



INSTALLATION GUIDE

CTS MBQ Front Subframe Bushing Kit

CTS-MQB-BOSS



**20630 Mufford Crescent, Unit #309
Langley, British Columbia V2Y 2V9**

www.CTSTURBO.com

WHAT IS INCLUDED

1. BOSS Turbo
2. Vacuum Hoses (long and short)
3. Turbo Inlet Pipe
4. Turbo Outlet Pipe
5. Hose Clamps
6. Water drain hardline
7. Water feed hardline
8. Oil Feed line
9. DV/BOV Relocation Flange
10. PCV Bung
11. Oil Drain Hardline
12. Exhaust donut gasket
13. Thermotec Sleeve
14. Turbo manifold gasket and hardware



TOOLS REQUIRED

1. Torx set
2. Triple Square Set
3. Metric Socket Set
4. O2 Sensor removal tool
5. Allen key set
6. VAG Com VCDS

NOTES

Vehicle used in this guide is a 2015 VW Gti. Other cars will follow the same steps. We highly recommend installation using a hoist. Professional installation recommended. Always make sure the car is safe to work on. Do not work on a hot motor.

STEP 1

Drain the coolant and oil from the car.

Remove the air filter housing.

Remove the heated oxygen sensor.

Remove the downpipe from the factory turbo.

**STEP 2**

Loosen the hose clamp and remove the Torx bolt of the factory turbo outlet pipe. Disconnect it from the factory turbo.



STEP 3

Remove the ground wires from each ignition coil and remove the wireharness out of the way.

**STEP 4**

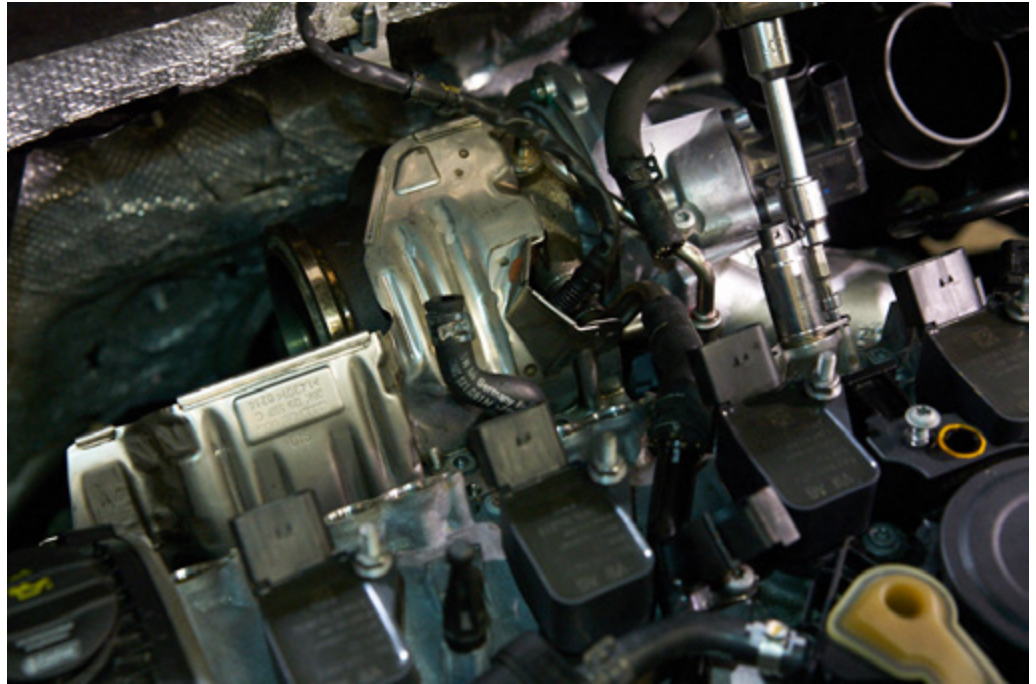
Unscrew the coolant hardline from the engine and disconnect it from the coolant hose. Pivot the coolant hardline so it is out of the way.



STEP 5

Remove the
cam adjustment
actuators.

Note, the seals can
be reused.

**STEP 6**

Remove the
heatshield



STEP 7

Remove the turbo support bracket.

**STEP 8**

Disconnect the turbo inlet pipe and remove it.

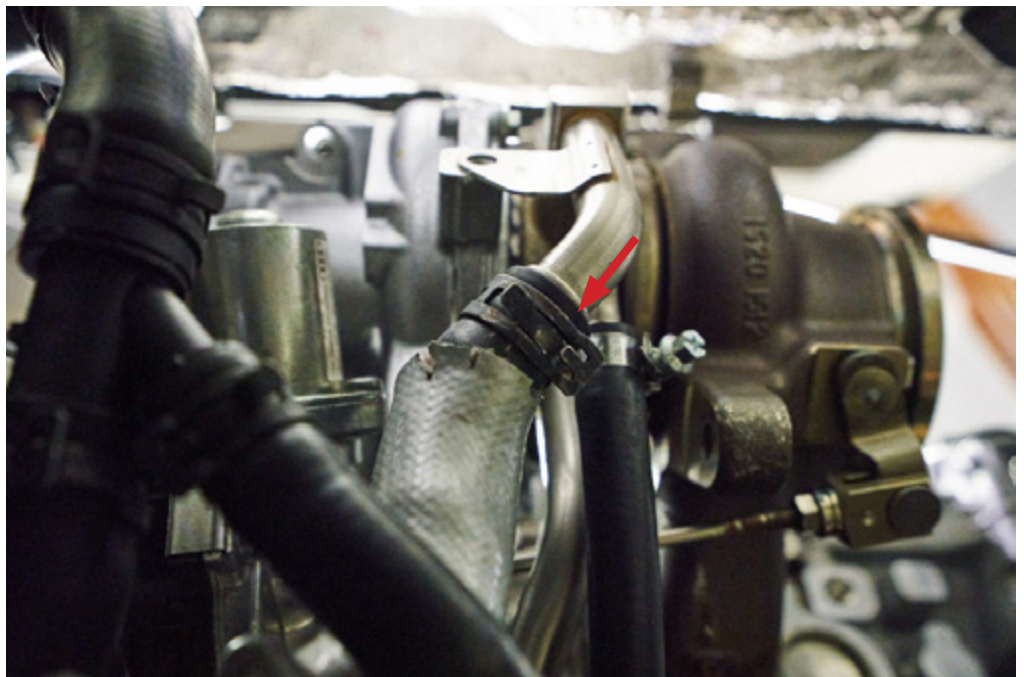


STEP 9

Remove oil supply line.

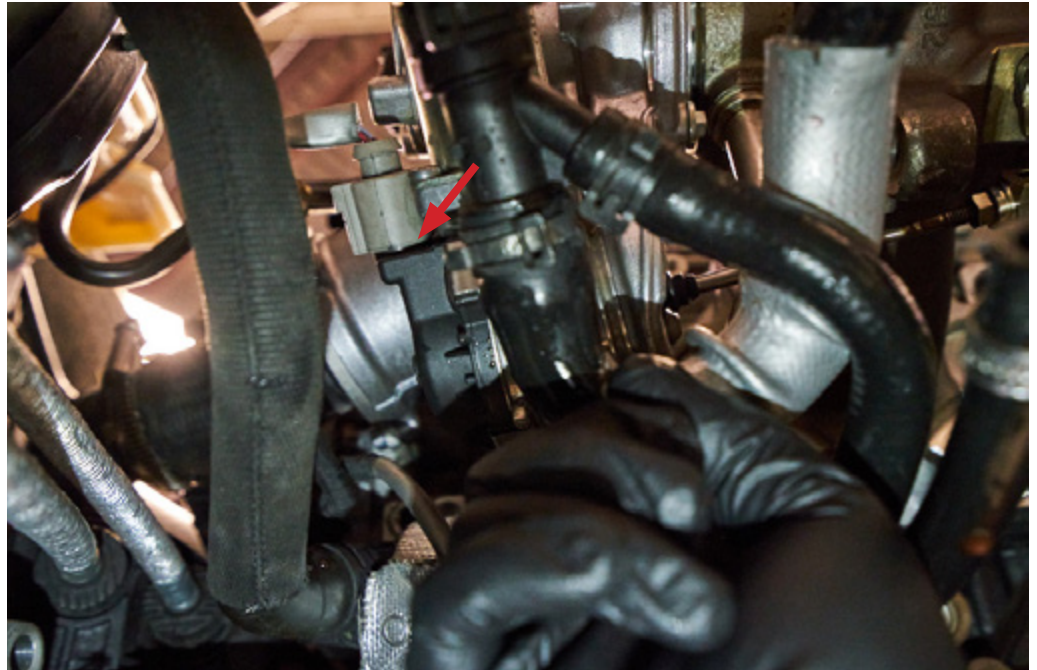
**STEP 10**

Remove the coolant
drain line

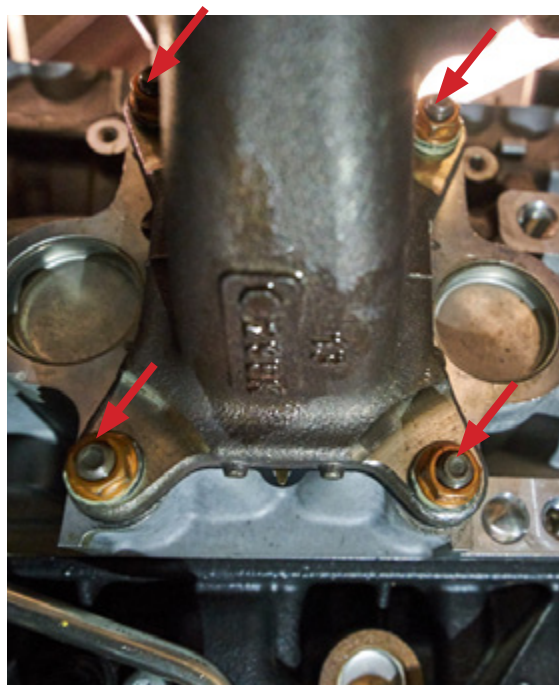


STEP 11

Unclip the wastegate connector

**STEP 12**

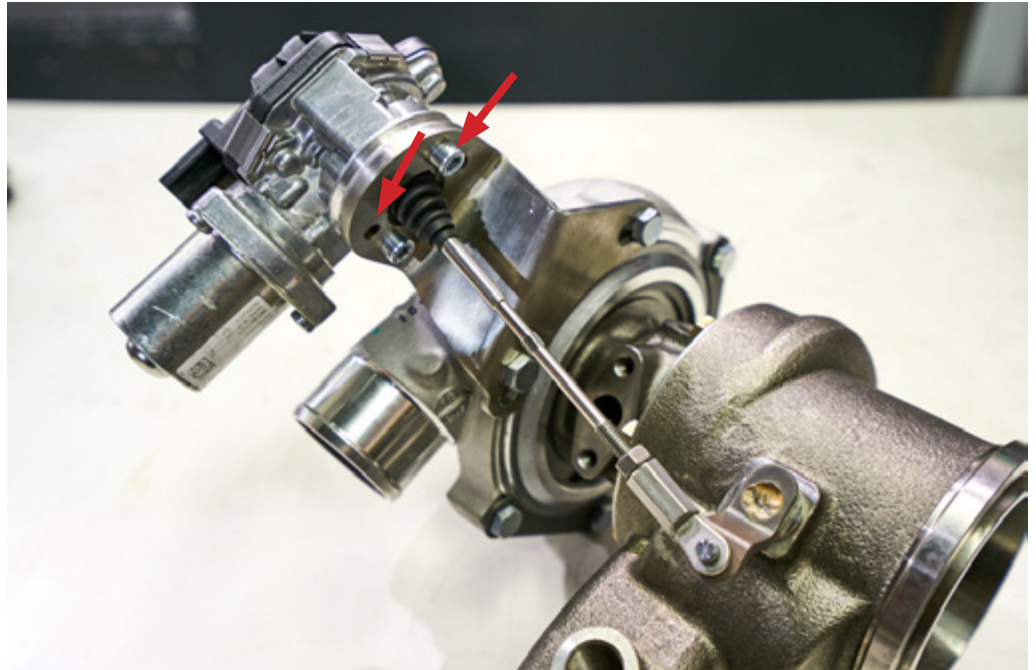
Unbolt the turbo charger from the cylinder head and remove upwards.



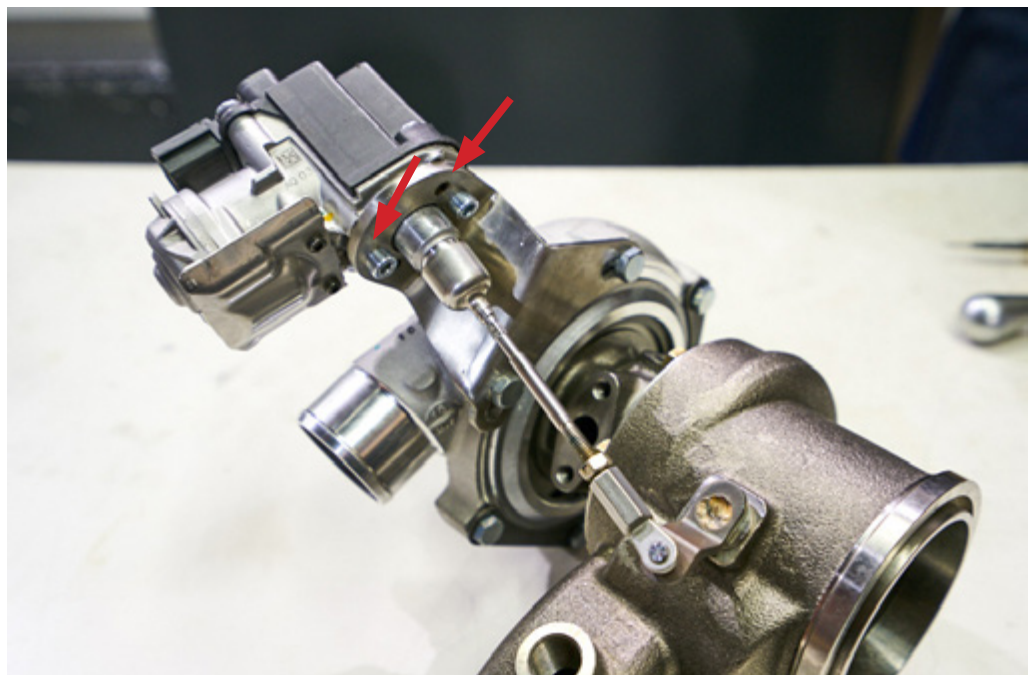
STEP 13

Remove the wastegate from the stock turbo and install onto the BOSS turbo in this orientation.

Note: There are two different sets of mounting holes to use depending on which wastegate you have

**STEP 14**

Type 2 wastegate orientation



STEP 15

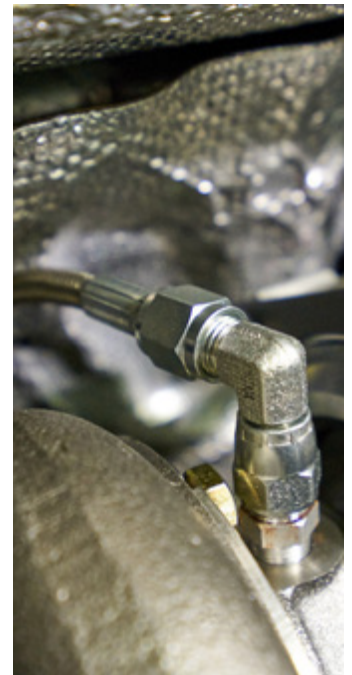
Install new gasket on the exhaust side of the BOSS Turbine housing.

Install new exhaust manifold gasket on the engine block.

Install BOSS Turbo onto the engine block with the new locking bolts supplied.

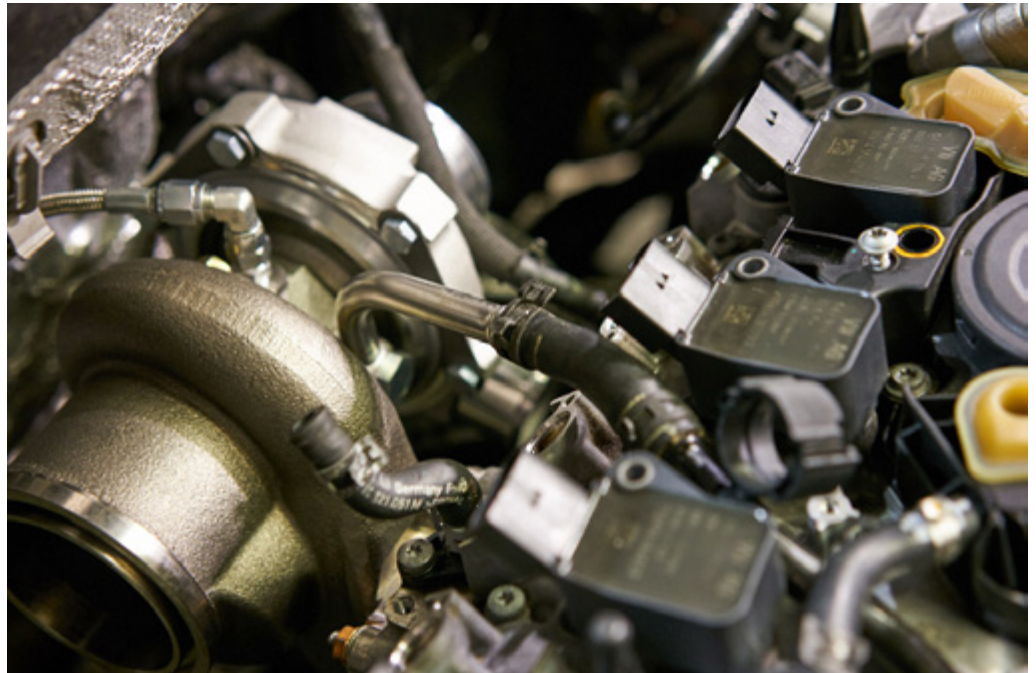
**STEP 16**

Install the GT oil restrictor on the top of the turbo, the 90 degree fitting, and the provided stainless steel braided line.



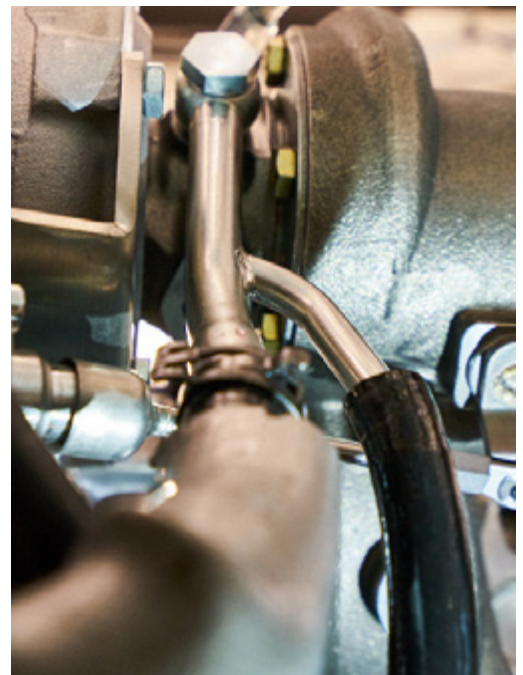
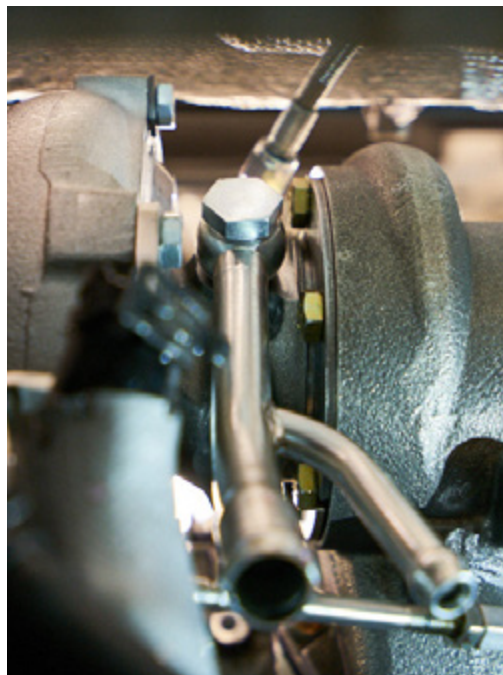
STEP 17

Install waterfeed with the supplied banjo washers and the banjo bolt.

**STEP 18**

Install the water drain hardline.

Reconnect the hoses.



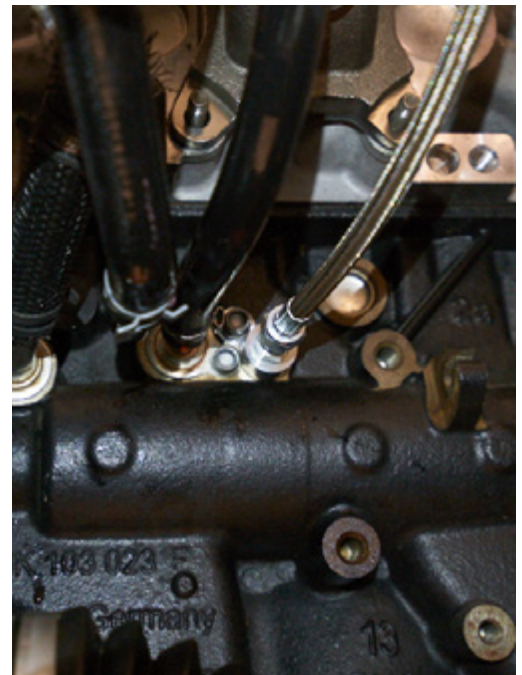
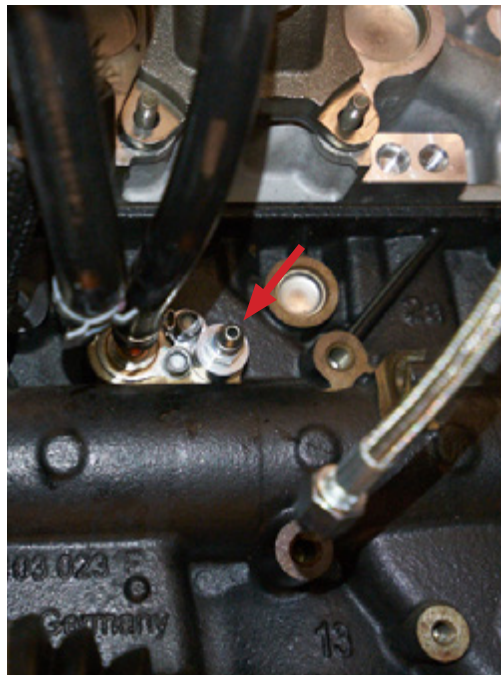
STEP 19

Install the oil drain hardline and gasket.

Reconnect the factory oil drain hose to the hardline.

**STEP 20**

Connect the stainless steel braided oil feed line to the engine using the provided adapter and oil feed fitting.

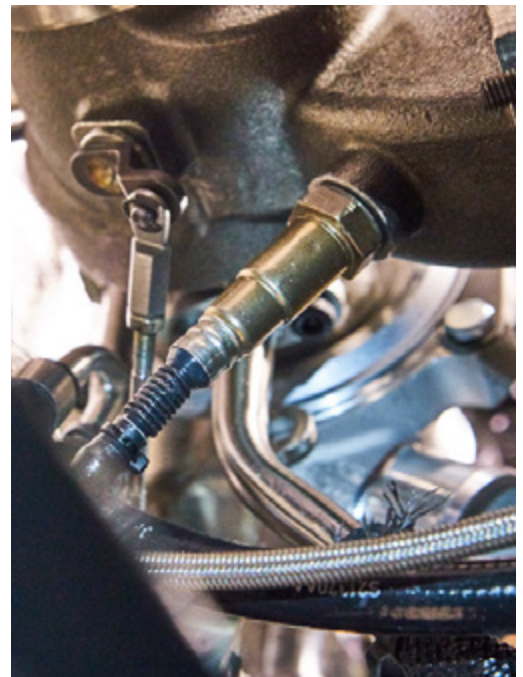
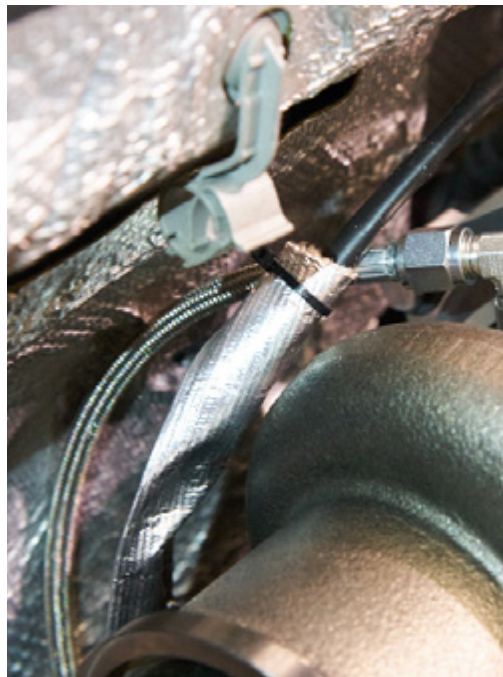


STEP 21

Reconnect the wastegate actuator plug.

**STEP 22**

Zip tie the thermotec sleeve to the O2 sensor and attach to the turbine housing.



STEP 23

Install turbo outlet silicone.

Do not tighten clamps all the way

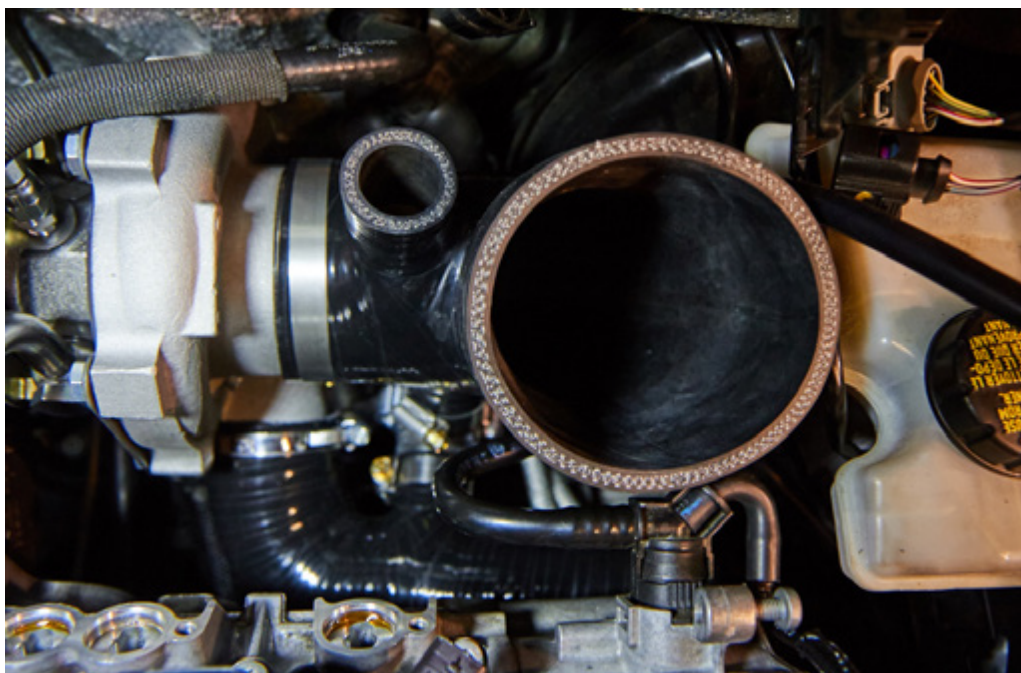
**STEP 24**

Install the BOV/DV into the relocation flange and reattach the vacuum lines.



STEP 25

Install turbo inlet pipe

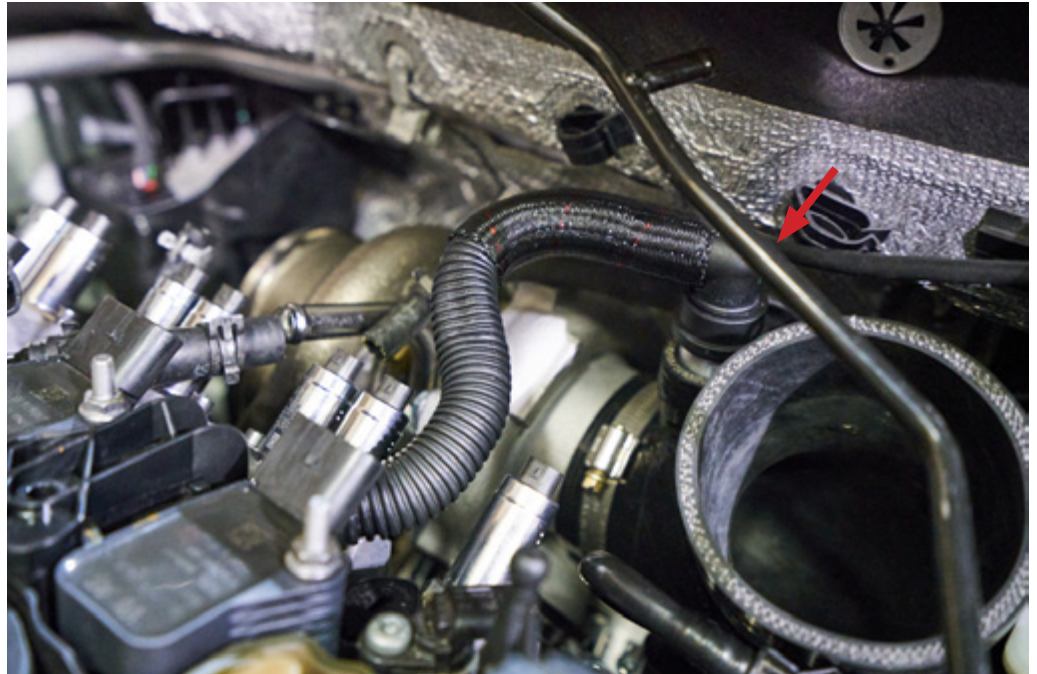
**STEP 26**

Reinstall the Cam adjusters

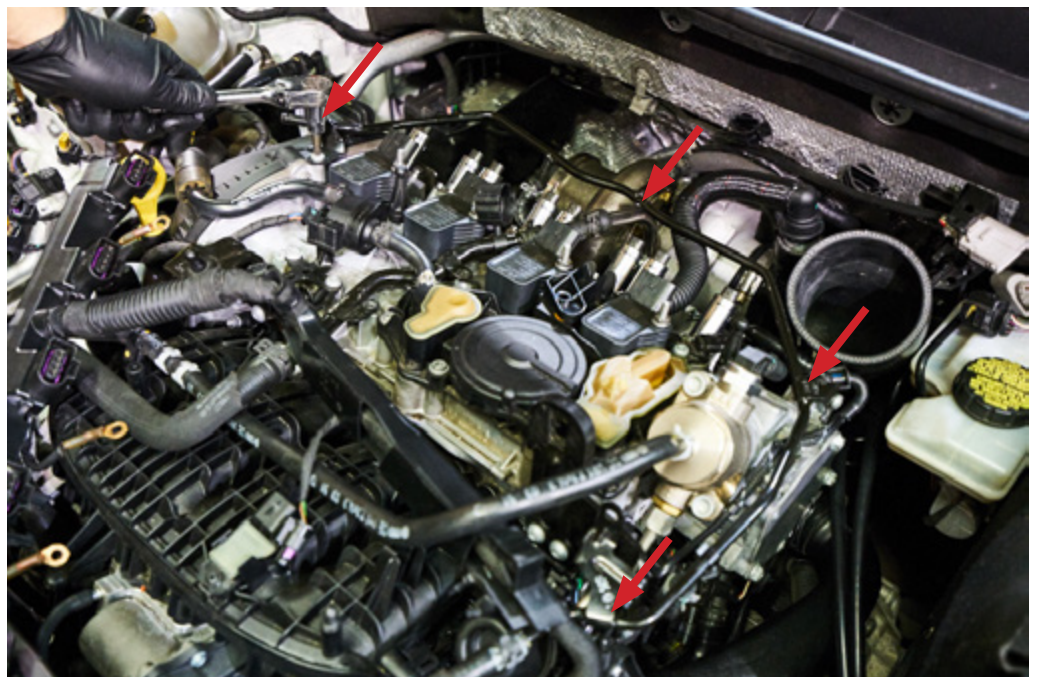


STEP 27

Reconnect PCV pipe to the turbo inlet silicone using the provided aluminum bung.

**STEP 28**

Reconnect coolant lines to the coolant hardlines and fasten back onto the engine block



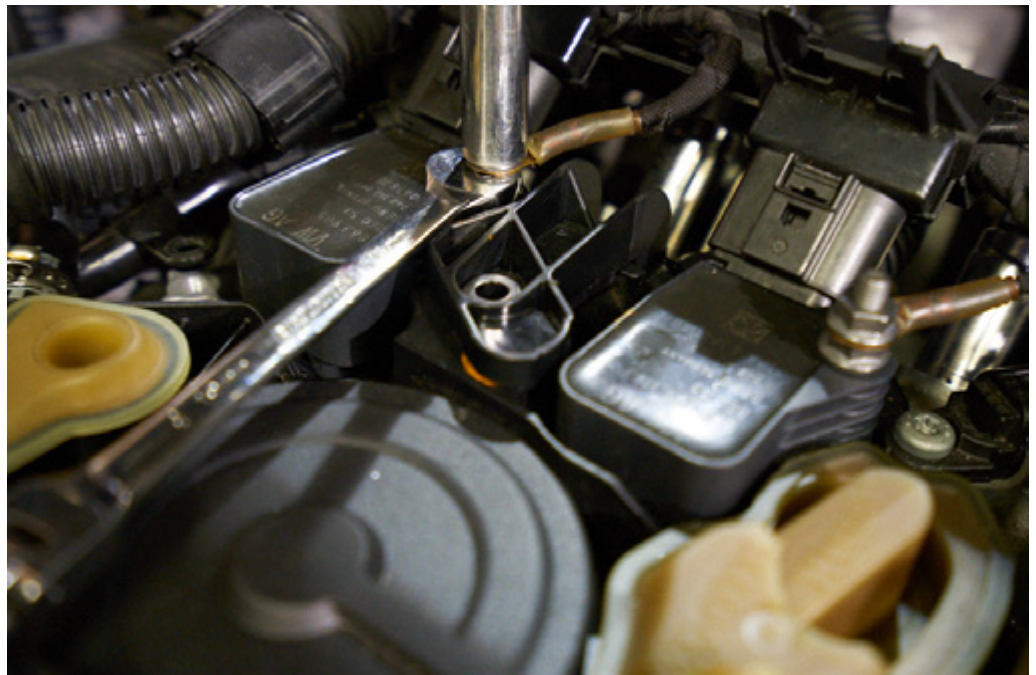
STEP 29

Reconnect all connections to the ignition coils and cam adjusters.

Refasten ground wires for the coil packs

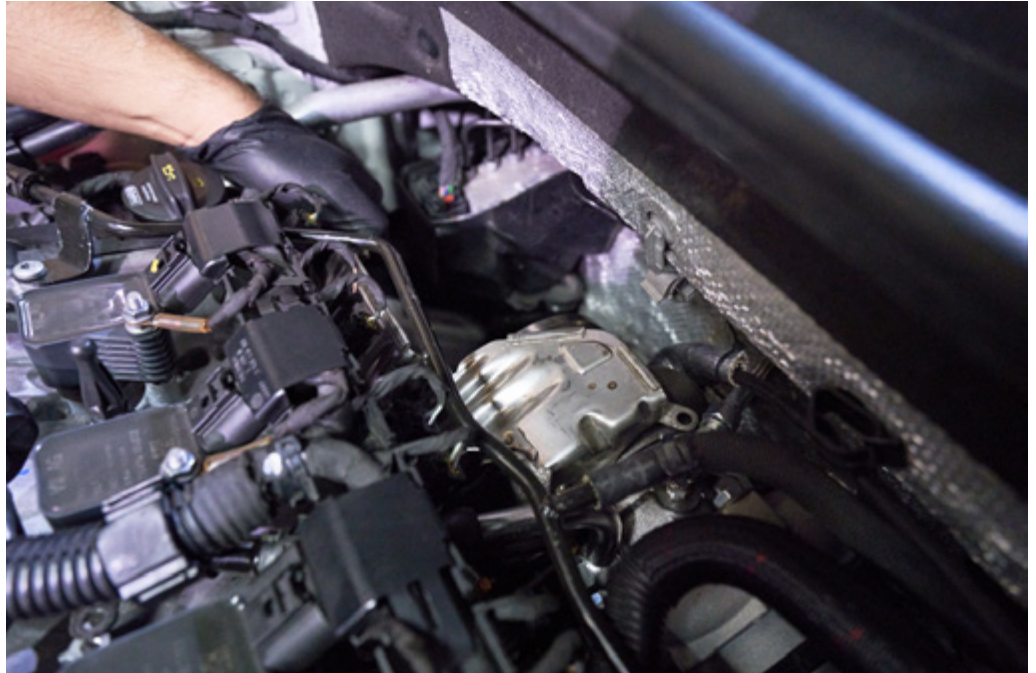
**STEP 30**

Refasten ground wires for the coil packs



STEP 31

Reattach the turbo
heatshield

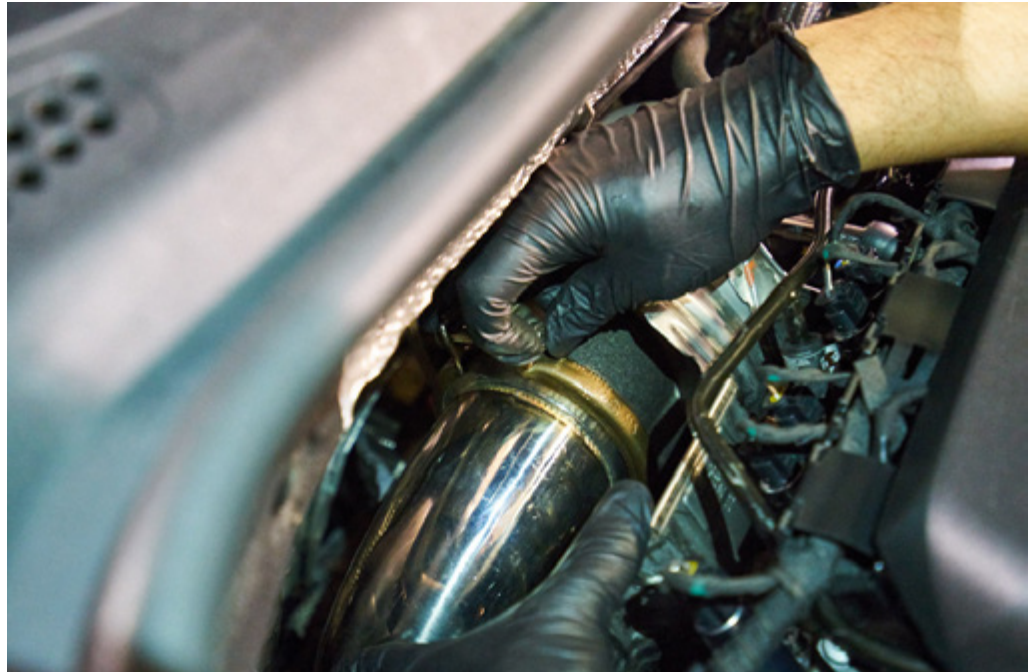
**STEP 32**

Reinstall the air
intake kit.



STEP 33

Reconnect the downpipe to the turbo.

**STEP 34**

Reinstall the engine cover.

You are done!

Note: The wastegate will need to be calibrated using a Vag Com. See the following two page for detailed instructions.



MQB Bolt-On Speed Solution (BOSS) Wastegate Adjustment

1. Unbox the turbo
2. Loosen jam nut on the actuator rod
3. Turn the rod until the wastegate door is loose, i.e. it should wiggle freely
4. Slowly turn the actuator rod to tighten the wastegate until the wastegate door makes contact with
the housing. Once this occurs, the wastegate door should no longer wiggle freely
5. Draw a small line/mark a dot on the actuator rod
6. Using the line/dot as a point of reference, turn the rod once to tighten the wastegate
7. Tighten the jam nut
8. Install the turbo and plug in the wastegate actuator
9. Leave the turbo accessible if further adjustments are needed. Best to accessible the turbo from
underneath with the downpipe removed
10. Plug in the VCDS cable into the OBDII port
11. Turn on the ignition, but DO NOT turn on the engine
12. Open the VCDS program
13. Go to "Select Control Module"
14. Go to "01 – Engine"
15. Go to "Basic Settings – 04"

[BOSS] Wastegate Adjustment (Cont.)

17. Click "Go"

18. The program will run shortly, i.e. "running" but for no more than 10 seconds

a. If test failed, continue to Step 19

b. If test successful, continue to Step 20

19. If test was not successful, i.e. "Aborted – Safety reasons", loosen jam nut and turn the rod 0.1

turns

a. Go to "Done – Go back"

b. Go to "Clear Codes – 02"

c. Return to Step 15, and run test again

20. If test was successful, i.e. "Finished Correctly"

a. Return to Step 15 to validate that test is successful and calibrated

21. Complete installation of turbocharge system and enjoy