



ZZPERFORMANCE

Installation Instructions
ZZP Sonic/Cruze 1.4T PCV Upgrade Kit



Estimated Installation Time: 1.5 Hours

Installation Difficulty: 2/5

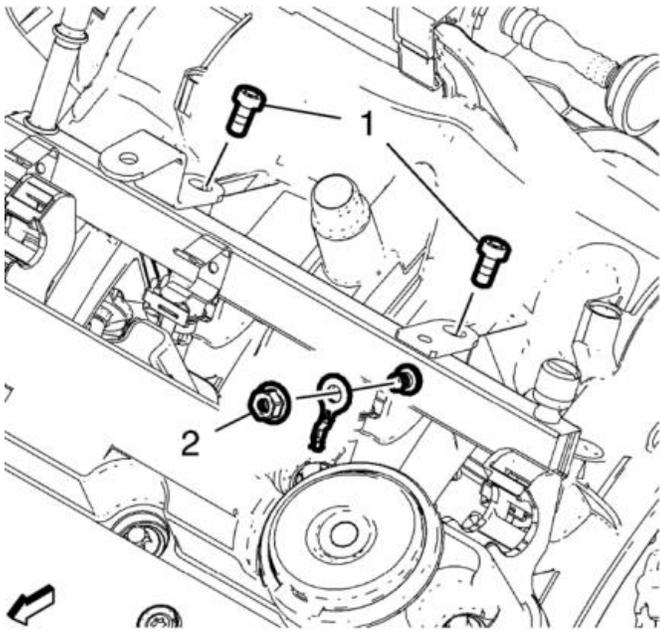
Note: Read through these instructions before starting your installation. Some pre-production parts were used for instructions; yours may look slightly different in color/finish. If you run into any installation issues or have trouble comprehending any of the procedures, please contact customerservice@zzperformance.com

Kit Contents:

- 1 – Billet Oil Cap
- 1 – ZZP PCV Intake Plate
- 6 – M8 x 55MM Socket Head Screws
- 2 – M6 x 20MM Socket Cap Screws
- 1 – ZZP Baffled Oil Catch Can
- 1 – Catch Can Bracket
- 1 – ZZP Sonic Catch Can Hose Set
- 6 – Hose Clamps
- 1 – Check Valve
- 1 – Intake Manifold Cap

Tools Needed:

- Allen key set (5mm, 6mm) or Allen sockets
- Fuel line disconnect tool
- Ratchet
- Socket set
- E10 socket or a tight 8mm 6 point socket
- Pick tool
- Side cuts

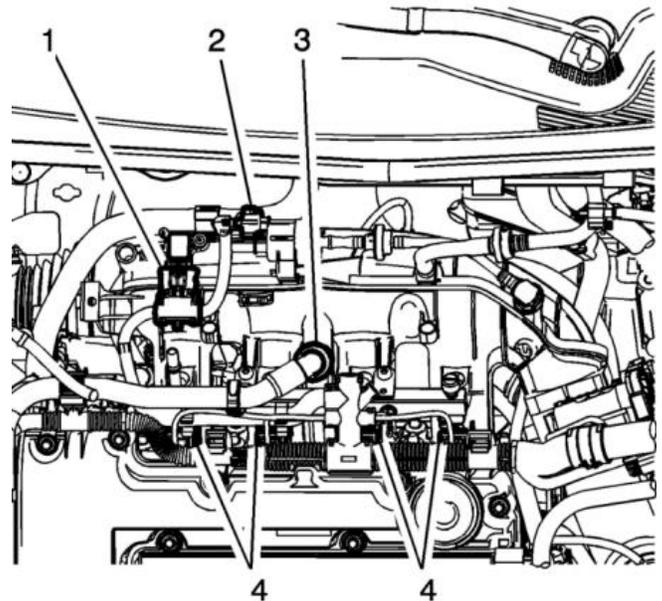


STEP ONE: Remove fuel rail

- Disconnect fuel feed line from fuel rail using fuel disconnect tool.
- Relieve pressure via Schrader valve.
- If you have the ZZP flex fuel kit you will disconnect both fuel lines and proceed to remove sensor and bracket using 5mm Allen.
- Disconnect the intake manifold to fuel rail ground using 10mm socket or wrench (#2 in photo).
- Unclip injectors from harness, push clip in and pull connector.
- Undo the two bolts holding the fuel rail onto the intake manifold (#1 in photo).
- Remove fuel injectors and rail as one unit from intake manifold.
- **Note:** You do not have to remove the fuel rail and injectors; however we find it much easier to work around with them off.

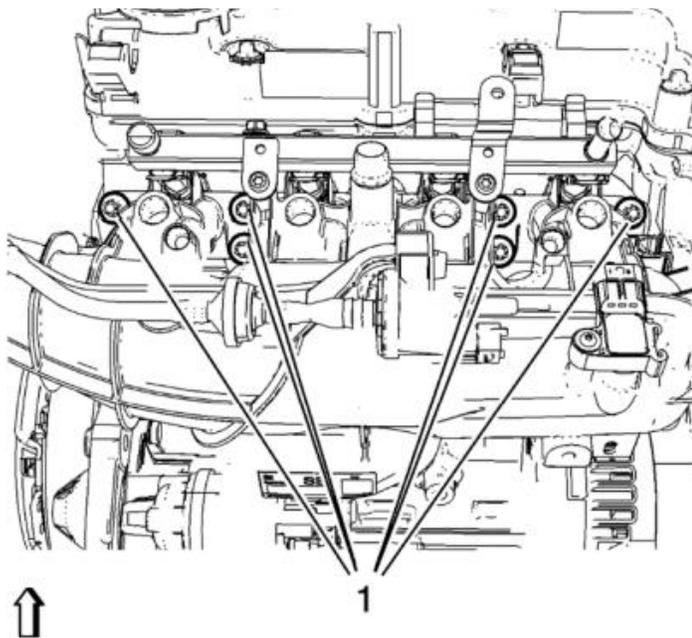
STEP TWO: Prepare intake manifold assembly for spacer plate installation.

- Remove cold side charge pipe from throttle body using 8mm or flat head screwdriver.
- Unplug throttle body electrical connector.
- Remove turbo to intake manifold PCV hose from intake manifold (#3 in photo). Use your pick tool to pull the silver clip out (**DO NOT** lose this clip, you will re-use later), then pull up on the fitting to remove hose.



STEP THREE: Undo intake manifold from head

- Loosen the 6 E10 bolts holding the intake manifold to the head. You can use a tight fitting 6 point 8mm socket if you do not have an E socket, however make sure not to round off the bolts.
- Pull the E socket bolts from the intake manifold; you will be replacing them with new stainless socket bolts. You will need to use a wrench or some force to remove the bolts.
- Pull intake manifold away from the head.
- You can choose to completely pull the manifold out of the engine bay but is not necessary. If doing so, you'll need to disconnect the two map sensors as well as brake booster line and EVAP line on the back of the manifold.



STEP FOUR: Prepare Intake Manifold

- There is a locator tab in the PCV valley on the intake manifold, pictured on the right.
- You will need to clip or shave down that tab before placing the spacer on.
- A pair of side cuts will snip the tab easily off, make sure the tab does not fall into the intake manifold.

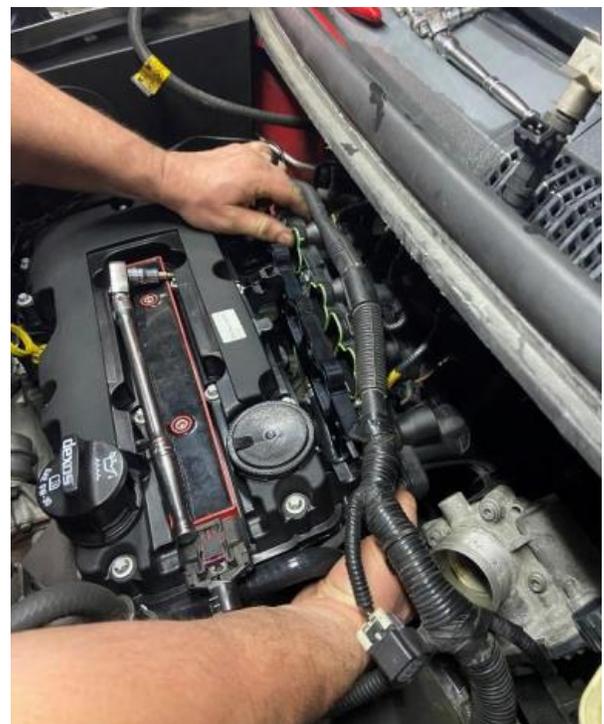


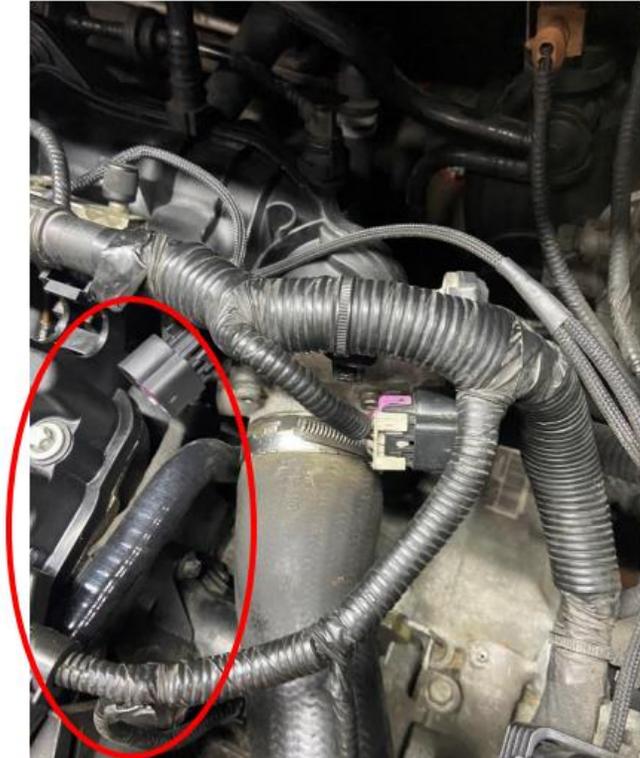
STEP FIVE: Prepare spacer plate

- In your package there are 3 hoses. One hose will be connected to the manifold spacer plate.
- Make sure the spacer plate has the hose pictured to the left attached and oriented correctly.
- The spacer plate should have the O-rings facing the head flange and the hose coming out towards the driver's side of the car.

STEP SIX: Start installation of spacer plate

- Slide spacer plate in between head and manifold.
- As stated, O-rings on manifold go toward the head.
- You will route the hose as outlined in step 7.



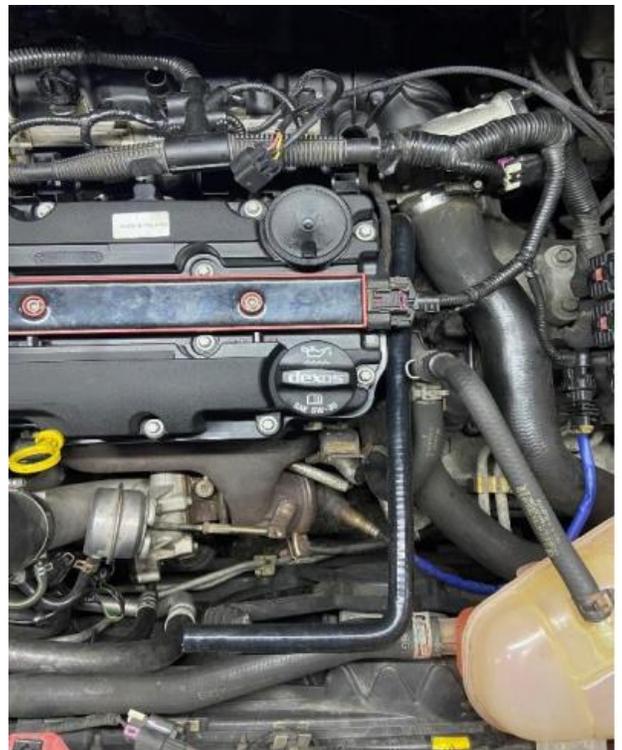


STEP SEVEN: Route catch can hose #1

- Hose coming from spacer plate will route under the wire harness and throttle body, as pictured.
- Hose will run alongside driver's side of engine towards the front of the engine bay.
- This hose will eventually be attached to the left nipple of the catch can.

STEP EIGHT: Finish installation of spacer plate

- Use the six included M8 bolts to bolt the manifold and spacer plate to the head. Use the top 2 middle bolts first for easiest installation.
- Make sure the washers are on the bolts, or else manifold will pull away from the head.
- To make sure everything is seated correctly slide two of the bolts through the manifold and spacer plate to keep them together, then start to hand tighten onto the head.
- Thread remaining 4 bolts through manifold/spacer combo into head.
- Tighten all 6 bolts to 15 ft/lbs.
- System should look as pictured at this point.



STEP NINE: Prepare and install second catch can hose

- Catch can hose #2 will run from top nipple of the manifold (where you removed hose in step two) to the can. This hose will be the other thin hose with the silver check valve pre-installed.
- You will use the machined cap with the 90° brass fitting to attach hose to intake manifold. Now you will re-use the clip from step 2 for the cap (pictured on the left).
- The "thin" side of the hose will attach to the brass fitting with a hose clamp.

STEP TEN: Route second catch can hose

- Second catch can hose will run from the previously installed intake manifold fitting to the right nipple on the catch can.
- Route hose under wiring harness and under coil pack plug towards front of engine bay.
- Verify that the check valve is pointing towards passenger side of engine.
- You may now re-install your fuel rail and flex fuel sensor/line (if applicable). Do not forget the ground wire from the manifold bolt to fuel rail (Pictured as #2 in step one).



STEP ELEVEN: Remove stock manifold to turbo line

- We previously removed the back half of this line from the intake manifold (the fitting with the clip). You'll now proceed to the turbo inlet and remove from that end.
- Remove intake tube from turbo inlet with an 8mm socket or flat head on the hose clamp holding the intake tube to the inlet.
- Rotate intake tube up and out of the way.
- Remove fitting off turbo inlet. Pinch both ribbed sides and pull fitting off the turbo.
- Once line is off the engine, you will transfer that push connect fitting to the final hose in your ZZP kit.

STEP TWELVE: Replace oil cap

- Remove your stock oil cap
- Install new oil cap onto vehicle.
- Tighten down fitting 90° fitting on oil cap using adjustable wrench or 1" wrench. Fitting will face towards front of vehicle.

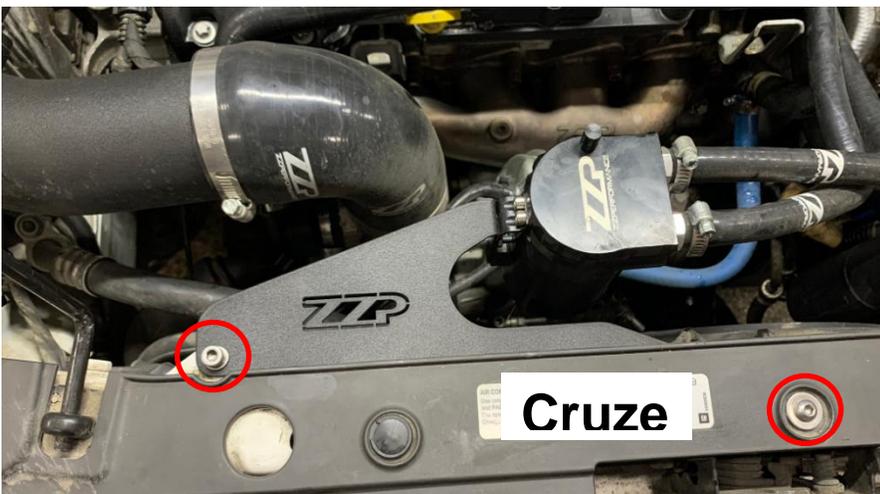
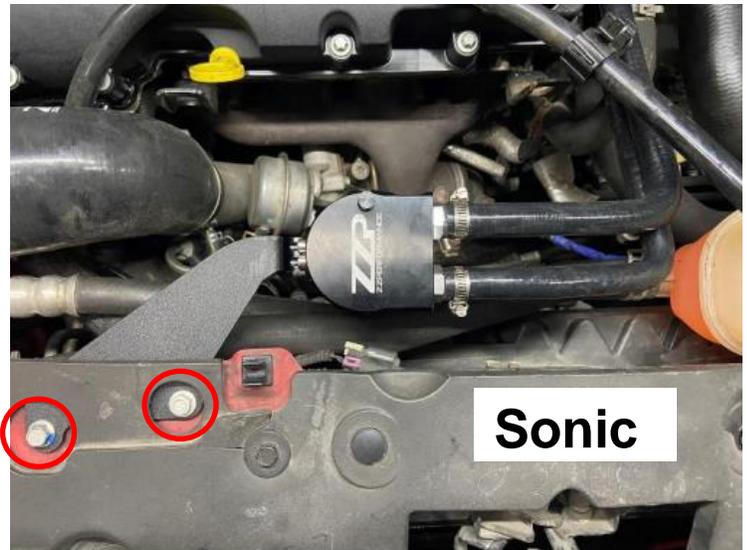


STEP THIRTEEN: Install third hose

- You will now install the third hose in the kit.
- This hose will run from the now installed ZZP billet oil cap to the turbo compressor inlet.
- Use hose clamps on both ends
- Hose will run parallel to the valve cover and dip underneath the intake elbow coming off the turbo.

STEP FOURTEEN: Install catch can to body

- Your catch can will come pre-installed with the included bracket.
- The can will face towards the driver side of the engine bay.
- You will use the included M6 bolts to bolt the can to the radiator support.
- It will go slide between the plastic cowling and the metal radiator support.
- You will then connect the two hoses from the back of the engine.



STEP FIFTEEN: Enjoy!

- Make sure to double check all connections and fasteners are tightened down properly.
- Review the photo to the left and verify that your kit resembles the fully assembled kit.
- If you have any questions please reach out to customerservice@zzperformance.com
- Enjoy your new, problem free, maintenance free, PCV fix kit.
- Check your catch can frequently (about once a week, or once a gas fill up) at the start. Once you've determined the frequency at which your can fills up (every car will be different) you can then empty when needed on your schedule.

