

PERFORMANCE SERIES CATBACK



FITS:

MY2020+ GM CORVETTE STINGRAY 6.2L V8, COUPE / CONVERTIBLE

MY2024+ GM CORVETTE ERA1 6.2L V8, COUPE / CONVERTIBLE

CONGRATULATIONS ON THE PURCHASE OF THE FINEST PERFORMANCE EXHAUST SYSTEM AVAILABLE FOR THE C8 CORVETTE. DESIGNED, MANUFACTURED AND ASSEMBLED WITH GREAT PRIDE IN THE USA.



INSTALLATION TIME

INSTALLATION TIME IS ESTIMATED AT APPROXIMATELY **3 HOURS** WITH A LIFT. ACTUAL TIME MAY VARY DEPENDING ON EXPERIENCE WITH THE VEHICLE AND ITS COMPONENTS.



DIFFICULTY

INSTALLATION DIFFICULTY IS RATED AS MODERATE (2/5). IT IS RECOMMENDED TO HAVE A 2ND PERSON ASSIST IN REMOVING AND INSTALLING THE REAR BUMPER.



AUTOSPEED WANTS YOU TO FULLY ENJOY YOUR NEW EXHAUST, SO PLEASE **READ THIS MANUAL PRIOR** TO INSTALLATION.

IF YOU HAVE ANY QUESTIONS OR NEED ASSISTANCE, PLEASE CONTACT TECH SUPPORT AT (856) 772-9500 OR EMAIL US ONLINE AT INFO@AUTOSPEED.US



TOOLS / SUPPLIES REQUIRED

- RATCHET, 1/4 DRIVE, 3/8 DRIVE
- EXTENSIONS, 1/4 DRIVE, 3/8 DRIVE
- SWIVELS, 1/4 DRIVE, 3/8 DRIVE
- 7MM SHALLOW SOCKET
- 10MM DEEP SOCKET
- 13MM DEEP SOCKET
- 15MM DEEP SOCKET
- M3, M5 HEX KEYS / BITS
- T15, T25 TORX SOCKET BIT / DRIVER
- FLATHEAD SCREWDRIVER
- LONG PRY BAR
- LARGE CHANNEL LOCKS
- PUSH CLIP REMOVAL TOOL
- KROIL, PB BLASTER, WD40 OR EQUIVALENT LUBRICANT



SAFETY PRECAUTIONS



FOLLOW ALL FACTORY RECOMMENDATIONS FOR JACKING AND LIFTING THE VEHICLE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY AND/OR DEATH. ALWAYS ENSURE A SAFE WORK AREA.



DO NOT SERVICE THE EXHAUST SYSTEM WHILE IT IS STILL HOT. ALLOW THE VEHICLE TO FULLY COOL TO AVOID BEING BURNED.

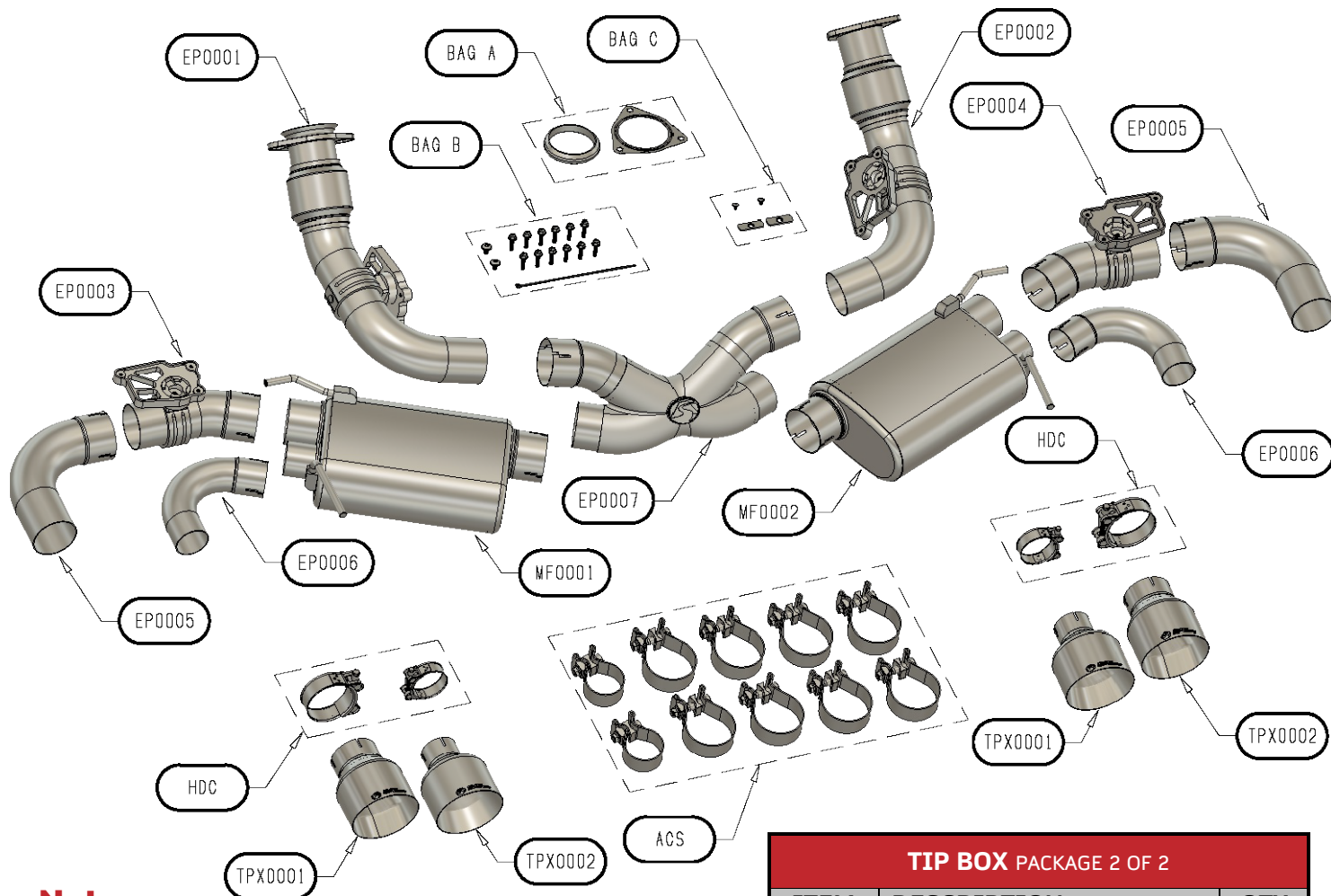


ALWAYS WEAR EYE PROTECTION WHEN WORKING ON AND UNDER THE VEHICLE.



WEAR PROTECTIVE GLOVES TO AVOID INJURY AND TO ELIMINATE OILS AND GREASES THAT MAY CAUSE STAINING.

THANK YOU FOR YOUR CONFIDENCE IN CHOOSING AUTOSPEED



Note

PLEASE CONFIRM **ALL** COMPONENTS ARE PRESENT PRIOR TO INSTALLATION. IF ANYTHING IS MISSING OR DAMAGED, PLEASE CONTACT YOUR SALES CENTER.

MAIN BOX PACKAGE 1 OF 2		
ITEM	DESCRIPTION	QTY
EP0001	EXHAUST PIPE, PRIMARY, DRIVER	1
EP0002	EXHAUST PIPE, PRIMARY, PASSENGER	1
EP0003	EXHAUST PIPE, NPP VALVE, DRIVER	1
EP0004	EXHAUST PIPE, NPP VALVE, PASSENGER	1
EP0005	EXHAUST PIPE, TIP TUBE, 3", DRIVER/PASSENGER	2
EP0006	EXHAUST PIPE, TIP TUBE, 2.25", DRIVER/PASSENGER	2
EP0007	X PIPE, CAST CROSSOVER	1
MF0001	MUFFLER ASSEMBLY, DRIVER	1
MF0002	MUFFLER ASSEMBLY, PASSENGER	1

TIP BOX PACKAGE 2 OF 2		
ITEM	DESCRIPTION	QTY
TPX0001	TIP 4.5" DIAMETER, 3" INLET	2
TPX0002	TIP 4.5" DIAMETER, 2.25" INLET	2
HDC	HEAVY DUTY CLAMP TIPS, 3"	2
	HEAVY DUTY CLAMP TIPS, 2.25"	2

HARDWARE BOX INSIDE MAIN BOX		
ITEM	DESCRIPTION	QTY
BAG A	GASKET, DRIVER SIDE	1
	GASKET PASSENGER SIDE	1
BAG B	M6 X 25MM ACTUATOR BOLTS (12)	12
	M8 X 12MM FLANGE BUTTON HEAD SCREW	2
	ZIP TIE	1
BAG C	ACTUATOR CONTROL BLADES (2)	2
	M5 X 8MM, FLANGE BUTTON HEAD SCREW (2)	2
ACS	EXHAUST CLAMPS, ACCUASEAL 3"	8
	EXHAUST CLAMPS, ACCUASEAL 2.25"	2

REMOVING THE FACTORY CATBACK EXHAUST

- Raise and support the vehicle, see lifting/jacking instructions in the owners and service manual
- Remove rear wheels

REAR WHEEL MOLDING REMOVAL

- Item [1] - Using 7mm socket, remove rear wheel opening molding screw (1x)
- Item [2] - Rear Wheel Opening Molding, starting from the top use a trim type release tool to release the spring clips (5x). Then rotate lower corner of molding towards rear shock and front of vehicle to avoid breaking locking tab, pull molding away from vehicle
- Repeat for other side of vehicle

REAR AIR DEFLECTOR REMOVAL

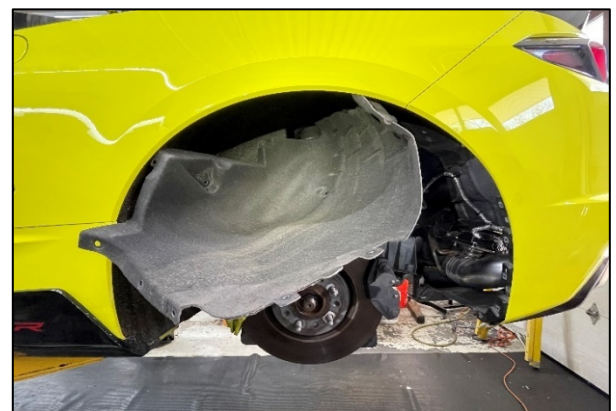
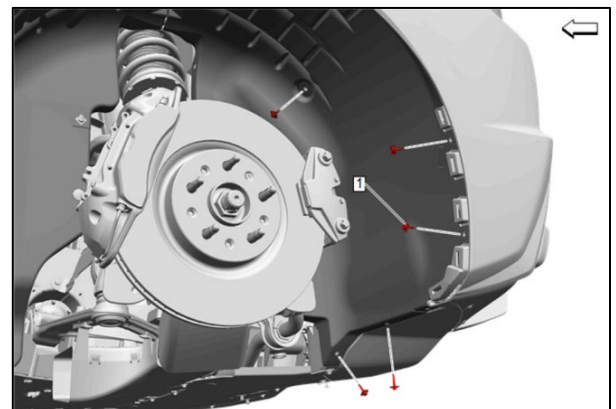
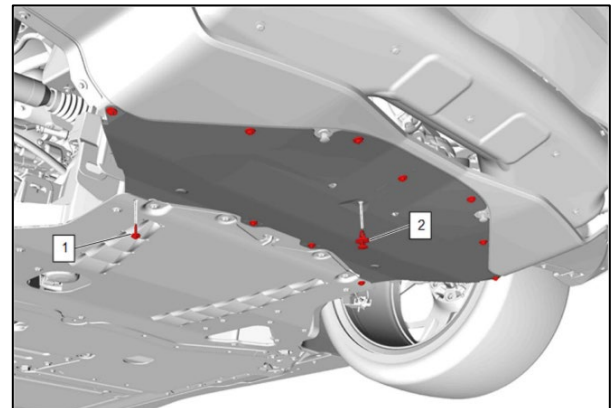
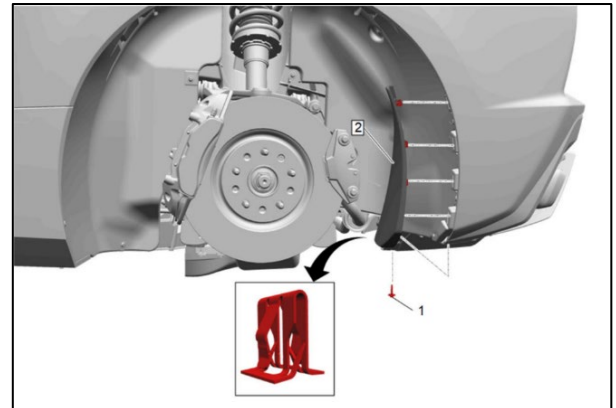
- Item [1] - Deflector screw(s), Using 7mm socket, remove (11x)
- Item [2] - Retainer, using small flat blade screwdriver or panel fastener tool, pry the center portion down and remove, then gently pry out the female retainer and out of the deflector (1x)

REAR BUMPER FASCIA REMOVAL

- Item [1] - Wheel liner screw(s) Lower, Using 7mm socket, remove (2x)
- Item [1] - Wheel liner screw(s) Upper, Using T15 Torx Bit socket, remove (3x)

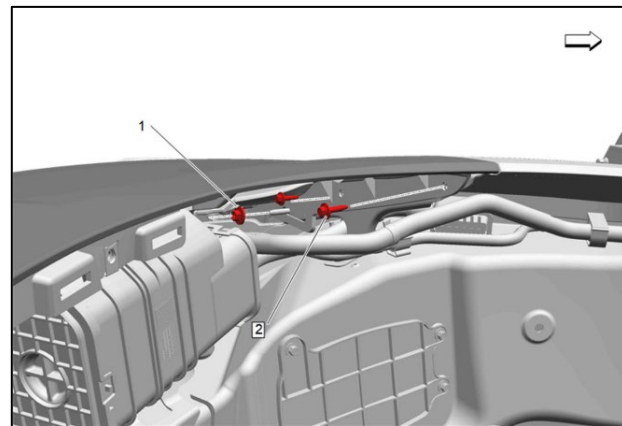


NOTE OPTIONAL, you can remove additional lower screw using 7mm socket (1x) and additional Torx screws (2x) and upper center plastic pop retainer (1x) per side to allow full inside liner access and fold back liner completely. (See Figure)

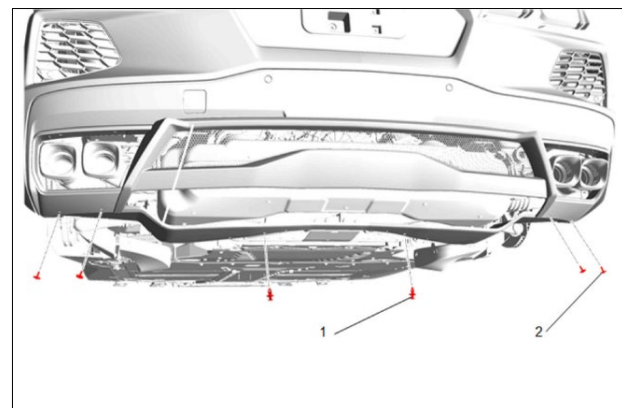


REAR BUMPER FASCIA REMOVAL (continued)

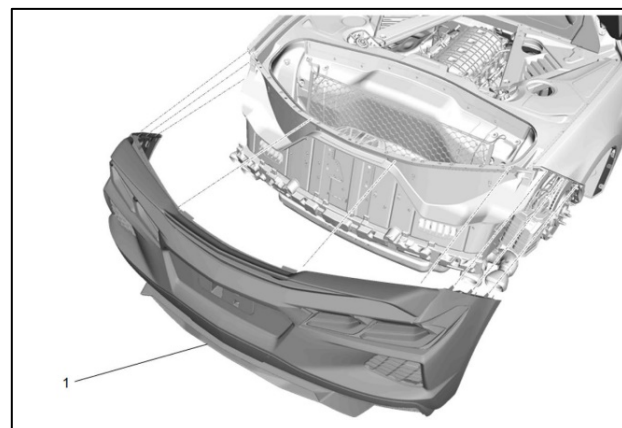
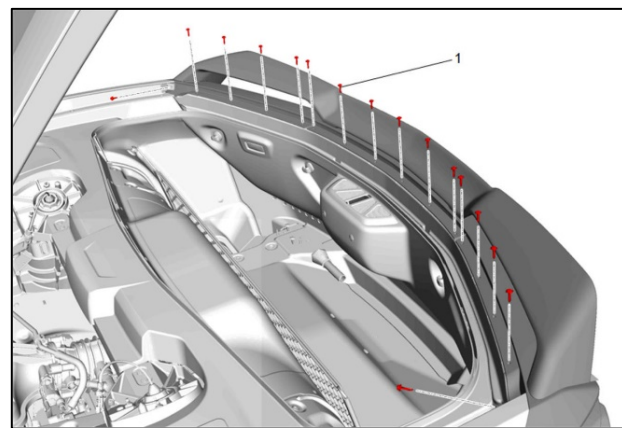
- Item [1] – Fascia Nut, With Wheel liner pulled back and away, using a flashlight locate the right-side rear fascia nut located at rear of vehicle. Remove using 10mm Deep socket on a ¼" universal and 12" extension, Remove Nut (1x)
- Item [2] – Fascia Bolts, using 7mm socket with universal (optional) and 12" extension, remove rear fascia bolts (2x)

**LOWER FASCIA DEFLECTOR REMOVAL**

- Item [1] – Plastic Bumper Fascia Retainer, Remove (2x)
- Item [2] – Bumper Fascia Bolt, using T15 Torx Bit (4x)

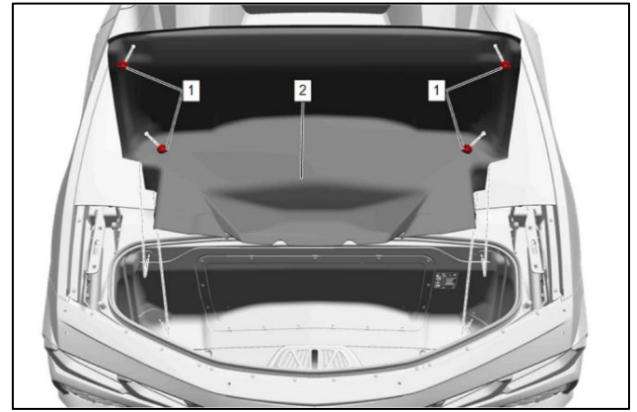
**REAR BUMPER FASCIA REMOVAL (continued)**

- Item [1] – Rear Bumper Fascia Bolts, using T15 Torx Bit remove (16x)
- NOTE there is a bolt in the corners
- Apply two layers of masking tape to the painted surface of the left and right quarter panel to prevent paint damage to the quarter panel.
- Item [1] – Release the 3 left and right-side rear bumper fascia tabs from the rear bumper fascia reinforcement by pulling rearward and upward to release the fascia from the mounting flanges.
- Item [1] – Rear Bumper Fascia, with the help of a friend, pull back bumper and disconnect the (3) electrical connectors. Slide the red lockers toward rear of connector, then just in front of the red lockers there are locking tabs that must be firmly pressed down while gently pulling the connectors apart. Note sometimes it is necessary to push the connectors together and then try to separate them
- Set Fascia on an appropriate stand or open area where fascia will not be damaged or scratched

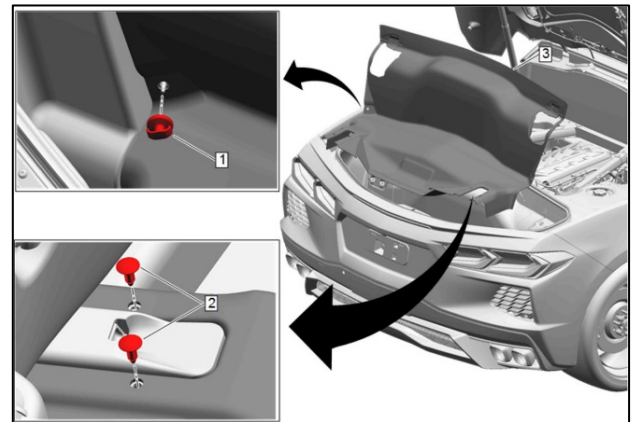
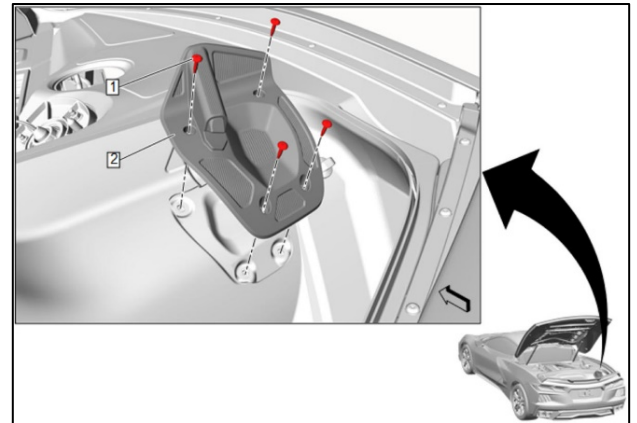


REAR COMPARTMENT LINER (CONVERTIBLE)

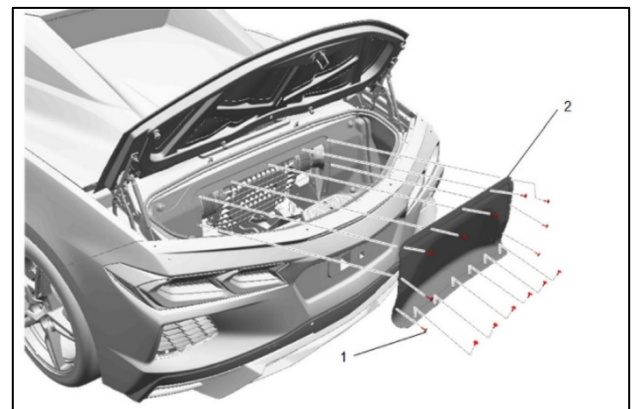
- Item [1] – Convenience Net Retainer, remove the convenience net retainers on each side by twisting them counter-clockwise by hand (4x)
- Item [2] – Main Carpet Panel, fold back the upper weatherstrip from the cover and carefully remove panel from the studs and out of trunk

**REAR COMPARTMENT LINER (COUPE)**

- Item [1] – Remove Roof Panel Stowage Bracket Bolts (4x)
- Item [2] – Roof Panel Stowage Bracket, lift and set aside (2x)
- Item [1] – Convenience Net Retainer, remove the convenience net retainers on each side by twisting them counterclockwise by hand (2x)
- Item [2] – Rear Compartment Side Trim Retainer, using a flat bladed plastic trim tool, carefully pry up (4x)
- Item [3] – Main Carpet Panel, fold back the upper weatherstrip from the cover and carefully remove panel from the studs and out of trunk

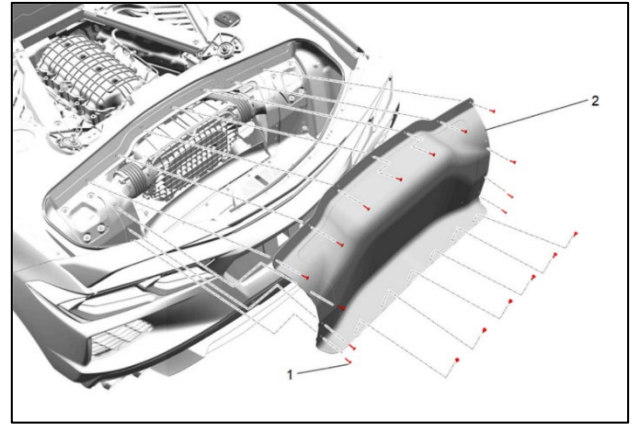
**AIR CLEANER ACCESS PANEL (CONVERTIBLE)**

- Item [1] – Air Cleaner Access Cover Screws, using T15 Torx Bit remove (15x)
- Item [2] – Air Cleaner Access Cover, remove (1x)



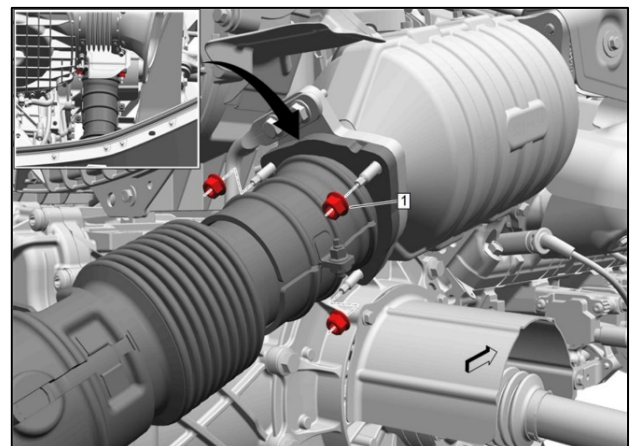
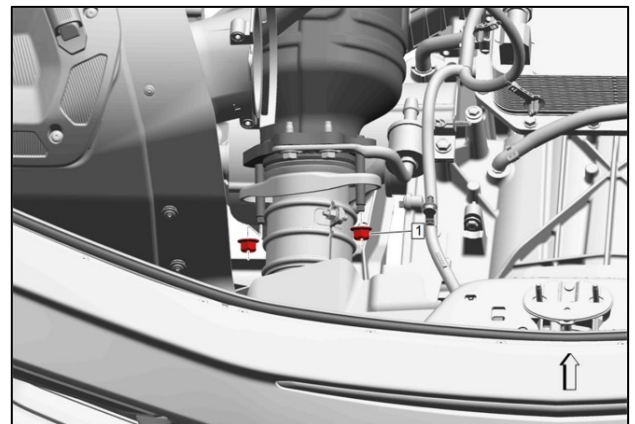
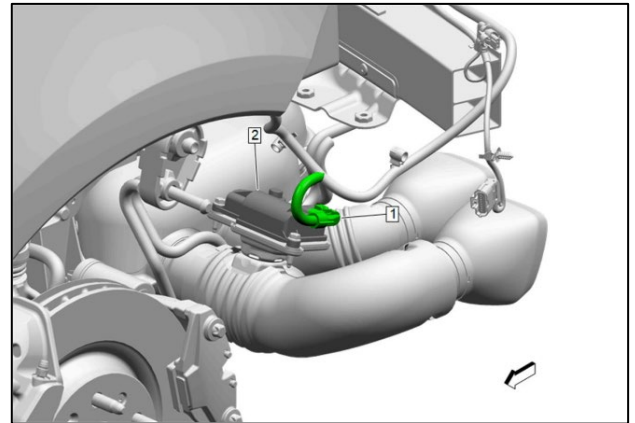
AIR CLEANER ACCESS PANEL (COUPE)

- Item [1] – Air Cleaner Access Cover Screws, using T15 Torx Bit remove (19x)
- Item [2] – Air Cleaner Access Cover, remove (1x)



EXHAUST REMOVAL (AFM / NPP EQUIPPED)

- Item [1] – NPP Valve Connector, disconnect the electrical connector by sliding gray locker tab rearwards away from valve and then press down on locking tab to release the connector from the left and right side exhaust control valve (NPP) actuators (2x)
- Item [1] – Exhaust System Driver Side Nuts, using 15mm Deep Socket remove (2x)
- **NOTE** a swivel socket with extension works well if available.
- Item [1] – Exhaust System Passenger Side Nuts, using 13mm Socket remove (3x)



EXHAUST REMOVAL (AFM / NPP EQUIPPED) (continued)

- Support the exhaust system by placing a jack under the muffler
- Item [1] – Rubber Insulator Mount, Spray exhaust rubber front insulators with PB Blast or equivalent lubricant, Slide the insulators from the vehicle body mount Item [2]. You can leave the mounts on the muffler until you are ready to transfer to the AutoSpeed Mufflers (2x)



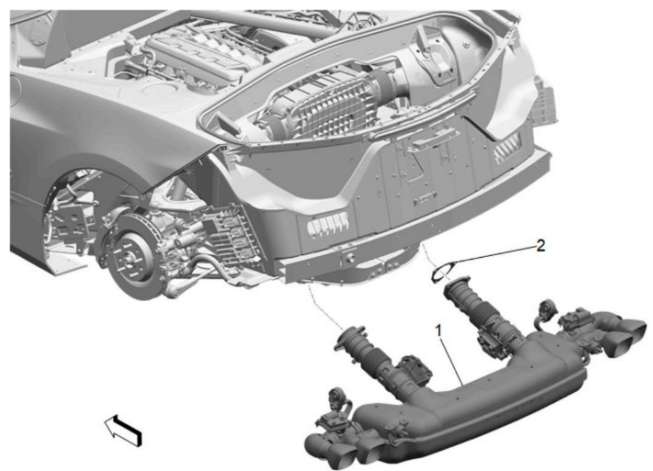
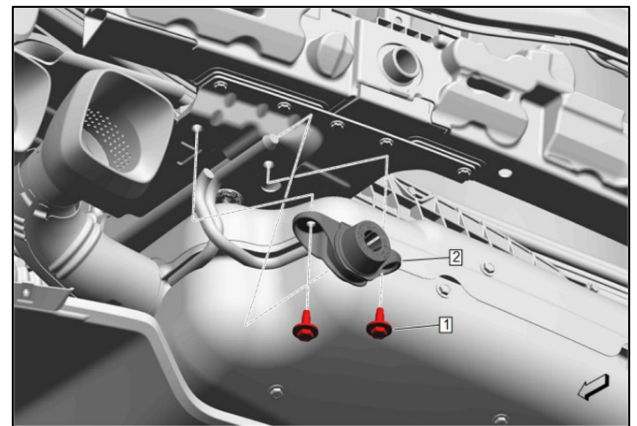
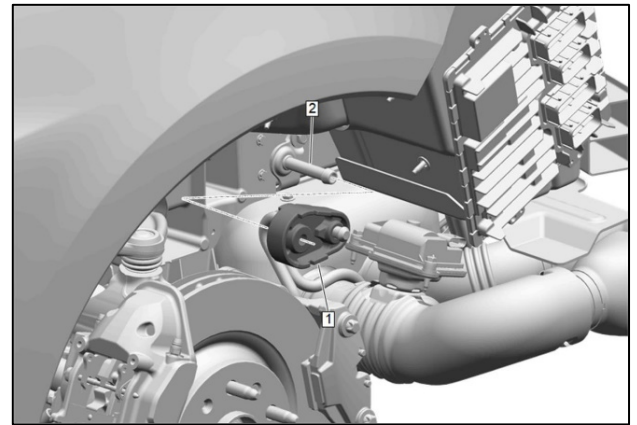
PRO TIP: Using large channel lock pliers or a pry bar may help Insulator removal, be careful not to tear/damage the insulator.

- Item [1] – Exhaust Muffler Hanger Bracket Bolt, using 13mm Socket remove (4x)
- Item [2] – It is necessary to remove the exhaust rear muffler insulators from the exhaust muffler, however, leave them installed for orientation purposes and transfer them to the new mufflers when ready.



NOTE ORIENTATION, of muffler insulators prior to removing from the factory exhaust system

- Item [1] – Exhaust system, lower the factory exhaust assembly and disconnect the electrical connectors at the two center cylinder deactivation valves, (AFM) exhaust control valve actuators. Disconnect the electrical connector by sliding gray locker tab rearwards away from valve and then press down on locking tab to release the connector from the left and right side (AFM) actuators (2x)
- Item [2] – Passenger Exhaust Gasket, Remove and Discard



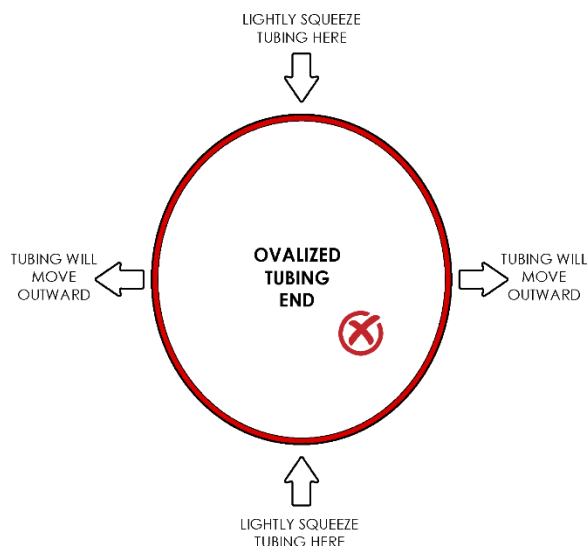
ASSEMBLY TIPS

OVALIZED . DEFORMED TUBING END

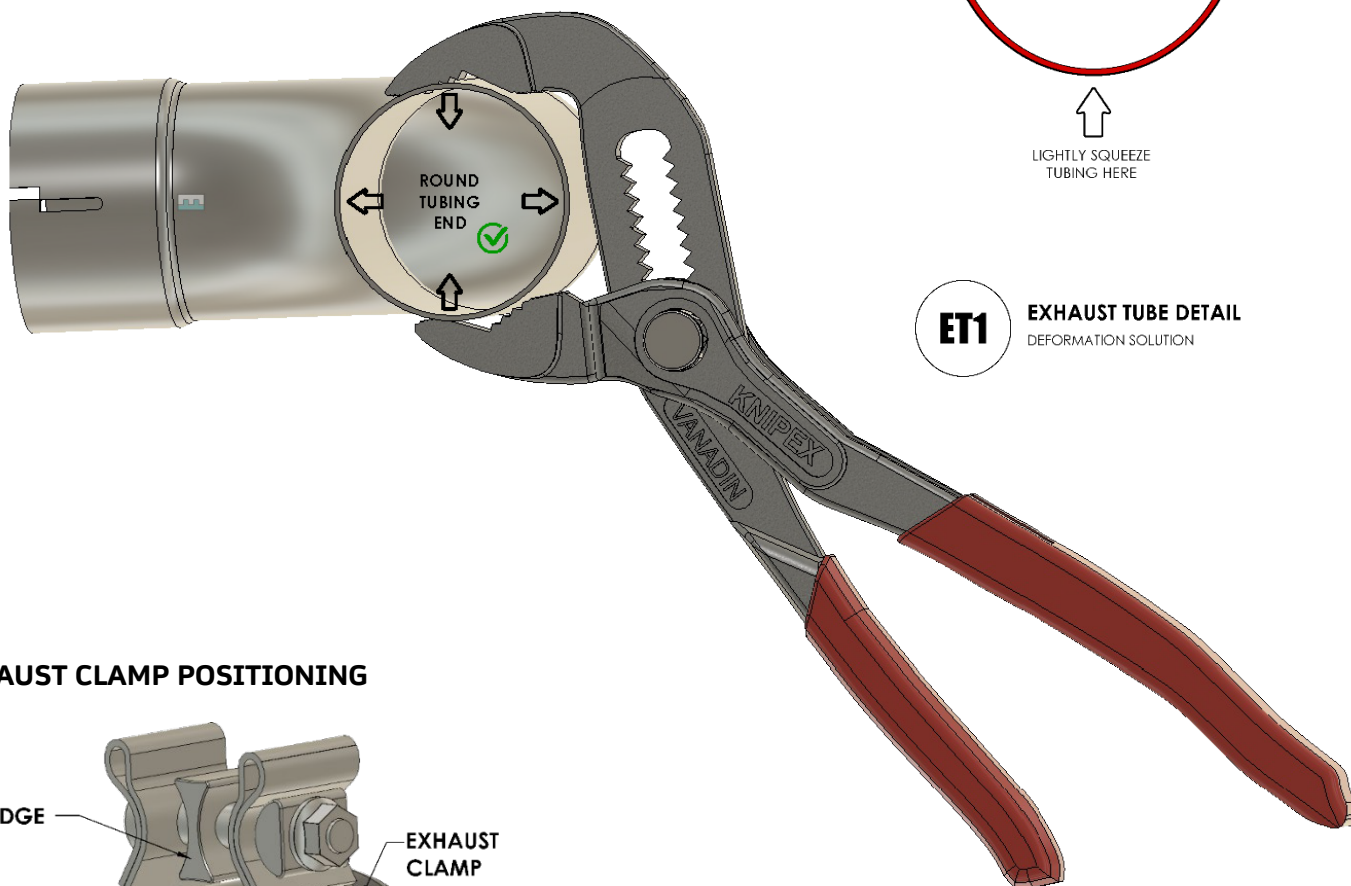


NOTE due to the nature of tight mandrel bends, temperature changes and shipping may cause the ends of the tubing to get slightly ovalized.

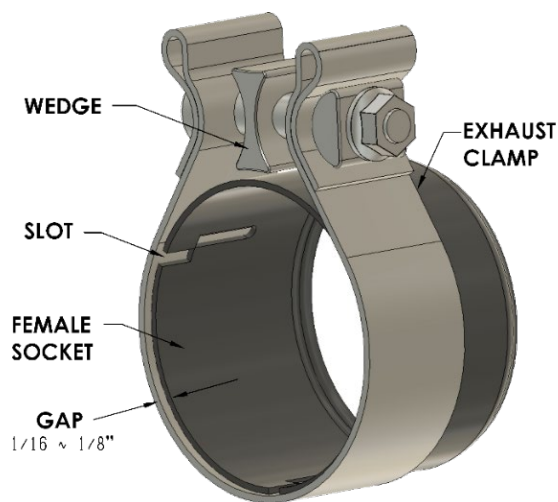
This is normal and can easily be remedied during installation. Using a large channel lock plier or c-clamp, **SLIGHTLY** squeeze the tubing at the 12 and 6 O'clock positions, approximately 1" back from the end to make it round. See Detail **ET1**.


ET1

EXHAUST TUBE DETAIL
DEFORMATION SOLUTION



EXHAUST CLAMP POSITIONING


EC1

EXHAUST CLAMP DETAIL
POSITION AND ORIENTATION



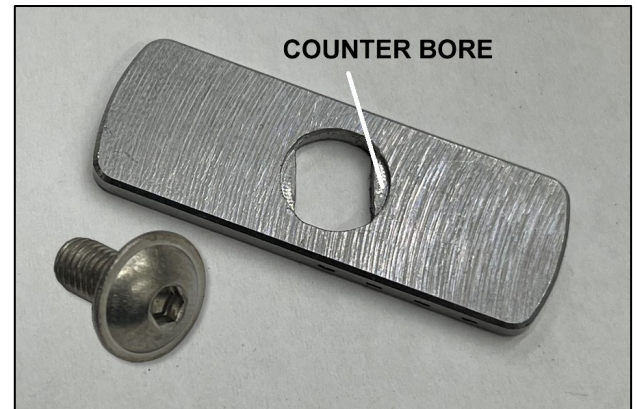
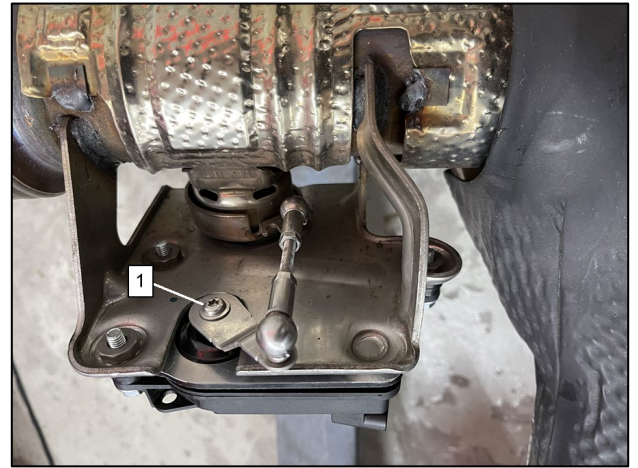
NOTE The orientation **AND** position of the exhaust clamps is critical to providing a leak free seal.

Make sure the **WEDGE** is positioned between adjacent tubing slots, never on top of a slot. Tightening on top of a slot can damage the component and void your warranty.

Pay particular attention to the placement of the clamp regarding the end of the joint. It may not be obvious, but the clamp edge should **OVERHANG** the end of the socket 1/16" ~ 1/8". Essentially you should not be able to see the edge of the tubing from the side. This ensures the clamp can fully compress the joint. See Detail **EC1**.

EXHAUST INSTALL (AFM / NPP EQUIPPED)

- Item [1] – Unbolt the factory AFM valve actuator lever arm from valve, using a T25 bit remove the torx bolt securing the arm to the motor, pry the arm off the actuator. Repeat for other side.
- Remove the AFM and NPP actuators from the factory exhaust system, using a 10mm socket remove the (3) M6 bolts per valve and set actuators aside.
- Install the supplied AFM actuator control blade (provided in hardware kit), Carefully press blade with counter bored side towards the valve shaft, be sure to align the flat keyways and carefully press down and install the M5 x 8 Flange Head Hex Screw (provided in hardware kit) using a 3mm Hex Bit. Torque to 5 Nm / 44 lb-in
- Looking at AFM and NPP motor actuators, rotate each motor fully clockwise. For NPP this is the install position, for the AFM actuators, rotate each blade shown in the photo (install position).
- Install each actuator into its respective machined billet holder with the provided M6 x 25mm Long Flange Head Hex Bolts, (3x), Torque to 8.5 Nm / 75lb-in
- Remove the AFM wiring brown press plug from the transmission casting.
- Install Passenger side primary pipe and new flat metal gasket (provided in hardware kit) and tighten the (3) nuts with 13mm socket or equivalent tool to 22 Nm / 16 lb-ft.
- It is recommended to plug in the AFM connector wiring at this time.
- Loosely install provided 8" zip tie to the AFM wiring and through the hole where the original brown press plug was connected. This will ensure the wiring does not contact any part of the exhaust



EXHAUST INSTALL (AFM / NPP EQUIPPED) (continued)

- Install Drivers side primary pipe and new donut gasket (provided in hardware kit). Re-Install factory 15mm Locking Nuts.



NOTE Only tighten slightly the (2) locking nuts such that the flared pipe is touching the donut gasket, but the pipe can still be moved around. Pay attention to ensure that the nuts are equal depth on the studs (ignoring this may create an odd angle to the donut gasket, causing leaks and potentially bending the studs)

- Plug in the AFM connector wiring at this time as it will be difficult to reach later.



PRO TIP: Measure 2" from the end of each primary pipe; with a sharpie marker, mark tubing all around perimeter. So, when the pipe is fully inserted into the X-Pipe you should be able to see the mark 1/8" to 3/16" from end of X-Pipe receiver. This is how you will know it is properly seated.

Failure to observe this will result in off center and poorly fitting tip locations..

- Place a 3" Exhaust clamp onto each side of the X-Pipe upper tubes. (Note clamp directions)
- Slide X-Pipe onto the passenger side primary pipe.
- Flex the driver's side primary pipe to the left, press into the upper left side X-Pipe. If needed tap the primary pipes with a rubber mallet to ensure they are seated all the way into the X-Pipe. Rotate the X-Pipe bottom towards the transmission to make it vertical.

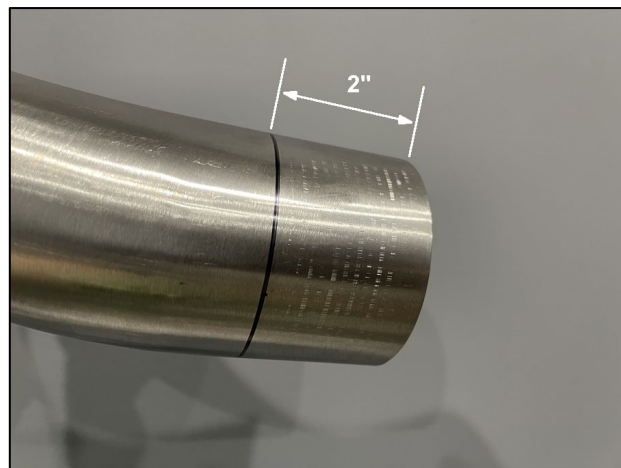


NOTE GAP of sharpie mark made in earlier step will be approximately 1/8" from end of XPipe Female Socket

Failure to observe this will result in off center and poorly fitting tip locations..

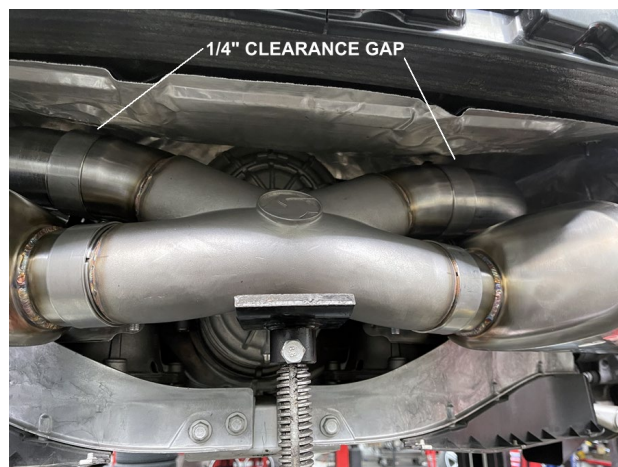
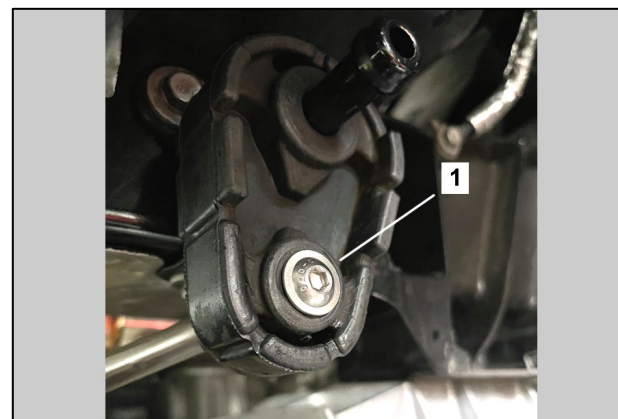
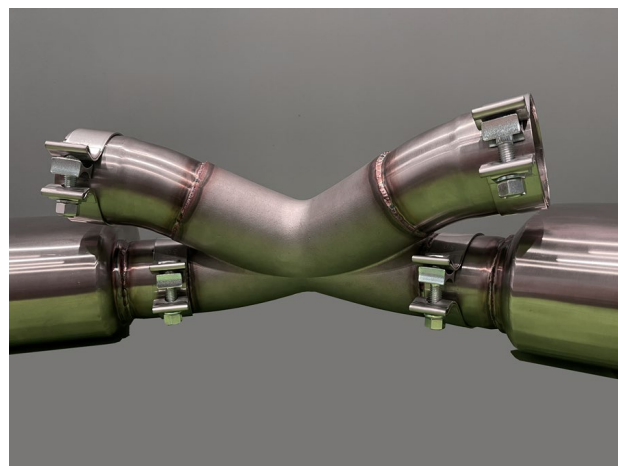


DO NOT TIGHTEN CLAMPS AT THIS TIME !



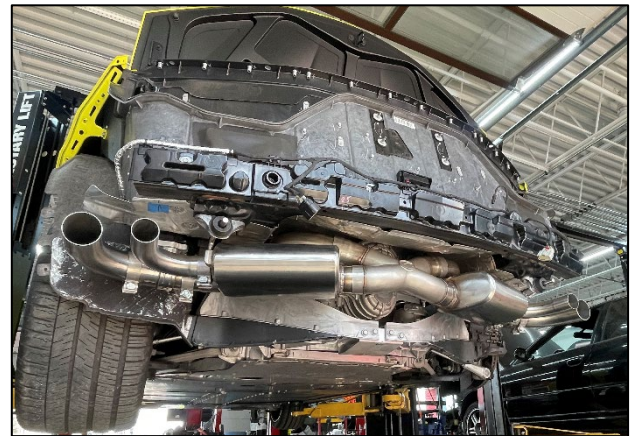
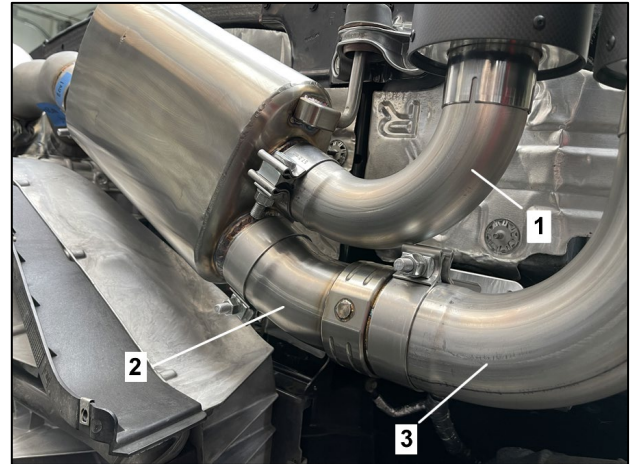
EXHAUST INSTALL (AFM / NPP EQUIPPED) (CONTINUED)

- Install Driver and Passenger mufflers, Place a 3" Exhaust clamp onto a muffler inlet (note orientation), Install muffler rear hanger into the front rubber mount (using some grease will help), then slide muffler into the lower X-Pipe. Make sure the X-Pipe male stub is fully seated against the mufflers.
- Install the provided M8 x 12mm Flange Head Button Socket screw into the end of the front hanger using M5 Hex Bit tighten 22 Nm / 16 lb-ft
- Install Rear factory hanger mount, note direction (tighten with M13 socket) 22 Nm / 16 lb-ft
- Using a jack or adjustable support stand under the center of the X-Pipe, raise the X-Pipe until the Drivers and Pass Primary pipes are approx. $\frac{1}{4}$ " from the heat shielding. At this point the mufflers should appear level. Ensure all pipes are inserted as far as they can go into the X-Pipe. Tighten all (4) X-Pipe 3" Exhaust clamps using M15 socket, Tq to 60lb-ft.
- Once tightened and jack/support lowered this clearance should increase to approx. $\frac{5}{8}$ ~ $\frac{3}{4}$ ".
- Mufflers and X-Pipe should appear level and look like photo



EXHAUST INSTALL (AFM / NPP EQUIPPED) (CONTINUED)

- Item [1] – Place a 2.25" Exhaust clamp on the inner outlet pipe and onto the muffler. Do not tighten, allow the outlet pipe to be rotated up and down.
 - Item [2] – Installing NPP Valve Pipes. Place a 3" Exhaust clamp on the inlet part of the NPP pipe, (Note Orientation). Slide NPP pipe onto the muffler outlet.
 - Item [3] – Install 3" outlet pipes. Place a 3" Exhaust clamp on the inlet part of the outlet pipe, (Note Orientation). Slide outlet onto the NPP pipe. Tighten, only slightly while still allowing the outlet pipe to be rotated up and down and in and out.
-
- Final tighten the nuts on Drivers side primary pipe with 15mm socket and extension.
 - **Note** Do not over tighten the nuts as the studs can be damaged and bent.
 - Level outlet pipes prior to bumper installation.
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- Install bumper cover only at this time. **DO NOT INSTALL** lower fascia and wheel liners yet, you will need access to the exhaust system clamps to be able to perform final adjustments.

**EXHAUST TIP INSTALLATION**

- Note the following photos have the rear bumper fascia removed for clarity.
- Start with the inner TIP since there is less freedom of movement. The Inner position will help align outer tips. Place a 60-63mm Tip clamp onto the outlet pipe, Note orientation. Install the inner tip onto the outlet pipe. Recommended Position is when the outlet pipe is even with the bottom of TIP Taper looking from inside (see pic next page).
- Place a 76-80mm Tip clamp onto the outer outlet pipe, Note orientation. Install the outer tip onto the outlet pipe. Recommended Position is when the outlet pipe is even with the bottom of TIP Taper looking from inside (see pic next page).

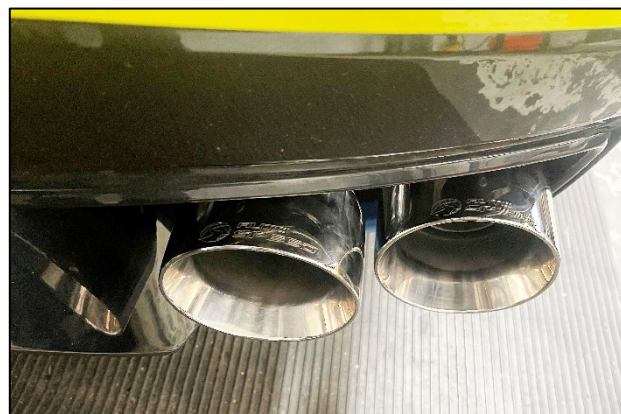
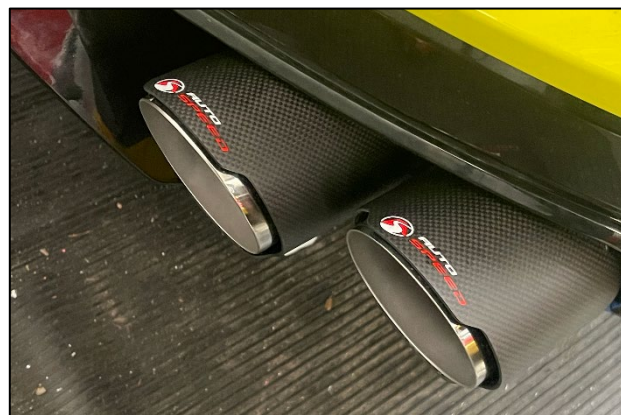
- Adjust and set the inner tip to level when viewing from the side, adjust the NPP valve and outlet pipe to make the outer tip parallel in relation to the inner tip.
- Once satisfied with all tip positions, tighten all exhaust clamps using M15 socket or wrench, TQ to 60 lb-ft.
- Tighten the Tip clamps to the pipe using M10 socket or wrench



NOTE After initial tightening, carefully try and rotate the tip by hand. If the tip rotates, re-center and further tighten clamp until tip is firm and can not be spun by hand. If testing the carbon fiber tips, please be careful to no crack the outer carbon shroud

Tip clamps may loosen after a drive cycle. Recheck and re-tighten the tip clamps after heat cycling using above method.

- Install remaining items removed during installation. Lower Deflectors, Fascia, Trunk and Wheel liners....



FINAL STEPS

CYLINDER DEACTIVATION (AFM) AND EXHAUST SOUND VALVE (NPP) CALIBRATION



The valves will require a **"RELEARN"** procedure according to GM TECHNICAL DOCUMENT ID #5406413. Failure to recalibrate the valves may result in a check engine light and damage the exhaust valves. The calibration is a quick and easy procedure performed by using a quality OBD scan tool. In the event you can not get access to a scan tool, please visit your nearest Chevrolet dealership.



NOTE: Upon the first few starts with the new system there may be a slight oil odor and smoke coming from the tips. This is completely normal as it is the lubrication used to mandrel bend the tubing. The vapors will burn off within a drive cycle or two. It is also normal to get some acoustical muffler roving to be emitted, this too will stop as the exhaust gasses firm up the roving after a few temperature cycles.

CONTACT

That's it, you are finished! Thank you for purchasing this AutoSpeed product. If you have any questions regarding this product or installation please do not hesitate to contact us via phone (856) 772.9500 or email info@autospeed.us.