



**SCAVENGER
SERIES ELITE HEADERS**

409S Stainless Steel

Header Installation Instructions:

Part Number: 814212

2005-2010 Ford Mustang GT

4.6L · 3V V8 Engine

03/20/13



WARNING: The product accompanying this document is legal only for off-highway use (except in California or states that have adopted California emission standards), racing use or for use on pre-emission-controlled motor vehicles/motor vehicle engines (pre-1966 domestic vehicles certified to California standards, pre-1968 domestic vehicles certified to federal standards and all pre-1968 foreign vehicles), per the manufacturer's application guide.

Note: Installation of this product requires adequate work space, general mechanic's tools, general mechanical "know how" and a reasonable level of experience. Most auto enthusiasts with these resources will have little difficulty installing these headers. However, you should carefully read these instructions before attempting to install these headers. If in doubt, consult a professional mechanic. (Better to do it now than to get stuck halfway through the installation.) This part is certified for use on Pollution Controlled Vehicles.

Check to make sure that you have received the proper parts for your installation. The header number will be stamped on the engine flange. If you are unsure you have received the proper parts call before you start work.

Be sure to work safe! Whenever you work under the vehicle be sure that it is located on level, solid ground and is supported by adequate safety stands. **Remember: hot asphalt will not support most jack stands!**

Many factors affect the installation of headers, some of which are; broken or aftermarket motor mounts, accidents that impact the configuration of the frame, and/or the installation of different engines or aftermarket cylinder heads.

Attention Customers breaking in new engines: Due to the extreme heat generated during the break-in process, the appearance of the ceramic coating may be altered in certain areas. The protection characteristics and thermal barrier properties of the coating is never compromised. It is recommended that a cast iron manifold or old set of headers be used for this process.

The purchaser is responsible for following all installation instructions and safety guidelines supplied with your new Flowmaster Performance Exhaust Product. Flowmaster Performance Exhaust assumes no responsibility for damages resulting from improper operation, misuse, abuse, or lack of reasonable care, or any problems resulting from incompatibility with other manufacturer's products.

Flowmaster uses sealing beads on its headers. We have found that when installed correctly, the raised bead around each port increases the pressure exerted on the gasket directly adjacent to the port and effectively prevents leaking gaskets. It is normal for the flange to be raised off the cylinder head the thickness of the sealing bead. It is important when installing the header, to install all bolts loosely, and then tighten evenly to ensure the flat installation of the flange. The torque sequence from one flange to another will vary, but generally every bolt on a header should be first fit snug, starting from the inside of the flange working out, alternating from top to bottom so that the bolt connects the flange to the manifold to the point where they barely touch. Second, using the same inside-out pattern, tighten each bolt until finished. This method will help prevent leakage and will give the user the best possible performance out of their new set of headers.

For refinement, Ford utilized hydro mount bushings on either side of the block. These liquid filled engine mounts are tuned to quell specific unwanted vibration. Under extreme driving conditions these mounts can allow excessive engine movement. We recommend replacing these motor mounts with performance mounts available from Steeds PN # 555-4005.

- 1) Place the vehicle in a location where the floor is solid and flat, with adequate lighting. Do not attempt to work on a hot engine. Heat causes metal to expand and makes removal of fasteners difficult at best. **Disconnect the battery cables from the battery.** Raise the front of the vehicle to obtain adequate access to the bottom exhaust manifold flanges. Use large base jack stands to support the vehicle. Do not rely on the jack! Block the tires to prevent the vehicle from rolling off of the jack stands.
- 2) Spray WD-40 or some type of penetrating lubricant on all accessible exhaust manifold fasteners and fittings before attempting to remove them.
- 3) Loosen the clamps and disconnect the exhaust system from the H-pipe assembly.
- 4) Unplug the O2 sensors. Unbolt and remove the converter assembly.
- 5) If equipped, remove the strut tower brace that runs across the top of the engine.

Driver's side:

- 6) Remove the nut on the drivers side motor mount to allow the engine to be raised.
- 7) Remove the nuts attaching the manifold to the cylinder head.
- 8) Raise the engine enough to remove the manifold. Once removed, lower the engine.
- 9) Remove the two lower-rear, and three top-rear exhaust manifold studs from the cylinder head. Remove the dipstick.
- 10) Remove the lower bolt from the steering shaft coupler at the power steering rack.
- 11) Remove the bolt attaching the steering rack to the frame on the drivers side. Loosen the same bolt on the passenger side. Slide the power steering rack forward on the drivers side approximately 1".
- 12) Reinstall one of the factory gaskets on the remaining head studs.
- 13) Raise the engine enough to slip the new header into position. Install the supplied bolts and lock washers where you removed the studs. Once installed, lower the engine back into place, and reinstall mount nut.
- 14) Reinstall the dipstick tube. You will have to space the top mount away from the head with the spacer provided.
- 15) Move the steering rack back into place and reconnect the steering coupler. Replace the mounting bolt and tighten both down securely.
- 16) Tighten all header flange bolts/nuts. To ensure a good seal, use an alternating torque sequence to snug the header to the head, working both top and bottom bolts in evenly. Failure to follow this procedure will result in leaks.

Passenger Side:

- 17) Remove the nut on the passenger side motor mount to allow the engine to be raised.
- 18) Remove the three mounting bolts from the starter. Let the starter rest on the frame.
- 19) Remove the nuts attaching the manifold to the cylinder head. Raise the engine enough to remove the factory manifold.
- 20) Leave the top-forward header stud in place, and remove the other seven from the head.
- 21) Reinstall the factory gasket, and slip the new header into place. (With the engine raised, slip the header past the starter boss until the boss is between the third and fourth primary tubes. Then lower the engine until the header will slip over the starter boss. Then raise the engine again to finish the placement of the header. Once in place lower the engine and replace the motor mount nut.
- 22) Replace the starter, and reinstall the O2 sensors. Connect the sensors to the wiring harness using the supplied extensions.
- 23) Reconnect the new headers to the exhaust system. These headers were designed to be used with Flowmaster Mid-pipes however custom adapters can be fabricated to connect to the exhaust system.
- 24) Check to ensure that there is adequate clearance around all brake lines, wire looms, A/C lines, etc.
- 25) If removed, replace the strut tower brace. Reconnect the battery cable and recheck everything!
- 26) Start the engine and check for leaks. Allow the engine to warm up, then shut the engine off and allow it to cool. Recheck the header bolts and other fasteners for correct tightness.
- 27) Periodically check and retighten the header bolts.

Parts List

<u>Qty</u>	<u>Description</u>
(1)	Drivers Side Header Assembly.
(1)	Passenger Side Header Assembly
(16)	8mm Header bolts w/lock washers
(1)	Dipstick Spacer Tube (3/8" Nut)
(2)	O2 Sensor Harness Extensions
(1)	Flowmaster Decal

* This product is designed to re-use the original manufacturer's gaskets.