

Header Installation Instructions: Part Number: 814224 2005-2010 Ford Mustang GT

4.6L · 3V V8 Engine ARB E.O. No. D-698

409Se Stainless Steel

03/20/13



The product accompanying this document has been granted a California Air Resources Board (CARB) exemption, an "E.O." number, or is a direct or consolidated replacement part. It is 50-state legal, per the manufacturer's application guide.

Note: Installation of this product requires an 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.

- 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) From underneath the vehicle, loosen the clamps on the exhaust to H-pipe connection.
- 4) Disconnect the rear O2 sensors and the top O2 sensor on the passenger side. Unbolt and remove the H-pipe.
- 5) If equipped, remove the strut tower brace in the engine compartment.

Driver's side:

- 6) Remove the lower bolt from the steering shaft coupler at the power steering rack. Remove the bolt attaching the rack to the frame on the driver's side. Loosen the same bolt on the passenger side. Slide the rack forward on the driver's side approximately 1". Remove the steering shaft coupler from the rack.
- 7) With the engine safely supported, remove the four bolts from the engine mount on the side of the block to allow the engine to be raised.
- 8) Remove the nuts attaching the manifold to the cylinder head. Raise the engine enough to remove the factory manifold. (Save the original gaskets as they will be re-used)
- 9) Remove the exhaust manifold studs from the cylinder head. Remove the dipstick. **Note:** Some installers prefer to retain the stock studs. This is acceptable.
- 10) Re-Install the original gaskets with high-temp O2 sensor safe RTV silicone sealant. Place two of the bolts in the top two rear holes. Install the new Flowmaster header using the supplied bolts with lock washers. Re-install the dipstick. You will have to space the top mount away from the head using the 3/8" spacer (nut) provided. Reconnect the steering coupler and move the rack back into place. Replace the mounting bolt and tighten both bolts securely. Lower the engine and replace the mount bolts.

Passenger Side:

- 11) Remove the bolts attaching the starter and swing the starter out of the way.
- 12) With the engine safely supported, remove the motor mount bolts connecting it to the engine block to allow the engine to be raised.
- 13) Remove the nuts attaching the manifold to the cylinder head. Raise the engine enough to remove the factory manifold. (Save the original gaskets as they will be re-used)
- 14) Remove the exhaust manifold studs from the cylinder head, (see note above) and then install the original gaskets, with high-temp O2 sensor safe RTV silicone sealant placing two of the bolts in the top two rear holes.

- 15) From underneath slip the Flowmaster header into place. Install the supplied hardware. Lower the engine and replace the motor mount bolts. Tighten securely. Place the starter back into place and secure.
- 16) Reconnect the exhaust to the headers.
- 17) Check to ensure that there is adequate clearance around all brake lines, wire looms, A/C lines, etc.
- 18) Reconnect the battery cable and recheck everything!
- 19) 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.
- 20) Periodically check and retighten the header bolts.

Parts List

 Drivers Side Header Assembly. Passenger Side Header Assembly 8mm Header bolts w/lock washers 3/8" x 2½" Collector Bolts w/nuts and lock washers Dipstick Spacer Tube (3/8" Nut) CARB Emissions Sticker Elowmaster Decal 	<u>Qty</u>	Description
	(1) (16) (4) (1)	Passenger Side Header Assembly 8mm Header bolts w/lock washers 3/8" x 2 ¹ / ₂ " Collector Bolts w/nuts and lock washers Dipstick Spacer Tube (3/8" Nut)

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