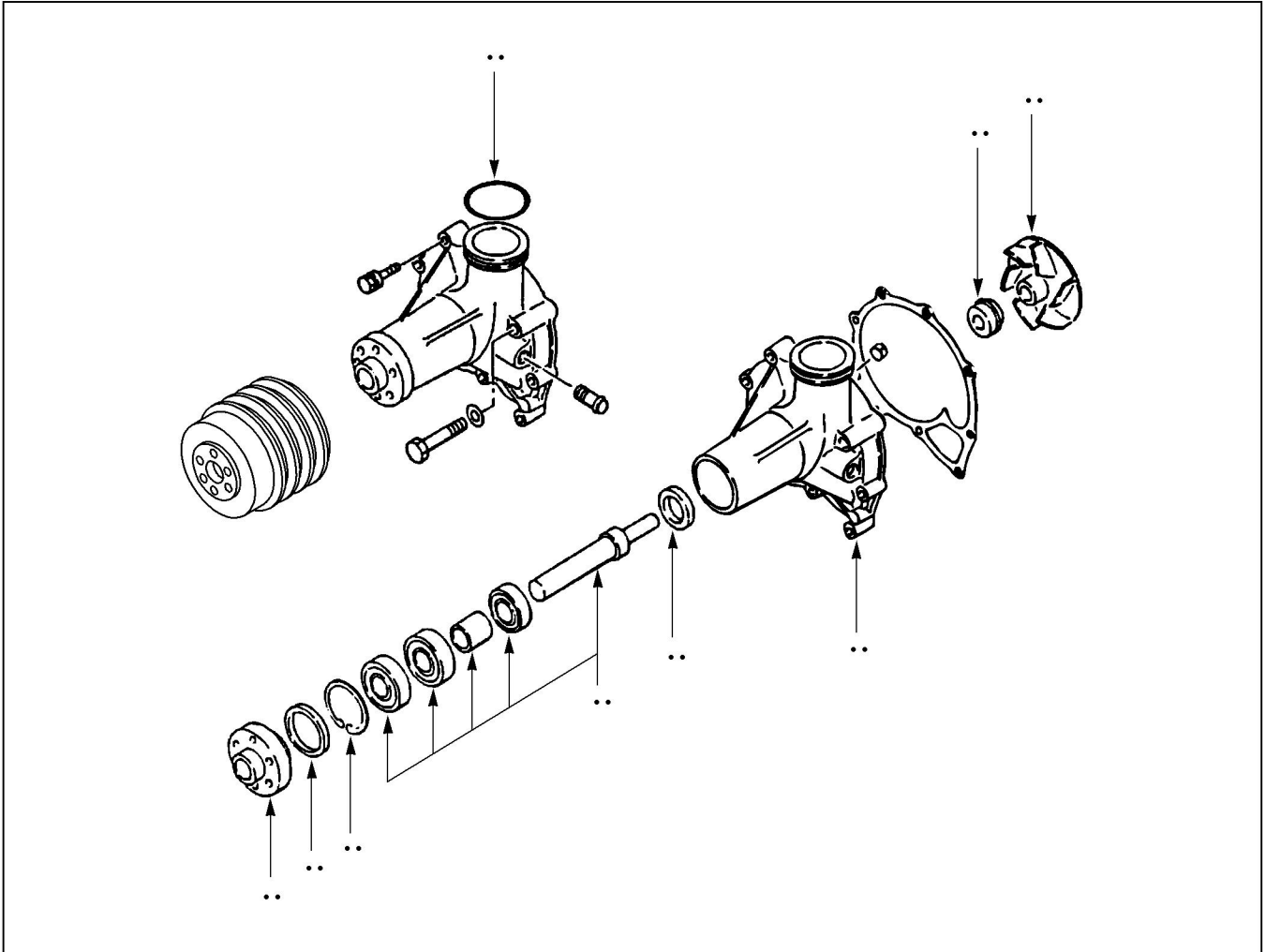


ASSEMBLY



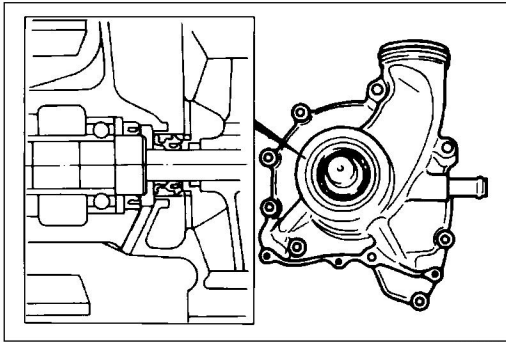
030E100013

**Assembly sequence**

- | | |
|---|-------------------------|
| 1. Water pump body | ▲6. Pulley center |
| ▲2. Oil seal (impeller side) | ▲7. Seal unit |
| ▲3. Water pump shaft (with ball bearings) | ▲8. Water pump impeller |
| 4. Snap ring | 9. Gasket |
| ▲5. Oil seal (pulley center side) | |



IMPORTANT OPERATIONS

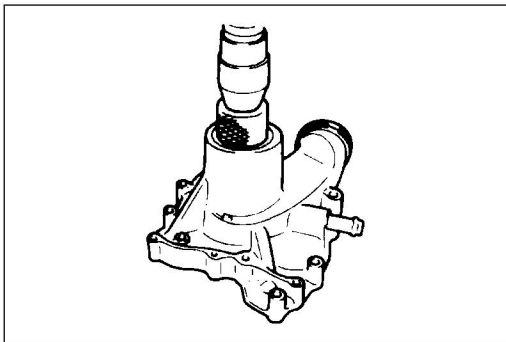


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2. Oil seal (impeller side)

- (1) Apply molybdenum disulfide grease to the inner periphery of the oil seal lip.
- (2) Apply clean engine oil to the outer periphery of the oil seal.
- (3) Press the oil seal into place with the lip facing the outside, and taking care not to deform the oil seal.



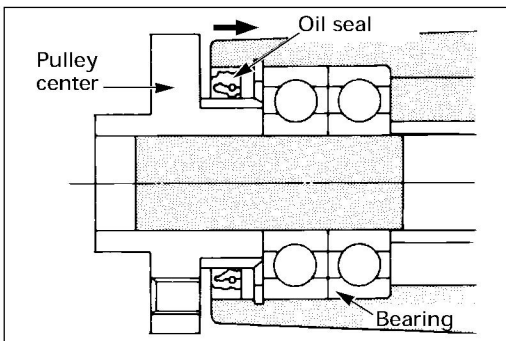
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3. Water pump shaft (with bearings)

- (1) Set the pump with the impeller mounting side facing down, and set on top of the base plates of a bench press.
- (2) Apply engine oil to the outer periphery of the bearing outer face.
- (3) Use the bench press to slowly press in the pump shaft (with bearings) from the pulley center side.

When pressing the pump shaft, take care not to damage the oil seal.

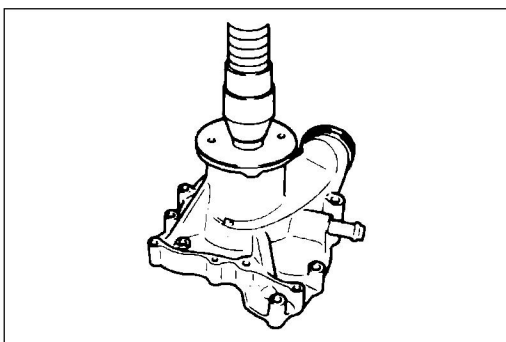


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5. Oil seal (pulley-center side)

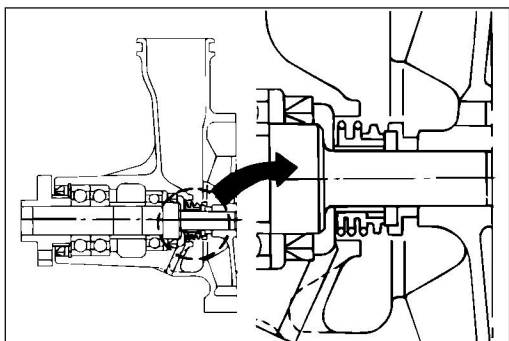
- (1) Apply molybdenum disulfide grease to the inner periphery of the seal lip.
- (2) Press in the oil seal with the lip facing the inside and taking care not to deform the seal.



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6. Pulley center

Use a bench press to press in the pulley center, taking care not to damage the oil seal.



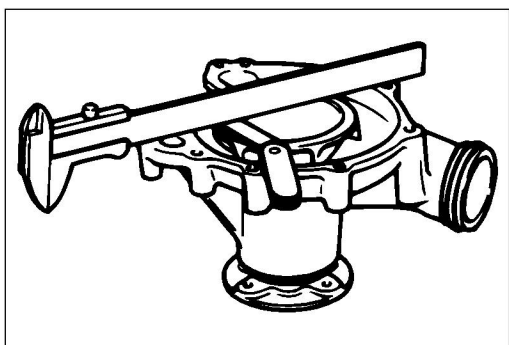
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7. Seal unit

- (1) Apply sealant to the pump body contact surface of the seal unit.
- (2) Press in the seal unit fully until its collar strikes the pump body.

Take care not to damage the seal unit.



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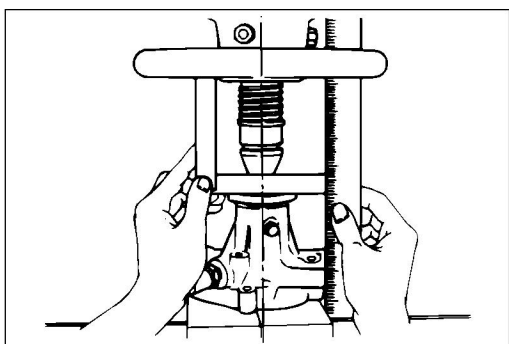


8. Water pump impeller

Use a bench press to press in the impeller until the designated clearance exists between it and the pump body facing.

Pump body and impeller clearance mm (in)

0.5 (0.020)



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Note:

1. The fan center and impeller have been installed on the pump shaft with a press, and no attempt must be made to remove or reinstall them separately. Always replace the assembly as a single unit. Removing and installing the fan center and impeller alone may result in the failure of the water pump during engine operation, leading to serious overheating.

Note:

2. The water pump assembly must be replaced any time the fan center and impeller pressure can be pulled off with a force of less than falls below 1,960 N (200 kgf).

Note:

3. Do not strike bearings with a hammer to install, since damage may result.