

Installation for Ford F-150 Raptor (V6 Ecoboost) PN's- 60637, 60638, 60650*



******* 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 X-Pipe w/ Mid Pipes (PN-60637, 60638) are designed for the Ford F-150 Raptor equipped with a 3.5L V6 Ecoboost Engine, 4-wheel drive, automatic transmission.

Borla Performance Front Muffler Option (PN-60650) is designed for the Ford F-150 Raptor equipped with a 3.5L V6 Ecoboost Engine, 4-wheel drive, automatic transmission.

***PN-60650 is designed to replace the X-Pipe on PN's-60637 and 60638.**

Borla Performance Industries recommends that an exhaust shop or professional after market parts installer perform the installation of this system. However, if you decide to perform the installation on your own it is recommended that two people are used. This installation should not be performed by one person due to the risk of injury. Ensure the installers use 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:

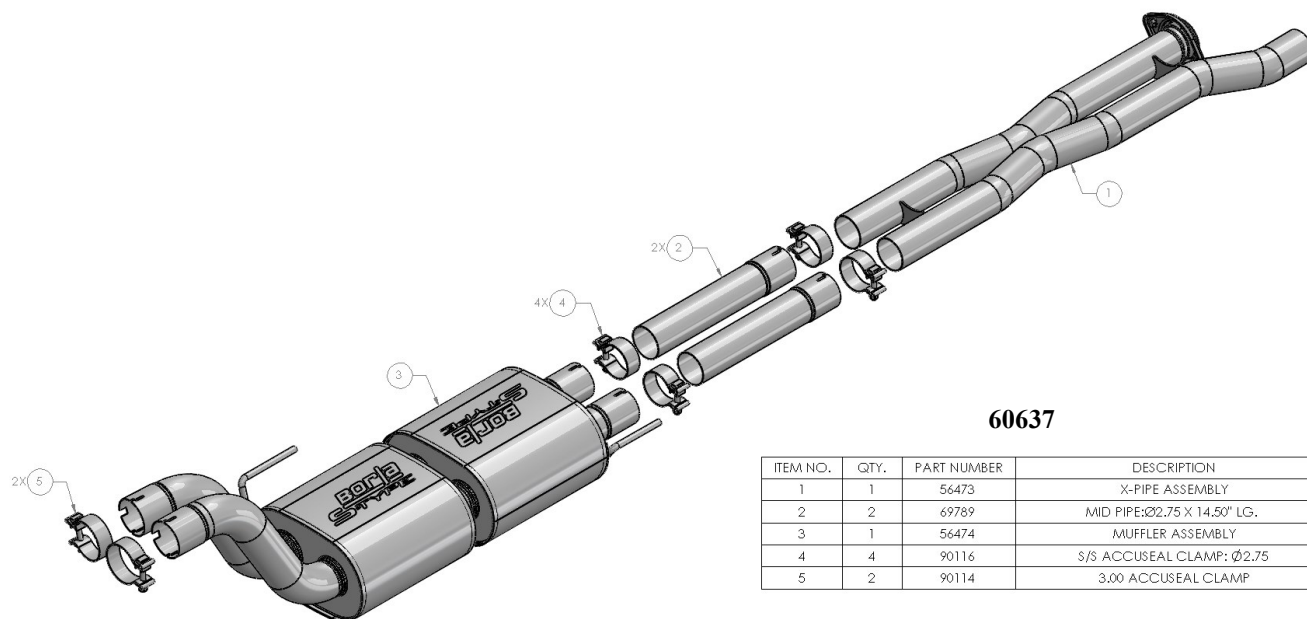
TOOLS:

- 1 3/8" Drive Ratchet
- 2 3/8" Drive Extension 3" & 6"
- 3 15mm Deep Well Socket
- 4 13mm Socket
- 5 10mm Socket
- 6 Pry Bar

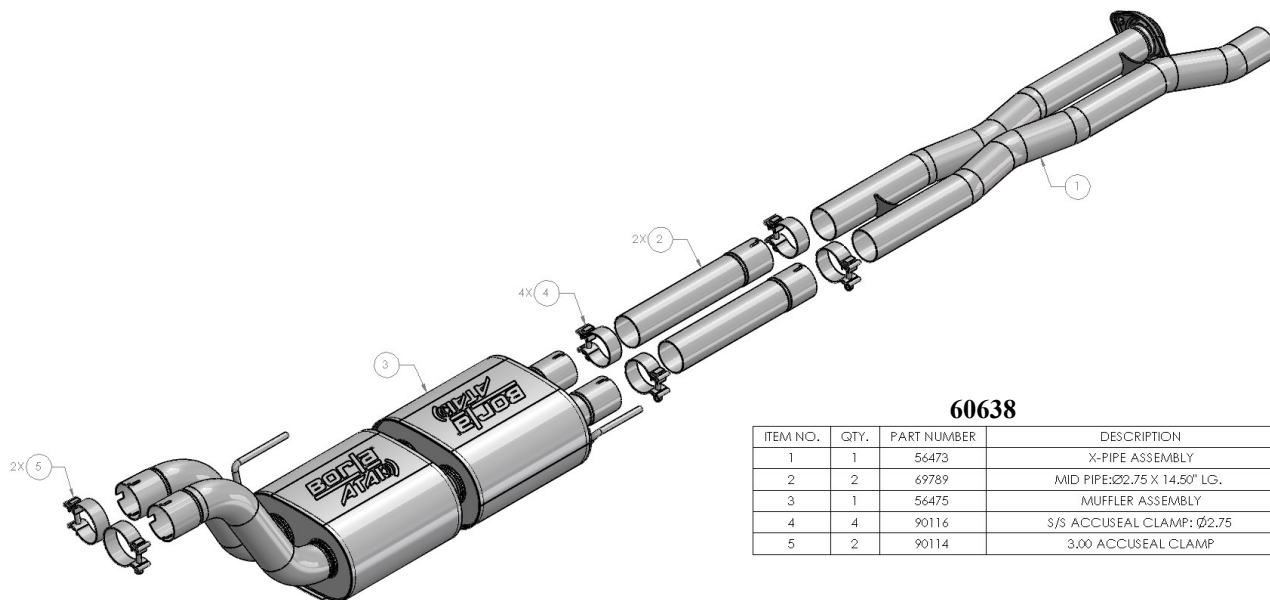
SHOP SUPPLIES:

- 1 Spray Lubricant

Borla Performance Bill of Materials

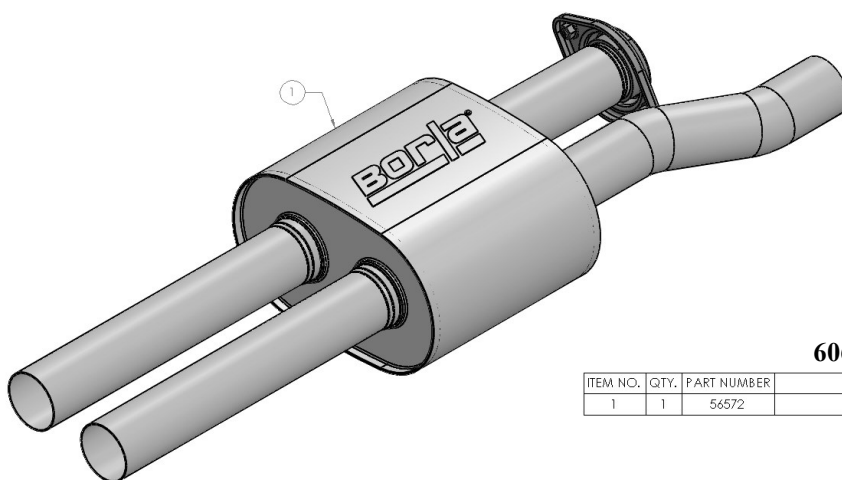


ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	56473	X-PIPE ASSEMBLY
2	2	69789	MID PIPE:Ø2.75 X 14.50" LG.
3	1	56474	MUFFLER ASSEMBLY
4	4	90116	S/S ACCUSEAL CLAMP: Ø2.75
5	2	90114	3.00 ACCUSEAL CLAMP



60638

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	56473	X-PIPE ASSEMBLY
2	2	69789	MID PIPE:Ø2.75 X 14.50" LG.
3	1	56475	MUFFLER ASSEMBLY
4	4	90116	S/S ACCUSEAL CLAMP: Ø2.75
5	2	90114	3.00 ACCUSEAL CLAMP



60650

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	56572	MUFFLER ASSEMBLY

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.*

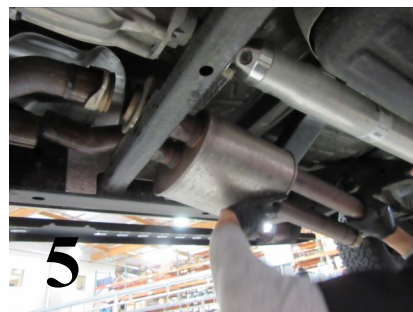
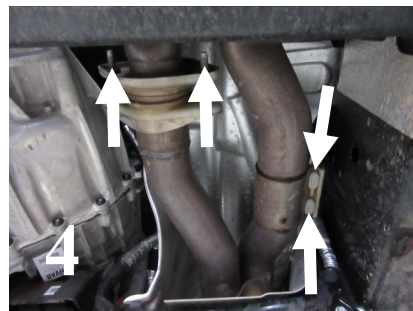
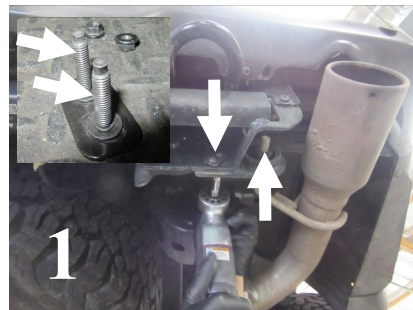
Taking all under car safety precautions, lift the vehicle using a hoist or hydraulic lift. Once this has been done, you may begin the removal of your old exhaust system from your vehicle.

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. Unbolt and remove the R/H & L/H side hanger brackets assemblies. Keep the hardware for re-installation. (See Fig.1)
3. Loosen the clamps and remove both tail pipes put to the side for re-installation. (See Fig. 2)
4. Remove the original muffler assembly to the side. (See Fig. 3)
5. Loosen and remove (2) bolts from flange and remove the original clamp, put to the side for re-installation. (See Fig. 4 & 5)
6. Use a muffler stand or an additional person to support the exhaust system, into position and then remove exhaust system from the vehicle.



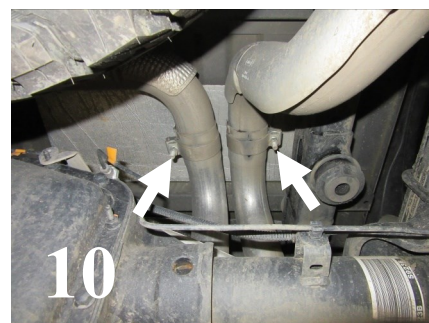
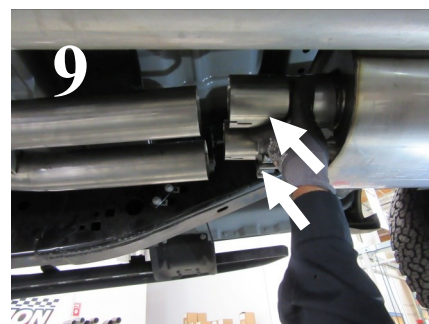
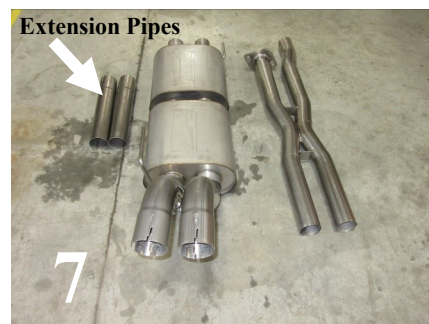
Borla Performance Exhaust System Installation

EXTENSION PIPE INSTALLATION NOTE: Both Borla Exhaust Systems 60637 & 60638 include an **Extension Pipe** for the longer wheel-base Super Cab configuration. This **Extension Pipe** is not installed on the Extended Cab configuration. (See Figs. 6 & 7)

1. Place the **X-Pipe Assembly** into position use the original hardware. (See Fig. 13) Do not tighten the clamp.
2. SUPER CAB configuration only: Place a **Accuseal Clamp** over both expanded inlets of the **Extension Pipe** and install over the outlets of the installed **X-Pipe Assembly**. (See Fig. 8) Do not tighten the clamp.
3. Place a **Accuseal Clamp** over both expanded inlets of the **Muffler Assembly** and install over the outlets of the installed **X-Pipe Assembly** or **Extension Pipes**. Carefully insert hangers into rubber isolator. (See Fig. 9) Do not tighten the clamp.
4. Install original tail pipes and insert hangers into the rubber isolator. Re-install the R/H & L/H side hanger brackets. (See Fig.) Do not tighten the clamp. (See Fig. 10)
5. Check your exhaust system for proper clearance under the vehicle and also for tip alignment.
6. Once position has been determined to be correct, tighten the Accuseal clamps to 32-35 ft. lbs.
7. Before starting your vehicle, make sure to check all wires, hoses, brake lines, body parts and tires for safe clearance from the exhaust system.
8. Start 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.



Borla Performance Exhaust System Installation for 60650*

*PN-60650 is designed to replace the X-Pipe on Mid Muffler Sections PN-60637 and 60638. X-Pipe Assembly will be removed and replaced with 60650 Front Muffler Option.

Page 6 NOTES: Borla components are in **bold text** and 60650 parts are underlined on these installation instructions.

1. Refer to instructions and photos on page 5 of this document if needed.
2. Loosen **Accuseal Clamps** and bolts on front flange on **X-Pipe Assembly (Mid Pipe** if equipped), and **Muffler Assembly**). Support the exhaust system with a muffler stand. Slide these assemblies to the rear of the vehicle to aide in the removal of the **X-Pipe Assembly**.
3. Carefully slide and remove the **X-Pipe** from the vehicle. (See Fig. A)
4. Place a **Accuseal Clamp** over the expanded inlet of the front **Muffler Assembly** and insert inlet to right-side to factory catalytic converter pipe. Install the flanges using the original hardware. (See Figs. B & C) Do not tighten the clamp.
5. Place a **Accuseal Clamp** over both expanded inlets of the **Muffler Assembly** and install over the outlets of the installed **Muffler Assembly** or **Mid Pipes**. Carefully insert hangers into rubber isolator. (See Fig. D) Do not tighten the clamps.
6. Check your exhaust system for proper clearance under the vehicle and also for tip alignment.
7. Once position has been determined to be correct, start at the front **Muffler Assembly** and work to the rear of the vehicle. tighten the Accuseal clamps to 32-35 ft. lbs.
8. Before starting your vehicle, make sure to check all wires, hoses, brake lines, body parts and tires for safe clearance from the exhaust system.
9. Start vehicle and check for any leaks. If any leaks are found, determine cause (such as loose or incorrectly positioned clamp) and repair as necessary.

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