

Installing a new High-Speed Seal on a Vortech Supercharger



When installing seals, you should use a shaft sleeve to protect the seal from becoming cut during the installation. Wipe a little grease within the lips of the seal so they do not run dry. I like to use high-temp wheel bearing grease for this.

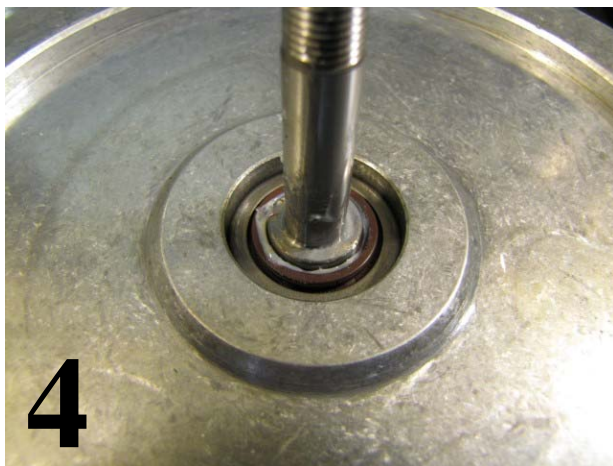
In picture 1, the seal is on the shaft sleeve, and the sleeve has been wiped with grease.



In Picture 2 the shaft sleeve has been placed over the impeller shaft of the Vortech supercharger.

In Picture 3 the seal has been driven home.

NOTE: Some Vortechs have a lip to prevent you from driving the seal to far in, others do not. The seal is at the correct depth when the sealing lip is just below the step on the shaft as shown in picture 4.



Then just remove the shaft sleeve (Picture 4). Reinstall the impeller stop washer and impeller as before.

Other Causes of Vortech Seal “Failures”



Often what seems like a bad seal may be just a symptom of another problem. Check these items as well:

PCV System Rebreather: On some kit installs, the crankcase ventilation system is routed around to the inlet side of the supercharger. Check to see if your installation does this, as the oil you find in your volute may actually be from the crankcase and not a leaky shaft seal at all.

PCV Restriction: Make sure the vehicles PCV system was properly modified when the supercharger was installed, and that the crankcase is not building pressure under boost. Temporarily installing a boost gauge on the crankcase is a fast way to be sure. If the crankcase is building pressure, the supercharger case (which drains into the crankcase) is building pressure too, and this may be the cause of the seal weeping. Vent the crankcase correctly and the seal leak may stop.

Supercharger Drain Too Small: The supercharger drain should be -10 AN or better. That's 5/8" ID, and 3/4" ID would even be better. If the drain is too small, the supercharger case cannot empty fast enough and may cause the seal to leak.

Supercharger Drain Not at the Bottom: the supercharger drain should be at the 6 O'Clock position on the case—pointed straight down. No kinks and only smooth wide bends on the way to the oil pan. If the drain is not at the bottom, the supercharger will hold waste oil in the case, build pressure, and the seal will leak.

Seal Cut During Installation: another common failure occurs when the seal was cut during the installation. See previous page for proper seal installation with a shaft sleeve.

Impeller Shaft Worn: check for wear on the impeller shaft itself where the seal meets the shaft. If a groove has been worn into the shaft, the shaft will need to be replaced.