



ROSSWULF

Remove old pulley if applicable.

Installing the Ross Wulf Crank Pulley:

Polish the crank snout with emory cloth, removing any burrs or rust that may be on the surface.

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. Do not force the pulley onto the crank – aluminum pulleys are very easy to damage. Honing may be required for the pulley to slip onto the crankshaft. Once fully pushed on check to see that there is no movement in the slot and key by trying to rotate the pulley on the crankshaft back and forth. 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.

Pulleys sold after 8/1/23 have been bore gauged and tolerance checked to be between +.0007 and .0017" over the stock crank dimension of 36mm for proper fit. It's unlikely that you will have any issues with a stock crank fitment with our tolerances. If your pulley is still loose on the crankshaft, please note the following: Many aftermarket crankshaft snouts are manufactured undersize of the stock VW crank – Loctite 640 is suitable for slip fit up .008". This more than covers any additional gap created from an undersized crank to the Ross Wulf pulley. In all cases (yes even a very tight fit, but especially if there is any wiggle in the fitment) **We strongly recommend using Green Loctite 640 or Permatex 64040 on the crankshaft for final assembly of our crank pulley***.

***This information is also present in the Gene Berg Instructions for pulley installation**

Loctite 640 is available from our store:

<https://rosswulf.com/shop/ols/products/loctite-sleeve-retainer-640-green-6ml-tube>

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.

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



ROSSWULF

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

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.

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