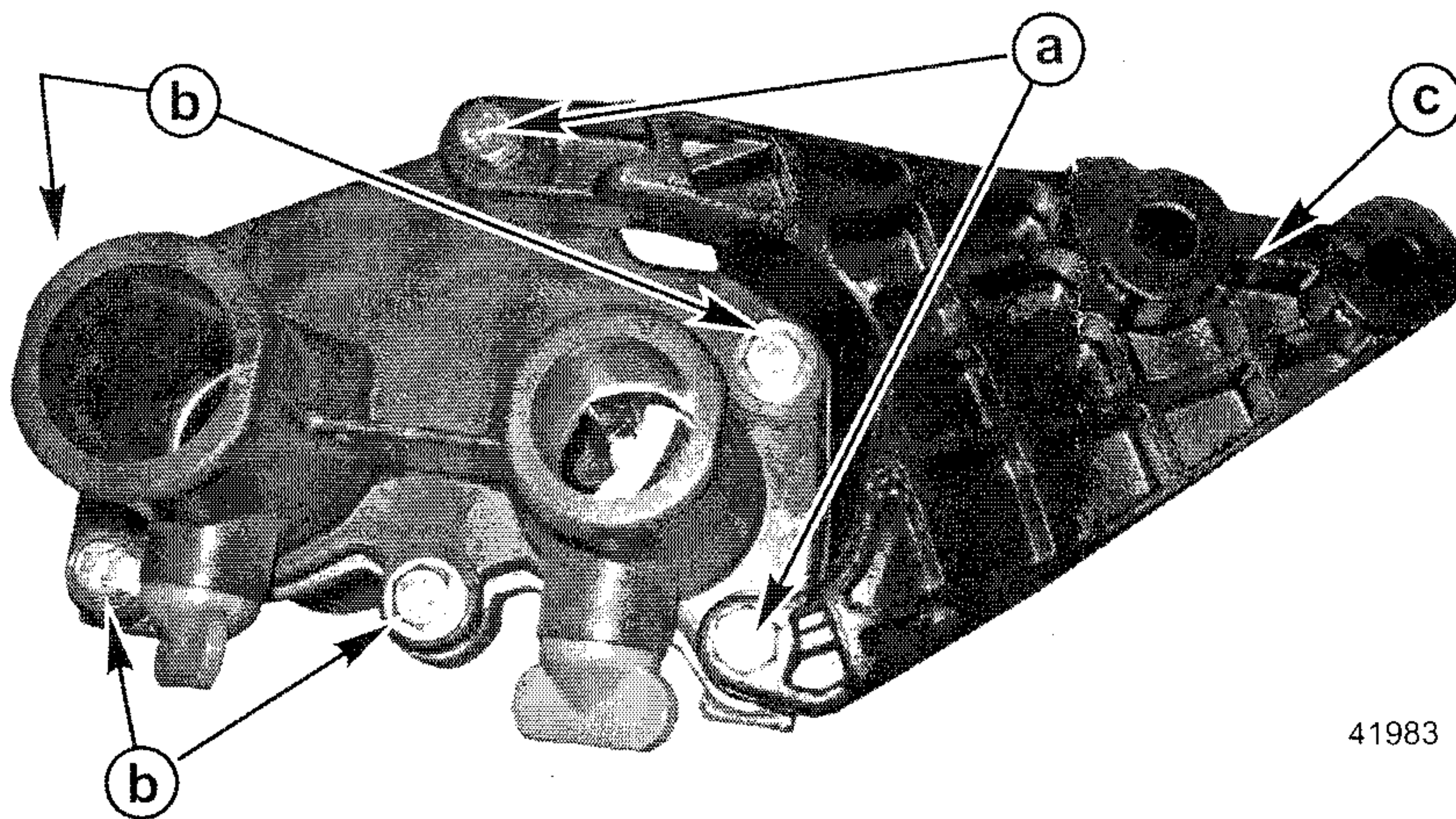
15. Apply adhesive to the threads of the impeller housing cover or the seawater pump air actuator housing screws.

Tube Ref No.	Description	Where Used	Part No.
 66	Loctite 242 Threadlocker	Impeller housing cover or seawater pump actuator housing screw	92-809821

16. Install the four short impeller housing cover or the seawater pump actuator housing screws and tighten to specification.

Description	Nm	lb-in.	lb-ft
Impeller housing cover or the seawater pump air actuator housing screw	10	88	-

17. Install the seawater pump bracket onto the seawater pump assembly. Install the two long screws through the bracket and into the seawater pump assembly. Tighten the screws to specification.



- a - Seawater pump bracket screw (2)
- b - Impeller housing cover screw (4)
- c - Seawater pump bracket

41983