

Cobalt Supercharger Parts List

The following parts and the Bolt Kit should all be bagged together:

- 1 - Plastic Straight ½" Pipe to ¾" Hose Barb Fitting
- 1 - Plastic 90 ½" Pipe to ¾" Hose Barb Fitting
- 8 - ¾" Hose Clamps
- 1 - ¾" Plastic 90 Hose Barb Fitting
- 1 - ¾" T Barb Fitting
- 1 - ¾" Plastic Fill Plug
- 1 - 18" Power Wire For IC Pump
- 1 - Eyelet Ground
- 1 - Power Wire Splice
- 2 - Self-Tapping Screws

Bolt kit:

- 4 - 6mm x 48mm Throttle Body Socket Head Bolts
- 2 - 6mm x 72mm Long Intake Socket Head Bolts
- 7 - 6mm Washers
- 3 - 8mm x 140mm Alt Spacer **GRADE 8 Hex Head** bolts
- 1 - 8mm x 90mm Alt Spacer **GRADE 8 Hex Head** bolt
- 2 - 8mm x 20mm Socket Head Bolts
- 4 - 8mm Nuts
- 2 - 8mm Fender Washers
- 4 - 8mm x 35mm Supercharger Socket Head Bolts
- 2 - 8mm x 55mm **GRADE 8 Hex Head** bolts
- 1 - 10mm x 50mm **GRADE 8 Hex Head** bolt

- 1 - Supercharger Intake Manifold w/4 Laminova Cores, and Endplate
- 1 - Bypass Valve O-Ring
- 1 - Intake Gasket
- 1 - Throttle Body Gasket
- 1 - Blower Gasket
- 1 - M62 supercharger w/Modular Hub
- 1 - LSJ Dipstick & Tube
- 1 - IC Pump
- 1 - IC Pump Mounting Clamp
- 1 - S3 Heat Exchanger
- 4 - 40# Injectors (Stage 1) EV6 Connector **OR** 4 - 60# (Stage 2) EV6 Connector
- 1 - K&N air filter (ru-5111)
- 1 - LSJ Upper Radiator Hose
- 2 - 3.25 Hose Clamps
- 1 - Valve cover breather w/hose clamp
- 4 - Autolite XP5263
- 1 - Instruction book (On our web site)
- 1 - MAF tube with bolts
- 1 - 3" Modified Silicone 45° Coupler
- 1 - 3.4 Pulley (stage 1) **OR** 3.1 Pulley (stage2)
- 1 - 4050705 Belt
- 1 - MAF Extension Harness
- 1 - 2 Bar Map Sensor **(on 2.4L Kits Only)**
- 1 - LSJ Throttle Body
- 1 - Throttle Body Adapter Harness
- 5" - 3/16" Vacuum Line
- 18" - 5/16" Vacuum Line

The following parts should be assembled with the Alt Stands Zip Tied to it:

- 2 - Alt stands
- 1 - Idler pulley stand
- 1 - Alt Pulley Spacer
- 1 - 3" Idler Pulley
- 1 - Idler Pulley Washer
- 1 - 10 x 60mm 1.50mm Pitch Grade 10 Socket Head Bolt Black Oxide Finish

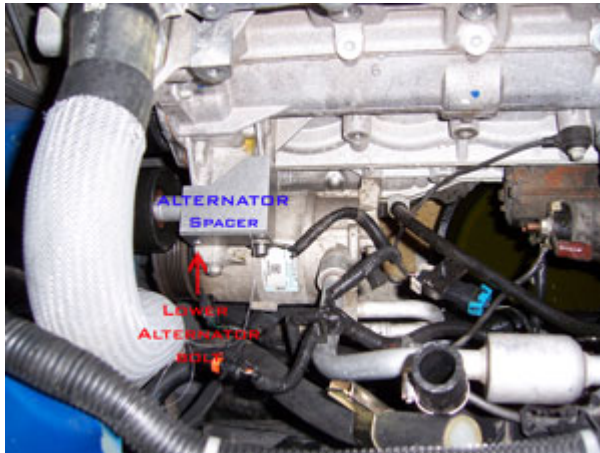
PCM & TCM Flash on 2.4 Kits Only (Order Specific)

08+ Gets an Adapter Plate w/O-Ring and 4 - 6mm x 1.0 x 20mm (Comes prepackaged)

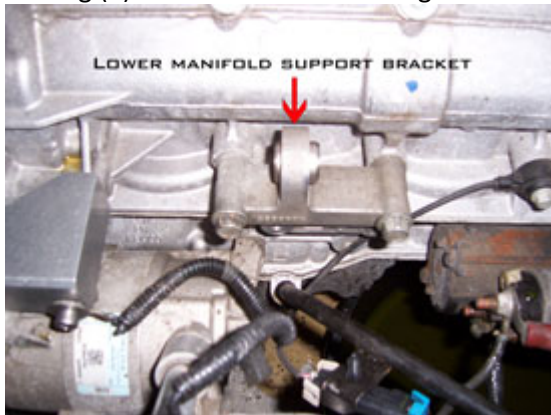
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2.4/2.2 SUPERCHARGER KIT INSTRUCTIONS

1. Install the alternator spacer/ idler stand on motor with the pulley facing the passenger frame using (1) 8mm x 140mm bolt in the hole farthest from the frame as a guide (do not tighten) and (1) 8mm x 90mm bolt in the original alternator lower mounting hole. Tighten the 8mm x 90mm bolt to **15 lb ft** at this time. Remove the 8mm x 140mm bolt.



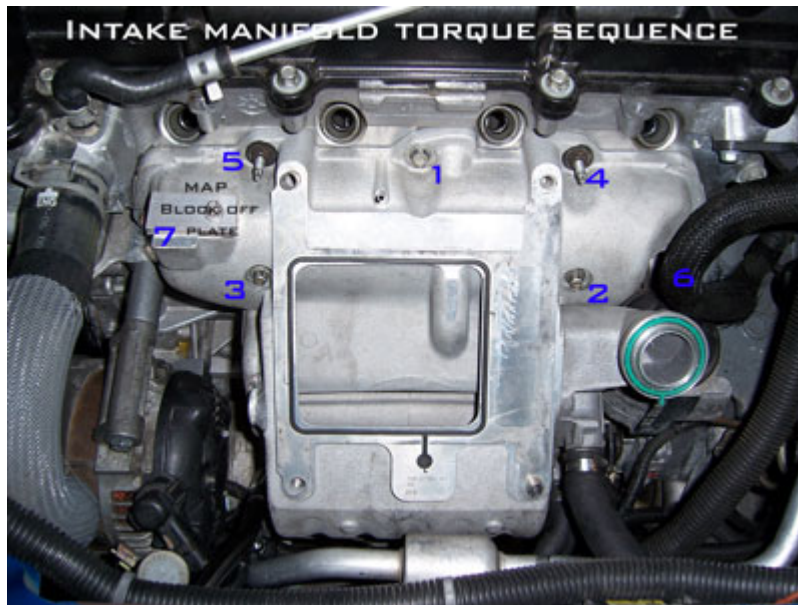
2. Install lower manifold support bracket locating it almost center and low on the motor under the intake using (2) 10mm x 55mm bolts. Tighten to **30 lb/ft** (See figure 2)



3. Install alternator using (2) spacers between the alternator and head and (2) 8mm x140mm bolt for the upper mounts. Install the 3rd 8mm x 140mm in the lower alternator mounting hole going through the alternator spacer installed in the previous step. Tighten all bolts to **15lb/ft** at this time.



4. Remove original dipstick and tube. Install dipstick and tube supplied in your kit.
5. Install upper radiator hose supplied in you kit.
6. Install the supercharger manifold and gasket using a total of 5 bolts and 2 nuts. The (3) 6mm x 25mm bolts supplied in the kit and (2) 6mm nuts that you saved when removing your original manifold are used along the top and ends. There are (2) 6mm x 70mm bolts supplied that are used in the lower center holes in the manifold. Tighten bolts-**89 inch lbs**



7. Install the 10mm x 50mm manifold to lower support bolt and tighten to **30lb/ft.**
8. Put the (5") piece of 3/16 vacuum hose on the small barb sticking up from the top of your blower manifold. Connect the MAP sensor supplied in the kit to the other end of the hose. Using small zip tie around each end of the hose to hold it to the barb and MAP sensor.



9. Secure dipstick to side of manifold using (1) 6mm x 10mm bolt. Tighten to **89 lb/in.**
10. Holding your new ZZP heat exchanger against the bottom of the front bumper with the water inlet and outlet facing the drivers side of the car. The 2 tabs sticking up will mount to the factory bumper bolts sticking out the back of the bumper with (2) 8mm nuts. Tighten to **16 lb/ft** Using the (2) 6mm x 20mm bolts, lock nuts and washers bolt the heat exchanger to the bottom of the bumper using the holes already in the bumper that align with the tabs on your heat exchanger. You will tighten these later.

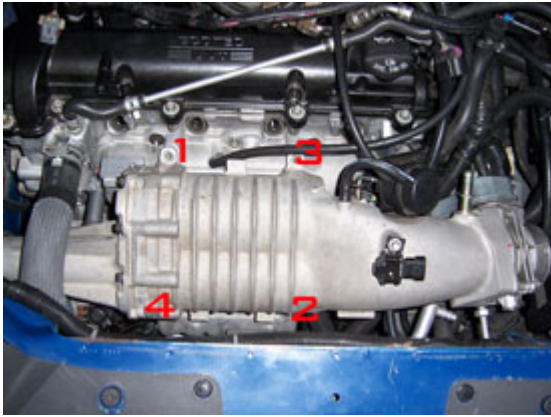


11. Using thread sealer, install both $\frac{3}{4}$ " pipe thread to $\frac{3}{4}$ " hose barb plastic fittings into the fittings on the end of your heat exchanger.
12. Using a 36" piece of $\frac{3}{4}$ " hose run a line from the top hose barb in the heat exchanger to the top hose barb on you blower manifold. Use a hose clamp on each end of the hose to hold securely to the hose barbs. Cut the hose 5" before the manifold barb and install the filler "T" with a (6") piece of $\frac{3}{4}$ " hose connected. The main cooler line should run straight through the "T" so as not to disrupt or slow the flow down. With the fill hose connection to the "T" leg. Put the fill plug in the hose at this time. (see figure 9)
13. Cut (2) 6" pieces of $\frac{3}{4}$ " hose and connect one end of each piece to the plastic 90' hose barb. Using hose clamps secure both pieces. Install one of the hoses to the lower hose barb on the heat exchanger and

the other hose to the pump and secure with hose clamps.



14. Plug the pump harness into the pump and mount the pump with the self tapping screw as shown with the outlet facing the radiator. With the ground wire of the pump harness being secured with the same screw that hold the pump bracket. (*See above*)
15. Connect the power wire from your pump harness to the pink switched power wire in the ABS harness located in the driver side front corner of the engine compartment under the MAF sensor. The harness comes out of the bottom of the ABS pump.
16. From the outlet of the pump run a 36" piece of 3/4" hose to the lower port on the supercharger manifold and secure both ends with hose clamps.
17. Connect the throttle body extension harness to the throttle body and then install the throttle body on the supercharger using a gasket and (4) 6mm x 45mm bolts.
18. Install the 3.4 Pulley (stage 1) **OR** 3.1 Pulley (stage2) before installing the supercharger and torque the pulley bolts to **72 in/lbs**
19. **For automatic cars only.** You will find that there is an interference issue between the blower pulley and the radiator support. There are a couple ways to resolve this. Set the blower on the manifold without a gasket getting it aligned as close as possible to its proper location. You will now see where the pulley touches the radiator support. Using a marker, mark around where the pulley touches the car. Remove the blower and cover the intake opening to prevent anything getting down in it while you work on the car. At this point you can use a dremel tool and cut 1/4" outside of your marked lines to make a pocket that the pulley can sit in. Using touch up paint to cover the cut area to prevent rusting. This will not be highly visible when normally looking at your car. You could also cover the area with a dense cloth or towel and using a mallet to deform the area to clear the pulley.
20. Install the blower with a gasket on the manifold using (4) 8mm x 35mm bolts making sure it aligns on the dowels with out forcing it.(**tighten to 18 ft/lbs**)



21. Connect the brake booster vacuum line to the hose barb on the blower that points towards the motor.



22. Using the 5/16" vacuum line supplied in the kit connect it to EVAP solenoid and the hose barb fitting on the throttle body that faces the radiator support.



23. The lower hose port on the supercharger bypass valve is left without a hose connected to it so it can vent to the atmosphere.

24. Installing your new fuel injectors will require that you unbolt the fuel rail by removing the (2) 6mm bolts and pull the fuel rail and injectors as an assembly out of the head. If any of the injector sleeves pulled out of the head and stayed on the injector reinstall them back into the head. Remove the clips holding the injectors to the rail and unplug the harness from the injectors. With a twisting and pulling motion pull the injectors out of the rail. Make sure there is an o-ring on each end of the new injectors and put a small amount of white lithium grease on each o-ring so it will slide into the fuel rails and intake. Being

careful not to get grease in the end of the injector. With a twisting and pushing motion push the injectors into the fuel rail with the electrical plug towards the fuel rail the same as the OEM. Reinstall the injector clips and plug the harness back on the injectors. Install your injector/fuel rail assembly back onto the motor and secure down with the (2) 6mm bolts you removed earlier. Tighten to **89 lb/in**

25. Connect the throttle body adapter harness to the factory harness.

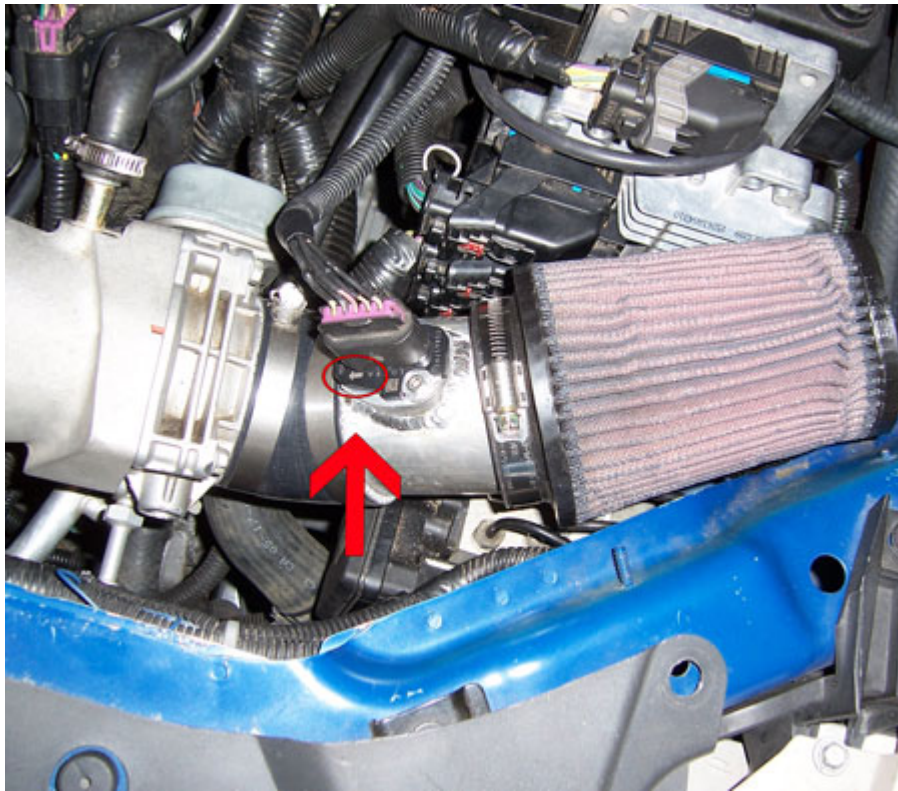
26. Using a zip tie secure the map sensor down so that it doesn't bounce around and break.

27. Install your new belt.

BELT ROUTING



28. Remove your factory MAF sensor from your intake tube and reinstall it in the ZZP MAF tube that was included in the kit. With the arrow of the MAF sensor pointed towards the blower inlet, then use the 3" silicone 45* connector and both hose clamps(don't tighten clamps yet). Slide the air filter on the end of the MAF sensor and clock the silicone connector and MAF sensor so that the air filter doesn't hit the radiator support or the pcm, and tighten.



29. Reinstall your fuel pump fuse.
30. Reconnect your negative battery cable.
31. Fill your heat exchanger with a normal 50/50 mix of automotive antifreeze and water. It is best to use a different type than the engine as the color will be different so if you ever have a coolant leak you will know if it's the motor or heat exchanger. Turn the ignition key on to allow the pump to circulate the coolant and bleed out the air bubbles. Keep filling the cooler until the level stays up and all the air bubbles are out.
32. Refill your radiator with the antifreeze that you drained out earlier and carefully purge the air from the system by running the car. Watch the temp gauge so that the motor doesn't overheat. Once it has run at operating temp steadily for 5 min and doesn't keep increasing in temp shut the car off and let cool. Fill the coolant bottle to the proper level and repeat the procedure again to confirm that the system is full and without air.
33. Reinstall the front bumper cover and head lights in the reverse order that you removed it. Using the (2) 6mm x 20mm bolts with the large washers to hold the bumper cover in the center grill area instead of the plastic body rivets.(tighten to 89lb/in)
34. If you purchased our PCM with or without the TCM there is an installation and relearn process that is needed to be done in order for your vehicle to start

How do I perform a security relearn?

1. Disconnect battery
2. Install new computer
3. Reconnect battery
4. Put emergency brake on to disable daytime running lights (this step is required!)

5. Make sure all doors trunk and hood are closed leave driver window down and reach in threw window
6. Try to start. If it doesn't start, leave the key in the on position for 10 min on 97-03 cars and 15 min for 04 and newer cars. The security light *should* turn off after this amount of time.
7. Turn off ignition for 3 seconds
8. Try and start the car. It probably won't start. Repeat step 5 two more times.
9. If this doesn't work disconnect battery for 5 seconds and then try and start the car.

If that doesn't work, try this one:

1. Disconnect battery for 10 sec.
2. Reconnect battery
3. Turn key to ON position
4. Do not try to start vehicle, just quickly click to RUN position to engage security light
5. Let vehicle sit with key ON for 35 min.
6. Attempt to crank vehicle. Once vehicle is running, the security light may still be on
7. If security light is still on, turn key to OFF position for 5 sec.
8. Turn key to ON position and security light should turn off
9. Start vehicle and enjoy new PCM

Notes: If your car starts at any time and stays running, you are done. If your car starts and dies, try step 9. If it dies after 2 seconds after you have done these steps, you either have a bad FP resistor or the security setting in your PCM is wrong and it will need an update.

Security relearn procedure will not work with the valet key!

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2.4/2.2 SUPERCHARGER KIT INSTRUCTIONS REMOVAL

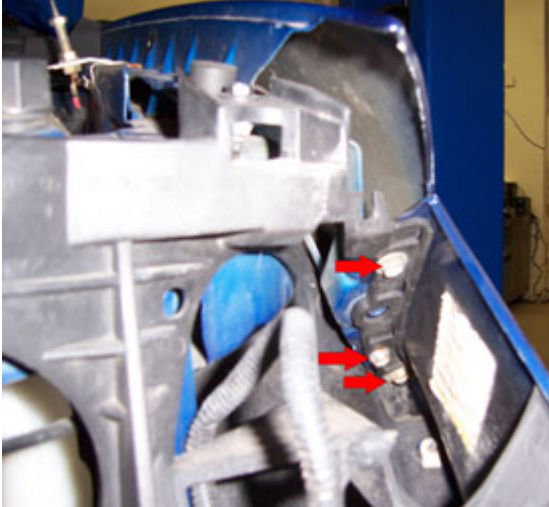
Removing parts from the engine

1. Find your fuse box located under the hood on the driver side and remove the fuel pump fuse. Try starting the engine 3 times, this will drain the fuel out of the injectors and make sure there is no pressure for changing the injectors later.
2. Disconnect the negative cable from the battery (located in the trunk under the carpet).
3. Remove the air filter box and the air inlet hose to the throttle body. Unplug the throttle body harness from the throttle body.
4. Drain the antifreeze from your radiator into a clean container so that the coolant can be reused after the installation of you supercharger kit. The drain valve is located on the passengers side of the radiator on the bottom corner.
5. After the coolant has been drained remove the upper radiator hose
6. Remove the evap and master cylinder vacuum hoses from manifold keeping track of the hoses because you will need them later.
7. Disconnect the harness from the map sensor.
8. Unbolt and remove the intake manifold (being careful to not get anything in the motor) by removing the (5) 6mm bolts and (2) 6mm nuts (Keep the nuts and bolts as you will need them for the install of your new blower manifold).
9. Disconnect the wires from the alternator and remove the alternator from car.

Removing the front bumper cover

10. Remove 4 plastic body rivets holding radiator cover in place. The easiest way to remove them is to use a trim removal tool, or a large flat screw driver.

11. Remove (2) 6mm bolts in the top of each headlight and pull headlight part way out. Unplug harness from headlights and finish removing the headlights.
12. Remove 4 body screws in the front edge of each wheel well.
13. Looking in where the headlight was along the outside edge where the front bumper cover and fender meet there are (3) bolts on each side of the car. Loosen the top 2 bolts and loosen the bottom 1. Carefully pop the bumper cover out of the bracket that was just loosened.



14. Remove the (8) body screws (4 per side) from the bottom of the front bumper cover and the (2) plastic



body rivets on the top of grill opening.

15. Unplug fog lights if your car has them.
16. Carefully remove the front bumper cover at this time.