



SCAVENGER
SERIES ELITE HEADERS
409S® Stainless Steel

Header Installation Instructions:

Part Number: 814120

Universal Small Block Chevrolet
ARB E.O. No. D-698

08/10/12

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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) Carefully remove the spark plug wires by grasping and gently twisting the spark plug wire boots. Do not pull directly on the wire. Brush or blow off any debris which may have collected around the manifolds or spark plugs. This will help prevent foreign matter from entering the combustion chamber when the manifolds are removed. Spray WD-40 or some type of penetrating lubricant on all accessible exhaust manifold fasteners and fittings before attempting to remove them.
- 3) Typically the factory exhaust pipes on early vehicles are long gone. These instructions contemplate the removal of old exhaust components and the installation of a new exhaust system by a competent exhaust shop. These instructions cover only the installation of the shorty headers. The necessary exhaust system modifications should be left to a competent exhaust shop.
- 4) Unbolt the driver side exhaust manifold and remove. Using a small wire brush or similar instrument, carefully clean any carbon deposits left on the cylinder head.
- 5) Bolt the header to the head using the supplied gaskets and hardware. Torque the bolts to factory specifications. Don't forget the lock washers. **Note:** it is recommended that you use anti-seize on the bolt threads when installing on aluminum heads.
- 6) Unbolt the passenger side exhaust manifold and remove. Clean the head surface and bolt the new header to the engine using the supplied gaskets and hardware.
- 7) Reinstall the spark plug wires and looms taking care not to let any wires rest against the header tubes. Reconnect the battery cables. Make sure that all rubber hoses and wires are kept away from the headers. Otherwise, the heat will damage these components.
- 8) The installation of the headers is now complete. The adaptation of the headers to the exhaust system should be done by an exhaust shop unless you have access to tube bending and welding equipment.
- 9) The headers come with two three-bolt flanges for use when mating the exhaust system to the new Flowmaster Shorty headers. Bolts are also included for these connections. **Note:** It is recommended that a small amount of sealant be used on the ball flange.
- 10) After the exhaust modifications have been made to adapt the headers to the exhaust system, recheck everything! Make sure that all fasteners are tight.
- 11) Start the engine and let it warm up. Check for leaks. Test drive the vehicle. Let the engine cool and retorque the header bolts.
- 12) Check to ensure that there is adequate clearance around all fuel lines, brake lines, battery cables, wiring harnesses and other heat sensitive items.
- 13) All tubular headers require maintenance including periodically checking and retightening the header bolts.

Parts List

<u>Qty</u>	<u>Description</u>
(1)	Drivers Side Header Assembly
(1)	Passenger Side Header Assembly
(12)	3/8" x 1" Header Fasteners W/Lock Washers
(2)	Header Gaskets
(6)	3/8" Collector Bolts
(6)	3/8" Nuts
(12)	3/8" Flat Washers
(2)	3-Bolt flanges
(1)	CARB Emissions Sticker
(1)	Flowmaster Decal