

Tapout CT4-V Blackwing Downpipe Installation Instructions

SC/MD/JM – 7/21/2022

Tapout downpipes fit as nicely as OEM, whether you have an A10 or M6 transmission. These downpipes do not make contact with your transmission or cooling lines. The crossover/balance pipe is located higher than on other brands, slotting it nicely between the wiring harness on the engine block and the transmission cooler line. All four oxygen sensor bungs are correctly located, so your wires do not need to be stretched or extended.

Kit Contents

- Driver side downpipe
- Passenger side downpipe
- Band clamp for crossover pipe
- Flange bolts (2) and nuts (2) for passenger side
- Anti-seize compound
- OEM hardware and gasket kit (optional)
- Heat wrap

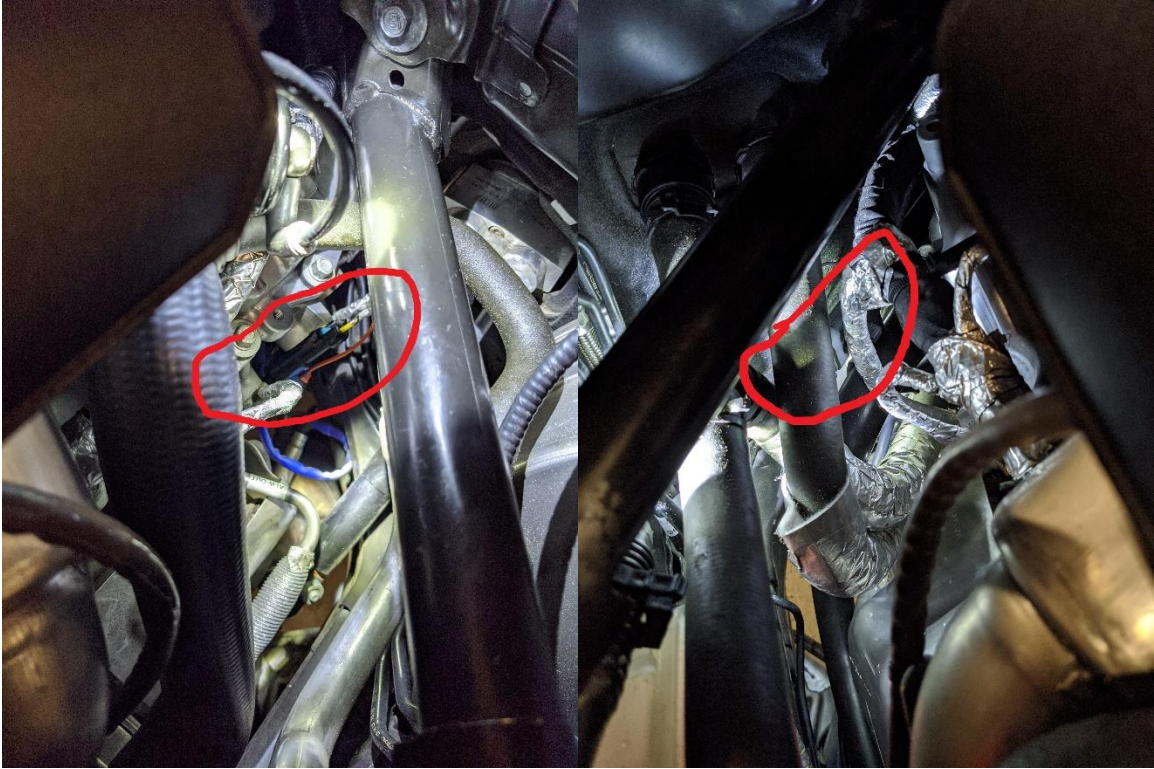
Tools Required

- Long extension (length will vary depending on the tools you use)
- 15 mm deep and shallow sockets
- Universal joint
- 7/8" or 22 mm. wrench or oxygen sensor wrench
- Flat head screwdriver
- Long pry bar
- 13 mm. wrench
- Small pick
- Penetrating fluid

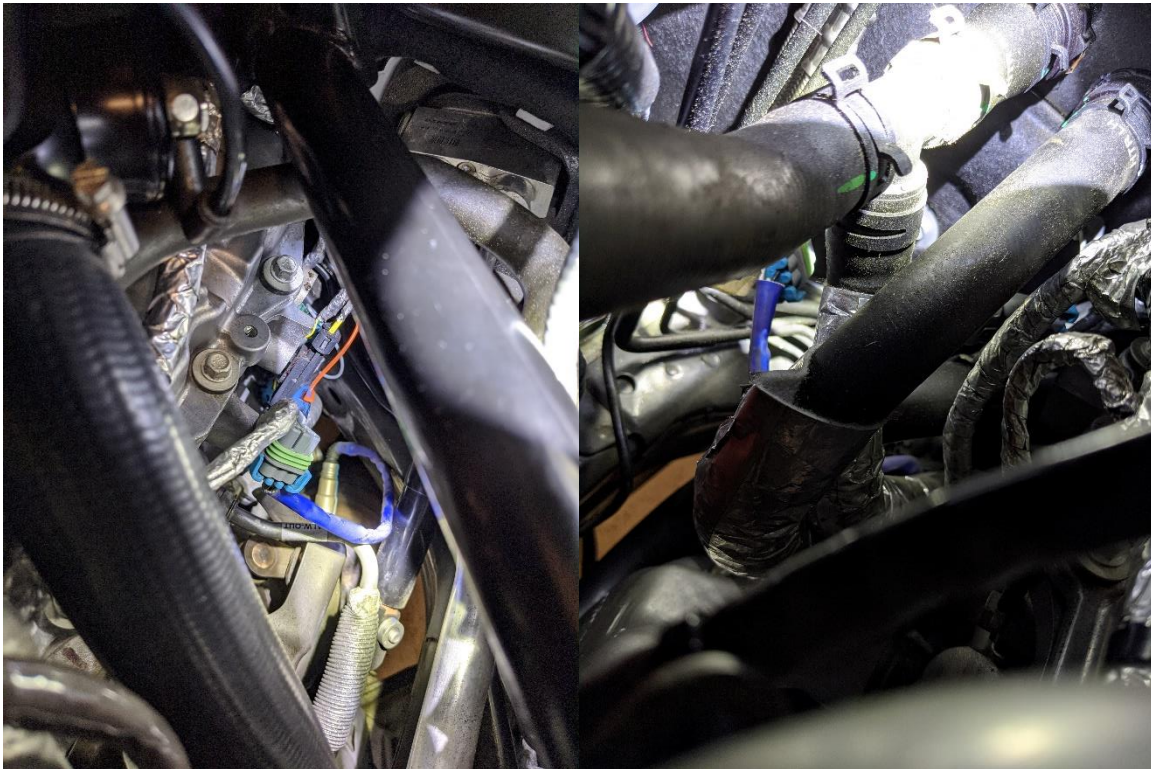
OEM Catalytic Converter Removal

WARNING – Only work on the exhaust system of the vehicle when it is completely cold to mitigate the chance of getting burned.

1. Removal starts by opening the hood and disconnecting bank 1 and bank 2 front oxygen sensors. Follow the blue wire to the connector and remove the CPA (connector position assurance), it is a gray tab that slides in perpendicular to the connector body. Then disconnect the connector.

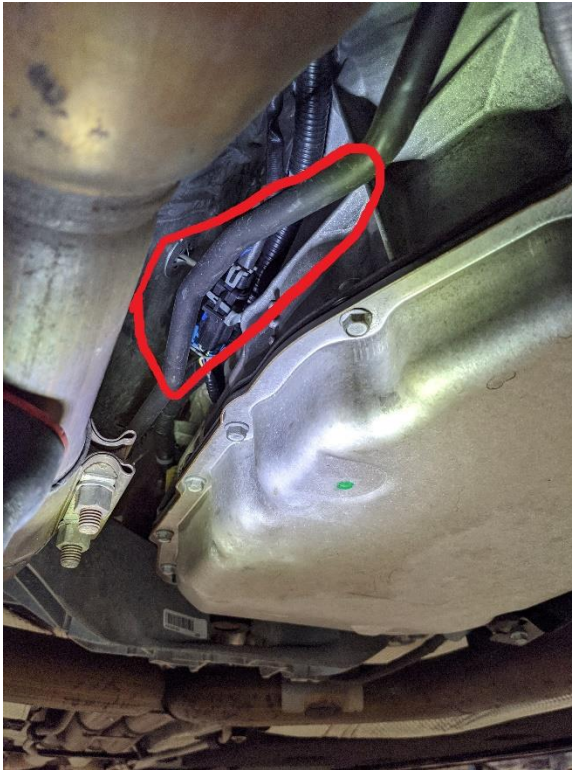


Drivers side mounted to rear of cylinder head. Passenger side is mounted to the coolant pipe.



Both sensors disconnected.

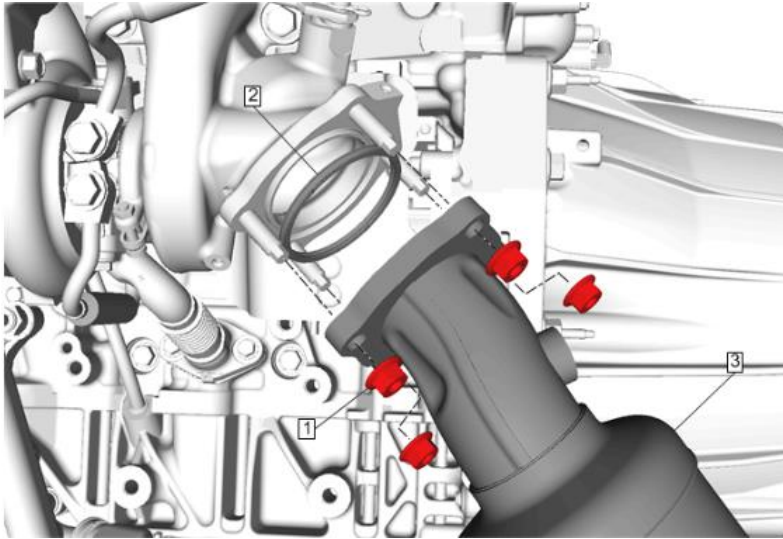
2. Raise vehicle and remove the connector for the passenger side rear oxygen sensor



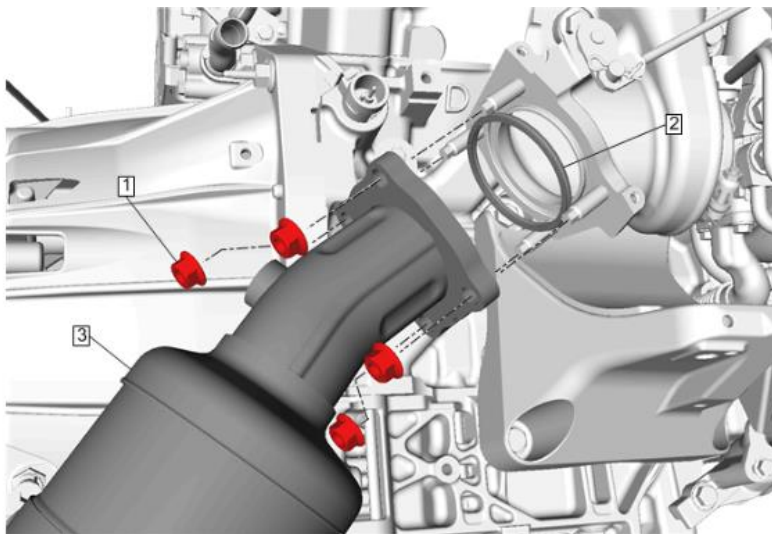
3. Remove Catalytic converter brace bracket. There are five 13 mm. nuts.



Drivers Side Catalytic Converter



Passenger Side Catalytic Converter



- 1 – Catalytic converter to turbocharger nuts (four per side)
- 2 – Turbocharger seal (one per side)
- 3 – Catalytic converter (one per side)

4. Spray your favorite penetrating oil on all nuts being removed from the exhaust system, two band clamp bolts, passenger side catalytic converter to exhaust pipe bolts, and all eight bolts that secure the catalytic converters to the turbochargers.



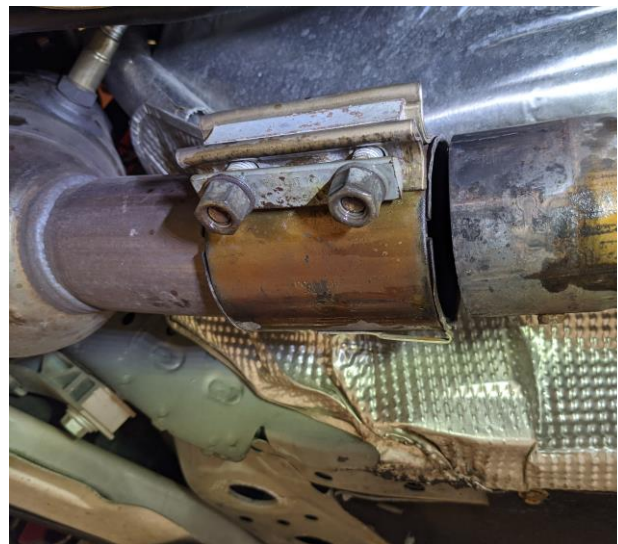
5. Carefully pry the passenger side turbocharger heat shield out of the way, just enough so that you can have access to the nuts that secure it to the turbocharger.



6. Remove passenger side rear oxygen sensor using 22 mm. or 7/8" wrench and let it hang under the car.



7. Loosen, but do not completely remove two 15 mm. band clamp bolts. Then using flat blade screwdriver pull out on release tab and slide band clamp forward towards driver side catalytic converter until the pipe has separated.



8. Remove the four 15 mm. nuts securing the passenger side catalytic converter to the turbo. This will require patience and the combination of shallow and deep 15 mm. sockets on a universal joint with a long extension. Here is an example of the tools used.



9. Remove driver side catalytic converter making sure that you guide the oxygen sensor wires out and that the pre-cat oxygen sensor wire does not get caught on the coolant hard pipe (O2 sensor wires will be black). Then using a small pick remove the gasket if you purchased the optional OEM Hardware Kit. If you plan to reuse the OEM hardware, take extra care to ensure nothing is damaged during disassembly.



10. Next you will need to slide the exhaust muffler back to gain clearance from the studs on the passenger's side catalytic converter. Using a pry bar slide the muffler back at the rear sway bar. The exhaust will stay in this position so you won't have to constantly hold it. **Take care not to slam the exhaust valves into the rear carbon diffuser/bumper area.**



11. Remove the four 15 mm. nuts holding the passenger side catalytic converter to the turbocharger and remove the catalytic converter, again making sure to guide the oxygen sensor wire down as you remove it. After removal of cat, remove the gasket or leave it depending on your purchase option. If you plan to reuse the OEM gasket, take extra care to ensure it is not damaged during disassembly.



12. Remove the three oxygen sensors from the catalytic converters using a 22 mm. or 7/8" wrench. Remember that the fourth one should still be under the car. Transfer these sensors from the cats to the Tapout Downpipes, using anti-seize compound on the oxygen sensor threads (O2 sensor wires will be black). Also take care to ensure each sensor is installed in the same location as original (front versus rear, and left versus right).



13. Install both turbocharger seals now if you purchased the optional OEM Hardware Kit.
14. Add anti-seize compound to the turbocharger studs.
15. Now that the exhaust muffler is slid backwards, reinstall the original band clamp on the passenger side muffler pipe making sure that it is clipped in
16. Start by placing the passenger side downpipe up into the car but first take the blue oxygen sensor wire and feed it up near the metal coolant pipe. (wire will be black)



17. Slide the pipe onto the studs and using two 15 mm. nuts just start a couple threads to hold it. Leave enough slack so the pipe can still move. This will help with crossover installation.
18. Slide the band clamp onto the driver's side downpipe crossover. Then slide provided heatshield over passenger side crossover pipe.



19. If your car has an **A10 transmission**, you'll need to bend the transmission cooling lines mounting bracket about 45 degrees, then rotate the lines for clearance (see below).

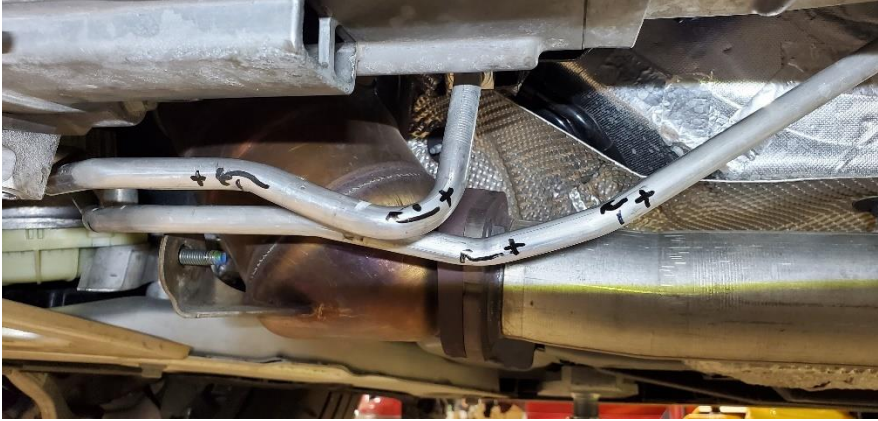


20. Additionally for **A10 Transmission** cars, make sure to check the transmission line near the transmission cross member for clearance. Notice how in the picture below the line is touching the crossmember. This should be bent upward to avoid any contact.



21. For M6 transmission cars, remove the bracket holding the transmission lines to the transmission completely. You will reinstall it upside down as depicted in step 23.
22. Make several slight bends in the lines as depicted below. Use a line bending tool or something round, such as a socket to complete these bends. This will help to avoid kinking the line. It can help to attach an extension to the socket you are using the bend the line so you can brace it against something (see below).





In this picture we show the location of the bends needed for additional clearance. Where the bends already exist, they should have additional bend added where the arrows are pointed.



In this picture, the trans lines is bending down over where the crossover pipe will be. It should be bent further, as depicted by the + sign.



In this picture, the passenger side downpipe (with crossover) has already been installed to show the clearance you should have.

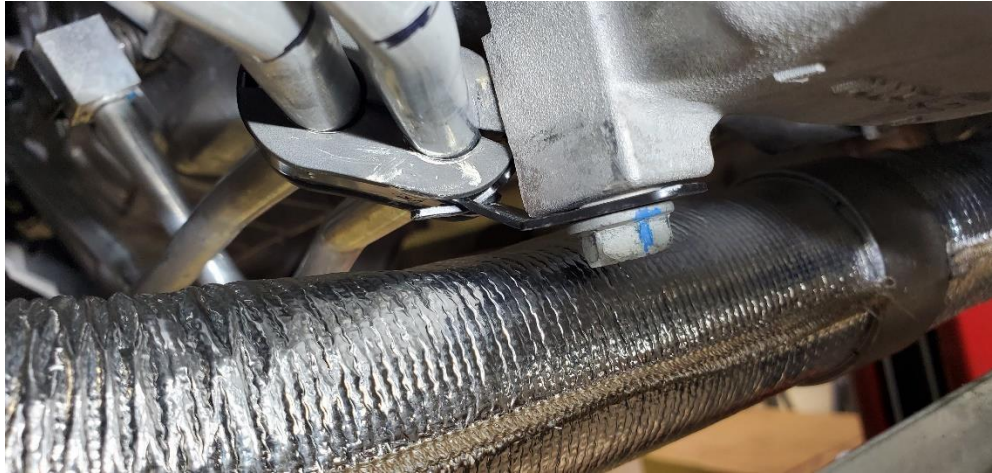


In this pictures, the trans lines near the passenger side catalytic converter need to have the bends reduced as depicted by the – sign. This should be done on the existing bend, which is marked here with a line.



This is the same picture as above, but a clip from further back was relocated forward of its original location for added clearance.

23. After you've completed bending the lines, flip the bracket you removed upside down and reinstall. This will give the clearance necessary to install the drivers side downpipe (see below).



24. Check the entire length of the trans line to the back of the car to make sure no contact is being made anywhere. If it is, make a slight bend as needed to give clearance.
25. Install the driver side downpipe up into the car feeding the black oxygen sensor wire up towards the front of the engine. When sliding this side in you have to start to line up the crossover tube at the same time. This will require some finessing to slide the pipes together and the downpipe up into the studs at the same time. Be patient and take your time.

NOTE: the driver side, position one (grey wire) oxygen sensor can be removed to aid in installation but note that it will be difficult to reinstall once the pipe is in. This will require oxygen sensors sockets, open ended wrenches and lots of patience.
26. Now that the downpipes are installed loose in the car with the crossover tube engaged, verify that you haven't forgotten to install the band clamp.
27. Install the remaining 15 mm. nuts on the turbocharger housings. Torque these bolts in a crisscross fashion doing a little at a time and then switching to the other side. Go back and forth until all eight bolts are tight.
28. Reinstall driver side second position oxygen sensor that is hanging in the vehicle. **It is best to turn it backwards approximately four turns before inserting it into the pipe so that the wires aren't twisted when it is fully installed. On M6 cars, it may be necessary to loosen the O2 harness from stud on transmission bolt above O2 sensor connection to harness to give additional slack.**
29. Connect the passenger side second position oxygen sensor back to the connector on the side of the transmission and make sure to install the gray CPA.
30. Position band clamp for crossover tube and secure it in place.

Slide the muffler forward making sure to line up the band clamp and slip it onto the driver's side downpipe.

31. Use the provided M10 flange bolts and nuts to install the muffler to the passenger side downpipe, either using the OEM gasket, or a new gasket if you purchased the optional OEM Hardware Kit. Tighten these bolts evenly.
32. Tighten the driver side band clamp coupler using a 15 mm. deep socket.



33. Bend the passenger side turbocharger heat shield back into place slightly covering the bolts.\
34. Lower the vehicle and re-connect both oxygen sensors removed in the first step. Be sure to reconnect the gray CPAs.
35. Start vehicle and enjoy the beautiful sound. Note that there will be some burning smell from the grease and oil on your hands touching the exhaust pipes. This will dissipate after two or three heat cycles.