



ROSSWULF

Thank you for purchasing our Alt/Gen Pulley for your Type 1 or 2 VW. The Ross Wulf Pulley System was carefully engineered and crafted for the utmost reliability and trouble-free service.

Your Pulley Kit Includes the Following:

Back Pulley Half
Front Pulley Half
3x5mm Woodruff Key
Qty 3 – Anti Vibration Bolts
Qty 8 – Stock Pulley Shims
36mm Stainless Steel Pulley Nut

Tools required:

5mm Hex Key Allen Wrench
Screwdriver with protected shaft
Crescent Wrench or 36mm Socket

Removal of existing pulley:

1. With the car in Neutral and e-brake on - Remove the nut holding the pulley to the alternator shaft. When removing a stock style steel pulley insert the blade of a flat-blade screwdriver through the cutout in the back half of the pulley and brace it against the generator/alternator housing bolt to keep the pulley from turning (use a small piece of tubing or hose over the driver shaft on aluminum pulleys). Remove the pulley nut with the appropriate size wrench (19mm Stock, aftermarket will vary).
2. Now you can remove the bell-spacer, shims, and outer half of the pulley. The belt will be free for removal as well as the shims in-between the pulley halves.
3. Remove the second half of the pulley by rocking the pulley back and forth, turning the pulley slightly after each rock. If the pulley won't budge, we suggest using the appropriate pulley puller to remove. Prying on the pulley with a screwdriver or small pry bar is not the proper option for removal.
4. With the back half removed, the woodruff key is now exposed. Remove the existing key and insert the new one from your Ross Wulf kit (Important that you use the new, 3x5mm key for the tightest fit possible on the aluminum pulley).

Installing Ross Wulf Pulley:

1. With the new woodruff key in position, install the back half of the Ross Wulf Pulley onto the shaft pushing evenly by hand. Make sure the woodruff key is fully seated into the slot in the center shaft, and that it does not slide out of the slot

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while installing the pulley half. In most cases the woodruff key wants to lift or slide out of the slot while installing the pulley half – you can use a small screwdriver from the back side to keep the key in place while installing the pulley half.

2. With the pulley half installed it's time to check the fit. Hold the pulley with one hand and the gen/alt shaft with another. Check for backlash and play between the two – there should be no visible or easily detectable movement between the parts. If there is movement – STOP! Troubleshoot the issue – possible causes are: worn woodruff keyway, or worn/undersized alternator shaft. Woodruff keyways can often be peened (with key in) to tighten up excess slop. Green Loctite can be applied to the pulley half to remove a small amount of play (let dry before testing). If you continue to have movement – STOP! Contact Ross Wulf. Failure to adjust or fix this issue will lead to pulley failure.
3. 8 shims were included with your kit, and it's important that there is at least 1 shim between the pulleys, and at least one shim under the 36mm nut. Start by installing 4 shims on the back pulley snout. String your belt and install the front half of your Ross Wulf Pulley.

Ross Wulf suggests that you always use a high-quality, NEW belt that is the correct width and length for your crank pulley (the Ross Wulf Crank Pulley is designed for the 11.3x912mm late Super Beetle belt).

Belt fitment is often overlooked as the primary cause for belt failure and slippage. The belt should fit near flush against the top edge of the crank pulley. Bulging belts will fail, and very few of the aftermarket crank pulleys were designed for the 11.3 belt. Find a belt that fits your pulley before proceeding.

4. Hand thread the 3 Anti vibration bolts into the Ross Wulf Pulley – Do Not Tighten yet. Make sure that you have at least 1 shim on the front face of the pulley to act as a washer for the 36mm nut that can be threaded on now.
5. Tighten the 36mm nut until the pulley rotates fully, or the slot in the rear pulley is near the top. Using the screwdriver with the tube/hose over the shaft (protecting the anodized aluminum pulley) in the slot, find the bracing point between the pulley and alternator housing to keep the pulley from turning clockwise – tighten the 36mm nut. Once the 36mm nut is snug, remove the screwdriver and rotate the pulley around fully. Insert screwdriver and check tension on the 36mm nut again (we are not torquing this yet – just make sure the belt is properly seated).



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6. Check the tension on the belt. A properly tensioned belt should deflect 5/8" – Remove 1 or 2 shims at a time if the belt deflects more than 5/8" and repeat steps 3-6. Add 1 or 2 shims at a time if the belt deflects less than 5/8" and repeat steps 3-6. Make sure that your belt is aligned and straight between the 2 pulleys. Any deviation will require special shims to get the belt into alignment.
7. With the proper tension on your belt, you can make the final torque adjustments to your pulley. Tighten the 3 anti-vibration bolts (these will feel tight all the way – you can feel the point where the head bottoms out against the pulley. Stop once you feel this, and do not put on additional torque). Using the screwdriver with the tube/hose over the shaft in the slot, find the bracing point between the pulley and alternator housing to keep the pulley from turning clockwise – torque the 36mm nut to 50 ft/lbs.
8. Using the 36mm nut, turn the engine over 1 complete turn and check belt tension again. If acceptable tension exists, run motor for 5 minutes. Shut off and check tension again. If belt falls out of acceptable tension, repeat steps 3-7. Check belt tension again at approximately 100 miles, and per factory recommendations thereafter.