



# ROSSWULF

Remove old pulley if applicable.

## **Installing the Ross Wulf Crank Pulley:**

The keyway, woodruff key and slot fitment is the most critical part of the crankshaft pulley connection. Please pay special attention to these key points.

Check the woodruff key to make sure it is tight in the keyway and there is no movement side to side. If the key is too loose in the keyway, remove it and try another one or lightly center-punch an array of divots (punch marks) on the sides of the key. This will increase the total width envelope of the key by a few ten thousandths of an inch.

Once your key is tight in the keyway, line up the woodruff key with the slot in the crank pulley and push on the pulley. Once fully pushed on check to see that there is no movement in the slot and key by trying to rotating the pulley on the crankshaft back and forth. If there is movement, remove the pulley and light peen the key with a hammer to tighten the fit and try pushing on the pulley again.

If you had the pulley on the crankshaft and after modifying the key, you cannot push on the pulley you can use a fine file and file the woodruff key or start over with a new one.

A snug fit on the crankshaft with a loose keyway will fail. A slip fit on the crankshaft with a tight woodruff key will not fail.

**We recommend using Green Loctite 640 or Permatex 64040 on the crankshaft for final assembly of our crank pulley.**

## **Crank Bolt Installation:**

Use red Loctite on the threads and torque to 36ft/lbs for stock bolt. **Ross Wulf Crank Bolt** - add a thin layer of oil on the back of the mating surface to ensure you get the proper torque reading as there is no washer used. Torque to 36ft/lbs.

## **TROUBLESHOOTING**

**Pulley is loose on crankshaft** – This should only be considered after the woodruff key has been installed and adjusted - Refer to woodruff key instructions above. If pulley is still loose, and Loctite/Permatex sleeve retainer is not an option – contact Ross Wulf

**Pulley is too tight on crankshaft** – honing may be required for a proper fit

Ross Wulf LLC  
Belgrade, MT USA  
406.356.8348  
@rosswulf46  
Sales@rosswulf.com



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## **Pulley is leaking/spraying oil after installation:**

This is an indication of a breathing issue with the engine. The grooves on the RossWulf pulley are machined to stock VW tolerances, and pump fresh air into the crankcase (not oil slingers as commonly referred). The fresh air into the case is necessary to help remove contaminated air from piston blow by (this is what discolors and degrades your oil). Stock VW 1600 had breathing from the oil filler 1. To open air via the down tube & 2. To the carburetor via the oil bath air cleaner. Larger displacement engines need more breathing than stock configuration. Brand new and high mileage engines will exaggerate blow by requiring maximum breathing to remove contaminated case air. Other aftermarket pulleys may not expose this breathing issue because they are not grooved properly, and do not pump the proper amount of fresh air into the case. If you have adequate breathing, and are still experiencing leaking issues with your pulley – contact RossWulf ASAP.

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