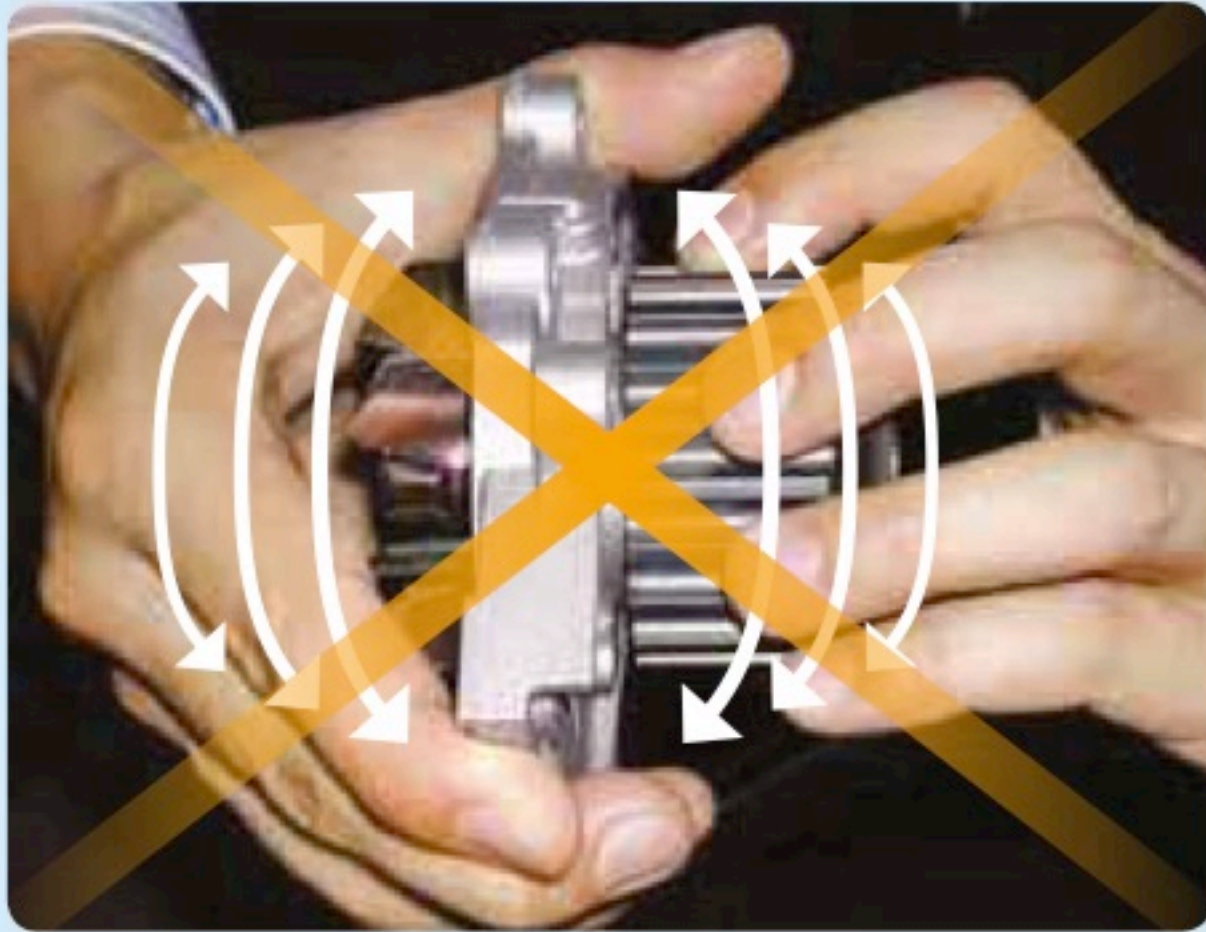


Precautions in Handling

Do not manually turn the pulley before installation of the water pump. In the mechanical seal, the soft carbon block may create residue on the ceramic block, generating abnormal (squealing) noises during operation.

1. Do not dry turn the pulley!



WARNING!
Dry turning will damage the mechanical seal.
Pre-lubricate before turning.

2. Seal Damage Example

Mechanical Seal Inner View



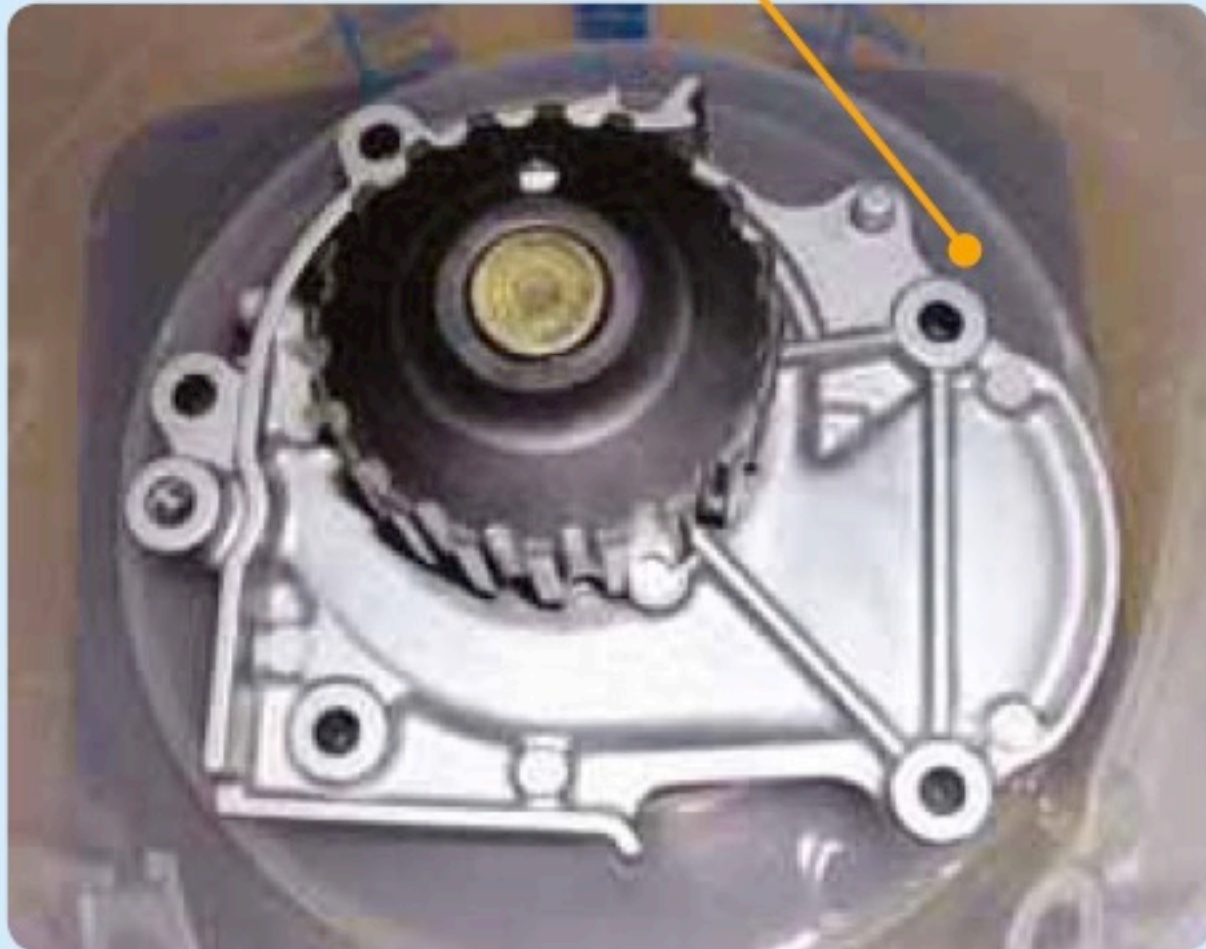
Carbon block

Ceramic block

Dry turning will deposit carbon onto the ceramic block, causing squealing during operation.

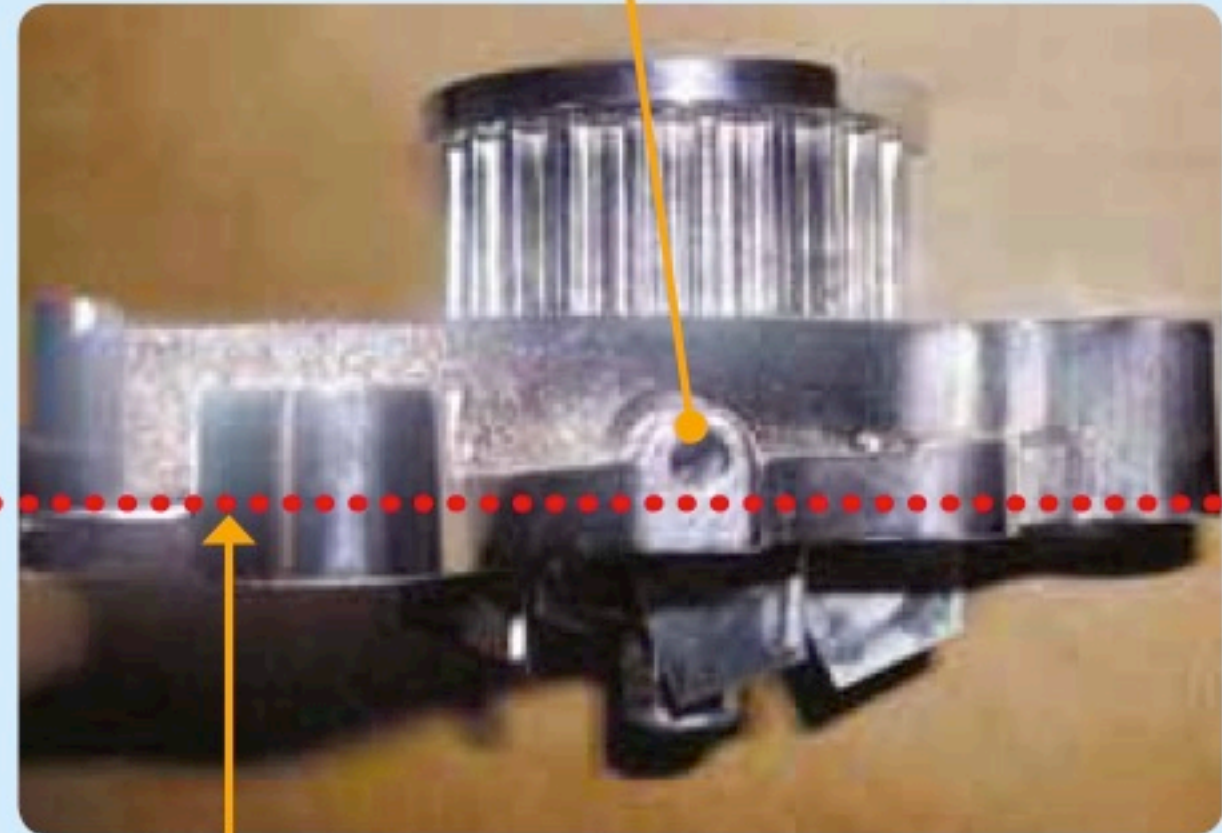
3. Pre-lubrication

Submerge the lower part of the pump body and the base of the rotor.



4. Water level

Caution: Do not submerge the weep hole or vapor hole in water



Submerge the water pump body below the red line

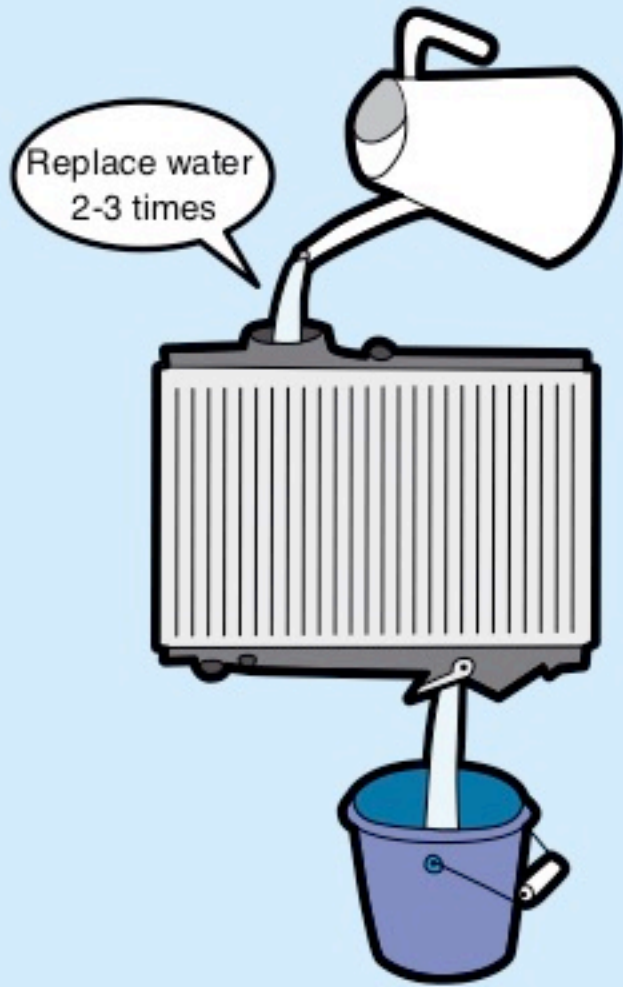
PRECAUTIONS

It is recommended that the lower part of the water pump is submerged in water for approximately 3 minutes prior to installation. This is to form a layer of water between the carbon and ceramic blocks in the mechanical seal, and prevent abnormal (squealing) noises from being generated.
(Some noise may be heard at initial start-up, but will disappear after engine warm-up.)

Installation Procedure

1

Flush the radiator 2-3 times with water while letting the engine idle. This will remove scale, rust deposits and sludge from the coolant system.

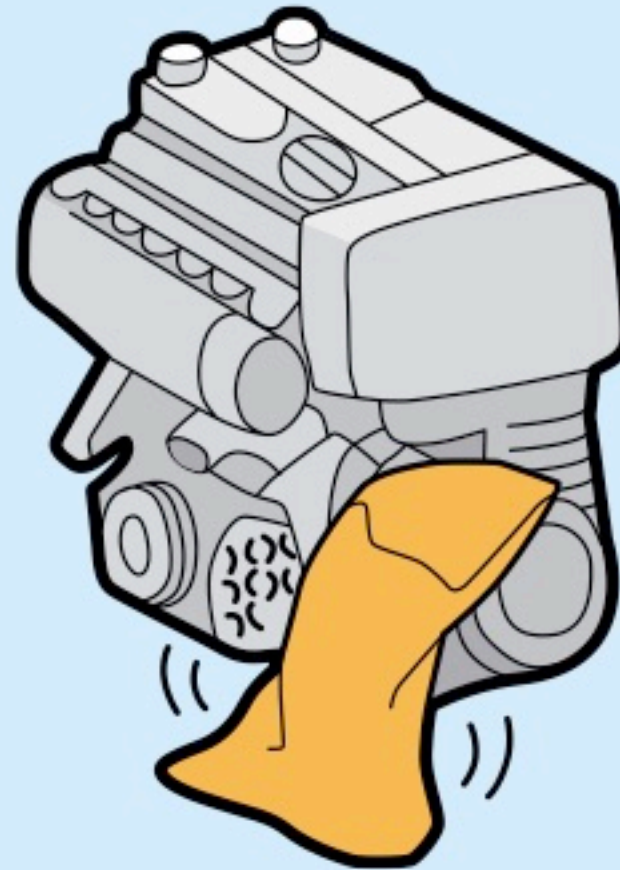


WHY ?

Prevents foreign materials from contaminating the new water pump mechanical seal.

2

After engine is cooled down, drain water from step 1, remove old pump, gaskets and foreign materials left on the mounting surface. Thoroughly clean with non-abrasive solvent

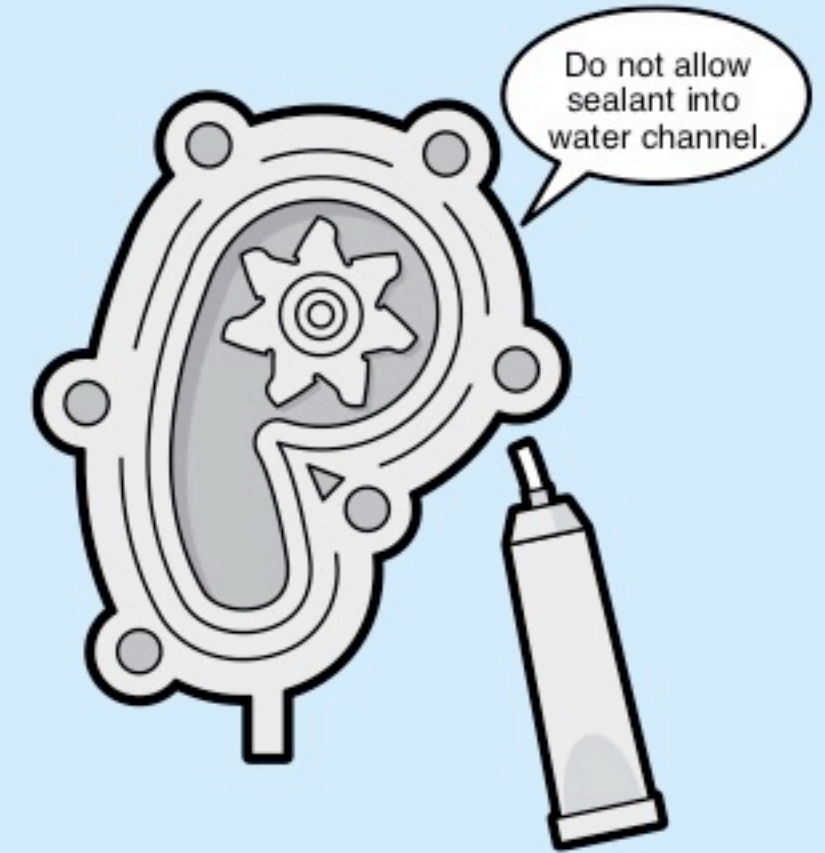


WHY ?

Prevents leakage from the mounting surface.

3

If a sealant is needed, apply an even amount around the pump. Wipe off excess and make sure the sealant (RTV) does not intrude into the water channel.

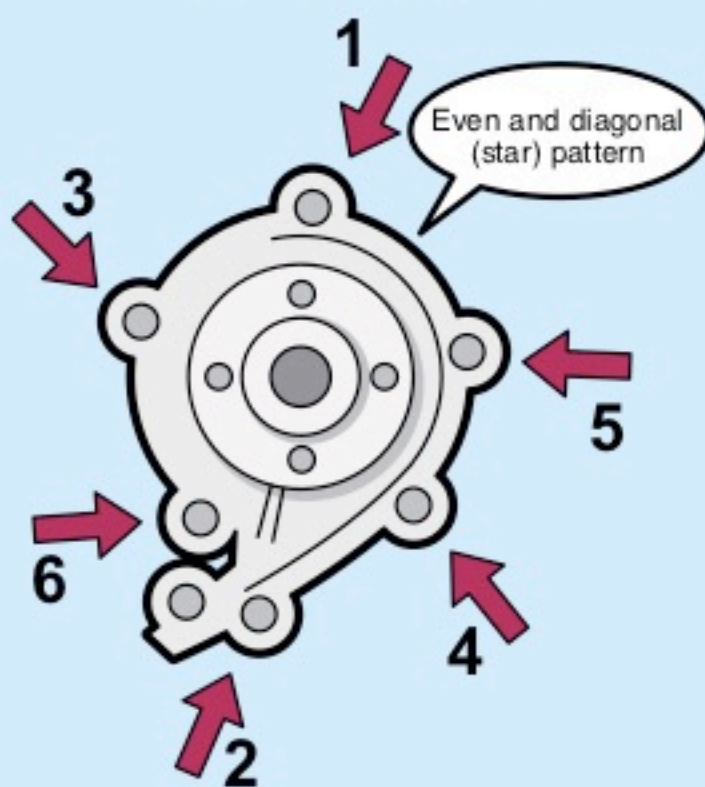


WHY ?

Excess sealant material may damage the mechanical seal, which may cause pump failure.

4

Install the new water pump in a diagonal (star) pattern and apply torque specified by the vehicle manufacturer. Allow sealant(RTV) to cure if applied.



WHY ?

Prevents leakage from the mounting surface.
Prevents body damage from installation.
Prevents body fractures caused by belt tension.

5

Confirm that the fan coupling is free of rust and contaminants. After installation, verify run-out tolerances specified by the manufacturer using a dial indicator.

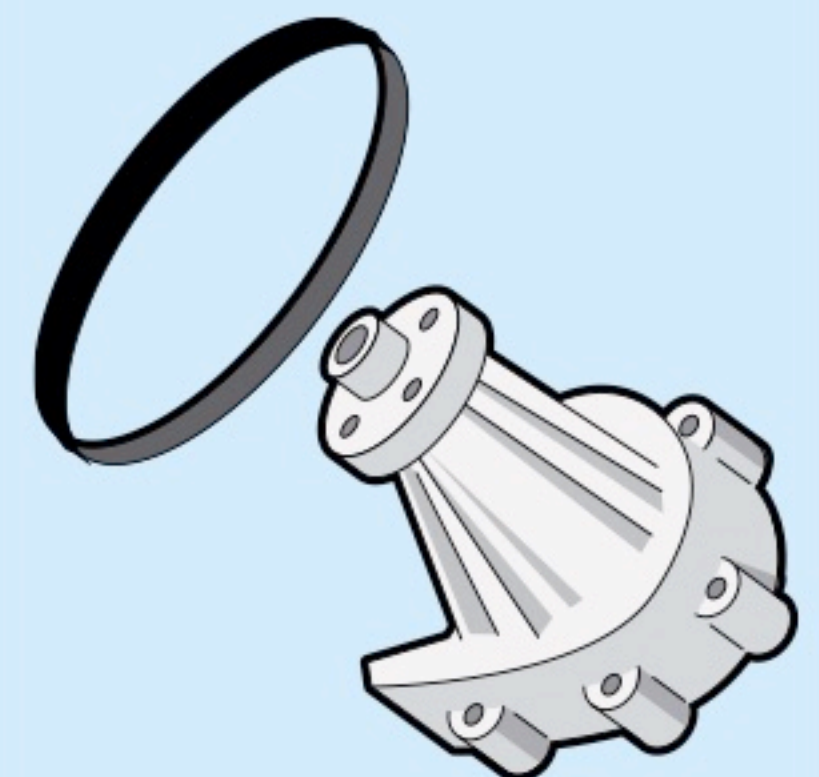


WHY ?

Prevents fractures and damage caused by belt tension.

6

Install the fan belt or timing belt and apply tension specified by the manufacturer.



WHY ?

Prevents fractures and damages caused by belt tension.
Prevents noise.