BORLA PERFORMANCE INDUSTRIES
500 Borla Drive
Johnson City TN, 37604-7523
805-986-8600

Installation Guide for Ford Ranger Raptor

PN: 60742

******* Please compare the parts in the box with the bill of materials provided ***** to assure that you have all the parts necessary for this installation.**

These instructions have been written to help you with the installation of your Borla Performance exhaust system. Please read this document completely before beginning the installation of your system.

To ensure this part number fits your specific model year, please visit our website for the latest model year listings at www.BORLA.com

Thank you for purchasing a Borla Performance exhaust system.

Borla Performance Mid-Section Exhaust PN 60742 is designed for the Ford Ranger Raptor equipped with a 3.0L V6 twin turbo-charged engine and 2+4WD automatic transmission

NOTE: These components are compatible and will mate to the factory tailpipes.

Borla Performance Industries recommends that an exhaust shop or professional after market parts installer, who has all the necessary equipment, tools and experienced personnel needed for proper installation, should perform the installation of this system. However, if you decide to perform the installation, we recommend someone should help you. Ensure the installer uses all under car safety precautions including eye protection.

Please take time to read and understand the following…

By installing your Borla Performance exhaust system, you indicate that you have read this document and you agree with the terms stated below.

It is the responsibility of the purchaser to follow all installation instruction guidelines and safety procedures supplied with your Borla Performance exhaust system.

Borla Performance Industries assumes no responsibility for damages occurring from misuse, abuse, improper installation, improper operation, lack of responsible care, or all previously stated reasons resulting from incompatibility with other manufacturer's products and/or systems.

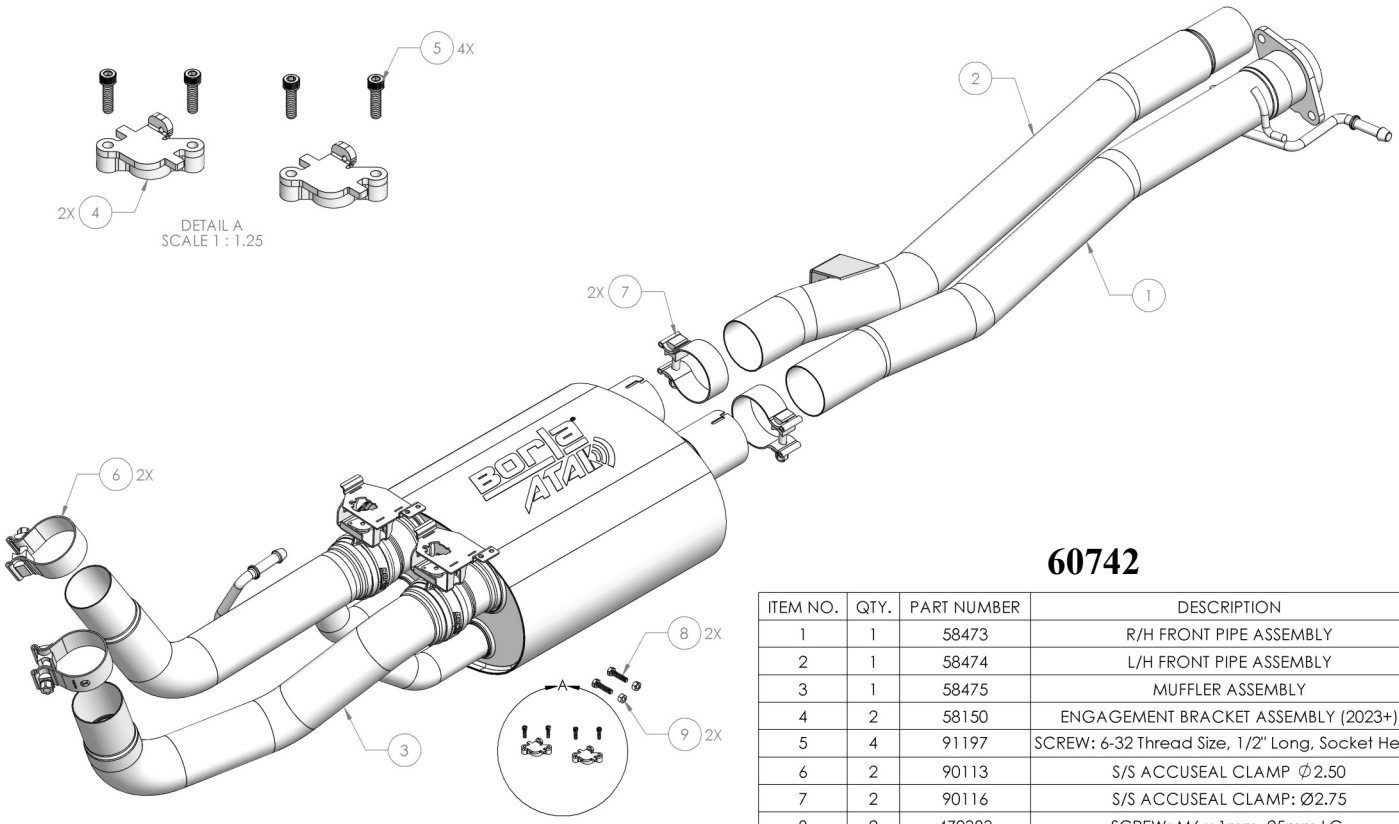
Included with your Borla Performance exhaust system is a warranty card. Please read it carefully before you begin any work on your vehicle. If you should have any questions regarding our warranty policy, installation, or any other matter pertaining to your new Borla Performance exhaust system, please give us a call at the number provided on the warranty card.

Minimum Required Tool List:

TOOLS:
1. 3/8” drive ratchet
2. 3/8” drive extension 6”
3. 7/64” Allen key
4. 10mm socket
5. 15mm deep well socket
6. 15mm box end wrench
7. Pry bar

SHOP SUPPLIES:
1. Spray lubricant

Borla Performance - Bill of Materials



60742

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	58473	R/H FRONT PIPE ASSEMBLY
2	1	58474	L/H FRONT PIPE ASSEMBLY
3	1	58475	MUFFLER ASSEMBLY
4	2	58150	ENGAGEMENT BRACKET ASSEMBLY (2023+)
5	4	91197	SCREW: 6-32 Thread Size, 1/2" Long, Socket Head
6	2	90113	S/S ACCUSEAL CLAMP ∅2.50
7	2	90116	S/S ACCUSEAL CLAMP: Ø2.75
8	2	470383	SCREW: M6 x 1mm, 25mm LG.
9	2	93004	NUT: HXHD, M6 X 1.00" PITCH, DIN 934

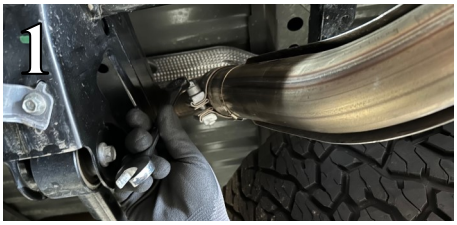
Caution!!! Never work on a hot exhaust system. Serious injury in the form of burns can result If the vehicle has been in use and the exhaust system is hot, allow vehicle to cool for at least 1 hour. Always wear eye protection when working under any vehicle.

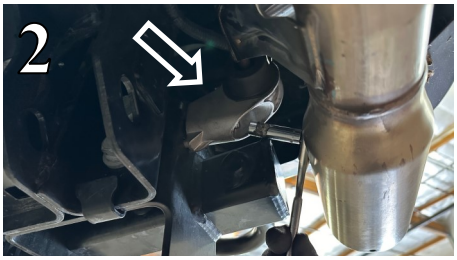
Note: It is our recommendation that you use a hoist or hydraulic lift to facilitate the installation of your new Borla Performance Exhaust System.

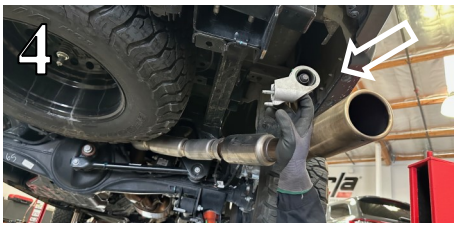
Taking all under car safety precautions, lift the vehicle using a hoist or hydraulic lift. Once this has been done, you may begin the removal of your old exhaust system from your vehicle.

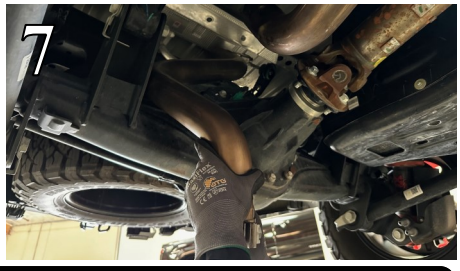
Note: Before removing the original exhaust system from your vehicle, please compare the parts you have received with the bill of materials provided on the previous page to assure that you have all the parts necessary for the installation of your new Borla Performance Exhaust System.

Note: With a used vehicle, we suggest a penetrating spray lubricant to be applied liberally to all exhaust fasteners and allowing a significant period of time for the chemical to lubricate the threads before attempting to disassemble.







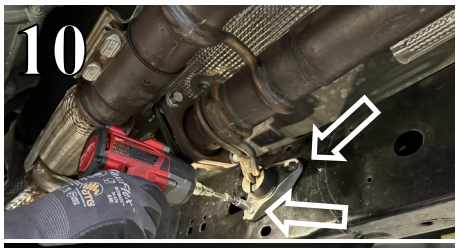


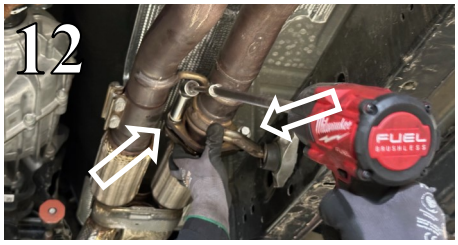
Original Exhaust System Removal

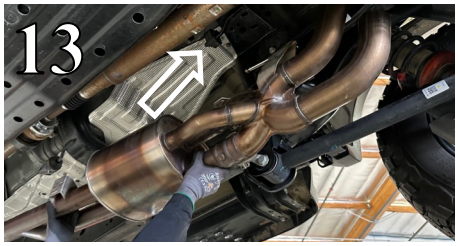
1. Lubricate all hangers, rubber isolators, bolts and nuts.
2. Loosen clamp that attaches the driver side tailpipe to the over axle pipe (Fig. 1).
3. Remove the hardware that attaches the original rubber isolator assembly to the vehicle. Lift up to release the hook on the original rubber isolator assembly and remove the driver side tailpipe from the vehicle (Figs. 2-3). Save hardware and isolator for re-installation.
4. Repeat Steps 2-3 to remove the passenger side tailpipe assembly (Fig 4).
5. Loosen clamp that attaches the driver side over axle pipe to the muffler assembly (Fig. 5).
6. Remove the hardware that attaches the original center rubber isolator assembly to the vehicle. Lift the isolator assembly upward so that it releases from the frame and remove the driver side over axle pipe (Figs. 6-7). Save hardware and isolator for re-installation.

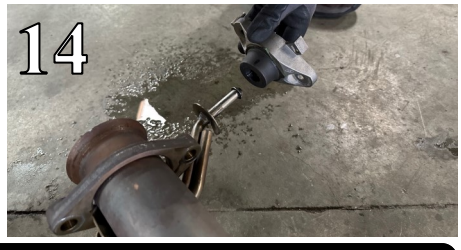
Original Exhaust System Removal Cont'd

7. Disconnect the electrical connector on the valve actuator and pull off the wire harness fastener from the threaded stud (Fig. 8).
8. Remove the hardware that attaches the original rubber isolator assembly to the muffler assembly. Lift up to release the hook on the original rubber isolator assembly (Fig. 9). Save hardware for installation of your Borla system.
9. Remove the hardware that attaches the original rubber isolator assembly to the vehicle (Fig. 10). Save hardware for installation of your Borla system.
10. Using a prybar or a screwdriver, pry up on the locking tab on the sleeve clamp toward the rear of the vehicle, then loosen the side of the clamp that attaches the muffler assembly inlet to the vehicle (Fig. 11).
11. Remove the hardware that connects the muffler assembly flange to the vehicle (Fig. 12). Save the hardware for installation of your Borla system.
12. Using a muffler stand or another person, slide the entire muffler assembly toward the rear of the vehicle, out of the clamp on the inlet, the original rubber isolator and out of the vehicle entirely (Fig. 13).
13. Remove the original rubber isolator assembly from the hanger on the muffler assembly (Fig. 14). Save the isolator for installation of your Borla system.









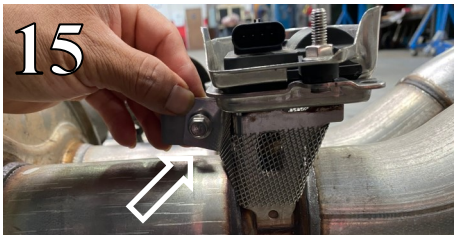
Original Exhaust System Removal Cont'd

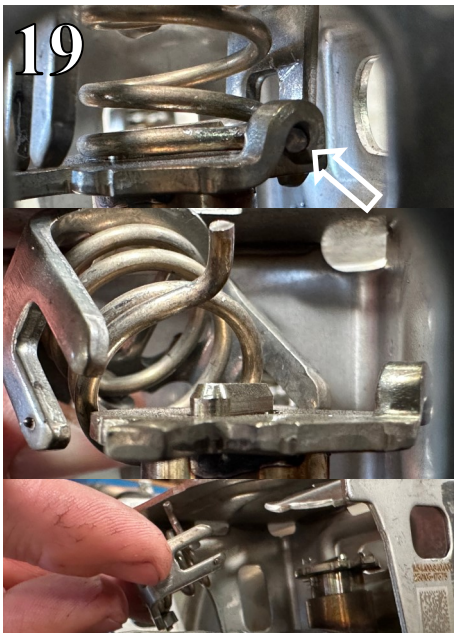
14. Loosen and remove the hardware that keeps the screen on the valve assembly and remove the screen (Fig. 15). Save the hardware and the screen for installation on your Borla system.

15. Loosen and remove the hardware that keeps the valve actuator in place (Fig. 16). Rotate the actuator counter-clockwise and remove it from the valve body (Fig. 17). Save the actuator for installation on your Borla system.

16. Use a screwdriver or a pick to move the end of the spring out of the valve bracket and remove the entire assembly from the vehicle (Figs. 18-19). Save the valve engagement spring assembly for installation on your Borla system.

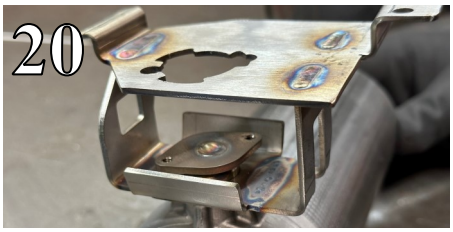
17. Original exhaust system removed.

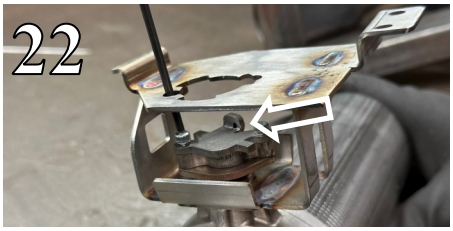


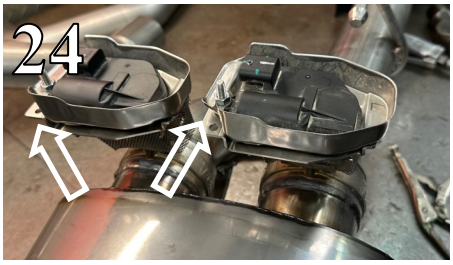


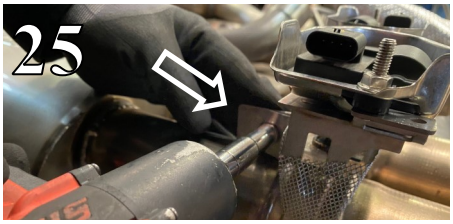
Borla Performance Mid-Section Exhaust Installation

1. Orient components on shop floor according to Borla bill of materials drawing on page 2.
2. Using the two provided Allen screws (**PN 91197**) attach the **Engagement Bracket Assembly (2023+)** to the top of the valve, with the spacer between the two (Figs. 20-22). Install your original valve engagement spring by feeding the end of the spring into the slot in the bracket that you installed and place the forks of the original valve engagement spring over the two edges that extend out from the bracket.
3. With your original valve engagement spring installed, attach your original valve actuator to the assembly by lining up the cutout on the engagement spring and the piece that extends on the bottom of the actuator. Firmly press down on the actuator and rotate the actuator clockwise until the hole on the top of the valve assembly lines up with the one on the actuator (Fig. 23).
4. Feed the **Screw** (**PN 470383**) up through the bottom of the bracket and using the provided **Nut** (**PN 93004**) tighten the two together to fasten the actuator to the valve assembly (Fig. 24). <u>You will have threads showing on the top of the actuator, this is to give the actuator wiring harness a place to attach to.</u>
5. Install the original valve screen onto the valve assembly as shown (Figs. 25 -26).



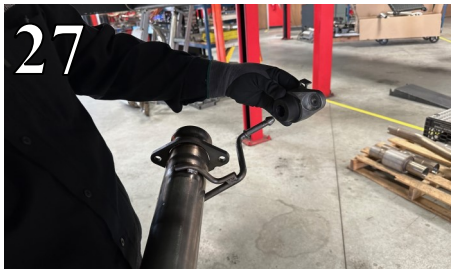


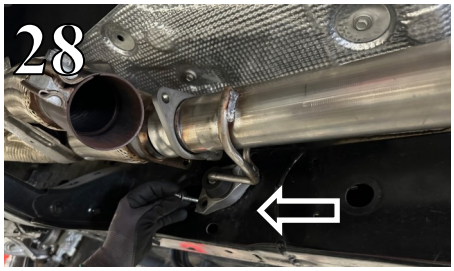


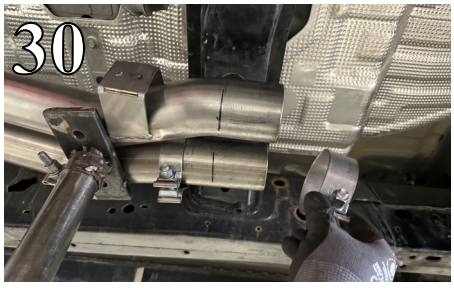


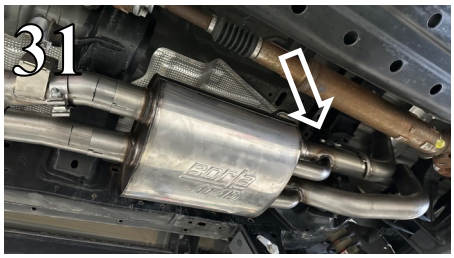
Borla Performance Mid-Section Exhaust Installation Cont'd

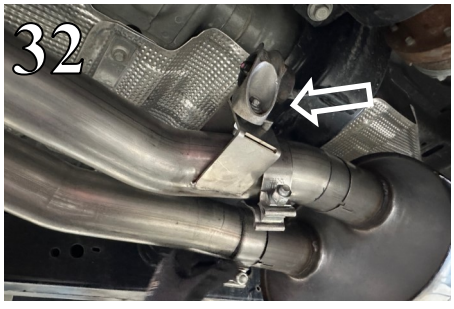
6. Install the original rubber isolator assembly onto the hanger of the **R/H Front Pipe Assembly** (Fig 27).
7. Install the **R/H Front Pipe Assembly** by first mating the flange to the vehicle. Then attach the original rubber isolator assembly to the frame by allowing the hook to grab the frame. Loosely tighten the original hardware on the flange and rubber isolator assembly (Fig. 28).
8. Insert the reduced end of the **L/H Front Pipe Assembly** into the original sleeve clamp (Fig. 29). Do not tighten the clamp.
9. Place a clamp over each of the expanded ends of the **Muffler Assembly** and insert the inlets to the **L/H and R/H Front Pipe Assemblies**. Insert the hanger into the original rubber isolator (Figs. 30-31). Do not tighten the clamps.
10. Install the original rubber isolator assembly onto the **L/H Front Pipe Assembly** by aligning the isolator assembly to the bracket on the **L/H Front Pipe Assembly** and use the original hardware to loosely attach it (Fig. 32).
11. Not shown: Attach the electrical connectors to each valve actuator and attach the wire harness fastener onto the exposed threads of **Screw (PN 470383)**.











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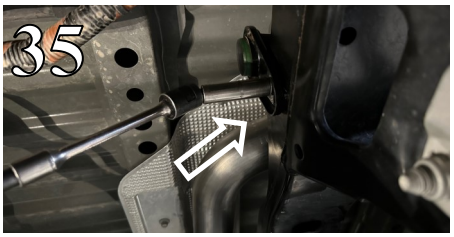
Borla Performance Mid-Section Exhaust Installation Cont'd

12. The following installation instructions work for both the stock tailpipes as well as Borla optional tailpipe kits **60743BC, 60743CB** and **60743CFBA**.
13. Install the original rubber isolator assembly onto the **Crossover Tube Assembly** (Fig. 33).
14. Place a clamp over the expanded end of the **Crossover Tube Assembly** and feed it up and over the axle, inserting the inlet to the driver side of the **Muffler Assembly**. Attach the original rubber isolator assembly to the frame by allowing the hook to grab the frame. Loosely tighten the original hardware on the rubber isolator assembly (Figs. 34-35). Do not tighten the clamp.
15. Place a clamp over the expanded end of the **R/H Inlet Elbow Tube** and insert the inlet to the passenger side of the **Muffler Assembly** (Fig. 36). Do not tighten the clamp.
16. Install the original rubber isolator assembly onto the hanger of the **L/H Tailpipe Assembly**. Place a clamp over the expanded end of the **L/H Tailpipe Assembly** and insert the inlet to the **Crossover Tube Assembly**. Loosely tighten the original hardware on the rubber isolator assembly (Figs. 37-38). Do not tighten the clamp.
17. Repeat step 16 for installation of **R/H Tailpipe Assembly**.
18. Check your exhaust system for proper clearance under the vehicle and also for tip alignment (Fig. 39).
19. Once position has been determined to be correct, start at the front of the vehicle and tighten the original hardware then tighten the Accuseal clamps to 32-35 ft. lbs.
20. Before starting your vehicle, make sure to check all wires, hoses, brake lines, body parts and tires for safe clearance from the exhaust system.
21. Start the vehicle and check for any leaks. If any leaks are found, determine cause (such as loose or incorrectly positioned clamp) and repair as necessary.



WARNING: Use extreme caution during installation. Torque all fasteners according to manufacturer's torque values and tightening sequence. DO NOT use air impact tools to tighten fasteners on Borla Performance Exhaust Systems. Use of such tools may result in bent flanges or gasket contact areas leading to exhaust leaks.

NOTE: When you first start your vehicle after the installation of your new Borla Performance Exhaust System, there may be some smoke and fumes coming from the system. This is a protective oil based coating used in the manufacturing of mandrel bent performance exhaust tubing. This is not a problem and will disappear within a very short period of time after the exhaust has reached normal operating temperatures.