



**2006+ Challenger  
Charger 300C  
Magnum Hemi 6.4  
Sleeper Twin Turbo  
Kit V1.2**

*Make sure to read all instructions before attempting installation of turbo system. Proper installation of this system requires general automotive knowledge and experience.*

*The base system as advertised was designed to be used on stock unmodified vehicles. Use premium grade fuel with a minimum of 91 octane.*

*Keep in mind that fuel system upgrades/JMS voltage booster/engine modifications may be needed if boost over 5 psi is desired.*

*\*NOTE 15-up cars will need to have ECU removed and sent to Livernois, Diablo, HP tuners or another source for unlocking.*



### **Preparation**

- 1. Secure vehicle on suitable lift or jack stands to allow access to underside.**
- 2. After tune is downloaded, disconnect negative battery cable located in trunk.**

3. Remove Ecu for 2015+ vehicles. Ecu will need to be sent off to be unlocked for tuning (2006-2014 vehicles can skip to step 10).

4. Located on passenger side cowl.  
Remove the 2 pushlock retainers and remove the cowl panel to access the ECU (Fig. 4)



*Figure 4: Remove push pins*

5. Using a 13mm socket remove ECM bolt and bracket. (Fig. 5)



*Figure 5: Remove using 13mm socket*



6. Using a 10mm socket remove the 2 nuts retaining the ECM to the mounting bracket. (Fig. 6)

7. Remove ECM mounting bracket. (Fig. 7)

8. Unplug the upper and lower connector. (Fig. 8)



*Figure 6: Remove 2 nuts holding ECM to bracket*



*Figure 7: Remove ECM bracket*



*Figure 8: Unplug upper and lower connectors*



9. With ECM disconnected, it can now be sent off for the unlocking procedure.



**10. Remove upper driver and passenger radiator cover panels. (Fig. 10)**

**11. Next, remove (2) 10mm nuts above headlights (Located on the outer side of the headlight in the fender-one on each side). (Fig. 11)**

**12. From underneath, remove (4) 10mm bolts holding engine service panel. Remove panel and set aside. (Fig. 12)**



*Figure 10: Remove upper cover panels*



*Figure 11. Remove (2) 10mm nuts above headlights*



*Figure 12: Remove (4) 10mm headed bolts to remove service panel*

- 13. Remove (10) push pins and (7) 7mm screws holding lower splash guard. Remove and set aside. (Fig. 13 a, b, c)**



*Figure 13a: Remove push pins*



*Figure 13b: Remove 7mm screws*



*Figure 13c: Remove splash guard*

**14. Unplug front fascia harness on pass. side of radiator to the fog lamps and turn signals (this wiring harness stays with front bumper, do not unplug fog lamps and turn signals). (Fig. 14)**



*Figure 14: Unplug fascia harness*

**15. Drill and remove plastic rivets holding each wheel well to the front fascia (4) per side (make sure not to over drill the hole, we are going to re-rivet this in our final steps). (Fig. 15)**



*Figure 15: Wheel well rivets*



*Figure 16: Drill out rivets*





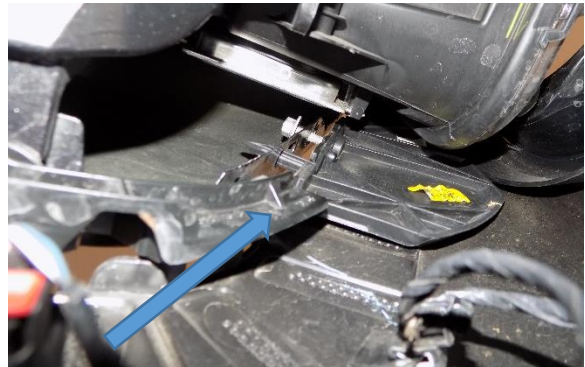
**16. Pull the front of the inner fender out of the way to gain access and remove the 10mm bolt behind the fender well on each side. (Fig. 16)**

**17. Reach up and remove 10mm nut from stud and unclip front fascia by gently pulling outward. (Fig. 17)**

**18. Remove 6 push clips from upper radiator support and carefully remove front fascia. (Fig. 18)**



*Figure 16: Remove 10mm headed bolt on each side*



*Figure 17: Remove 10mm nut*



*Figure 18: Remove 6 push pins*



*Figure 19: Carefully remove the front fascia*

19. Locate the radiator drain valve on lower passenger side of radiator. Drain radiator into a clean container (keep coolant for re-use) and remove upper radiator hose from engine. (Fig. 19a,b)

20. Remove the two push pins that hold the ambient air temp sensor and harness to the radiator air dam. Let sensor hang out of the way. (Fig. 20)



Figure 19a: Radiator drain valve

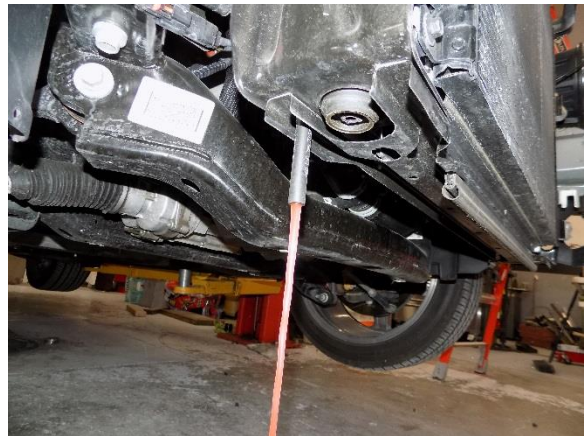


Figure 19b: Drain radiator fluid in clean container for re-use



Figure 20: Remove push pins holding air temp sensor



**21. Remove (7) push pins holding down radiator air dam. (Fig. 21)**

**22. Remove air dam**



*Figure 21: Remove (7) push pins*



*Figure 22: Remove air dam*





- 23. Using a flat blade screwdriver, depress the (8) retaining clips and push pins to remove the front bumper inner support. (Fig 23 a,b,c)**



*Figure 23a: Remove push pins*



*Figure 23b: Depress (8) plastic clips*



*Figure 23c: Remove bumper support*



**24. Unplug inlet air temp (located on driver side for 6.4 and 6.2, on passenger side for 5.7). (Fig. 24)**

**25. Un plug crank case evap. hose from airbox. (Fig. 25)**

**26. Remove airbox and inlet tube from throttle body using 8mm headed nut driver or socket. Loosen (2) clamps and remove. (Fig. 26)**



*Figure 24: Unplug air temp sensor*



*Figure 25: Unplug crank case hose*



*Figure 26: Remove airbox tube*

**27. Using a 10mm socket remove the bolt located on the core support. Remove the air box. (Fig. 27 a, b))**

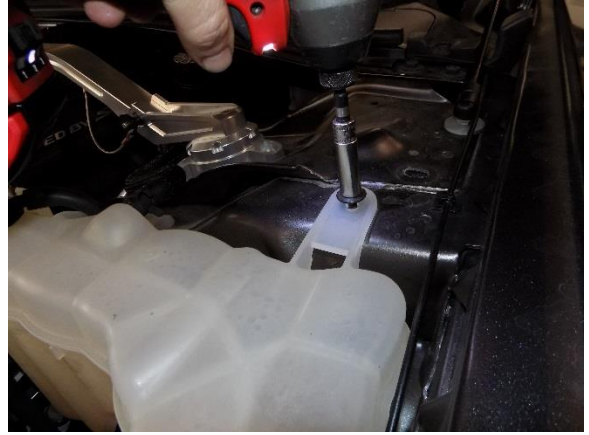


*Figure 27a: Remove 10mm headed bolt*



*Figure 27b: Remove airbox*

**28. Unbolt coolant tank and move coolant overflow tank out of the way to gain access to header bolts. (Fig. 28)**



*Figure 28: Move tank out of the way for additional header access*

**29. From underneath, unplug (2) up stream and (2) downstream o2 sensors, knock sensors and crank sensor. (Fig. 29)**

**30. Remove cat pipes from headers and cat back with 15mm headed socket. Remove heat shield as well. (Fig. 30 a, b, c)**



*Figure 29: Unplug O2 sensors*



*Figure 30a: Unbolt rear clamps*



*Figure 30b: Unbolt cat pipes/heat shield*



*Figure 30c: Remove cat pipes*



**31. Unplug/unbolt starter and remove starter from engine. Disconnect power wire first located on rear of starter. Pull small starter wire next. (Fig. 31 a, b, c)**

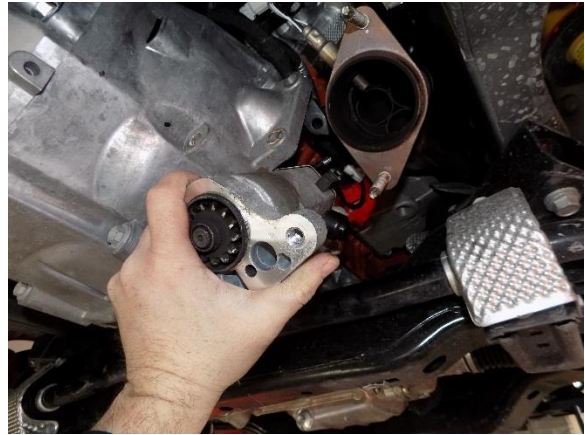
**Images below are from both sides (again, starter can be on either side).**



*Figure 31a: Unbolt and remove power wire*



*Figure 31b: Remove small wire*



*Figure 31 c: Unbolt and remove starter*

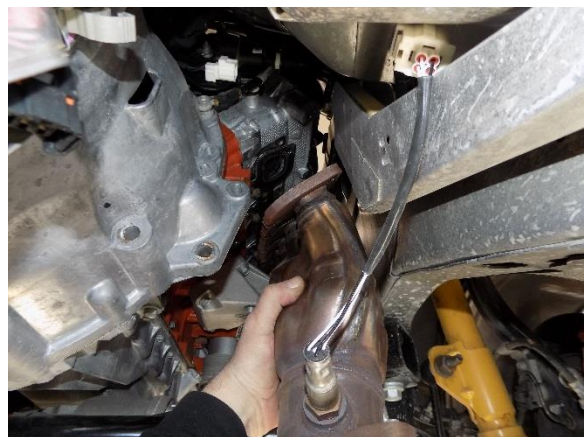


**32. Remove driver exhaust. (Fig. 32)**

**33. Next, remove passenger manifold. (Fig. 33)**



*Figure 32: Unbolt and remove factory manifolds*



*Figure 33: Remove pass. manifold*



The following images are shown with alternator removed for better images

34. Unplug oil pressure sensor, and using a 19mm wrench, remove the oil pressure sensor from the block. (Fig. 34)

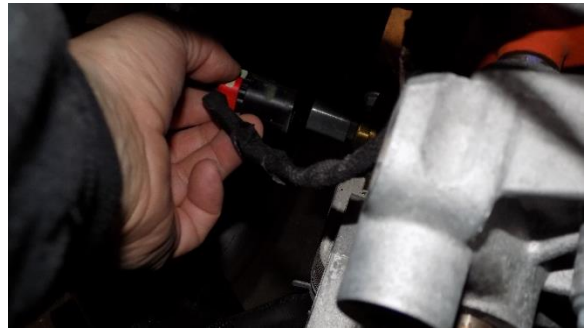


Figure 34: Unplug sensor, remove with 19mm wrench

35. Next, using an 8mm hex, remove the plug that is above it (some oil will come out, have a drain pan ready). (Fig. 35)



Figure 35: Using a 8mm hex, remove plug and sensor

36. Install the 3/8" M to 1/8" F bushing with sealant in the top hole, and then install the 1/8" M to -4 M 90 into bushing. (Fig. 36)



Figure 36: Install bushing assembly with sealant

38. Re install oil pressure sensor in the original hole and plug harness back in. (Fig. 38)



Figure 38: Connect 30" oil line and re-install oil pressure fitting

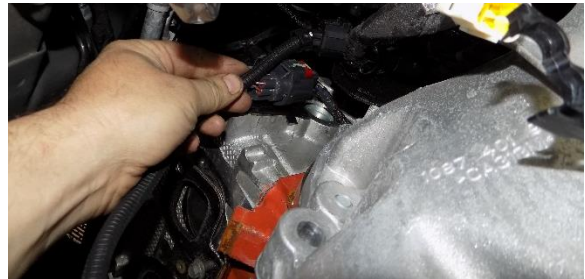
**39. Plug in both supplied upstream o2 extension harnesses and let hang for now. (Fig. 39 a, b)**

**40. Install supplied pass. turbo header using **supplied** gasket. DO NOT USE RE-USE STOCK GASKETS (Fig. 40)**

**41. Snake oil dipstick back into hole in pan and bolt to factory location. (Fig. 41)**



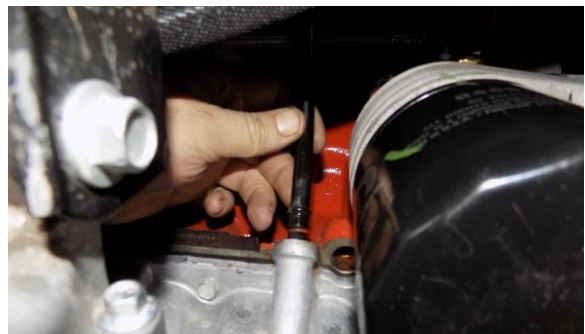
*Figure 39a: Plug in pass. O2 extension*



*Figure 39b: Plug in driver O2 extension*



*Figure 40: Install pass. turbo header with supplied gaskets and hardware.*



*Figure 41: Re-install dipstick*

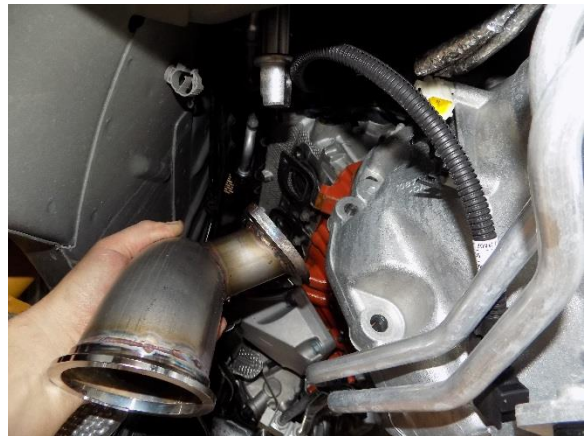


42. Take the (2) supplied 10" long heat tube. Slice each tube down the side and slide over the brake lines on the driver side. (Fig. 42)

43. Install supplied driver turbo header using **supplied** gasket. DO NOT USE RE-USE STOCK GASKETS (Fig. 43)



*Figure 42: Slide supplied heat tubing over brake lines*



*Figure 43: Install driver header with supplied gasket*

44. From top, unplug main fan harness as shown. Unbolt (2) bolts holding fan to radiator. (Fig. 44 a, b)



Figure 44a: Unplug fan



Figure 44b: Unbolt fan

45. Remove (4) push pins holding panel to driver side of frame rail to gain access to fan removal and scavenge pump installation. (Fig. 45)



Figure 45: Remove plastic panel



**46. Support bottom of radiator support and remove (4) 13mm bolts. Lower radiator assembly and pivot out on passenger side to allow access for scavenge pump installation and fan removal. (Fig. 46 a, b, c,)**



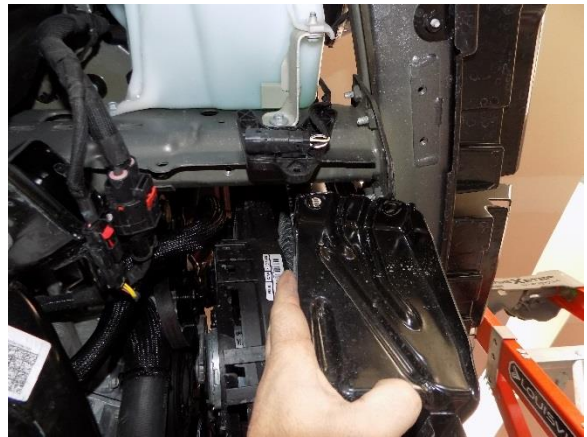
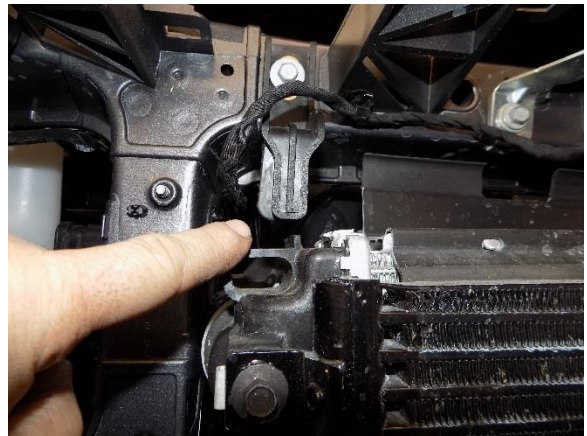
*Figure 46a: Support radiator support*



*Figure 46b: Remove (2) bolts per side*



*Figure 46c: slowly unbolt radiator support*





**47. Carefully slide out fan assembly and set aside for now.**



48. Using a small pry bar, hold the flex plate teeth using starter hole as an access point. Loosen the crank bolt with a breaker bar and a 21mm socket. Remove bolt. (Fig. 48 a, b, c)



Figure 48: Hold engine with pry bar



Figure 48b: Loosen crank bolt



Figure 48c: Remove crank bolt

49. Locate mandrel, (1) belt guides, end cap, 22T pulley, keyway and new longer crank bolt. Assemble as shown if not already together. APPLY RED LOCTITE to bolt as shown and thread into crankshaft. Torque bolt to 120lbs, holding crankshaft by flywheel. Make sure keyway is installed. (ATI balancers will need to use a spacer to extend the pulley---Optional upon kit order). (Fig. 49 a, b, c)

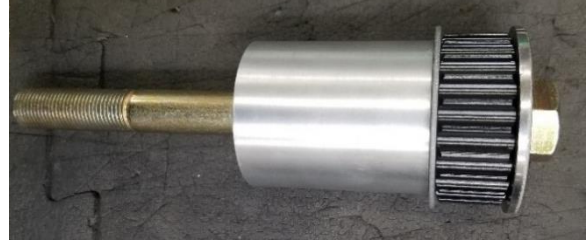


Figure 49a: Make sure keyway is installed

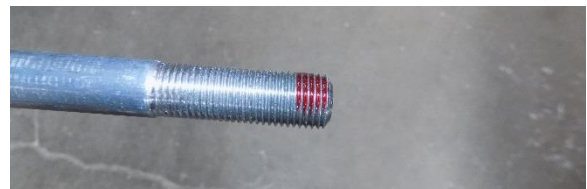


Figure 49b: Use red Loctite on crank bolt



Figure 49c: Torque to 120 lb/ft

50. Locate supplied oil scavenge pump.  
(Pump is shipped with oil, but at this time pour some more oil into each fitting of the pump and rotate to make sure pump will prime on startup). (Fig. 50)

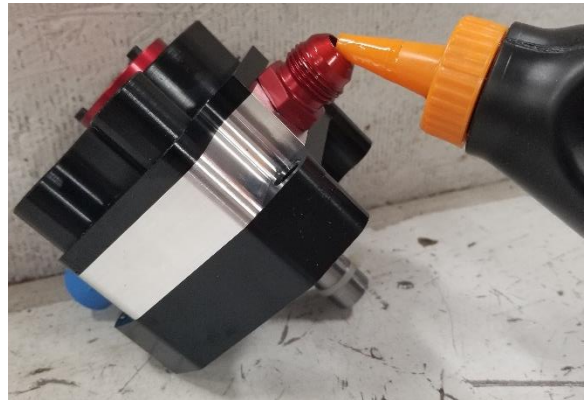


Figure 50: Add a bit of oil and turn pump for priming

51. Assemble oil scavenge pump on to pump bracket using the supplied 3/8" x 1" long button head bolts. Use a dab of RED LOCTITE on bolts. Button head bolt will sit in a machined recess in plate. Tighten bolts. (Fig 51)



Figure 51: Add a dab of Loctite to oil pump bolts

52. Next, install 37 tooth pulley on pump shaft, leaving about 1/8" clearance between pulley and plate. Snug the (3) small socket head bolts to secure pulley to shaft (Make sure pulley is in position before tightening, as it is difficult to remove later. Final tightening of 3 bolts will take place after pulley is positioned on car with belt installed).

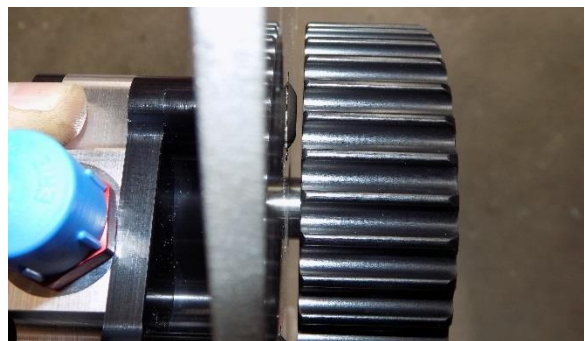


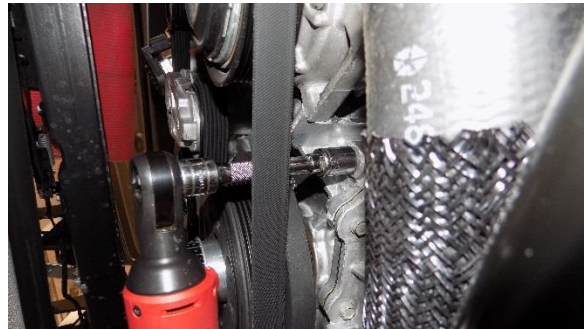
Figure 52: Slide pulley on shaft, snug 3 bolts on pulley



- 53. Remove the (3) 13mm bolts from engine timing cover as shown. There are (2) on the driver side between the balancer and the A/C pulley. The third is on the pass. side of the balancer on the bottom. (Fig. 53 a, b, c)**



*Figure 53a: Remove lower pass. timing cover bolt*



*Figure 53b: Remove upper driver timing cover bolt*



*Figure 53c: Remove upper pass. timing cover bolt*

54. Locate the (3) threaded rods in the oil pump kit. Install the threaded rods with a dab of Loctite into the block. (Fig. 54 a, b)



Figure 54a: Use dab of Loctite on studs going into timing cover

55. Slide the (3) aluminum spacers over threaded rods (spacers are the same length). NOTE: Some engines have different balancers, crankshafts etc., which can affect pump and plate spacing. It is possible that some washers may need to be used to space the pump bracket to not touch. We only require 1/8" clearance between plate and balancer. (Fig. 55)



Figure 54b: Install studs in block



Figure 55: Slide oil pump spacers over threaded rods

**56. Next, install pump/bracket/belt assembly on to the threaded rods. Install supplied M8 washers and M8 nylock nuts on studs. Pull down on bracket with slight pressure and tighten (3) nuts. The belt does not need to be tight. Belt will have some play but is ok either way. (Fig. 56 a)**



*Figure 56a: Install pump/bracket/plate assembly*

**57. Finally position large pulley and tighten the 3 socket head bolts that attach pulley to pump shaft. (Fig. 57)**



*Figure 57: Position and tighten 3 oil pump pulley bolts*

58. The next few steps connect the pump to the top of the engine hose assembly with a check valve in between. Locate long length of -8 hose, large check valve, length of -12 hose and barb fittings from oil water system bag. (Fig. 58)

59. From long length of supplied -8 hose, cut a 12" long piece of line and install the 45 degree push lock fitting on one end. (Fig. 59)

60. Next assemble supplied 3/8" check valve assembly (larger) with 3/8" barb on pump side and 3/4" barb on the other (use pipe sealant). Clamp check valve to 12" line with supplied 1/2" hose clamp. (Fig. 60)

61. Now, from oil kit, locate the 17" long piece of -12 oil line, clamp to the other side of check valve.



Figure 58: locate oil line parts and set out



Figure 59: Install 45 degree hose end into 12" piece of line

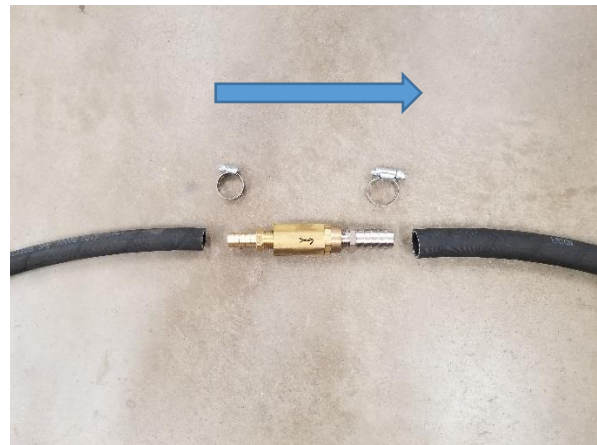
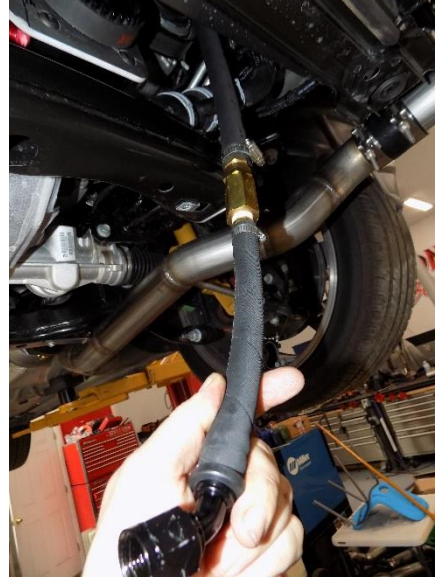


Figure 60: Assemble check valve assembly with arrow



**62. Push this entire assembly up from the bottom and connect the 45 degree fitting to the outlet of the oil pump (driver side) and tighten. The top will connect to the engine in the next step. (Fig. 62 a, b)**

**63. Attach 12" long -12 oil line to the other crankcase vent port next to oil fill cap and clamp. Keep line away from moving parts. (Fig. 62)**



*Figure 62a: install from below*



*Figure 62b: Connect line to pump and tighten*



*Figure 63: Connect other end of check valve line to crankcase vent port and clamp*

64. Set fan shroud assembly on bench and relocate fan harness and add split loom with zip ties as shown (Fig. 64 a, b, c)

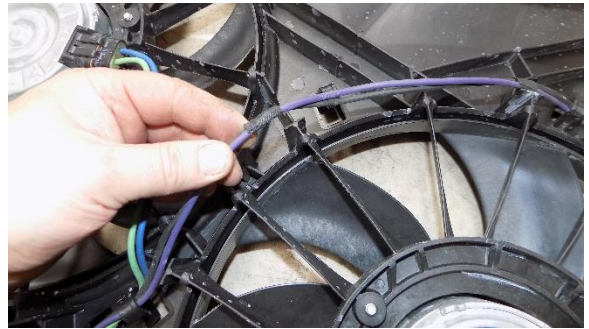
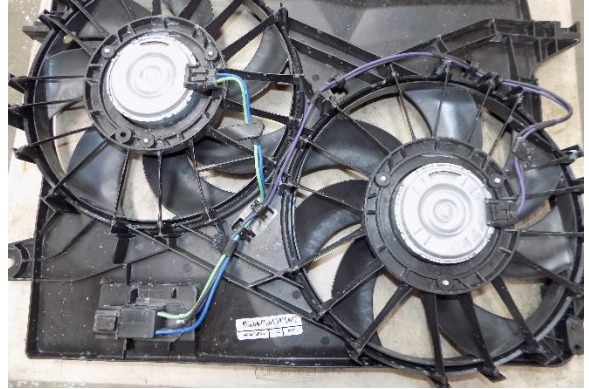


Figure 64a: Remove harness



Figure 64b: Cover harness with loom and move next to motor

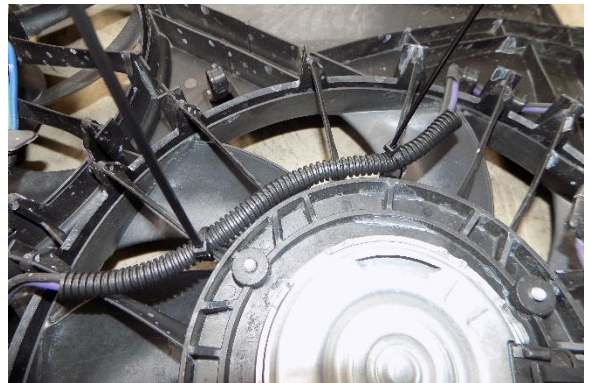
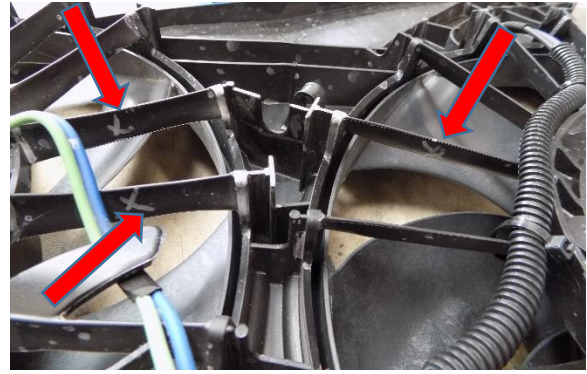


Figure 64c: Zip tie harness closer to motor

65. Next, trim plastic as shown in pictures to make room for the oil pump crank drive pulley. Take your time and test fit the shroud to make sure it has clearance. (Fig. 65 a, b)
66. Once completed, carefully re-install fan assembly on radiator and re-install lower radiator support bracket bolts into frame. Make sure upper "U" mounts are fully seated as shown and that there is enough clearance between crank bolt and fan shroud.
67. Make sure that there is some clearance between crank bolt and fan shroud.



*Figure 65a: Trim fan shroud pieces*



*Figure 65b: Trim fan shroud*

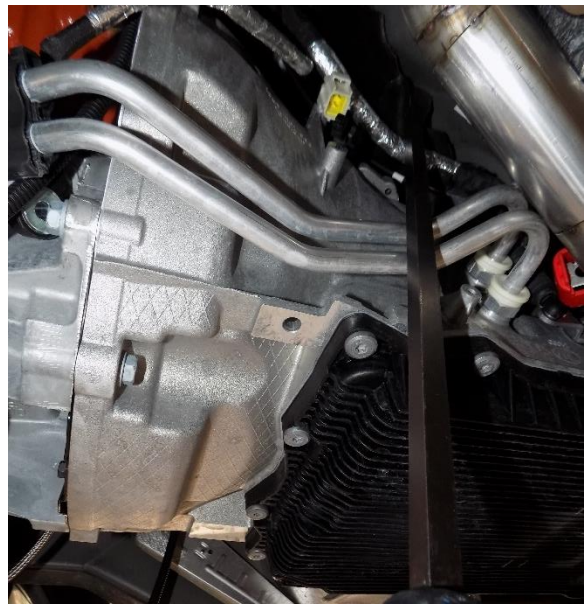


68. If so equipped, remove plastic push in clip from frame rail as shown (driver side). (Fig. 68)

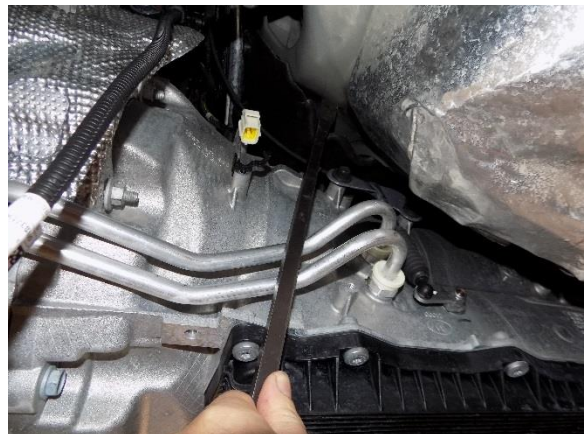
69. If vehicle is equipped with an automatic transmission, carefully pry the trans cooler lines closer to the transmission using a prybar or long screwdriver. This will make clearance for the header pipe. (Fig. 69 a, b)



*Figure 68: Remove push pin*



*Figure 69a: Carefully pry cooler lines closer to the transmission*



*Figure 69b: Lines after moving towards transmission*

**70. Next, take the supplied 5" long heat tube and slice down the side and place over trans lines. (Fig. 70)**



*Figure 70: Slice heat tubing and install on lines*

71. Install driver up-pipe using the supplied **low profile** (smaller) 3" V band clamp and snug down, do not completely tighten at this time. (Fig. 71)



*Figure 71: Install up-pipe to driver header*





**72. Re-install starter and re-connect wiring. Re-install starter heat shield if so equipped) Next, re-install steering shaft using OEM bolts. USE RED LOCTITE ON STEERING BOLTS.**



**73. For driver side, Insert 4" dia. X 2.5" long stint into air filter and clamp. Take trimmed 4" 45 degree coupler and clamp to the turbo inlet stint. Take air cleaner and clamp to stint assembly with supplied 4" worm clamp. Place entire assembly in space next to engine for now. (Fig. 73 a, b, c)**



*Figure 73b: Clamp hose to stint*



*Figure 73c: Install assembly next to engine*



*Figure 73a: Clamp air cleaner to stint*



**74. Next, install (4) 3/8" studs into up-pipe as shown. (Fig. 74)**

**75. Slide supplied T4 metal gasket into place. (Fig. 75)**



*Figure 74: Install studs into up-pipe flange*



*Figure 75: Slide T4 gasket over studs*

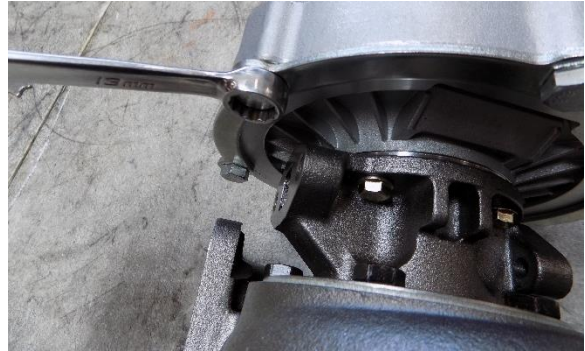


**76. Place turbos on bench and loosen all clocking bolts. (Fig. 76 a, b)**

**77. FOR SLEEPER TURBOS (Skip to 80 for Turbonetics/Precision) –Remove all 10mm bolts on hot side and carefully remove cartridge from exhaust housing and set turbo down on compressor side. (Fig. 77 a, b)**



*Figure 76a: Loosen all clocking bolts on turbine side*



*Figure 76b: Loosen all clocking bolts on compressor cover*



*Figure 77a: For sleeper turbos, remove all clocking bolts*

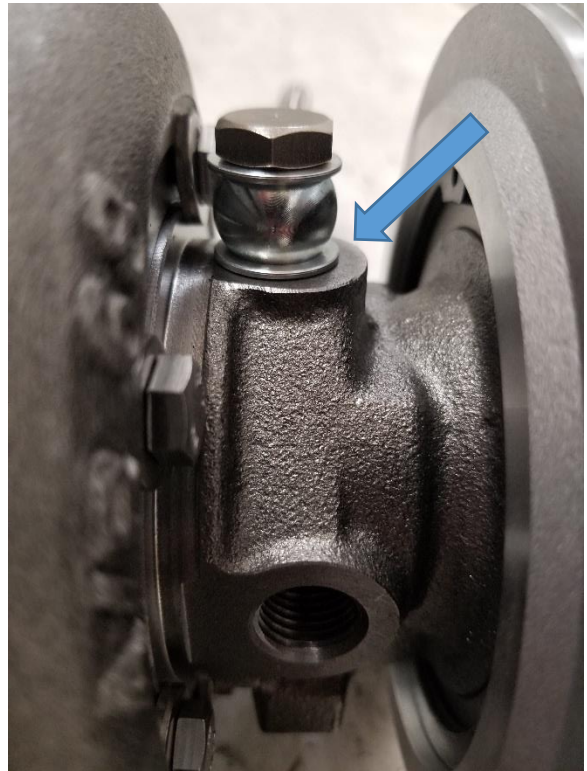


*Figure 77b: For Sleeper turbos remove turbo from housing*

78. Locate the two oil lines in oil feed kit with banjo fittings on one end. Install oil feed line with banjo bolt on each turbo as shown. Next, put (1) washer (blue arrow) on turbo side and (1) washer on top and tighten line to turbo with supplied Banjo bolt.
- NOTE: Do both turbos currently and use pictures as a guide (the two side ports on each turbo will remain open).



79. Re-install exhaust housings and you will leave (1) bolt out as it will not go back in once turbo is positioned (It is a blind hole and will not leak).



**80. TURBONETICS/PRECISION oil feed**

Using pipe sealant or tape, install 1/8" M to -4 M 90 degree fitting into top of turbo. Make sure not to get any sealant into oil feed holes. Repeat for other side.





81. Slide driver turbo onto 3/8" studs on driver up-pipe. Screw on (4) 3/8" flange nuts and tighten finger tight (will be completely tightened at the end). (Fig. 81 a, b)



*Figure 81: Install turbo over studs*



*Figure 81b: Finger tighten for now*

**82. If not using an open catch can for crankcase vent (customer option), take pass air cleaner and drill a hole in the end to press in supplied 5/8" 90 degree barb as shown (If using catch can the crankcase vent will have the hose routing to it and not to the air cleaner). (Fig. 82 a, b)**



*Figure 83a: Clamp air cleaner to stint*

**83. For pass. side Insert 4" dia. X 2.5" long stint into air filter and clamp. Take air cleaner and stint assembly and slide into 45 degree coupler and clamp with supplied 4" worm clamp. Place entire assembly in space next to engine for now. (Fig. 83 a, b, c)**



*Figure 82: Drill small hole for 90 degree fitting*



*Figure 83b: Clamp inlet hose to stint*



*Figure 82b: Install fitting*



*Figure 84c: Set assembly next to engine for now*

84. Install pass. up-pipe onto passenger header with supplied **low profile** (smaller) 3" V band clamp and snug. (Fig. 84)

85. Install (4) 3/8" studs into up-pipe flange. (Fig. 85)

86. Slide T4 gasket over flange.



*Figure 84: Install pass up-pipe and clamp loosely for now*



*Figure 85: Install studs into pass T4 flange, then gasket*



**87. Next, install pass. turbo with gasket onto studs. Hand tighten flange nuts. (Fig. 87)**

**88. Install driver and pass. downpipes into cat back and onto turbos using supplied larger 3" V-band clamps. (Fig. 88)**

**89. Tighten all hot side bolts and clamps previously installed, making sure that no parts touch. Position oil feed line on top and drain on bottom. TIP: Rotating center oil housing will allow clearance to the turbo flange nuts.**



*Figure 87: Install turbo with gasket loosely for now*



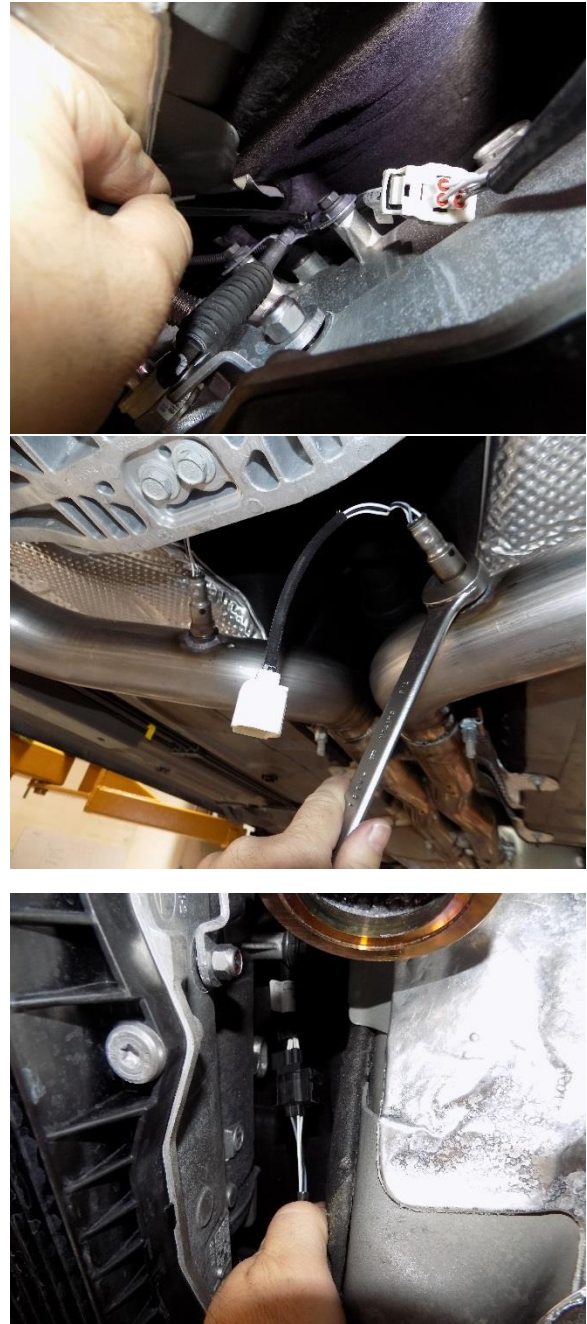
*Figure 88: Install downpipes using 3" V-band clamps*



**90. Install front and rear o2 sensors and remaining (2) rear extension harnesses as shown. (Fig. 90 a, b)**



*Figure 90a: Re-install o2 sensors*



*Figure 90b: Install extension harness for rear o2 sensors*



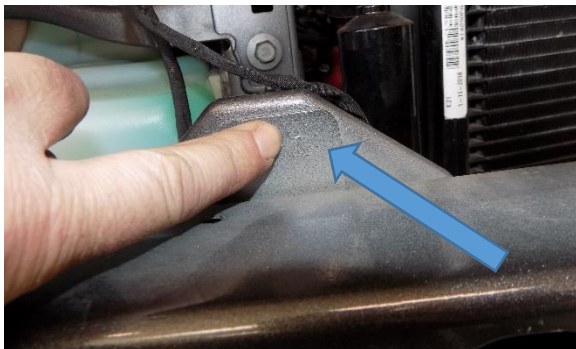
**91. Using supplied spot weld cutter, drill out (4) spot welds as shown and unbolt the (8) 13mm bumper bolts. (Fig. 91 a, b, c, d)**



*Figure 91b: Drill at a slow speed*



*Figure 91c: Once drilled, bumper can be removed*



*Figure 91a: Locate spot welds*



*Figure 91d: Remove 13mm headed bolts*



**92. Using supplied M8 x 40mm long hex bolts and washers, install 3/8" spacer and bolt bumper back on spaced out. This will make room for the standard intercooler. If using the RACE intercooler upgrade, the bumper support will need to be cut to accommodate clearance. (Fig. 92 a, b)**



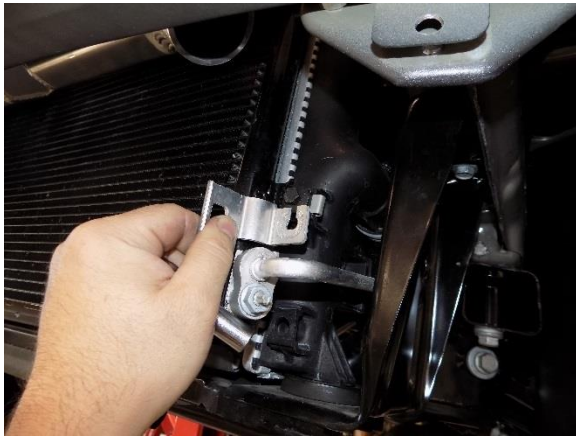
*Figure 92a: Install (4) alum. Bumper spacers*



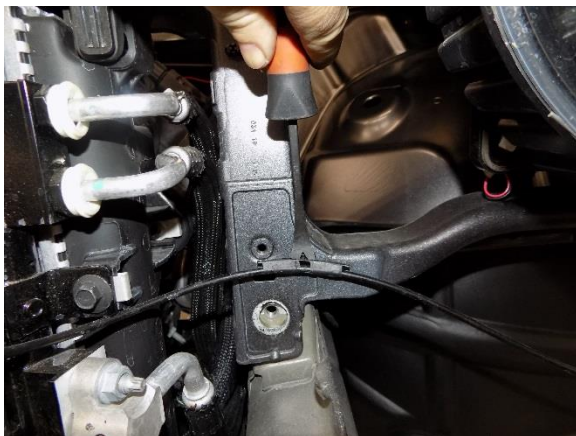
*Figure 92b: Tighten bumper*

**93. Remove horn brackets and harness from upper radiator support and set aside. Unbolt condenser bracket as shown. If not removeable, bend toward condenser. Pull out push pin. (Fig. 93 a, b)**

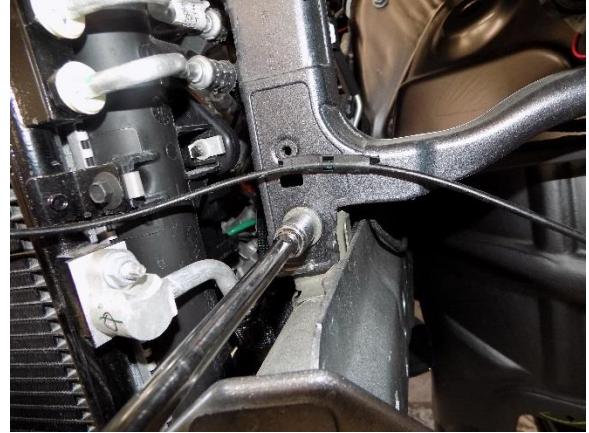
**94. Remove 13mm bolts from radiator support as shown and replace with supplied brackets and additional M6 x 20 bolts and washers. Leave loose for now. (Fig. 94 a, b, c)**



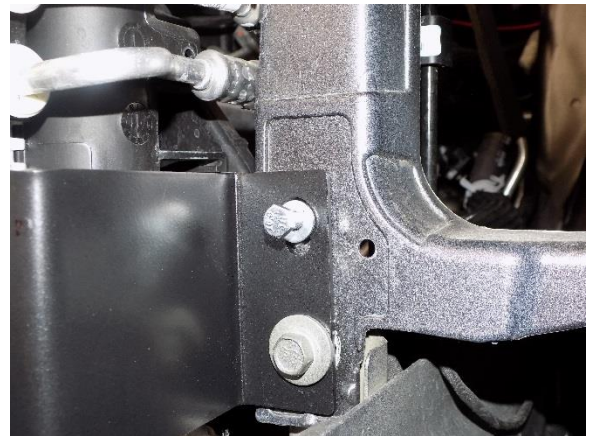
*Figure 93a: Remove condenser bracket*



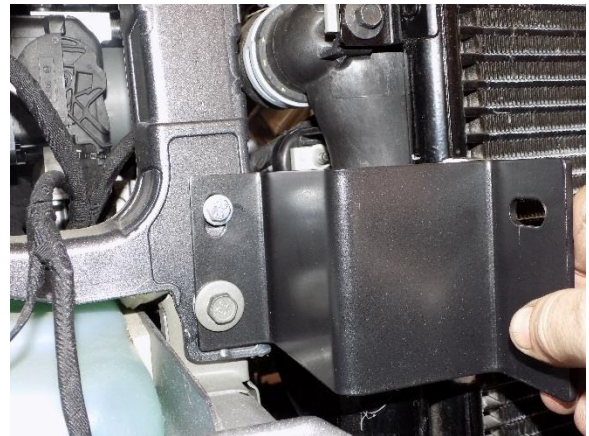
*Figure 93b: Pull push pin out*



*Figure 94a: Remove 13mm headed bolts from each side*



*Figure 94b: Bolt brackets to support with factory and M6 bolt and washer*



*Figure 94c: Repeat on pass side*



95. Carefully slide intercooler into place and bolt onto bracket using supplied 5/16" x 3/4" long hex bolts and washers. Make sure to position intercooler to not hit condenser and tighten all mounting bolts. If upgraded "RACE" intercooler is optioned, use longer supplied bolts and spacers on each end. Mount ambient air temp sensor to intercooler mount at this time. (Fig. 95 a, b, c)

**\*\*FOR 300C, CHARGER AND MAGNUM VEHICLES ONLY, USE SMALLER INTERCOOLER BRACKET ON DRIVER SIDE. INSTALL LONGER BOLT THROUGH BUMPER, THEN SLIDE BRACKET OVER BOLT AND SECURE WITH NUT AND WASHER. BOLT THE OTHER SIDE TO INTERCOOLER\*\***



Figure 95: Slide standard IC into place

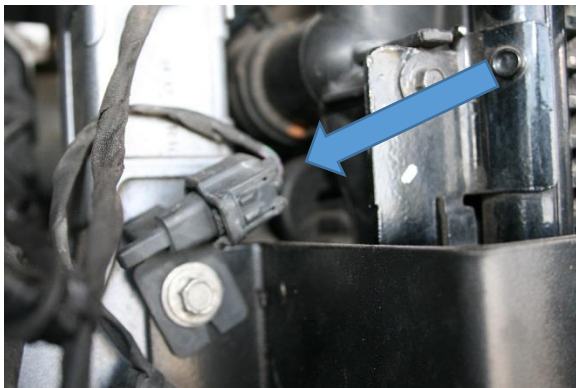


Figure 95b: Re-mount ambient air temp sensor

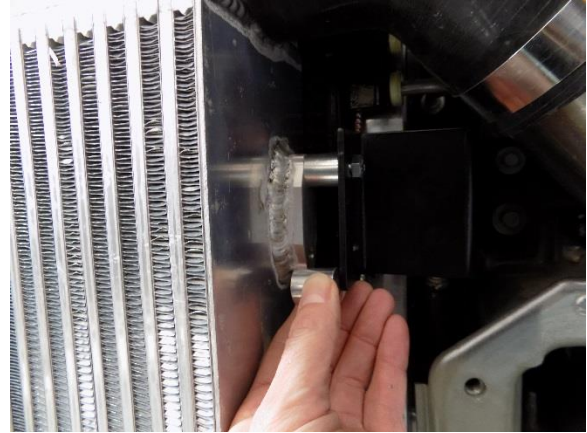
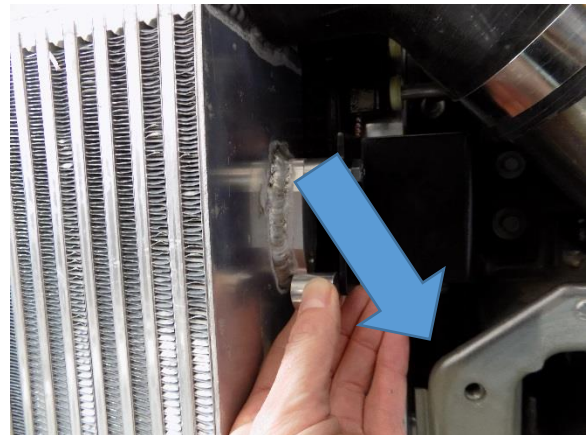


Figure 95c: Insert spacers and longer bolt for RACE IC



**\*\*300c and Magnum driver intercooler bracket will bolt through long M8 bolt installed here. It allows room for the IC hose\*\***



96. On front fascia, remove inlet scoops if equipped.

97. Remove harness push pin. (Fig. 97)

98. Remove plastic pop rivet. (Fig. 98)



*Figure 97: Remove harness push pin*



*Figure 98: Remove plastic pop rivet*



**99. Unclip scoop and remove. (Fig. 99a)**

**100. Repeat on driver side.**

**101. Cut lower RH and LH tabs as shown.  
(Fig. 101 a, b)**



*Figure 99a: Unclip scoop*



*Figure 99b:*



*Figure 101a: Cut tab off each side*



*Figure 101b: Cut another tab off*



**102. Locate both 45mm Turbosmart Hypergates. Install fittings as shown using sealant. For Passenger side wastegate, install plugs as shown. One of the top ports on the hat will be left open unless a boost controller is used (these parts are in the WG box). If boost controller is used, the open top port will be used. (Fig. 102 a, b)**

**THE MOST IMPORTANT PART OF THIS INSTALLATION IS THAT THE LOWER PART OF THE WASTEGATE HAT HAS ONE PLUG AND ONE BARB FITTING. THE TOP OF THE WASTEGASTE IS ONLY USED WHEN A BOOST CONTROLLER IS OPTIONED. FAILURE TO INSTALL THIS CORRECTLY CAN LEAD TO ENGINE DAMAGE. IF YOU HAVE ANY QUESTIONS, CALL HELLION TECH SUPPORT AT 505-873-4670**

**103. Install WG with supplied clamp as shown. (Fig. 103)**



*Figure 102a: One lower port with barb fitting, one lower port with plug*



*Figure 102b: Install plug in upper port, lower*



*Figure 103: Install wastegate*



**104. For driver side, remove the lower plug and move it to the other port on the bottom as shown. Install top fitting as shown. Install WG.**



Remove plug



Install on other lower port



Install barb fitting in lower port where plug was

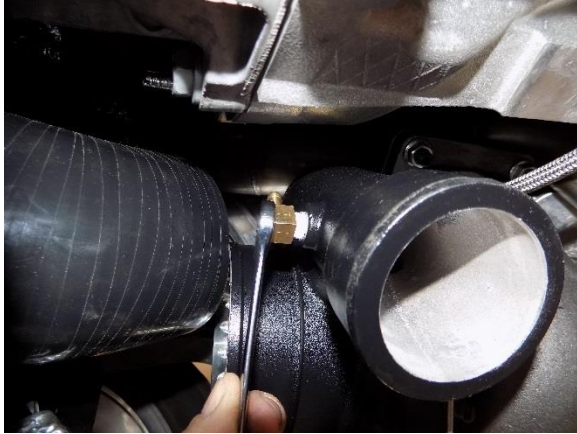


Install other plug in top port



**105. Install brass 90 degree fitting into turbo discharge with sealant. (Fig. 105)**

**106. Connect the barb fitting on the compressor housings to the only barbs on the lower ports of each WG with the supplied vacuum line. Secure line with supplied small zip ties. (Fig. 106 a, b, c)**



*Figure 105: Install brass 90 fitting with sealant and tighten*



*Figure 106: Connect wg to turbo fitting with supplied line*



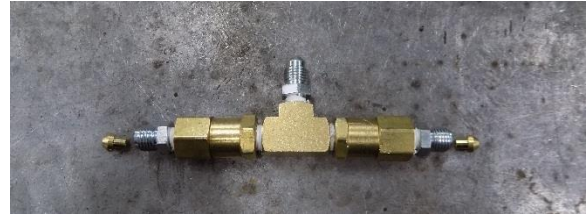
*Figure 106b: Secure with zip tie*



*Figure 106c: Secure line*

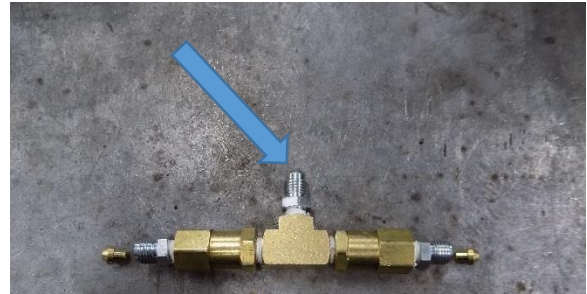


**107. From underneath, using supplied parts (TEE, (2) check valves, (3) fittings and (2) oil jets--- assemble oil feed TEE as shown. Use sealant on all connections. (Fig. 107)**



*Figure 107: Assemble TEE as shown with sealant*

**108. Screw oil feed line from previous installation to TEE inlet. (Fig. 108)**



*Figure 108: TEE inlet shown*

**109. Next, attach two 9" long oil feed lines from each side to the top of each turbo. Make sure to include the restrictors that are supplied between fitting and line (they are loose and can fall out until line is tightened). (Fig. 109)**



*Figure 109: Connect 9" line from each turbo to TEE*





**110. Assemble driver and pass. drain flanges as shown with sealant and supplied M8 hex bolts. Bolt may have to be inserted before screwing on brass block. Do not screw brass fitting past the sealing surface –oil drain flanges and hardware are in separate packet from brass block and 3/8” steel fitting (Socket head bolts for Precision/Turbonetics). (Fig. 110)**



*Figure 110: Assemble drain flange and fitting*

**111. Install drain flanges onto turbo with supplied gasket as shown. (Fig. 111)**



*Figure 111: Tighten bolts*

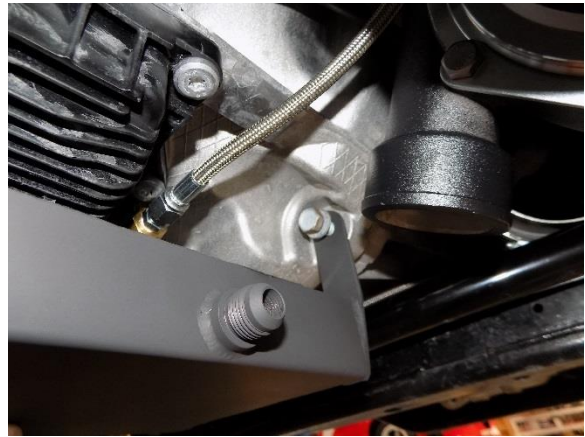
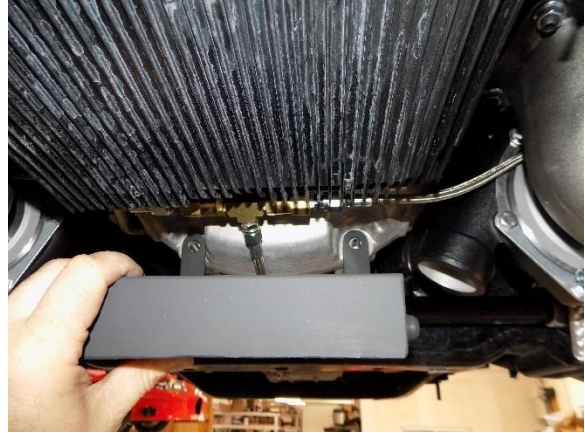
**112. Install supplied -8M to 3/8 M fitting into brass 90 with sealant. (Fig. 112)**



*Figure 112: Install fitting with sealant*

**113. Assemble oil drain lines. First locate -8 line in oil system bag and cut two lines, one 4.25" long for pass. and 4.75" for driver. Push -8 straight fittings into each hose end. Turbo center sections may have to be rotated to assist installation. (Fig. 113 a, b)**

**114. For automatic cars, bolt tank to bellhousing and secure using factory bolts. (Fig. 114)**



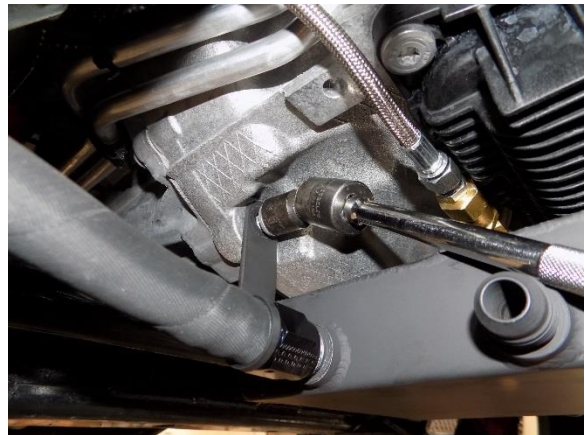
*Figure 114: Bolt tank to bellhousing*



*Figure 113a: Connect line to pass turbo*



*Figure 113b: Connect line to driver turbo*



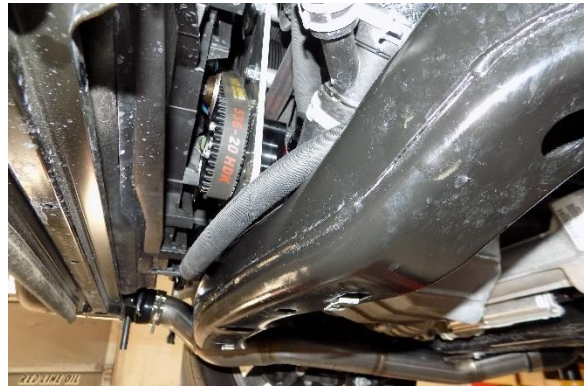


**115. Assemble 47" oil line from oil pump to tank with (2) 90 degree push lock fittings, one on each end.**

**116. Route line from pump outlet on Pass. side and run around to drain tank. Make sure lines do not touch any hot or moving parts. (Fig. 116 a, b)**



*Figure 115: Connect line to pass. side of pump*



*Figure 116a: Route line to tank*



*Figure 116b: Connect to tank*



**117. Remove factory breather line from rear of intake. (Fig. 117)**

**118. Locate supplied 52" 5/8 breather hose and run from intake to 90 degree fitting on pass. air cleaner. Clamp with supplied hose and clamp and zip tie line out of the way. (Fig. 118 a, b, c)**

**IF A CATCH CAN IS DESIRED, THIS LINE WILL CONNECT TO THE CATCH CAN, THEN THE VENT FROM THE CATCH CAN WILL CONNECT TO THE AIR CLEANER (CATCH CAN WILL BE IN BETWEEN INTAKE AND AIR CLEANER)**



*Figure 117: Remove breather hose*



*Figure 118a: Connect breather hose to intake and clamp*



*Figure 118b: Route line to air cleaner and connect*



*Figure 118c: Secure line with zip ties*

**119. Install supplied 2.5" to 2.25" 90 degree hose on pass. turbo. (Fig. 119)**

**120. Bolt IC pipe to frame using supplied 3/8" x 1.5" long hex bolt and welded nut extension (Use a dab of blue Loctite in nut before installation). (Fig. 120)**

**121. Repeat on driver side. (Fig. 121)**



*Figure 120: Bolt pass. IC pipe to frame with bolt and welded extension nut*



*Figure 121: Repeat on driver side*



*Figure 119: Connect 2.25" to 2.5" hose to turbo outlet*



## STANDARD INTERCOOLER

122. Install 45 degree coupler on intercooler facing down as shown. Install 2.5" T bolt clamps as well. (Fig. 122 a, b)
123. Install straight 2.25" to 2.5" hose to end of pass. IC 1 (standard intercooler) (Fig. 123)
124. Connect IC 2 to IC 1 and finally connect IC 2 to 45 degree coupler.



Figure 122a: Install 45 degree hose and clamp



Figure 122b: Install second clamp




Figure 123: Install 2.25" to 2.5" coupler



**125.** For the race intercooler, the IC2 pipes will not be used, and the long leg 2.25" 90 degree hoses will connect the pipes to the intercooler inlets on the bottom. On RACE intercooler option the front nose will have to be trimmed in some applications. Chrysler made many changes during the Hemi production run, and some of the front grill/plastic changed. For the use of such a large and efficient intercooler, some trimming will be required.

**FOLLOW THIS PAGE FOR 300C,  
Charger and Magnum INTERCOOLER  
ONLY! Skip to 125 for Challenger.**

---Install 2.5" 90 degree hose to 90 degree intercooler outlet and route under headlight---  
Hose will squeeze between headlight and pinch weld, trim hose to fit. Install using supplied clamps. (Fig. A)

---If the 3" intercooler discharge was optioned (High power goal), then trimming the pinch weld will be needed to open up the flow. (Fig. )

---Install either 2.5" or 3" IC1 into coupler with clamp.

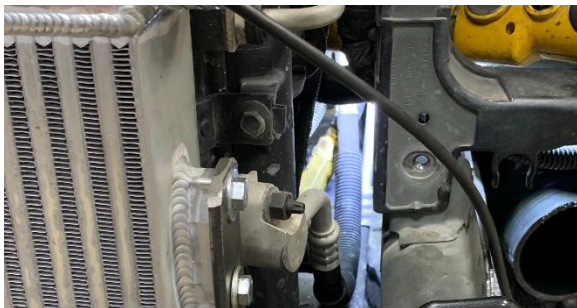
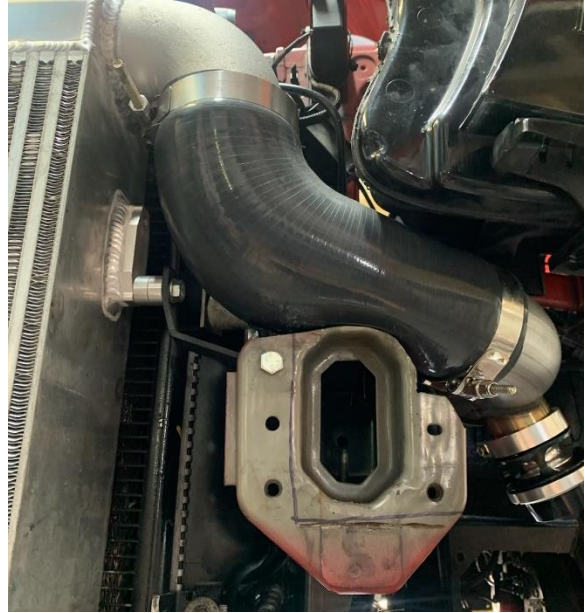


Figure A: Install 90 degree hose (trim to fit)



Figure B: Trim pinch weld for 3 inch hose

**126. Position and secure all clamps. Repeat on driver side. (Fig. 125)**

**127. Install 3" straight coupler onto cast 45 degree elbow welded on IC outlet (Challenger, Charger). (Fig. 126)**

**128. Install IC outlet 1 with clamp, leaving loose for now. (Fig. 127)**



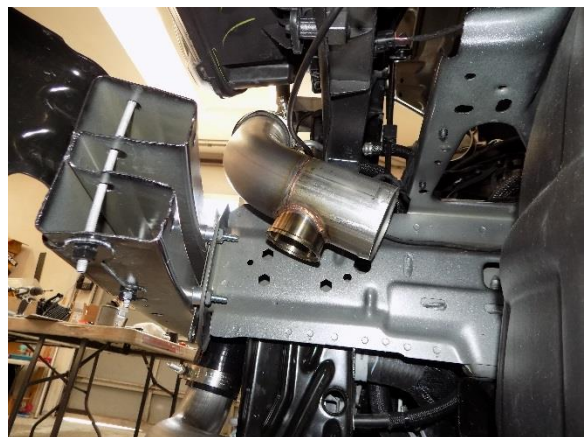
*Figure 126: Install straight coupler on IC outlet*



*Figure 127: Install IC 1 into coupler*



*Figure 125: Repeat IC piping on driver side*





**129. Install 3" 90 hose on IC outlet 1 with clamps positioned. (Fig. 128)**

**130. Install 3" to 3.5" adapter on Throttle body.**

**131. Insert IC outlet 2 through airbox**



*Figure 128: Install 3" 90 degree hose with clamps*



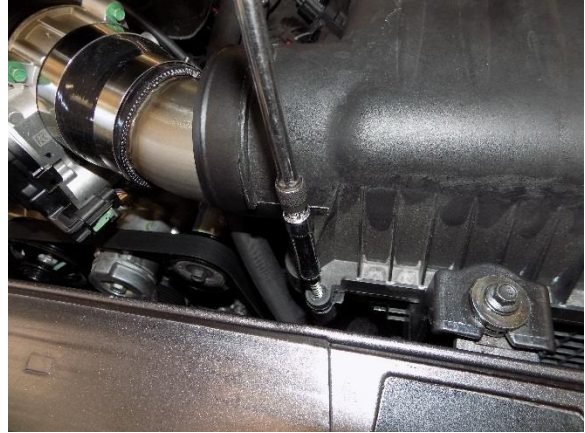
**132. Insert and turn air temp sensor in intake pipe.**

**133. Install airbox/intake pipe into car connecting to two previously installed hoses. (Fig. 132 a, b)**

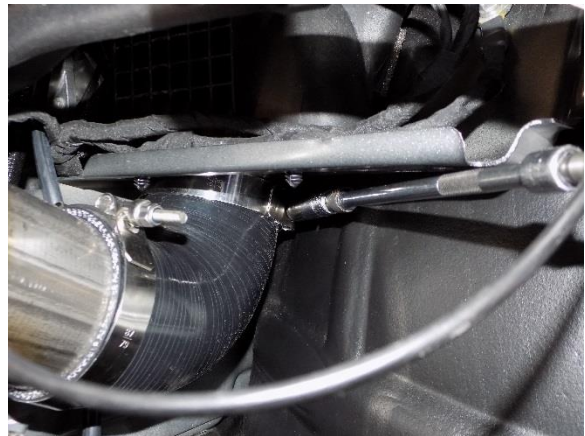
**134. Clamp hoses on top and bottom. (Fig. 133 a, b)**



*Figure 132a: Install airbox and pipe*



*Figure 132b: Bolt air box together*



*Figure 133a: Clamp hose on bottom*



*Figure 133b: Clamp on top*



**135. Plug in air temp sensor. (Fig. 134)**

**136. Slice factory hose to install over new clamps to keep the “Sleeper” in full effect! (Fig. a, b, c)**

**137. Install factory black hose clamps in factory location, leaving loose but locked into rubber holder. (Fig. 136)**



*Figure 134: Plug in air temp sensor*



*Figure 135c: Install over pipe*



*Figure 135a: Mark underside of hose for cutting*



*Figure 135b: Cut hose carefully*



*Figure 136: Install factory clamp*



**138. Install supplied Race Port BOV to IC outlet 1 with supplied clamp. (Fig. 137)**

**139. Take supplied vacuum line and route line from BOV to intake.**

**140. Using supplied  $\frac{1}{2}$  to  $\frac{1}{4}$  barb, connect BOV to factory 90 rubber hose with supplied vacuum line. (Fig. 139)**



*Figure 137: Install valve and connect vacuum line*

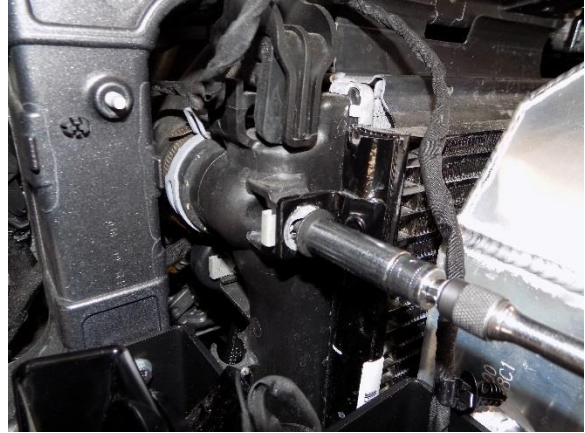


*Figure 139: Connect BOV line with supplied adapter here*

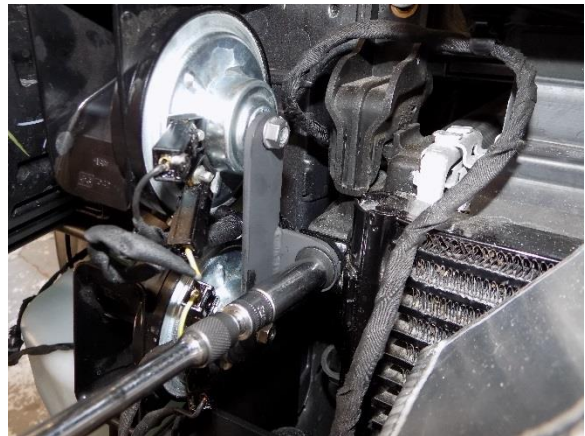
**141. Bolt horn to supplied bracket.**

**142. Remove upper condenser bolt on pass. side. (Fig. 141)**

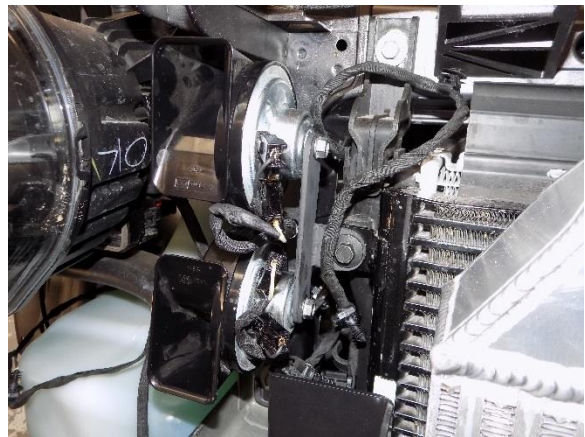
**143. Re-install horn assembly as shown. (Fig. 142 a, b)**



*Figure 141: Take out bolt and install horn bracket*



*Figure 142a: Bolt on horn assembly*



*Figure 142b: Plug in horn*

**144. Remove both valve cover shields.**

**145. Locate new supplied MAP sensor in kit.**

**146. On back of intake, unplug and remove factory MAP sensor (will not be re-used). (Fig. 145 a, b)**

**147. PLUG NEW SENSOR IN TO HARNESS, THEN RE-INSTALL IN INTAKE (sensor is tall and cannot be plugged in after installed). (Fig. 146)**



*Figure 145a: Unplug factory MAP sensor*



*Figure 145b: Remove factory MAP sensor*



*Figure 146: Re-install new map sensor*



**148. Unplug all (8) coils. (Fig. 147)**

**149. Unbolt the coils from the valve covers. Remove coils. (Fig. 148 a, b)**

**150. Remove all the spark plugs (16) and gap down to .015. Re-install.**



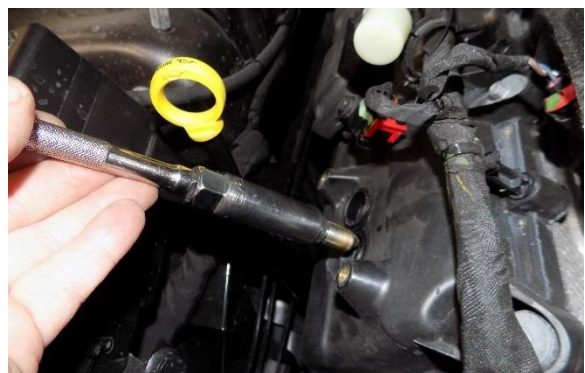
*Figure 147: Unplug the coils carefully*



*Figure 148a: Unbolt the coils from the valve cover*



*Figure 148b: Remove the coils*



*Figure 149: Gap spark plugs down*

**151. Remove sound pad from each side above injectors. (Fig. 150 a, b)**

**152. Carefully unclip and remove fuel line. Install supplied 3/8 vacuum cap to keep fuel in the rail to not make a mess. (Fig. 151)**



*Figure 150a: Remove sound pad from driver side*



*Figure 150b: Remove sound pad from pass. side*



*Figure 151: Unclip fuel line and cap for rail removal*

**153. Unclip all injectors by carefully popping up red locking clip. Next, squeeze connector and disconnect. (Fig. 152)**

**154. Unbolt fuel rails. Remove fuel rail and screws. (Fig. 153)**

**155. Remove fuel rails from car. (Fig. 154)**



*Figure 152: Lift red clip and remove plug from injector*



*Figure 153: Unbolt fuel rails*



*Figure 154: Remove fuel rails and injectors*



**156. On bench, swap the injectors with larger units.**

**157. Remove metal clip before pulling injectors out. (Fig. 156)**

**158. Install new injectors. (Fig. 157)**



*Figure 156: Remove metal clip*



*Figure 157: Install new injectors*



**159. Re-install fuel rail and screw back down. (Fig. 158)**

**160. Plug each connector back in. (Fig. 159)**

**161. Re-connect fuel line. (Fig. 160)**

**162. Re-install sound pads. (Fig. 161)**



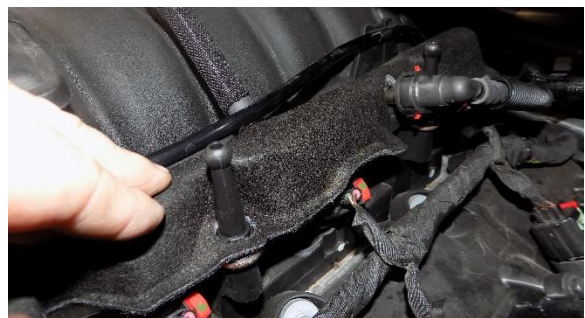
*Figure 158: Re-install fuel rails with new injectors*



*Figure 159: Plug each injector back in*



*Figure 160: Re-connect fuel line*



*Figure 161: Re-install sound pads on each side*

**163. At this time, install lower temperature thermostat. (Fig. 162)**

**164. Re-connect the upper radiator hose if not already done and re-install coolant tank. (Fig. 163)**

**165. Bolt tank to body. Connect lower and upper hoses. (Fig. 164 a, b)**

**166. Re-fill with previously drained coolant.**



*Figure 163: Re-install coolant tank*



*Figure 164a: Bolt tank back in stock location*



*Figure 162: Install lower temp thermostat*



*Figure 164b: Connect hoses*





**167. Re-install front end, secure inner fender lines with supplied new plastic pop rivets. (Fig. 166)**

**168. Mark two sections of lower splash guard and cut if needed to accommodate lower intercooler pipes as shown.**



*Figure 166: Re-install front end with new plastic rivets*



*Figure 167: Final installation*

**169. If vehicle is an 18+, a smart cable will need to be installed behind the dash.**

**170. Remove dash bezel by carefully prying out on the edge of the bezel as shown with tool. (Fig. 169 a, b)**

**171. Remove touch screen by removing the (4) ¼" screws and gently pull out to access security module. (Fig. 170 a, b)**



*Figure 169a: Carefully pry bezel forward with tool*



*Figure 169b: Pull bezel forward*



*Figure 170a: Remove touch screen*



*Figure 170b: Security module*



**172. Unplug pink plug as shown to gain access by moving the touch screen to the side. (Fig. 171 a, b)**

**173. Remove (3) ¼" screws and remove security module. Unplug larger connector on bottom and plug in smart cable jumper harness. (Fig. 172 a, b)**



*Figure 171a: Unplug wire with pink plug to move screen aside*



*Figure 171b: Move screen aside carefully*



*Figure 172a: Remove (3) screws to remove module*



*Figure 172b: Unplug module*



**174. Plug factory harness into jumper harness and re-install module with (3) screws and touch screen with (4) screws. Remember to plug pink plug back in. (Fig 173 a, b)**

**175. Snap dash bezel back into place. (Fig. 174)**



*Figure 173b: Re-install module*



*Figure 173a: Plug factory harness into jumper harness*



*Figure 173b: Re-install module*



*Figure 174: Re-install screen making sure to plug pink plug back in. Snap bezel in place.*



**176. Secure all loose connections and check all clamps etc.**

**177. Install JMS plug and play fuel pump voltage booster at this time.**

**178. Re-connect battery.**

**179. Tuning will be needed, use flash tool to load new file from tuning provider**

**180. The base kit is designed to make 5 psi. If that number is exceeded, engine damage can occur without proper upgrades----CONTACT HELLION WITH ANY QUESTIONS.**

**181. It is recommended to go to a dyno facility and ensure the tune, boost, and fueling is correct. While a dyno is not always needed, we like to use them as a tool to guarantee perfect operation.**



