



SCAVENGER
SERIES ELITE HEADERS

409S_B Stainless Steel

Header Installation Instructions:

Part Number: 814221

1986-1993 Mustang/Cobra 5.0L

ARB E.O. No. D-698

08/10/12



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) Unbolt the H-pipe assembly from the collector flanges of the factory headers. Insure that no pressure is placed on the O2 sensor wires, disconnect if necessary. The H-pipe does not need to be removed.
- 4) Unbolt the dipstick tube bracket from the engine and remove the dipstick tube. Unbolt the engine lift brackets and discard. Remove the spark plug wires and loosen the spark plugs. Leave them in the spark plug holes until you are finished with the following cleaning steps, then remove.
- 5) Unbolt the driver's side exhaust manifold and remove. Remove the gaskets and any gasket material or carbon deposits that remain on the head surface. The use of a gasket removal agent will ease the removal of any gasket material. Use care not to get any debris into the exhaust ports. Clean any carbon deposits from the H-pipe mating flange.
- 6) It may be necessary to grind the oil dipstick tube mounting tab to clear the header tube. See illustration on page 3 below. Once modified, insure that it is clean and apply a small amount of sensor safe silicone around the end of the tube where it slip into the block and reinstall the tube.
- 7) From above, slip the drivers' side header into position. Slide the gasket into place and install the supplied header bolts and lock washers. We recommended using anti-seize on aluminum heads. Torque the bolts to 25 ft./lbs. on iron heads and 23 ft./lbs. on aluminum heads starting from the center and working out.
- 8) Remove the passenger side EGR tube from the stock manifold. Unbolt the passenger side manifold and remove. Remove the gaskets and any gasket material or carbon deposits that remain on the head surface. The use of a gasket removal agent will ease the removal of any gasket material. Use care not to get any debris into the ports or spark plug holes. Clean any carbon deposits from the H-pipe mating flange.
- 9) From above, slip the passenger side header into position. Slide the gasket into place and install the supplied header bolts and lock washers. We recommended using anti-seize on aluminum heads. Torque the bolts to 25 ft./lbs. on iron heads and 23 ft./lbs. on aluminum heads starting from the center and working out. Use the 3/8" x 2" bolt with the space in the rearmost header bolt hole. The EGR tube tab will fasten to this bolt to space the tube out from its original location.
- 10) Apply a light coating of O2 sensor safe high-temp silicone to the collector dome on headers. Install the supplied collector bolts into the collector flange from the top side. Have an assistant hold a wrench on the bolt head from the topside when putting the nuts on and tightening from the bottom side. This procedure is the same on both sides.
- 11) Reinstall the spark plug wires and looms taking care not to let any wires rest on the header tubes.
- 12) Reconnect the battery cable.

- 13) Check that all bolts are tight. Make sure that all wiring, fuel lines, transmission lines, brake lines, etc. are clear of the headers and the exhaust, relocate if necessary.
- 14) 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.
- 15) Periodically check and retighten the header bolts.

Parts Kit

<u>Qty</u>	<u>Description</u>
(1)	Drivers Side Header Assembly.
(1)	Passenger Side Header Assembly
(15)	3/8" x 1" Header Bolts
(16)	3/8" Lock Washers
(1)	3/8" x 2" Header Bolt
(1)	1" Tubular Spacer
(2)	Header Gaskets
(4)	Collector Bolts & Nuts
(1)	CARB Emissions Sticker
(1)	Flowmaster Decal

