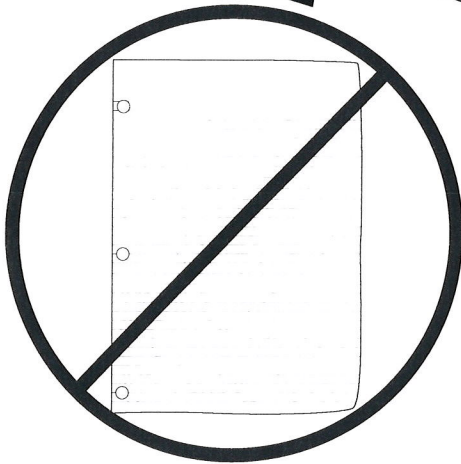


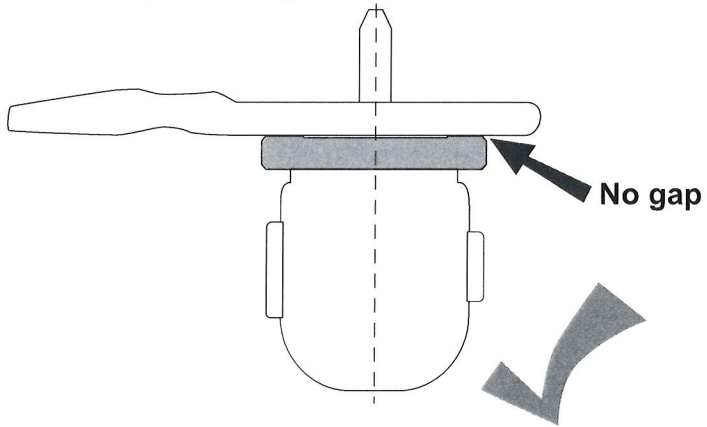
Pump & Clutch Installation

Raised circular guide around the pump shaft should slide completely into the cutout of the bracket. Use fine grit emery cloth **sparingly** to smooth any burs, paint or defects preventing the two surfaces from mating.

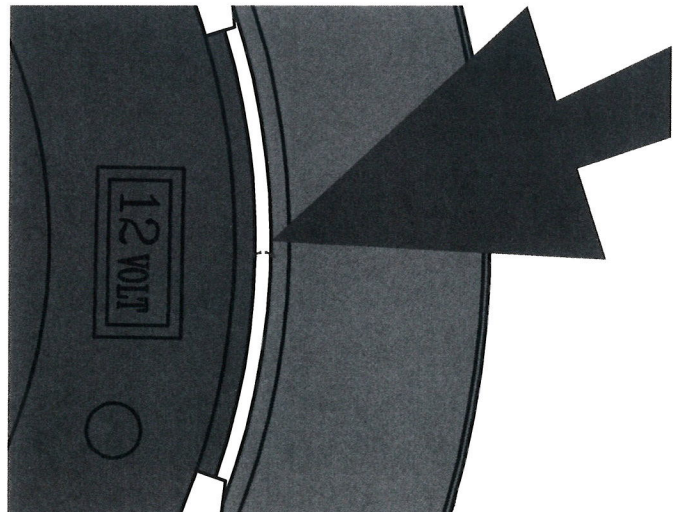
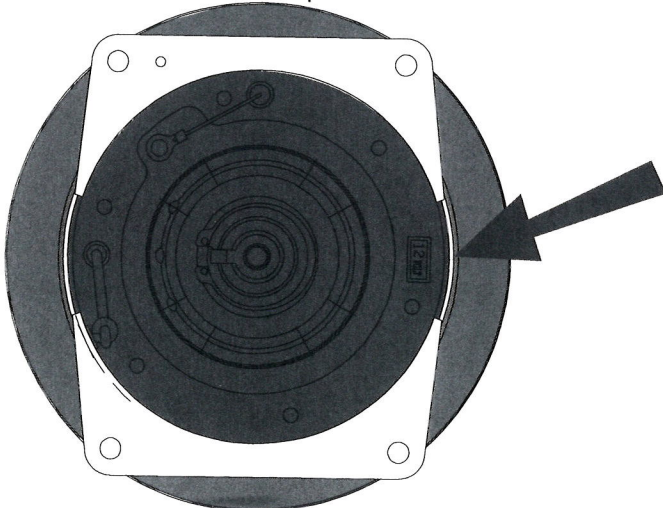
Pump face (in blue) should be absolutely flush with the bracket.



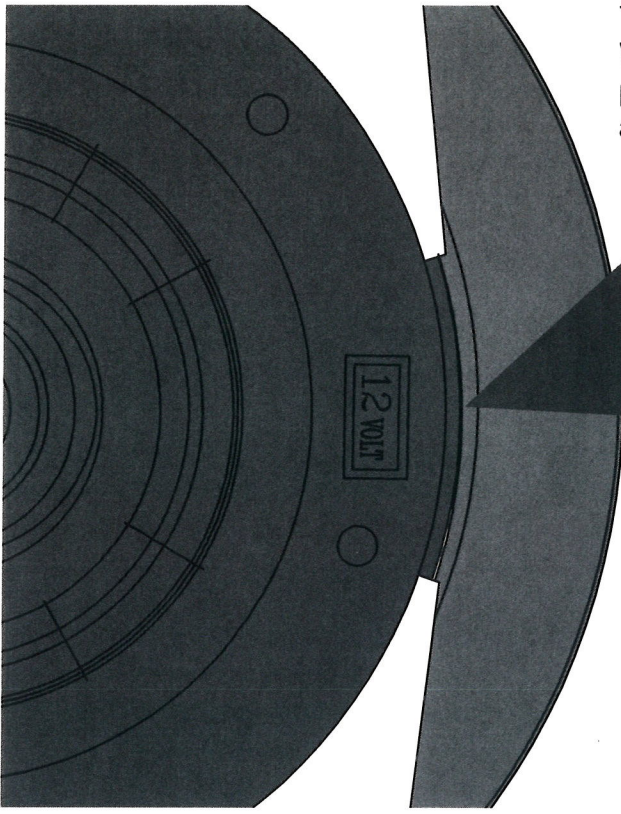
Not even a **paper's width** of gap should be measured around the circumference of the pump mounting.



The distance between the clutch pulley and magnet is so small, installation **HAS** to be precise.



Nearly 100% of burnt clutches are due to installation error. It is extremely rare to get an actual manufacturing defect from either the Ogura or Warner brands.



The magnet will always mount true center. With even a slightly crooked pump shaft, the pulley will mount crooked, rub the magnet and quickly build extreme heat.

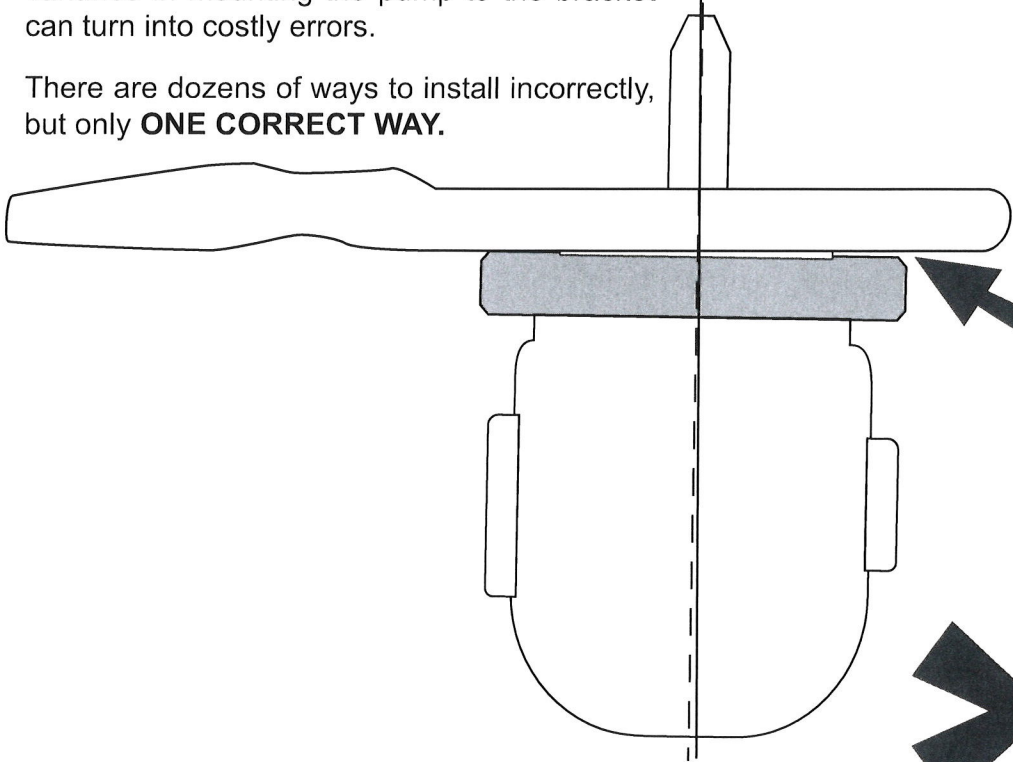


Blue line is true center. Red line is how far off the pulley will be due to the crooked shaft.

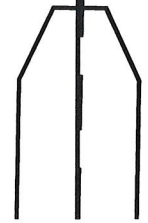
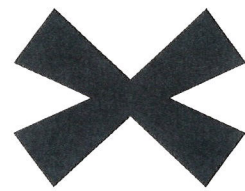


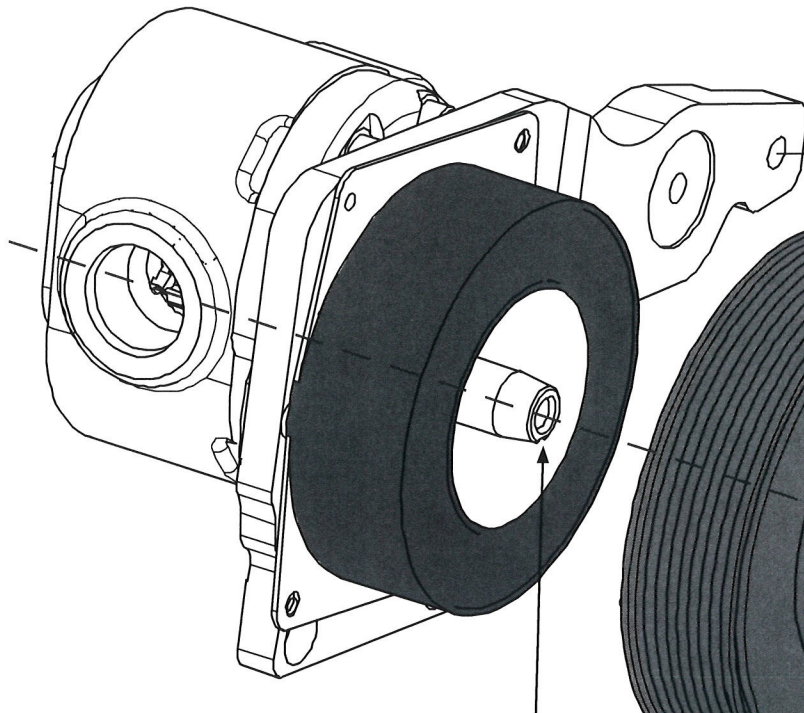
This clearly illustrates how even the slightest variance in mounting the pump to the bracket can turn into costly errors.

There are dozens of ways to install incorrectly, but only **ONE CORRECT WAY.**



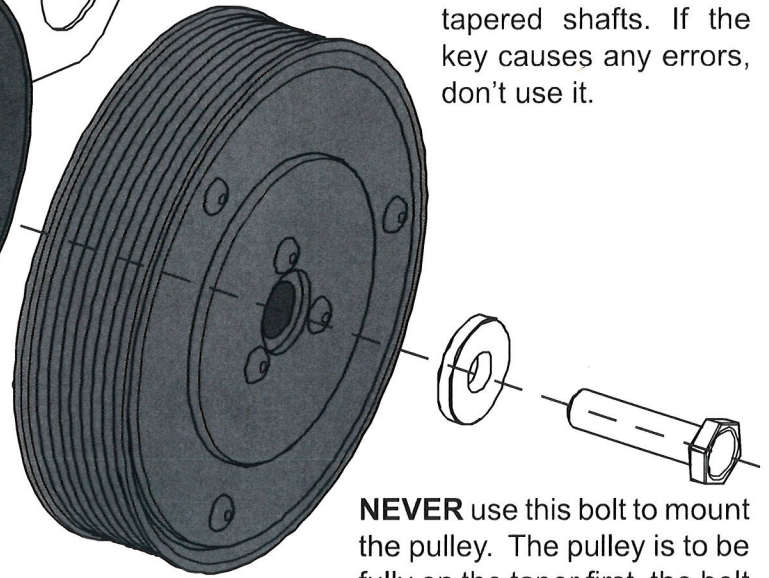
Tiny gap



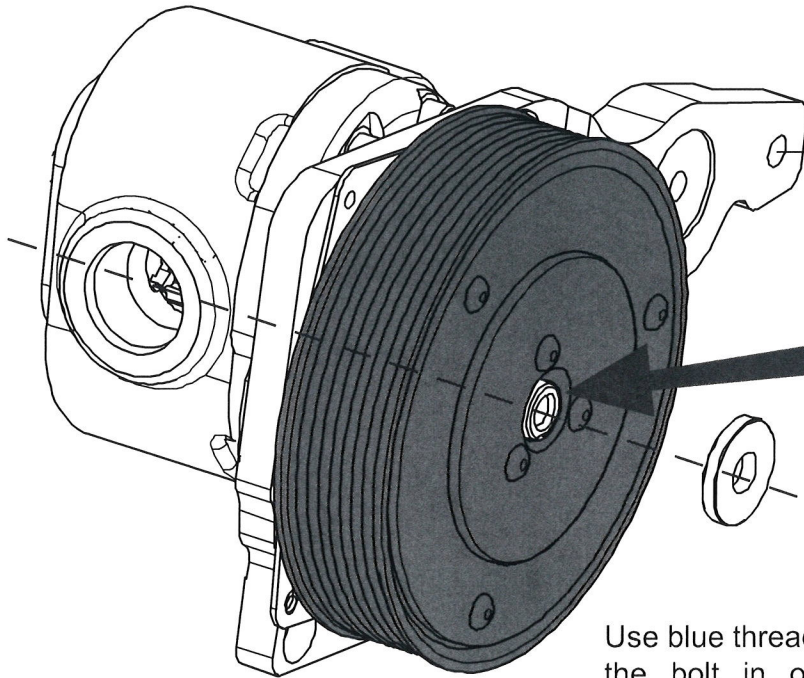


Use a 5/16-24 tap to clean shaft threads of old threadlock, rust or debris that could prevent the bolt from fully tightening.

The pulley has to fit 100% on the taper of the shaft. Use fine grit emery cloth to **sparingly** clean any debris, oxidation, packing glue or burs off of the shaft to ensure it seats fully forward on the pulley. Shaft keys are not necessary on tapered shafts. If the key causes any errors, don't use it.

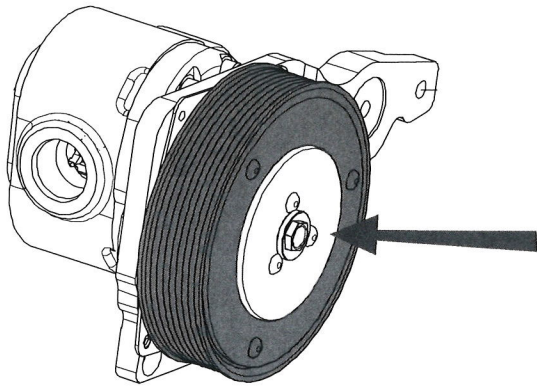


NEVER use this bolt to mount the pulley. The pulley is to be fully on the taper first, the bolt simply holds things in place.



Pulley is fully on the taper, the shaft cannot be any further forward.

Use blue threadlock and tighten the bolt in one motion (air/ electric ratchet) to 20 ft-lbs max.



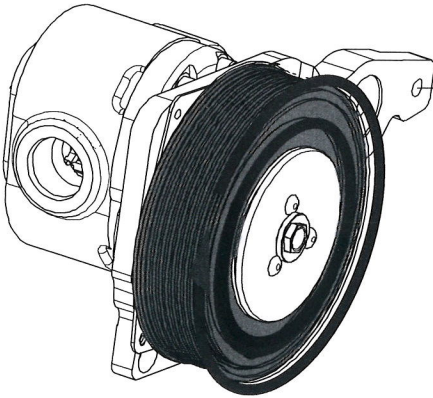
Burnishing a Clutch

Turn a new clutch on for a few seconds then off for a few seconds 30-40 times to do a “final machining.” This is **BURNISHING** a clutch.

The clutch face slips slightly each time it is engaged. Burnishing prepares both surfaces for better grip and hold, extending the life of the clutch tenfold.

Two issues of not burnishing:

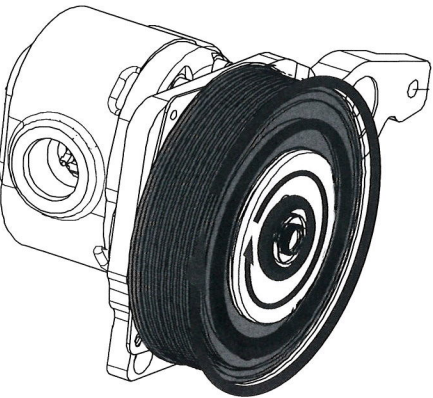
1. **Heat glazing:** The grip surfaces slip constantly. The pump won't spin enough to get good flow.
2. **Friction weld:** The clutch face won't let go of the pulley. Gentle taps with a soft-blow hammer may free it.



OFF

The clutch pulley spins independently of the pump as the vehicle runs.

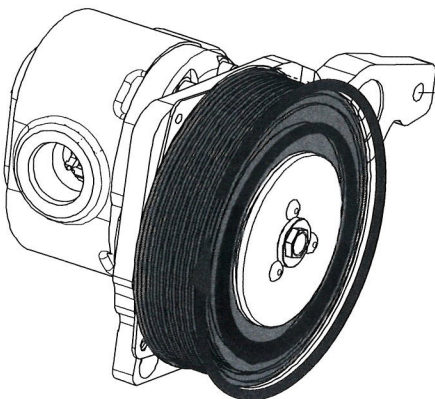
1-sec.



ON

Flipping the switch delivers 12VDC to the magnet, the clutch face grips the pump shaft and creates hydraulic flow.

1-sec.



OFF

Repeat the process 30-40 times.

1-sec.