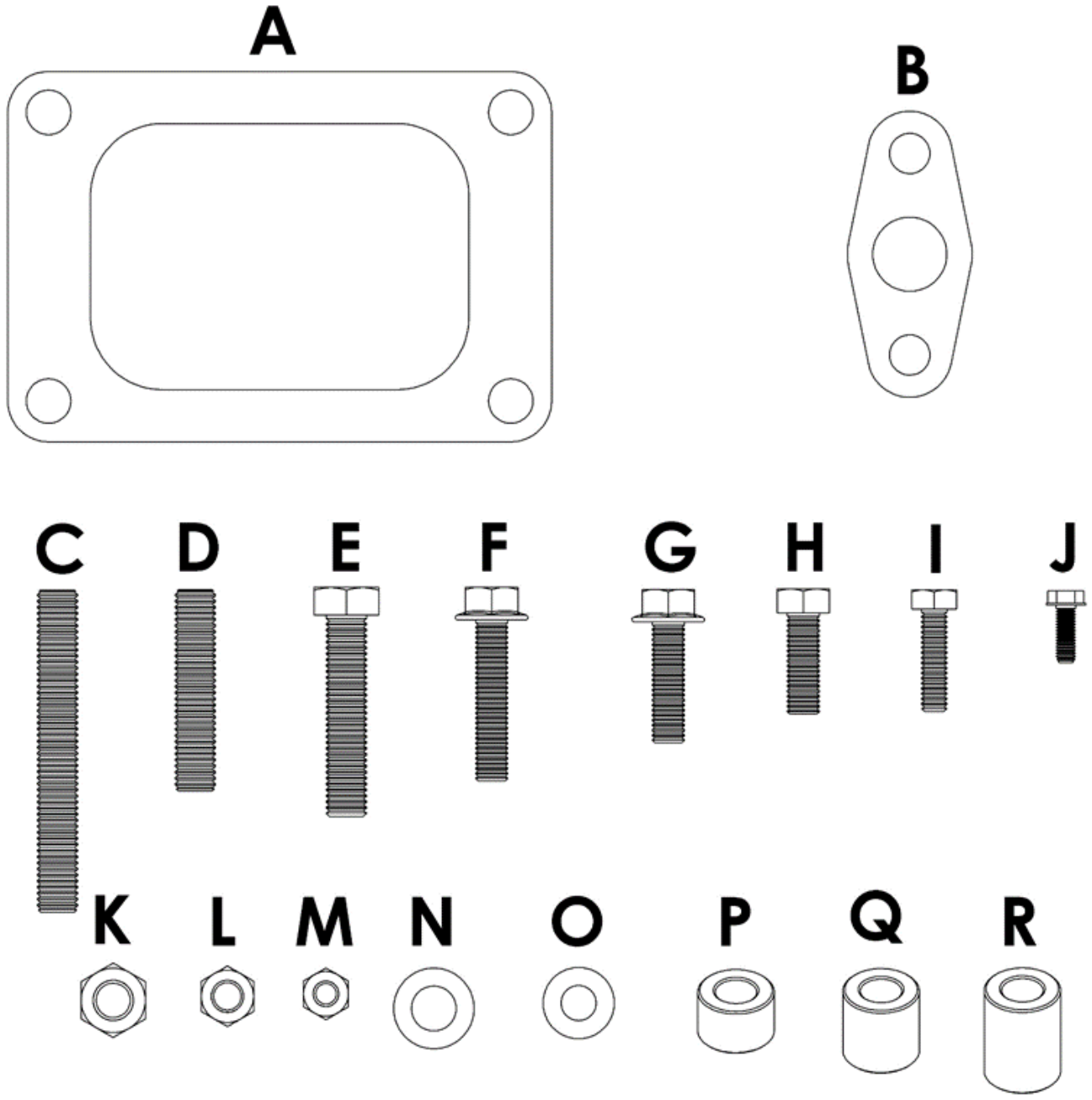
Stocker Compound Kit Instructions
2007.5-2009 Dodge Cummins 6.7L

Very important:

Prior to installation, blow out all oil lines and air tubes to make sure debris is not inside any of the lines or tubes.

6.7L Cummins Stocker Twin Gaskets and Hardware



Images Are Not to Scale

Hardware Letter	Hardware Specification	Quantities	
		2007.5 – 2009 Cummins	2010 – 2012 Cummins
A	T6 Non-Divided Gasket	1	1
B	Oil Drain Gasket	1	1
C	M10-1.5x80mm Stud	1	1
D	M10-1.5x50mm Stud	2	2
E	M10-1.5x50mm Hex Bolt	4	4
F	M8-1.25x40mm Flange Head Bolt	2	0
G	M8-1.25x30mm Flange Head Bolt	1	0
H	M8-1.25x25mm Hex Bolt	4	4
I	¼”-20 x 1” Hex Bolt	0	2
J	#10 x ½” Self-Tapping Screw	0	1
K	M10-1.5 Nut	6	6
L	M8-1.25 Nut	2	2
M	¼”-20 Nut	0	2
N	M10 Narrow Washer	8	8
O	M8 Narrow Washer	0	2
P	½” Spacer	1	1
Q	¾” Spacer	1	2
R	1” Spacer	3	1

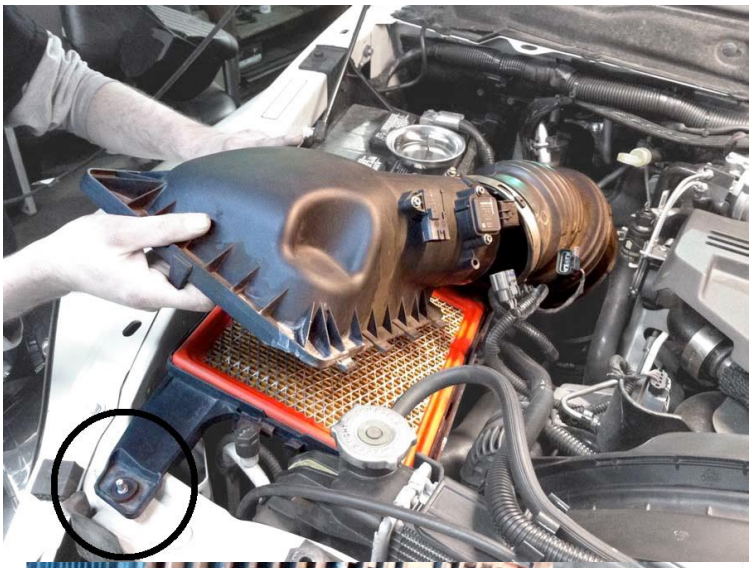
Please read all instructions before installation.

Note: This turbocharger system requires the installation of head studs.

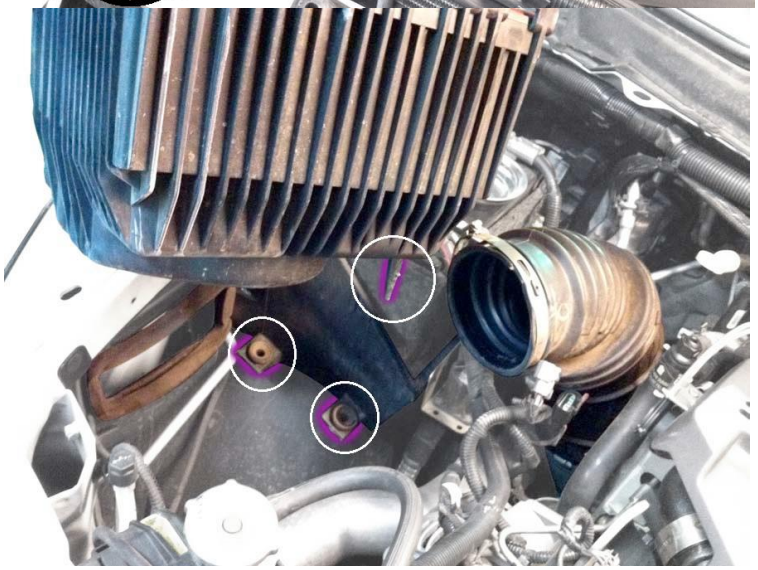
1.Make sure your vehicle is parked on level ground and parking brake is applied.

2.Disconnect the negative battery terminals.

3.Loosen the hose clamp on the intake air box cover.

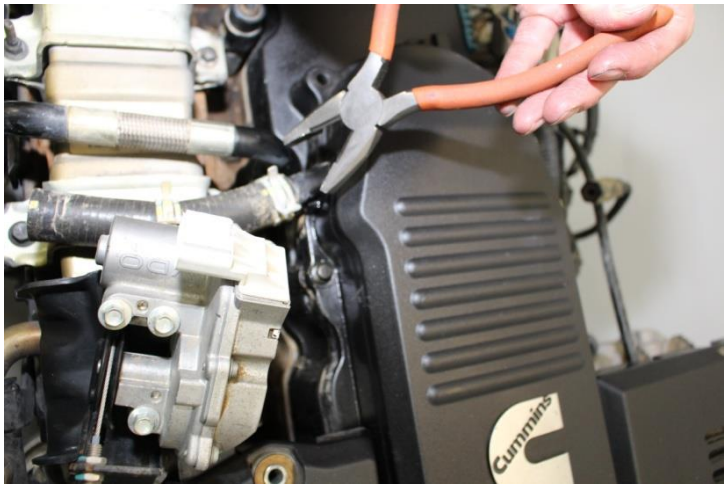


4.Unsnap the 2 retaining clips of the air box cover. Take the cover off by sliding it out toward the passenger side and set it aside. The air box cover will be reinstalled later.



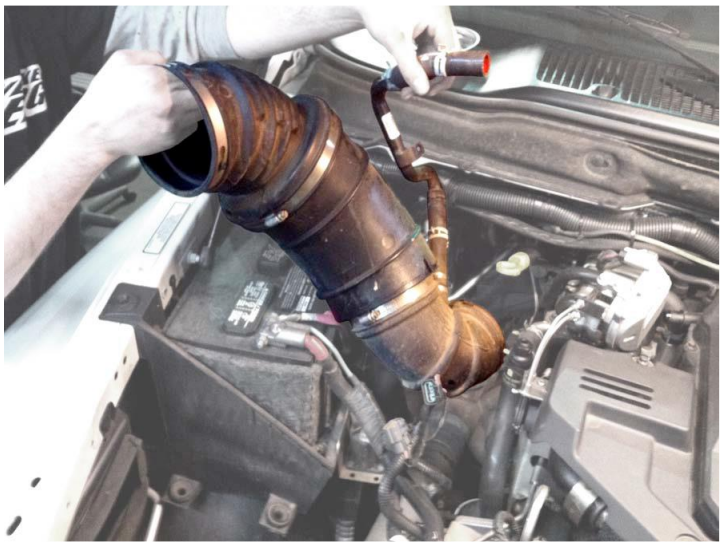
5.Unbolt the front of the intake air box. Take out the intake air box by pulling it up until the two tapered pins come out from the grommets. The intake air box will be reinstalled later.

6.Remove the spring clamp off the barb on the valve cover to disconnect the crankcase vent tube. Keep the spring clamp to reuse it later.



7.Take out the bolt holding the crankcase breather tube.

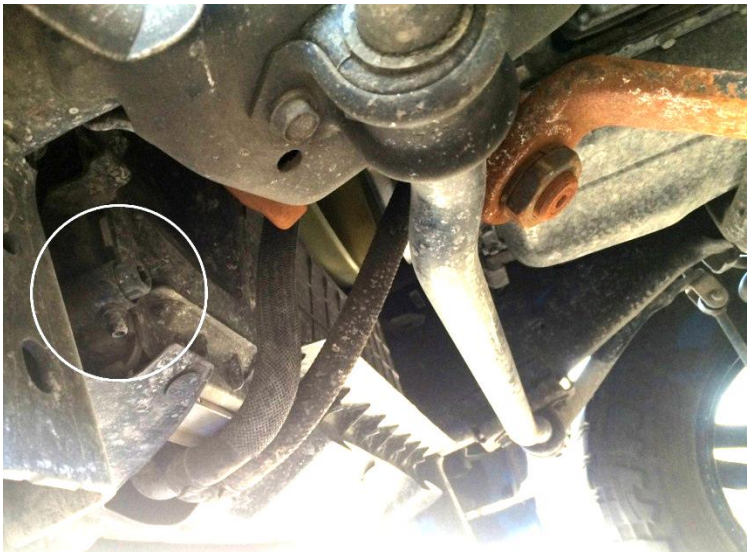
8.Loosen the hose clamp on the turbo where the intake tube is connected. Remove the intake tube along with crankcase breather tube.



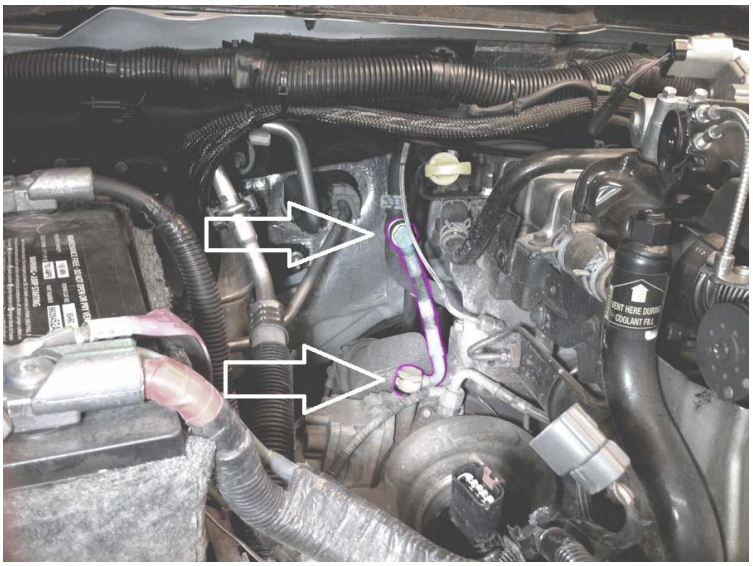
9.Remove the bolt and plastic clamp to remove the passenger side battery. This will allow more space for much easier installation. The battery will be reinstalled later.

10.Drain the coolant from the radiator. Locate the petcock on the bottom of the radiator on the driver side. Turn petcock counterclockwise little more than a full turn. Do not remove it completely. It is difficult to install it again.

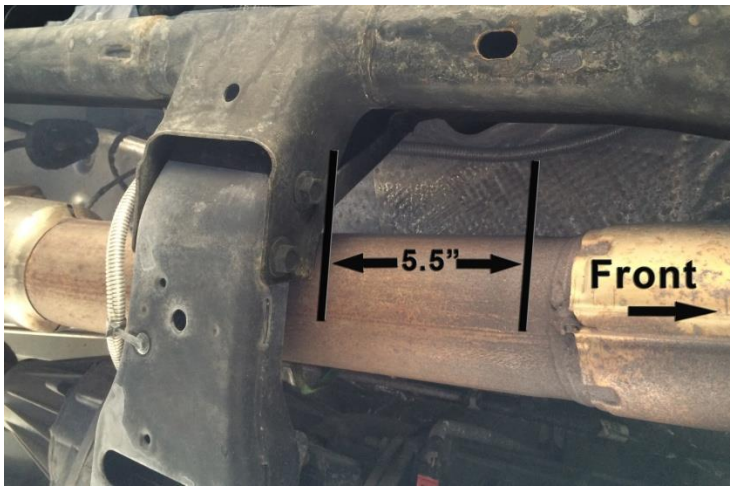
11.Remove the passenger side inner fender for easier access. There are 8 hex head screws and a push pin holding the inner fender in place.



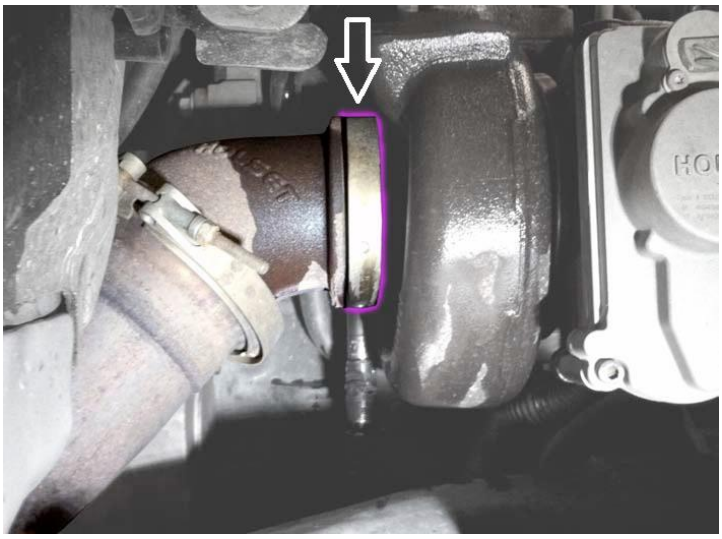
12.Remove the coolant supply line to the turbo. Remove the upper banjo bolt first. Have a rag below the line to soak up some coolant that drain out. Keep both banjo bolt and washers. They will be reused later.



13.Cut the downpipe about 5.5" from the cross member shown.



14.Remove the downpipe by disconnecting the v-band clamp. The clamp will be reused later. There is a mount for the downpipe attached to bell housing of the transmission. Instead of fighting with the grommet, just remove the bolts holding the bracket in place and replace the bolts without the bracket.



15.**(2007.5-2009 Trucks only)** Remove the two bolts holding the AC receiver dryer to the metal bracket. Carefully bend the lines to make enough space for two **R** spacers provided in your kit. Use the two **F** bolts provided to install the spacers between the receiver dryer and the mounting bracket. Bend the front receiver dryer mount toward the receiver dryer to avoid contact with the downpipe.

2007.5-2012 Vehicles are equipped with two different EGR systems.

If equipped with the early style EGR system, continue at Step 16.
If equipped with the late style EGR system, skip to Step 19.

Early EGR System (2007.5-2008)
Solid Tube

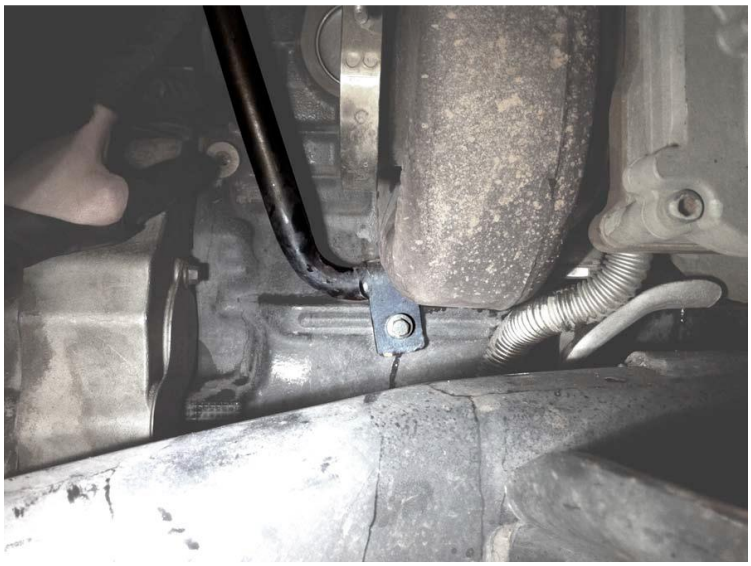
Late EGR System (2009-2012)
With Braided Section

16.**(Early EGR systems Only)** Remove the solid coolant supply line running from the front of the engine, below the factory turbo and to the firewall. Steps are shown below.

(Early EGR systems Only) Using a pair of pliers, squeeze the clamp and slide the clamp above the barb. Remove the hose from the hard line.

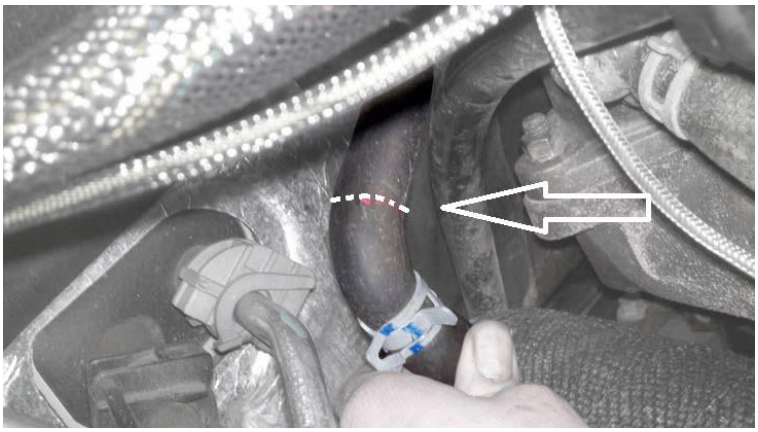
(Early EGR systems Only) Remove the mounting tab by removing the lower nut on the #6 exhaust manifold stud

(Early EGR systems Only) Remove the bolt securing the lower portion of the coolant line. It is located just below the turbocharger.



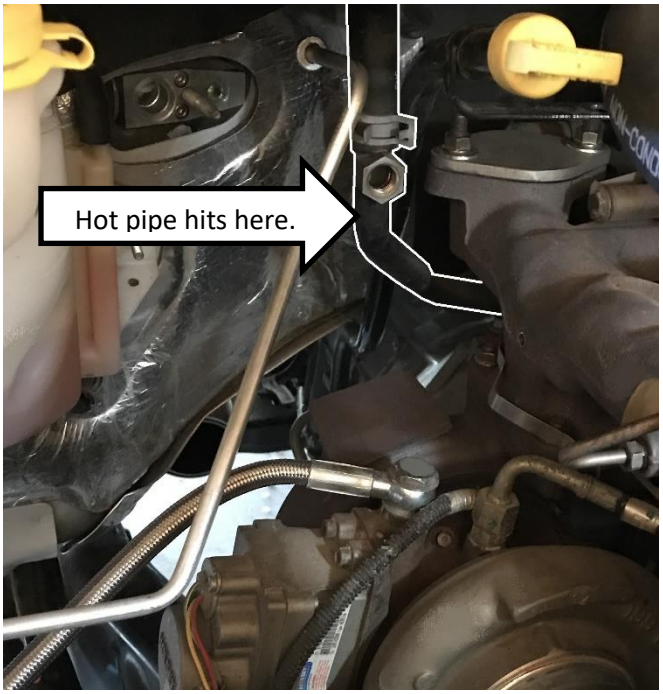
(Early EGR systems Only) The front portion of the coolant line is located above the oil filter. Remove the clamp on hose and the bolt on the engine block.

17.**(Early EGR systems Only)** Cut the coolant line coming off the firewall, just above the bend. Keep the clamp.



18.**(Early EGR systems Only)** Install the new coolant transfer line. Use the provided **G** bolt and the **P** spacer between the mounting tab and the mounting hole on the EGR Bracket. Reuse the factory clamps to connect the hoses. When complete, skip to Step 20.

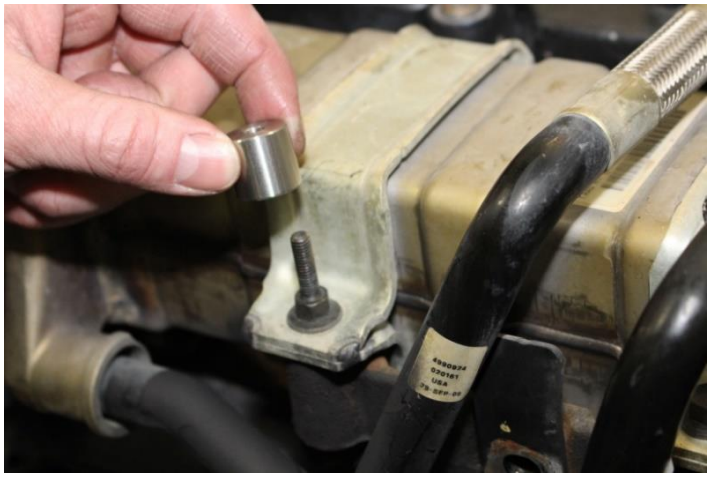
19.**(Late EGR systems Only)** For trucks equipped with the late EGR system, remove the factory bolt and spacer on the lower #6 exhaust manifold. Replace it with the **C** stud, two **K** hex nuts and **R** spacer included in the kit.



Factory bolt may bottom out in the hole and not tighten all the way. **After the R spacer is installed, bend the metal coolant line up toward the engine approximately ½ to 1 inch.**

Why is this step necessary? The metal coolant line attached to this bolt will hit the hot pipe if it is not moved in slightly.

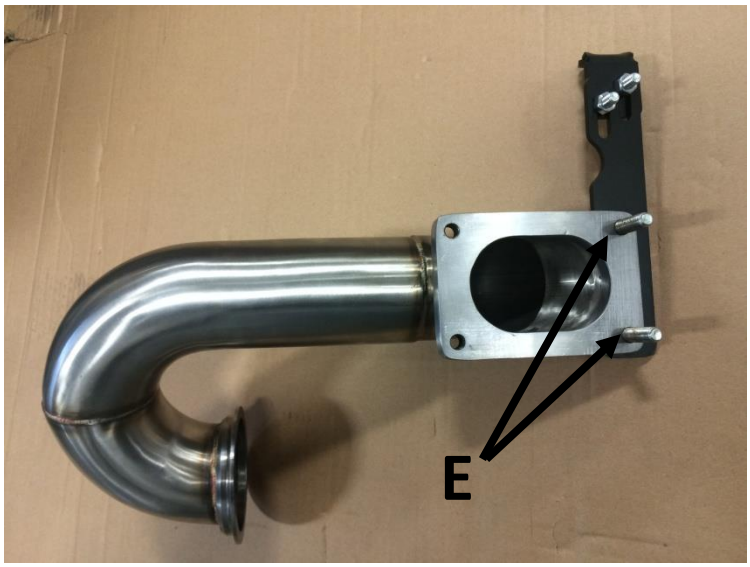
20.Install the new turbo coolant supply line to the turbo using one of the factory banjo bolts and washers. The other end of the line will be connected later.



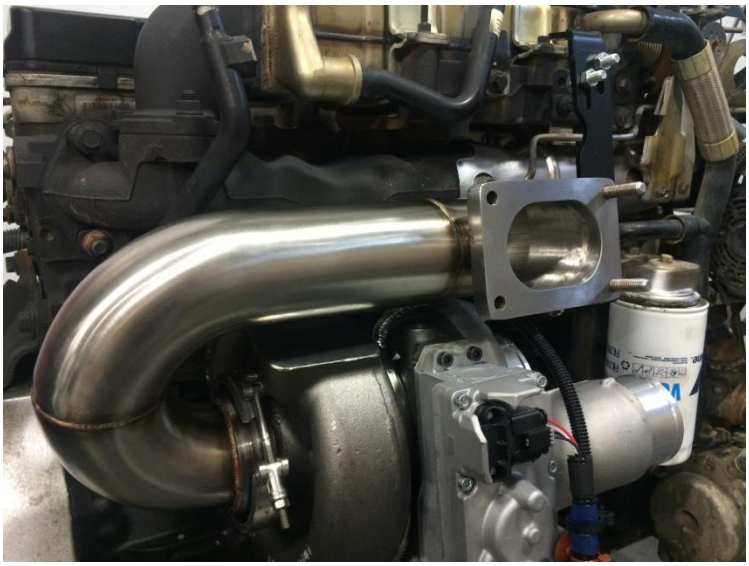
21.Install the dipstick spacer **Q** between the stud and mounting tab of the dipstick tube.

22.The hot pipe needs to be wrapped in the insulating heat wrap provided with the kit. Use the clamp to hold the wrap in place. **Notice the gap in the wrap left around the dent in the picture.** This dent is provided to clear the banjo bolt on the top of the stock turbo, the wrap cannot cover the dent or the pipe will not fit.

23.Attach the provided turbo support bracket onto the T6 turbo flange of the hot pipe using the two provided **E** hex bolts as shown.

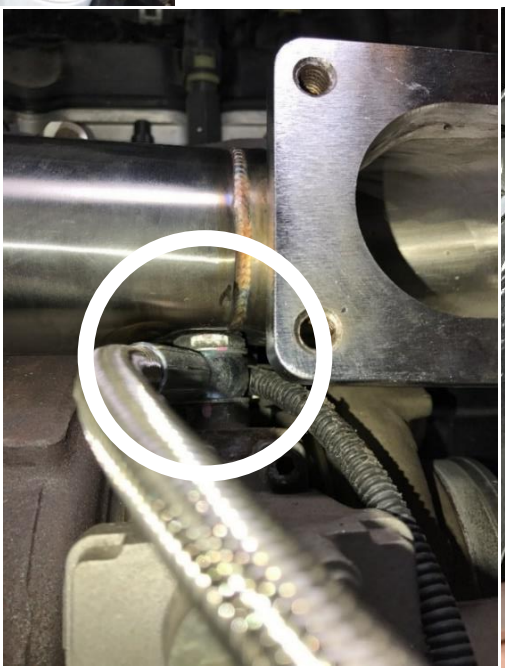


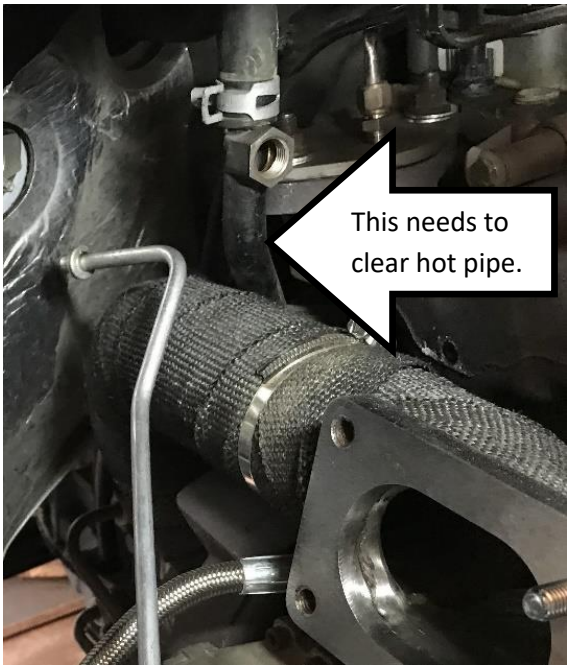
24.Install the wrapped hot pipe to the turbine outlet of the stock turbo using the factory clamp. Leave loose for adjustment.

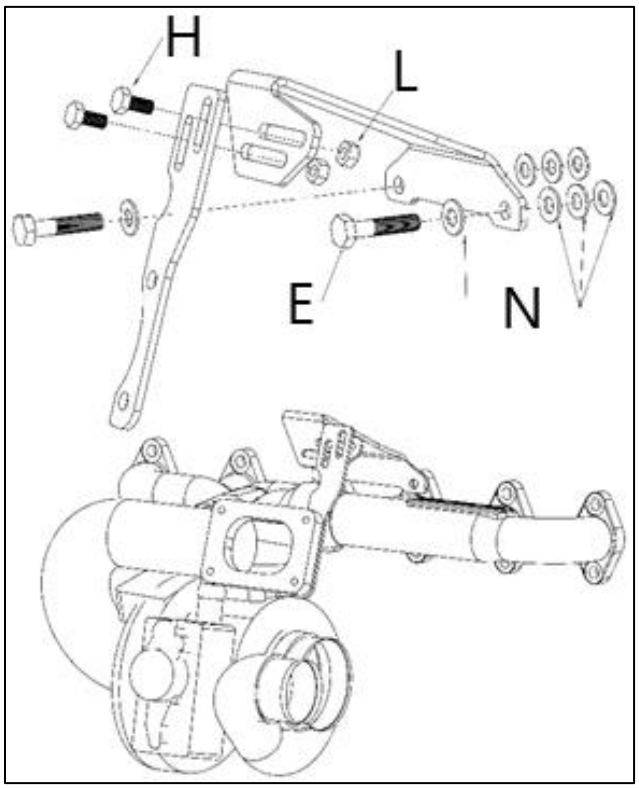


25.Install the turbo support bracket using the factory M8-1.25 x 20mm bolt as shown. Rotate the hot pipe as close to the engine block as the support bracket will allow. Tighten the two **H** bolts and **L** nuts on the bracket and tighten the clamp on to the turbo to secure the hot pipe in place.

One more fitment note for the hot pipe. If the hot pipe does not clear the banjo bolt from the factory turbo, the coolant transfer line near #6 exhaust manifold stud may need to be bent slightly so the hot pipe can rotate up higher. Bend the metal coolant line about a ½ inch toward the engine, just above the hot pipe. See the pictures below for more details.

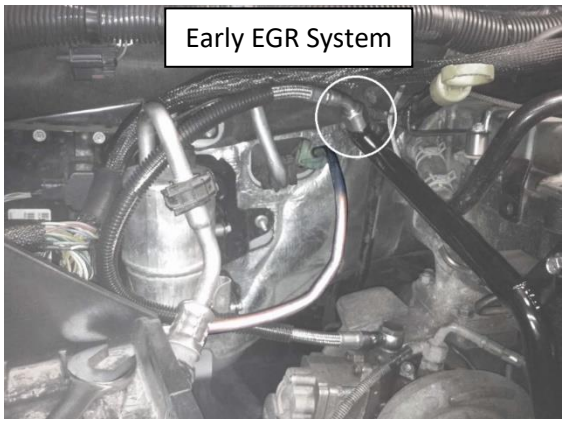


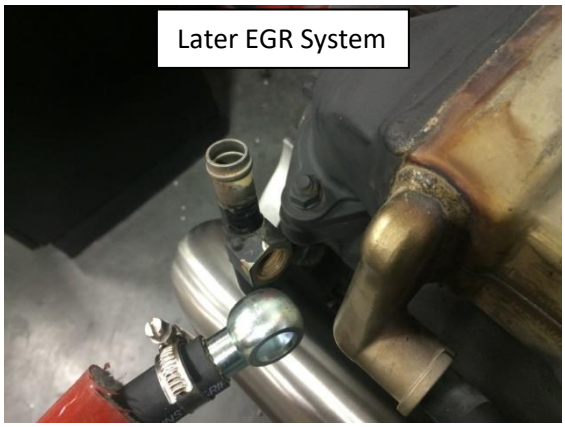




<u>If your EGR is deleted</u>: Install the EGR delete bracket before you do this step. Attach the bracket to the two upper center bolt holes on the manifold (cylinders 3 & 4) using the **E** bolts and **N** washers included with your kit. The turbo support bracket should be attached to the EGR bracket using two **H** bolts and **L** nuts.

26.Install the loose end of the turbo coolant supply line. For trucks with the early EGR system, it should be installed to the new coolant transfer line that was installed earlier. For trucks with the later EGR system, install the coolant supply line using the factory banjo bolt and washer (near #6 exhaust manifold stud).





27.Separate the turbine housing from the new turbocharger assembly by removing the v-band clamp securing the bearing housing to the turbine housing. Be careful not to damage the turbine wheel when separating them.

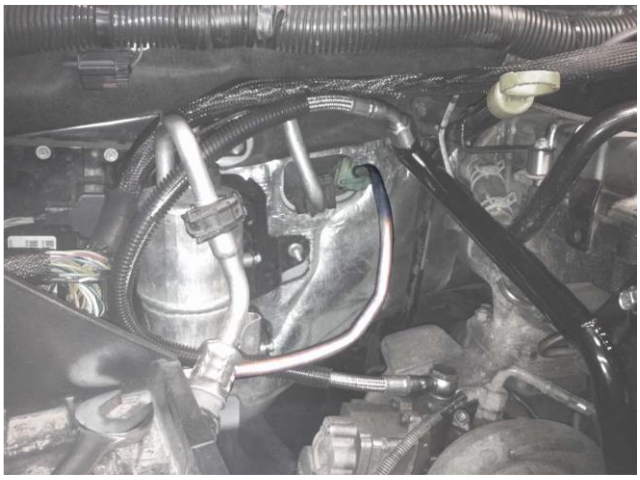
If your Truck model is 2010 – 2012: It is best to replace the coolant expansion tank before the turbine housing is installed. It can be done at anytime, but you will have more space to work if the turbine housing is not installed. Instructions for the coolant expansion tank can be found at the end of this document.

28.Slide the **A** gasket over the threaded **E** bolts on the hot pipe flange. Install the new turbine housing on the hot pipe using the two previously installed **E** bolts, two **D** studs, and lastly four **K** nuts. Hand tighten the hardware to secure in place. **Do not tighten with a wrench at this point.**

29.Install heat wrap on the upper downpipe. Use provided hose clamp to secure the wrap in place. Then install the upper downpipe to check the clearance of the AC lines around the downpipe and the turbine housing.

The large AC line running under the battery tray requires 3/4-inch distance between the plastic clamp and the turbine housing to prevent damage to the air conditioning system. Carefully bend the line if needed.

The smaller AC lines must be bent to run between the turbine housing and downpipe. The downpipe needs to pass between the firewall and the AC line. It may require removing and installing the turbine housing and downpipe several times to bend the AC lines.



<u>If you purchased the AC relocation lines, empty out the refrigerant and install the new line.</u>

30.When the AC lines are properly adjusted, reinstall the turbine housing on the hot pipe and torque the nuts to 32 ft-lbs.

31.Reinstall the upper portion of the new downpipe. Leave the clamp loose enough to allow for adjustment.

32.Remove the plug from the oil filter housing. Connect the oil supply line to the oil filter housing using the provided fitting. Leave the other end of the line unattached.

33.Locate the freeze plug underneath the oil filter. Oil filter could be removed to improve accessibility to the freeze plug. Gently tap on the outer rim of the freeze plug using a flat blade screwdriver and a hammer to rotate it in the block. Once rotated, use needle nose pliers to retrieve the freeze plug.

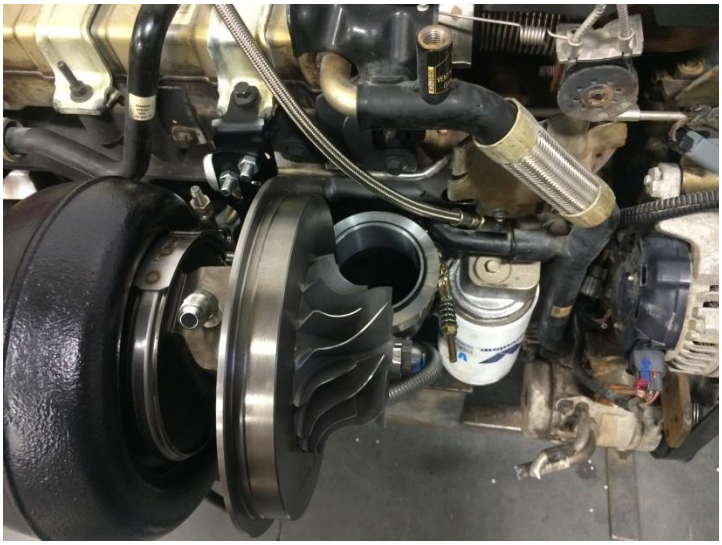
***NOTE*: Be sure to clean around the freeze plug and remove all debris from the cup of the freeze plug to make sure nothing drops into the oil pan.**

34.Install the silicone charge elbow on the factory compressor housing using the clamp provided. Leave the clamp loose. Rotate the hose until it nearly touches the coolant transfer line. Make sure the oil supply line runs above the silicone charge elbow. Tighten the clamp on the other end of the elbow to secure the steel flange.

35.Insert the new turbo oil drain line into the block. Be sure the O-rings are completely seated in freeze plug bore. Bend the line so the line will run above the intercooler charge pipe and in front of the silicone charge elbow as shown.

36.Reinstall the oil filter if you chose to remove it earlier.

37.Disconnect the bearing housing from the compressor housing by removing the clamp.



38.Install the bearing housing into the turbine housing in the truck. Orient the bearing housing so the oil supply port points up and oil drain port faces down. Once aligned, tighten the clamp to secure the bearing housing.

39.Connect the oil drain line to the bearing housing using the provided **B** gasket and two **H** bolts.

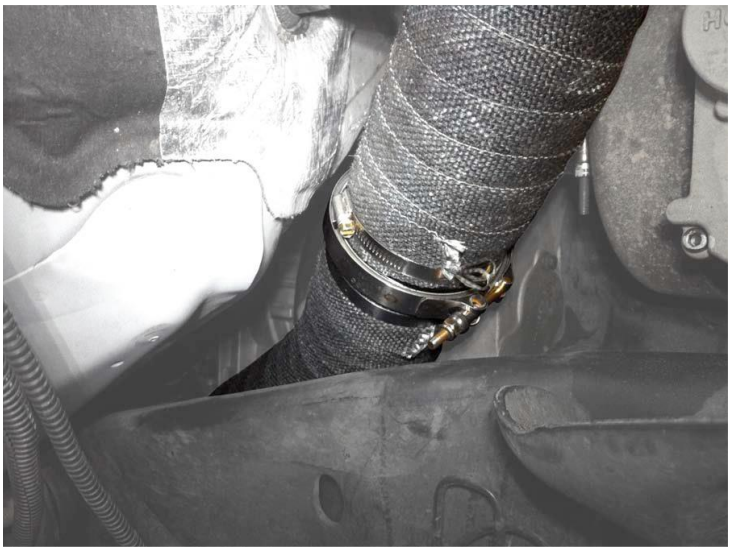
40.Connect the oil supply line from the oil filter housing to the attached fitting on bearing housing. Adjust the oil supply line so it points away from the turbine housing.

41.Install the compressor housing on the bearing housing and lightly tighten the clamp so the housing can rotate but not rattle.

Clock the compressor housing so the silicone charge elbow is properly aligned with the compressor outlet. Use the provided v-band clamp to connect the silicone charge pipe elbow and compressor outlet.

Tighten all three clamps on the silicone charge elbow and the clamp between the compressor housing and bearing housing.

42.Install the lower portion of the new downpipe between upper portion of the downpipe and the factory exhaust using 4.4" v-band clamp. Adjust as necessary to ensure the downpipe has clearance around the frame rail. After adjustment is complete, tighten all the clamps.



43.Using the exhaust coupler, connect the lower portion of the downpipe to the stock exhaust.

44.Install Turbo Blanket for the new turbo using the two springs provided.

45.Reinstall the factory battery box. It is easier to install from the wheel-well side.

46.Reinstall the battery in the battery tray but do not connect the terminals.

47.Reinstall the bottom part of the factory intake air box.

48.Install the new air filter.

49.Reinstall the top cover of the factory intake air box.

50.Install the rubber Intake tube from the inlet of the compressor housing to the outlet of the top cover of the intake air box using the provided clamps.

51.Reinstall the overflow tube on the barb of the radiator.

52.Using the factory clamp, attach the ¾” hose to the breather barb on the valve cover. Route the hose along the transmission dipstick tube using the zip ties provided.

53.Refill the cooling system with approved coolant.

54.Refill the refrigerant if needed.

55.Reconnect the positive battery terminal.

56.Reconnect the negative battery cables.

57.Start the truck and check for coolant/oil leaks or vibrations. Allow it to idle for about 5 minutes without revving the engine. This will allow the oil to reach the bearings of the new turbo. If leaks are found, make sure clamps/bolts/fittings are tight.

58.If no leaks are present, reinstall the passenger side inner fender.

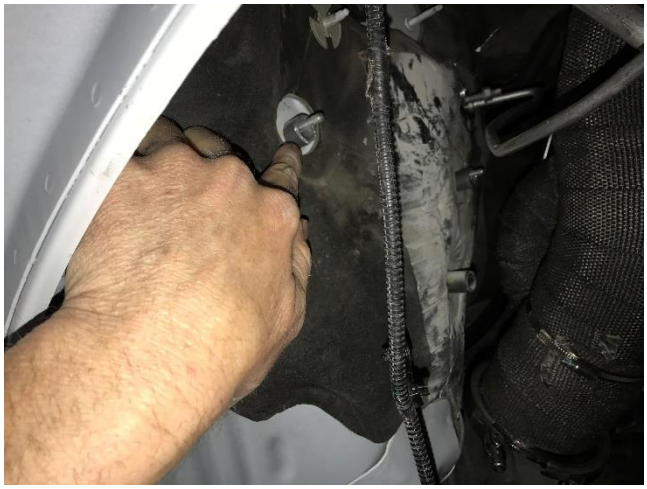
59.Drive conservatively for about 100 miles to allow some break-in time on the turbocharger.

2010-2012 Model trucks only. Coolant Expansion Tank Replacement Instructions.

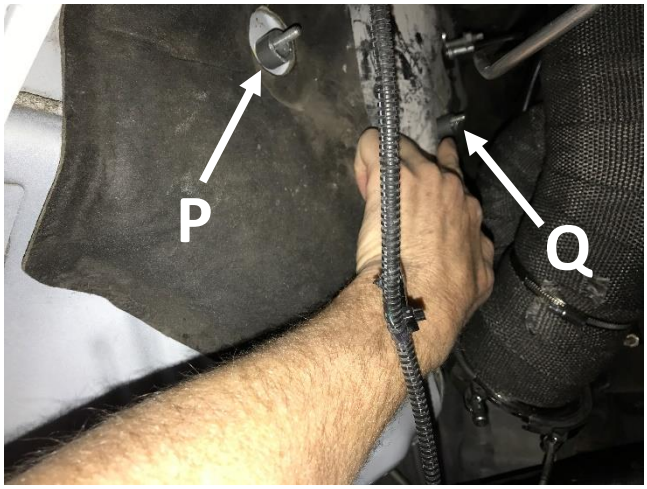
Remove the factory coolant expansion tank, sitting at the rear, passenger-side of the engine compartment. Keep the factory nuts that attach the factory coolant tank to the firewall they will be reused.

Take the relocation bracket provided with the kit, and using the provided **I** bolts, **O** washers, and **M** nuts, attach the bracket to the new expansion tank as shown in the picture. The tank is Dorman part number 603–317, or the Dodge part number is 55056493 AB (from a 2008 Dodge Ram Cummins 6.7L).

Take the new tank that is attached to the new bracket and place it as shown in the picture where the old coolant tank was.



Using the provided **P** and **Q** spacers slide them over the existing factory bolts that held the factory cooling expansion tank. Use the **P** spacer on the factory stud closest to the passenger side, and the **Q** spacer on the stud nearest the center of the truck.



Next attach the bracket with the coolant tank on to the studs and use the factory nuts. At this point you will be removing this tank one more time, but you want to tighten the studs at this point. Tighten the studs enough to hold the tank into position so you can mark the fender side where you need to drill a hole, in the truck body.

Use a marker (sharpie), to make a mark on the fender where the hole in the tab on the tank is. This is where you will drill a hole. Once again undo the bracket and remove the coolant tank so you can drill a hole where you just marked.

Using a 1/8-inch drill bit drill a hole in the truck body as shown in the picture where you marked the hole.

Replace the new coolant tank, and tighten the bolts on the bracket first. Do not over tighten these bolts as the tank is plastic and only requires about 30-50 inch pounds.

Use the provided **J** self-tapping screw to attach the coolant tank to the side fender where you just drilled your 1/8-inch hole.

Attach your existing coolant hose to the lower nipple on the tank. The top nipple near the cap of the new tank will simply be left open to allow for expansion into the new tank.