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HEADER INSTALLATION INSTRUCTIONS

Part # D319

APPLICATION:

**1967-1969 CHEVY Camaro / 68-72 Nova/Chevy II
396-502 Big Block (Std. Deck Height Only)**



WARNING: These headers are legal for Off Highway use (except in California or states that have adopted California emission standards) or Racing use (which may never be used on a Highway), 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) **Only**.

NOTE: These are a large 2 1/8" header primarily designed for racing and as such are not recommended for cars with comfort options. They are a tight fit and tougher to install than smaller tube versions available from Doug's.

NOTE: Vehicles MUST have Original Style Big Block motor stands and motor mounts for Headers to fit properly. They are no longer available from G.M., but reproductions are available from most of the Camaro & Nova specialty suppliers. If the motor is mounted on Small Block frame mounts, you will notice possible Steering Box, Frame, and Idler Arm fit problems.

NOTE: Will not fit with Power Steering, Column Mounted Stick Shift and not recommended with air conditioning

PerTronix® thanks you for choosing **DOUG'S HEADERS**, the best fitting, highest quality header on the market. In order to realize the full potential of our good fit, please read and understand these instructions completely prior to starting work.

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

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. Most installations require some welding. If you are uncomfortable with welding operations, we recommend that you contact a professional exhaust system specialist to install your new headers.

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.

Notice: The coating of these headers can be marred or scratched during installation. If the header needs to be returned and is damaged, you will be charged for recoat.

DISASSEMBLY

1. Disconnect the negative battery cable from the battery.
2. If a car lift is not available, raise the vehicle 3 feet or higher and support it with adequate safety stands. Make sure the vehicle is on a flat solid surface and is stable.

3. Apply penetrating oil to all nuts and bolts to be removed.
4. Remove and mark all spark plug wires and then remove all spark plugs.
5. Remove the Oil filter, Clutch Linkage, Column shift auto trans linkage, Oil dipstick Tube, Starter, and Air Conditioning Compressor. 1969 Cars with shifter/key interlock system will have to be removed and disabled.
6. Disconnect the head pipes from the exhaust manifolds and remove the manifolds
7. Remove the gaskets and any gasket material or any 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 debris into ports or spark plug holes.
8. At this point it may be necessary to cut the head pipes to allow room to install the headers. If you are installing a new exhaust system you may cut the head pipes any where you choose, but if you are using the existing exhaust you need to cut the head pipes in the proper location so that they will be able to be welded to the reducers supplied with your headers.

INSTALLATION

1. Place a jack under the oil pan, with a block of wood to prevent damage to the pan. Loosen the rear transmission mount bolts. Remove the **Driver's** side motor mount bolt and nut.
2. Raise the left side of the engine approximately 1" to 1 1/2".
3. Starting from below, work the **Driver's** side header up into position. Start a bolt on each end of the header to hold in place. Do not fully tighten at this time.
4. Lower the engine back into position and replace the mount bolt and nut and fully tighten them. Retighten the transmission bolts.
5. With the header still loose, work the clutch or automatic shifter cross shaft between the L3 and L4 tubes and into position.
6. Reinstall and fully tighten all linkages and the oil filter.
7. Slip the exhaust gasket in to place and start all the header bolts by hand.
8. Tighten all the bolts evenly starting in the center and working your way out to a torque of approximately 35 Foot Pounds on iron heads.
9. From below, work the **Passenger** side header into position. Start a bolt on each end of the header to hold in place. Do not fully tighten at this time.
10. Re install the starter motor.
11. Slip the exhaust gasket in to place and start all the header bolts by hand.
12. Tighten all the bolts evenly to a torque of approximately 35 Foot Pounds.
13. Doug's **does not** recommend A/C with this header, but Air Conditioned cars will require the modification to the bracket as shown in Illustration A.
14. Install the oil dipstick tube.
15. Install the reducers using the supplied bolts, washers, nuts and gaskets.
16. Weld the exhaust system to the reducers.
17. Install the spark plugs and connect the wires to the proper plug.
18. Check to make sure that all the wiring, fuel lines, transmission cooler lines, brake lines, hoses, etc. are clear of the headers or any exhaust components and reroute or relocate those components as necessary.
19. Check the oil level.
20. Connect the battery cable.

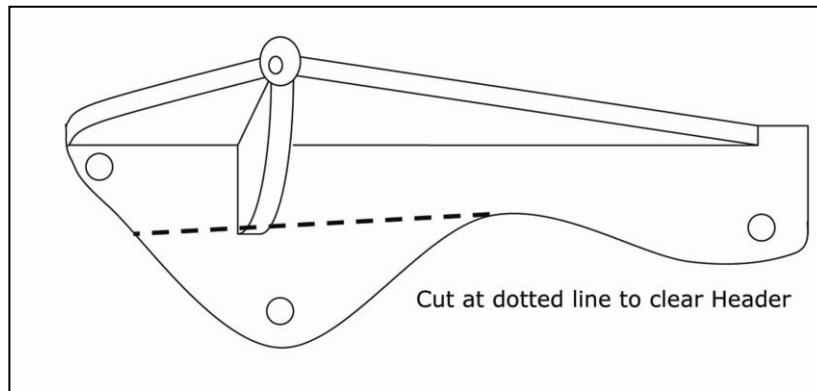


Illustration A; Air conditioning Bracket.

IMPORTANT CHECK LIST

- Be sure that all brake lines and fuel lines are clear of headers and/or connector pipes.
- All spark plug wires, battery cables, or other electrical components should be clear of headers and/or connector pipes.
- If dipstick tube was removed, make sure it is installed properly and that the dipstick has been replaced.
- Double-check the tightness of all bolts including brackets and accessories.

START THE ENGINE

Start the engine and allow it to warm up to operating temperature. Check for any unusual noises or exhaust leaks. If every thing is OK, stop the engine and tighten all bolts while the engine is still warm. **NOTE:** Check the bolts periodically to make sure they have not loosened. Re-tighten after the first 500 miles and then again at 1000 miles

PARTS LIST

<u>Qty</u>	<u>Description</u>
1	Left Side Header
1	Right Side Header
2	Header Gaskets
2	3 ½" Reducers
2	3 ½", 3 Bolt Collector Gaskets
16	3/8"-16 X 1" Header Bolts
6	3/8"-16 X 1 ¼" Hex Head Cap Screws
6	3/8"-16 Hex Nuts
22	3/8" Lock-Washers
2	Doug's Stickers