

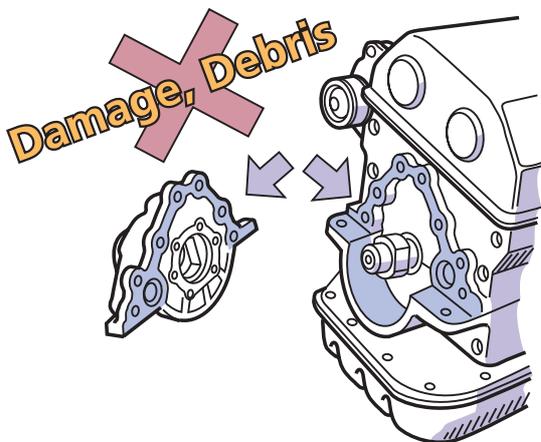
Installation Procedure

CAUTION!

Failure to follow recommended procedures may cause engine failure and injury. Always consult the manufacturer's vehicle specific service manual for reference.

1

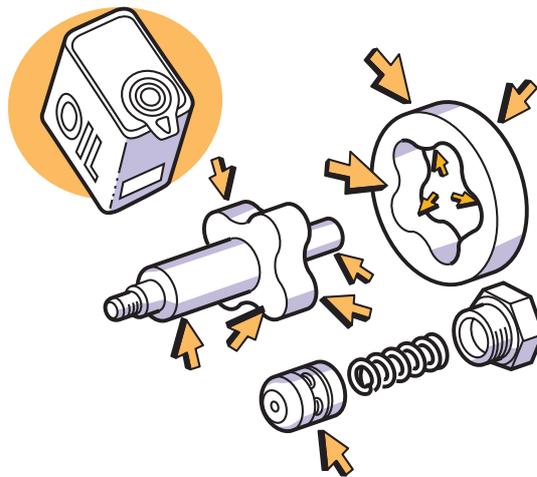
Remove old pump, gaskets and foreign materials left on the mounting surface. Thoroughly clean with non-abrasive solvent. Confirm that the mounting surfaces are free of damage, deformation, and debris.



Damage, deformation, and debris on mounting surfaces may cause seal malfunction which will create oil leakage and lower oil pressure.

2

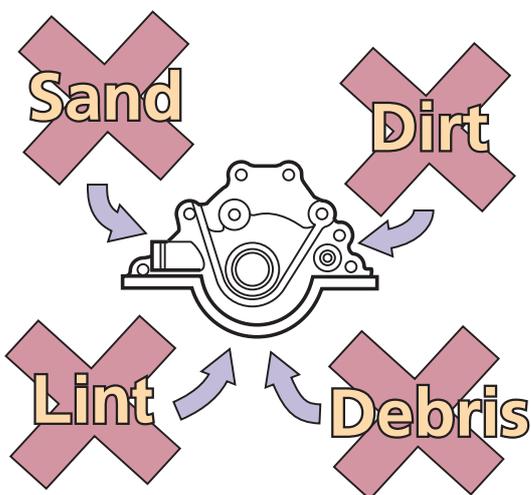
Always use engine oil to lubricate the sliding and rotating components of the oil pump when installing, disassembling, or cleaning.



Lubricating surfaces will prevent pump seizure and suction failure.

3

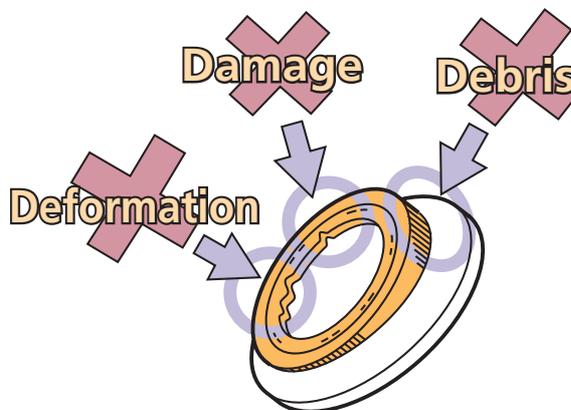
Ensure that there are no contaminants or debris in the pump before installation.



Contaminants and debris will cause damage to rotors. Consequently, improper valve operations and abnormal pressure may occur.

4

Check for damage, deformation, and debris along the oil seal mounting areas. Install oil seal and confirm proper seating.



Improper seating will cause oil leakage and loss of oil pressure.



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5

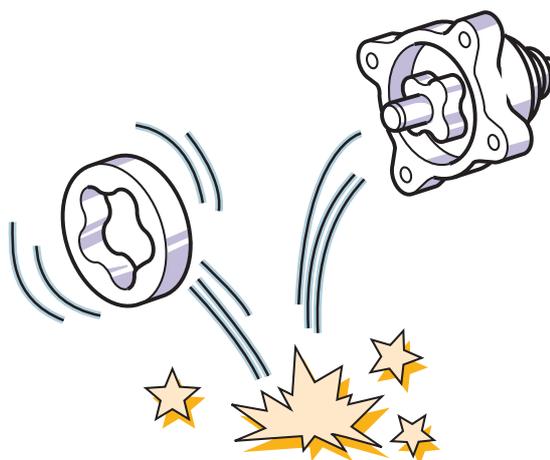
Always use new O-rings and gaskets when installing an oil pump. Ensure the O-ring does not pinch between mounting surfaces during installation.



Pinched oil rings will cause oil leaks and lower oil pressure.

6

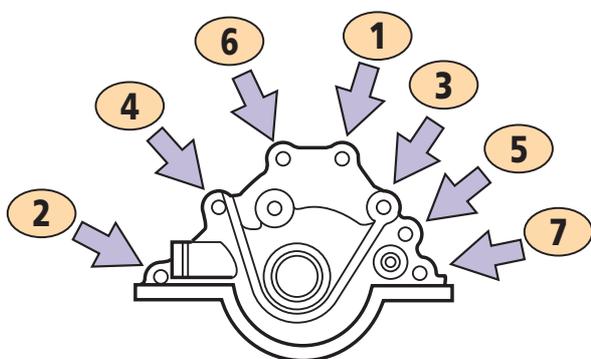
Oil pump rotors are precision components that require care in handling. Take extreme caution when inspecting and installing.



Damaged rotors will cause improper rotation and incorrect oil pressure.

7

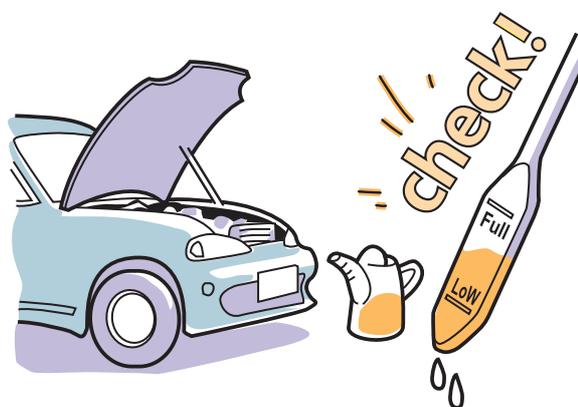
Install the oil pump in a diagonal (star) pattern. Always follow the manufacturer's vehicle specific recommended torque tools, procedures, and specifications.



Following correct procedures prevents leakage from the mounting surface, oil pump body, and body fractures caused by over-torque.

8

After the installation of the oil pump, start and idle the engine until operating temperature has been reached. Stop the engine and check the oil level. Add oil to proper level.



Circulating the oil after replacing the pump bleeds trapped air within the engine. Adding oil to the proper level prevents engine damage and ensures optimal performance.