

**034 MOTORSPORT**

034Motorsport's Billet Aluminum Front Main Seal is designed to replace the failure-prone stamped steel factory front main wiper seal on your 3.0T Audi. This Billet Front Main Seal is CNC machined from 6061-T6 Aluminum and features an OEM Viton Elring seal with an integral tension spring to ensure a tight seal to the crankshaft. The 034Motorsport Billet Aluminum Front Main Seal is significantly less prone to failure due to serpentine belt failure than the OE front main seal, which can easily ingest belts that have been shredded.

Installation Spiciness Rating: Hot

Installation of your 034Motorsport Front Main Seal is a fairly straightforward process that will take approximately 4 hours to complete.

Supplied Parts:

- 034Motorsport Billet Front Main Seal
- Elring 581.617 Shaft Seal
- (9x) M6x1.00x25-SS Socket Head Screws

Tools Needed:

- T25 & T30 Torx
- M10 triple square
- 16mm socket & 11" extension
- 5mm & 6mm Allen wrench
- Long 16mm wrench
- Phillips Screwdriver
- (2x) M10x120mm bolt
- Silicone sealant

Getting Started

Confirm you have received all the parts included with your purchase by reading the complete guide, if there are missing components, please contact:

customerservice@034motorsport.com

About This Guide

This Install Guide documents the installation process of the Billet Front Main Seal, on a 2014 Audi S4. There may be minor differences in the engine bay of other 3.0T (supercharged) vehicles, depending on specific vehicle, market, options, etc. It is recommended to disconnect the battery when unplugging airbag sensors.

Step 1

Remove the front splash shield and front bumper cover.



Step 2

Release coolant system pressure by very slowly loosening the coolant reservoir cap. Once pressure is released, disconnect the overflow hose.



Step 3

If you have something that can be used, cap the overflow hose to prevent leaking.



Step 4

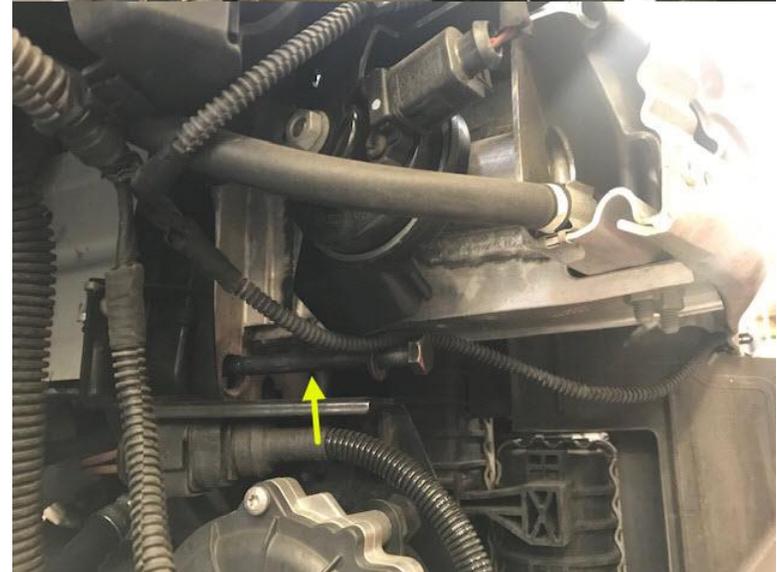
Using a T30 Torx bit, remove the two screws securing the core support to the core support brackets.

**Step 5**

Using a 16mm socket, remove the 6 bolts (3 each side) securing the bumper crash bar brackets to the body.

**Step 6**

Install M10x110mm bolts into each of the outside lower bolt holes in the crash bar support.



Step 7

Using a T30 Torx, remove the 2 screws securing the radiator support to the body.



Step 8

Put radiator support into maintenance position (pull out ~4")



Step 9

You will now have space to remove the crank pulley and access the front main seal.



Step 10

Using a 16mm wrench, turn the belt tensioner center bolt clockwise to remove tension from the belt. While still holding tensioner in loose position, remove the belt.

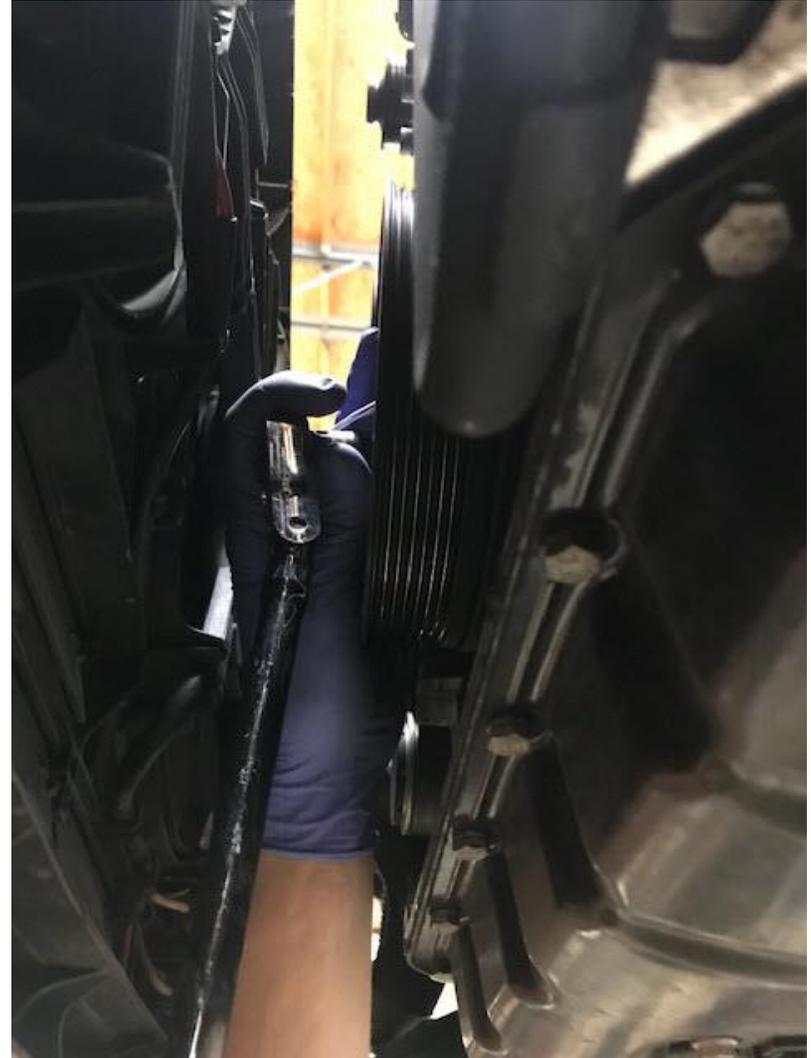


Step 11

Repeat process for inner belt. The tensioner is tucked behind the two coolant pipes, but can be loosened with an open-end wrench.

**Step 12**

Using an M10 triple square, remove the 8 bolts securing the stock crank pulley (6mm Allen if 034 pulley).



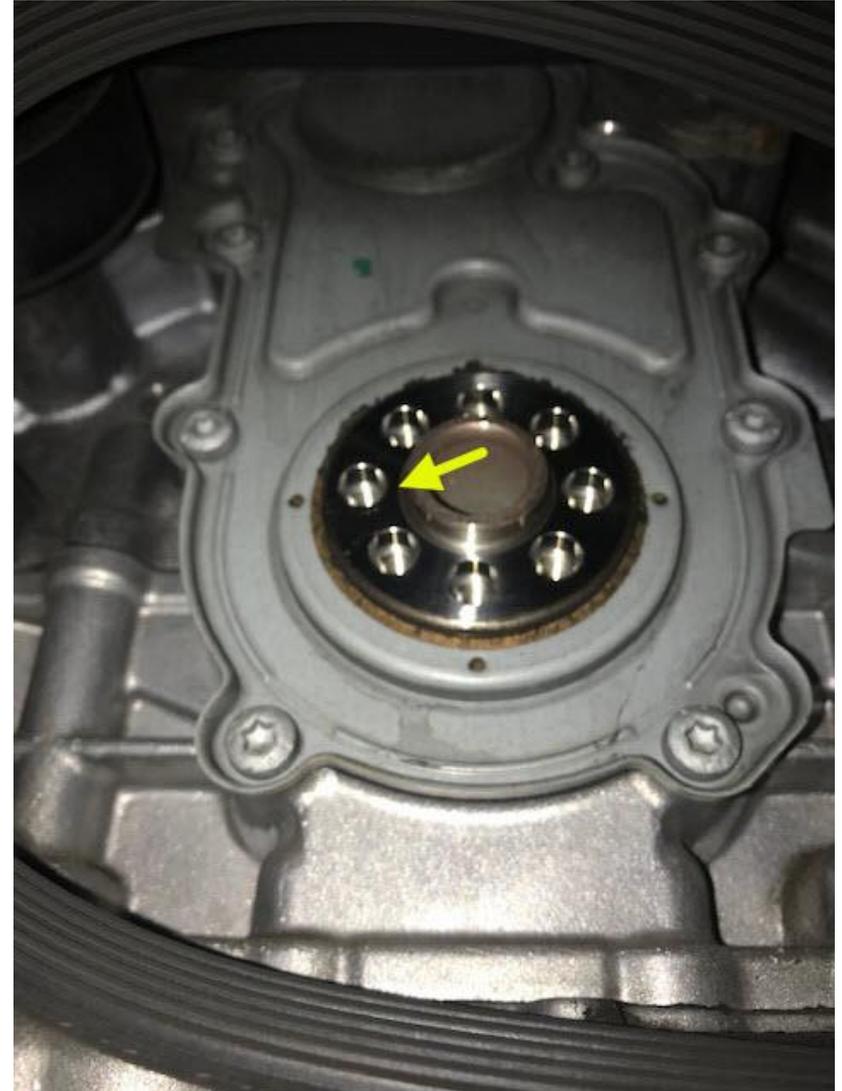
Step 13

Carefully remove the crank pulley, as straight as possible, from the crankshaft snout and straight down to easily determine offset hole location for easier reinstallation of pulley. There are two pips on either side of the offset hole, as well as a paint mark on the outside surface of the pulley.



Step 13 cont.

If you lose track of which hole was offset, you can tell by looking at the end of the crankshaft. That hole will have a little larger gap to the center snub.



Step 14

Remove the M10 triple square to remove the supercharger idler pulley.

**Step 15**

To remove the water pump pulley, remove the three M10 triple square bolts holding it in place and gently slide it off.

**Step 16**

With access to the OE front main seal, carefully remove nine T30 bolts holding it in place and gently pry it loose.



Step 17

With the front main seal removed, carefully clean the contact surface and ensure it is free of oil that may affect sealant curing.



Step 18

Apply silicone sealant to the 034 Front Main Seal along the sealant groove.



Step 19

Carefully install the front main seal, and torque in a diagonal pattern to **9 Nm** (6.6 ft-lbs) using a 5mm Allen.



Step 20

Install the water pump pulley and torque to **9Nm** (6.6 ft-lbs).

Step 21

Install supercharger idler pulley and torque to **42Nm** (31 ft-lbs).

Step 22

Install the crank pulley in the same orientation it was removed and torque to **30Nm** (22 ft-lbs).

Step 23

Reinstall inner belt removed in Step 11, then install the supercharger belt.

Step 25

Push radiator support back into position. Using a T30 Torx bit, reinstall the two screws securing the top of the core support (removed in Step 5). Torque to **10Nm** (7 ft-lbs).

Step 26

Remove M10x110mm bolts and reinstall OE M10 bolts removed in Step 3. Torque to **30 Nm** (22 ft-lbs).

Step 27

Using a T30 Torx bit, reinstall the two screws securing the core support brackets (removed in Step 2). Torque to **10Nm** (7 ft-lbs).

Step 28

Re-connect coolant reservoir overflow line.

Step 29

Reinstall front bumper and undercar splash shield.

Step 30

You are finally done!
Enjoy the peace of mind and the superior feeling of having billet parts.