NOSTRUM
HIGH PERFORMANCE

2.0L VW EA888 CCTA-CBFA Standard Bore High Pressure Fuel Pump Kit Installation Guide

Small Bore Kit - Part Sku#: H086-0348

Big Bore Kit - Part Sku#: H086-0633

WARNING! PLEASE FOLLOW ALL WARNINGS AND INSTRUCTIONS FOUND IN YOUR VEHICLE OWNERS MANUAL. THE FOLLOWING INSTRUCTIONS MUST BE READ AND FULLY UNDERSTOOD BEFORE BEGINNING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN VEHICLE DAMAGE, PERSONAL INJURY OR DEATH. IF THESE INSTRUCTIONS ARE NOT FULLY UNDERSTOOD, DO NOT ATTEMPT INSTALLATION.

VW EA888 CCTA CBFA (2010-2016)

HIGH FLOW HIGH PRESSURE FUEL PUMP KIT
INSTALLATION INSTRUCTIONS

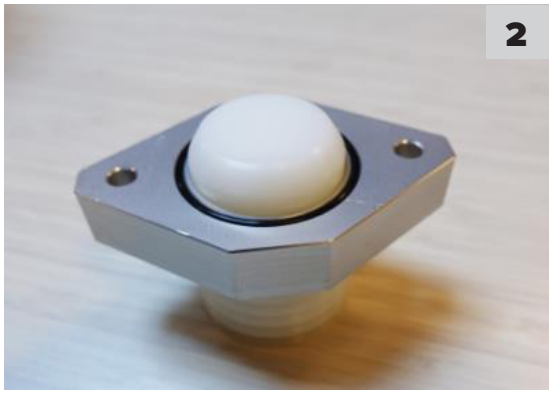
VW EA888 SMALL BORE (2010-2016) PART #: H086-0348
VW EA888 BIG BORE (2010-2016) PART #: H086-0633

Flange Installation

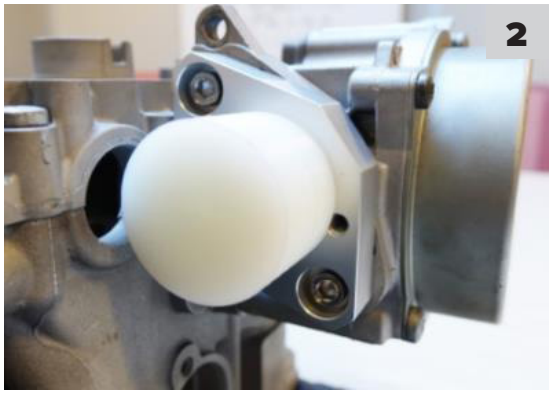
Your kit from Nostrum includes a white plastic installation tool, the fuel pump flange, and the flange sealing O-ring (black). The first step will be to install this flange on your EA888.

1. Insert the white cylindrical installation tool into the main bore of the flange. The flange O-ring should be pointing outward. The installation tool should be inserted from the pump side of the flange, which is indicated by the pump bolt holes. Make sure that the O-ring is seated flat and is not deformed, twisted or disoriented. Now the flange is ready for installation.

2. Insert the installation tool into the pump bore on the cylinder head (vacuum pump housing). Be sure to gently slide into the bore. The installation tool will align the flange and the O-ring into proper orientation and concentric alignment with the pump bore on the cylinder head. This prevents O-ring damage, pump damage, and pump installation problems. Push into the bore until the flange and O-ring are seated against the pump mounting face on the cylinder head. ***See fig. A***



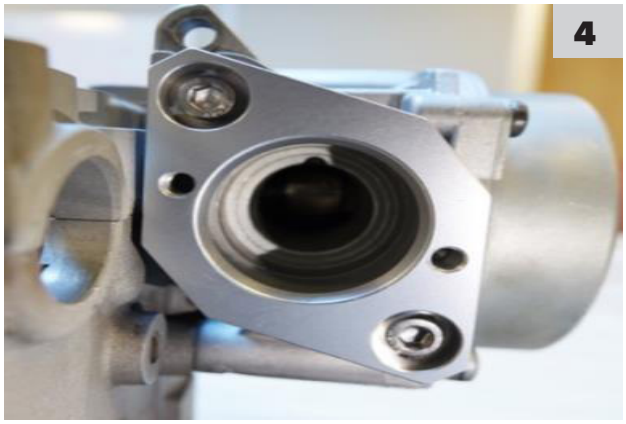
3. With the installation tool still in the bore, rotate the flange to align the flange bolt holes with the tapped holes on the cylinder head. Hand start the supplied stainless steel M6 x 25mm length bolts in each of the two bolt holes (5mm Allen key). Then proceed to screw the bolts in until bottoming. Follow your factory torque specification and torque the bolts.



TIP: Rotate the installation tool while seating the two fasteners. This will assist in preventing the installation tool from becoming trapped and difficult to remove.

4. Proceed to remove the plastic installation tool and set it aside. The flange and O-ring are now aligned for the pump installation. The flange will guide the pump to the cylinder head bore without damage to the O-ring. You should not see any O-ring deformities or flange gross miss-alignments to the cylinder head bore.

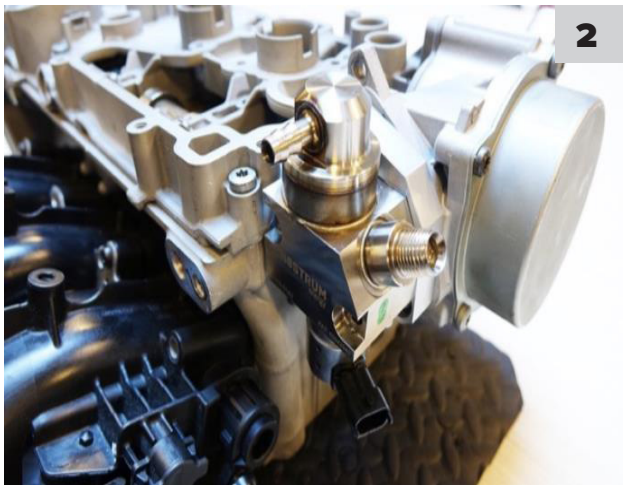
NOTE: On high mileage vehicles, it may be a good idea to replace the cam follower with a new OEM unit before pump installation.



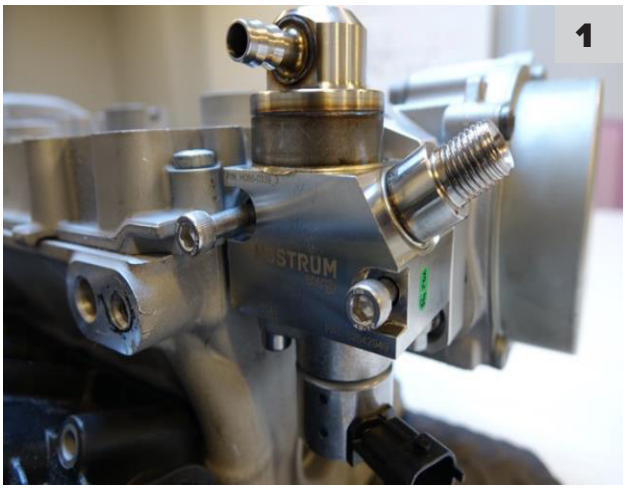
Pump Installation

1. Remove the pump assembly from packaging and check the pump O-ring (red), mating face and diameter. Ensure that they are clean and ready for installation. Place the pump in position to insert the pump into the flange main bore with the orientation shown below.

2. Proceed to gently insert the pump into the bore, keeping attention to the parallel alignment of the pump body diameter to the flange bore. (It is a tight fit due to the O-ring compression.) Push the pump in until it stops against the O-ring (red). Do not rock the pump off center of the bore excessively because you can damage the flange. You may rotate lightly to get the pump to seat into the bore. ***See fig. 2***



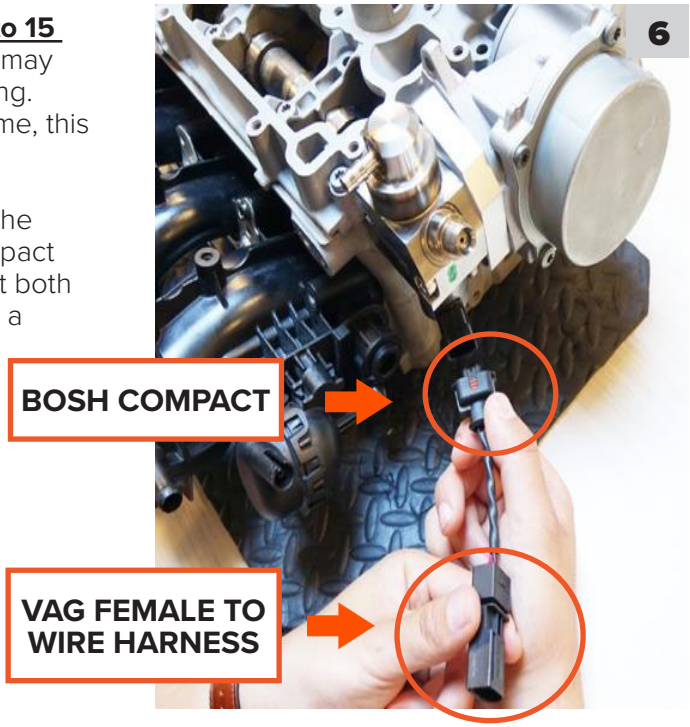
3. Obtain the two stainless steel M6 x 45mm long Allen bolts from the kit and align the pump main body bolt holes to the threaded holes on the flange. Insert the bolts and hand start them.



4. Push the pump deep into the flange until it seats against the flange face. You may need to apply force or use a rubber mallet to help it seat. Apply force to the main body of the fuel pump (the stainless steel rectangular body). DO NOT apply force to any fittings or electrical connectors. DO NOT USE HARD TOOLS, SLEDGE HAMMERS, CROWBARS or any tool that may damage the pump body, bolts or flange.

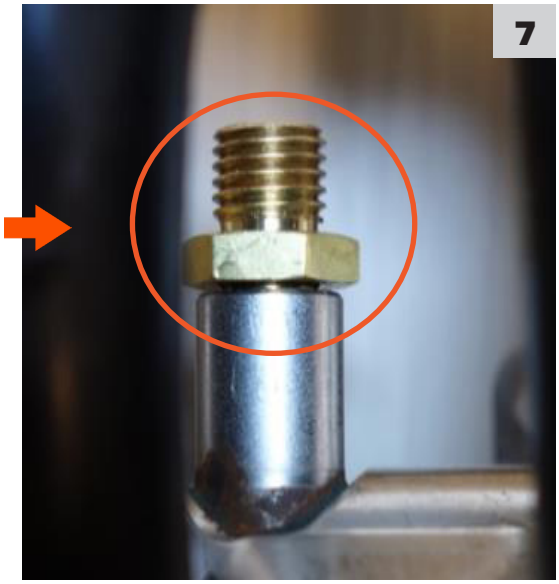
5. Proceed to secure the pump bolts to the flange. **Torque to 15 lb-ft.** Since your camshaft may not be at its base circle, you may need to gradually "walk" the pump in to load the return spring. Alternate tightening each pump bolt 2-3 roatations. As a thime, this will ensure the pump is installed evenly.

6. Obtain the electrical connector jumper from the kit. Plug the VW male into the engine wire harness. Plug the Bosch Compact female to the male on the pump. Be sure, in both cases, that both connectors lock into the mating connector (you should hear a click). Check by pulling on the connectors.
Do not pull on the wires!!!

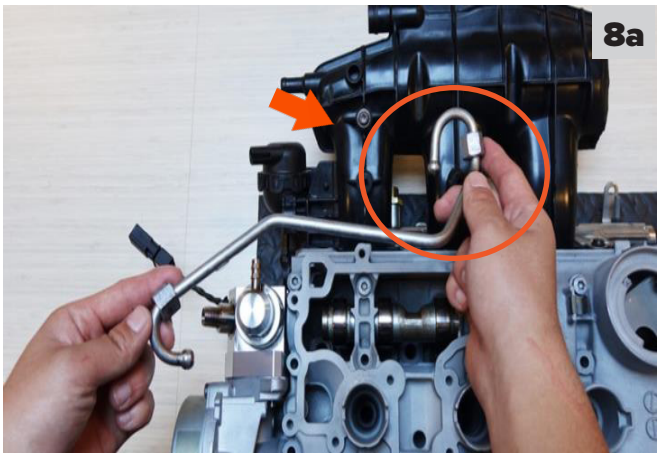


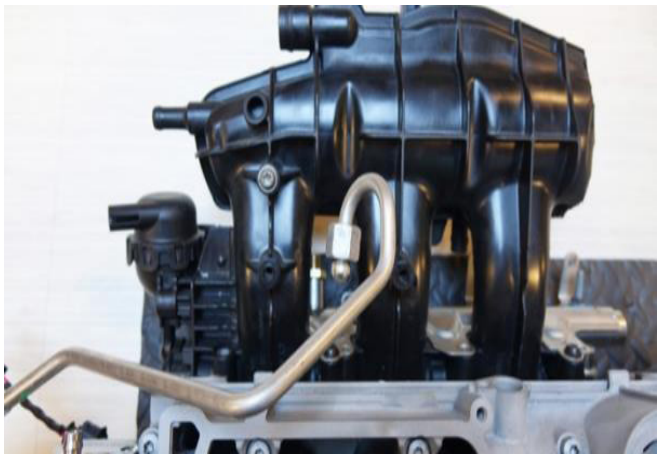
7. Install the new brass fuel rail fitting with the supplied replacement. Be sure the fuel rail is clean before installation.

NOTE: We do Not recommend reusing your exisiting, used, brass fitting. A new fitting is provided in your kit.



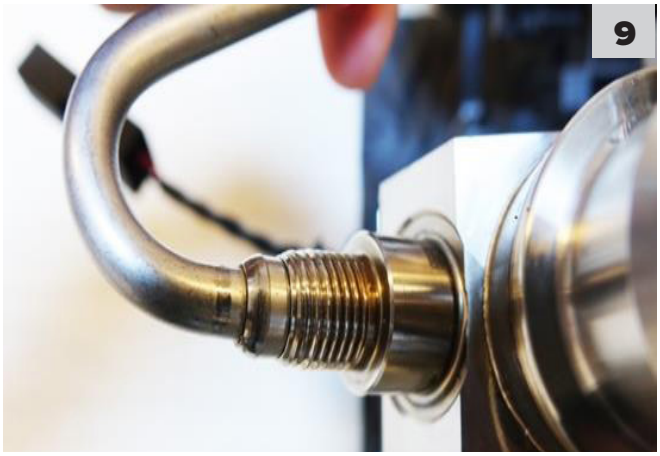
8. Obtain the high pressure hard line from the kit, it must be oriented correctly before installation. Rotate the hard line so that the U-shaped end slides between the two intake runners (from the top) and down to the fuel rail. ***(See fig. 8a)*** Rotate the hard line and orient the part so that the spherical fitting on the hard line mates into the female cone of the FUEL PUMP. It is important to be sure the female cone of the brass fitting and the threads of the brass fitting are in good condition and clean of debris.

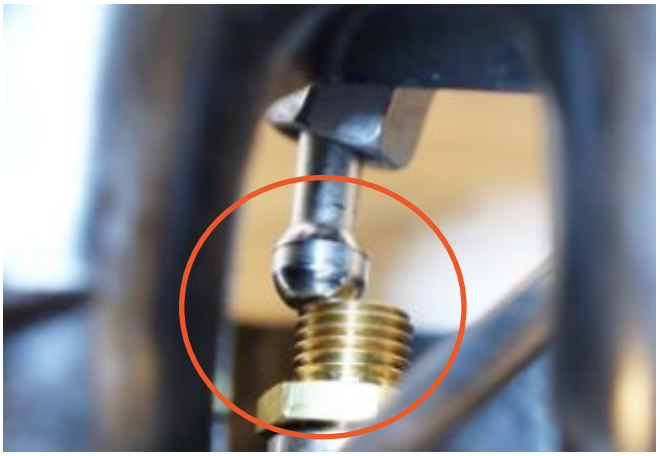




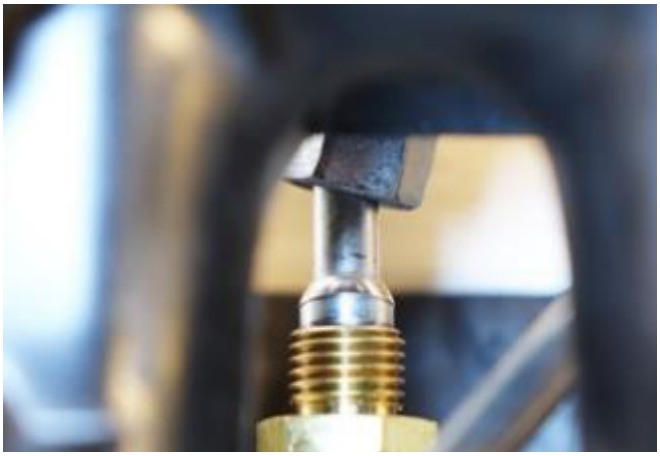
9. Next, ensure the spherical fitting is seated and aligned on the FUEL PUMP side. While holding the FUEL PUMP fitting in place, align the other end of the hard line spherical fitting to the FUEL RAIL female cone. IT IS IMPORTANT TO ENSURE THE FUEL PUMP FITTING IS SEATED FIRST, THEN SEAT THE FUEL RAIL SIDE.

Do not start engaging threads on the compression nut until both spherical fittings are securely seated.





INCORRECT



CORRECT

10. To secure the spherical end in the female cone, ensure it is aligned and seated, then slide the female compression nut into position at the brass fitting. Hand start the compression nut on the fitting. Thread the nut onto the fitting while continuing to hold the line in position with the spherical end seated into the female cone on center. DO NOT USE THE NUT TO “CENTER” the spherical tube fitting because it may damage the brass fitting, damage the thread, or miss-align the fitting and result in a leak. Tighten the **torque to 20 lb-ft.** compression nuts all the way until seated and secured.

NOTE: You may need to remove the airbox and wiring harness clip to gain access to the fitting from underneath the intake manifold. This is the best way to get an open-end wrench to the fitting. See your OEM maintenance manual.

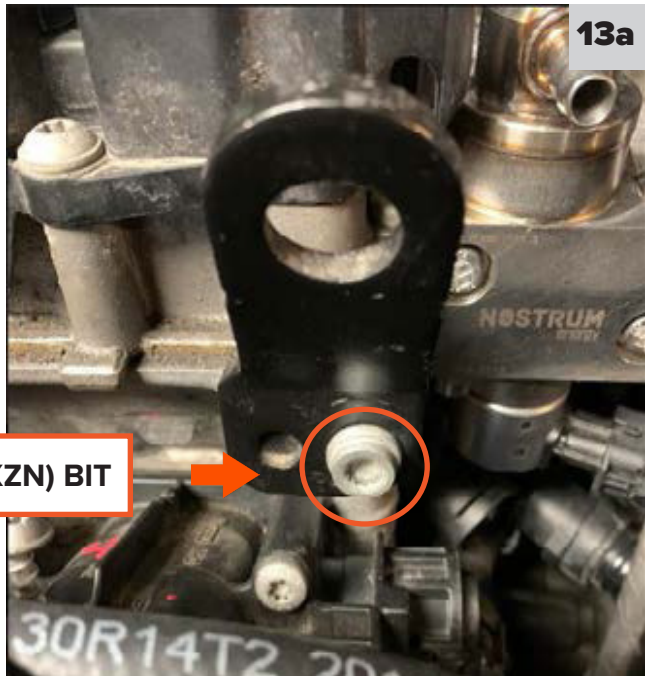
11. Attempt to move or shake the high-pressure hard line at both ends near the fittings. They should not move inside the compression nut. If they do move, remove the tube and go back to Step 8.

***Small Bore Pump Kit -** 12a. Push the low-pressure fuel line hose onto the barb fitting. Tighten the hose clamp. Tug on it to be sure it is secure.

***Big Bore Pump Kit -** 12b. If you purchsed a Big bore kit, your kit comes with an AN06-Barb 90 degrees fitting for the low pressure side of the pump. Screw the AN06 female portion of the fitting to the AN06 male on the pump. Orient the barb for the OE factory rubber hose. **Torque the AN fitting to 13 lb-ft.**

13. HP fuel line bracket. Your high pressure tube includes a bracket to secure the tube to the intake manifold.

13a. Remove the black engine lift bracket. An 8mm 12-point (XZN) bit is needed to remove the bracket bolt.



13b. Using the provided M8 hex-head bolt and washer, install the lift bracket and high pressure tube “Z” bracket. Hand-tighten the M8 hex-head bolt such that the “Z” bracket is free to rotate.


14a


14b

14. After tube is installed) Align the rubber-lined P-clamp with the “Z” bracket and fix them together with the provided M6 bolt & nut. **Torque the bolt to 9 ft-lb. (See fig. 14a and 14b)**

15. Torque the lift bracket M8 hex-bolt to 15 ft-lb. Start the bolt using an open-ended ½” wrench and apply the final torque using a ½” Crowfoot wrench and ratchet extension.


15

Hardware installation is complete.

First Start-Up

1. Be sure to remove all installation tools and loose items from the engine compartment. Follow good, safe practices when working on your vehicle. Be sure to reassemble all parts and components according to your OE maintenance manual.

2. Key cycle the vehicle into the “Accessory On” position (do not go to Ignition position). The low- pressure fuel pump with activate and the low pressure side of the pump will pressurize. Check the high-pressure fuel pump and the low pressure side for leaks. If OK, proceed to step 3.

3. Key cycle to ignition and let the car attempt several start cycles. Remember that the fuel lines, pump and part of the fuel rail are filled with air, therefore this step is necessary to evacuate that air and get the system charged. If it starts, OK. If it doesn’t, key off the vehicle. Check the high- pressure lines to the fuel rail, to the pump and the pump itself for leaks. If OK, proceed to step 4.

4. Key cycle one more time all the way to ignition. Engine should start-up and idle. If not, proceed with steps 2-4 again.

5. Let the car idle for a few minutes. Check for leaks on low and high-pressure portions again.

6. Plug in your Cobb Accessport and follow the instructions for loading the calibration included on your Accessport.

7. Installation is complete!

NOTE: a fault code may appear at the first key cycle due to the long ignition time or the low pressure in the fuel rail, both due to the air in the fuel system. This code should self-clear after the OEM defined quantity of key cycles.

NOTE: After driving the car and letting it cool, next day, check for fuel leaks again (from thermal expansion and contraction). Retighten fittings if needed.

For more information or specific support questions:
email **support@nostrumshop.com** or call 734-548-8677 (during normal business hours)