Edelbrock
SUPERCHARGERS

Edelbrock Supercharger

2018-20 JEEP WRANGLER JL, GLADIATOR JT

3.6L V6

Part #15284*, 152840*

*Not compatible with E-Torque Hybrid Electric Systems.

Edelbrock
SUPERCHARGERS

Edelbrock Supercharger System
2018-20 Jeep Wrangler JL, Gladiator JT 3.6L V6
Installation Instructions

WARNING!

The supercharger bypass valve is factory installed and adjusted intended to be vacuum operated only. DO NOT move the solenoid actuator lever by hand or adjust the stop point. Moving the lever manually will damage the solenoid and the system will not function properly. Damage to the bypass assembly from manual movement will not be covered under manufacture warranty.

IMPORTANT CALIBRATION DETAILS

2018-2020 Vehicles ONLY

USA CUSTOMERS ONLY:
In order to properly calibrate your vehicle for this supercharger kit, the ECM must be removed from the vehicle, packaged and shipped to Edelbrock. Your vehicle's computer will be modified for supercharger kit compatibility. Part number 15284 and 152840 contain a box for shipping the ECM to Edelbrock. (See ECM removal procedures on the following pages.)

NOTE: *Please email your Name, Address and phone number to: ECMCalibration@Edelbrock.com and a prepaid return label will be sent. Affix the label to the package and drop it off at any UPS Store in your area.*

The calibration process will take approximately 8-10 business days from the time your vehicles ECM is received. To avoid unplanned vehicle down time, we recommend that the ECM be shipped out BEFORE beginning the supercharger installation.

INTERNATIONAL (NON-USA) CUSTOMERS PLEASE CALL EDELBROCK TECHNICAL SUPPORT AT (800)-416-8628.

IMPORTANT WARNINGS (CONTINUED)

The supercharger manifold includes a 1/8 NPT port to accommodate the installation of a boost gauge or pressure transducer. Remove the plug and replace it with a fitting to attach your gauge or sensor.

The supercharger has been pre-drilled and tapped for a 1/8" NPT fitting at the rear of the passenger side intake runner flange. There is currently a plug sealing the hole, which can be removed, and replaced with a fitting to adapt to your sensor. **CAUTION:** Never cut into the vacuum lines leading to the bypass actuator for the purpose of tapping in a boost gauge. This can result in boost pressure readings that are higher than what is actually present in the intake plenum.

Do not use a wideband oxygen sensor in place of the rear O2 sensor when dyno testing this supercharger system. The voltage signal will cause the fuel system to run lean and possibly cause engine damage.

91 octane or higher gasoline is required at all times. If your vehicle has been filled with anything less, it must be run until dry and refilled with 91 or higher octane gasoline twice prior to installation.

Failure to use the required 91 octane gasoline or higher could permanently damage your engine. Any failures associated with not using premium 91 octane gasoline or higher, will be ineligible for warranty repairs.

WARNING: Installation of this supercharger and charge air cooler may require removal and replacement of front grille, front bumpers, or other pieces which may be equipped with Advanced Driver Assistance Systems (ADAS). ADAS Systems include, without limitation:

- Forward Collision Warning
- Auto braking
- Lane Departure Warning
- Lane Keeping Assist
- Blind Spot Warning
- Rear Cross Traffic
- Rearview Camera
- And various other OEM ADAS Equipment

It is the responsibility of the installer to ensure that all necessary ADAS systems that require post-repair calibrations/targeting/aiming is performed by qualified repair facilities. Edelbrock assumes no liability whatsoever with respect to any damages or losses with respect to any ADAS systems.

Edelbrock Authorized Installer Disclaimer

Authorized installers of Edelbrock products are independent companies over which Edelbrock has no right of control. Edelbrock LLC makes no claims regarding the abilities, expertise or competency of individual employees of any authorized installer. Each authorized installer is an independent company and makes its own independent judgments. Edelbrock LLC specifically disclaims any responsibility to any party including third parties for the actions, or the failure to act, of individuals, agents or a company authorized in the installation of Edelbrock LLC products.

INTRODUCTION

Thank you for purchasing the Edelbrock Supercharger System for the Jeep Wrangler with 3.6L V6 Pentastar. This is a front drive, front inlet, blow down supercharger system using Eaton's TVS1320 rotor group. The supercharger housing is mated to a lower manifold assembly which houses a dual pass intercooler measuring in at 11" long by 3.5" wide and 1.5" thick.

The supercharger is 50-State emissions legal, and includes a 3-year 36,000 mile warranty, where applicable, so there are no worries when installing on a brand new vehicle.

TOOLS AND SUPPLIES REQUIRED

- 17mm Allen Socket
- Impact Wrench
- Ratchet and Socket Set including but not limited to:
  1/4" Drive: 8mm, 10mm and Universal Joint
  3/8" Drive: 8mm, 10mm, 12mm, 13mm, 15mm, 16mm, 24mm,
  Deep: 9mm, 19mm
  1/2" Drive: 22mm, 24mm
- Wrench Set including but not limited to: 8mm, 10mm, 17mm
- Breaker Bar: 1/2"
- Utility Knife
- Flat Blade & Phillips Screwdrivers
- 50/50 Coolant Mixture
- Side Cutters
- Fuel Line Removal Tools
- Torque Wrench
- Pliers OR Hose Clamp Removal Tool
- Blue Thread Retaining Compound
- O-ring Lube
- Masking Tape
- Shop Rags
- Wire Ties
- Dremel or Grinding Tool

IMPORTANT WARNINGS

Before beginning the installation, use the enclosed checklist to verify that all components are present in the box then inspect each component for damage that may have occurred in transit. If any parts are missing or damaged, contact Edelbrock Technical Support (800-416-8628), not your parts distributor.

Due to the complexity of the Edelbrock Supercharging system, it is recommended that this system only be installed by a qualified professional with access to a service lift, pneumatic tools, and a strong familiarity with automotive service procedures. To qualify for the Powertrain Warranty, the supercharger system must be installed by a Certified ASE Technician at a licensed business, Chrysler/Jeep Dealership, or an Authorized Edelbrock installer. Failure to do so will void and/or disqualify any and all warranties offered with this system. Please contact the Edelbrock Technical Support department if you have any questions regarding this system and/or how your installer of choice will affect any warranty coverage for which your vehicle may qualify.

IMPORTANT WARNINGS CONTINUED

Proper installation is the responsibility of the installer. Improper installation will void all manufacture's standard warranties and may result in poor performance and engine or vehicle damage.

Inspect all components for damage that may have occurred in transit before beginning installation. If any parts are missing or damaged, contact Edelbrock Technical Support, not your parts distributor.

Any previously installed aftermarket tuning equipment must be removed and the vehicle returned to an as stock condition before installing the supercharger.

Any equipment that directly modifies the fuel mixture or ignition timing of the engine can cause severe engine damage if used in conjunction with the Edelbrock Supercharger System. This includes, but is not limited to: OBDII programmers, MAF sensors, adapters and any other device that modifies signals to and/or from the ECU. Aftermarket bolt-on equipment such as underdrive pulleys or air intake kits will also conflict with the operation of the supercharger and must be removed prior to installation. Use of any of these products with the Supercharger could result in severe engine damage, **make the vehicle emissions non-compliant, and void warranty.**

WARNING: *Installation of this supercharger will result in a significant change to the performance characteristics of your vehicle. It is highly recommended that you take some time to familiarize yourself with the added power, and how it is delivered. This must be done in a controlled environment. Take extra care on wet and slippery roads as the rear tires will be more likely to lose traction with the added power. It is never recommended to turn off your vehicles traction control system.*

It is recommended that you check the Edelbrock Tech Center Website for any updates to this installation manual. Please refer to the lower right hand corner to verify that you have the latest revision of this installation manual before beginning the installation.

Tech Center: http://www.edelbrock.com/automotive_new/misc/tech_center/install/index.php

INSTALLATION HARDWARE IDENTIFICATION GUIDE

(Parts Are Not To Scale)

Bag #1

(2) - Bolt, Hex Flange, M10 x 1.5 x 130mm

(1) - Bolt, Hex Flange, M10 x 1.5 x 110mm

(1) - Bolt, Hex Flange, M8 x 1.25 x 120mm

(1) - Bolt, Hex Flange, M8 x 1.25 x 40mm

(1) - M14 Washer

(1) - Nut M14x1.5 Left Hand Thread

(2) - Bolt, Hex Flange, M8 x 1.25 x 30mm

(2) - Bolt, Button Head, M8 x 1.25 x 25mm

(2) - Bolt, Hex Flange, M8 x 1.25 x 20mm

(1) - M8 Washer

(1) - M10 Hex Nut

(1) - Shim, Upper Idler

(1) - Spacer, Alternator Support

(1) - Bracket, Alternator Support

(1) - Shim, Upper FEAD

Bag #2

(8) - 3/4” Hose Clamp

(2) - M6 Nut

(8) - Bolt, Hex Flange, M6 x 1.00 x 10mm

(1) - 20A Fuse

Bag #3

(1) - Bolt, SHCS, M6 x 1.00 x 65mm

(6) - Bolt, SHCS, M6 x 1.00 x 60mm

(10) - Bolt, SHCS, M8 x 1.25 x 22mm

(3) - Bolt, Hex Flange, M6 x 1.00 x 50mm

(4) - Bolt, Hex Flange, M6 x 1.00 x 40mm

(8) - Bolt, Hex Flange, M6 x 1.00 x 30mm

(1) - Taper Jet, .015”

(2) - Bolt, Hex Flange, M6 x 1.00 x 20mm

(4) - Bolt, SHCS, Low Profile Head, M5 x 0.8 x 14mm

BRACKET AND FEAD IDENTIFICATION GUIDE

(Parts Are Not To Scale)

FEAD Bracket

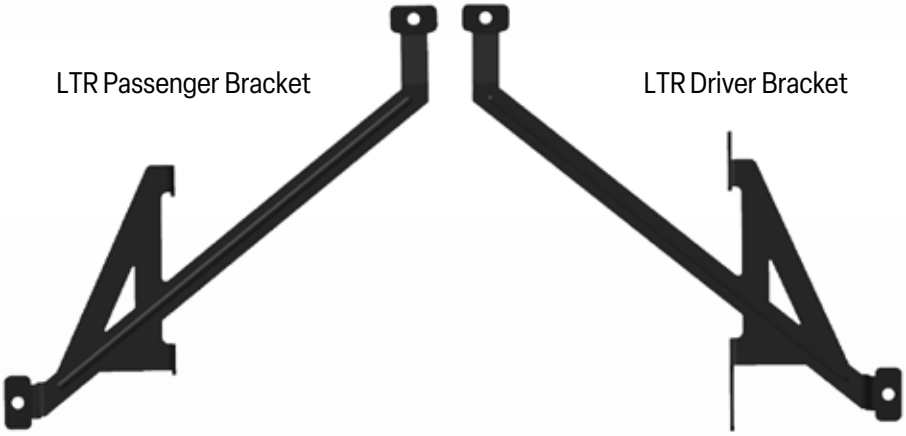
70mm Idler Pulley

54mm Idler Pulley

Surge Tank w/ Cap

LTR Passenger Bracket

LTR Driver Bracket



Water Pump Isolator

Water Pump Bracket

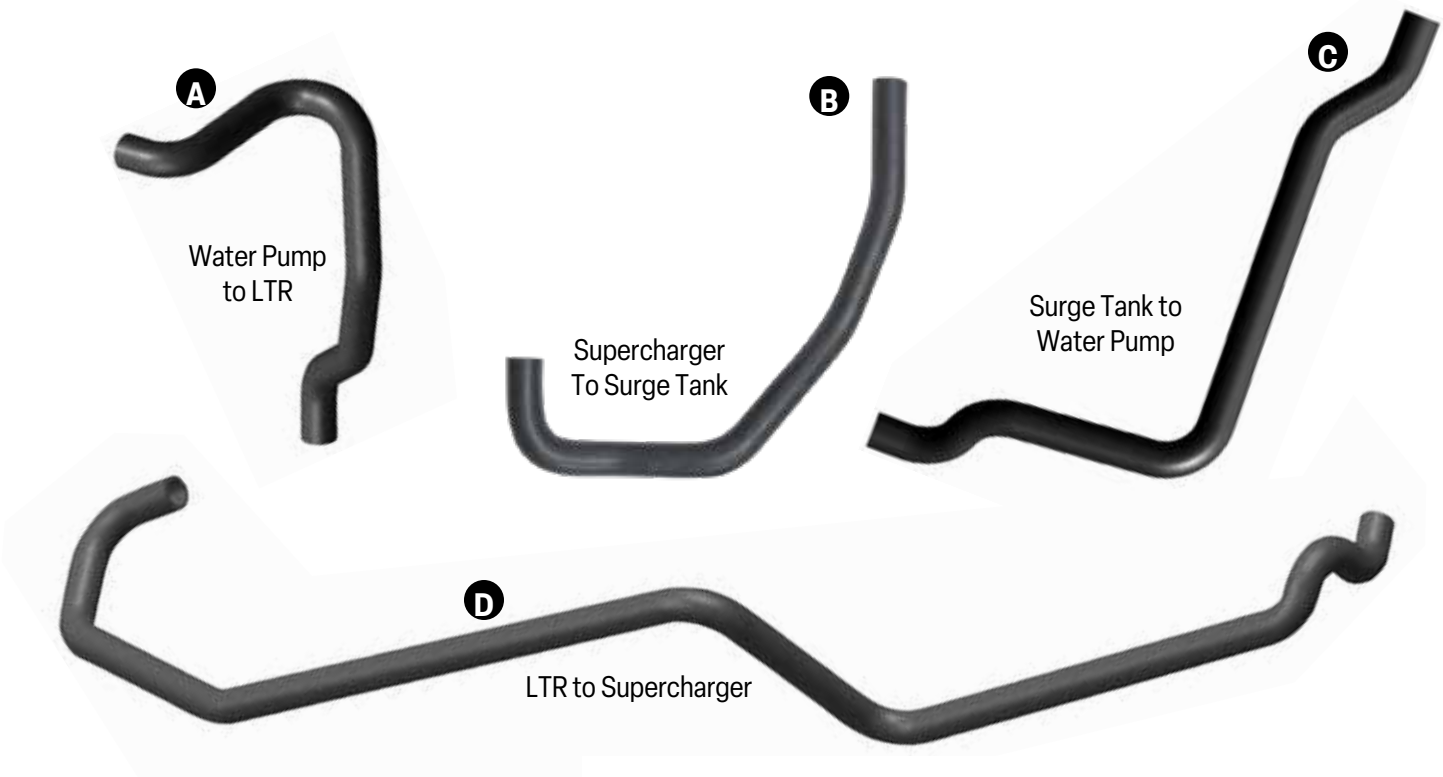
Alternator Pulley

Surge Tank Bracket

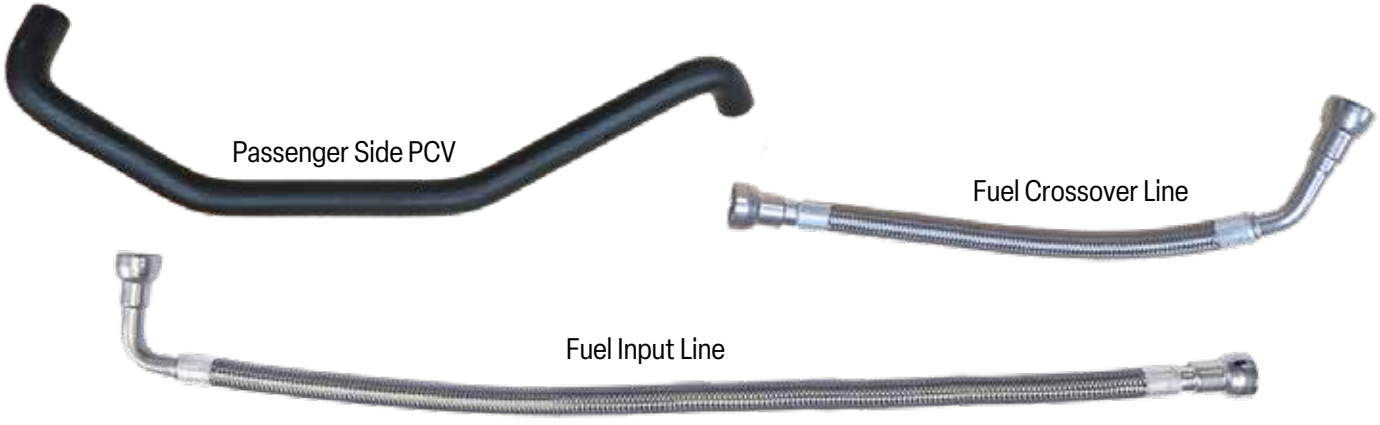
OBDII Cap

HOSE IDENTIFICATION GUIDE

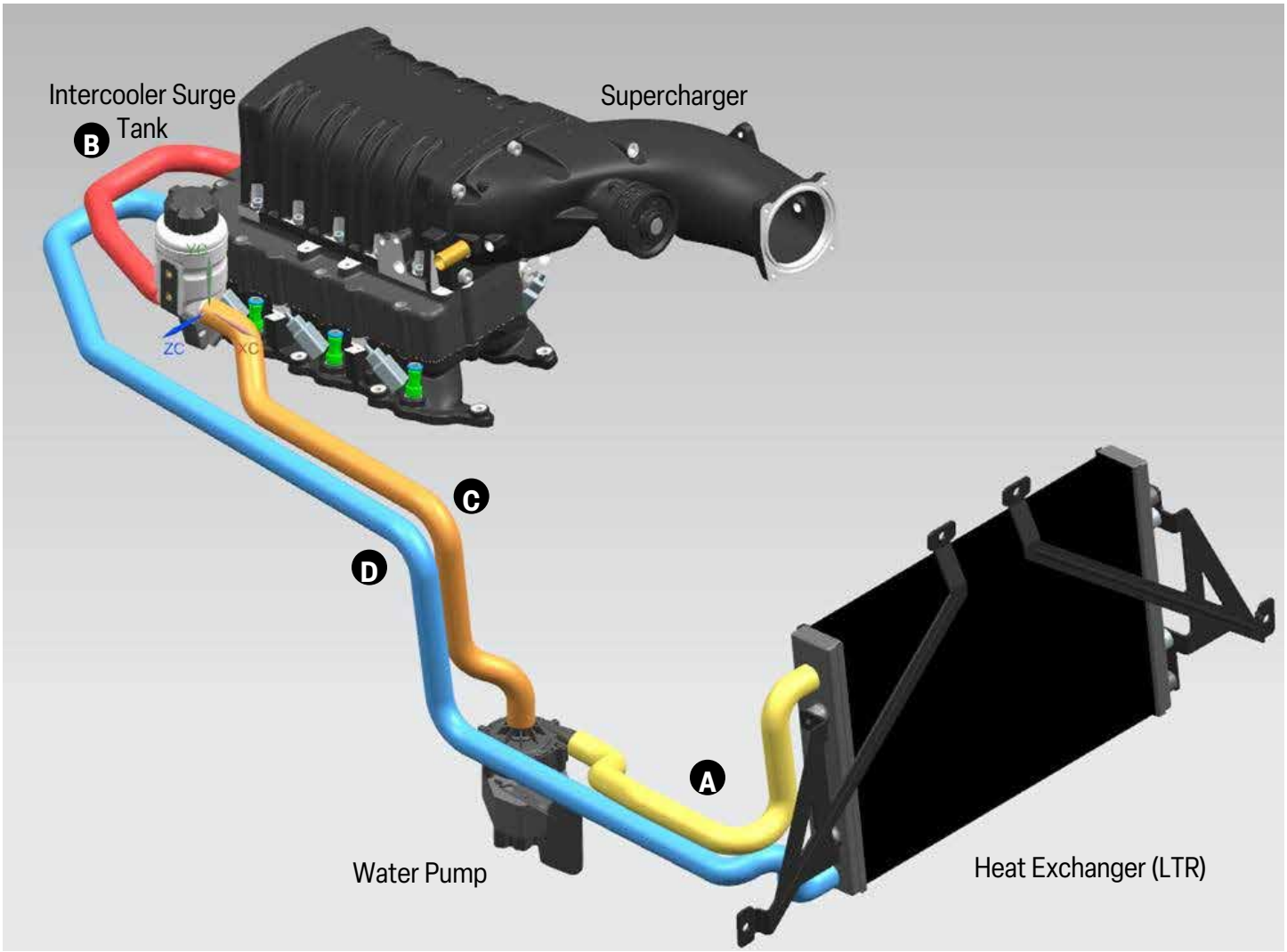
(Parts Are Not To Scale)



Driver Side PCV to Intake Tube (43”)



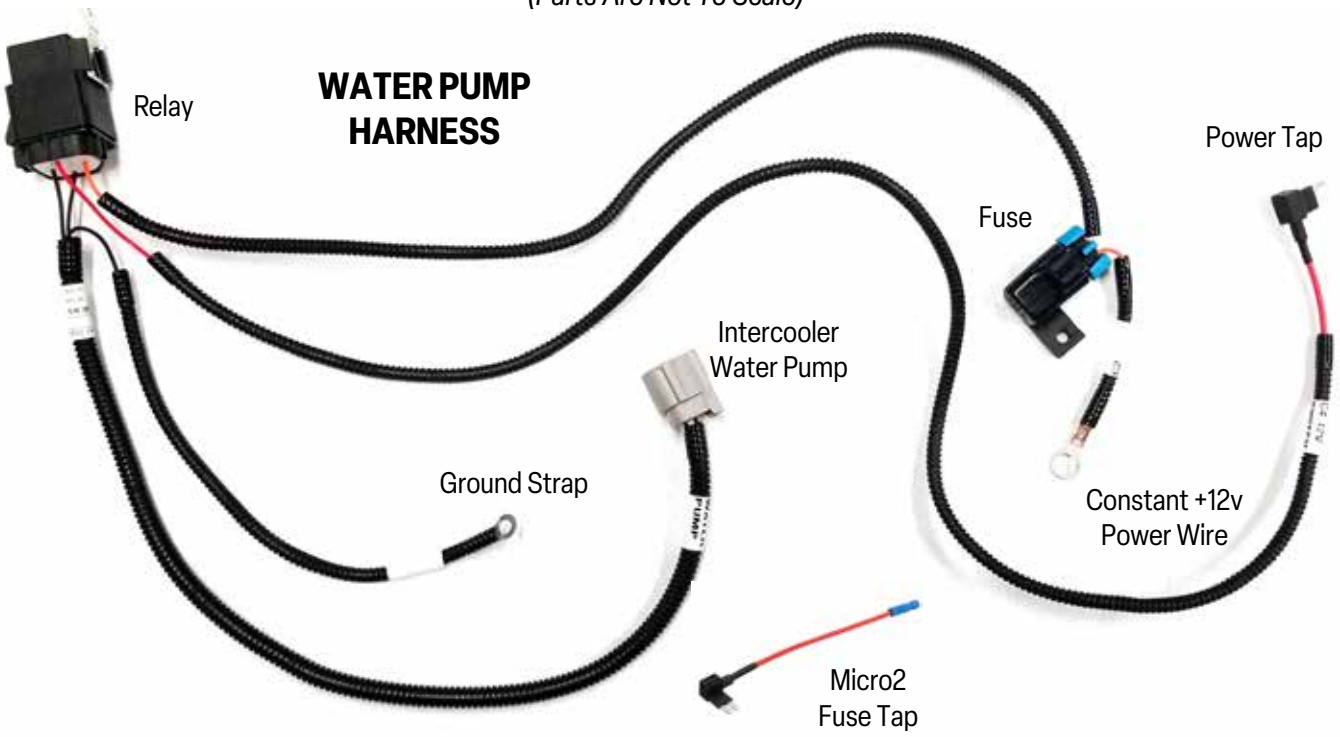
HOSE ROUTING DIAGRAM



WIRE HARNESS GUIDE

(Parts Are Not To Scale)

WATER PUMP HARNESS



IAT EXTENSION HARNESS

MAP ADAPTER/EXTENSION HARNESS

HORN EXTENSIONS

WARNING: *If your PCM has been programmed with anything other than an HP TUNERS programmer, please contact calibration@edelbrock.com before flashing your PCM.* ***FAILURE TO DO SO COULD RENDER THE PCM INOPERABLE!*** *Edelbrock is not liable for any recovery fees, including but not limited to, replacement of PCM, programmer and/or PCM flashing fees.*

If the PCM that came with the vehicle is not the PCM being sent to Edelbrock, contact calibration@edelbrock.com for additional procedures BEFORE sending a PCM to Edelbrock. The original PCM must be read in the vehicle and the files properly transferred to Edelbrock if a different PCM is being used.

PLEASE COMPLETE THIS PROCEDURE PRIOR to starting the installation of your supercharger system. This will allow our calibration team to complete your calibration file while the installation of your supercharger system is being completed. Manufacturers regularly update the factory calibration, as a result, there is the possibility for delays due to not having access to your current calibration file. This can normally be resolved in 1 business day.

Please e-mail the requested information below to calibration@edelbrock.com with the E-mail Subject as "**Calibration Update**". We will complete your calibration and e-mail it back to you as soon as possible. MOST calibration updates will be sent back the same business day. In rare cases, it could take up to 1-2 business days to complete. Please contact our Tech Hot Line at (800)416-8628 if you have any questions or if you need assistance with this procedure.

INFORMATION NEEDED:

E-Mail Address:
Vehicle Year:
Vehicle Make:
Vehicle Model (Specify if Z06, Z51, SRT8, RT, Boss 302, etc..):
Engine Size:
Transmission:
Fuel Octane (91 or 93 ONLY):
Supercharger System Part Number:
Supercharger Serial Number:
HP Tuners RTD Serial Number:
VIN#

FAILURE TO PROVIDE ALL OF THE INFORMATION ABOVE WILL DELAY THE COMPLETION OF THE CALIBRATION FILE FOR YOUR VEHICLE. TO LIMIT VEHICLE DOWN TIME, PLEASE SEND US THE REQUESTED INFORMATION BEFORE STARTING THE SUPERCHARGER INSTALL.

SUPERCHARGER INSTALLATION

WARNING: Battery must be sufficiently charged before starting the PCM flashing procedure.

NOTE: A stable internet connection is required in order to read/flash the ECM and TCM.

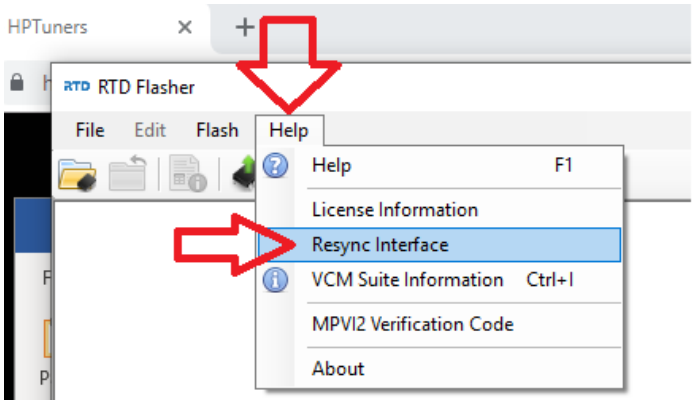
1. Create a new registration, then download and install the latest RTD Flasher from: https://files.hptuners.com/RTD%20Flasher/RTD%20Flasher.msi. Connect your RTD device to your PC via the supplied USB cable.

2. Locate the DLC/OBDII connector under the driver side dash (above your left knee).

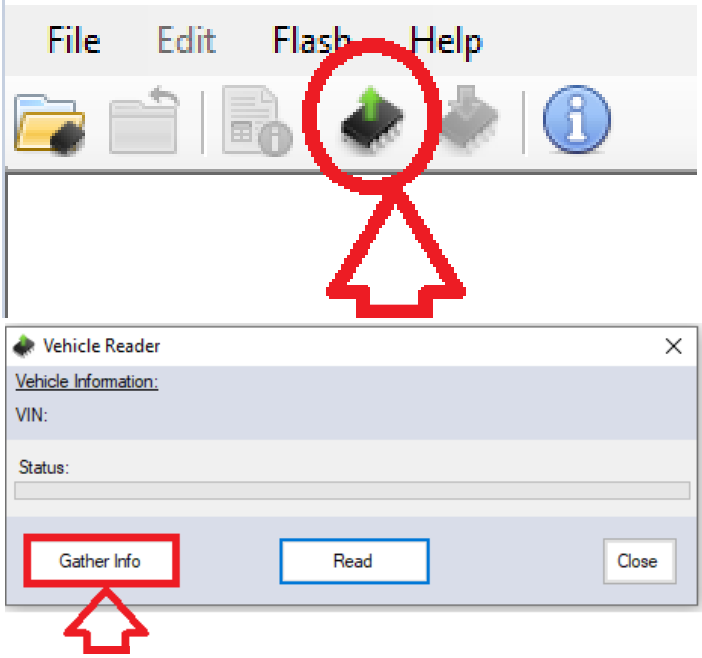
3. Directly behind and above the OBDII connector, locate the security bypass module. Disconnect the larger of the two connectors.

4. The HP Tuners smart access cable will now be installed between the security bypass module and the factory harness that was just disconnected. Insert the male end of the HP Tuners smart access cable into the security module then connect the female end of the HP Tuners cable to the loose factory harness.

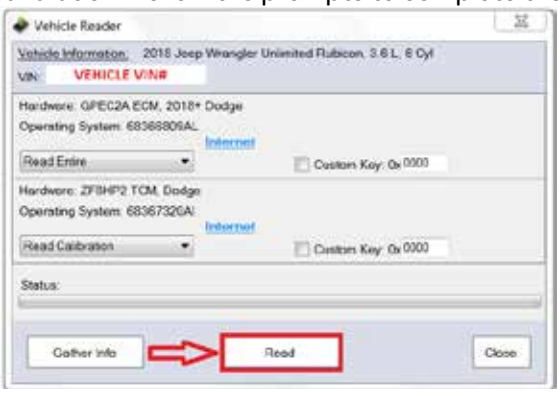
5. Open RTD Flasher, select HELP, and then resync interface.



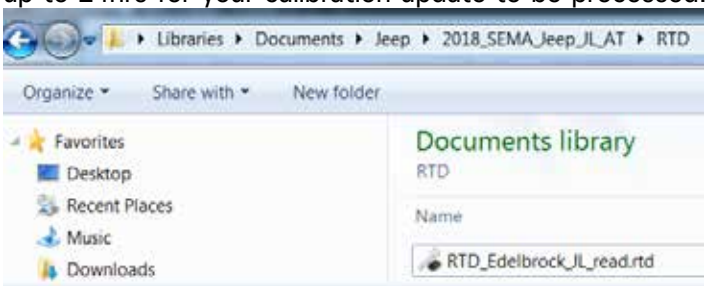
6. Your RTD is now ready to use and will have six (6) credits pre-installed. With the RTD Flasher program still open, plug the RTD into your vehicles OBDII port and turn the ignition ON without starting the engine. Select the READ VEHICLE icon then click GATHER INFO in the VEHICLE READER box.



7. Select READ to begin uploading your stock ECM and TCM calibration. Follow the prompts to complete the read.



8. Once the stock read is saved to your PC, email the file to calibration@edelbrock.com titled "Calibration Update Needed, 20xx Jeep JL/JT Supercharger Kit ". Please allow up to 24hrs for your calibration update to be processed.



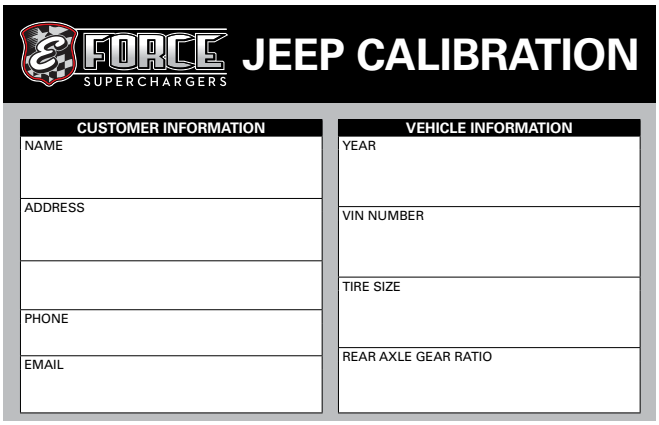
The ECM on a 2018-20 Jeep Wrangler is located under the hood on the driver side of the vehicle. Follow these instructions carefully to remove, package and ship the ECM to Edelbrock.

9. Disconnect <u>both</u> negative battery terminals and isolate the negative cables so they do not come in contact with the battery terminal, body of the vehicle, or each other.

10. Locate the ECM and remove the main harness connectors by lifting up on the RED levers and pulling the plugs out.

11. Remove the three (3) 10mm bolts securing the ECM to the bracket.

12. Fill out the provided calibration label with customer and vehicle information and apply the label directly to the ECM.

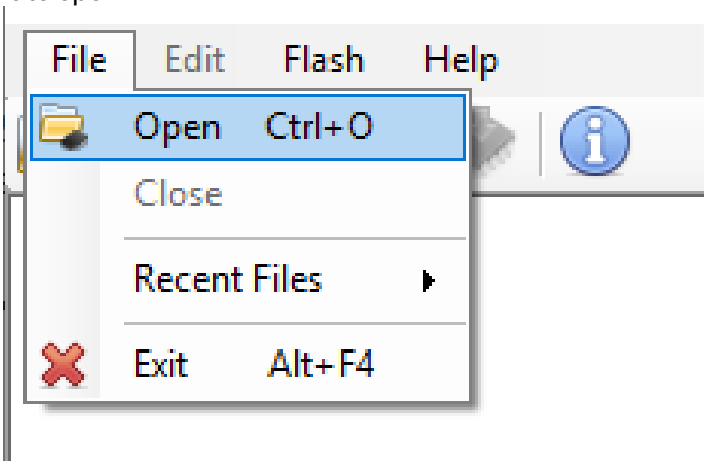


13. Place the ECM in the provided box with packing material so the ECM cannot move around in the box. Ship ECM to Edelbrock using the provided return shipping label.

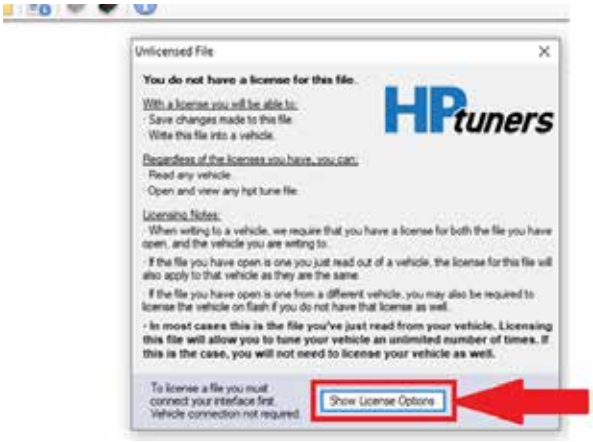
AFTER RECEIVING THE UNLOCKED ECM

14. The supercharger should be installed at this time.

15. After you reinstall the unlocked ECM and receive the updated Edelbrock file via email, save it to your PC. Open RTD Flasher, select FILE, OPEN, locate the updated Edelbrock file you just saved to your PC, and double-click it to open.

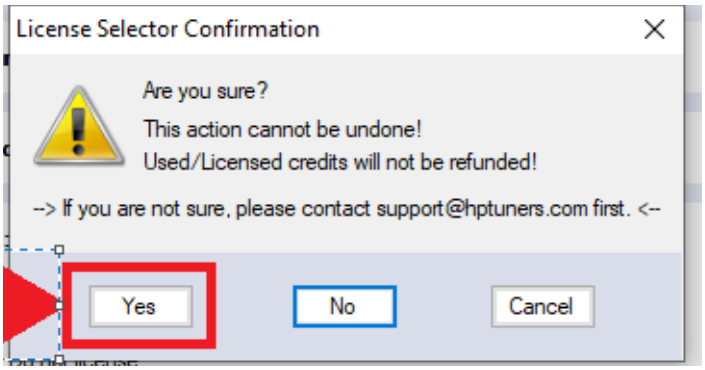


16. Select "SHOW LICENSE OPTIONS" at the bottom of the UNLICENSED FILE window.

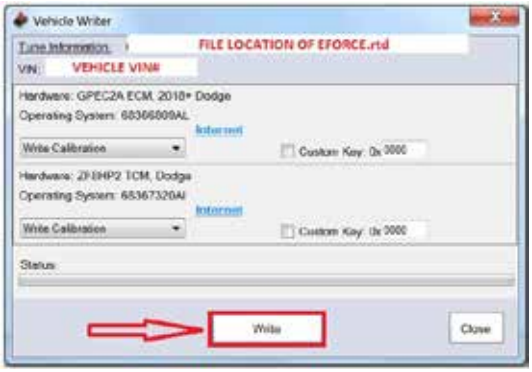


17. In the LICENSE SELECTOR window, select OK to apply the available credits for the Edelbrock calibration.

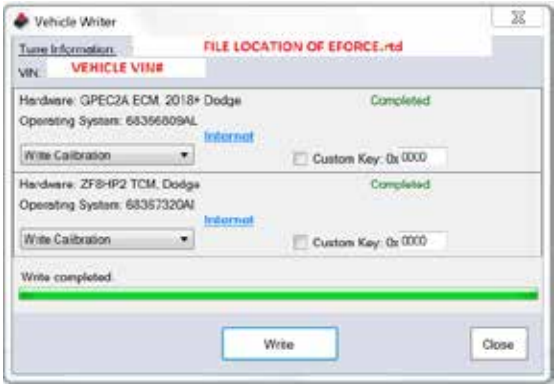
18. In the LICENSE SELECTOR CONFIRMATION window, select YES.



19. In the VEHICLE WRITER window, select WRITE to begin flashing the Edelbrock calibration. Follow the prompts to complete the flash.



20. Once the flash is completed, click CLOSE, turn the ignition OFF and disconnect the RTD from your OBDII port. The engine is now ready to start once the supercharger installation is complete!



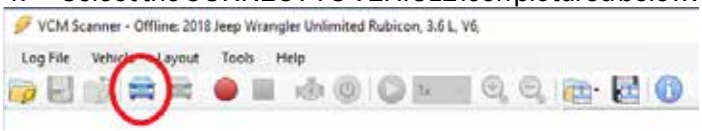
HP TUNERS VEHICLE CONTROLS & SPECIAL FUNCTIONS

NOTE: These steps are for vehicles with modified gearing and/or oversized tires. If the vehicle is in a stock configuration, skip to the next page.

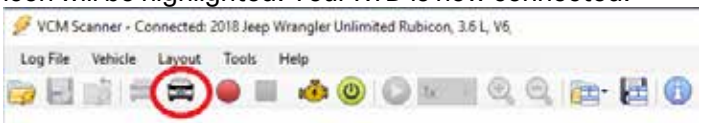
Download ***HP Tuners*** latest ***VCM Suite*** version at https://files.hptuners.com/VCM%20Suite/VCM%20Suite.msi

1. Open SCT's VCM Scanner which will appear as a lightning bolt icon on your PC.

2. Connect the RTD to your JL/JT's OBDII port then to your PC via the USB cable.
3. Turn the ignition ON but do not start the engine.
4. Select the CONNECT TO VEHICLE icon pictured below.



5. When HP Tuners has established a connection, the DISCONNECT FROM VEHICLE icon will be highlighted. Your RTD is now connected.



6. You can now access the VEHICLE CONTROLS & SPECIAL FUNCTIONS menu by clicking the green power icon.

7. The GEAR/TIRE ADJUSTMENT function is located under the speedometer tab. Click the GEAR/TIRE ADJUSTMENT tab and follow the prompts to adjust these settings as needed.

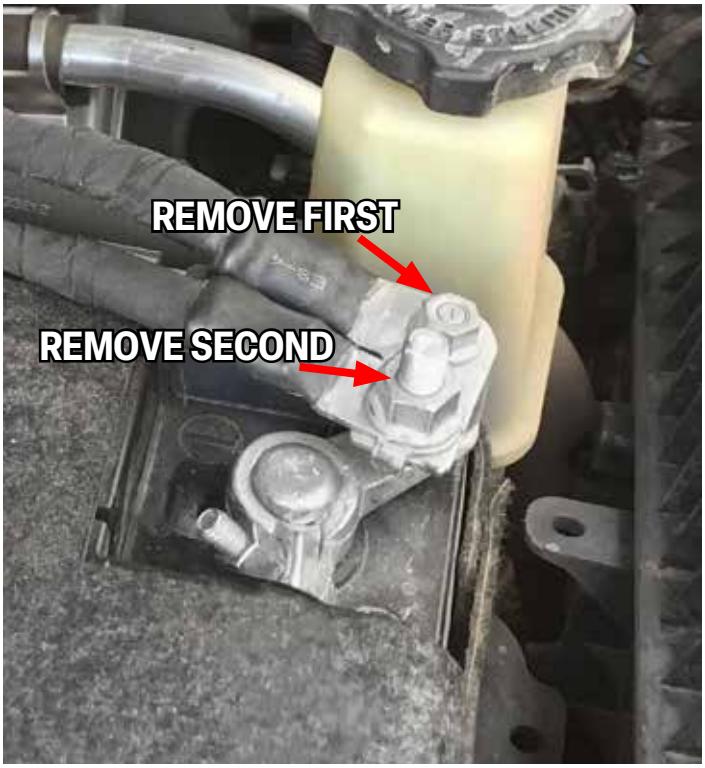
When finished, follow the HP Tuners prompts before disconnecting.

NOTE: There are various other Wrangler/Gladiator specific functions in this menu that can be adjusted by following similar prompts:

- Transfer Case Ratio
- TPMS Settings
- Sway Bar Settings
- Axle Lock Configuration
- Electric Power Steering Settings

IMPORTANT NOTICE

If the ECM and TCM flashing is done after the installation of the supercharger, follow step 2 (Pg. 17) in the instructions to disconnect and isolate both ground cables from the battery terminal.

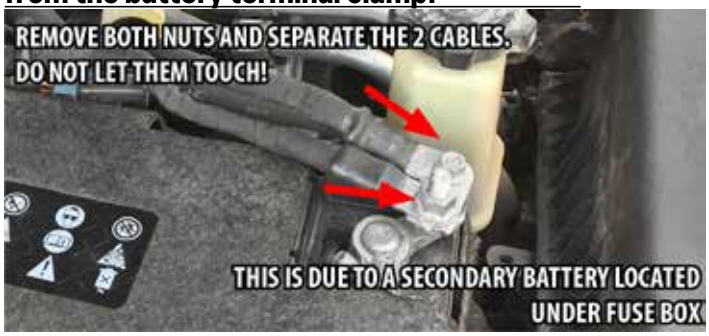


Reconnect after 30 minutes. First, connecting the cable attached to the terminal clamp. Secondly, connecting the cable that attaches to the stud.

SUPERCHARGER INSTALLATION

1. Carefully rest the hood onto the window frame using a fender cover or equivalent.

2. Disconnect BOTH ground cables from the battery terminal clamp. **WARNING: Severe electrical damage may occur if both ground cables are not removed from the battery terminal clamp.**



3. Remove factory intake manifold cover by removing (2) T-30 bolts.

4. Remove two bolts from front of vehicle on the intake tube using a 10mm socket (will be reused). Be sure to also remove the PCV hose, disconnect the IAT sensor, and remove the 3 harness clips on the intake tube before removing. **NOTE:** The IAT sensor pictured here will not be reused. Leave the sensor installed to seal the port.

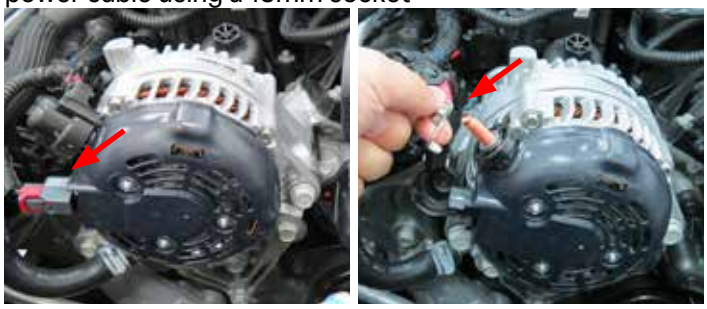
5. Remove the 10mm bolt holding the airbox to the fender. Remove the box and intake tube assembly and set aside.

6. Remove Throttle body by removing 4 screws and disconnect ETC connector. Disconnect harness clips.

7. Unbolt 2 bolts from factory vacuum pump bracket from factory FEAD using 13mm wench.

8. Using ½" breaker bar and extension, remove tension from the belt (clockwise) and slide the belt off the smooth idler. Belt will not be completely removed at this time.

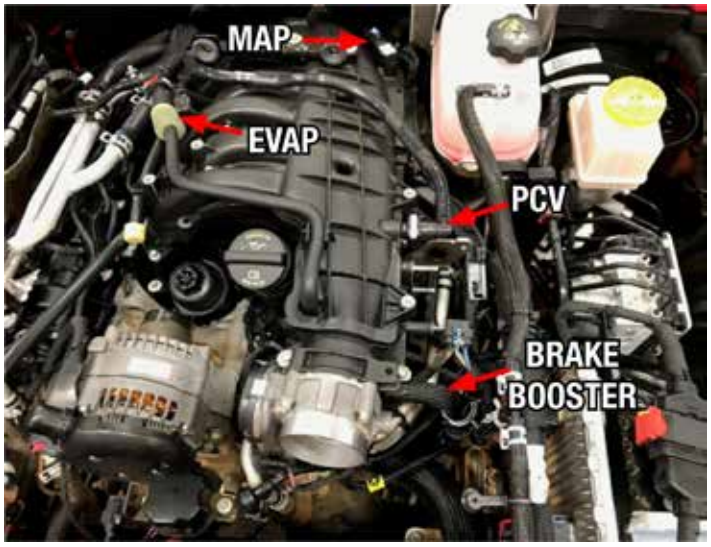
9. Unplug the alternator connector and remove the power cable using a 13mm socket



10. Using a 15mm socket, remove two (2) upper bolts securing the alternator to the engine. Remove two (2) lower bolts securing the alternator to the bracket using a 13mm socket. **NOTE:** One of the 15mm bolts will be reused.

11. Undo the two bolts on the intake manifold to support bracket using a 10mm socket.

12. Disconnect EVAP, Brake Booster, Driver' Side PCV hose, and MAP sensor from intake manifold and slide EVAP solenoid and isolator off intake manifold.



13. Remove two bolts from the EGR hardline to EGR valve. Be careful not to lose gasket between the two. TIP: If having difficulty, loosening the two bolts on the lower end of the EGR Hardline to make this process easier.

14. Twist lower oil fill neck by depressing the locking tab and lift up. Remove cap and reinstall cap onto lower oil fill. **NOTE:** Once the supercharger is installed, there will be no access to this oil fill cap. The oil filter cartridge port will be used as the oil fill.

15. Remove the engine cover bracket. Using an 8mm socket, remove eight (8) bolts securing the upper manifold to the lower manifold. Cut all harness clips that are attached to the upper manifold. Once free, remove the upper manifold. **WARNING:** Removal can be difficult. Lift and move the manifold to passenger side to clear the driver's side support bracket. Once the bracket has been cleared, the intake will be free.

16. Clean any debris from around the port openings and cover the port openings with tape. Remove the foam insulator. It will not be reused.

17. Disengage the blue locking clip on the fuel input line fitting and remove the fuel input line from the fuel rail.

18. Lift up the red locking clips on the six (6) injector plugs and disconnect them from the fuel injectors.

19. Using an 8mm socket, remove eight (8) bolts securing the lower manifold to the cylinder heads. Uninstall (3) harness clips located in the rear of the manifold.

20. Carefully remove the lower manifold and set aside.

21. Using a shop vac or clean shop rag, clean the cylinder head flanges and cover the ports with protective tape.

22. Using a 3/8" fuel line removal tool, remove the fuel input line from the factory hard line located behind the cylinder heads. Cut or remove hose straps.

23. Install the 90° end of the supplied fuel feed line to the factory hard line. Route fuel line through the hoses behind the engine to be able to reach the front of passenger side intake flange.

24. Remove both PCV hoses from the rear of both valve covers.

25. Remove the quick-connect ends off of the factory driver side PCV hose by carefully cutting the plastic hose with a razor.

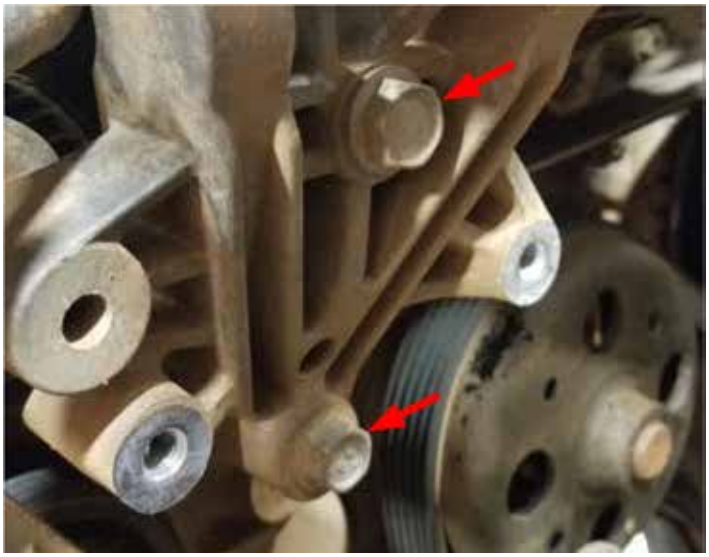
26. Insert the quick-connect fittings into the supplied 43" hose. TIP: Heating the hose will help in the insertion of the fittings.

27. Remove Intake manifold support bracket from FEAD.

28. Connect the new hose to the rear of the driver side valve cover using the straight fitting. Route the hose behind the engine and then towards the front of the vehicle as pictured. The 90° fitting will connect to the air intake tube later in this installation.

29. Install the supplied passenger side PCV hose to the rear of the passenger valve cover. Route the hose under the coolant lines. Hose will connect to the supercharger later.

30. Unbolt the factory FEAD bracket using a 16mm socket and 13mm socket.



31. Remove the factory belt at this time.

32. Remove 6 push pins securing the front grille. Lift the grille up and off of the core support.

33. Unbolt and remove the factory support braces.

34. Remove the (2) T20 screws holding the lower air scoop onto the core support.

35. Remove air scoop from airbox. It will not be reused.

36. Unbolt the factory horn brackets located on the upper core support facing the radiator. Unplug and set aside. **NOTE:** Jeeps optioned with oil cooler will need to loosen the 2 top bolts of the radiator to access the horn bracket bolts.

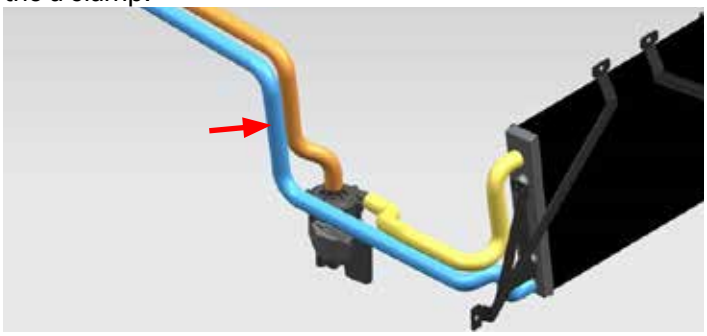
37. Remove passenger side shroud.

38. Remove plastic shroud from above the bumper, below the grill.

39. Reinstall horns using the provided M6 x 12mm hardware from bag #2 using the existing holes located on this bracket between the bumper and the core support. Adjust as needed until horns clear the shroud and frame. Install the horn extension cables.

40. Secure LTR brackets to the LTR using (4) M6 x 10mm bolts from hardware bag #2. Then, install the assembly onto the core support using the factory hardware where the original braces were located. Connect horn extension cables to the factory horn leads and route behind the LTR. Reconnect the horns and replace the upper bumper cowl.

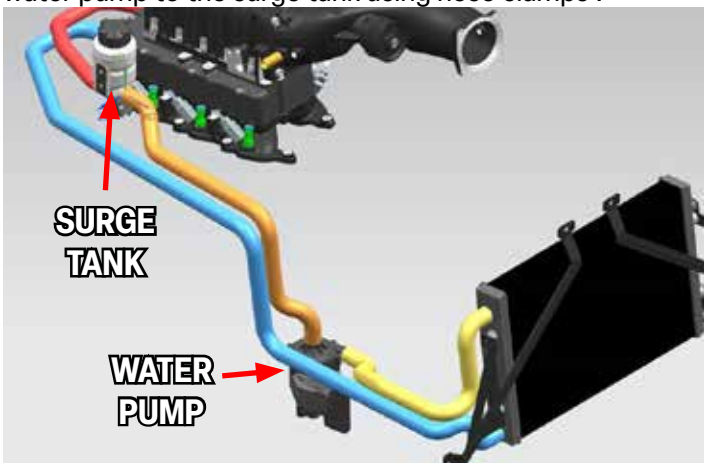
41. Pass the long hose (blue) through the core support. Using a clamp, attach the hose to the bottom port of the Low Temp Radiator. Next, route the water pump hose (yellow) next to the other hose as pictured below. Secure the a clamp.



42. Connect the water pump harness to the pump. Install the water pump and water pump bracket onto the power steering motor using supplied M6 x 10mm bolts in bag #2 on the passenger side. Clock the water pump so the outlet is pointing towards the front of the vehicle.

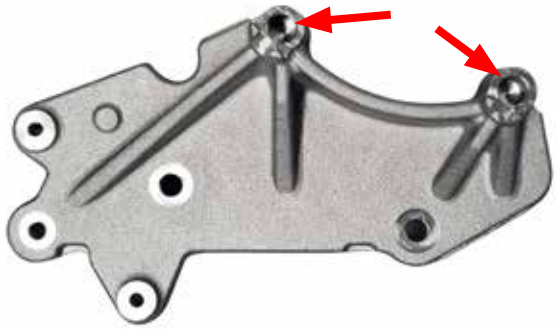
43. Place the surge tank bracket over the coolant lines' front mounting point using the factory bolt. Using two M6 x 10mm bolts from Bag #2, secure the surge tank to the surge tank bracket.

44. Connect the upper LTR hose (yellow) to the side port located on the water pump using the provided hose clamps. Attach the hose (orange) from the top of the water pump to the surge tank using hose clamps .



45. Using a vise, a 1/2" 24mm socket and a 3/8" 9mm deep socket, carefully remove two bushings from the factory alternator bracket. Tip: Channellock pliers can be used if you don't have access to a vise.

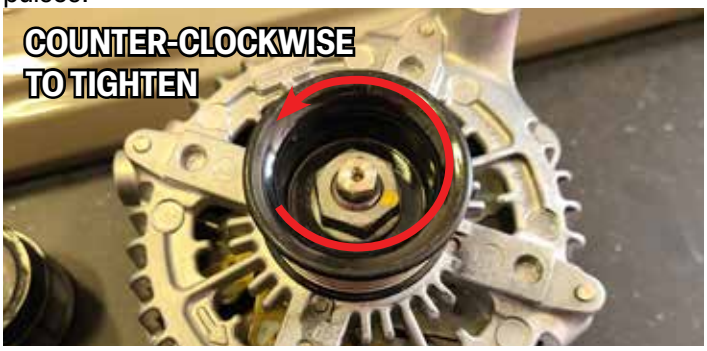
46. Carefully install the bushings into the supplied FEAD bracket using a vise or equivalent. WARNING: DO NOT use a hammer as it may damage the bushings and/or FEAD bracket.



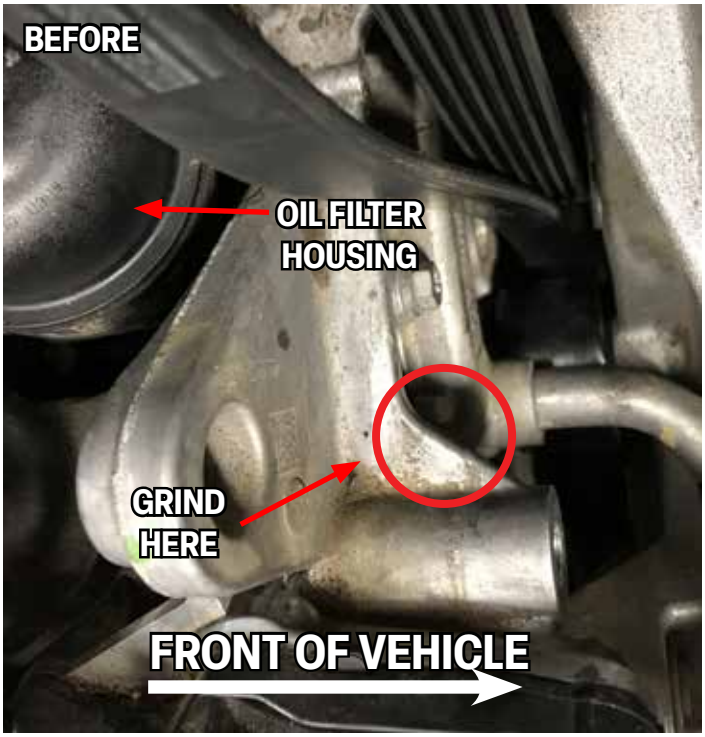
47. Remove the protective dust cover from center of the pulley hub using a pick. The cover will not be reused.

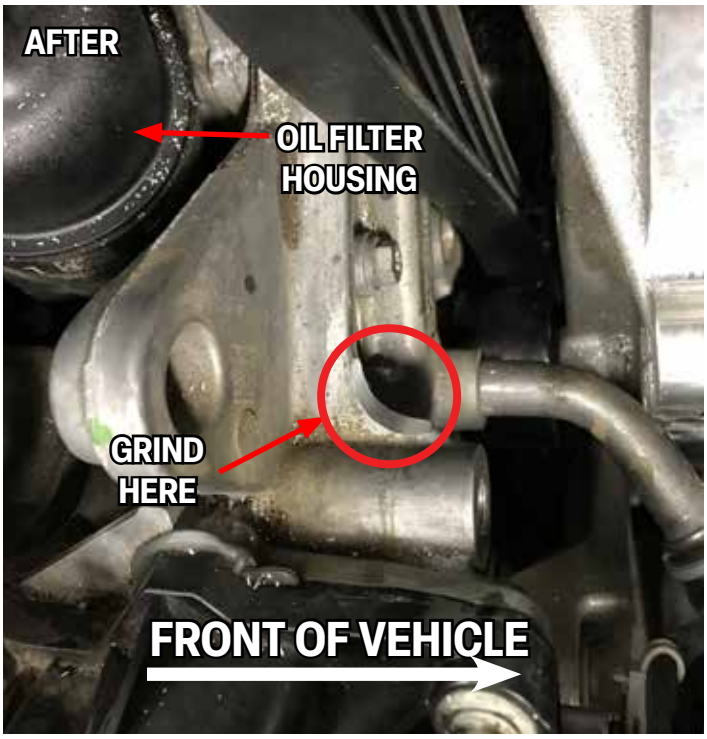
48. Using a 17mm Allen socket and impact wrench, remove the alternator pulley CLOCKWISE. This pulley has a left-handed thread. Use the impact wrench in short bursts to remove. This pulley will not be reused.

49. Install the supplied pulley, nut and washer using BLUE Loctite. Tighten the nut using an impact wrench in short pulses.

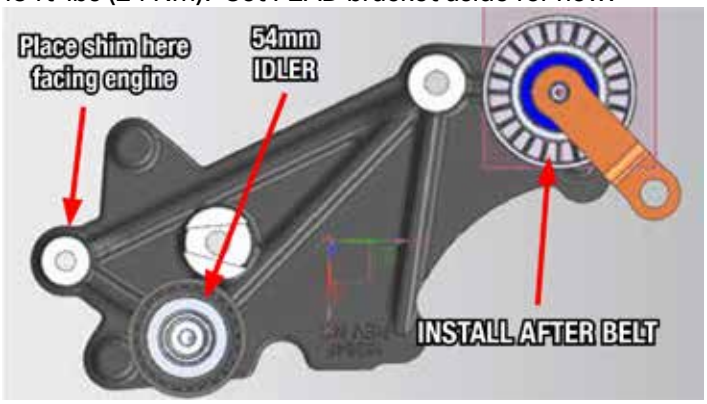


50. Using a die-grinder or similar, notch the webbing on the engine as shown here. This will allow more room for the belt to flex.

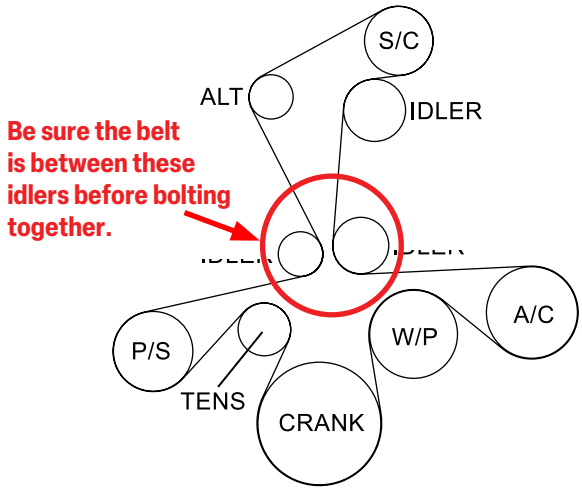




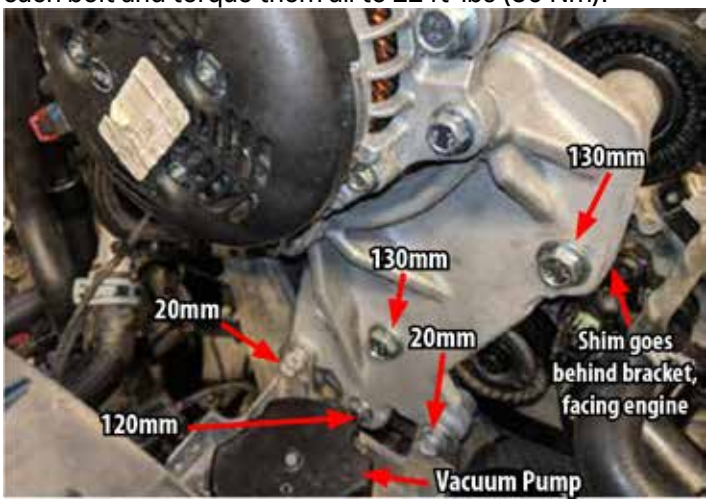
51. Install the supplied 54mm idler pulley onto the FEAD bracket using an M8 x 25mm button head bolt and an M8 washer from Bag #1. Clamp the bracket to a vise. Apply blue thread locker to the threads of the bolt and torque to 18 ft-lbs (24 Nm). Set FEAD bracket aside for now.



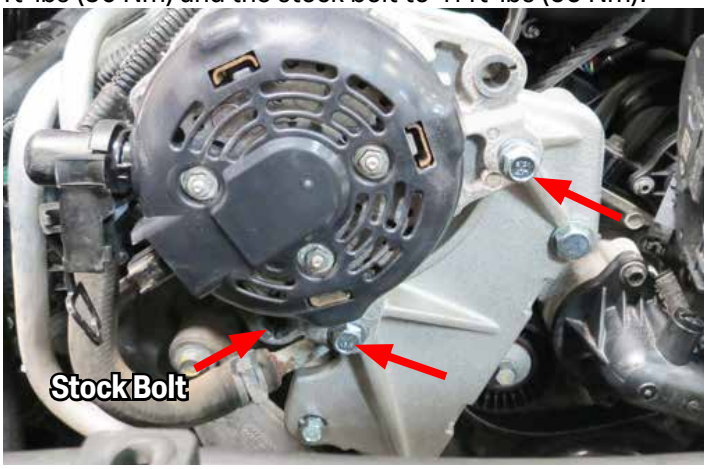
52. Feed the drive belt down towards the crank. Using the belt routing diagram, route the belt around the P/S, tensioner, crank, water pump and A/C.



53. Install the bracket to the provisions shown below using the hardware found in Bag #1. The bottom-center hole will use the M8 x 120mm bolt. The hole above that one will use the M10 x 130mm bolt. The upper-right bolt hole will use the M10 x 130mm bolt . **IMPORTANT:** Insert 1/2" ID x .045" shim between FEAD bracket and engine at this bolt. Apply blue thread locker on each bolt and torque them all to 22 ft-lbs (30 Nm).



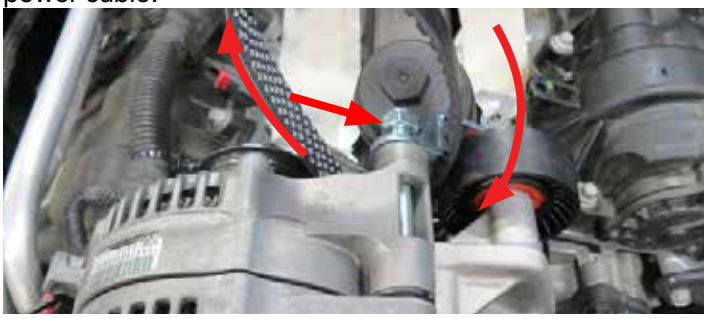
54. Using two M8 x 30mm hex flange bolts from Bag #1, install the alternator onto the FEAD bracket. Using one of the longer factory alternator bolts, secure the alternator to the lower-left factory provision. Torque M8 bolts to 22 ft-lbs (30 Nm) and the stock bolt to 41 ft-lbs (55 Nm).



55. Place 3/4"ID shim onto idler boss.

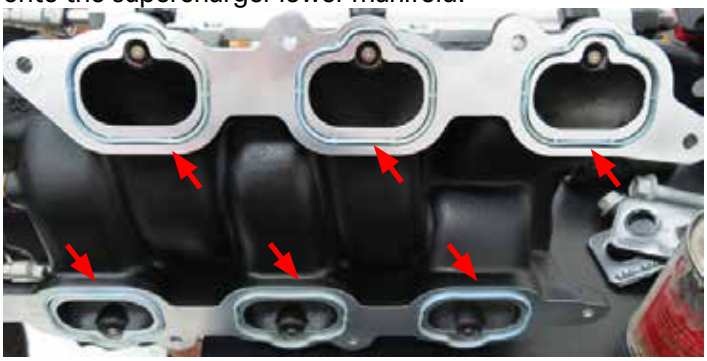
56. Position the alternator support bracket spacer, support bracket, and a M8 x 40mm hex flange bolt from Bag #1 onto the supplied 70mm pulley as shown. Apply blue thread locker to the threads of the bolt and loosely install it onto the upper FEAD provision as shown.

57. Position the drive belt in between the support bracket and pulley as shown. Using the M10 nut and M10 x 110mm bolt from Bag #1, secure the support bracket to the alternator. Torque the bolt to 41 ft-lbs (55 Nm). Fasten the idler pulley bolt and torque to 18 ft-lbs (24 Nm). Reconnect the alternator voltage control connector and the alternator power cable.



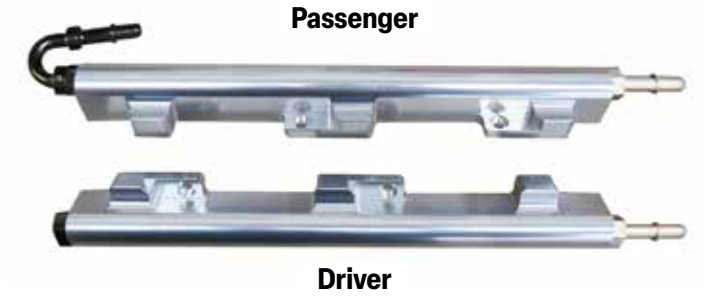
58. Connect the IAT extension harness to the IAT sensor located on the rear of the lower manifold.

59. Remove the lower manifold gaskets from the factory lower manifold. Ensure the gaskets are clean and dry of any oil residue. Inspect the o-rings for damage and replace as necessary (Jeep PN 05184331AC). Install the gaskets onto the supercharger lower manifold.



60. Remove the plastic wire harness housing off of the driver's side fuel injector harness. This wire protector interferes with the supercharger housing so it will not be reused. Remove the protective tape from the cylinder heads. Carefully lower the lower manifold assembly onto the cylinder heads. Apply blue thread locker onto the threads of the eight (8) M6 x 30mm hex bolts from Bag #3. Using a 10mm socket, secure the lower manifold to the cylinder heads with the M6 bolts. Use a circular torque sequence starting with the inner bolts and working outwards. Torque the bolts to 108 in-lbs. (12 Nm).

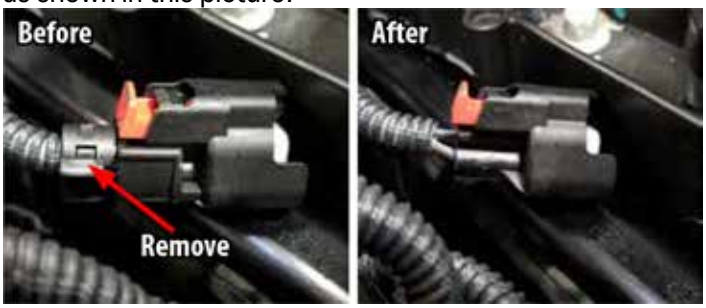
61. Apply o-ring lube to the supplied fuel fittings and install them onto the fuel rails. The straight fittings are positioned on the rear of the fuel rails. The 180° fitting will go onto the passenger side rail and the plug on the driver side rail. Gently lube the o-rings on the supplied fuel injectors and install them into the fuel rail provisions with the connector facing outwards.



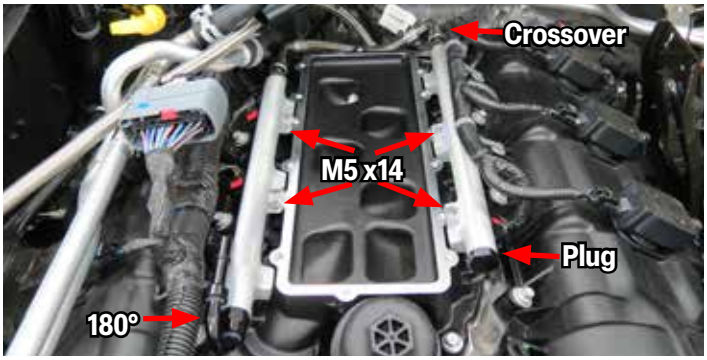
62. Install the supplied injector orientation clips as shown below. The electrical connectors should be facing outward and to the front on the driver side, and outward to the rear on the passenger side.

63. Install the 45° fitting on the supplied fuel crossover onto the rear driver side fuel rail fitting. Install the other end of the crossover onto the passenger side rail fitting AFTER the fuel rails have been installed on the manifold. (Step 67)This is done so the fuel line can be routed around factory wire harnesses and coolant lines.

64. Using a small flathead screwdriver, modify the injector connectors by removing the outer clip as shown in this picture.



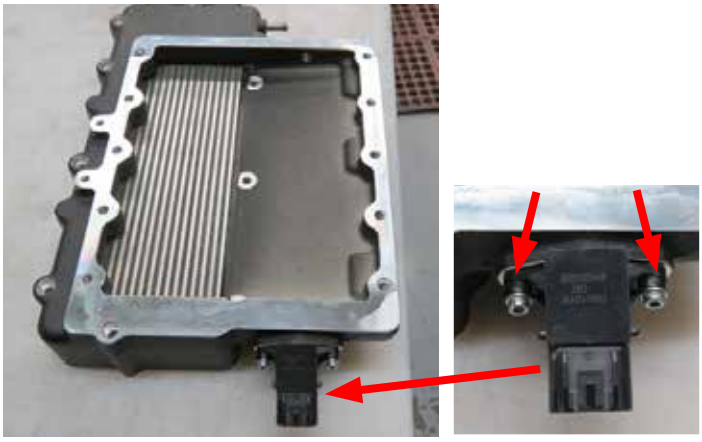
65. Apply o-ring lube to the lower injector o-rings. Align the fuel injectors with their provisions on the lower manifold and push down firmly to seat the injectors. Apply blue thread locker onto the threads of the M5 x 14mm bolts from Bag #3. Using the M5 bolts, secure the fuel rails to the lower manifold. Torque the bolts to 4 ft-lbs (5.42 Nm). Once installed, connect the passenger side fuel crossover line, routing the fuel line around the coolant hardline and harness.



66. Connect the injector electrical connectors to the proper injectors. Position the fuel feed line around the passenger side fuel rail and connect it to the 180° fuel fitting. **NOTE:** The fuel injector connectors can be difficult to connect.

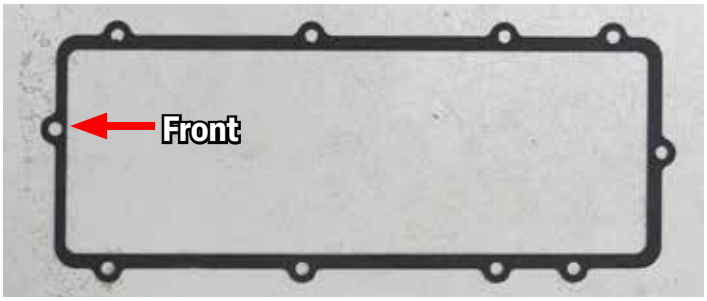
67. Route the previously installed IAT extension towards the front of the vehicle, along the driver side valve cover, and connect it to the factory IAT connector.

68. Apply o-ring lube to the o-ring on the supplied MAP sensor and carefully install it into the front provision on the intercooler adapter. Apply blue thread locker onto the threads of the M4 x 16mm bolts and secure the MAP sensor to the intercooler adapter using a 3mm Hex Key. Torque the bolts to **18 in. lbs**. DO NOT OVERTIGHTEN.



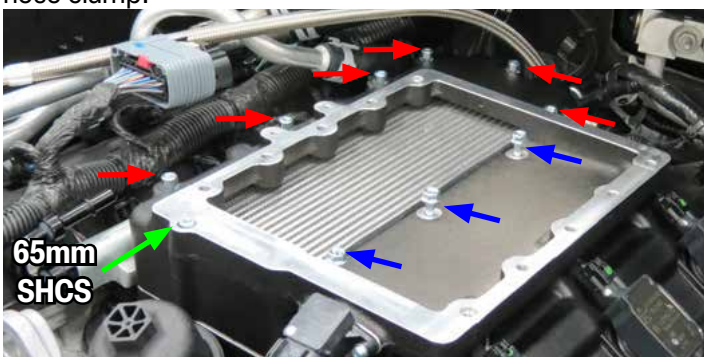
69. Using the hose clamps from Bag #2, secure the Manifold to Surge Tank hose to the inner intercooler barb and the Manifold to LTR hose to the outer intercooler barb.

70. Position the Lower to Upper Manifold Gasket onto the lower manifold with the offset provision facing the front of the vehicle.



71. Carefully route the hoses around the engine harness and position the upper manifold onto the lower manifold. **NOTE:** When setting the upper manifold onto the lower, be sure not to pinch the harness at the rear of the unit.

72. Secure the upper manifold to the lower manifold using the hardware from Bag #3. Apply blue thread locker onto the threads of the bolts and fasten using a circular sequence starting with the inner bolts and working outwards. The front manifold provision will use the M6 x 65mm SHCS. Blue arrows represent M6 x 50mm hex flange bolts while Red arrows represent M6 x 60mm SHCS bolts. Torque all bolts to 96 in-lbs (11 Nm). Connect the "Supercharger to Surge Tank" hose to the Surge Tank using the supplied hose clamp.



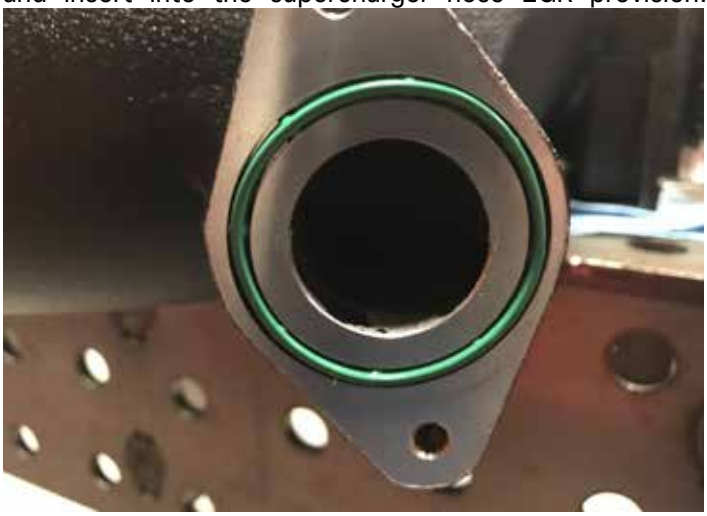
73. Connect the supplied MAP extension harness to the factory MAP connector. **WARNING!** ***The MAP extension harness MUST be connected to the factory harness in the orientation shown below. DO NOT force the connectors together any other way.***

74. Connect the MAP extension harness to the MAP sensor located on the front of the upper manifold.

75. Connect the supplied bypass actuator hose to the barb located on the rear of the upper manifold. This will connect to the bypass actuator once the supercharger housing is installed.

76. Using a 10mm socket, remove the EGR valve from the original intake manifold.

77. Remove the EGR O-ring from the original intake manifold and insert into the supercharger nose EGR provision.

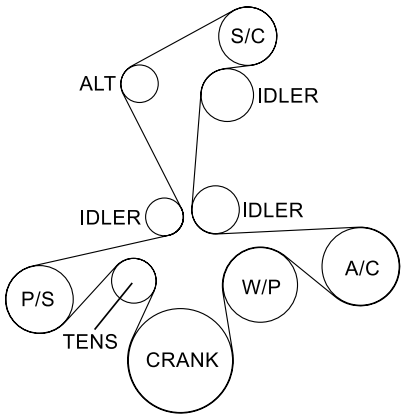


78. Install the EGR to the Supercharger nose using the supplied M6x20mm bolts. Use the factory bolts on the hardline mounted on the rear of the EGR.

79. Place the Upper Manifold to Supercharger gasket onto the upper manifold. Align the thin end of the gasket to the rear.

80. Carefully lower the supercharger onto the upper manifold and verify that the gasket is properly aligned. Apply blue thread locker onto the threads of the ten (10) M8 x 22 SHCS bolts from Bag #3. Install the bolts and fasten using a circular sequence starting with the inner bolts and working outwards. Torque the bolts to **18 ft-lbs (24.4 Nm)**. Once secure, install the factory hard line to the EGR valve. Reconnect the EGR valve electrical connector.

81. Using a 1/2" breaker bar, rotate the hydraulic tensioner clockwise and finalize the installation of the drive belt.



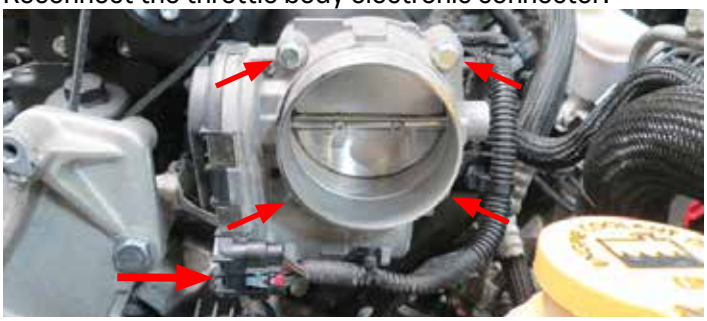
82. Install the vacuum pump onto the new FEAD bracket using the (2) supplied M8x20mm bolts.

83. Place the taper jet (Bag #3) into the bypass actuator barb as shown here.

84. Connect the previously installed actuator hose to the actuator barb, pushing it over the taper jet.

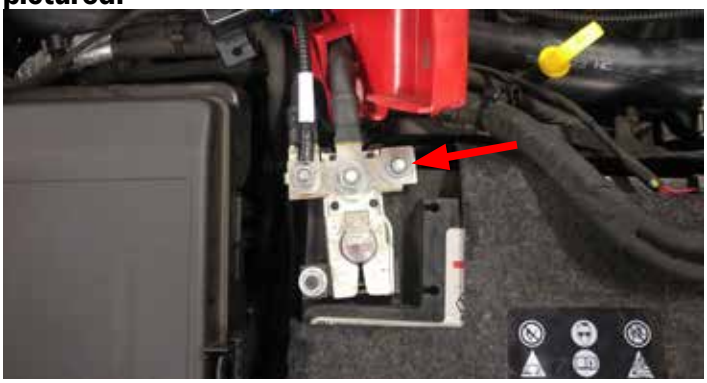
85. Remove the factory throttle body O-ring from the manifold and clean using a shop rag. Install the gasket onto the supercharger throttle body flange as shown.

86. Secure the throttle body to the supercharger nose using four (4) M6 x 40mm hex flange bolts from Bag #3. Reconnect the throttle body electronic connector.



87. Reinstall the plastic filler panel that covers the top of the radiator using the factory push-pins. Then, reinstall the front grill using the factory push-pins.

88. On the supplied water pump harness, connect the Constant (+12V) wire to the +12V terminal located on the battery. **NOTE: Use the terminal without a cable as pictured.**



89. Using a 10mm socket, connect the Ground (-) wire on the water pump harness to the chassis ground located between the battery and fender on the passenger side fender. **NOTE: Use the fastener without a factory cable attached as pictured.**

90. Using the factory fuse removal tool, remove the 20A fuse from the F52 slot (CIGAR LTR).

91. Cut the mini fuse tap off of the supplied harness and crimp the supplied micro2 fuse tap back onto the harness.

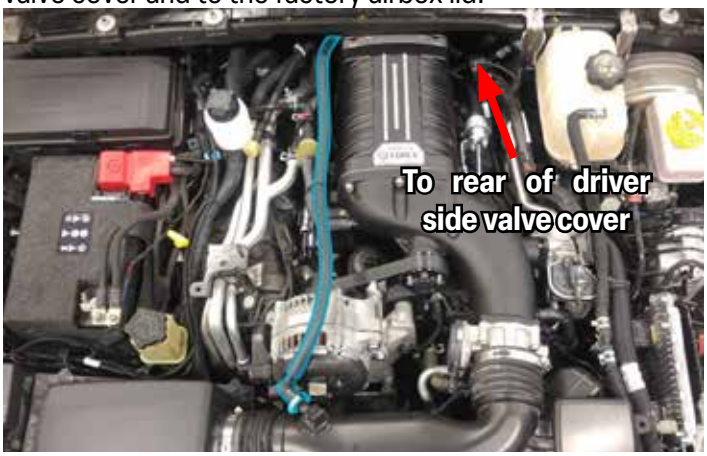
92. Install the factory 20A fuse into the fuse tap located on the water pump harness. Install the supplied 20A fuse into the other slot on the fuse tap. Insert the fuse tap into the F52 slot.

93. Connect the previously installed passenger side PCV hose to the rear barb on the supercharger nose.

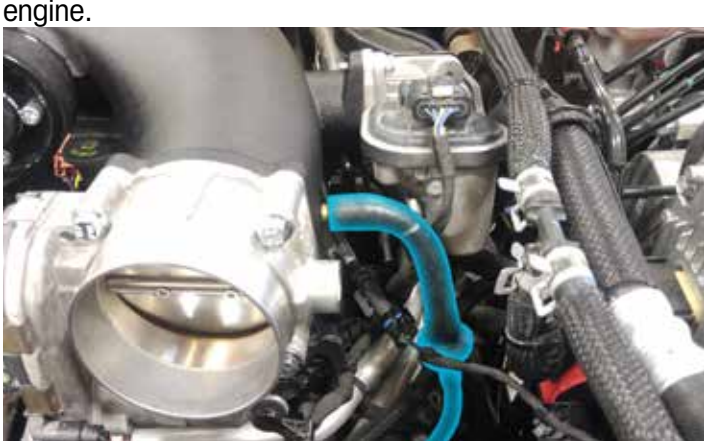
94. Connect the supplied EVAP hose to the EVAP solenoid. Connect it to the smaller fitting located towards the front of the supercharger on the passenger side. Trim hose to fit.

95. Install the new High Performance Green Air Filter into the factory airbox. Reinstall the airbox assembly. Tighten all hose clamps.

96. Secure the driver side PCV hose to the driver's side valve cover and to the factory airbox lid.



97. Connect the vacuum hose to the barb on the supercharger inlet as shown. **NOTE:** This hose will be connected to the vacuum pump on the front of the engine.



98. Reconnect the battery.

99. Fill the supercharger surge tank with a 50/50 coolant and water mixture. *NOTE: Please see "How to Prime the Edelbrock Intercooler Systems" at the end of these instructions for detailed instructions.*

100. Turn the ignition on but do not start the vehicle. Check for any fuel or coolant leaks. If leaks are present, shut the ignition off immediately and repair leaks before continuing.

IMPORTANT: If the ECU has been flashed, start the vehicle and drive normally for at least one hour without shutting off the ignition. This procedure is done to relearn the auto stop-start battery function.

WARNING

If the ECU process has not been completed, follow the ECU flash procedure located at the beginning of this manual. Be sure to disconnect the battery as directed. Not following ECU flashing instructions will lead to ECU errors.

Congratulations on the installation of your new Edelbrock Supercharger System. If you have any questions, please call our Technical Support hotline and one of our technicians will be happy to assist you.

CAUTION: Check ADAS sensors as described under the "Important Warning" section in the front of this document.

CARB E.O. LABEL INSTALLATION INSTRUCTIONS

1. Prep surface that the lavel will be affied to with isopropyl alcohol. Peel the label off the sheet and place it in an under hood location near the vehicle Emissions Control Information Label.

WARNING: This label is required to aid inspection of the vehicle under the California Smog Check Program.

91 OCTANE LABEL INSTALLATION INSTRUCTIONS

1. Prep surface that the lavel will be affied to with isopropyl alcohol. Peel the label off the sheet and place it on the inside of the fuel door.

Congratulations on the installation of your new Edelbrock Turbocharger System. If you have any questions, please call our Technical Support hotline at 800-416-8628 and one of our technicians will be happy to assist you.

CAUTION: Check ADAS sensors as described under the "Important Warning" section in the front of this document.

OIL MAINTENANCE PROCEDURE

Due to the design of this supercharger system, the original oil cap will not be accessible.

1. Before changing the oil, let the engine rest for 30 minutes to ensure the engine is cool and to help drain the filter cannister.

2. Using a 24mm socket with extension, turn the housing couter-clockwise. Once loose, un-thread the cannister off of the engine by hand.

3. Once the oil has been drained and the drain plug reinstalled, place a long funnel into the cannister filter orifice as pictured here. Add oil as recommended by the manufacturer.

4. Check the engine dipstick for correct oil level. Add or remove oil as needed.

5. When finished, clean the O-ring on the cannister housing as well as the surface on the filter orifice. Insert the filter cannister into the filter housing and thread the cannister into the engine by hand. Once it is hand tight, torque to 25Nm as instructed by the user manual. DO NOT OVERTIGHTEN.

How to Prime the Edelbrock Intercooler Systems.

The electric water pump used on this Edelbrock Supercharger System has a built-in micro-processor that will vary pump cycle speed when air bubbles are present in the system. If a significant amount of air is trapped in the system, the pump may cycle at a slower speed and pulsations are likely to occur resulting in poor cooling performance.

For the best result, it is highly recommended to use a Radiator Cooling System Vacuum Purge and Refill Kit to properly evacuate the air from the intercooler system before filling with a 50/50 mixture of coolant and distilled water. If one is not available, the following procedure will be adequate.

1. Using the Lisle 24680 Spill-Free Funnel, or equivalent, secure the appropriate filler neck adapter to the surge tank.
2. Attach the funnel and fill with a 50/50 mixture of coolant and distilled water until the funnel is half full.
3. Turn the ignition to the ON position and listen for the pump's electric motor to cycle. Air bubbles will begin to purge from the system as the coolant level drops. Add coolant to the funnel as necessary. *NOTE: Do NOT let the coolant level in the funnel run empty as this may introduce air into the system.*
4. To build more pressure in the intercooler system, try squeezing the intercooler hoses while the pump is cycling. Building pressure in the system will help purge the trapped air from the intercooler system.
5. Cycle the ignition OFF and wait a few seconds for the pump to come to a stop.
6. Cycle the ignition ON again and repeat until the sound of the electric pump is continuous without any pulsation. *NOTE: During water pump start-up, it is normal for a slight pulsation to occur. Once the pump has reached its maximum cycle speed, no pulsations should be present.*
7. Periodically inspect the water pump flow after a few drive cycles and re-fill the intercooler system as necessary.
8. Several drive cycles may be required to completely purge the air from the intercooler system. During a drive cycle, the intercooler system will build up pressure as the supercharger temperature increases. Any residual air trapped in the system will gradually bleed out of the surge tank as the system reaches a pressure above 5psi.

WARNING: Always avoid removing the surge tank cap when the engine is hot. The hot coolant is under pressure and may spray out causing burns.