

Installation for Ford F-150 Raptor Tail Pipes PN's- 60640, 60640BC, 60640CFBA



***** 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 Component. 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 Component.

Borla Performance Tail Pipes (PN's-60640, 60640BC, & 60640CFBA) are designed for the Ford F-150 Raptor, equipped with a 3.5L EcoBoost V6 engine, 4-WD, automatic transmission.

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

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 Component, 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 Component.

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 Component 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.

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Minimum Required Tool List:

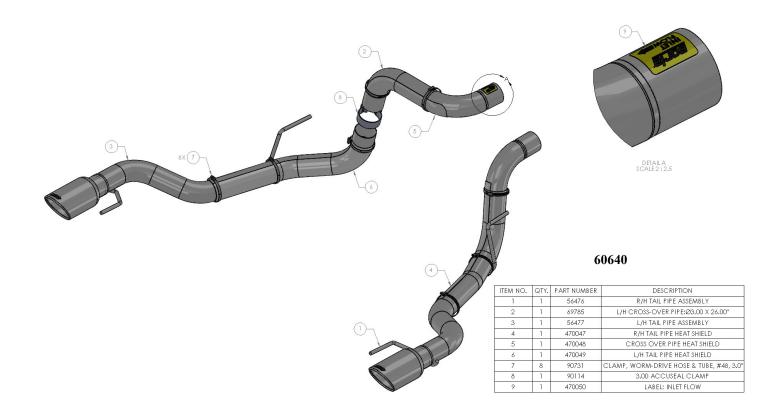
TOOLS:

- 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

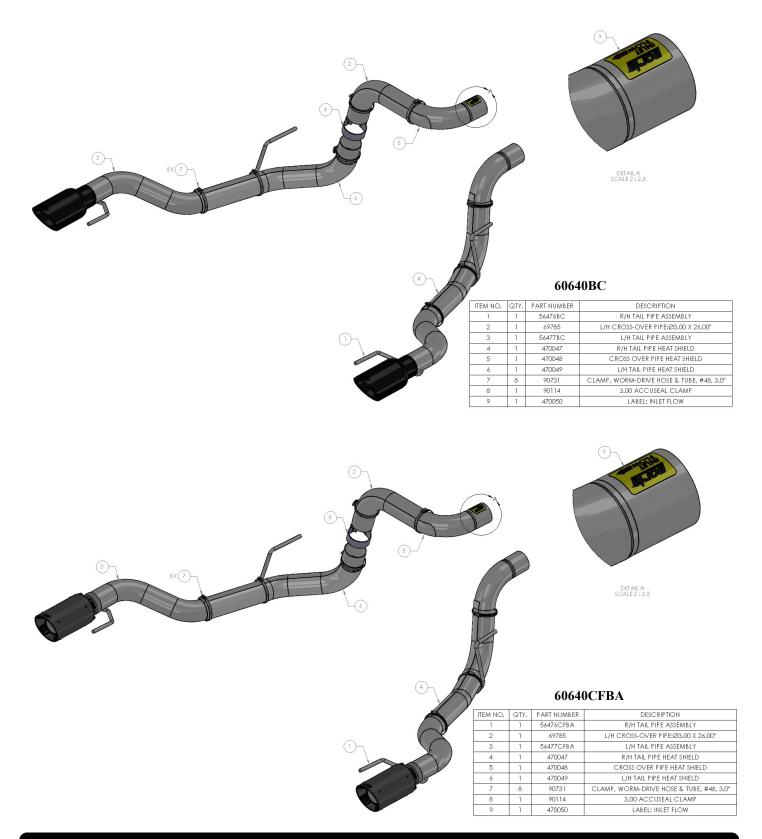
SHOP SUPPLIES:

1 Spray Lubricant

Borla Performance Bill of Materials







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Caution!!! <u>Never</u> 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. Use a muffler stand or an additional person to support the exhaust system, into position and then remove exhaust system from the vehicle.
- 3. Unbolt and remove the R/H & L/H Side hanger bracket assemblies. Keep the hardware for re-installation later. (See Fig.1)
- 4. Loosen the clamps on both sides. (See Fig. 2)
- 5. Remove the R/H Side Tail Pipe and transfer the rubber bracket isolator to your new **R/H Tail Pipe Assembly**. (See Fig. 3)
- Remove the original L/H Side Tail Pipe and transfer the rubber bracket isolator to your new L/H Tail Pipe Assembly. (See Fig. 4)
- 7. OEM Tail Pipes removed. (See Fig. 5)













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Borla Performance Tail Pipe Installation

- 1. Orient components on floor referencing pages 2 & 3 drawings. (See Fig. 6)
- 2. Attachment points of over axle pipes. (See Fig. 7)
- 3. Insert **R/H Tail Pipe Assembly** into the right-side muffler assembly and carefully insert hangers into rubber isolator. (See Fig. 8) <u>Do not tighten the clamp.</u>
- 4. Place a clamp over the expanded end of the **Cross-Over Pipe** and insert to left-side over-axle pipe outlet. (See Fig. 9)
- Place a clamp over the expanded end of the L/H Tail Pipe Assembly and insert to right-side over-axle pipe outlet. Install both original hanger brackets and insert the hangers into the rubber isolators. (See Fig. 10) Do not tighten the clamp.
- 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, 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.

WARNING: Use extreme caution during installation. Torque all fasteners according to manufacturer's torque values and tightening sequence. <u>DO NOT</u> 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.

INSTALLATION INSTRUCTIONS Ford F-150 Raptor Tail Pipes











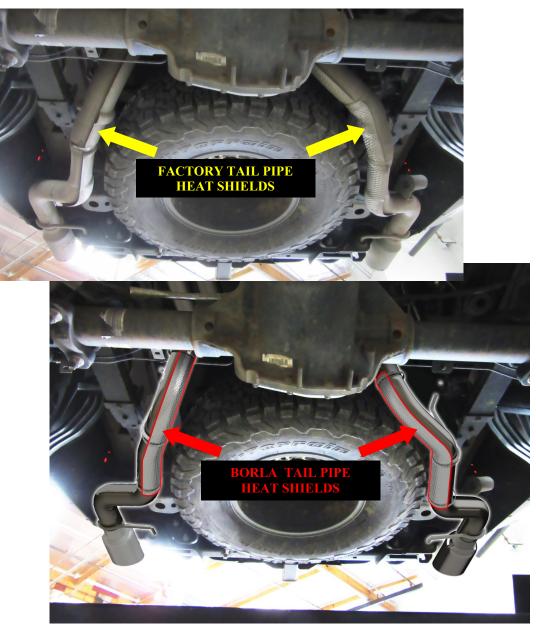
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***** PLEASE VERIFY HEAT SHIELD POSITION *****

NOTE: Borla includes (3) integrated heat shields to protect the spare tire from heat emitted by the exhaust tail pipes. The ORIGINAL exhaust has (3) factory heat shields as shown in the below photographs.

Please verify the position of your new Borla Tailpipe Heat shields are positioned to protect your spare tire by referencing the below factory image:





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