

Installation Guide for Ford Bronco Raptor PNs 140934, 140934CB, 140935



******* 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 Cat-Back Exhaust PNs 140934, 140934CB, and 140935 are designed for the Ford Bronco Raptor equipped with a 3.0L V6 twin turbo-charged engine and 2+4WD automatic transmission.

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:

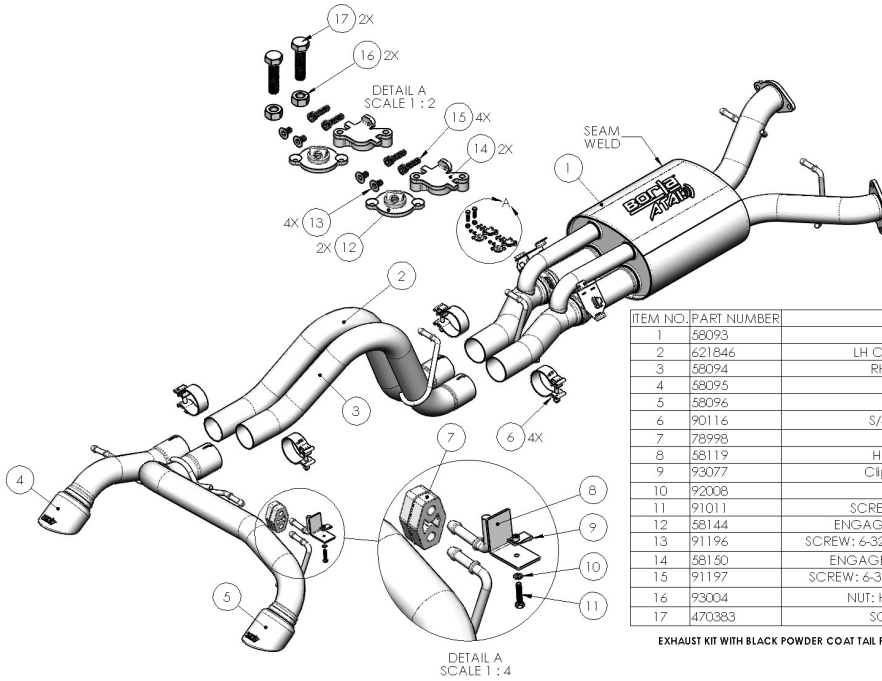
1. 3/8" drive ratchet
2. 3/8" drive extension 6"
3. 7/64" Allen key
4. T15 Torx screwdriver
5. 10mm socket

6. 13mm deep well socket
7. 15mm deep well socket
8. Pry bar

SHOP SUPPLIES:

1. Spray lubricant

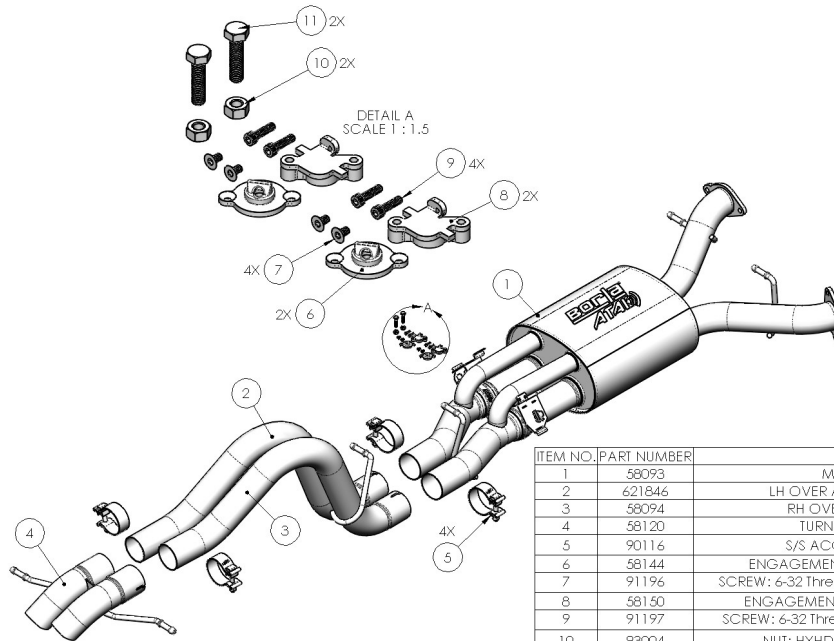
Borla Performance - Bill of Materials



140934/CB

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	58093	MUFFLER ASSEMBLY	1
2	621846	LH OVER AXLE PIPE: Ø2.75 X 39.64in	1
3	58094	RH OVER AXLE PIPE ASSEMBLY	1
4	58095	LH TAIL PIPE ASSEMBLY	1
5	58096	RH TAIL PIPE ASSEMBLY	1
6	90116	S/S ACCUSEAL CLAMP: Ø2.75	4
7	78998	RUBBER ISOLATOR	1
8	58119	HANGER/BRACKET ASSEMBLY	1
9	93077	Clip-on Nut: M6 Size, 1mm Pitch	1
10	92008	WASHER: FLAT, M6	1
11	91011	SCREW: CAP, HXHD, M6x30mm CL 8.8	1
12	58144	ENGAGEMENT BRACKET ASSEMBLY (2022)	2
13	91196	SCREW: 6-32 Thread Size, 1/4" Long, Torx Flat Head	4
14	58150	ENGAGEMENT BRACKET ASSEMBLY (2023+)	2
15	91197	SCREW: 6-32 Thread Size, 1/2" Long, Socket Head	4
16	93004	NUT: HXHD, M6 X 1.00" PITCH, DIN 934	2
17	470383	SCREW: M6 x 1mm, 25mm LG.	2

EXHAUST KIT WITH BLACK POWDER COAT TAIL PIPES WILL BE 140934CB.



140935

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	58093	MUFFLER ASSEMBLY	1
2	621846	LH OVER AXLE PIPE: Ø2.75 X 39.64in	1
3	58094	RH OVER AXLE PIPE ASSEMBLY	1
4	58120	TURNDOWN TIP ASSEMBLY	1
5	90116	S/S ACCUSEAL CLAMP: Ø2.75	4
6	58144	ENGAGEMENT BRACKET ASSEMBLY (2022)	2
7	91196	SCREW: 6-32 Thread Size, 1/4" Long, Torx Flat Head	4
8	58150	ENGAGEMENT BRACKET ASSEMBLY (2023+)	2
9	91197	SCREW: 6-32 Thread Size, 1/2" Long, Socket Head	4
10	93004	NUT: HXHD, M6 X 1.00" PITCH, DIN 934	2
11	470383	SCREW: M6 x 1mm, 25mm LG.	2

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.

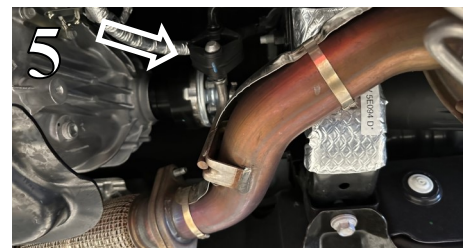
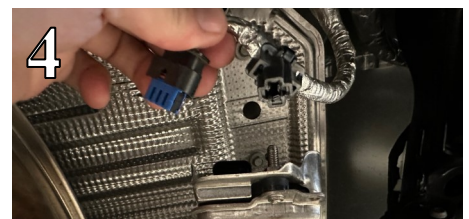
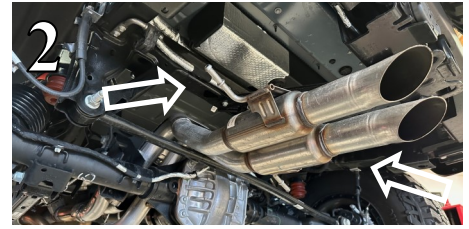
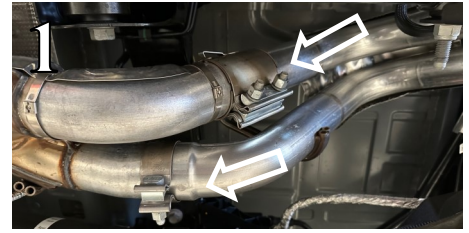
Taking all under car safety precautions, lift the vehicle using a hoist or hydraulic lift. Once this has been done, you may begin the removal of your old exhaust system from your vehicle.

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.

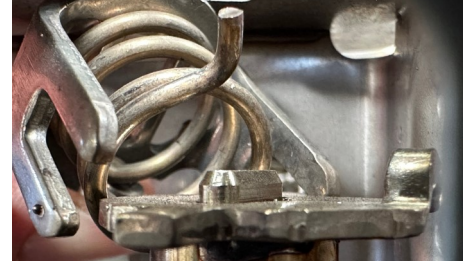
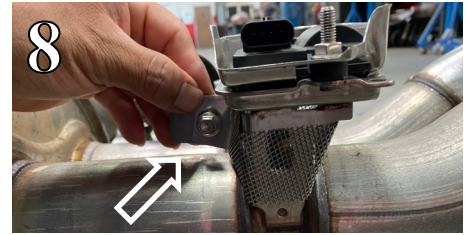
Original Exhaust System Removal

1. Lubricate all hangers, rubber isolators, bolts and nuts.
2. Loosen clamps that attach the tailpipe assembly to the exhaust system. Using a flathead screwdriver or a prybar, pry up on the clip on the sleeve clamp to release the passenger side tailpipe from the vehicle (Fig. 1).
3. Using a screwdriver or a prybar, remove the tailpipe assembly hangers from their rubber isolators and lower the entire assembly out of the vehicle (Figs. 2-3).
4. Disconnect the electrical connector on the valve actuator and pull off the wire harness fastener from the threaded stud (Fig. 4).
5. Loosen and remove the hardware that connects the muffler assembly flanges to the vehicle as well as the rubber isolator assembly to the vehicle (Figs. 5-6). Save hardware for installation of your Borla system.
6. Using a muffler stand or another person, support the muffler assembly while removing the last hangers from their rubber isolators and lower and remove the muffler assembly from the vehicle (Figs. 5-7).
7. Not shown: Remove rubber isolator assembly from the muffler assembly and save for installation of your Borla system.



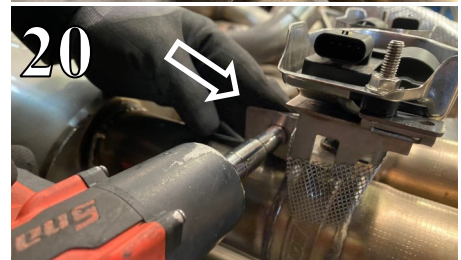
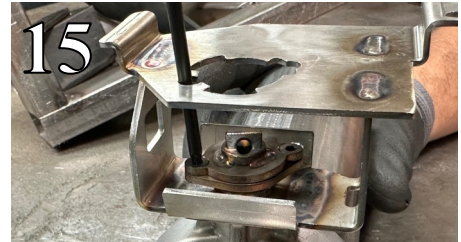
Original Exhaust System Removal Cont'd

8. Loosen and remove the hardware that keeps the screen on the valve assembly and remove the screen (Fig. 8). Save the hardware and the screen for installation on your Borla system.
9. Loosen and remove the hardware that keeps the valve actuator in place (Fig. 9). Rotate the actuator counter-clockwise and remove it from the valve body (Fig. 10). Save the actuator for installation on your Borla system.
10. For vehicles with the separate valve engagement spring: Lift the valve engagement spring off of its seat and out of the original valve (Fig. 11). Save the valve engagement spring for installation on your Borla system.
11. For vehicles with the attached valve engagement spring assembly: 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. 12-13). Save the valve engagement spring assembly for installation on your Borla system.
12. Original exhaust system removed.



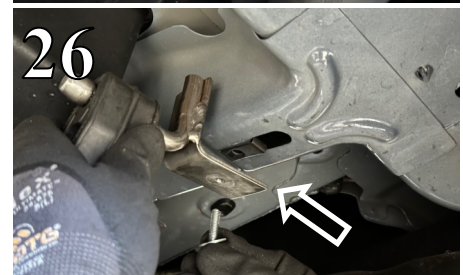
Borla Performance Cat-Back Exhaust Installation

1. Orient components on shop floor according to Borla bill of materials drawing on page 2.
2. For vehicles with the separate valve engagement spring: Using the two provided Torx screws (PN 91196) attach the **Engagement Bracket Assembly (2022)** to the top of the valve (Figs. 14-15). Install your original valve engagement spring in the same orientation as on the original system.
3. For vehicle with the attached valve engagement spring: 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. 14, 16-17). 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.
4. 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. 18).
5. 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. 19). You will have threads showing on the top of the actuator, this is to give the actuator wiring harness a place to attach to.
6. Install the original valve screen onto the valve assembly as shown (Fig. 20).



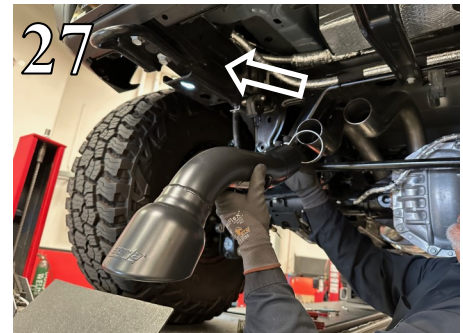
Borla Performance Cat-Back Exhaust Installation Cont'd

7. Install the original rubber isolator assembly on the driver's side inlet of the **Muffler Assembly** (Fig. 21).
8. Install the **Muffler Assembly** by mating the flanges to the vehicle. Insert the hangers into their original rubber isolators and install the hardware to the original rubber isolator assembly. Loosely tighten the original hardware on the flanges (Fig. 22).
9. Place a clamp over the expanded end of the **L/H Over Axle Pipe** and feed it up and over the axle, inserting the inlet to the **Muffler Assembly** (Fig. 23). Do not tighten the clamp.
10. Place a clamp over the expanded end of the **R/H Over Axle Pipe Assembly** and feed it up and over the axle, inserting the inlet to the **Muffler Assembly**. Insert the hanger into the original rubber isolator (Fig. 24). Do not tighten the clamp.
11. **For installation of 140935 skip to step 17.**
12. Not shown: Install the original sleeve clamp onto the reduced end of the X-Pipe Assembly (F-150 Raptor R only)
13. Insert the **Clip-On Nut** to the passenger side frame rail (Fig. 25).
14. Install the **Hanger/Bracket Assembly** on top of the portion of the frame rail where you previously installed the **Clip-On Nut**. Secure the **Hanger/Bracket Assembly** with the provided **Washer** and **Screw** (PN 91011) and insert the **Rubber Isolator** onto the hanger (Fig. 26).



Borla Performance Cat-Back Exhaust Installation Cont'd

15. Place a clamp over the expanded end of the **L/H Tailpipe Assembly** and insert the inlet to the **L/H Over Axle Pipe**. Insert the hanger into the original rubber isolator (Fig. 27). Do not tighten the clamp.
16. Place a clamp over the expanded end of the **R/H Tailpipe Assembly** and feed it up and over the hitch braces, inserting the inlet to the **R/H Over Axle Pipe Assembly**. Insert the hanger into the **Rubber Isolator** located on the **Hanger/Bracket Assembly** (Figs. 28-29). Do not tighten the clamp.
17. **For installation of 140935:** Place a clamp over both expanded ends of the **Turndown Tip Assembly** and insert the inlets to the **L/H and R/H Over Axle Assemblies**. Insert the hangers into the original rubber isolators (Figs. 30-31). Do not tighten the clamps.
18. Check your exhaust system for proper clearance under the vehicle and also for tip alignment (Figs. 29 & 31).
19. Once position has been determined to be correct, tighten the hardware on the **Muffler Assembly** and 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.