JEEP- JK (2007 - 2011)
INTERCOOLED SUPERCHARGER SYSTEM
264A1005 / 264A1007

INSTALLATION INSTRUCTIONS

System Serial # _____

Supercharger Serial # _____

ECU Serial # _____

Table of Contents

INTELLECTUAL PROPERTY USED IN THIS PUBLICATION - 6 -

IMPORTANT INFORMATION - 7 -

SAFETY WARNING - 8 -

CHANGES TO FACTORY SPECIFICATIONS - 8 -

TOOLS AND CONSUMABLES REQUIRED TO COMPLETE INSTALLATION - 10 -

PARTS SUPPLIED (NON-INTERCOOLED SUPERCHARGER SYSTEM) - 11 -

PARTS SUPPLIED (INTERCOOLER UPGRADE KIT) - 13 -

KIT PREPARATION - 15 -

1. REMOVE DISCHARGE DUCT FROM THE MANIFOLD ASSEMBLY - 16 -
2. REMOVE BLANKING PLUG - 16 -
3. SWAP THE SUPERCHARGER PULLEY - 17 -
4. FIT HOSE SUPPORT BRACKET - 19 -
5. REMOVE EXCESS PARTS FROM THE SUPPLIED KITS - 19 -

DISASSEMBLY INSTRUCTIONS - 20 -

PREPARATION - 21 -

1. DISCONNECT BATTERY - 23 -
2. LOOSEN FUEL FILLER CAP - 23 -
3. REMOVE AIR INLET PIPE - 23 -
4. REMOVE AIR BOX - 24 -
5. REMOVE CHARCOAL CANISTER VACUUM HOSE - 24 -
6. DISCONNECT FUEL LINE - 24 -
7. REMOVE RIGHT SIDE INNER WHEEL WELL (LHD VEHICLES)- OPTIONAL - 25 -
8. REMOVE EGR LINE - 25 -
9. DISCONNECT MAP SENSOR PLUG - 26 -
10. DISCONNECT THROTTLE BODY PLUG - 26 -
11. REMOVE VALVE COVER BREATHER HOSES - 26 -
12. REMOVE INTAKE MANIFOLD - 27 -

13. COVER INTAKE RUNNERS - 27 -
14. DISCONNECT INJECTOR PLUGS - 28 -
15. REMOVE HARNESS FROM FUEL RAIL - 28 -
16. STRIP BACK FUEL AND THROTTLE BODY HARNESS - 28 -
17. RE-ATTACH CONDUIT TO HARNESS - 29 -
18. REMOVE FUEL RAIL - 29 -
19. REMOVE EXISTING FUEL INJECTORS - 29 -
20. INSTALL THE SUPPLIED NEW INJECTORS - 29 -
21. INSTALL FUEL RAIL ASSEMBLY - 30 -
22. ATTACH WIRING HARNESS TO THE FUEL RAIL - 30 -
23. REMOVE ALTERNATOR WIRING HARNESS - 30 -
24. REMOVE ALTERNATOR BRACE - 30 -
25. REMOVE COIL PACK - 31 -
26. REMOVE COIL PACK BRACKET - 31 -
27. REMOVE DRIVE BELT - 31 -
28. REMOVE ALTERNATOR - 32 -
29. SWAP VALVE COVERS - 32 -
30. FIT ALTERNATOR - 32 -
31. FIT COIL PACK BRACKET - 33 -
32. ATTACH ALTERNATOR BRACE - 33 -
33. ROTATE RADIATOR HOSE CLAMP - 33 -
34. REMOVE END SECTION OF FUEL LINE - 34 -
35. TRIMMING BATTERY BOX (LHD VEHICLES ONLY) - 35 -
36. REMOVE THE FRONT GRILLE - 36 -
37. MODIFY PLASTIC PANEL - 37 -

INSTALLATION INSTRUCTIONS - 38 -

1. INSTALL FUEL LINE - 39 -
2. MODIFY PURGE LINE - 40 -
3. FIT THE IDLER BRACKET ASSEMBLY - 41 -

4. FIT THE SUPPLIED BREATHER HOSE - 42 -
5. INSTALL EGR PLATE - 42 -
6. CONNECT THE SUPPLIED INTERCOOLER WATER PUMP WIRING LOOM - 43 -
7. REPLACE SEALS - 43 -
8. INSTALL MANIFOLD - 43 -
9. FIT MAP SENSOR TO THE MANIFOLD - 44 -
10. FIT THROTTLE BODY - 44 -
11. INSTALL CANISTER VACUUM HOSE - 45 -
12. FIT THE NEW DRIVE BELT - 45 -
13. FIT THE WATER PUMP MOUNT BRACKET - 45 -
14. ATTACH THE WATER PUMP WIRING HARNESS - 46 -
15. POSITION THE EGR PIPE (INTERCOOLED SYSTEM SPECIFIC) - 46 -
16. FIT THE EGR SEAL/GASKET TO THE INTERCOOLER MANIFOLD - 47 -
17. INSTALLING THE INTERCOOLER MANIFOLD - 47 -
18. TIGHTEN THE EGR PIPE TO THE INTERCOOLER MANIFOLD - 49 -
19. INTERCOOLER RADIATOR PREPARATION - 49 -
20. FIT THE INTERCOOLER RADIATOR - 50 -
21. CONNECT HOSES - 51 -
22. FIT THE FACTORY AIR BOX - 52 -
23. FIT THE BLANKING PLUG TO THE AIR BOX - 53 -
24. MODIFY OEM BREATHER EXTENSION HOSE - 53 -
25. FIT THE AIR INLET PIPE AND THE FACTORY AIR INLET HOSE - 53 -
26. FIT THE FRONT GRILLE - 54 -
27. RECONNECT THE BATTERY - 54 -
28. LOAD THE ECM RE-FLASH - DIABLO - 55 -
29. INSTALL PREMIUM UNLEADED FUEL STICKER - 55 -

PRE TEST- DRIVE INSPECTION - 56 -

1. PRE-START INSPECTION - 57 -
2. ENGINE WARM UP - 57 -

3. ROAD TEST VEHICLE _____ **- 57 -**

MAINTENANCE INSTRUCTIONS _____ **- 58 -**

1. SUPERCHARGER DRIVE BELT REPLACEMENT _____ **- 59 -**

2. SUPERCHARGER LUBRICATION SERVICE _____ **- 60 -**

3. SUPERCHARGER SERVICE _____ **- 60 -**

Intellectual Property used in this Publication

This document is copyright of **Sprintex Ltd**, a company incorporated in Australia. This document may not be re-sold, copied or distributed in any way without prior written authorisation of Sprintex Ltd.

Copyrights / Trademarks:

Sprintex® is a registered trademark of Sprintex Limited, an Australian company ACN: 106 337 599 (“Sprintex”). Sprintex has patents for its superchargers. Any unauthorised copying or modification of the system may result in legal action.

Loctite® and Grey Maxx® are registered trademarks of Henkel KGaA, a company incorporated in Germany. Other than commercial supply arrangements, Henkel KGaA does not have any association with Sprintex.

RedLine® is a registered trademark of RedLine Synthetic Oil Corporation, a company incorporated in the United States of America. Other than commercial supply arrangements, Redline and RedLine Synthetic Oil Corporation do not have any association with Sprintex.

Jeep, Jeep - JK, Jeep & Wrangler are registered trademarks of FCA US LLC, formerly Chrysler Group LLC. A company Headquartered in Auburn Hills, MI, USA. (http://www.fcausllc.com)

SAE is a trademark of SAE International (www.sae.org), global technology information and standards setting resource organisation for the design, manufacturing, operation, and maintenance industry.

Gates is a registered trademark of the Gates Rubber Company, a subsidiary of Tomkins PLC, incorporated in London, United Kingdom. Other than commercial supply arrangements, Gates and Tomkins PLC do not have any association with Sprintex Limited.

IMPORTANT INFORMATION

PRODUCT WARNING

Installation of the Sprintex Intercooled Supercharger system to a Jeep- JK vehicle may void all or parts of the Jeep Warranty. Customers should consult their Jeep dealer for details.

Sprintex makes no representation that installation and use of the Sprintex supercharger system (or the intercooler) is legal for public road use worldwide. Customers should check that the installation and use of the Sprintex supercharger system on their vehicle is legal by contacting the relevant statutory authority in their jurisdiction prior to use on roads.

Sprintex supports safe driving. Always remember to observe all speed limits and road rules relevant to the state, city or other local jurisdiction.

Provided in this installation manual are detailed instructions to the installer on how to install the Sprintex patent pending Intercooled supercharger system to the Jeep- JK vehicle. The instructions are aimed at being simple yet informative, and are aided with well-presented pictures to make installations as simple, fast and problem free as possible. **Please read the entire instruction manual prior to beginning the installation procedure.** Pictures and descriptions may vary slightly from model to model.

It is recommended that all wiring harness connectors and vacuum hoses are labelled at the time of removal for easy and correct refitting. Some components that are removed and are to be refitted are fragile and should be stored safely to prevent damage to these components.

Sprintex recommends performing the following vehicle checks prior to installing the supercharger:

- Check that the factory fuel system is operating correctly.
- Ensure that the vehicle's ignition system is working correctly.
- Install new standard spark plugs and set gap to 0.043" / 1.1mm
- Inspect the catalytic converters for blockage or damage
- Replace the fuel filter, if the vehicle has travelled more than 15,000km (9000 miles).

It is recommended to run at least one full tank of premium unleaded fuel through the vehicle prior to installing the supercharger system to prevent any possible damage that may occur due to running the supercharged engine on lower Octane fuel.

Sprintex will not be liable for any loss, damage, payment, costs, expenses or other liability not expressly stated in this document. In particular, Sprintex shall not be liable to any person for any consequential, indirect or economic loss or punitive or exemplary damages of any kind.

Sprintex reserves the right to change specifications from time to time and will not be liable to any person for doing so. Sprintex believes that the information in this document is correct at time of print. Sprintex limits its liability to the maximum extent permissible at law with regard to the reliance which any person places on anything in this document.

THIS SPRINTEX INTERCOOLED SUPERCHARGER SYSTEM INSTALLATION REQUIRES THAT THE VEHICLE IS FITTED WITH AN APPROVED ECU AND ECU CALIBRATION. FAILURE TO ENSURE THIS WILL AFFECT THE PERFORMANCE AND MAY VOID WARRANTY. CONTACT YOUR RESELLER TO CONFIRM IF NECESSARY.

California residents:
California Proposition 65 entitles California to special warnings for products that contain chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

WARNING

This product can expose you to chemicals including Cumene, which is known to the State of California to cause cancer or birth defects or other reproductive harm.
For more information, visit
www.P65Warnings.ca.gov.

SAFETY WARNING

No unauthorised service or alteration may be undertaken to the Sprintex supercharger or related parts. Installation should be carried out in a workshop which is a safe and ventilated working environment with equipment and procedures compliant with local authority guidelines and legal requirements. Installers should ensure adequate hearing, eye and other appropriate personal protective equipment is used at all times during the installation process. Installers should take reasonable precautions to avoid fatigue and closely follow the installation instructions during every installation. Sprintex recommends installation should not be carried out unsupervised. Sprintex, its directors, employees and agents will not accept liability for damage accident or injury resulting from the installation process. Safety warnings are also provided throughout this document.

CHANGES TO FACTORY SPECIFICATIONS

FUEL: MINIMUM 95 RON (91 Octane USA) PREMIUM UNLEADED GASOLINE/FUEL TO BE USED AT ALL TIMES. NEVER ALLOW THE ENGINE TO KNOCK OR DETONATE AS SERIOUS ENGINE DAMAGE MAY OCCUR.

REQUIRED SERVICE: (SEE MAINTENANCE SECTION OF MANUAL)

1. **INSPECT THE SUPERCHARGER DRIVE BELT AT EVERY ROUTINE SERVICE AND REPLACE IF REQUIRED.**
2. **DRAIN AND REPLACE SUPERCHARGER OIL EVERY 40,000 km (25,000 miles) or 2 YEARS (whichever is earlier).**
   - **SUPERCHARGER IS SUPPLIED WITH REDLINE 75W90 NS GEAR OIL.**
     USE 100 millilitres or 3.38 US fluid ounces OF FULLY SYNTHETIC SAE 75W90 GEAR OIL (SPECIFICATIONS: API GL5, MT-1).
   - **CHECK THE OIL LEVEL IN THE SIGHT GLASS OF THE SUPERCHARGER (IF EQUIPPED).**

3. **OIL LEVEL SHOULD BE CHECKED WITH THE DIPSTICK OR LEVEL PLUG (WHICH EVER THE UNIT IS EQUIPPED WITH) PERIODICALLY (RECOMMENDED EVERY WEEK AND ALSO BEFORE & AFTER A LONG JOURNEY).**

NOTE:
MANY OF THE PHOTOS SHOWN IN THIS DOCUMENT ARE OF A TYPICAL JEEP- JK RIGHT HAND DRIVE VEHICLE AND ARE SIMILAR TO A TYPICAL JEEP- JK LEFT HAND DRIVE VEHICLE

NOTE:
SOME OF THE TERMINOLOGY AND LANGUAGE USED IN THIS INSTRUCTION MAY VARY FROM THAT OF THE END USER / INSTALLER'S EXPECTATIONS, AS SOME TOOLS AND AUTOMOTIVE COMPONENTS HAVE DIFFERENT COMMON NAMES IN DIFFERENT GEOGRAPHICAL LOCATIONS

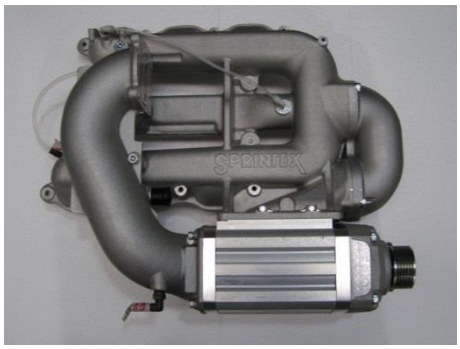
Tools and Consumables Required to Complete Installation

Metric Wrenches and Socket Sets	Various Pliers and Side Cutters (Dykes)	Metric Allen Keys
Flat and Philips Screwdrivers	Loctite 518 / 5188 sealant	3/8” Breaker Bar
3/8” or ¼” Universal Joint	Loctite 577 thread locker	Electrical Tape
Ear clamp crimp pliers	Rubber grease	

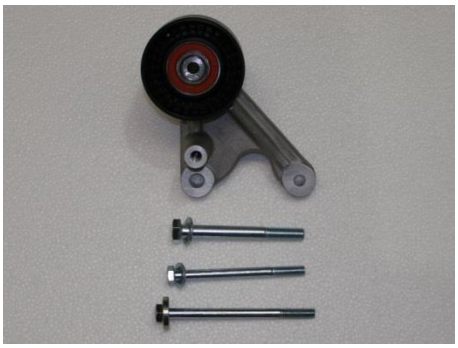
NOTE:

The intercooled supercharger system supplied is a combination of Non-intercooled supercharger (base) system and an intercooler upgrade kit. The customer needs to integrate these 2 versions to create an intercooled system which is explained in detail in the following pages.

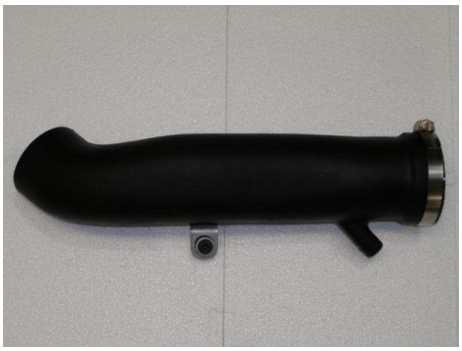
PARTS SUPPLIED (Non-Intercooled Supercharger system)



Sprintex® Supercharger manifold assembly

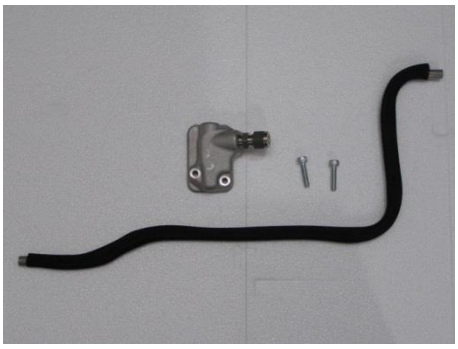


Idler pulley bracket assembly



Throttle body intake assembly

Fuel feed hose & canister vacuum hose



EGR plate assembly

Engine breather hose

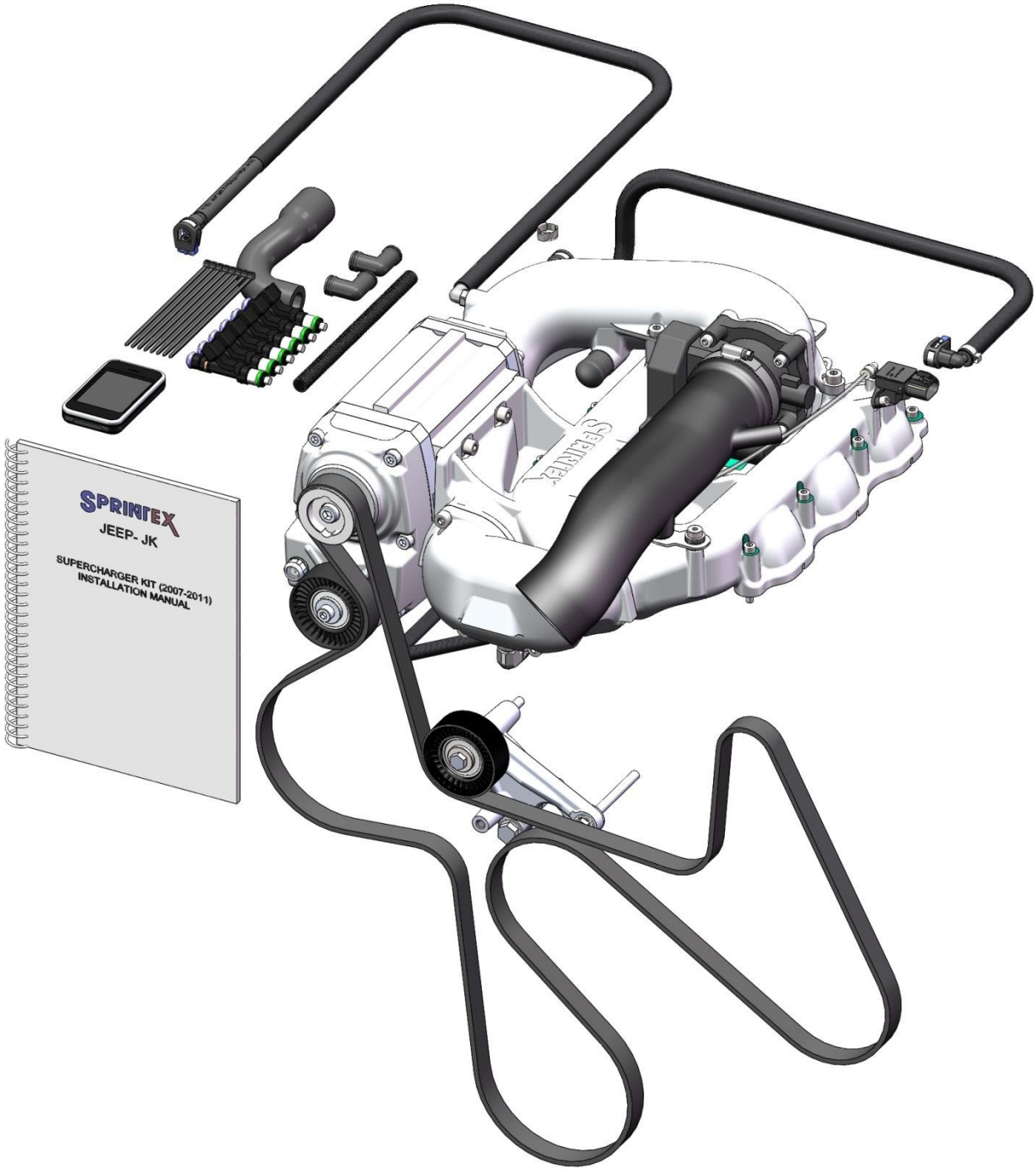
MAP sensor and screws

Drive belt, Fuel injectors and ancillary parts

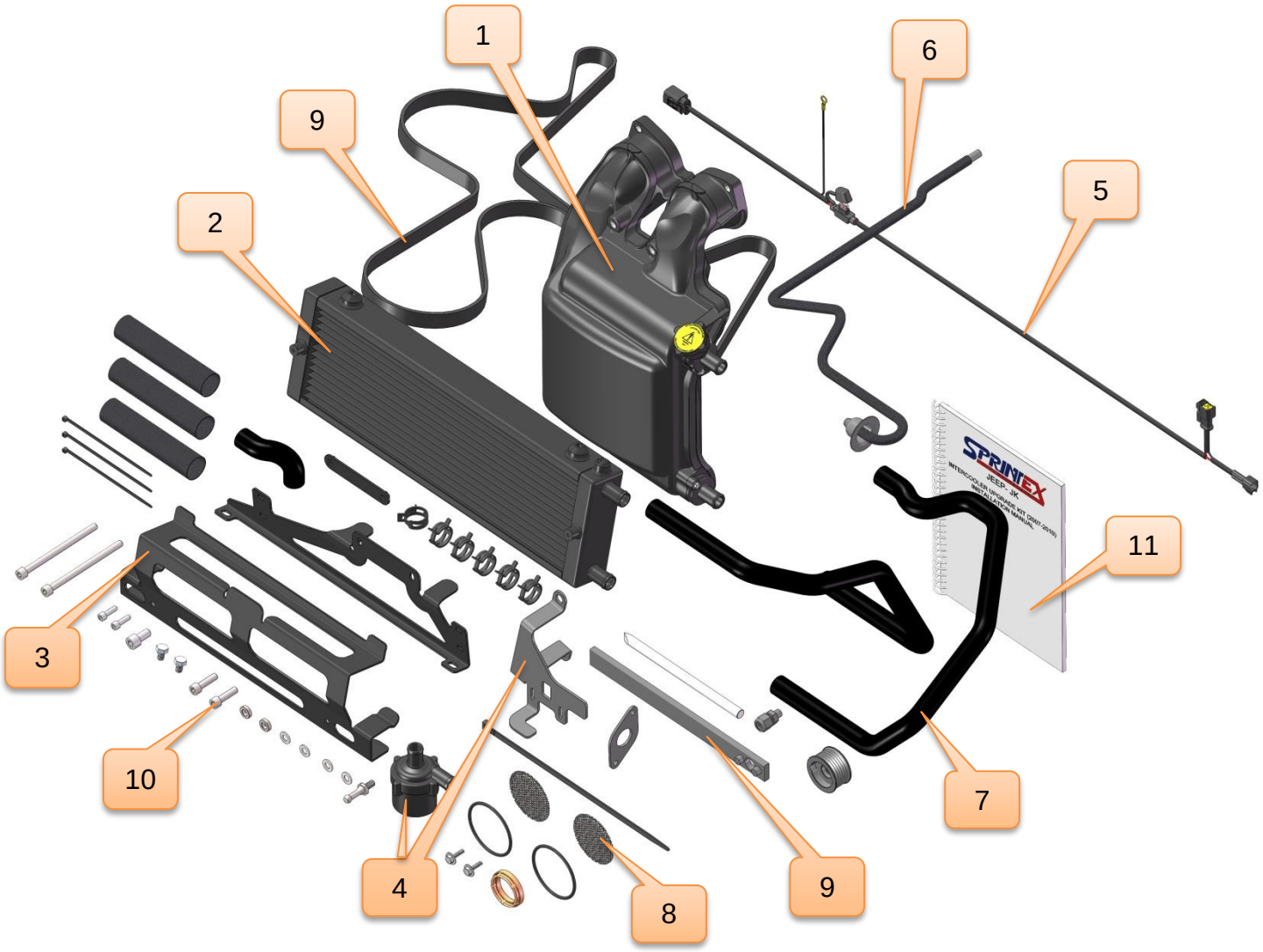
ECU Reflash unit- **Diablo**

Sticker, Premium Unleaded fuel

Installation Manual


SPRINTEX
JEEP- JK
SUPERCHARGER KIT (2007-2011)
INSTALLATION MANUAL

PARTS SUPPLIED (Intercooler upgrade kit)



1. Sprintex® Laminova® Intercooler Manifold Assembly
2. Intercooler radiator
3. Radiator mount brackets
4. Water pump & mounting bracket
5. Water pump wiring harness
6. EGR pipe assembly (Intercooled system specific)
7. Intercooler hoses & hose clamps
8. Silencing plates
9. Drive belt, Supercharger pulley, pulley holding tool, rotor stopper.
10. Assorted screws, washers and ancillary parts
11. Installation manual (Intercooler upgrade kit)

SPRINTEX
JEEP- JK
INTERCOOLER UPGRADE KIT (2007-2010)
INSTALLATION MANUAL

JEEP- JK (2007 - 2011)
INTERCOOLED SUPERCHARGER SYSTEM

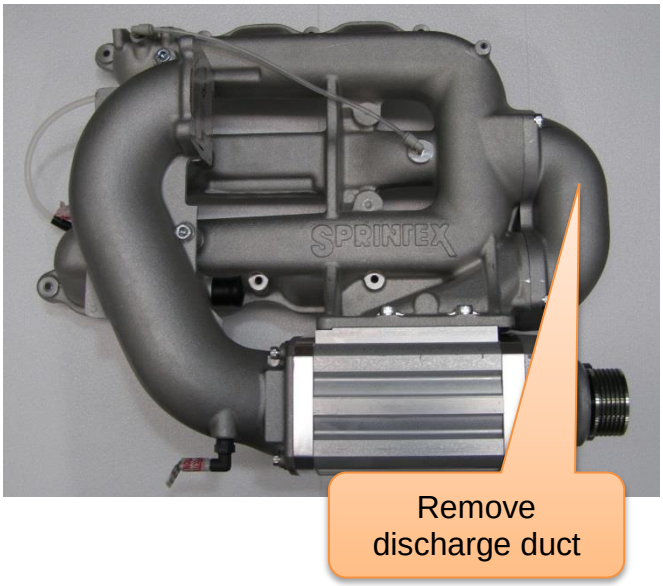
SECTION 1

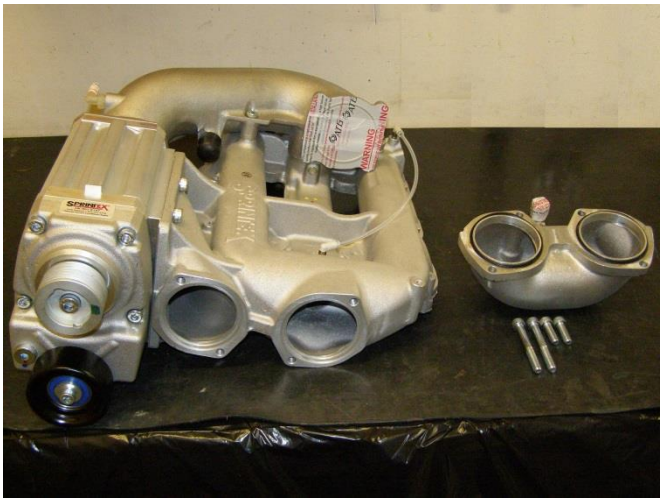
KIT PREPARATION

KIT PREPARATION

1. Remove discharge duct from the manifold assembly

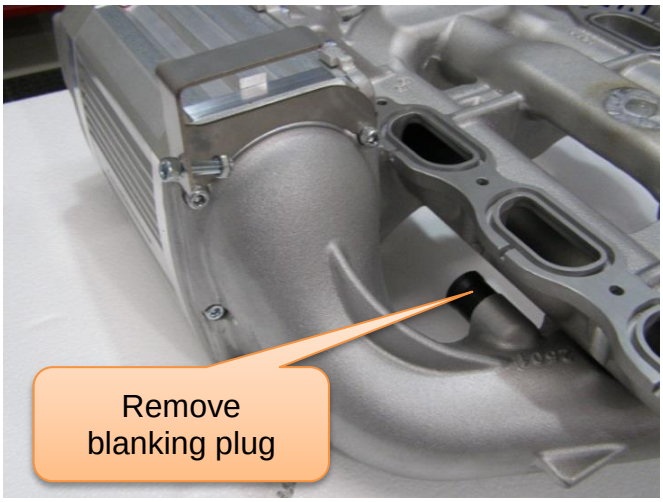
- Remove four M8 SHCS and remove the discharge duct with the O-Rings from the supercharger assembly.
- Store these parts in a safe location. These will not be used in the intercooled system assembly.





2. Remove blanking plug

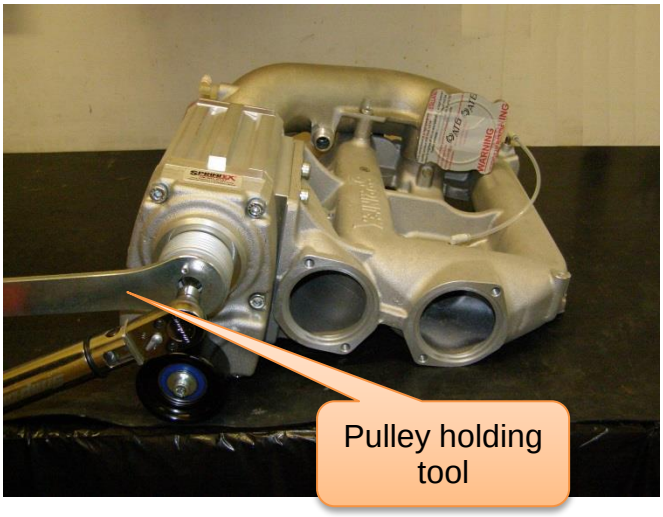
- Remove the rubber blanking cap from the supercharger assembly and store in a safe location. This will be fitted later to the air box.



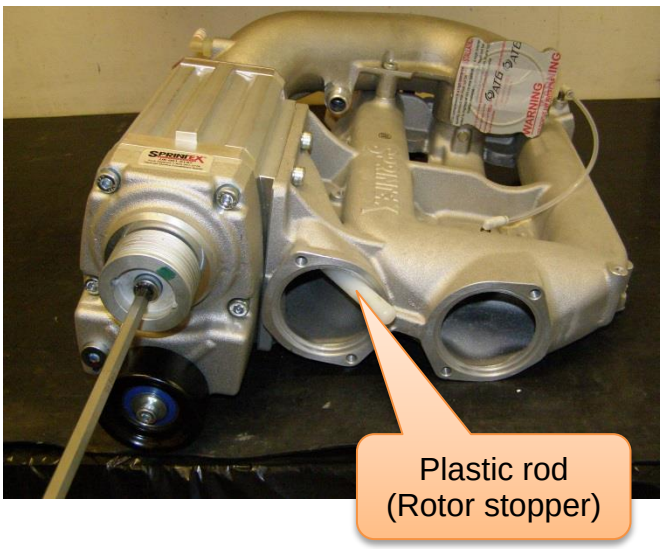
3. Swap the Supercharger pulley

NOTE:

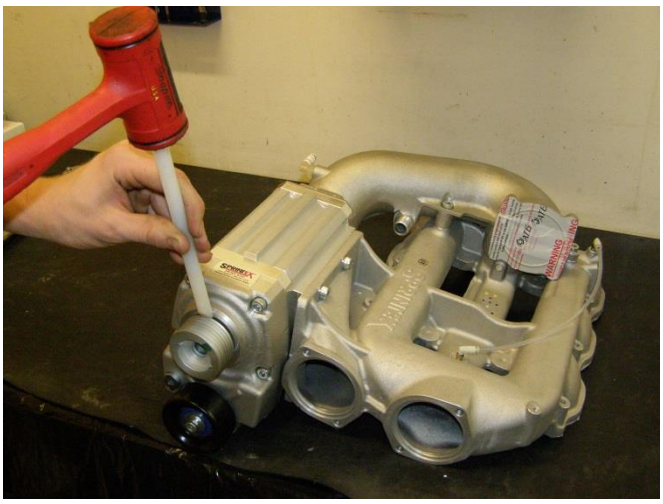
1. **Do not apply more than 10Nm of tightening or loosening torque to the pulley mount screw while the plastic rod (rotor stopper) supplied is in the supercharger, as this may disturb the rotor alignment.**
2. Take care to avoid dirt ingress into the supercharger.



- Loosen the SHCS retaining the supercharger pulley. Use the pulley holding tool supplied while loosening the screw.



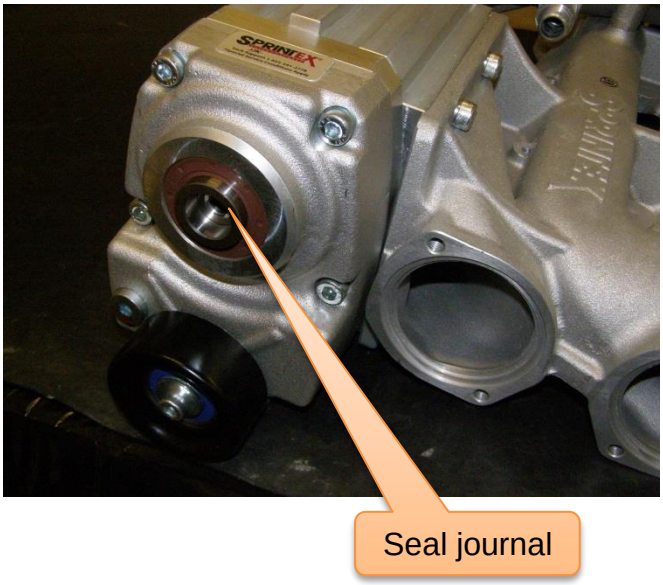
- **OPTIONAL-** Place the supplied plastic rod (rotor stopper) into the supercharger discharge side as per the picture stopping the rotors from spinning whilst removing the SHCS from the pulley because of Loctite on the screw threads.



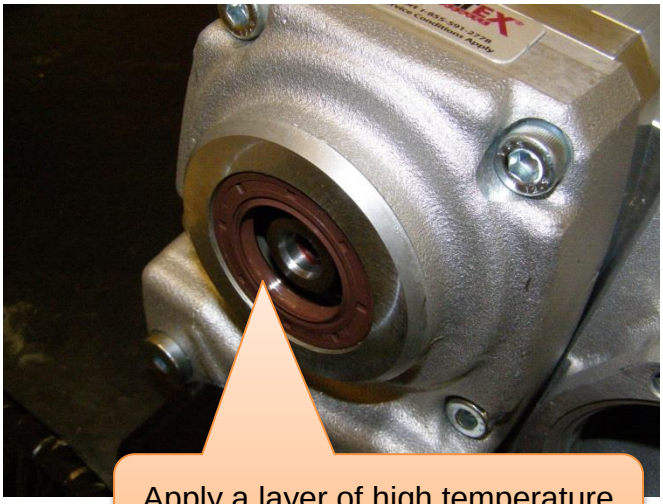
- Place the wedge (provided on one end of the rotor stopper) between the Supercharger and the pulley. Lightly tap on the wedge with a soft or rubber mallet. Rotate the pulley and repeat the process until the pulley comes off. Try not to remove the seal journal from the supercharger.

- Clean Loctite residue from the pulley screw and inside the threaded hole

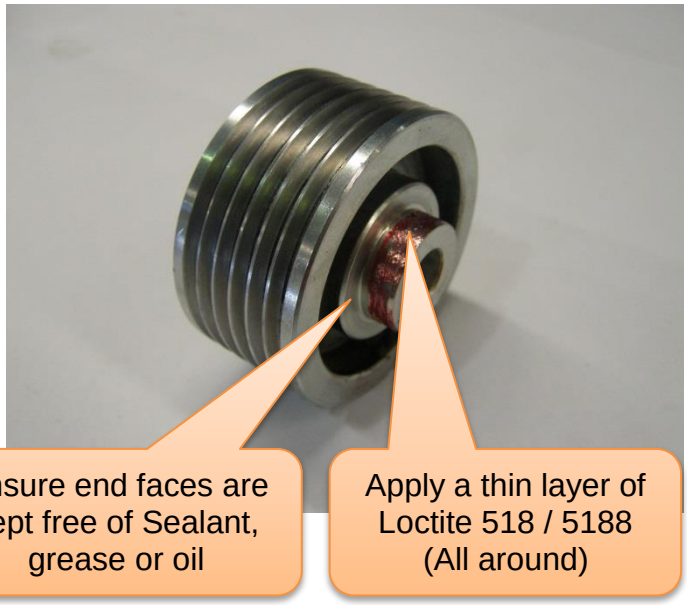
- Thoroughly clean Loctite residue from the seal journal.



- If the seal journal is removed accidentally from the supercharger, apply a layer of high temperature lubrication grease in between the lips of the lipseal. Insert the seal journal into the lipseal, locating the spigot on the supercharger drive system.

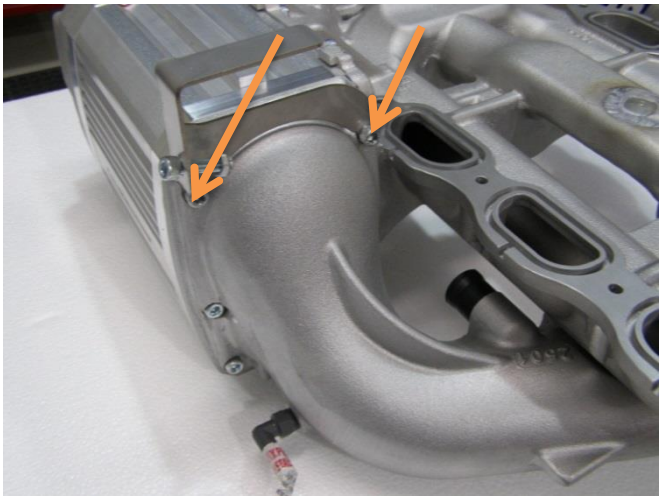


- Apply a thin layer of Loctite 518 / 5188 or equivalent on the spigot of the new pulley.
- Install the new **Ø50mm** pulley supplied. Apply Loctite 518 / 5188 or equivalent to threads upon assembly. Tighten the pulley to 75Nm using the pulley holding tool supplied. While replacing the pulley, do not disturb or remove the seal journal (spacer) or lipseal from the supercharger.



4. Fit hose support bracket

- Remove the 2 screws from the bottom of the supercharger intake and attach the hose support bracket. Tighten to 12Nm.



5. Remove excess parts from the supplied kits

- The following parts and assemblies supplied with the Non-Intercooled system are not required for the intercooled system assembly. These will be replaced by the parts supplied with intercooler upgrade kit.
  a) Drive belt 6PK2687
  b) EGR pipe assembly
  c) Discharge duct, O-Rings & fasteners

- Remove the compression fitting part from the intercooler upgrade kit. This is not required for the kit assembly.

JEEP- JK (2007 - 2011)
INTERCOOLED SUPERCHARGER SYSTEM

SECTION 2

DISASSEMBLY INSTRUCTIONS

SAFETY WARNING

No unauthorised service or alteration may be undertaken to the Sprintex supercharger. Installation should be carried out in a workshop which is a safe and ventilated working environment with equipment and procedures compliant with local authority guidelines and legal requirements. Installers should ensure adequate hearing, eye, and physical protection is used at all times during the installation process. Installers should take reasonable precautions to avoid fatigue and closely follow the installation instructions during every installation. Sprintex recommends installation should not be carried out unsupervised. Sprintex, its directors, employees and agents will not accept liability for damage accident or injury resulting from the installation process. Safety warnings are also provided throughout this document.

Preparation

Ensure that all components required to assemble the supercharger are available. Refer to the Parts Supplied section provided earlier.

Ensure that all required tools are available.

Please read the entire instruction manual prior to beginning the installation procedure.

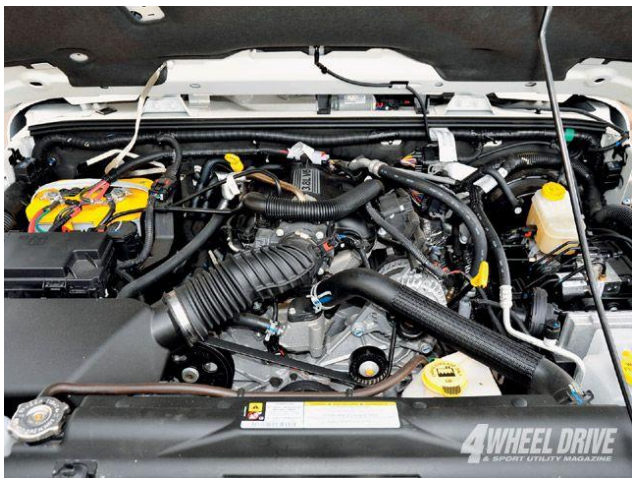
Ensure the vehicle is located in a secure position with the vehicle tyres secured and the handbrake applied. To avoid injury, Sprintex® recommends use of a suitable vehicle lift or axle stands when the vehicle is required to be lifted for access to. Stands should be positioned as per the vehicle Manufacturers Owners Handbook.

SAFETY WARNING: Use Personal Protective Equipment such as safety glasses, gloves, etc. at all times and as necessary.

SAFETY WARNING: Allow engine to cool prior to proceeding with disassembly to prevent scalding.

Note: During disassembly and removal of components, take notes and ensure to label and store them safely. This will help with the reassembly process.

Note: Many of the photos shown in this document are of a typical Jeep- JK right hand drive vehicle and are similar to a typical Jeep- JK left hand drive vehicle.



Left hand drive vehicle

Right hand drive vehicle

Caution:
Connect and disconnect battery cables, jumper cables or battery chargers only with the ignition switched off

Warning:
Disconnecting the battery may erase fault codes stored in the control module memory.
Using diagnostic equipment to check for fault codes before disconnecting the battery cables.
If the malfunction indicator light (MIL) is illuminated.

MIL (Malfunction Indicator Lamp)

The MIL can be found in one of two locations, dependant on the market the vehicle has been built for.

1. The MIL may be an illuminated **ENGINE** symbol within the speedometer cluster.

2. The MIL may be displayed as **SERVICE ENGINE SOON** within the tachometer.

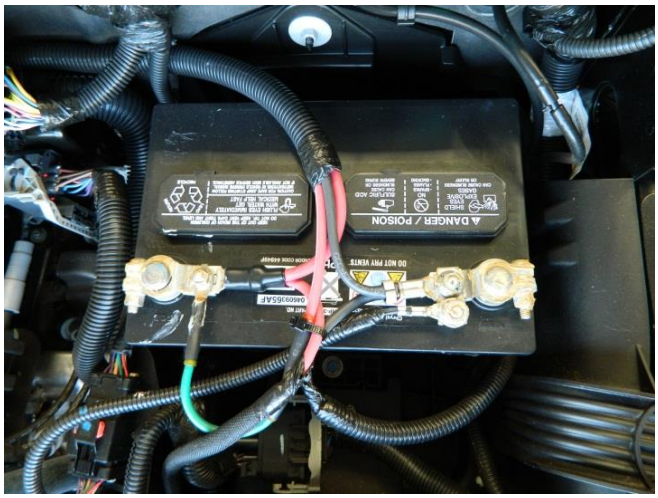
Please refer to the **OWNERS HANDBOOK** to define which off the above applies to the vehicle to be fitted with the Sprintex unit.

Note:
Always disconnect the negative battery terminal prior to disconnection the positive battery terminal. This prevents possible shorting and potential battery damage.

DISASSEMBLY INSTRUCTIONS

1. Disconnect Battery

- First disconnect the negative (-) battery cable.
- Lift the positive (+) terminal plastic cover, then disconnect the positive (+) cable.

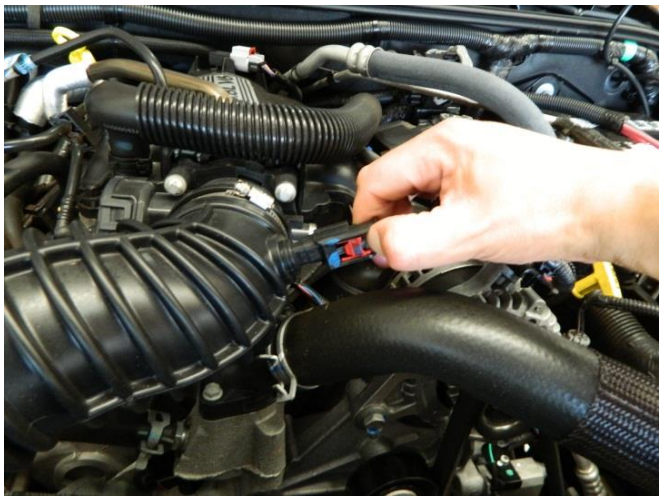


2. Loosen fuel filler cap

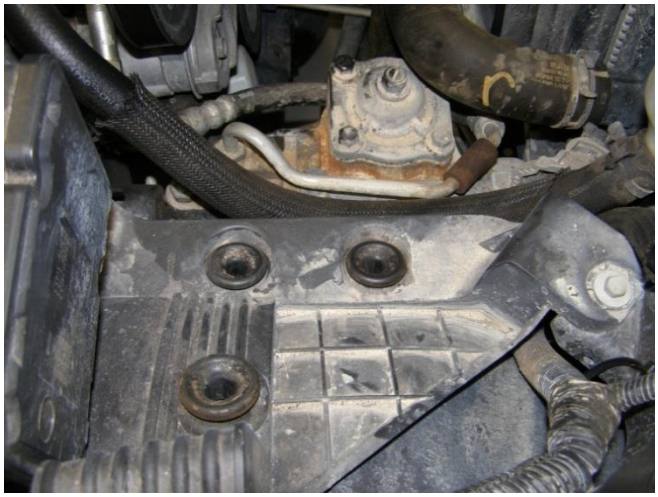
- Loosen fuel filler cap to relieve pressure in the system.

3. Remove air inlet pipe

- Remove air temp sensor from the inlet pipe.
- Loosen the 2 hose clamps with a flat blade screw driver and remove the air inlet pipe.



4. Remove air box

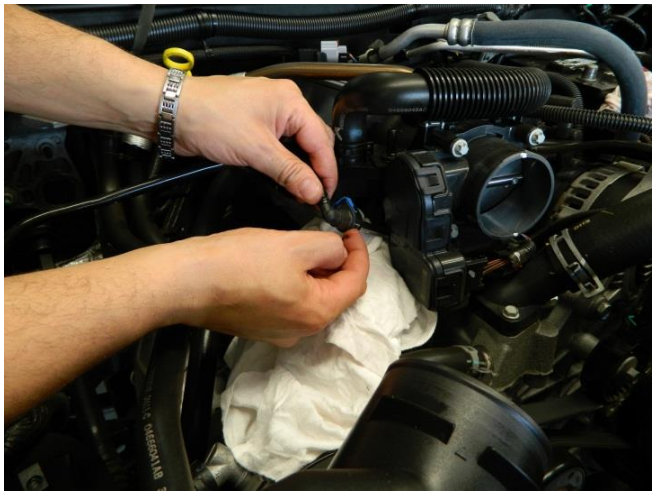


- Disconnect breather hose from valve cover.
- Remove air box, breather hose and store in a safe location.

5. Remove charcoal canister vacuum hose

- Disconnect vacuum hose and fitting from the canister, disconnect other end of hose from the manifold and remove hose.
- This is not required for the supercharger system and store in a safe location.

6. Disconnect fuel line



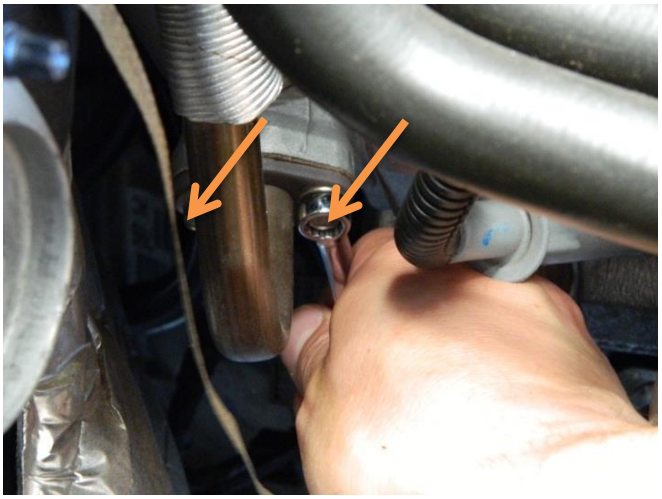
- Place a rag under the fuel fitting and disconnect fuel fitting from fuel rail.
- If required, use fuel fitting disconnect tool.

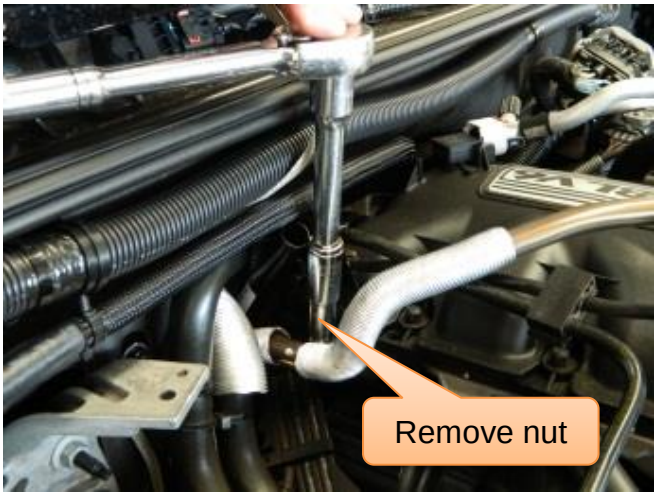
7. Remove right side inner wheel well (LHD vehicles)- OPTIONAL

- To assist access to EGR valve it may be beneficial to remove the passenger (right) side wheel and inner wheel well, **(LHD VEHICLES ONLY)** this step is not necessary but does make fitting components easier.

8. Remove EGR line

- Remove 2 screws from the EGR valve.
- Remove 2 screws on top of the manifold.
- Remove nut from stud and remove EGR tube from the engine.



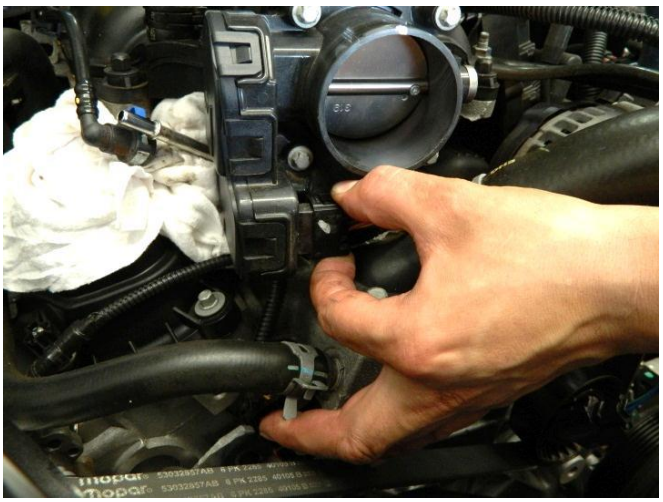


9. Disconnect MAP sensor plug

- Pull lock tab back on plug before removing plug from sensor on the manifold.

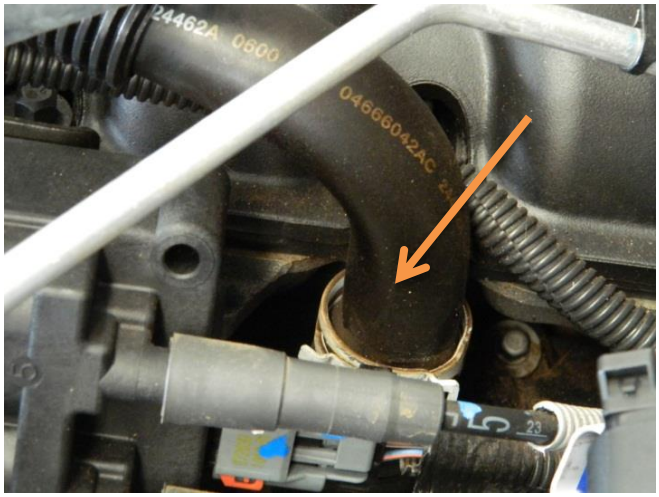
10. Disconnect throttle body plug

- Depress 2 lock tabs on the top and bottom of plug before removing plug.



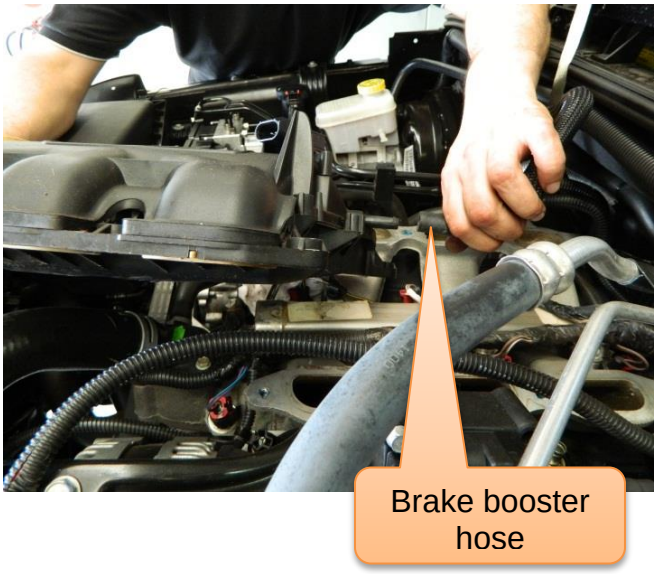
11. Remove valve cover breather hoses

- Loosen hose clamps on each end of hose and remove breather hose. Set aside to use later.
- Disconnect plug leads if needed for better access.



12. Remove intake manifold

- Disconnect the brake booster hose from the manifold.
- Remove 8 manifold screws and gently remove the plastic manifold from the cast aluminium intake runners.

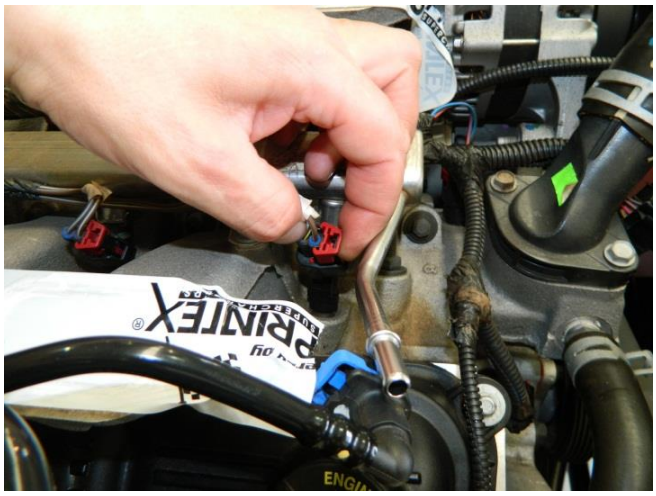


13. Cover intake runners

- Cover intake runners using sealing tape to prevent dirt ingress.

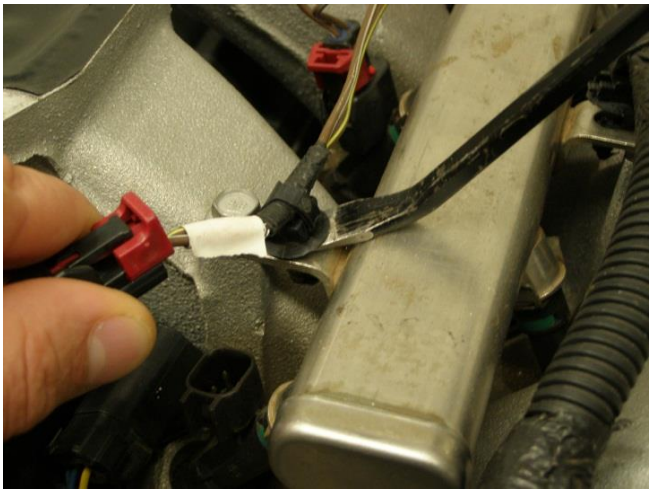
14. Disconnect injector plugs

- Lift the red lock tab up first before pressing tab to remove the injector plugs (6x).



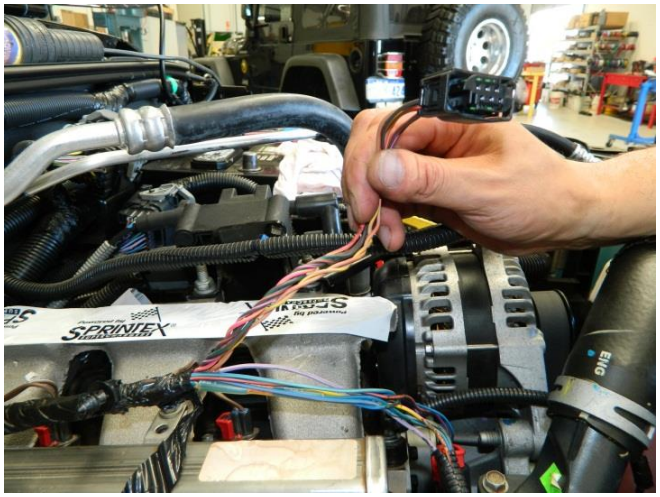
15. Remove harness from fuel rail

- Carefully remove fuel rail harness from the fuel rail assembly by gently prying up harness cable ties.



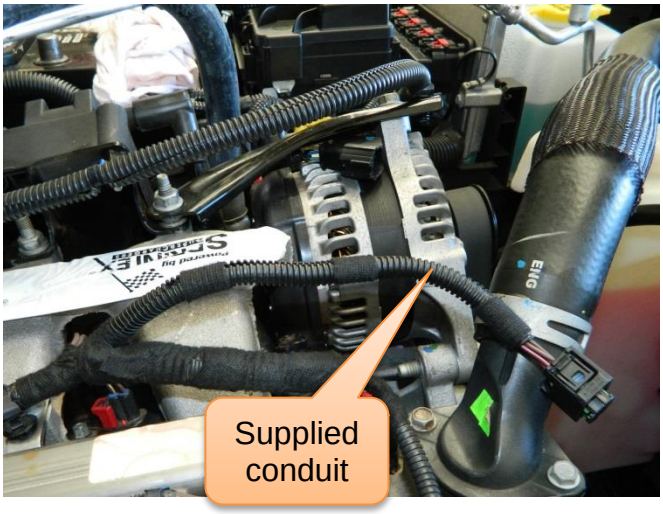
16. Strip back fuel and throttle body harness

- Carefully strip back harness approx. 6” (150mm) to separate throttle body cables and plug from the main harness.



17. Re-attach conduit to harness

- Re-attach conduit to main group of cables.
- Fit the supplied conduit to the throttle body cables and neatly cover the harness using insulation tape.



18. Remove fuel rail

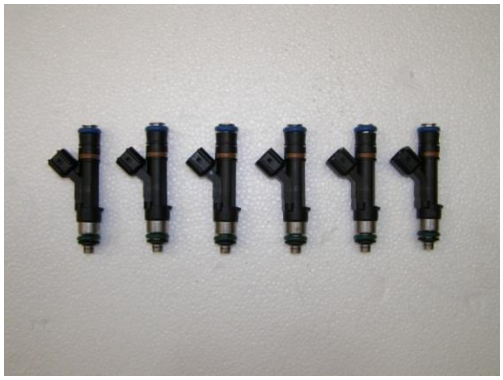
- Gently blow air around injectors to remove any loose dirt that may fall into the engine when the injectors are removed.
- Remove 4 screws and gently lift fuel rail assembly with the injectors.

19. Remove existing fuel injectors

- Remove one injector first and drain residual fuel from rail.
- Remove the injector retaining clips from fuel rail assembly and set them aside.
- Make note of the injector orientation and remove the remaining injectors from the fuel rail.

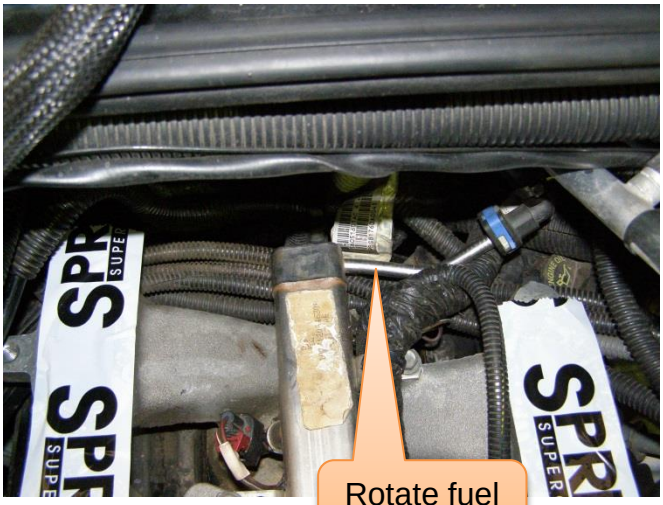
20. Install the supplied new injectors

- Install the 6 new injectors supplied into fuel rail; apply a small amount of rubber grease or silicone spray to O-Rings prior to installation.
- Once the injectors are in place refit the retaining clips.



21. Install fuel rail assembly

- Apply a small amount of rubber grease or silicone spray to O-Rings of the fuel injectors prior to installing the fuel rail assembly.
- Rotate the fuel rail assembly 180° from its original position, so that the fuel feed is toward the rear of the engine.
- Install the fuel rail and tighten with 4 screws.

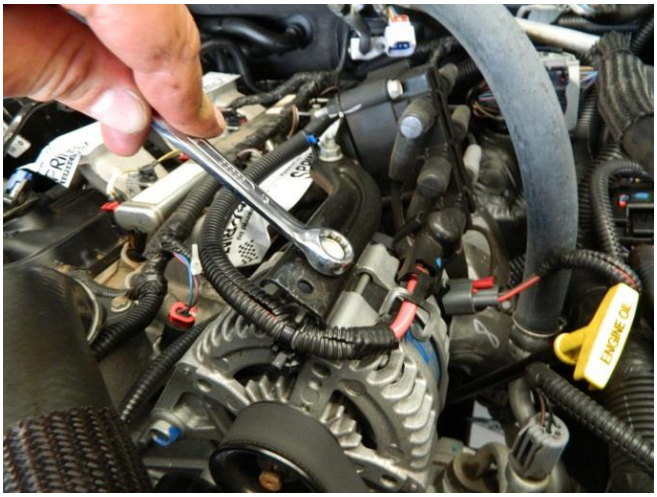


22. Attach wiring harness to the fuel rail

- Attach the wiring harness back to the fuel rail.

23. Remove alternator wiring harness

- Detach wiring clip from alternator brace
- Remove alternator wiring harness from brace and coil pack bracket.

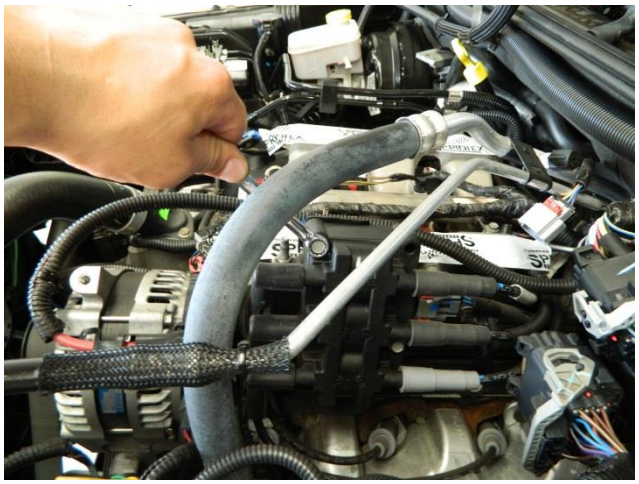


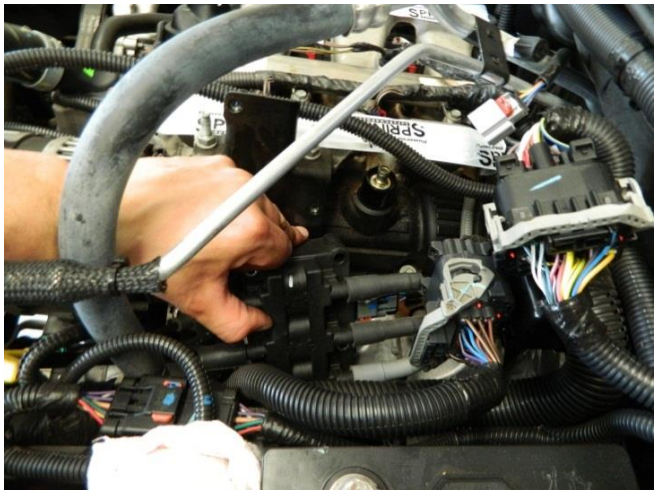
24. Remove alternator brace

- Remove bolt and nut from the alternator brace.

25. Remove coil pack

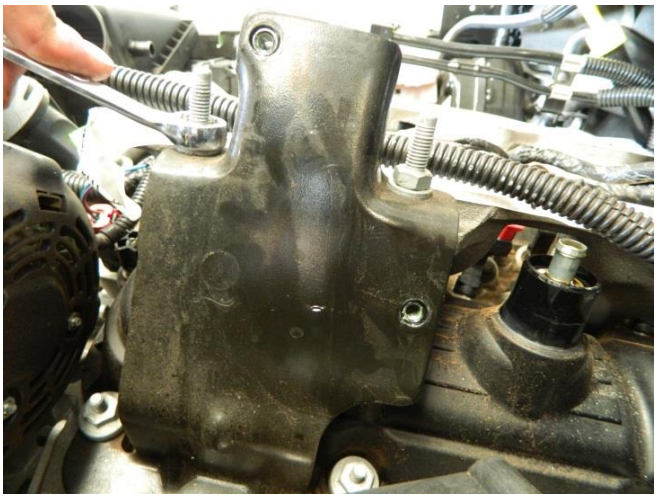
- Remove 2 screws on coil pack and lower coil pack out of the way.





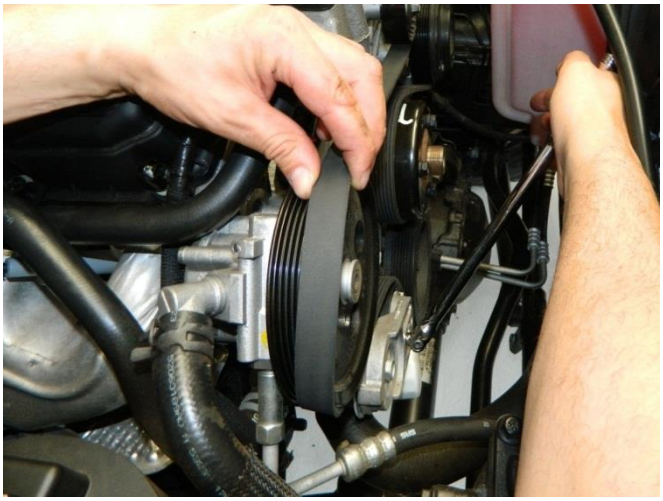
26. Remove coil pack bracket

- Remove 2 studs and 2 nuts that retain the bracket and then remove the bracket.



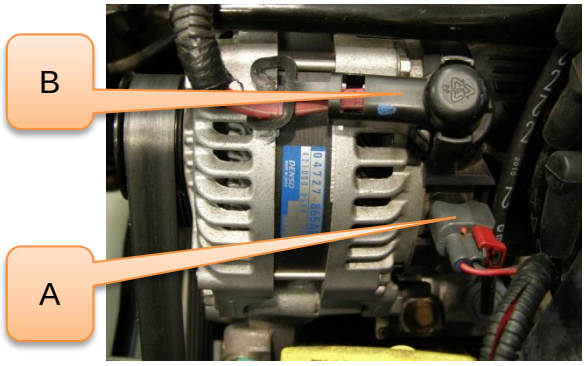
27. Remove drive belt

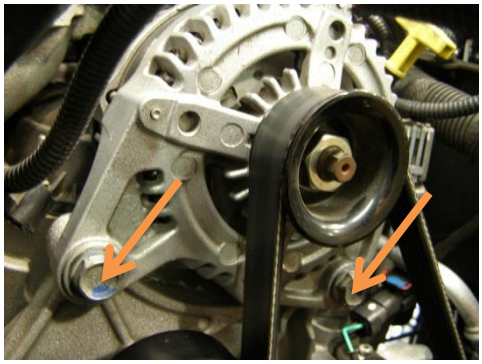
- Use long series 3/8” breaker bar to release the dynamic tensioner and remove the belt and store in a safe location. This will not be used in the intercooled supercharger system.



28. Remove alternator

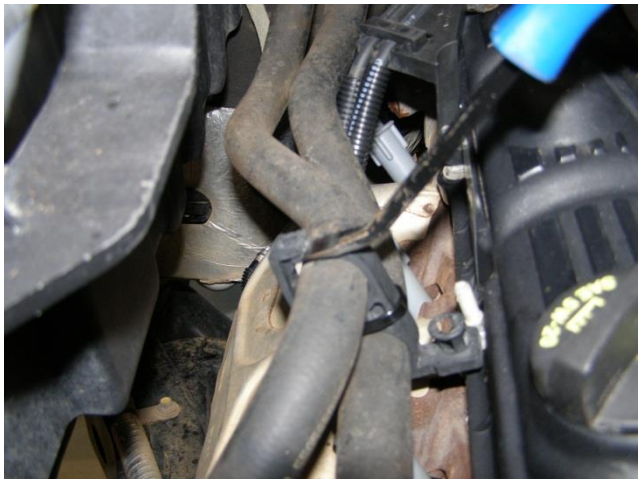
- Disconnect alternator plug (A) and lead (B)
- Remove 2 bolts from front of alternator and remove alternator from vehicle.





29. Swap valve covers

- Remove plug lead cradle from valve cover.
- Remove clamp from heater hoses and set aside to use later.
- Loosen all valve cover bolts, remove, and **swap valve covers left to right**.
- Tighten valve covers back in place.
- Re-attach plug lead cradle.



30. Fit alternator

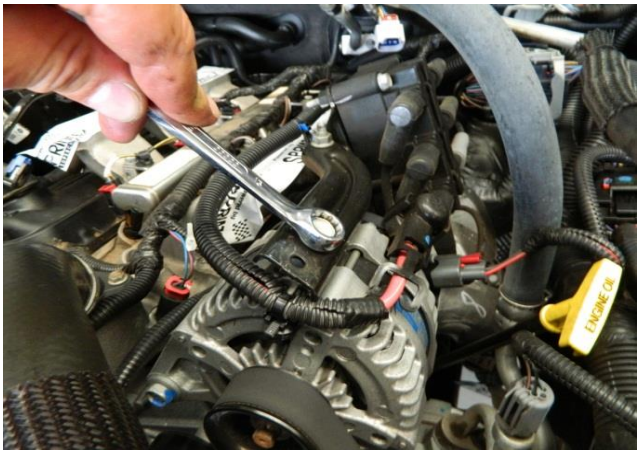
- Fit the alternator by reversing the procedure described in section- 27 on this page.

31. Fit coil pack bracket

- Fit coil pack bracket, when tightening bracket gently pull the bracket away from the centre to the engine, this is to provide better clearance when fitting supercharger manifold.

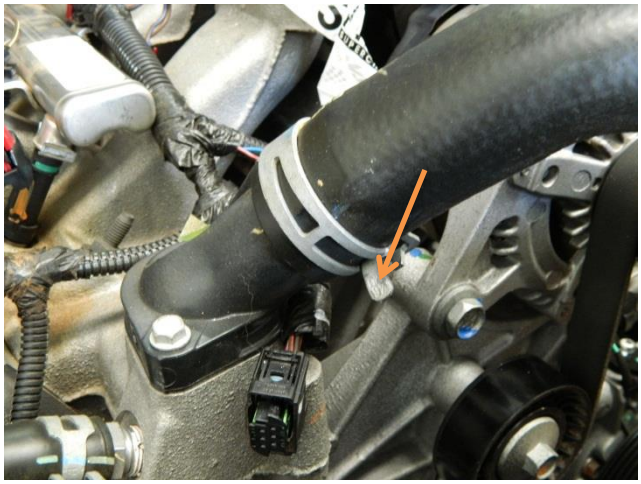
32. Attach alternator brace

- Attach alternator brace with its original fasteners.



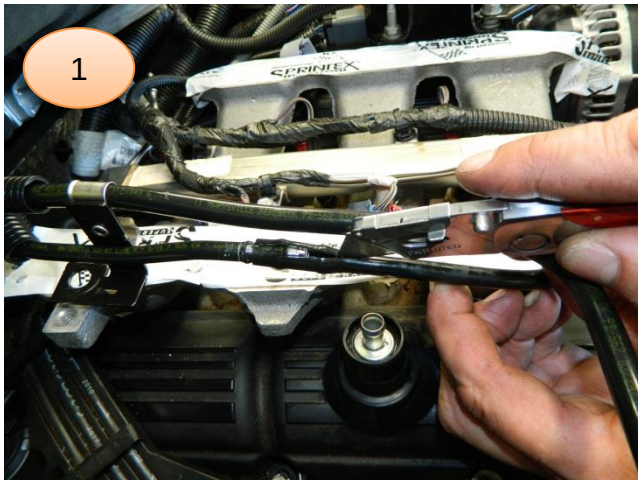
33. Rotate radiator hose clamp

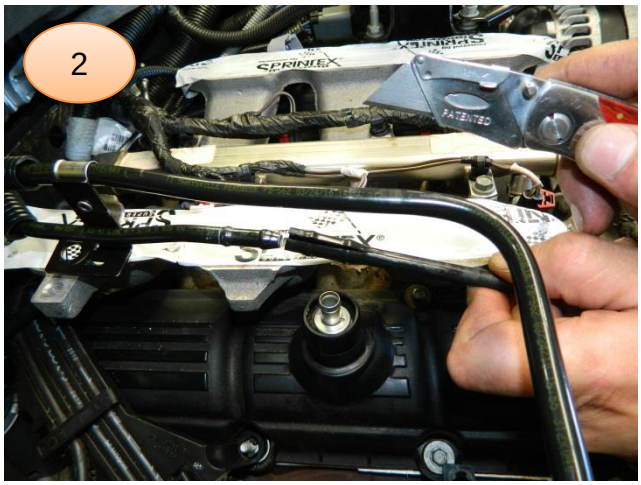
- Rotate hose clamp so that the clamp ears are facing the ground, this process is required to provide better clearance for the supercharger duct / intercooler manifold.

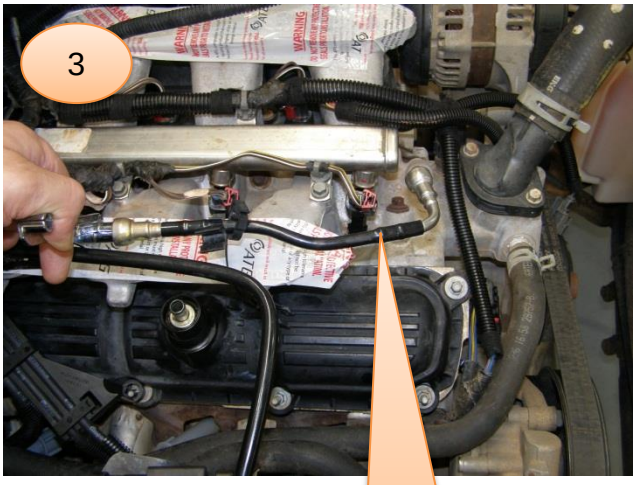


34. Remove end section of fuel line

- Some vehicles are equipped with a removable quick connect fitting. Others have the rubber hose crimped on to the steel fuel supply line.
- For the crimp type, cut off the clamp and carefully slit the hose with a sharp blade to expose the barb on the rigid fuel line.
- Take care to avoid scoring the fuel line with the sharp blade as this could cause a leak.
- Disconnect fuel connector from the fuel rail with a fuel fitting removal tool.
- Remove the end section of the fuel line, depending on the vehicle set up. This will be replaced with the new fuel line supplied.







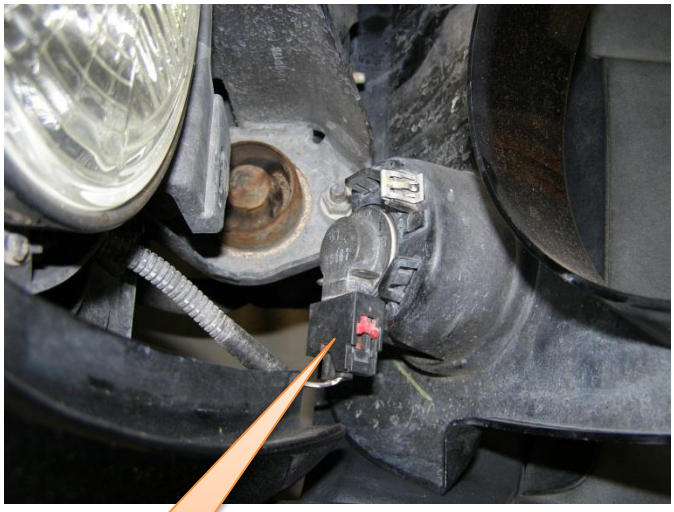
35. Trimming battery box (LHD vehicles only)

- LHD vehicle only requires some trimming of the factory battery box, use the trimming template provided on last page of this manual.

- Cut out the supplied template, stick it to the battery box and cut along marked line.

36. Remove the front grille

- Use a pry tool or a flat blade screw driver to pull out the push pin rivets on the top side of the front grille
- Carefully loosen the clips on the bottom side of the front grille
- Disconnect the plugs (2x) from the turn signal lamps located behind the front grille
- Remove the front grille and store in a safe location



37. Modify plastic panel

- Make a cut out (40mm wide x 40mm high), 2 places in the LHS plastic panel next to the factory radiator. This will allow the radiator hoses to pass through when the intercooler radiator is installed.

JEEP- JK (2007 - 2011)
INTERCOOLED SUPERCHARGER SYSTEM

SECTION 3

INSTALLATION INSTRUCTIONS

SAFETY WARNING

No unauthorised service or alteration may be undertaken to the Sprintex supercharger. Installation should be carried out in a workshop which is a safe and ventilated working environment with equipment and procedures compliant with local authority guidelines and legal requirements. Installers should ensure adequate hearing, eye and physical protection is used at all times during the installation process. Installers should take reasonable precautions to avoid fatigue and closely follow the installation instructions during every installation. Sprintex recommends installation should not be carried out unsupervised. Sprintex, its directors, employees and agents will not accept liability for damage accident or injury resulting from the installation process. Safety warnings are also provided throughout this document.

INTERCOOLED SUPERCHARGER SYSTEM INSTALLATION

1. Install fuel line

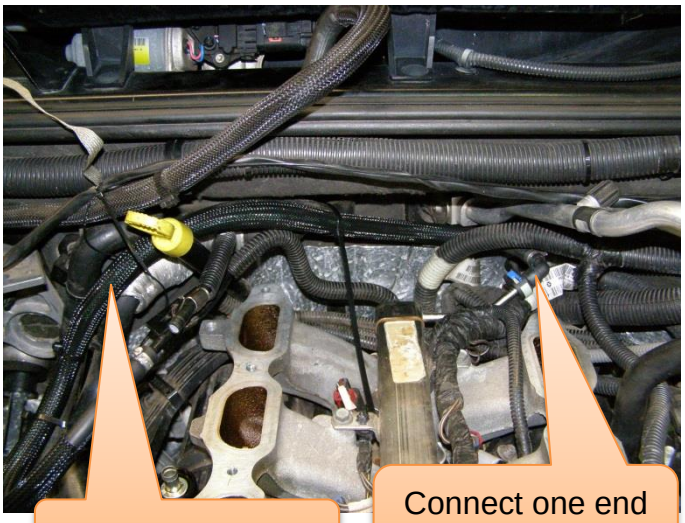
- Route the supplied fuel line (800mm long) as shown in picture.
- Fix in place with supplied cable ties as shown in the picture.
- Connect one end to the fuel rail and ensure it is securely fitted.
- Connect the other end to the fuel feed line and ensure it is securely fitted.

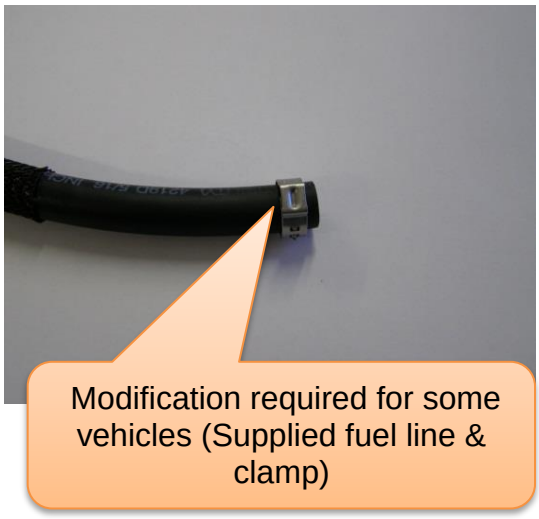
  NOTE:

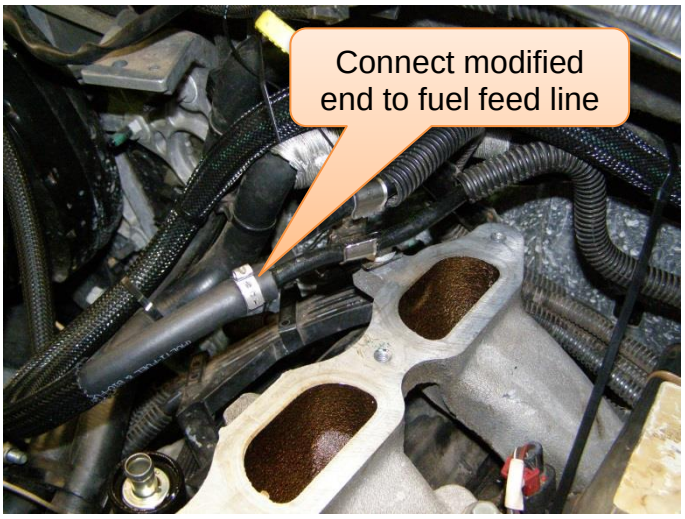
  In some instances (depending on the fuel system of the vehicle) it may be necessary to connect one end of the fuel line directly to the vehicles hard line (fuel feed line) using a hose clamp. If so, cut off one end of the supplied fuel line (including the quick fitting & hose clamp) and connect the supplied fuel hose directly to the vehicles fuel feed line using the hose clamp supplied.

IMPORTANT NOTE

Ensure that the fuel line is attached securely to fuel feed line. Crimp supplied ear clamp securely (where applicable) with the correct tool. Correct fitting of the fuel line is critical to safe operation of the vehicle.

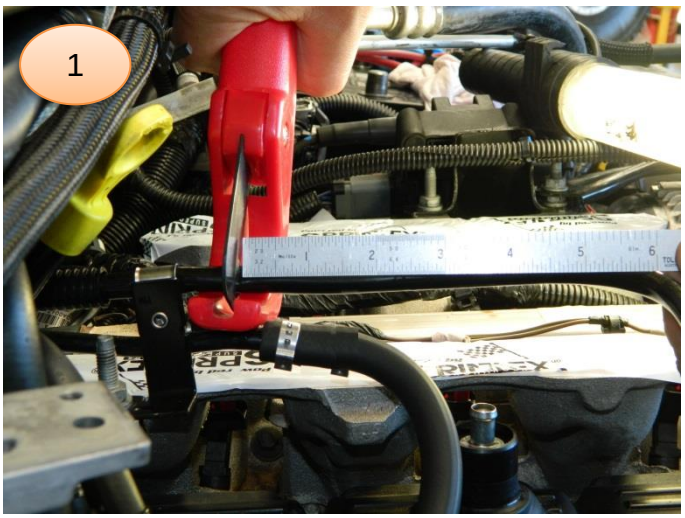


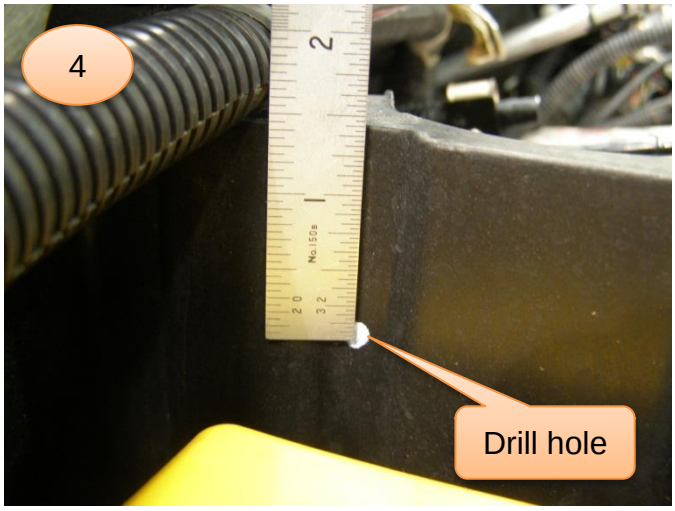


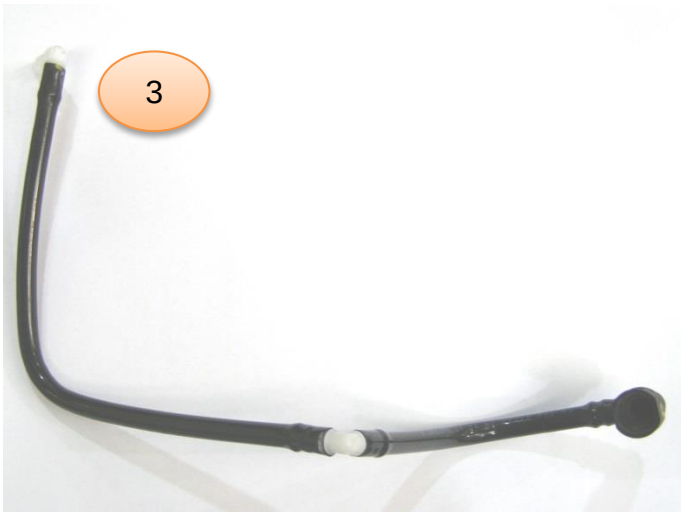


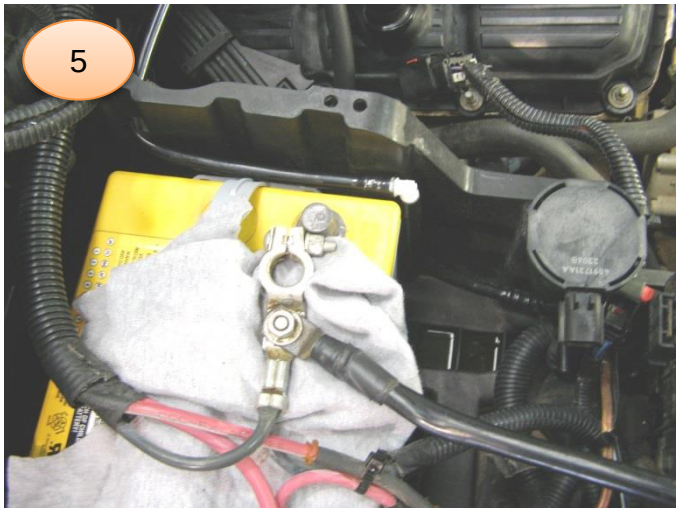
2. Modify purge line

- Cut purge line 6” (150mm) from inside of the bend in both directions.
- Fit supplied elbows (2x) to cut tube and refit cut section of tube. See pictures.
- **For LHD Vehicles only:**
  Drill a ¾” hole into battery box to feed purge line through.
- Connect the modified purge line to the Canister.



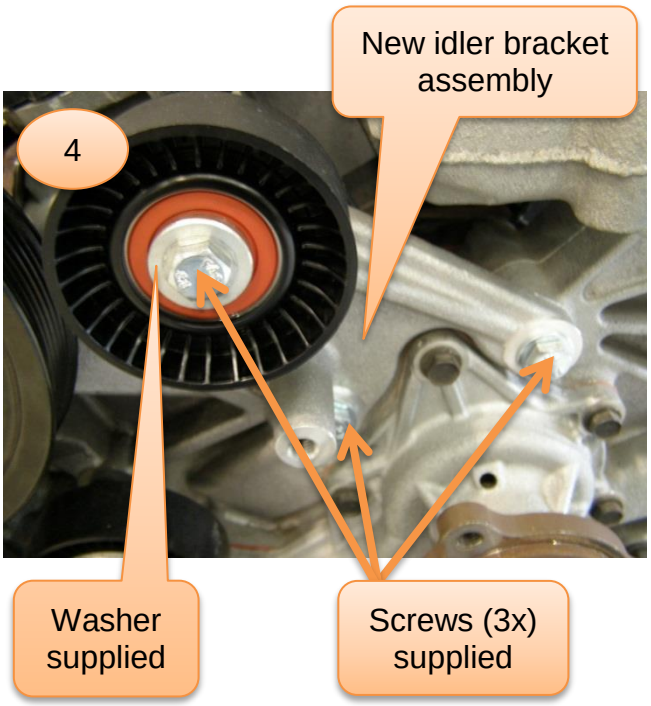


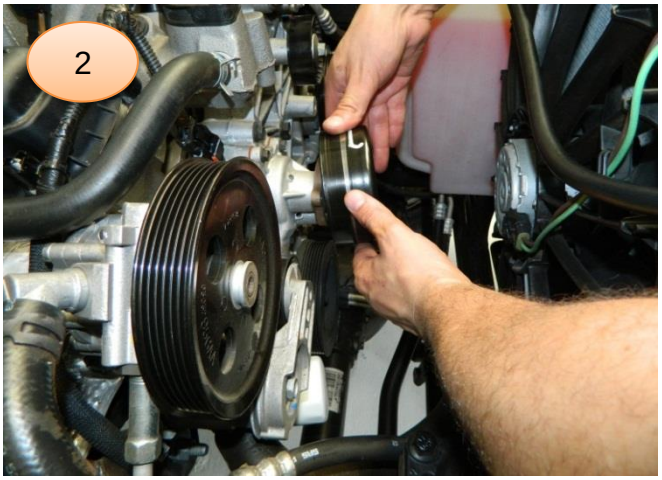


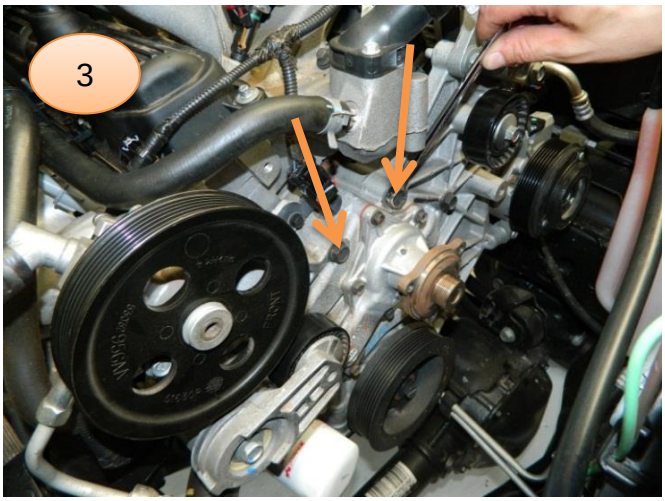


3. Fit the idler bracket assembly

- Remove 3 water pump pulley screws and remove the water pump pulley.
- Remove 2 bolts from engine casing
- Fit the idler bracket assembly to the engine using the screws supplied in the kit.
- Install the water pump pulley and tighten with previously removed 3 screws.





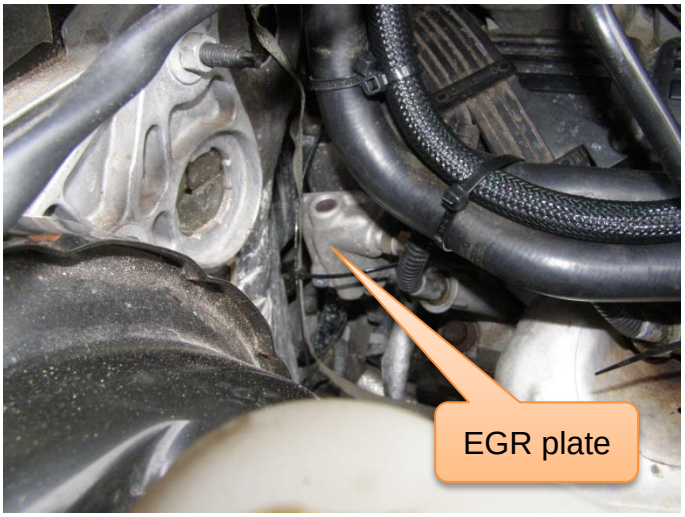


4. Fit the supplied breather hose

- Ensure orientation & fit the supplied breather hose as shown in the picture. Secure it with the hose clamp previously removed from the original hose.

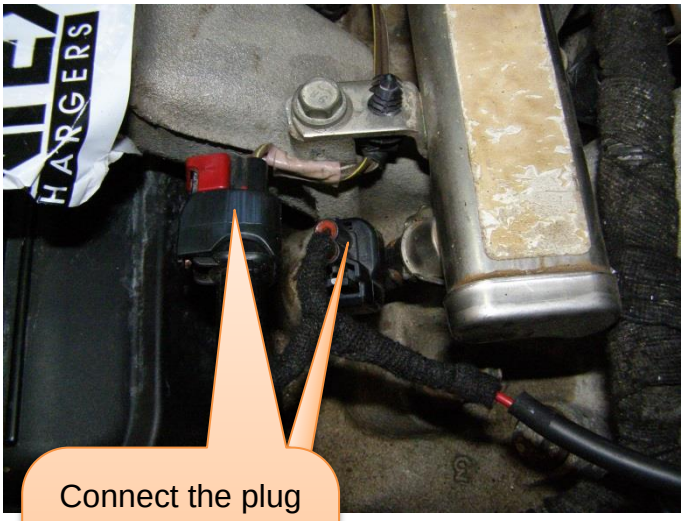
5. Install EGR plate

- Install EGR plate assembly to EGR valve with the supplied two SHCS M6 x 25 and tighten to 12Nm.



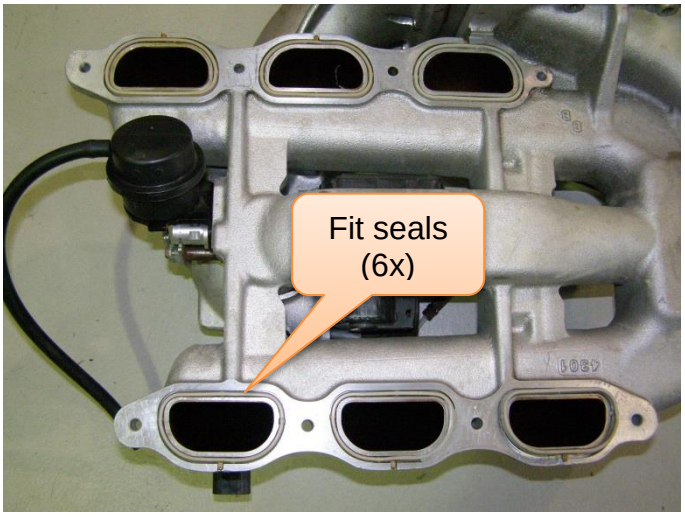
6. Connect the supplied intercooler water pump wiring loom

- Connect the water pump loom using the male & female connectors supplied, to one of the fuel injector connectors to provide switched 12V supply for the pump.
- The other end will be connected to the water pump later.



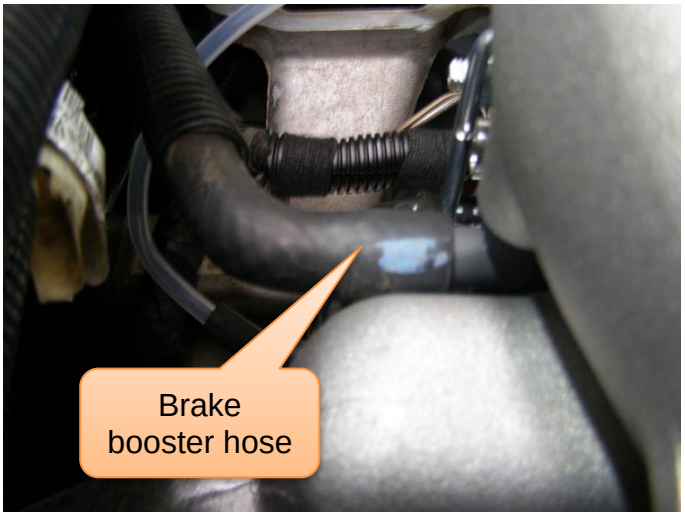
7. Replace seals

- Carefully remove manifold seals (6x) from plastic intake manifold and fit them into the supercharger manifold. Ensure that the seals are not damaged during the fitting process.



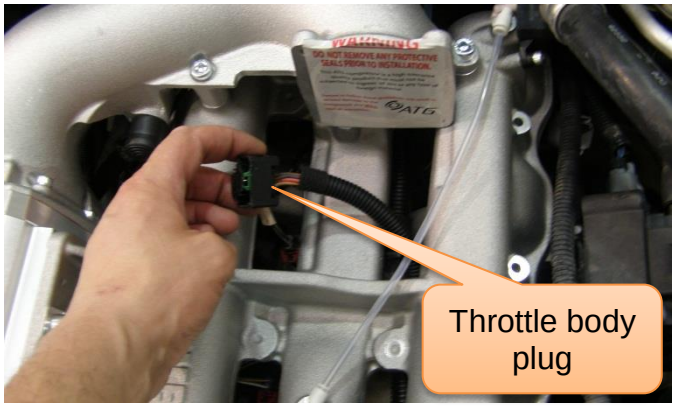
8. Install manifold

- Remove sealing tape from intake runners prior to fitting manifold.
- Position throttle body plug so it can be accessed once manifold is in place.
- Gently rest the supercharger manifold onto the intake runners. **(2 person lift)**
- Attach the brake booster hose to the fitting on the back of supercharger manifold assembly.
- Ensure that the seals are still in place before fixing the supercharger manifold

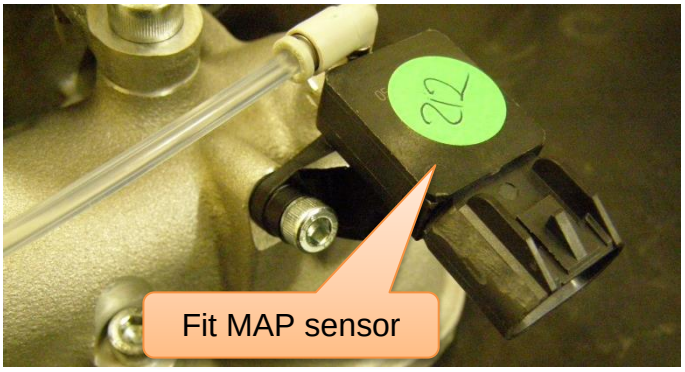


in place.

- Ensure that throttle body plug is accessible at this stage.
- Secure manifold down with the supplied SHCS M6 x 50 (5x) and SHCS M6 x 30 (3x). Tighten to 12Nm.

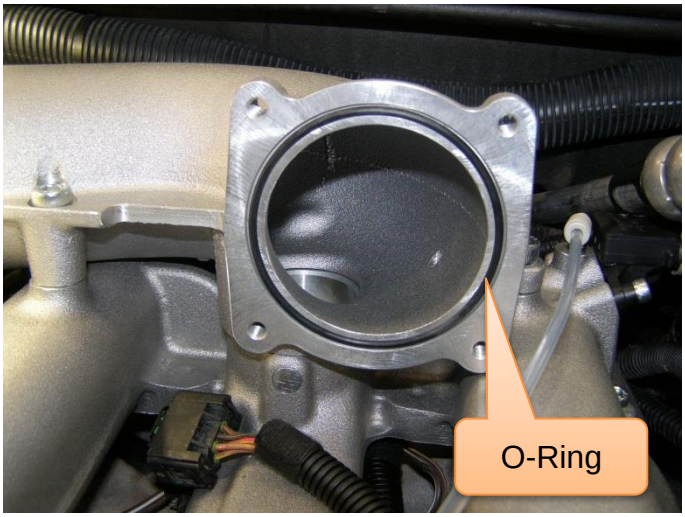


9. Fit MAP sensor to the manifold



- Prior to installing the MAP sensor check the hole in the manifold for burrs and sharp edges and lubricate the MAP sensor O-ring with rubber grease or similar.
- Install MAP sensor and attach with 2 x M5 x 20 SHCS and tighten to 8Nm.
- Connect the wiring harness connector to the MAP sensor.
- **NOTE:** Ensure there is at least 25 mm (1 inch) clearance between MAP sensor and nearby air-conditioning pipework.

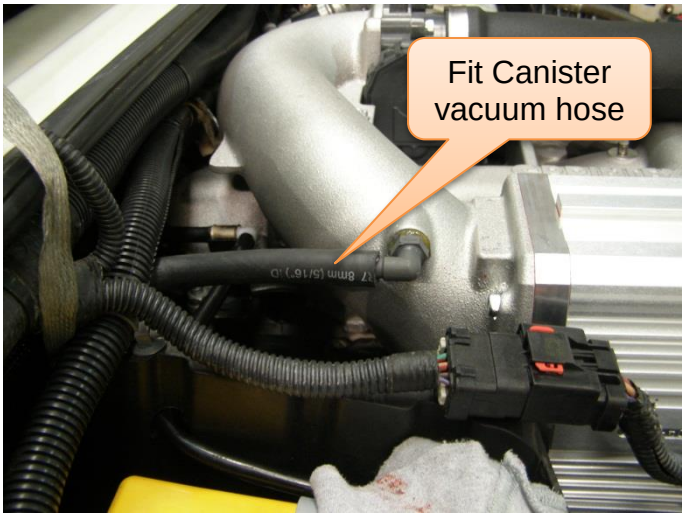
10. Fit throttle body



- Remove throttle body from OEM manifold and fit to supercharger manifold with the supplied SHCS M6 x 40 (4x) and tighten to 11Nm.
- Make sure to remove tape from supercharger intake prior to fitting throttle body and supplied O-Ring is in place.
- Connect plug to throttle body.

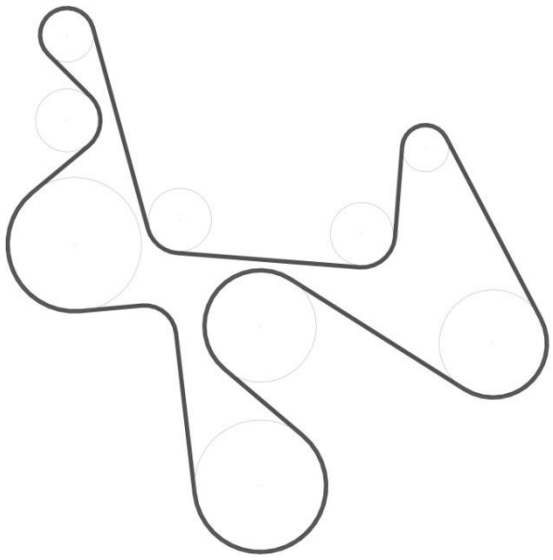
11. Install canister vacuum hose

- Install new supplied canister vacuum hose (1000mm long) supplied in kit as shown in the picture.
- Attach open end of hose to fitting on the supercharger intake.
- Fix in place with cable ties supplied.



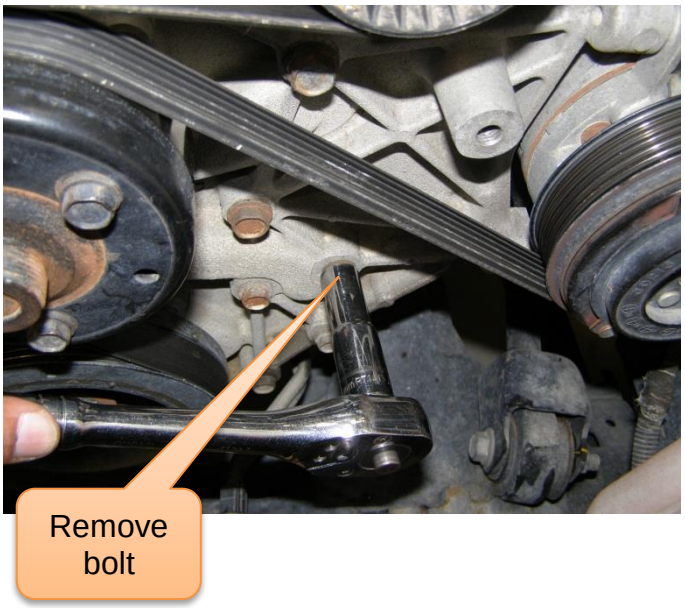
12. Fit the new drive belt

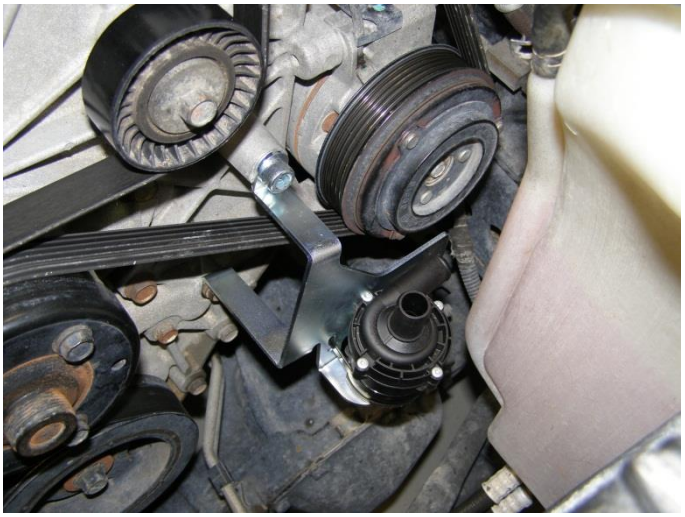
- Fit the new supplied **6PK2666 (GATES No.K061049)** Micro-V drive belt.



13. Fit the water pump mount bracket

- Attach the water pump to the bracket using the cable- tie supplied, as shown in the picture below.
- Remove the marked bolt from the engine.
- Fit the water pump mount bracket to the engine using the previously removed bolt and the supplied SHCS M10 x 20.



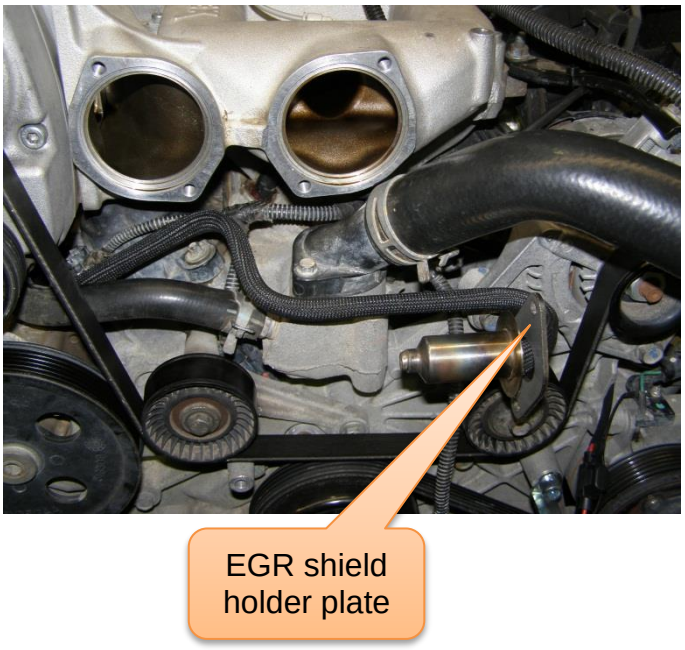


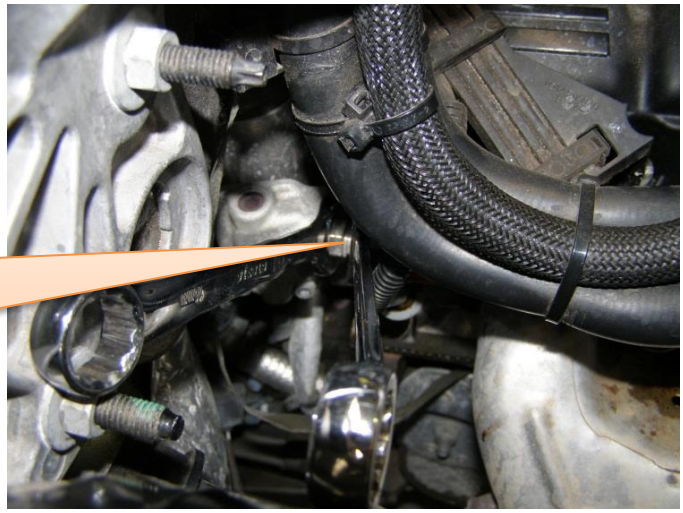
14. Attach the water pump wiring harness

- Connect the other end of the wiring harness to the water pump.
- Connect the earth point as shown in the picture.
- Secure the wiring harness using cable-ties, to avoid chafing on the moving parts.

15. Position the EGR pipe (Intercooled system specific)

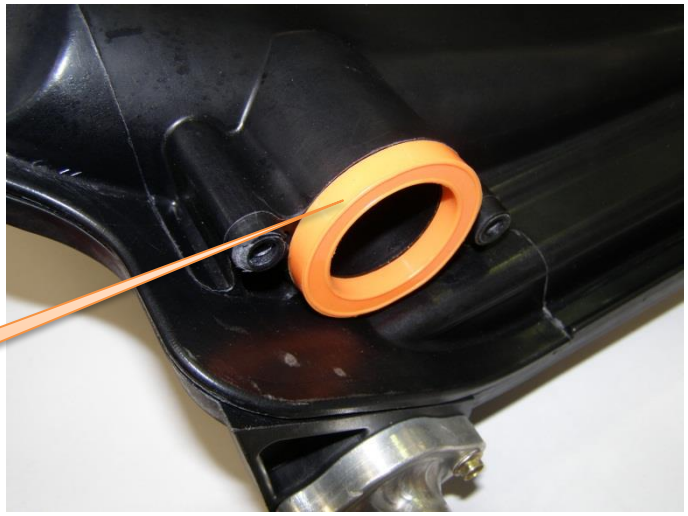
- Insert the EGR shield holder and plate supplied. Ensure the braided sleeve is assembled to the EGR pipe.
- Position the EGR using the new compression fitting (Olive & nut), to the EGR adaptor plate, so that it can be accessed after the manifold is in place. Do not tighten the compression fitting at this stage.





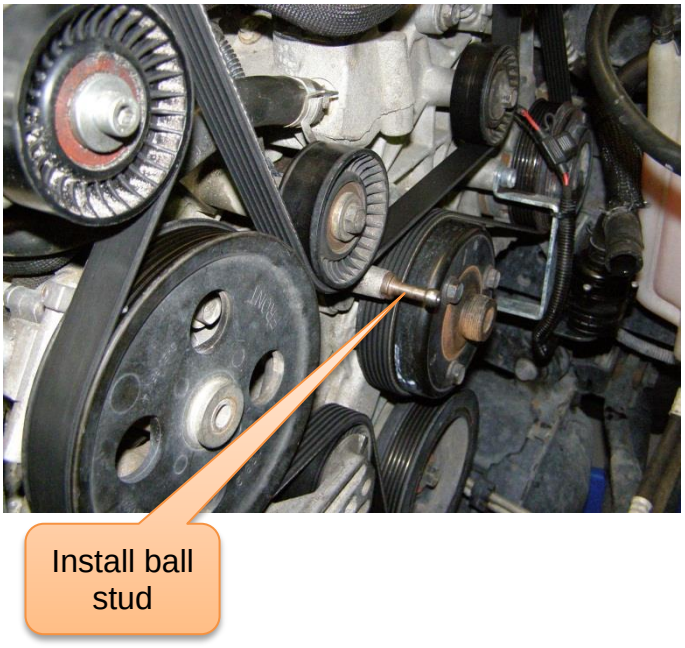
16. Fit the EGR seal/gasket to the Intercooler manifold

- Fit the gasket supplied to the intercooler manifold.

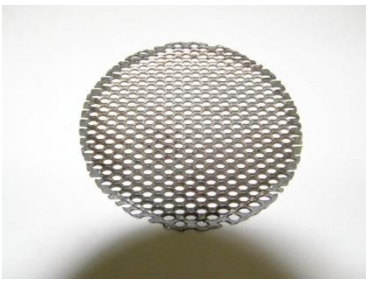


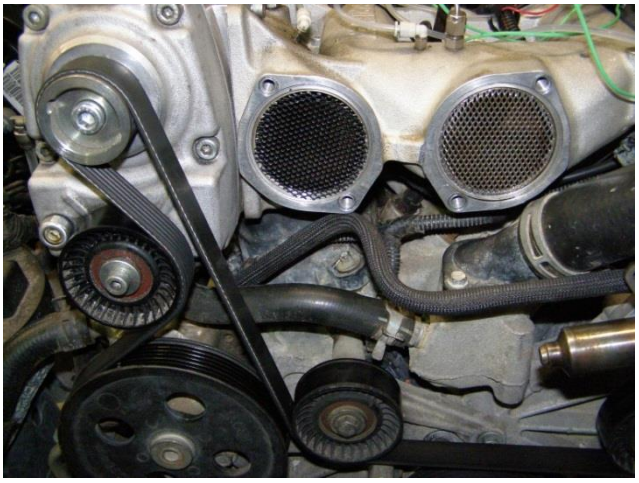
17. Installing the Intercooler manifold

- Install the Ball stud supplied to the idler bracket as shown in the picture



- Clean the discharge outlet holes of the manifold.
- Place the two silencing plates supplied, into the manifold using a thin layer of grease to keep the plates in position.





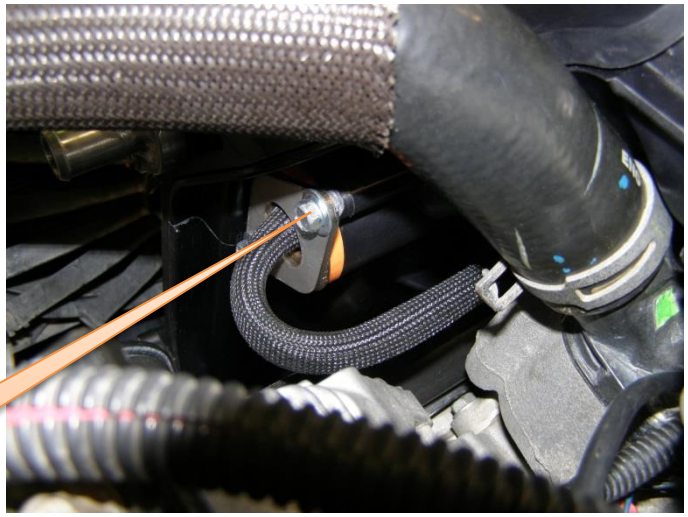
- Fit the two O-rings supplied to the intercooler manifold. Apply a thin layer of rubber grease to the O-Rings for ease of fitting.

- Slide the intercooler manifold into place sideways, engaging the EGR pipe with the gasket
- Locate the rubber grommet in the intercooler manifold to the ball stud. Carefully install into the discharge manifold. Take care not to damage the O-Rings upon installation. Fit the intercooler manifold using the supplied SHCS M8 x 30 (2x) with M8 flat washers (2x) and SHCS M8 x 120 (2x) with 5mm thick flat washers (2x). Tighten screws to 23Nm.

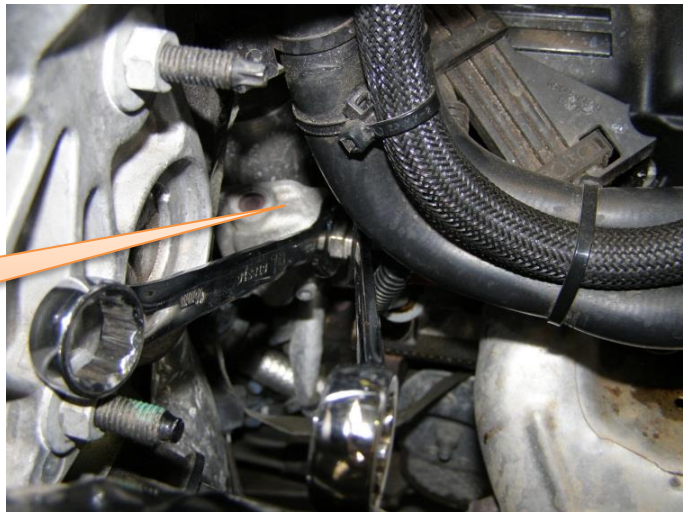
18. Tighten the EGR pipe to the Intercooler manifold

- Centralise the EGR shield to the EGR seal and clamp it to the manifold, using the clamp plate and self-tapping screws supplied. Tighten to 6Nm.

  NOTE: Ensure the EGR shield is not touching the plastic intercooler manifold.

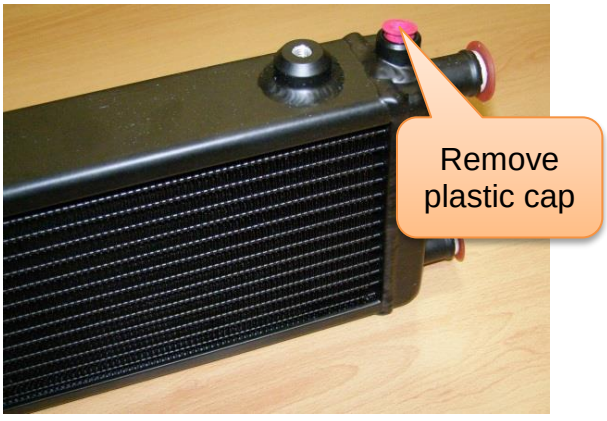


- Tighten the compression fitting on the EGR adaptor plate.



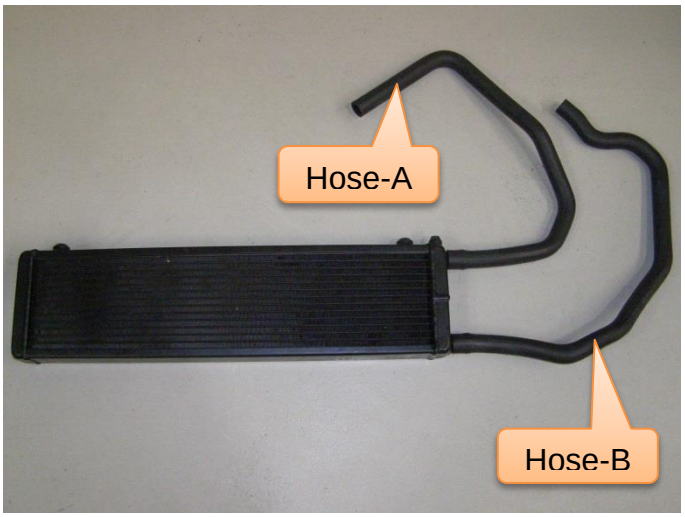
19. Intercooler radiator preparation

- Remove plastic blanking cap
- Apply thread sealant (Loctite 577 or equivalent) to the supplied ¼" BSPT blanking plug. Assemble the plug to the radiator and tighten adequately.



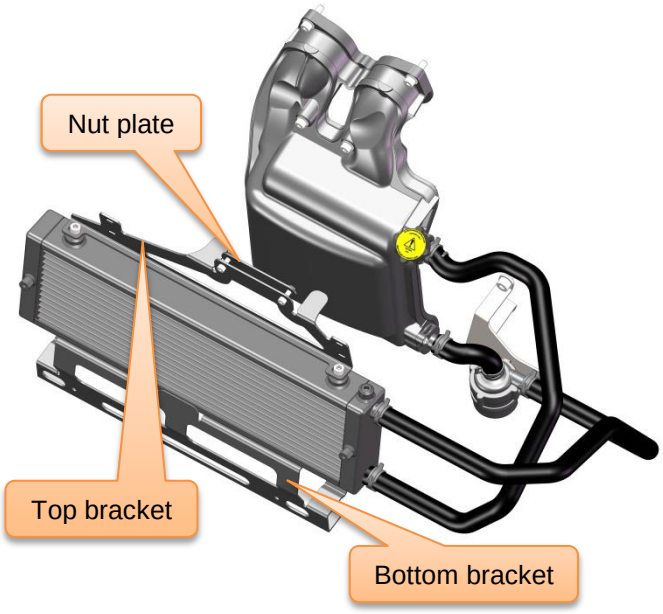
20. Fit the intercooler radiator

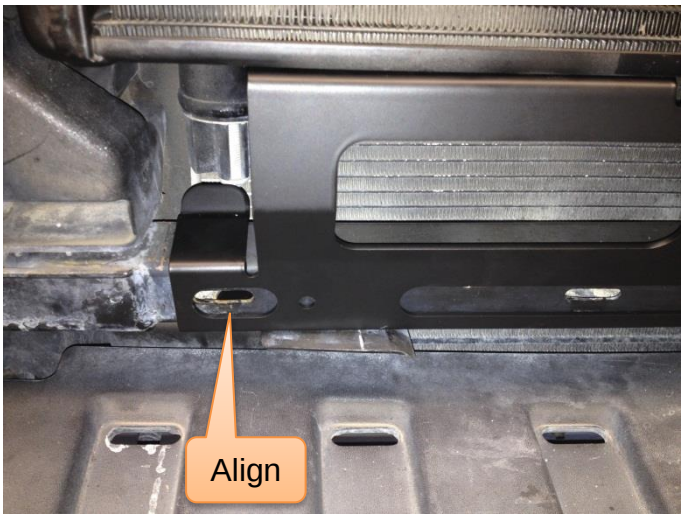
- Connect the radiator hoses (2x) to the radiator and fasten using the spring clamps supplied. Refer picture for the hoses orientation.

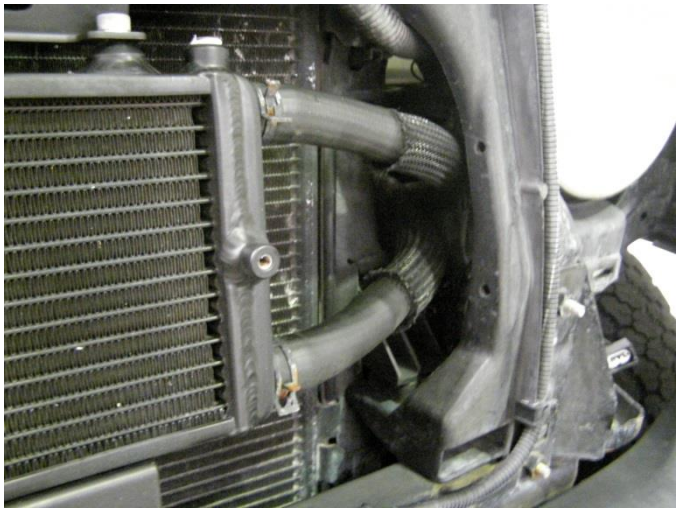


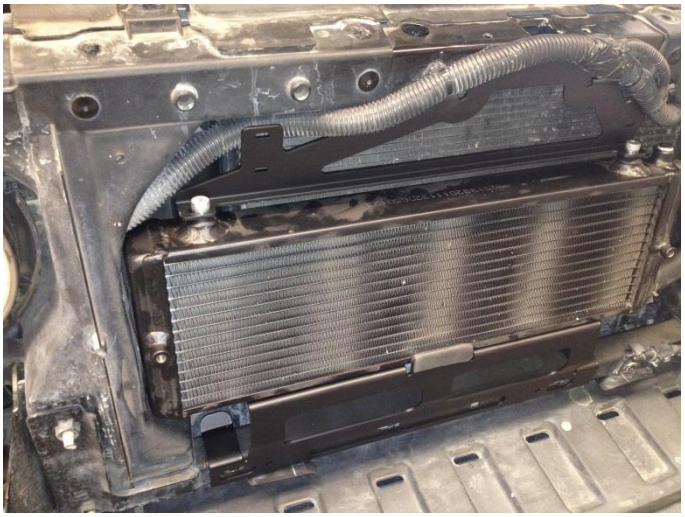
- Locate the bottom bracket to the vehicle's frame aligning the slots as shown in the picture.
- Locate the intercooler radiator to the bottom bracket.
- Fit the top bracket to the intercooler radiator using the supplied Hex head bolt M8 x 12 (2x) with M8 flat washers.

- Tighten the top bracket of the intercooler radiator to the frame as shown in the pictures using the supplied SHCS M6 x 20 (2x) and radiator mount nut plate. Ensure the assembly is securely mounted and that adequate clearance remains between the air-con condenser and intercooler radiator.
- Align the radiator on the brackets and tighten all fasteners.



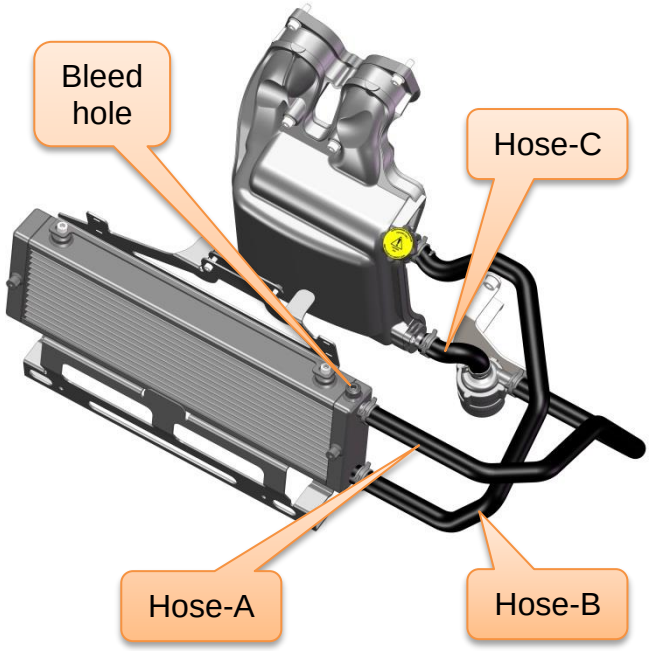






21. Connect Hoses

- Use the 150mm long braided sleeving supplied (3x), to prevent the intercooler hoses from chafing on the OEM overflow bottle, vehicle front panels and the LHS plastic panel next to the radiator.
- Attach Hose-A to the water pump outlet and route the other end beside the engine radiator and to the top hose connection of the radiator.
- Attach Hose-B to the intercooler inlet hose connection (top) and route the other end beside the engine radiator and to the bottom hose connection of the radiator.
- Attach Hose-C between the intercooler outlet hose connection (bottom) and the inlet of the water pump.
- Fasten all the hose connections with the hose clamps supplied.
- **OPTIONAL**- Remove the blanking plug from the bleeding hole of the intercooler radiator before filling the coolant.
- Fill the intercooler system with 1350ml (46 fluid oz.) of ethylene glycol based automotive engine coolant approved for use in aluminium engines. Allow the system to bleed.
- Once the coolant reaches the intercooler radiator, fit the previously removed blanking plug. Use Loctite 577 to threads upon assembly.



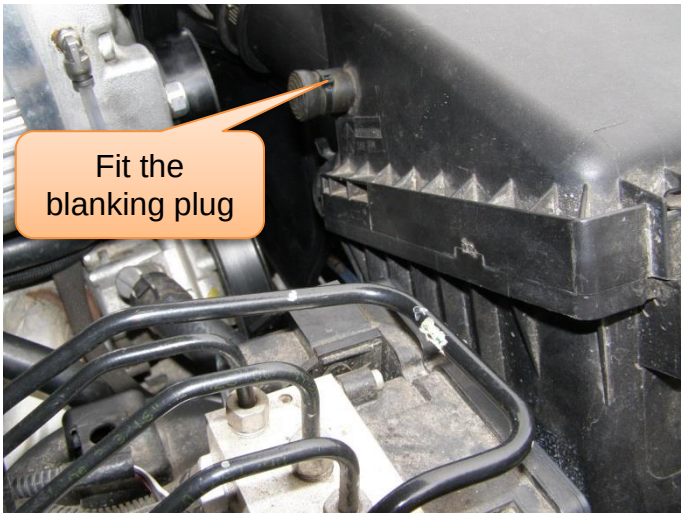
- Repeatedly squeeze the hoses to help to remove any air present in the system.
- Temporarily connect the battery. Turn the ignition to the run position and start the engine. Confirm that the intercooler water pump is running.
- With the pump running, continue to fill the system until all of the 1350ml of coolant is used. This step is important as the intercooler will perform poorly and restrict the engines performance if air remains in the system. It may be necessary to run the vehicle or 'work' (squeeze) the hoses some more to eliminate all air from the system.
- Check the intercooler coolant level & top up if necessary
- Check all the intercooler hose connections for leaks.
- Disconnect the battery again.

22. Fit the factory air box

- Fit the factory air box to the vehicle.

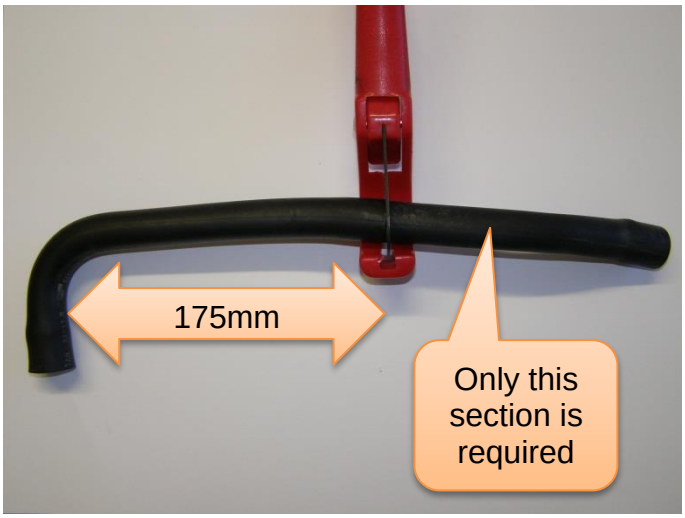
23. Fit the blanking plug to the air box

- Fit the previously removed blanking plug from the supplied discharge manifold to the air box as shown in the picture.



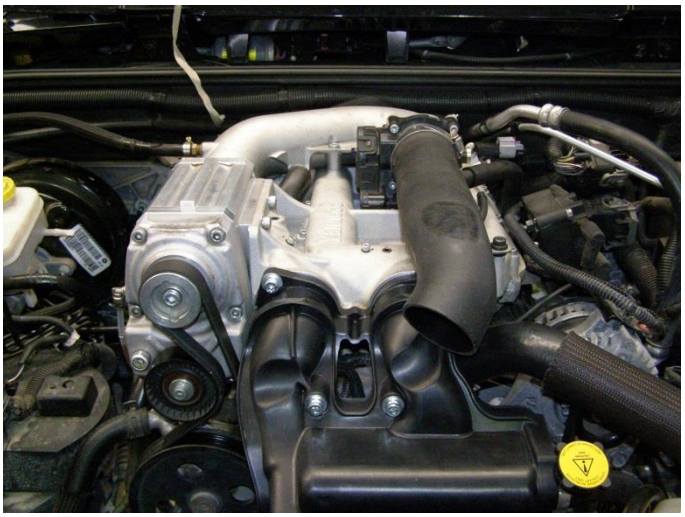
24. Modify OEM breather extension hose

- Cut the OEM breather hose as shown in picture.
- On the smaller diameter hose cut hose at 175mm from inside edge of radius.
- Fit to engine using the original hose clamp.



25. Fit the air inlet Pipe and the factory air inlet hose

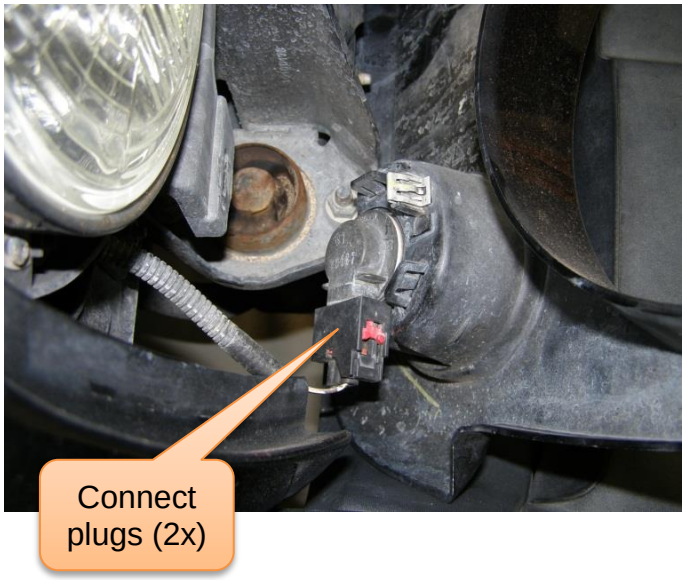
- Reattach the air inlet pipe to the throttle body and fasten using hose clamp.
- Reconnect the engine breather extension hose to the inlet pipe.
- Reattach the factory air inlet hose to the air inlet pipe and air box. Fasten using hose clamps.



- Connect the IAT sensor to the air inlet hose.

26. Fit the front grille

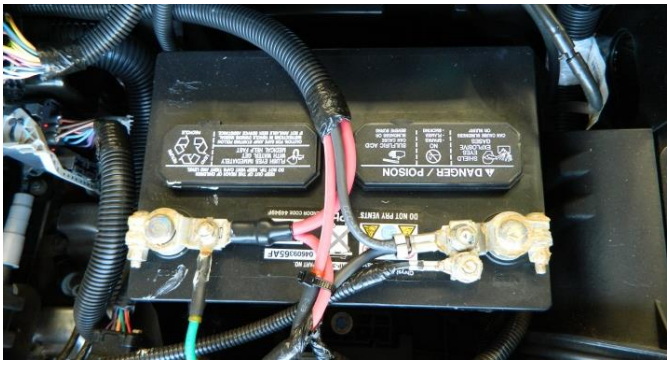
- Connect the plugs (2x) to the turn signal lamps behind the front grille
- Carefully locate & press the clips on the bottom side of the front grille to the frame.
- Insert & lock the push pin rivets on the top side of the front grille to the frame.



27. Reconnect the Battery

- Reconnect the battery.

  NOTE: The battery positive terminal (+) should always be connected before the negative terminal (-).



28. Load the ECM re-flash - Diablo

1. Read the instructions included with the Diablo SP2000 flash tuner.
2. Follow the instructions included with the Diablo SP2000 flash tuner.
   Contact:
   www.diablosport.com

Load the ECM re-flash - Hypertech (if supplied)

Refer to attached instructions for re-flashing the ECU.
Contact:
www.hypertech.com for further details

29. Install Premium unleaded fuel sticker

- It is recommended that the Premium unleaded fuel sticker is installed inside of the fuel flap or close to the fuel cap in a visible convenient location.
- Clean the area with soap and water, rubbing alcohol or any other fast drying cleaner.
- Remove sticker from its plastic bag and peel sticker off front protective film and paper backing.
- Place sticker.

JEEP- JK (2007 - 2011)
INTERCOOLED SUPERCHARGER SYSTEM

SECTION 4

PRE TEST- DRIVE INSPECTION

SAFETY WARNING

Ensure adequate steps are taken to prevent injury, spillage or fire.

1. Pre-Start Inspection

- Ensure the coolant is at the correct level.
- Ensure the engine oil is at the correct level.
- Ensure the vehicle has fresh 95 RON (91 Octane USA) premium unleaded fuel or higher.
- Ensure the belt is aligned.
- Ensure the air filter is clean.
- Check & replace spark plugs if necessary. Set the gaps to factory spec.

SAFETY WARNING: Ensure adequate steps are taken to prevent injury, spillage or fire should any of the required installation steps not have been carried out to specification.

IMPORTANT NOTE!!

THIS SPRINTEX SUPERCHARGER INTERCOOLED SYSTEM INSTALLATION REQUIRES THAT THE VEHICLE IS FITTED WITH AN APPROVED ECU AND ECU CALIBRATION. FAILURE TO ENSURE THIS WILL AFFECT THE PERFORMANCE AND MAY VOID THE WARRANTY. REFER TO THE SPRINTEX DEALER THAT SUPPLIED THE SYSTEM FOR CONFIRMATION.

SPRINTEX RECOMMENDS THAT THE VEHICLE IS NOT RUN UNLESS A SUITABLE ECU CALIBRATION IS INSTALLED.

2. Engine Warm Up

- Start the engine and allow it to run until it reaches normal operating temperature.
- Check for leaks.
- Check the intercooler filler coolant level with the engine running and top up the system with the remainder of the 1350 ml of coolant if required. If the system does not take the full 1350 ml of coolant there must be an air lock in the system. Top up the system once the vehicle has been taken for a short test drive.
- Check the engine coolant level & top up if necessary.

3. Road Test Vehicle

- Road test the vehicle.
- Recheck all joints and connections for leaks & rectify as required.
- Check intercooler system coolant level.

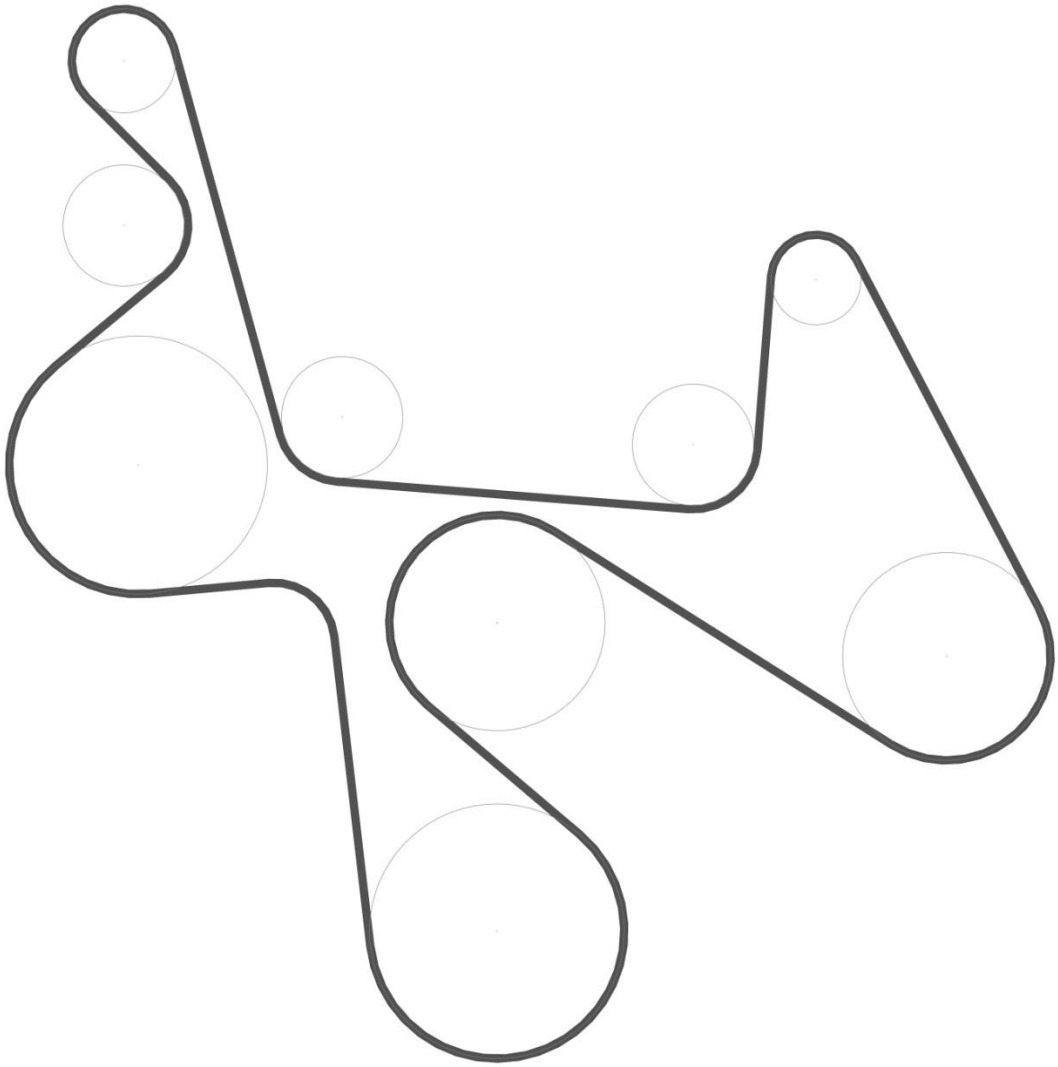
JEEP- JK (2007 - 2011)
INTERCOOLED SUPERCHARGER SYSTEM

SECTION 5

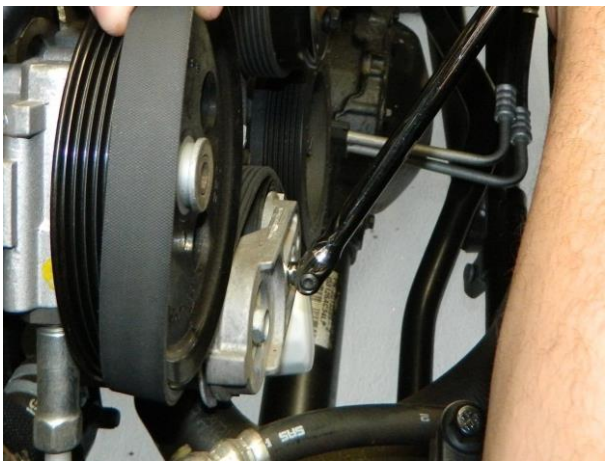
MAINTENANCE INSTRUCTIONS

1. Supercharger Drive Belt Replacement

It is recommended that the supercharger drive belt be checked at every regular service and be replaced at 50,000 km (30,000 miles) or 2 years, whichever occurs first.



Use long series 3/8” breaker bar to release the dynamic tensioner and remove the belt.



2. Supercharger Lubrication Service

1. Drain and replace oil every 40,000 km (25,000 miles) or 2 years (whichever is earlier).
2. Place a suitable funnel under drain plug at front side bottom of Supercharger extension housing. Remove the blanking plug on top centre of cover to allow complete draining. Remove bottom plug and drain.
3. Refit the bottom drain plug.
4. Supercharger is supplied with Redline 75W90 NS gear oil.

   Replenish with **100ml or 3.38 US fluid ounces** of **Fully Synthetic SAE 75W90 gear oil (Specifications: API GL5, MT-1)**
5. Apply Loctite 577 to threads and refit the fill plug.

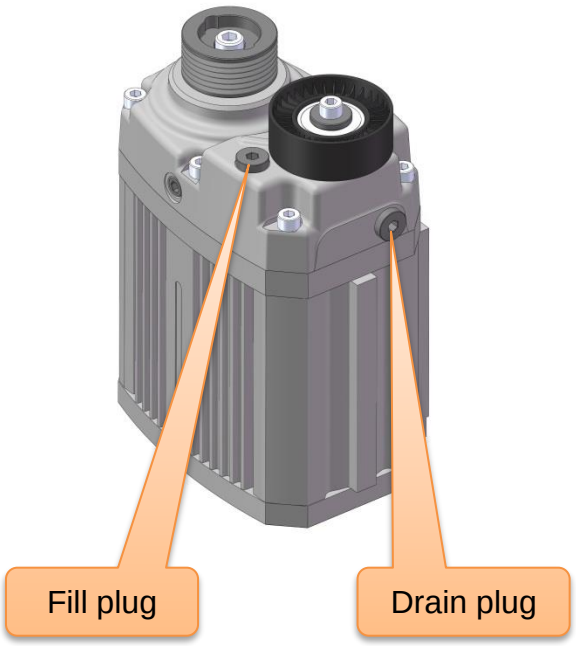
NOTE:

1. **Oil level should be checked at the fill plug at every general service. Oil level should be at the bottom of the fill point, with the supercharger installed to the vehicle (fill to spill)**

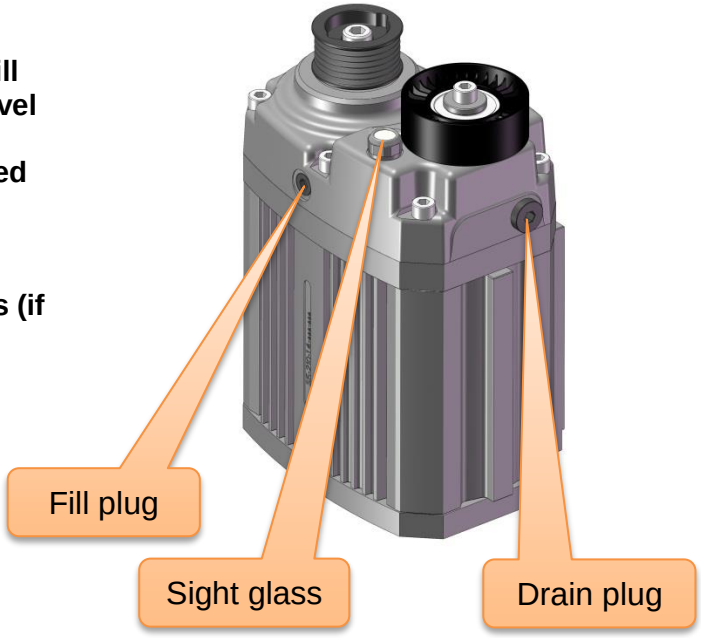
   (or)

   Check the oil level in the sight glass (if equipped).
2. **Oil level should be checked periodically (Recommended every week and also before & after a long journey).**

Supercharger without Sight glass

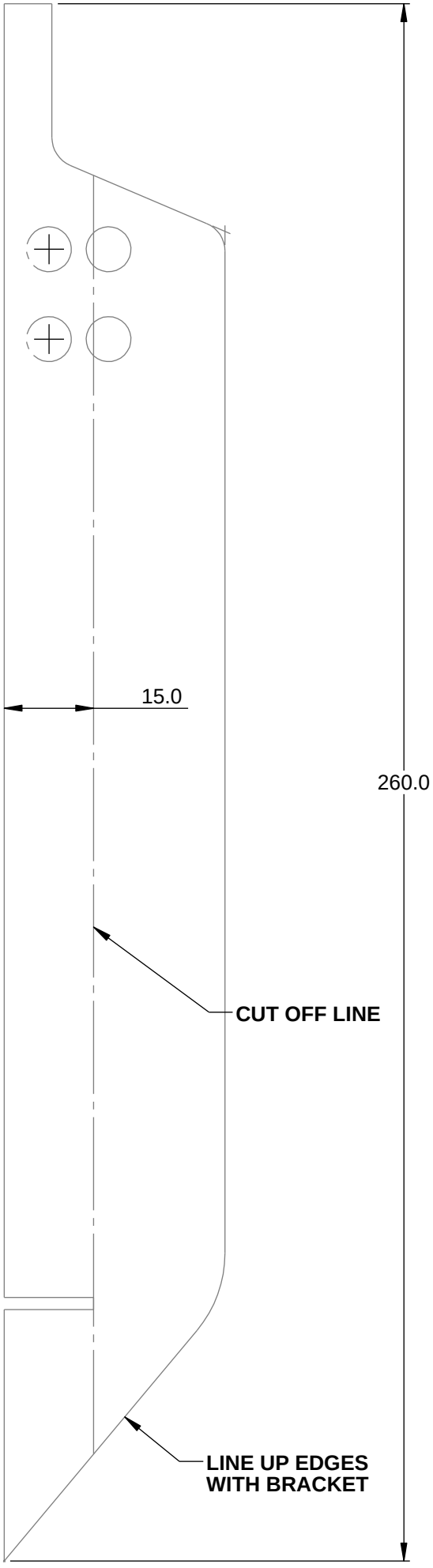


Supercharger with Sight glass for oil level



3. Supercharger Service

Sprintex recommends that the supercharger be serviced every 150,000 km. This entails a replacement of all bearings and seals.

Document No.	264D1005
Title	2007 - 2011 3.8L V6 INTERCOOLED SUPERCHARGER SYSTEM
Revision.	1.06
Approved by.	Adrian de Kock
Date.	

TEMPLATE for
trimming battery box