

3.6L Install MY-2015

Preinstall

1. Fuel
 - 1.1. Be sure to run highest octane available at the pump! This is critical for a forced-induction vehicle. If most of the tank is full of lower octane fuel, postpone install until filled up with high octane fuel.
2. Tools needed
 - 2.1. Normal hand tools: Flat head screwdriver, 10, 12, 13, and 15mm sockets.
 - 2.2. A 1/2" square male ratchet to unload the dynamic tensioner.
 - 2.3. All the Boosted Technologies parts use stainless allen head socket capscrews. You will need 4 and 5mm sockets. 'T'-handles are nice.
 - 2.4. Rags to clean gasket surfaces, duct tape to cover intake manifold inlet from dropped parts.
 - 2.5. Safety glasses to keep fuel out of your eyes when you disconnect the fuel line. It is under 50 PSI!

Stock Removal

| | |
|---|--|
| 1. Disconnect positive (red) terminal on battery <ol style="list-style-type: none">1.1. Place non-conductive material over terminal | |
|---|--|

Remove stock intake tube (

2. Figure 1)
 - 2.1. Pull off coolant overflow tube from radiator nub on passenger side
 - 2.1.1. Pull out of plastic hold downs on intake tube
 - 2.2. Loosen hose clamps
 - 2.2.1. 8mm nuts
 - 2.3. Loosen two 10mm bolts on intake tube

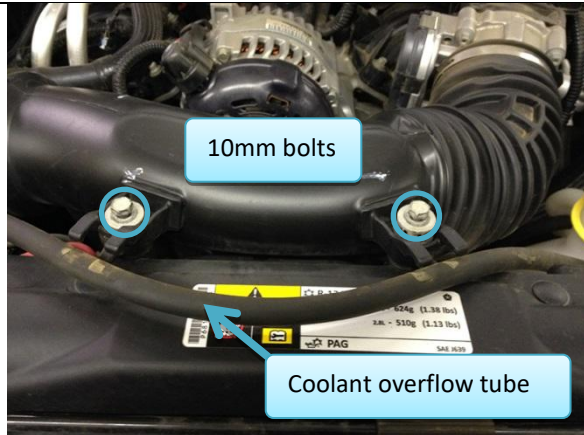


Figure 1: Stock air intake tube and coolant over flow tube.

- 2.4. Carefully remove Inlet air temperature connector on intake tube (Figure 2)
 - 2.4.1. Press on back side of clip

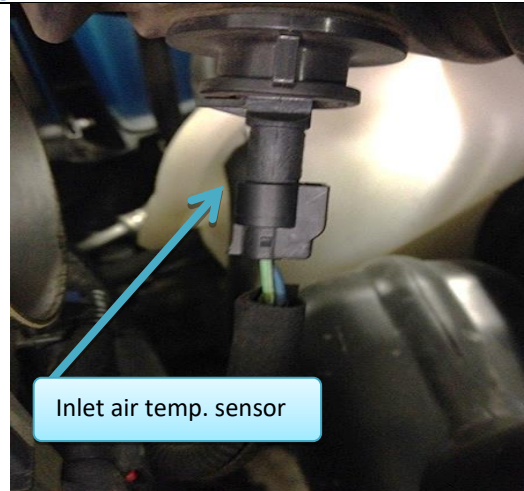


Figure 2: Inlet air temperature sensor on intake tube driver side below throttle body.

3. Remove throttle body
 - 3.1. Loosen four 8mm bolts
 - 3.2. Lift off three wire tie downs holding throttle body wire down (Figure 3)
 - 3.2.1. Use flat head screwdriver under tie down shoulder to make space for needle nose pliers
 - 3.2.2. Pull down and twist sideways under shoulder with needle nose pliers



Figure 3: Wire tie down

- 3.3. Place throttle body off to the side behind the ECU with a cloth underneath to prevent damage (Figure 4)



Figure 4: Throttle body placed behind ECU (on blue paper towel).

4. Disconnect vacuum lines from upper intake
4.1. Pull off lines from passenger side of upper intake (Figure 5)

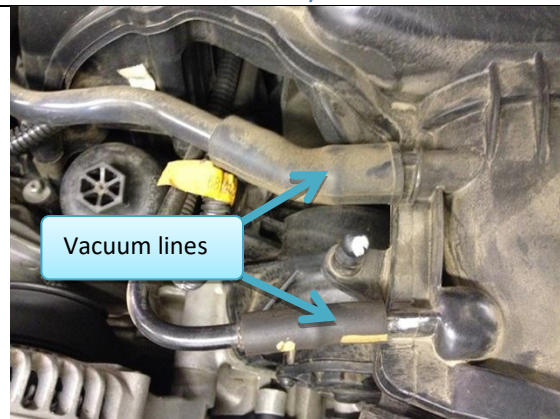


Figure 5: Passenger side vacuum lines.

- 4.2. Pull off brake booster on driver side (Figure 6)

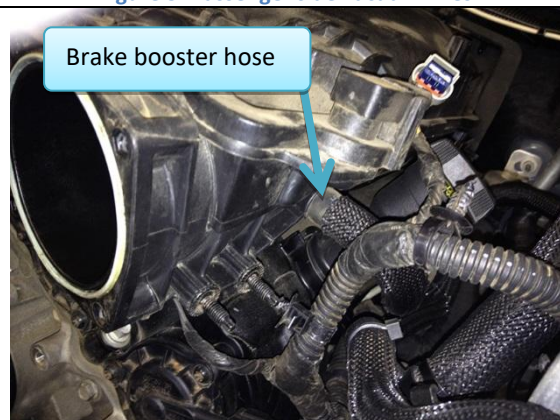


Figure 6: Brake booster (mesh covered).

5. Remove upper intake screws(Figure 7)
 - 5.1. Three 8mm very long screws on top
 - 5.2. Four 8mm short screws on passenger side
6. Clean/blowout area around lower intake area
 - 6.1. Cover intake holes/openings before starting



7. Disconnect large wire connector on passenger side of intake (Figure 8)
 - 7.1. Slide red tab away from grey shroud
 - 7.2. Press on side (passenger side) of grey shroud tab and pull towards front of vehicle

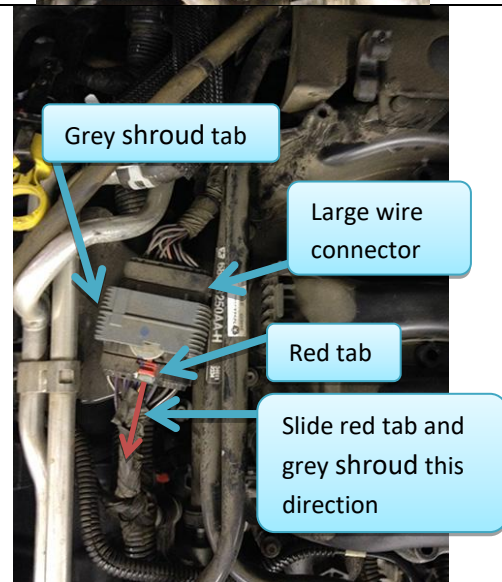


Figure 8: Large wire connector.

- 7.3. Release two tie downs under large wire connector (Figure 9)
 - 7.3.1. Use a pry bar inserted under the connector to carefully lift the tie downs from the bracket below

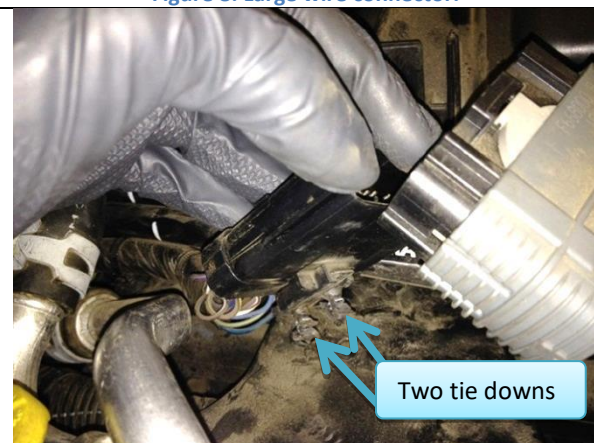


Figure 9: Wire connector tie downs.

- 7.4. Remove two screws from metal plate/bracket on intake side (Figure 10)
7.4.1. Two 10mm screws

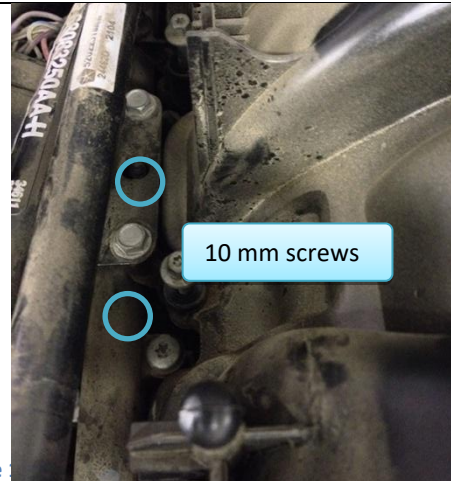


Figure 10: Intake side (n left).

- 7.5. Remove two nuts from bracket
2 On top holding down coolant supply tubes (7.5.1. Figure 11)

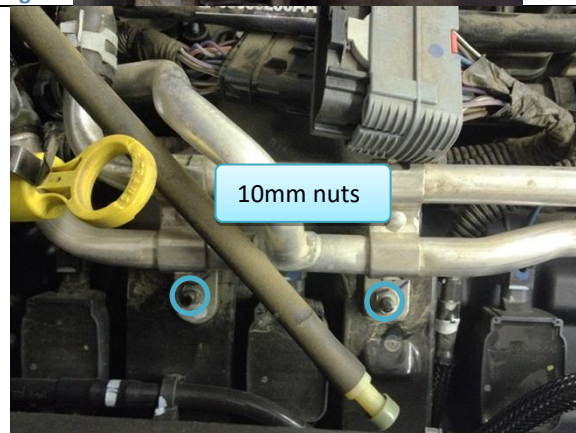


Figure 11: Heating tubes.

- 7.6. Remove two bolts on passenger side below valve cover
7.6.1. Use 10mm deep well socket -> flexible jointed fitting -> long extension -> ratchet wrench (all 1/4 in.) (Figure 12)

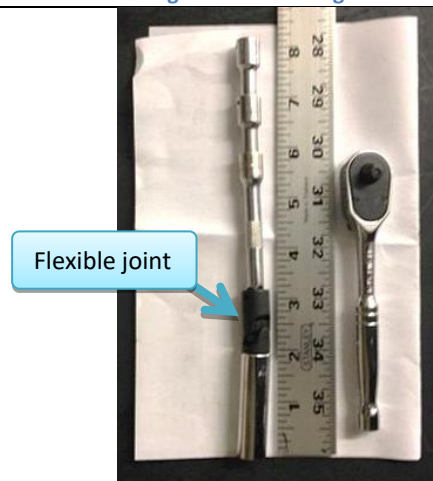


Figure 12: Ratchet setup for nut removal on side of valve cover.

- 7.7. Release two tie downs on intake near firewall for large connector wire (Figure 14)

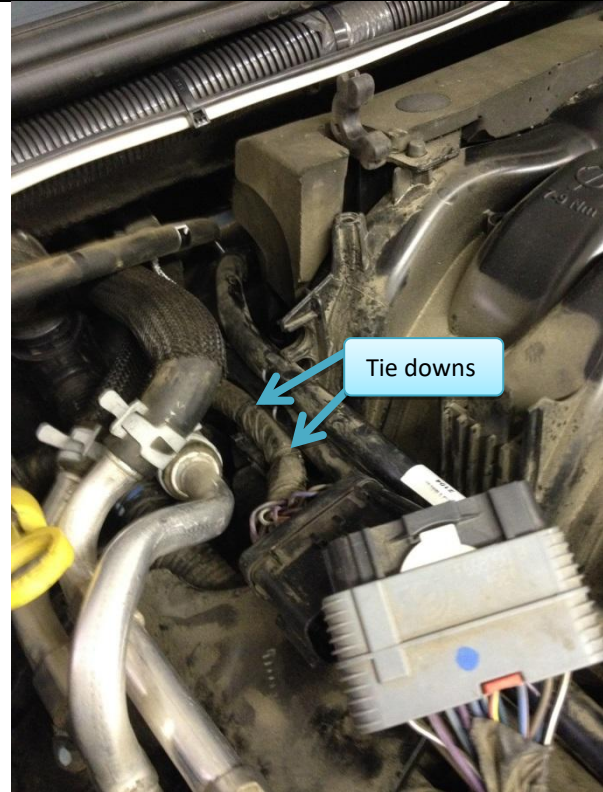


Figure 13: Two loom tie downs overview.

- 7.7.1. Tie down locations shown in Figure 14 and Figure 14

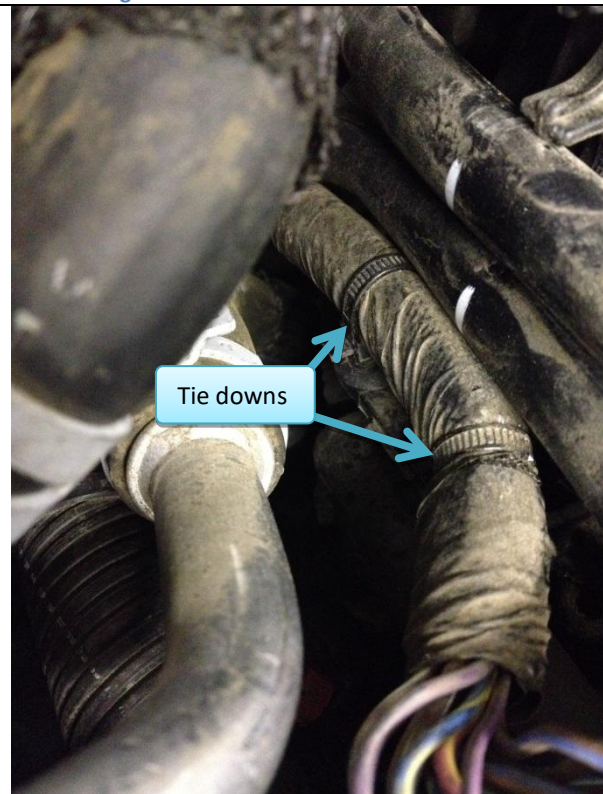



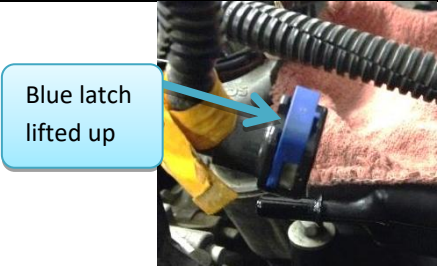


Figure 14: Close up view of two loom tie downs.

| | |
|---|--|
| <p>8. Remove upper intake and bracket under large wire connector (Figure 15)</p> <p>8.1. Remove the upper intake while lifting up on bracket to free it</p> <p>8.2. Lift coolant supply tubes off studs. Then lift them up while removing bracket to help free it</p> |  <p>Figure 15: Bracket after removal.</p> |
| <p>9. Remove large foam insulation from driver side above valve cover (Figure 16)</p> |  <p>Foam insulation</p> <p>Figure 16: Foam insulation.</p> |
| <p>10. Disconnect fuel line at front of fuel rail on driver side (Figure 17)</p> |  <p>Lift up here</p> <p>Figure 17: Fuel line connection to fuel rail.</p> |
| <p>10.1. Carefully lift up blue latch from top (Figure 18)</p> |  <p>Blue latch lifted up</p> <p>Figure 18: Blue latch lifted up.</p> |
| <p>10.2. Push the white latch in (opposite side as blue latch) while gently pulling away from fuel rail to release</p> | |

11. Remove valve cover fresh air hose from air box and back driver side of engine (Figure 19)
11.1. Twist the 90°-joint on valve cover port to help free it more easily



Figure 19: Driver side valve cover fresh air vent line connector.

12. Release tie downs from wiring harness from rear of lower intake (next to firewall) (Figure 20)

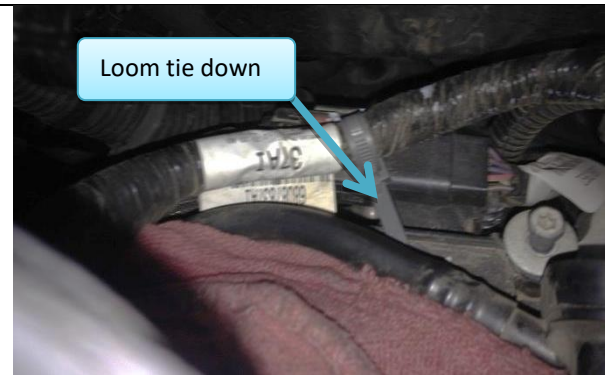


Figure 20: Wire tie downs on rear of lower intake.

13. Disconnect fuel injector wires (Figure 21)
13.1. Carefully lift up on red tab
13.2. Press in black tab and pull connector off straight up

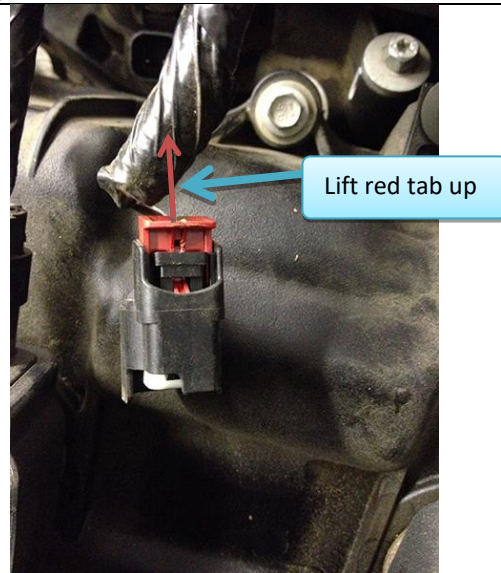


Figure 21: Fuel injector connector with red lock up (unlocked).

14. Remove lower intake manifold (Figure 22)

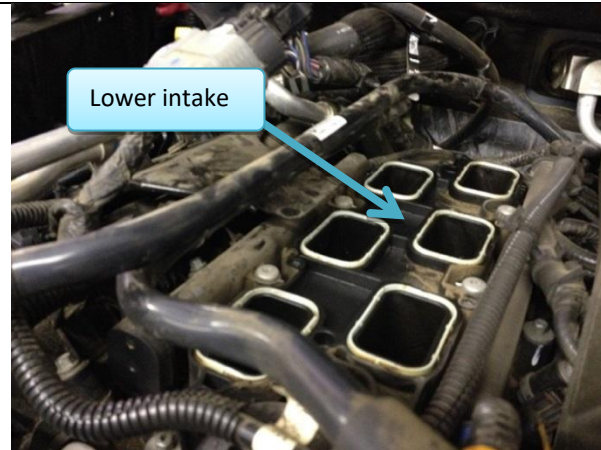


Figure 22: Lower intake.

14.1. Loosen eight bolts holding down intake manifold all around in a crisscross pattern starting from the outside (Figure 23)

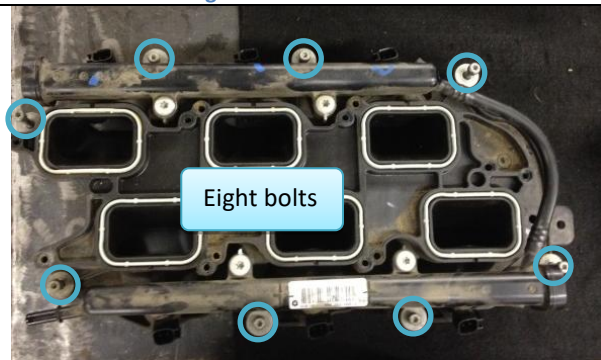


Figure 23: Lower intake bolts to remove.

14.2. Ensure nothing falls into the intake ports after removing lower intake
14.2.1. Stuff lint free cloth/rags into ports to catch anything that falls into ports (do not use paper towels) (Figure 24)
14.3. Vacuum dirt and debris around intake ports
14.4. Clean intake port area with lint free cloth and brake cleaner (Figure 24)
14.4.1. Any debris around this area could fall into the engine or cause vacuum leaks if they are between the engine and lower intake

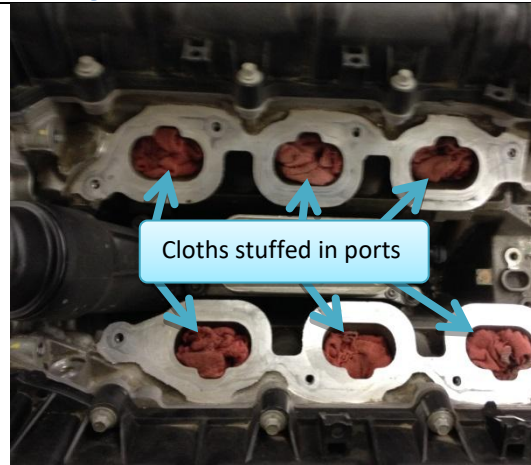
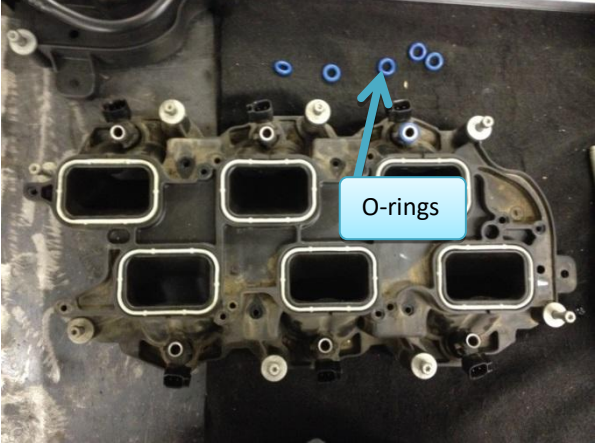
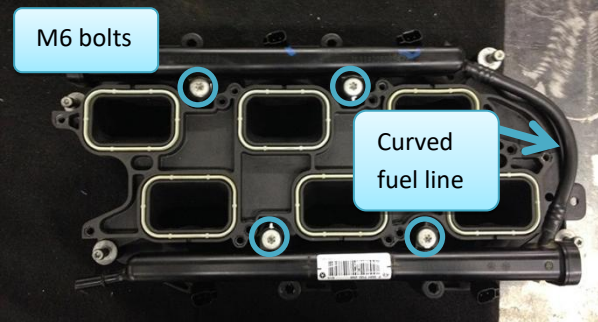


Figure 24: Clean intake port area and stuff intake ports with lint free rags to catch objects from falling in.

| | |
|---|---|
| <p>15. Remove fuel injectors and fuel lines from original intake manifold</p> <p>15.1. Remove four M6 bolts with torx head (T27?)</p> <p>15.2. Carefully pull up from one side releasing the first fuel injector before moving down the rail to the next fuel injector</p> <p>15.3. Fuel injector O-rings may fall off or stick inside the fuel rails (Figure 25)</p> <p>15.3.1. Clean and reinstall O-rings that come off fuel injectors</p> |  <p>Figure 25: Reinstall fuel injector O-rings (blue) that may come off when removing fuel rails.</p> |
| <p>15.4. Install included AUS fuel injectors on included intake manifold</p> <p>15.4.1. Put a minimal amount of o-ring lube or Vaseline on both the upper and lower O-rings on each fuel injector to ease installation and create a better seal</p> | |
| <p>15.5. Install fuel rails on lower intake (Figure 26)</p> <p>15.5.1. Torque four M6 Bolts to 7 Nm (62 in. lbs.)</p> <p>15.5.2. Note curved fuel line between fuel rails follow curve on lower intake when properly installed</p> |  <p>Figure 26: Fuel rails properly oriented on lower intake before install. Stock silicone o-rings installed on provided manifold.</p> |
| <p>15.6. Remove stock silicone o-rings from original intake manifold</p> <p>15.7. Install the stock silicone o-rings onto provided intake manifold</p> | |

16. Remove stock serpentine belt

16.1. Use 1/2" breaker bar in belt tensioner's 1/2" receiver to reduce belt tension

16.1.1. Have a second person do this from below the engine for easiest removal

16.1.2. Pull breaker bar to the passenger side (when underneath) to reduce tension on the belt (Figure 27)

16.2. Remove belt while tension is relieved

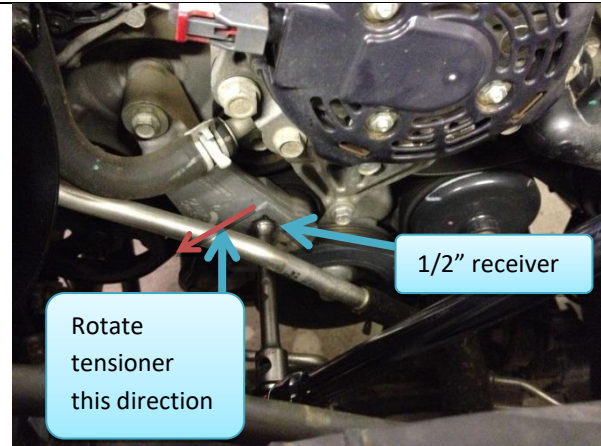


Figure 27: Serpentine belt tensioner and alternator.

17. Remove alternator and support bracket

17.1. Remove four bolts on bracket (Figure 28)

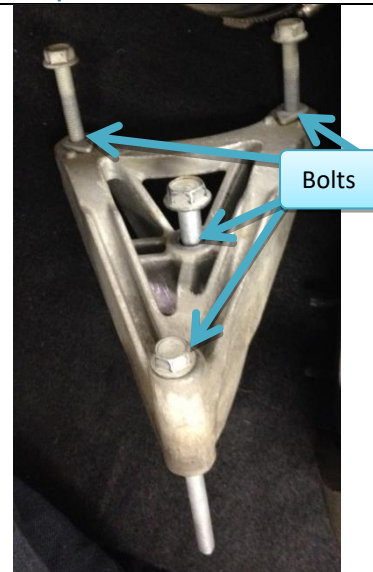


Figure 28: Alternator support bracket.

17.2. Disconnect grey connector from alternator (Figure 29)

17.2.1. Slide red tab up

17.2.2. Press in on exposed tab and gently pull off

17.3. Disconnect wire from top of alternator (Figure 29)

17.3.1. Remove nut from stud

17.4. Remove two bolts on alternator (Figure 29)

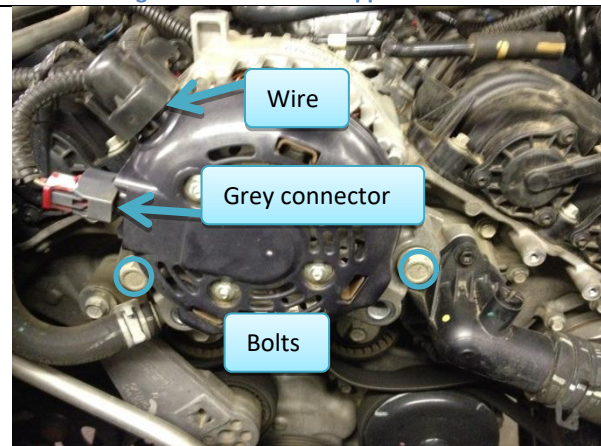


Figure 29: Alternator after removal of support bracket.

17.5. Remove stock pulley from alternator (Figure 30)

17.5.1. Nut is a left hand nut (threads are reversed)

17.5.2. An impact gun eases removal and installation

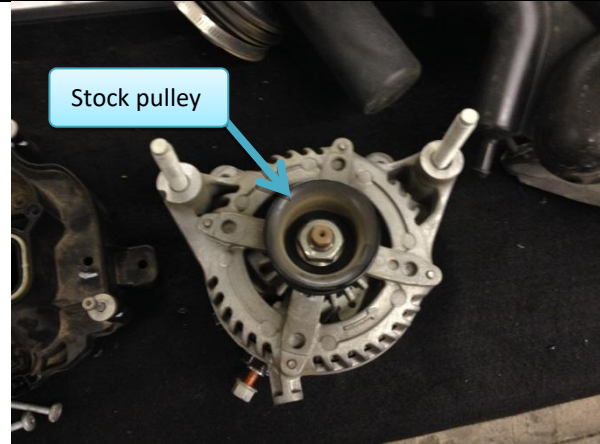


Figure 30: Stock alternator pulley.

17.6. Use an impact gun to Install included pulley (Figure 31)

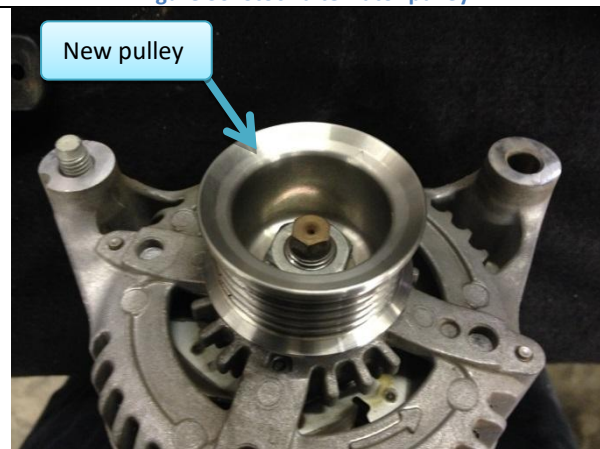
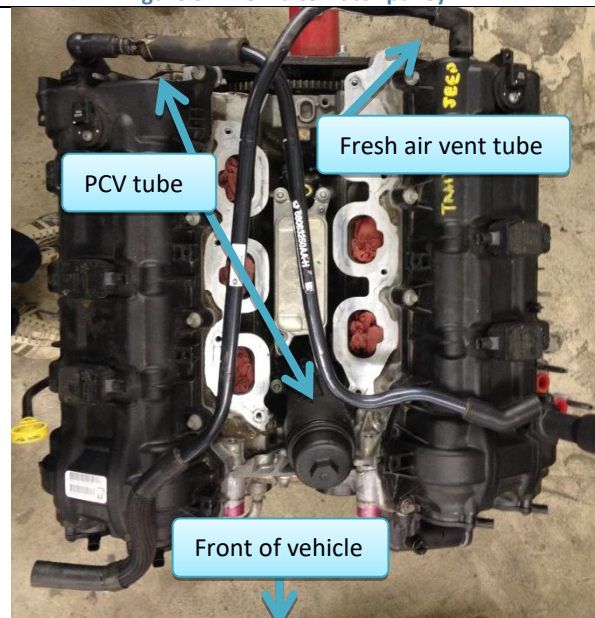


Figure 31: New alternator pulley.

18. Remove PCV tube going to rear of valve cover on passenger side (Figure 32)

18.1. Slide 90°-fitting up to remove

18.1.1. From below the engine use a very long flathead screwdriver or pry bar to push up on fitting shoulder



connected to top right of engine. Passenger side valve cover vent connected to top left of engine.

19. Change oil filter on engine

- 19.1. Unscrew oil filter housing (Figure 33)
- 19.2. Remove oil filter from housing
- 19.3. Insert new oil filter and O-ring in filter housing
- 19.4. Reinstall oil filter housing

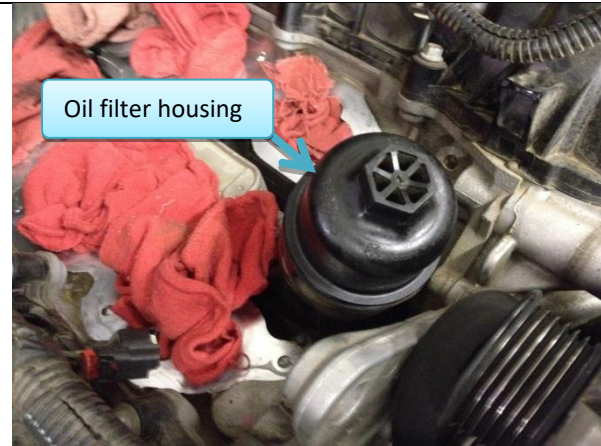


Figure 33: Oil filter housing.

20. Remove plastic fuel vapor line (Figure 34)

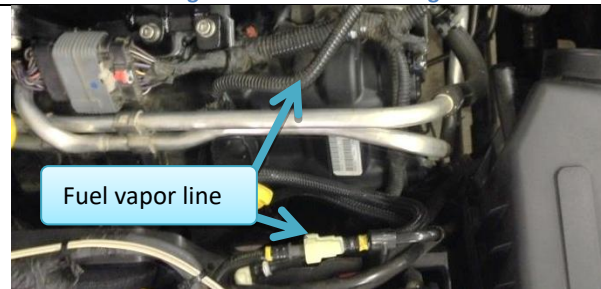


Figure 34: Fuel vapor line (white connector).

- 20.1. Unclip white connector
- 20.2. Unclip upper line from hold down
 - 20.2.1. This can be very tricky
 - 20.2.2. Upper and lower clips are separate
 - 20.2.3. Insert a small flathead screwdriver into hole past the middle rotate and push out (Figure 35)
- 20.3. Carefully remove line from under coolant supply tubes
 - 20.3.1. To prevent line from breaking bend line as little as possible while removing

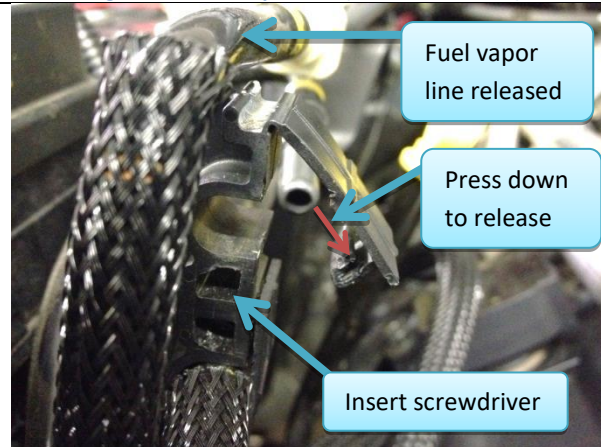
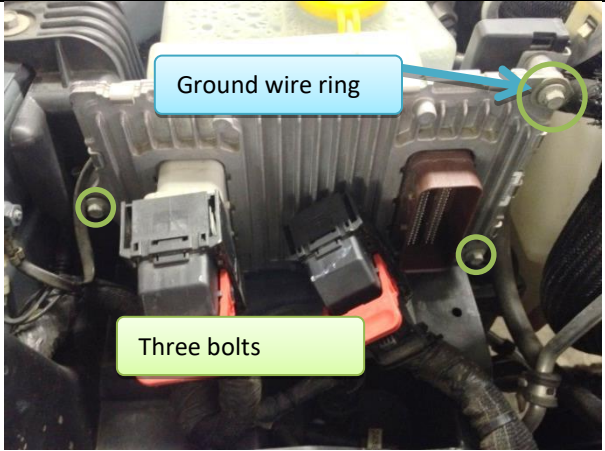


Figure 35: Clip after releasing fuel vapor line.

| | |
|--|---|
| <p>21. Remove stock ECU</p> <p>21.1. Observe placement of ground wire ring under upper bolt when installing unlocked ECU (Figure 36)</p> <p>21.2. Remove three bolts</p> <p>21.3. Install new ECU</p> <p>21.3.1. Ensure ground wire is properly installed</p> <p>21.3.2. Tighten three bolts</p> |  <p>Figure 36 shows a close-up of an ECU (Electronic Control Unit) installed on an engine. A blue callout box labeled 'Ground wire ring' points to a blue ring installed under the upper right bolt. A green callout box labeled 'Three bolts' points to three bolts on the ECU. The ECU is connected to various wires and hoses.</p> |
| <p>22. Check spark plugs</p> <p>22.1. Check condition of spark plugs and replace if necessary</p> <p>22.2. Set gaps to 0.032"</p> | |
| <p>23. With stock parts removed</p> <p>23.1. Check the condition of hoses on engine</p> <p>23.1.1. Coolant hoses</p> <p>23.1.2. Vacuum hoses</p> <p>23.2. Check for loose or damaged wires in engine bay</p> <p>23.3. Check water pump for leaks</p> | |
| | |

Super charger install

24. Torque specs for bolts if not listed

24.1. Examples from tables on right

24.1.1. 6mm bolts torque to 12-16 Nm
(9-12 ft-lbs)

24.1.2. 3/8" bolts torque to 27 Nm (20
ft-lbs)

24.1.3. Use the 18-8 S/S column for the
US recommended bolt torque

Metric Recommended Bolt Torque

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| Bolt Diameter (mm) | Recommended Torque (Nm) | |
|-----------------------|----------------------------|------------|
| | Class 8.8 | Class 10.9 |
| 5 | 7 | 9 |
| 6 | 12 | 16 |
| 8 | 30 | 40 |
| 10 | 55 | 75 |
| 12 | 100 | 135 |
| 14 | 160 | 215 |
| 16 | 245 | 335 |
| 20 | 480 | 650 |

37: <https://www.boltdepot.com/fastener-information/bolts/Metric-Recommended-Torque.aspx>

US Recommended Bolt Torque

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| Size | Recommended Torque | | | | | | | | | | | |
|-------|--------------------|------|---------|------|---------|------|----------|------|--------|------|--------|------|
| | Grade 2 | | Grade 5 | | Grade 8 | | 18-8 S/S | | Bronze | | Brass | |
| | Coarse | Fine | Coarse | Fine | Coarse | Fine | Coarse | Fine | Coarse | Fine | Coarse | Fine |
| #4* | - | - | - | - | - | - | 5.2 | - | 4.8 | - | 4.3 | - |
| #6* | - | - | - | - | - | - | 9.6 | - | 8.9 | - | 7.9 | - |
| #8* | - | - | - | - | - | - | 19.8 | - | 18.4 | - | 16.2 | - |
| #10* | - | - | - | - | - | - | 22.8 | 31.7 | 21.2 | 29.3 | 18.6 | 25.9 |
| 1/4" | 4 | 4.7 | 6.3 | 7.3 | 9 | 10 | 6.3 | 7.8 | 5.7 | 7.3 | 5.1 | 6.4 |
| 5/16" | 8 | 9 | 13 | 14 | 18 | 20 | 11 | 11.8 | 10.3 | 10.9 | 8.9 | 9.7 |
| 3/8" | 15 | 17 | 23 | 26 | 33 | 37 | 20 | 22 | 18 | 20 | 16 | 18 |
| 7/16" | 24 | 27 | 37 | 41 | 52 | 58 | 31 | 33 | 29 | 31 | 26 | 27 |
| 1/2" | 37 | 41 | 57 | 64 | 80 | 90 | 43 | 45 | 40 | 42 | 35 | 37 |
| 9/16" | 53 | 59 | 82 | 91 | 115 | 129 | 57 | 63 | 53 | 58 | 47 | 51 |
| 5/8" | 73 | 83 | 112 | 128 | 159 | 180 | 93 | 104 | 86 | 96 | 76 | 85 |
| 3/4" | 125 | 138 | 200 | 223 | 282 | 315 | 128 | 124 | 104 | 102 | 118 | 115 |
| 7/8" | 129 | 144 | 322 | 355 | 454 | 501 | 194 | 193 | 178 | 178 | 159 | 158 |
| 1" | 188 | 210 | 483 | 541 | 682 | 764 | 287 | 289 | 265 | 240 | 235 | 212 |

* Sizes from #4 to #10 are in lb-in.

Sizes from 1/4" up are in lb-ft.

* Fine thread figures are for 1"-14.

Grade 2, 5, and 8 values are for slightly lubricated bolts.

38: <https://www.boltdepot.com/fastener-information/bolts/US-Recommended-Torque.aspx>

25. Place plastic intake manifold (lower intake) on engine
- 25.1. Loosely tighten four stock bolts and washers in a crisscross pattern
- 25.2. Torque the bolts a little at a time in a crisscross pattern to 12N-m (106in. lbs.)



Figure 39: New intake manifold with four stock bolts.

26. Connect Fuel injector wires
- 26.1. Reconnect fuel injector wires to top of injectors
- 26.1.1. Push down on red clip to lock it on (Figure 40)

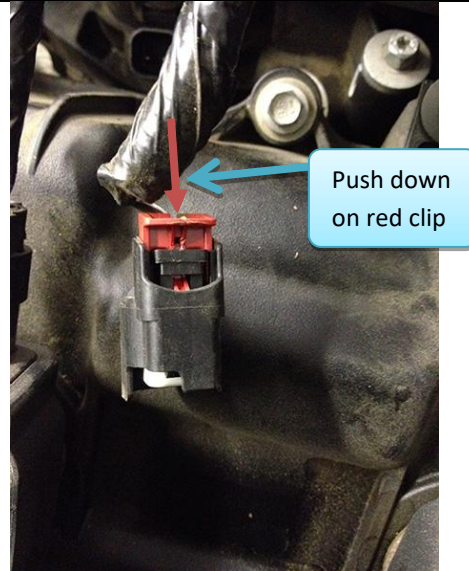


Figure 40: Fuel injector connector with red lock up (unlocked).

27. Connect large wire connector on passenger side

27.1. Slide grey shroud on and engage red lock clip into place (Figure 41)

Slide grey shroud and red tab this direction

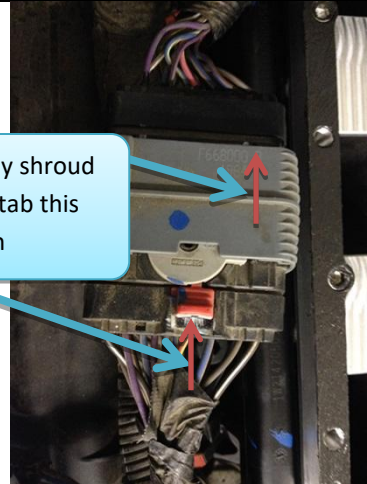


Figure 41: Wire connector with red lock engaged.

28. Place intake manifold adapter on top of the intake manifold

28.1. Loosely tighten seven – 6x30mm bolts in intake manifold adapter (Figure 42)

28.2. Ensure even pressure is maintained while tightening bolts

28.2.1. Torque to 10N-m (89in. lbs.) in a crisscross pattern

28.2.2. Intake manifold is plastic and can be damaged if it is tightened down crooked

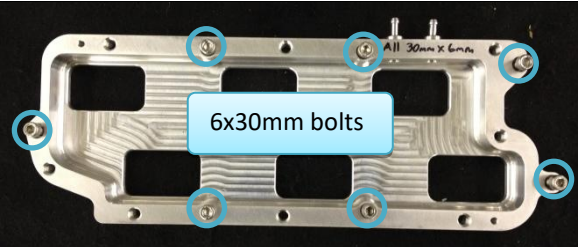


Figure 42: Bolt locations on intake manifold adapter.

29. Attach two provided hoses to ports on manifold adapter on driver side (Figure 43 and Figure 44)

Manifold ports

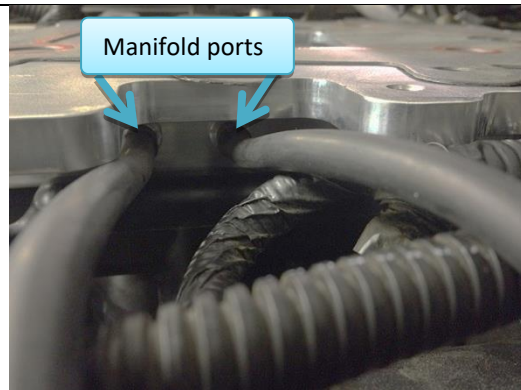


Figure 43: Provided hoses attached to intake manifold adapter on driver side.

- 29.1. Clean top lip surface with a lint free cloth and brake cleaner
- 29.2. Apply RTV to manifold adapter lip (Figure 44)
 - 29.2.1. Ensure the entire surface is covered evenly

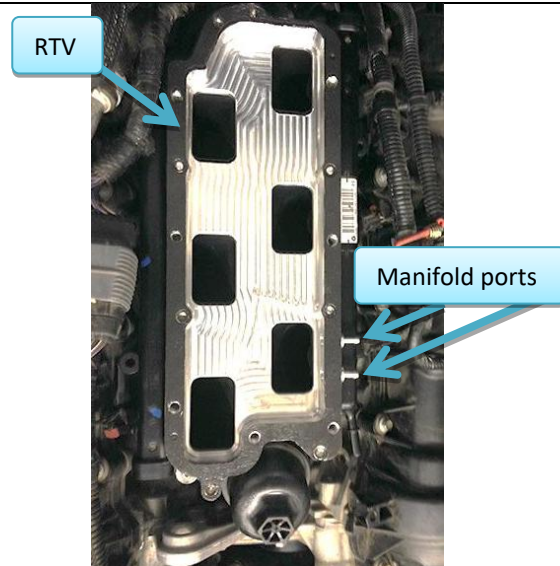


Figure 44: Intake manifold adapter installed with RTV applied to lip.

- 30. Reconnect fuel line connector on fuel rail
 - 30.1. Slip connector over fuel rail connection until connector clicks
 - 30.2. Push down on blue lock clip until it clicks on both sides (Figure 17)
 - 30.3. Test connection by carefully trying to pull off connector from fuel rail
 - 30.4. Ensure the connector is on all the way to prevent fuel leaks

- 31. Install supercharger intake plate
 - 31.1. Sizes and locations shown in Figure 45

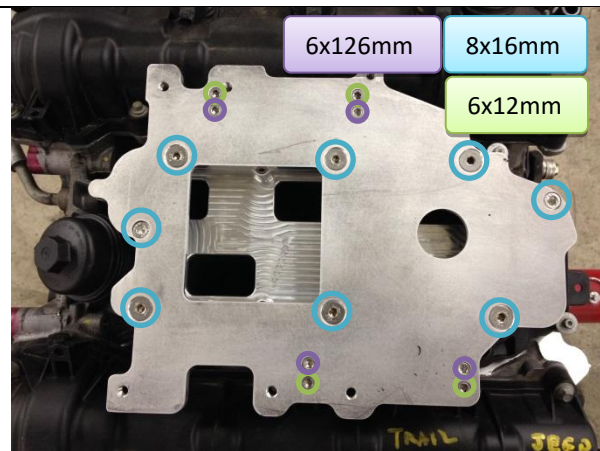


Figure 45: Intake plate with bolt sizes and locations marked.

31.2. Use bungee cords or zip ties to hold wires away from intake adapter to ease install of intake plate (Figure 46)

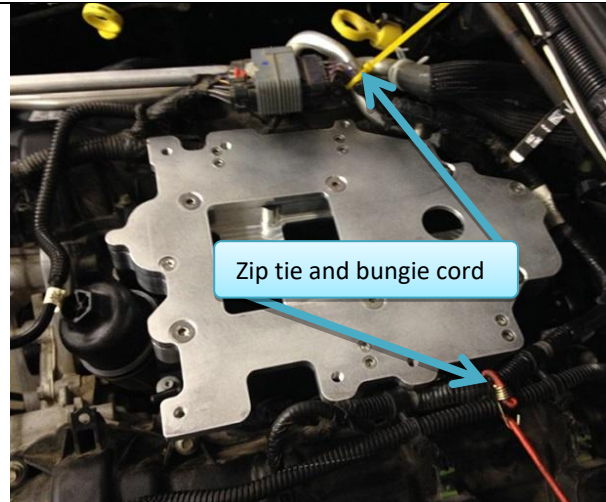


Figure 46: Supercharger intake plate installed with yellow zip tie and red bungee cord holding back wires.

31.3. Place intake plate supports under plate
31.3.1. "B" logo facing out (Figure 47)
31.3.2. Torque four - 6x12mm bolts through outer holes on plate into top of intake supports

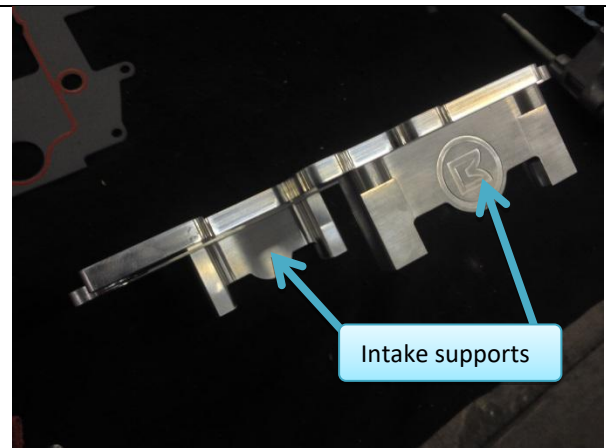
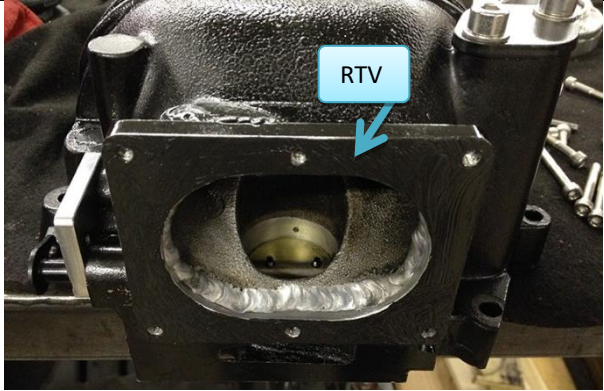
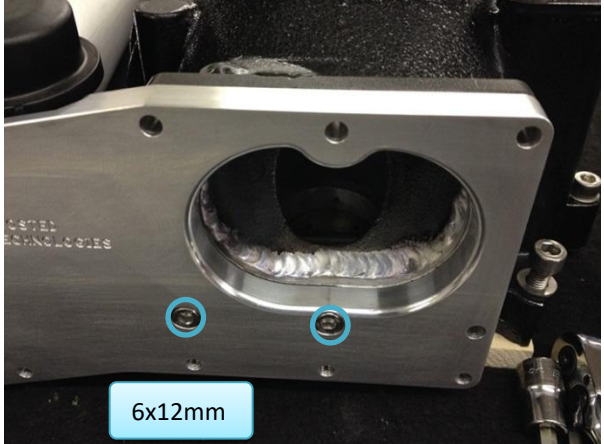



Figure 47: Intake plate with intake supports installed.

31.4. Install provided 8mm studs in intake tub to align plate and prevent RTV smearing
31.4.1. If the RTV is smeared it could cause a vacuum leak
31.5. Place supercharger intake plate on top of intake manifold adapter
31.6. Tighten maintaining even pressure loosely four 6x126mm bolts through intake plate, plate support and intake manifold
31.6.1.1. Apply anti-seize on four - 6x126mm bolts to threads and shaft
31.6.2. Loosely tighten four 6x126mm bolts in a crisscross pattern
31.7. Tighten loosely two - 8x16mm bolts on

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| <p>the front and back of plate in counter sunk holes</p> <p>31.8. Tighten loosely six – 8x16mm flat head tapered bolts into tapered holes</p> <p>31.9. Torque all bolts on supercharger intake plate while maintaining even pressure in a crisscross pattern</p> | |
| <p>32. Assemble supercharger and rear intake assembly</p> <p>32.1. Install rear intake plate on supercharger</p> <p>32.1.1. Clean surfaces where they mate with brake cleaner on a lint free cloth</p> <p>32.1.2. Apply RTV to supercharger flange on rear (Figure 48)</p> <p>32.1.2.1. Ensure the entire surface is covered evenly</p> |  <p>Figure 48 shows a close-up of the supercharger rear flange. A blue arrow points to the RTV (Room Temperature Vulcanizing) sealant applied to the entire surface of the flange. The text 'RTV' is written in a blue box above the arrow.</p> <p>Figure 48: Super charger rear flange with RTV applied to entire surface.</p> |
| <p>32.1.3. Place intake plate on supercharger flange (Figure 49)</p> <p>32.1.3.1. While holding the intake plate away from the flange thread the two bolts into the supercharge to align it</p> <p>32.1.3.2. Keep part from moving once it is in contact with the RTV to ensure a good seal</p> <p>32.1.4. Add loctite to two 6x12mm bolts on intake plate and torque (Figure 49)</p> |  <p>Figure 49 shows the rear intake plate attached to the supercharger flange. Two 6x12mm bolts are visible, secured with loctite. The text '6x12mm' is written in a blue box below the bolts.</p> <p>Figure 49: Rear intake plate attached to supercharger with two bolts (use loctite on these).</p> |
| <p>32.2. Install rear intake tub</p> <p>32.2.1. Install two provided 6mm studs from front side of intake plate into rear intake tub</p> <p>32.2.2. Torque in a crisscross pattern nine bolts (Figure 50)</p> <p>32.2.2.1. Five – 6x40mm bolts</p> <p>32.2.2.2. Four – 6x50mm bolts</p> |  <p>Figure 50 shows the rear intake housing. It features a crisscross pattern of nine bolts. The text '6x40mm' is written in a blue box above the top row of bolts, and '6x50mm' is written in a green box above the bottom row of bolts. The text 'BOOSTED TECHNOLOGIES' is visible on the housing.</p> <p>Figure 50: Rear intake housing.</p> |

32.2.3. Rear intake tub installed (Figure 51)



Figure 51: Rear intake housing installed on intake plate.

32.3. Install bypass valve

32.3.1. Insert stem into bypass valve flipper

32.3.1.1. Angle bypass valve forward to insert then rotate 90° to align with two bolt holes

32.3.2. Loosely tighten two bolts

32.3.2.1. Two 6x16mm bolts

32.3.3. The bypass valve stem should not allow the butterfly shaft to rotate past the stem

32.3.3.1. If the butterfly shaft can rotate past the stem then the valve needs to be mounted lower

32.3.3.2. When the bypass is properly installed you will feel a resistance when rotating the butterfly shaft all the way up.

32.3.4. Position bypass valve so that it is as far back and upright as possible (Figure 52)

32.3.4.1. Torque two bolts

32.3.4.2. Ensure pressure is exerted on bypass valve butterfly shaft holding it down on bump stop

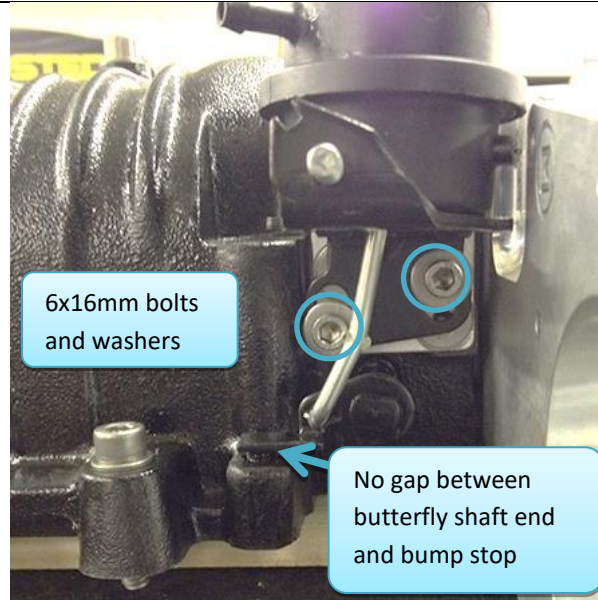


Figure 52: Bypass valve properly installed upright while maintaining downward pressure on bypass butterfly shaft.

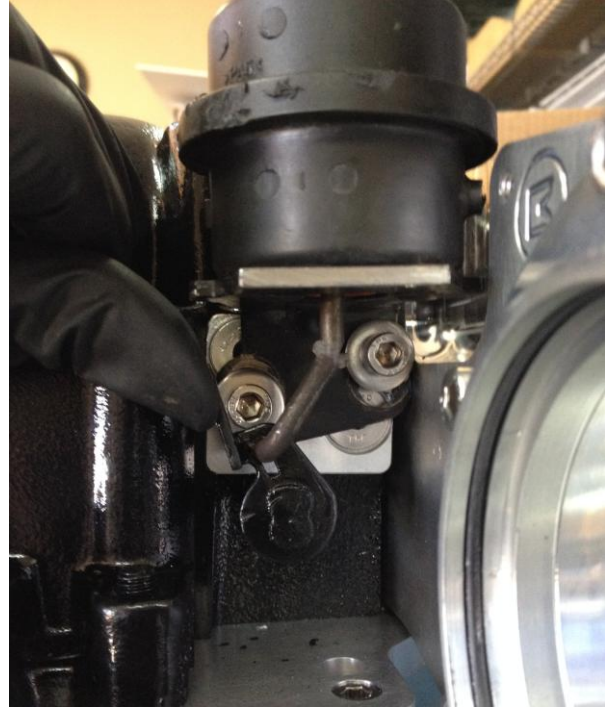


Figure 53: Butterfly foot rotated all the way back. The bypass stem cannot move up further. The butterfly foot is prevented from rotating past vertical which is required for the bypass to work properly.

32.4. Install rear intake tube flange (Figure 54)

- 32.4.1. Ensure provided O-rings are installed in both glands of tube flange
- 32.4.2. Loosely tighten two 6x30mm bolts in holes closest to supercharger housing shown in Figure 54
- 32.4.3. Loosely tighten four – 6x16mm
- 32.4.4. Torque in a crisscross pattern
- 32.4.5. Apply Vaseline to O-ring inside tube flange

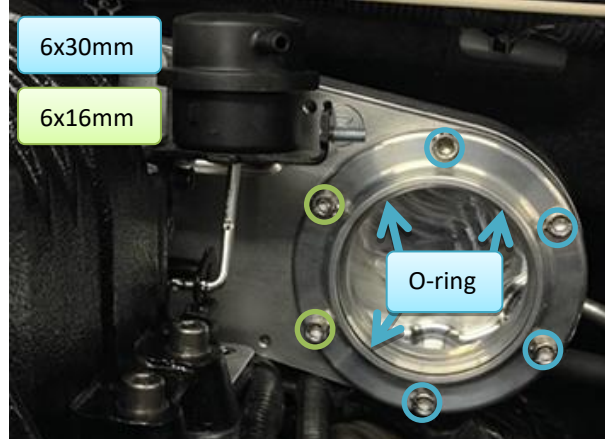


Figure 54: Rear intake tube flange installed on rear intake assembly.

33. Place supercharger gasket on top of intake plate (Figure 55)

33.1. Red rings facing up

33.2. Place a few dabs of RTV on bottom of gasket to prevent it sliding around when installing the supercharger

33.3. Align holes with bolt holes on intake plate

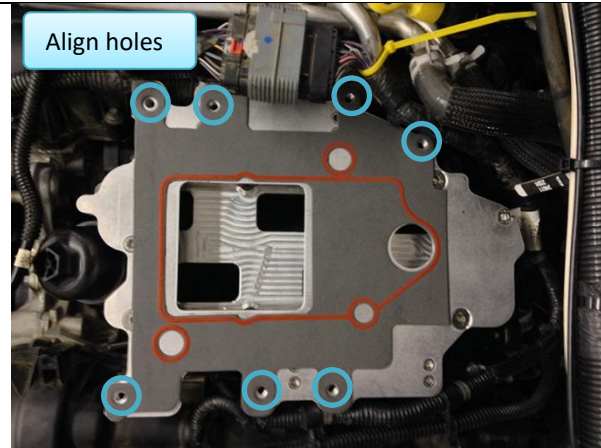


Figure 55: Correct supercharger gasket alignment and orientation on intake plate.

34. Place super charger over gasket (Figure 56 and Figure 57)

34.1. Gasket is delicate

34.1.1. Supercharger should be placed on gasket as flat as possible

34.2. Align supercharger bolt holes, gasket bolt holes and intake port bolt holes

34.2.1. Align one hole first and start threading a bolt and washer

34.2.2. Carefully shift the supercharger and gasket to align other holes one at a time

34.3. Loosely tighten in a crisscross pattern seven – 8x35mm bolts and washers

34.4. Torque bolts in a crisscross pattern

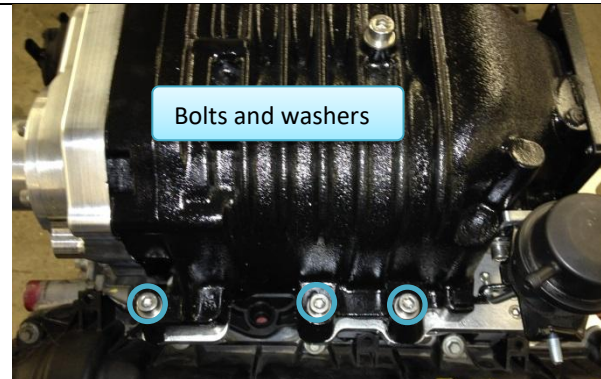


Figure 56: Bolts on driver side of supercharger.

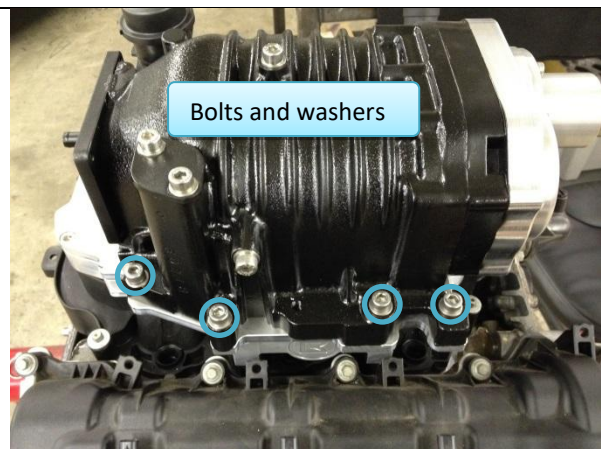


Figure 57: Bolts on passenger side of supercharger.

34.5. Supercharger installed and bolts tightened down (Figure 58)



Figure 58: Supercharger installed on intake plate.

35. Install supercharger nose support on nose (Figure 59)

35.1. Boosted Technologies text facing forward and on driver side of nose

35.1.1. Vaseline on the two O-rings will help support slide on smoothly

35.2. Slide nose support over supercharger nose

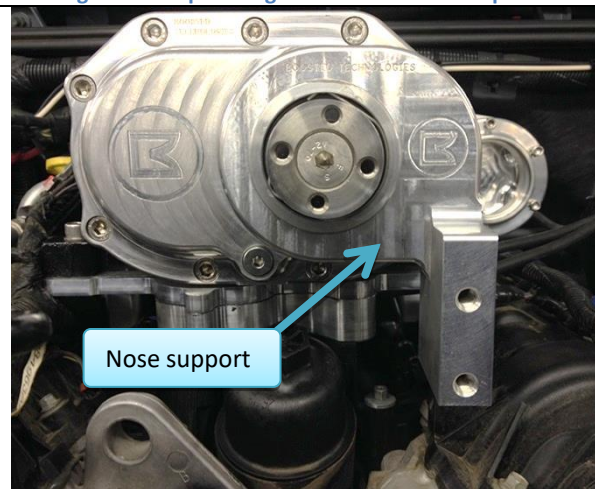


Figure 59: Supercharger nose support installed properly.

36. Install serpentine belt

36.1. Route belt the same as stock configuration

37. Install alternator, support bracket and plate with pulley

37.1. Install plate with pulley (Figure 60)

37.1.1. "B" logo facing forward on plate with pulley

37.1.2. Align nose support holes and plate with pulley

37.1.3. Tighten loosely two – 8x25mm bolts

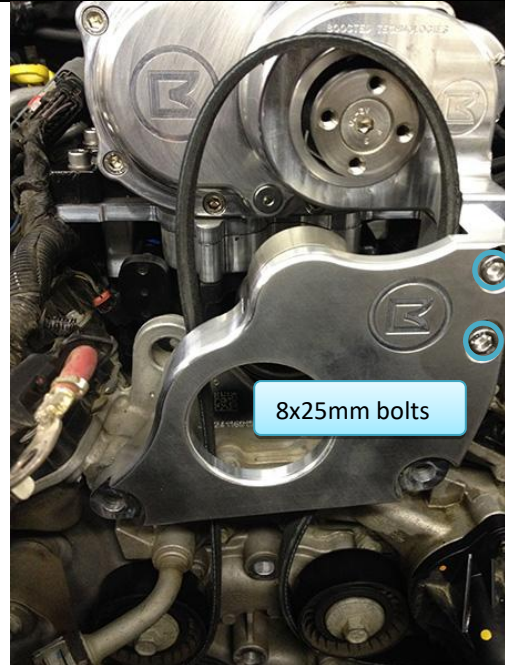


Figure 60: Plate with pulley attached to nose support.

37.2. Install alternator

37.2.1. Tighten loosely two stock alternator bolts and washers

37.2.2. Reconnect wire connector

37.2.3. Reconnect terminal wire on alternator stud

37.2.3.1. Torque nut to 18 N-m (13 ft. lbs.)

37.2.3.2. Reinstall stud cover

37.2.4. Route serpentine belt through plate with pulley and over alternator pulley (Figure 61)

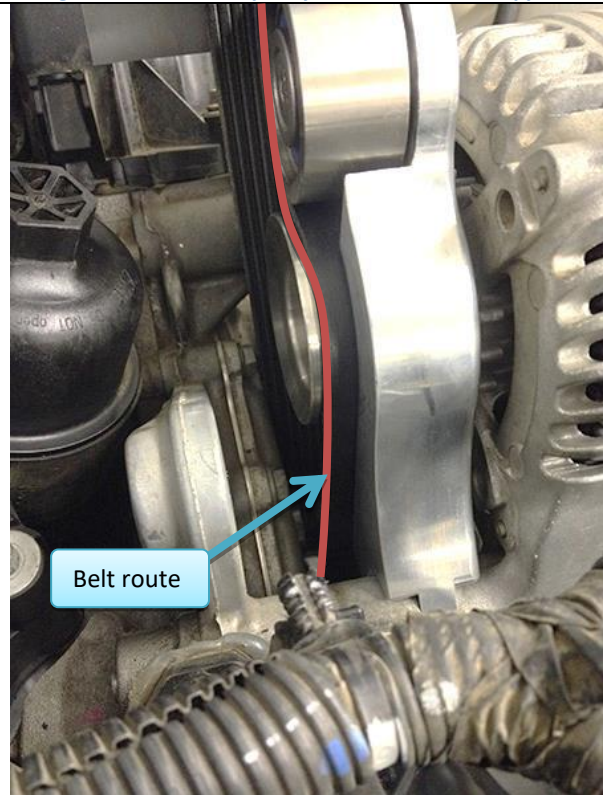


Figure 61: Serpentine belt properly routed in plate with pulley.

37.3. Install alternator support bracket

37.3.1. Use superglue to attach provided 3/8" spacers on alternator support bracket before installing

37.3.1.1. lineup flat side of top spacer with flat side of support bracket

37.3.1.2. Ensure top spacer is not protruding sideways from between support bracket and engine

37.3.2. Make sure support bracket is installed between belt end that goes vertical (Figure 62)

37.3.3. Install two stock bolts



Figure 62: Serpentine belt properly routed with vertical section on either side of alternator support anchors.

37.3.4. Torque all bolts on alternator, alternator support bracket and plate with pulley (Figure 63)

37.3.4.1. Torque two bolts on alternator to 54 N-m (40 ft. lbs.)

37.3.4.2. Torque three outer bolts on support bracket to 30 N-m (22ft. lbs.)

37.3.4.3. Torque center bolt on support bracket to 55 N-m (41 ft. lbs.)

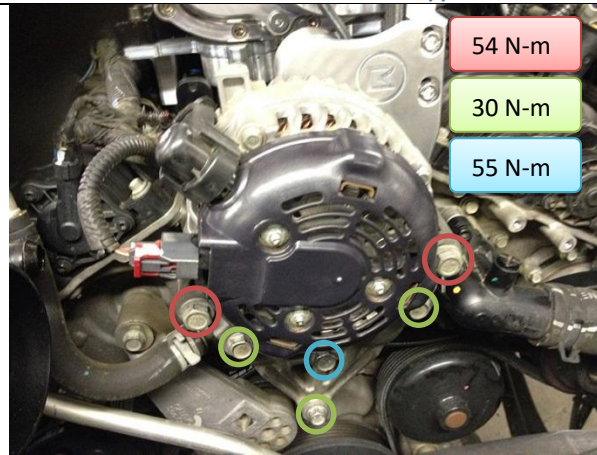


Figure 63: Alternator, support bracket and plate with pulley installed properly.

38. Install supercharger pulley with spacer on backside (Figure 64)

38.1. 4.68mm spacer

38.2. Torque four – 6x20mm bolts in a crisscross pattern

38.3. Have someone relieve tension on serpentine belt while slipping it over supercharger pulley

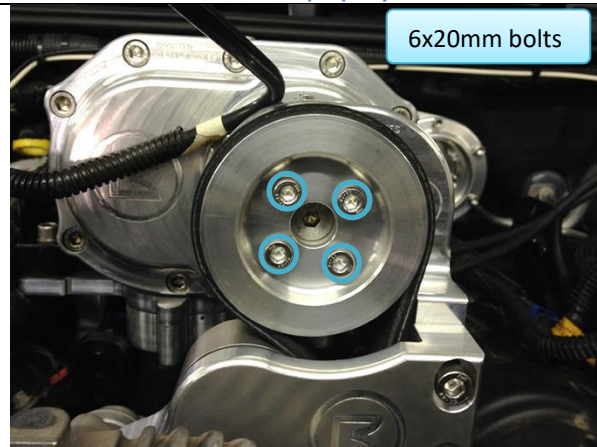

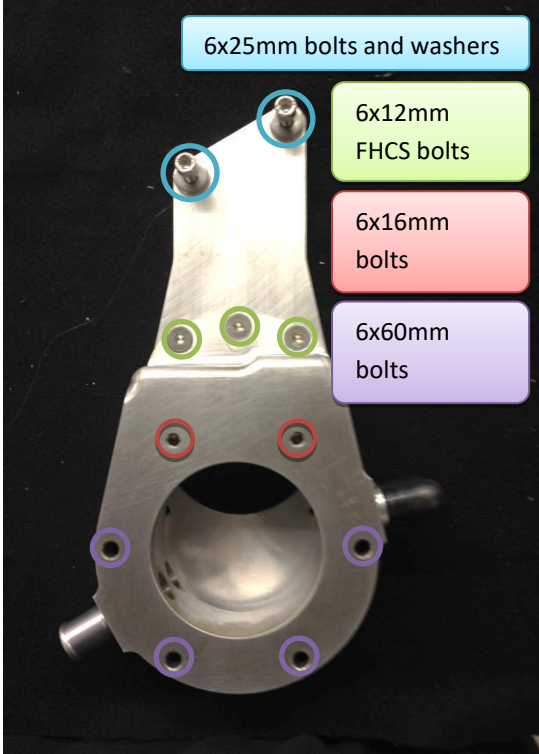


Figure 64: Supercharger pulley installed with serpentine belt wrapped over pulley.

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| <p>39. Slide intake tube into rear tube flange (Figure 65)</p> |  <p>Figure 65: Intake tube inserted into rear tube flange.</p> |
| <p>40. Assemble front intake (Figure 66)</p> <p>40.1. Attach front intake housing to front intake support bracket</p> <p>40.1.1. Loosely tighten three – 6x12mm FHCS bolts</p> <p>40.2. Attach front intake tube flange to front intake housing</p> <p>40.2.1. Ensure provided O-rings are installed in both glands of tube flange</p> <p>40.2.2. Loosely tighten two – 6x16mm bolts</p> <p>40.2.3. Loosely tighten four – 6x60mm bolts</p> <p>40.3. Torque all nine bolts in a crisscross pattern</p> <p>40.4. Apply Vaseline to O-ring inside tube flange</p> |  <p>Figure 66: Front assembly with bolt sizes. Note - missing front intake tube flange.</p> |
| <p>41. Install front intake assembly</p> <p>41.1. Slide tube flange over intake tube</p> <p>41.2. Ensure tube is pressed back into rear flange and front intake assembly is pushed back as far as possible to seal around the intake tube</p> <p>41.3. Attach to engine</p> <p>41.3.1. Torque two – 6x25mm bolts + washers</p> | |
| <p>42. Clean stock throttle body with brake cleaner and lint free cloth on inside</p> | |

43. Install throttle body and spacer

43.1. Install with same orientation as it was stock (Figure 67)

43.1.1. Orient throttle body with plastic actuator housing on passenger side

43.2. Torque four – 6x60mm bolts and washers in a crisscross pattern through throttle body and spacer into front intake plate

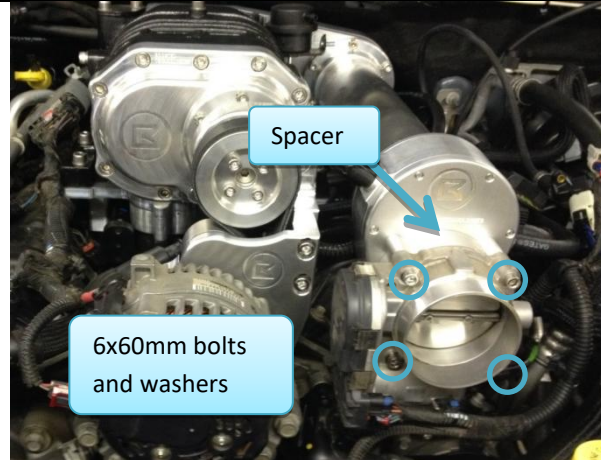


Figure 67: Throttle body properly installed with butterfly actuator on passenger side.

44. Attach brake booster port on driver side of front intake housing

44.1. May need to pull hose forward in tie down (twist and pull) (Figure 68)

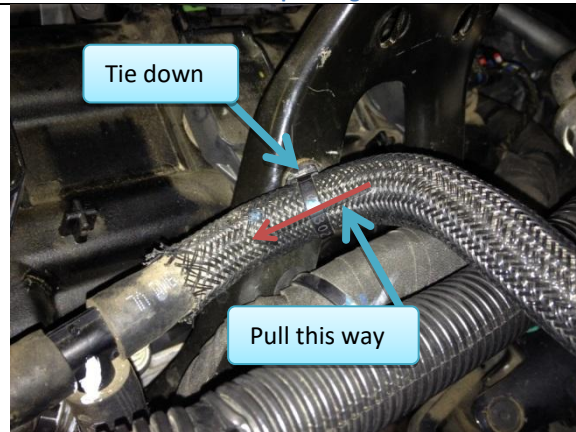


Figure 68: Brake booster tie down may prevent line connecting to port on front intake assembly.

45. Assemble two valve cover lines

45.1. Attach stock end from rear of PCV tube to teed line (Figure 69)



Figure 69: Valve cover vent and fuel vapor hose teed with stock end attached on short section.

45.2. Attach stock ends to valve cover fresh air vent hose (Figure 70)

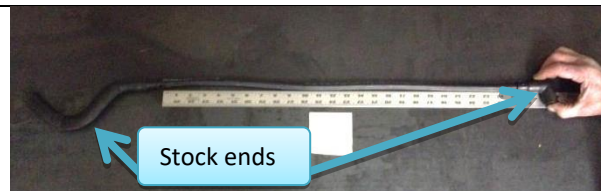
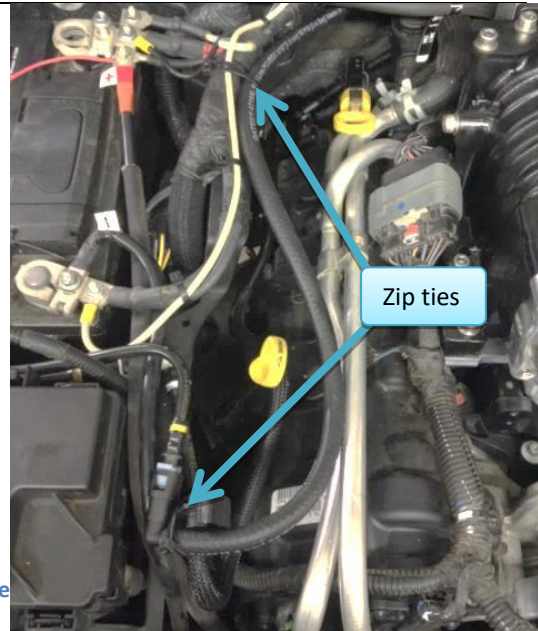


Figure 70: Fresh air vent hose with stock ends attached.

46. Connect "T'd" line to back of engine at PCV port and fuel vapor hose to front intake assembly
- 46.1. Push rubber fitting down onto PCV port till it pops on
- 46.2. Attach fuel vapor hose connector to existing plastic hose till it clicks
- 46.2.1. Use zip ties to hold line in place (Figure 71)

Figure



- 46.3. Attach hose to front intake housing on front port (Figure 72)

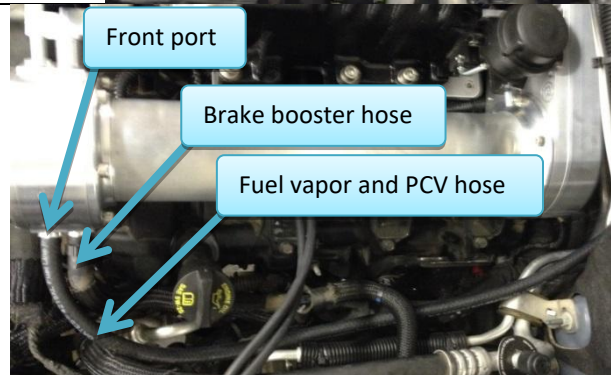


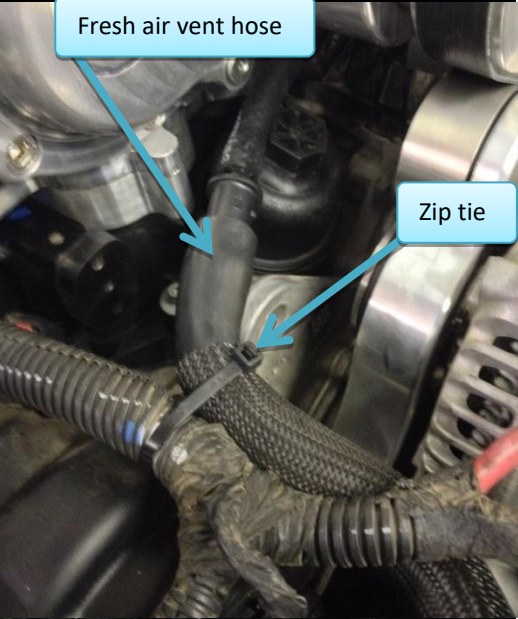
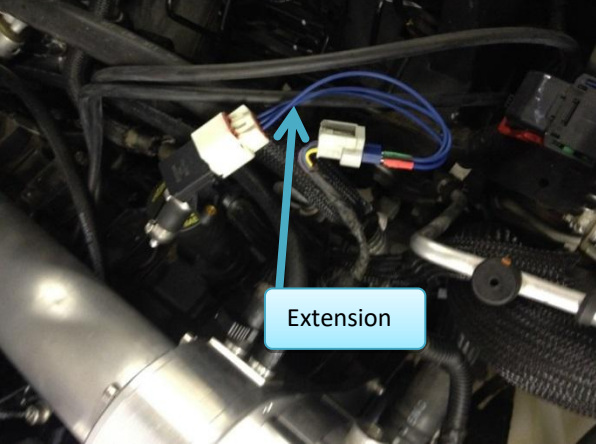

Figure 72: Combined fuel vapor and PCV hose connection to front intake housing.

47. Connect one of the hoses from step 29 to bypass valve top port
- 47.1. Cut to length, ensuring hose does not interfere with bypass valve operation or touch hot engine components

48. Connect fresh air vent hose to driver side rear valve cover and air box
- 48.1. Snake tube under supercharger nose and intake tube (Figure 73)



Figure 73: Fresh air vent hose routed under supercharger

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| <p>48.2. Slide rubber fitting over rear driver side port till it pops on</p> <p>48.3. Use zip ties to prevent tube from interfering with serpentine belt (Figure 74)</p> | <p>nose.</p>  <p>Fresh air vent hose</p> <p>Zip tie</p> <p>Figure 74</p> |
| <p>49. Connect provided connector to stock MAP sensor plug (Figure 75)</p> <p>49.1. Wire extension install here????????????</p> <p>49.2. MAP sensor placement???</p> <p>49.3. Connect to boost with hose from step 29</p> |  <p>Extension</p> <p>Figure 75: MAP sensor wire extension.</p> |
| <p>50. Install stock air intake (Figure 76)</p> <p>50.1. Lay coolant overflow tube up and out of the way while installing</p> <p>50.2. Ensure hose ends are fully seated on flange</p> <p>50.3. Torque two hose clamps to 4 N-m (35in. lbs.)</p> <p>50.4. Reattach electrical connector to inlet air temperature sensor on underside of intake near throttle body</p> <p>50.5. Torque two stock bolts on front of intake tube to 3 N-m (27in. lbs.)</p> <p>50.6. Route overflow tube through holders on air intake</p> <p>50.6.1. Attach to top of radiator port</p> <p>51. Attach any loose wire connectors</p> |  <p>Figure 76: Intake tube and coolant overflow hose reinstalled.</p> |

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| 52. Check all bolts and steps | |
| 53. Reconnect battery | |
| 54. Check for fuel leaks | |
| 54.1. Turn key to on without starting engine | |
| 54.2. Switch off ignition after a few seconds | |
| 54.3. Check fuel rail, injectors and fuel line connection for leaks | |
| 54.4. Do this multiple times | |
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