

**034 MOTOR SPORT**

034Motorsport's Fuel Pump Piston Upgrade is a relatively easy way to yield up to 50% flow increase over the factory HPFP. With a DLC coated piston and cylinder, these high-precision machined internals allow for reduced friction and increased performance, and will meet the demands of E85 optimized tunes

Installation Spiciness Rating: MILD

Installation of your 034Motorsport Fuel Pump Piston Upgrade is a straightforward process that will take approximately 30 minutes to complete.

Supplied Parts:

- Fuel pump piston
- Fuel pump sleeve
- Fuel pump spring retainer
- Fuel pump lock collars

Tools Needed:

- 27mm Wrench
- 21mm Wrench
- 17mm Wrench
- 14mm Wrench
- 10mm Triple-square Bit
- T30 Torx Bit
- Small Pick/Screwdriver
- Pliers
- Trim Removal tool
- Miscellaneous tools for work holding

About This Guide

This Install Guide documents the installation process on a B9.5 Audi S4. There may be minor differences depending on specific vehicle, market, options, etc.

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:

Install Steps

Step 1

Open the hood of your car.



Step 2

Remove the engine cover by pulling it up.



Step 3

Unbutton the heat jacket from the fuel lines.



Step 4

Lay down several rags to soak up any lost fuel.



Step 5

Using a set of pliers, loosen and move the fuel line hose clamps. There are two.

**Step 6**

Using a small pick, unclip the pressure sensor connector and separate them.

**Step 7**

Using a 21mm and 17mm wrench, loosen the fuel fitting at the front of the housing. Disconnect the hard line.



Step 8

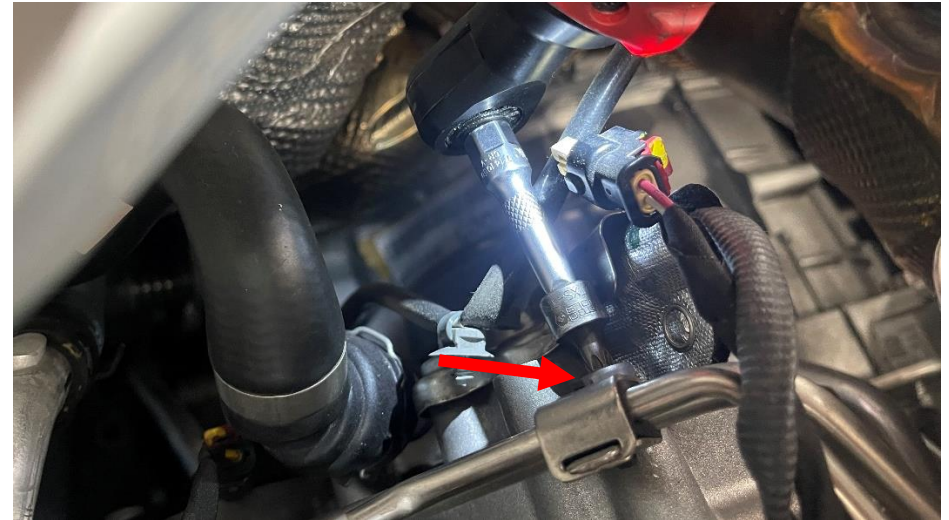
Using a 27mm wrench, remove the pressure sensor fitting at the back of the housing.

**Step 9**

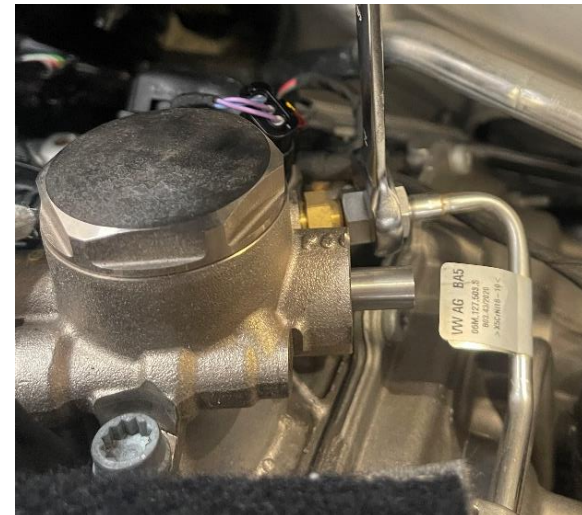
Using a trim removal tool, separate the harness clip from the engine.

**Step 10**

Using a T30 Torx, remove the hardware from the hard line bracket.

**Step 11**

Using a 14mm wrench, loosen the hard line from the back of the housing.

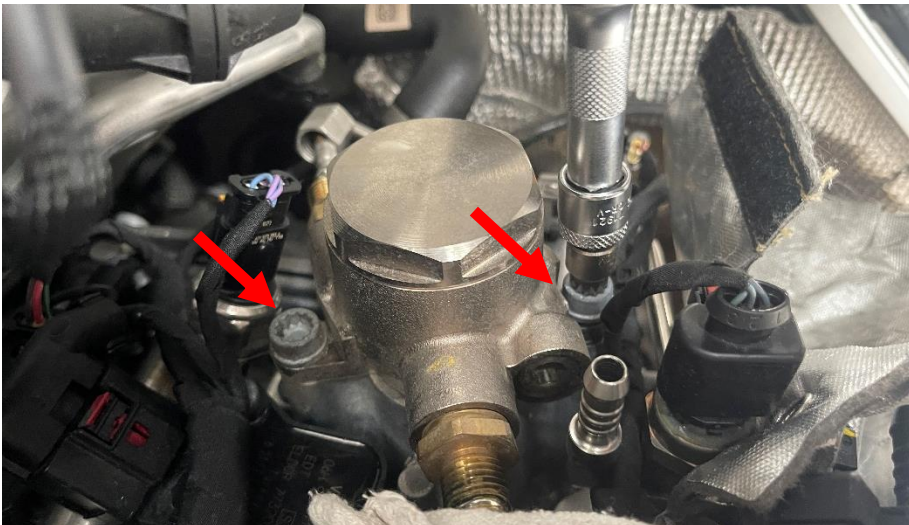


Step 12

The rear fuel hard line is now free from the fuel pump housing.

**Step 13**

Using an M10 triple-square, remove the hardware securing the fuel pump housing to the engine.

**Step 14**

Remove the fuel pump housing.

**Step 15**

Put the pump in a vice.

Step 16

Using the 034 fuel pump tool, remove the locking collar from the housing.



Step 17

Extract the spring assembly from the housing.



Step 18

Remove the piston sleeve from the spring assembly.



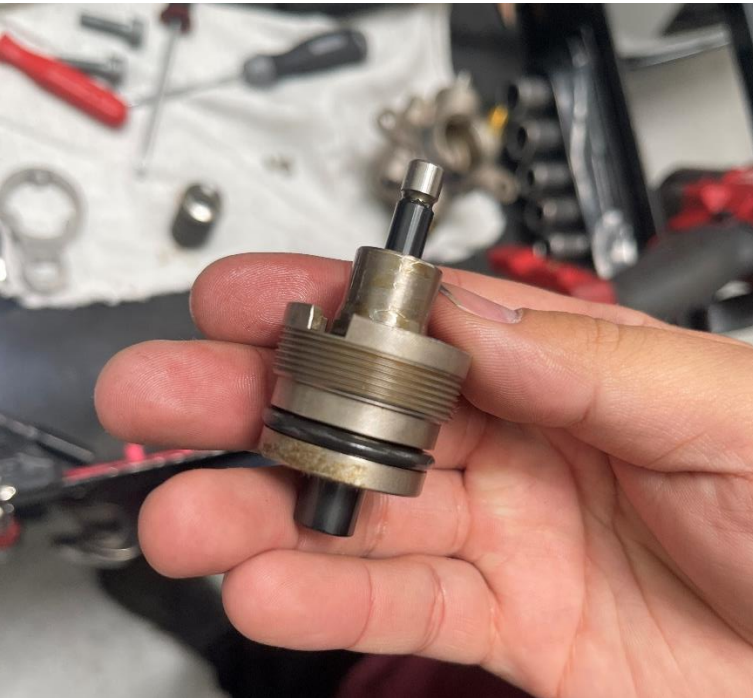
Step 19

We now must break the press fit of the spring retainer. We used a 19mm socket and a 4mm Allen bit. Position the Allen bit to contact the piston head only. Compress the assembly in a vise until you hear the retaining clip break free from the piston. **Wear eye protection and be careful!**



Step 20

Extract the old piston from the assembly and install the 034 piston.

**Step 21**

Transfer the spring from the stock piston to the new assembly.

**Step 22**

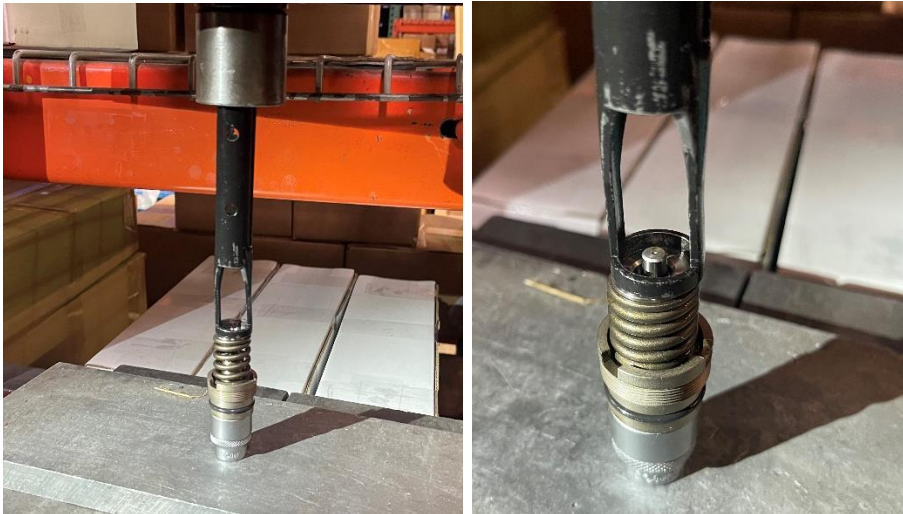
Place the 034 spring retaining washer over the spring.



Step 23

And now things get interesting; To install the retaining clips, you must compress the spring enough to slide them in. We used a valve seat tool, a 19mm socket, and a hydraulic press.

Make sure that the piston does not compress with the spring. Use a small screwdriver to lift the piston as well as to orient the retaining clips.

**Step 24**

Use a few drops of oil to re-lubricate the o-ring on the pump assembly.

Step 25

Install the 034 piston sleeve.

Step 26

Put assembly back into pump body. There is no true torque spec, tighten as tight as it was when you took it apart, using the 034 fuel pump tool.



Step 27

Reinstall the complete housing assembly into car.
Torque to **10Nm**.



Step 28

Using an M10 triple-square, reinstall the hardware securing the fuel pump housing to the engine.



Step 29

Using a 14mm wrench, tighten the hard line from the back of the housing.



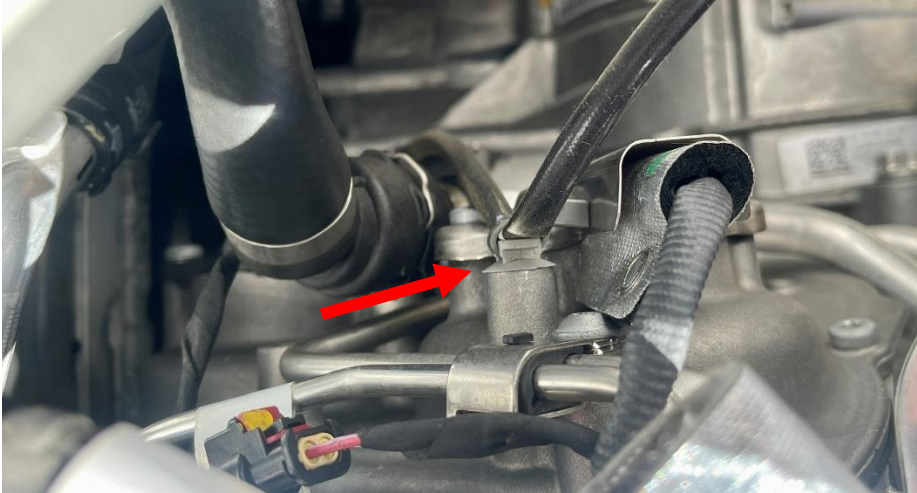
Step 30

Using a T30 Torx, reinstall the hardware for the hard fuel line bracket.



Step 31

Reinstall the harness push clip.

**Step 32**

Using a 27mm wrench, reinstall the pressure sensor fitting at the back of the housing.

**Step 33**

Using a 21mm and 17mm wrench, tighten the fuel fitting at the front of the housing.

**Step 34**

Reinstall the pressure sensor connector.



Step 35

Using a set of pliers, loosen and move the fuel line hose clamps. There are two.

**Step 36**

Button up the heat jacket for the fuel lines.

**Step 37**

Reinstall the engine cover.



Step 38

You're done! Enjoy the added performance of your new fuel pump piston upgrade.

