



INSTALLATION INSTRUCTIONS

Maverick R P47-400 Turbocharger Upgrade System

SKU(s): 604FC0128, 604FC0129, 604FC0132

NOTE: Your MG1 ECU must be Unlocked by EVP to enable proper tunes for this turbocharger upgrade.

NOTE: Your turbocharger must be in working order or you will be charged for a core. Remove your wastegate before sending your turbocharger.



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INSTALLATION INSTRUCTIONS

Parts Included in Paragon 47-400 Turbo Upgrade System

100FC0210	Maverick R Blow Off Valve (BOV) Kit
100FC0206	Maverick R Charge Tube Kit, Black
203FC0129	Maverick R Stock Turbo High Flow Intake Kit (HFI)
501FC0001	X3 1000cc Injectors, Set of 3
604FC0123	Maverick R P47 Turbocharger
702RC0013	X3 4 Bar MAP Sensor Kit
500FC0065	Maverick R Fuel Pump Assembly with 340LPH Pump, 4.5 Bar Regulator
002FC0317	Maverick R Big Turbo Power Flash with Launch Control and Transmission
804FC0319	Maverick R Big Turbo Spark Plug, Set of 3
953RU0586	2024 Maverick R ECU Unlock
804FC0320	Maverick R OEM Turbocharger Gasket
803FC0020	Maverick R Catch Can Kit
203FC0127	Maverick R Plenum Clamp Kit

Level	Tunes	Max Boost (psi)	Spark Plug Gap	Spring	Waste Gate (psi)	Engine HP
P46-335	91, MS-109, E85	21, 30, 32	.020"	N/A	Electronic	354WHP 402CHP(E85)

Required Parts (Sold Separately)

- EVP or other Full Turbo Back Exhaust System
-
-

STEPS TO SENDING IN YOUR TURBOCHARGER

- WASH TURBOCHARGER WITH HEAT SHEILDS REMOVED BUT EXHUAUST ON
- REMOVE WASTEGATE AND HADWARE BEFORE SENDING
- TAPE/PLUG THE COOLANT & OIL PASSEGAES ON THE TURBOCHARGER.



INSTALLATION INSTRUCTIONS

Step 1: Remove the heat shields (2 part) around the turbocharger. 1 hose clamp, (2) 10mm screws underneath and (4) on top by the valve cover.

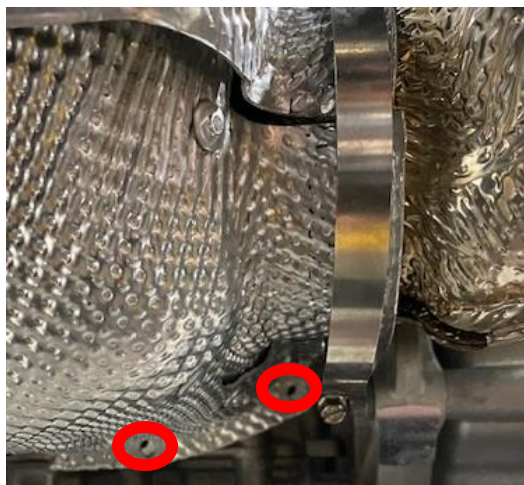


Figure 1

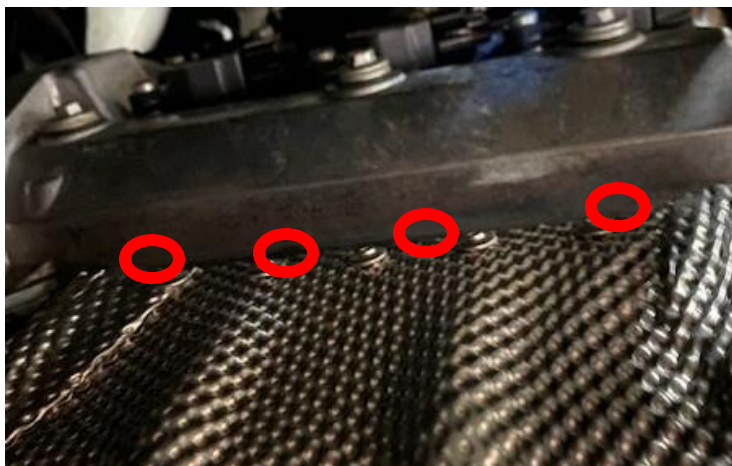


Figure 2

Step 2: Unplug the O2 sensor from the engine harness. If you are running a shocker, unplug the actuator plug as well.

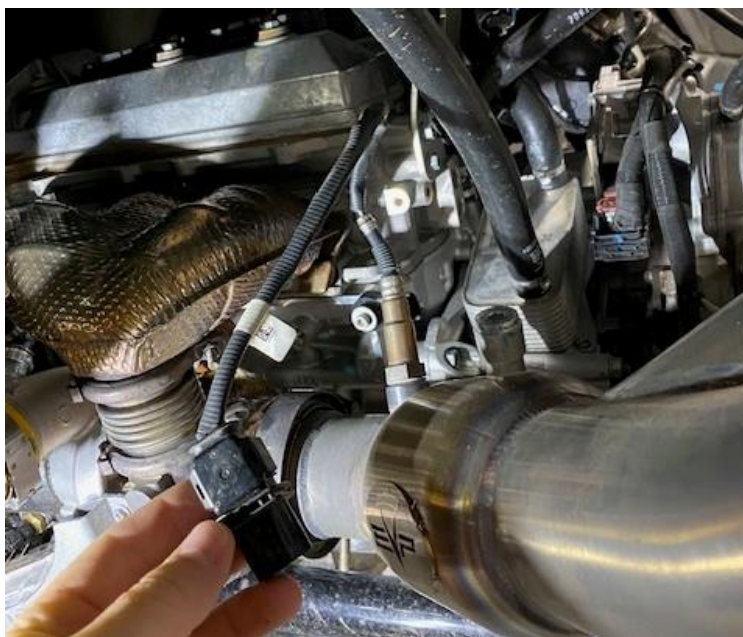


Figure 3

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Step 3: Remove the heat shield located on the downpipe. (3) 10mm screws.



Figure 4

Step 4: Remove the (4) exhaust springs holding the downpipe to muffler. Loosen the V-band clamp holding the downpipe onto the turbocharger. Use a 13mm socket, lightly tap the V-band if stuck. Do not bend this clamp. Remove downpipe.



Figure 5



INSTALLATION INSTRUCTIONS

Step 5: Remove the turbocharger to intercooler charge tube, (2) 11mm nuts. If you are running a rising rate setup, remove the vacuum line. Remove the intake tube, valve cover breather if not running a catch can, either OEM airbox or high flow intake.



Figure 6



Figure 7

Step 6: Unplug the electronic wastegate connector. There are (2) tabs, one on top and one on bottom. Press together and remove.



Figure 8

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Step 7: Remove both V-band clamps holding the flex jointer from the header to turbocharger. Take note on where these clamps are orientated. Use a 10mm socket.



Figure 9



Figure 10

Step 8: Remove the cap off the coolant reservoir. Pinch off all coolant lines going to and from the engine. A total of 5 clamps, going to the head, lines running up to the radiator and intercooler located by plenum, large hose by the temperature sensor, and hose between the firewall and plenum.



Figure 11



Figure 12



Figure 13

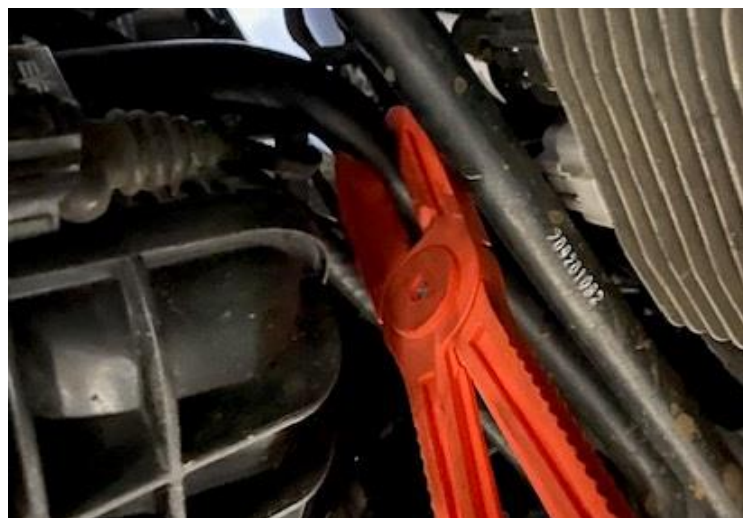


Figure 14

Step 9: CAREFULLY remove the 10mm nut holding the wastegate rod to the flapper. Remove the nut, washer and inner sleeve. **USE PB Blaster and let it sit!**



Figure 15

Step 10: Remove (2) 8mm screw holding the wastegate bracket onto the turbocharger.



Figure 16

Step 11: Remove (2) 10mm turbocharger mounting screws on the bottom. Remove wastegate bracket and rod.



Figure 17

Step 12: Place a catch pan underneath the vehicle. With the wastegate bracket removed, you can now access the coolant drain plug on the turbocharger. Use a 17mm socket, slowly remove the plug and copper washer.

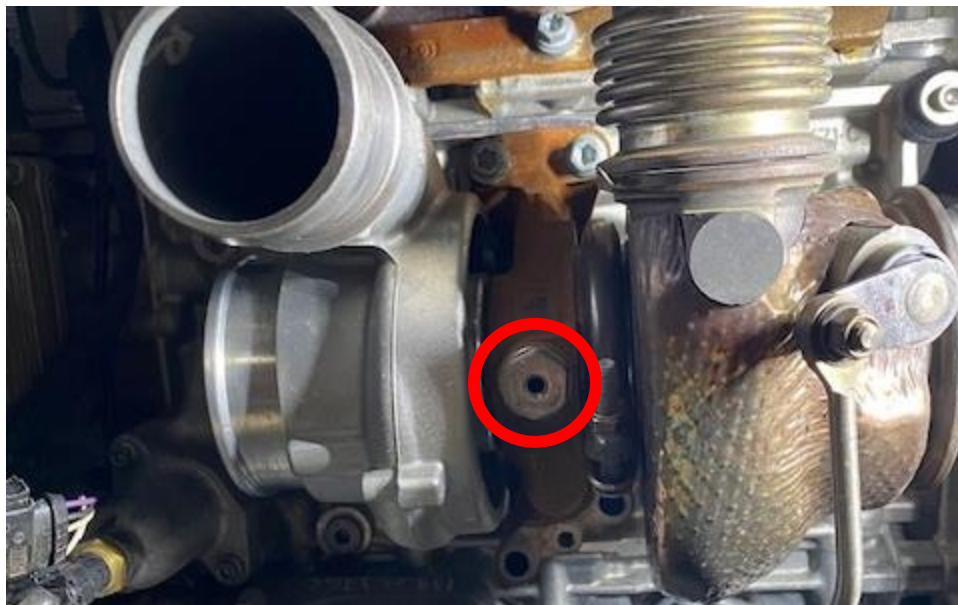


Figure 18



Figure 19

Step 13: Remove (4) 10mm screws on the top of the header.



Figure 20

Step 14: Loosen the bottom pinch plate screws holding the header to the block. You may need to indent the heat shield to get a socket on the screw.



Figure 21

Step 15: Remove the (2) top 10mm turbocharger screws.

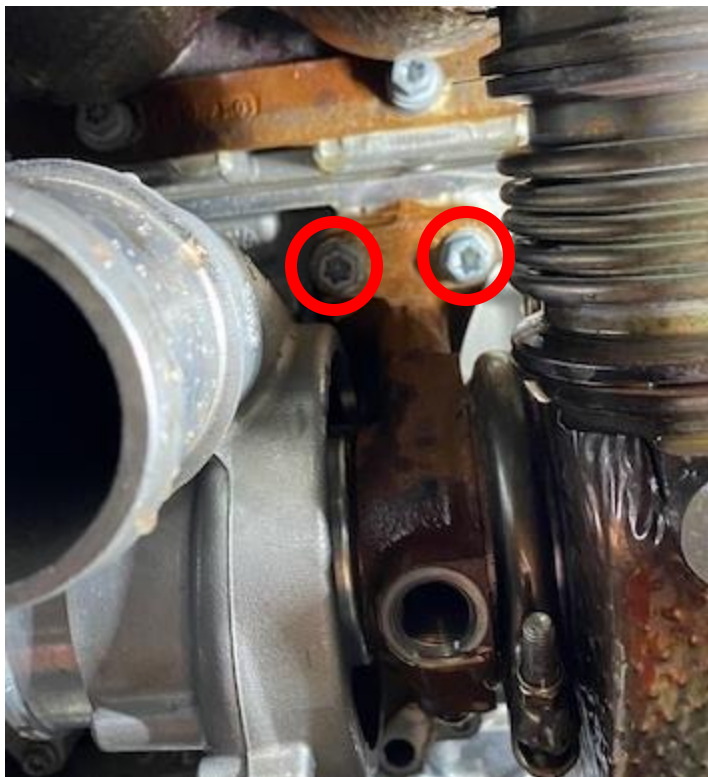


Figure 22

Step 16: Wiggle the turbocharger off the (2) locating pins while lifting the header up slightly. You do NOT need to remove the header. There is a pipe between the header and turbocharger.



Figure 23

Step 17: Keep the compensator and (2) gaskets. If torn or bent, you must get new.



Figure 24

Step 18: Clean up the turbocharger mounting location and gasket. Remove old gasket and replace with supplied gasket. Make sure the compensator tube is bottom out in the exhaust manifold or turbocharger. If not, remove and clean and reinstall with turbocharger. Sometimes they will get pinched sideways.



Figure 25

Step 19: Install the coolant plug and sealing washer into the turbocharger, torque to 22 ft-lb.
This is what you will be sending to Evolution Powersports.



Figure 26

Step 19b: You will keep all mounting hardware and wastegate hardware. **DO NOT SEND THIS WITH YOUR TURBOCHARGER!**



Figure 27



INSTALLATION INSTRUCTIONS

NOTE: PLEASE TAPE OVER BOTH COOLANT AND OIL INLET/OUTLET

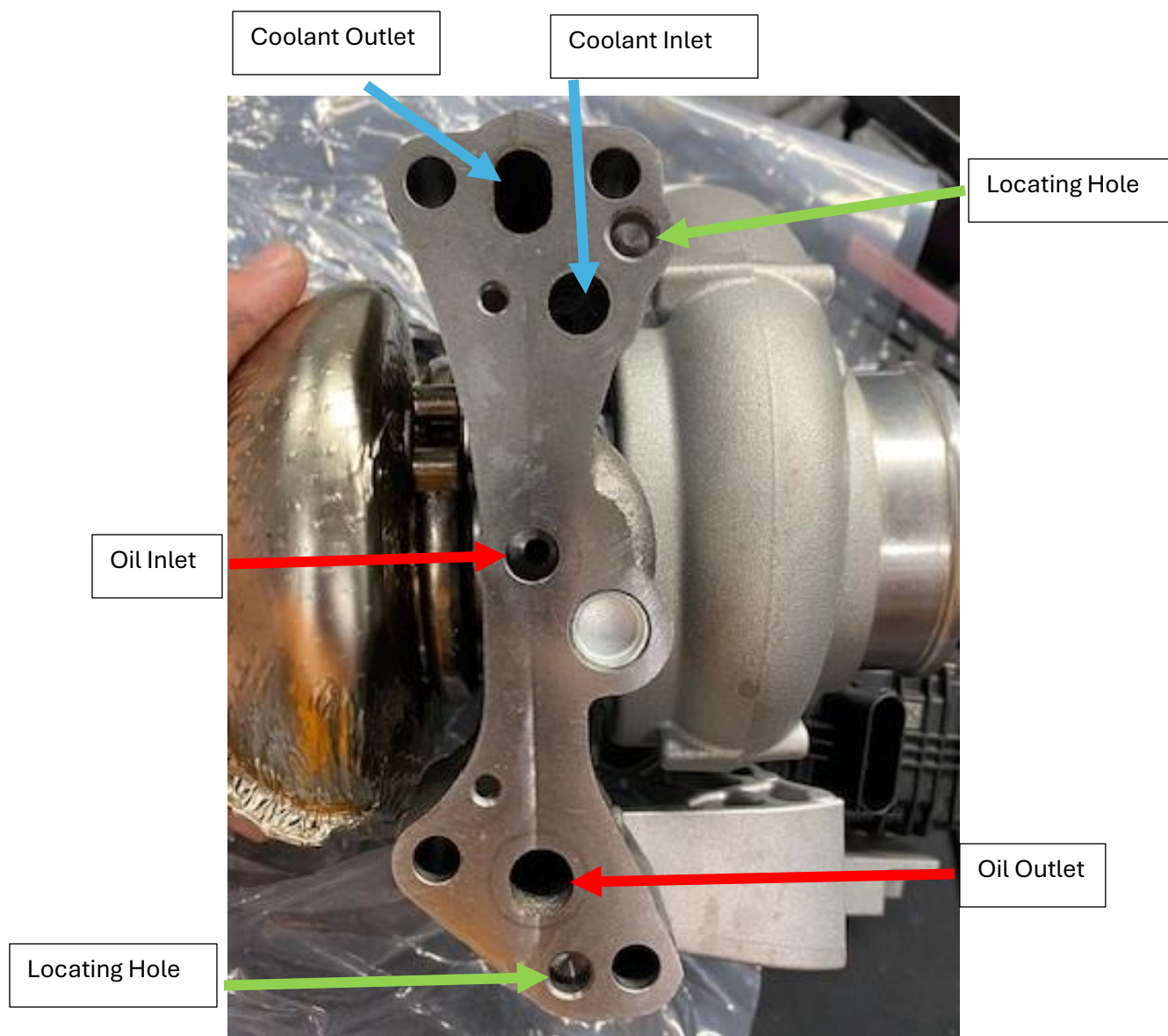


Figure 28

Step 20: Install the wastegate bracket and (2) 8mm screws onto the turbocharger. Install the wastegate rod with sleeve, washer and nut onto the wastegate flap. You will notice the wastegate flap won't be closed, this is normal.



Figure 29

Step 21: Remove the header and inspect the gasket. If torn, replace. Reinstall header into the pinch plate. Install new turbocharger gasket if you haven't already.



Figure 30

Step 22: Install the new turbocharger fully assembled, with the compensator and gaskets. Install (2) turbo mounting screws loosely.



Figure 31

Step 23: Spin the compensator gaskets so the tabs are facing the wastegate actuator. If not clocked correctly, the V-band clamps will be clocked incorrectly.

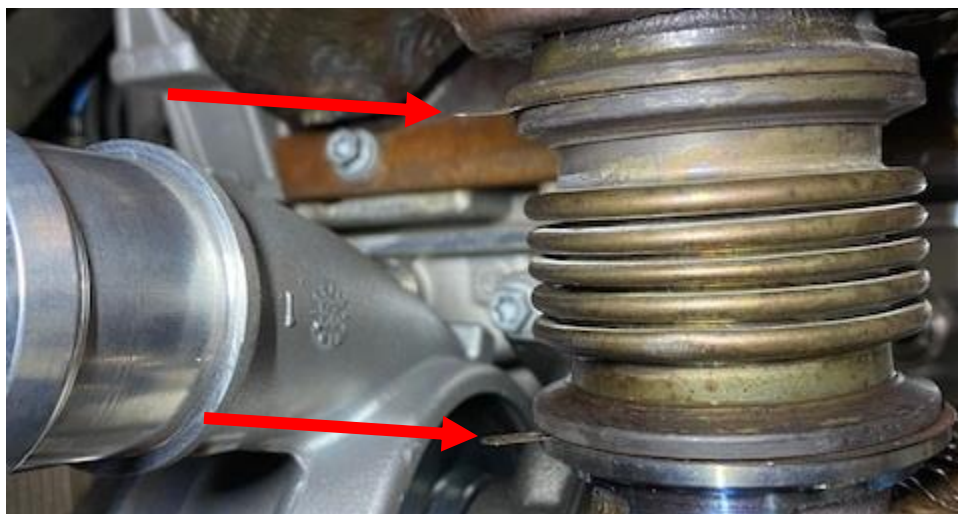


Figure 32

Step 24: Torque the bottom (3) screws on the clamping plate to 18 ft-lb in sequence.

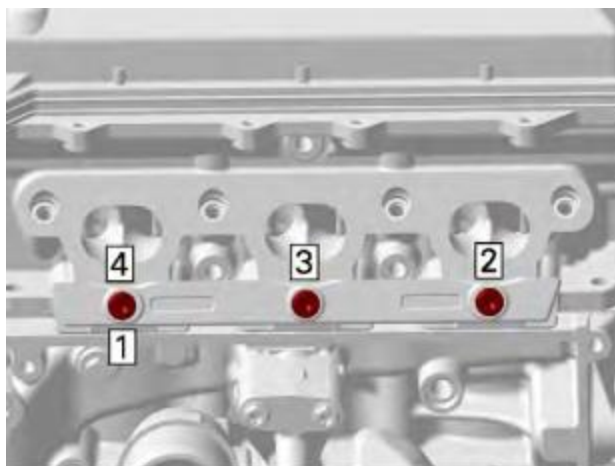


Figure 33

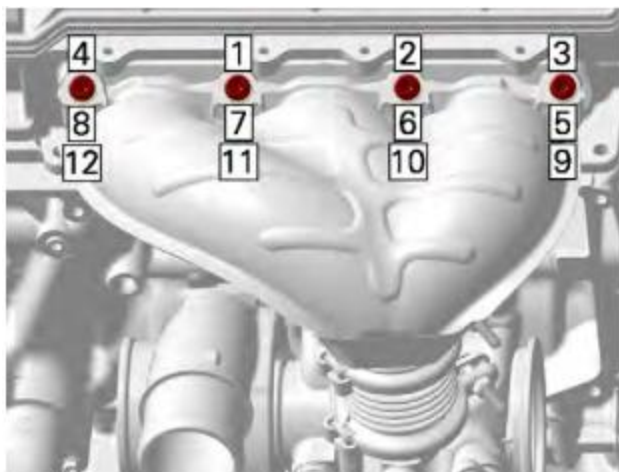
Step 25: Install the compensator V-band clamps and hand tighten to now. Make sure the gasket tab is in the opening of the V-band.



Figure 34

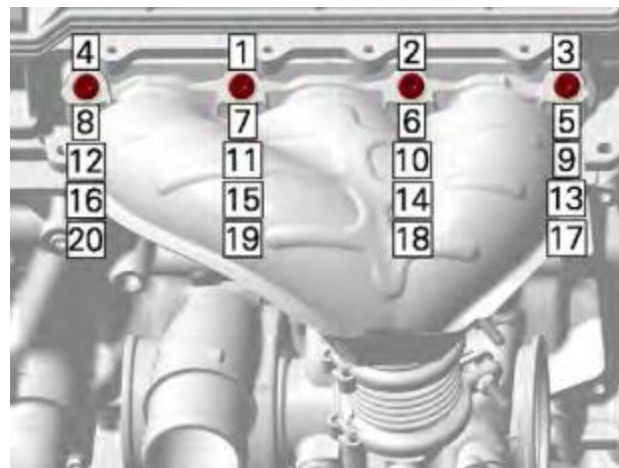


Step 26: Torque the upper exhaust manifold screws to 18 ft-lb, in sequence. Notice the difference between “NEW” and “USED”.



TIGHTENING SEQUENCE — NEW EXHAUST MANIFOLD

Figure 35



TIGHTENING SEQUENCE — REUSED EXHAUST MANIFOLD

Figure 36

Step 27: Torque the (4) turbocharger screws to 18 ft-lb in sequence.

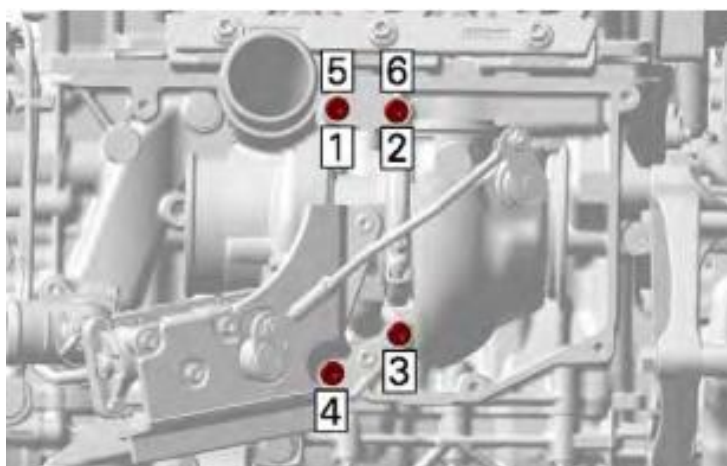


Figure 37

Step 28: Torque the compensator V-band clamps to 80 in-lb.



INSTALLATION INSTRUCTIONS

Step 27: Remove all the coolant clamps on all hoses.

Step 28: Reinstall the HFI intake tube.

Step 29: Reinstall charge tube from intercooler to turbocharger.

Step 30: Reinstall exhaust and all heat shields.

Step 31: Check oil levels, may have to add a little.

Step 32: Add coolant, heat cycle the engine so thermostat opens to top off coolant.

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Map Sensor Installation:

Step 1: located on the top of the plenum you will find a MAP sensor, remove the electrical connector. With a T-30 socket remove the screw. Remove the OEM MAP sensor. Install dielectric grease on the supplied 4 bar MAP sensor O-ring. Install into the plenum and plug in the electrical connector.



Figure 38

Step 2: Located on the inside of the throttle body is the second MAP sensor. Remove the charge tube. Unplug the electrical connector, with a T-30 socket remove the screw. Remove the OEM MAP sensor. Install dielectric grease on the supplied 4 bar MAP sensor O-ring. Install the supplied MAP sensor harness to the OEM harness and MAP sensor.



Figure 39

Fuel Injector Installation

Step 1: Spray all injector ports and plenum with brake cleaner and compressed air. You do NOT want anything falling into the injector ports. Remove (2) 8mm screws.

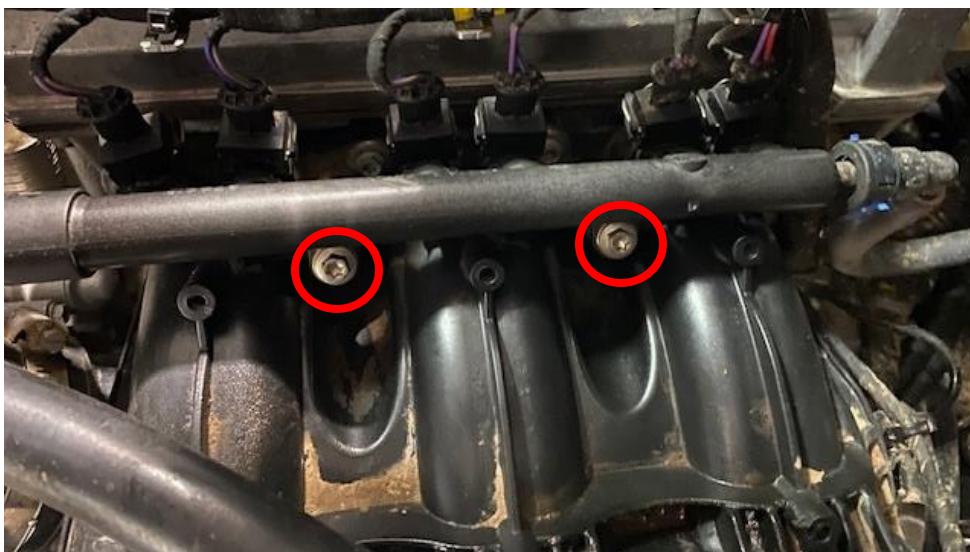


Figure 40

Step 2: Carefully push down and remove the blue safety clip on the fuel quick connector. DON'T BREAK IT. Press down on the top black connector and remove the fuel hose from the fuel rail.

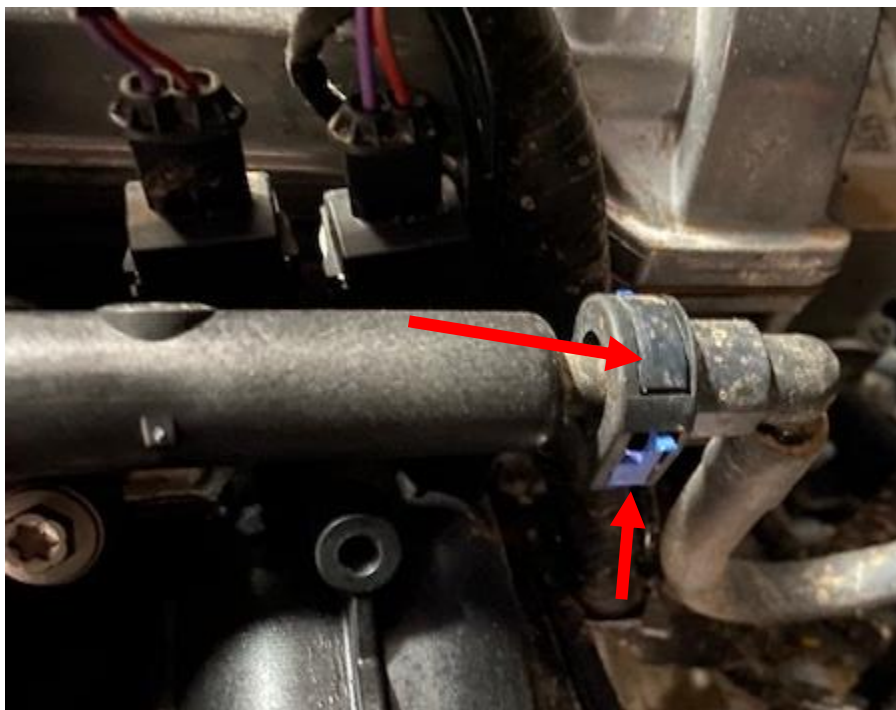


Figure 41

Step 3: Remove the fuel rail with injectors attached. Flip the fuel rail 180 degrees. Unclip all injector electrical connectors.

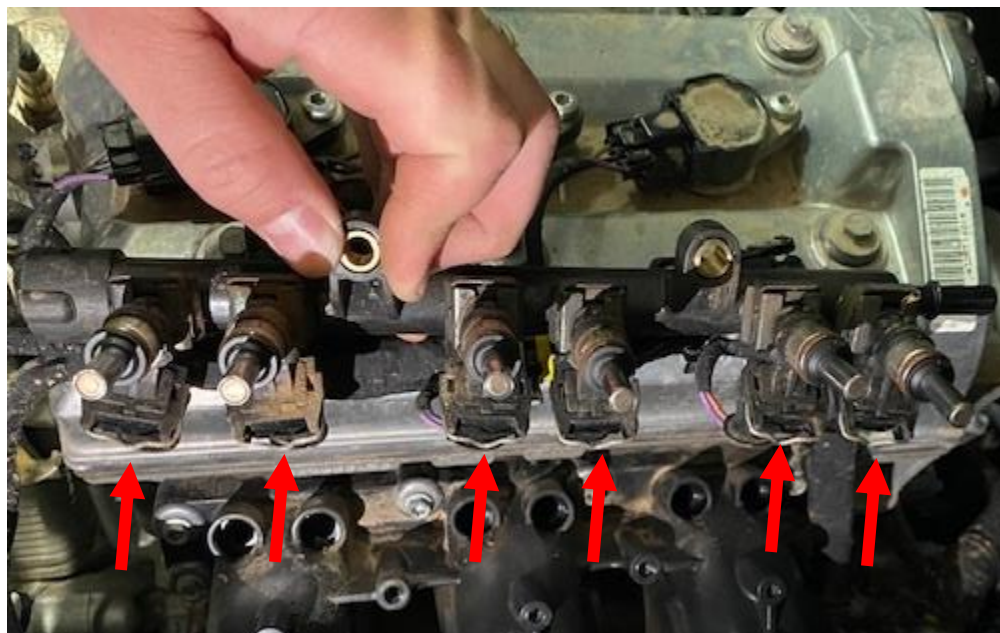


Figure 42

Step 4: ONLY remove the (3) secondary injector clips. Remove injectors and clean O-rings. Install the (3) supplied 1000cc injectors. Use dielectric grease on the O-rings.

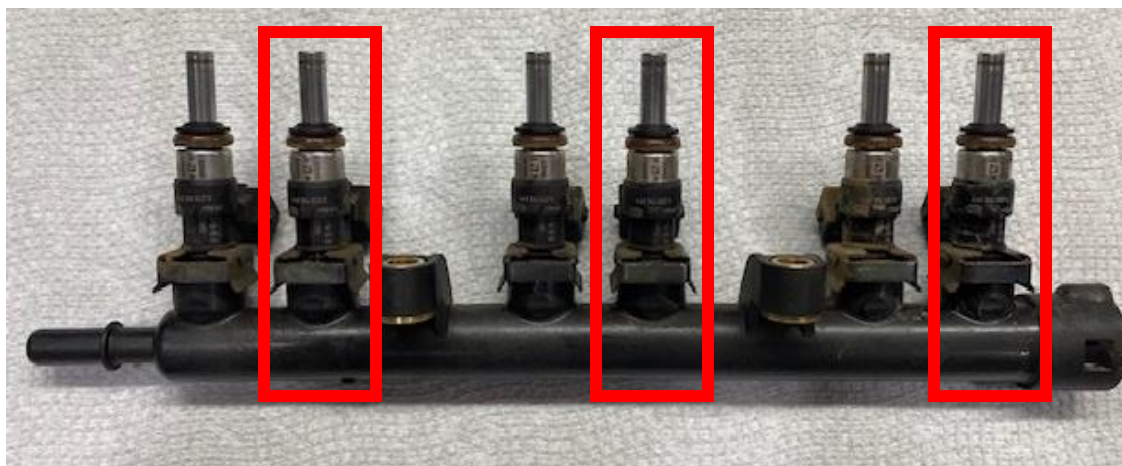


Figure 43

Step 5: Reinstall all other parts in reverse order. No injector adaptors are needed.

Spark Plug Installation

Step 1: Remove the bed and intercooler / radiator wind dam.



Figure 44

Step 2: Remove both charge tubes from the intercooler using an 11mm socket.

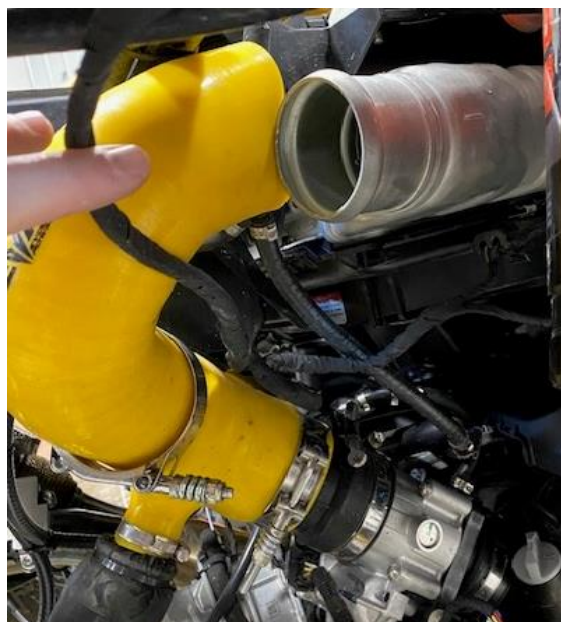


Figure 45



Figure 46

Step 3: Remove the (1) coolant reservoir mounting screw using a 10mm socket.



Figure 47

Step 4: Remove the coolant reservoir and bungee it up to the cage.



Figure 48

Step 5: Remove (6) intercooler tray screws using a 10mm socket.



Figure 49

Step 6: Tilt the back of the intercooler upwards, unplug (2) intercooler fan connectors. Remove the intercooler from the vehicle.



Figure 50

Step 7: With the intercooler removed you can now access the valve cover. Unplug (3) coil pack connectors, (3) T-30 screws, and remove (3) coils. With a 14mm socket loosen the spark plugs. Use a magnet to remove the plugs.



Figure 51



Figure 52



Figure 53

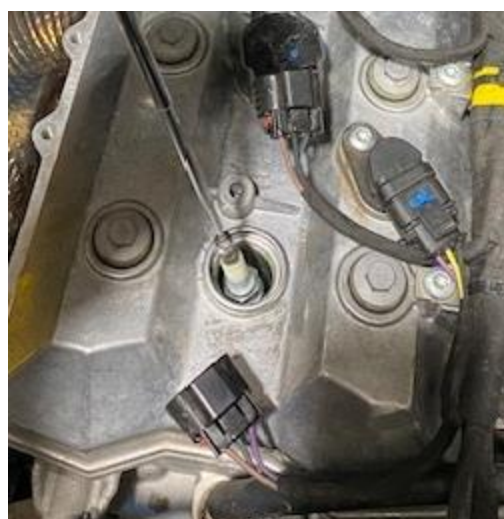


Figure 54



INSTALLATION INSTRUCTIONS

Step 8: Apply a small amount of anti-seize to the threads of the new plugs. Install the plugs into the head using a magnet. Torque the plugs to 124 in-lb (14 Nm).

Step 9: Once complete, reinstall vehicle in reverse order.

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