

HEADER INSTALLATION INSTRUCTIONS

Part #D316

APPLICATION

1970-72 Camaro ~ 1968-74 Chevelle/El Camino 396-502 Big Block (Std. Deck 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: 68-74 Chevelle/El Camino **MUST** have correct Motor Mounts and Stands (frame brackets) for 350 or Big Block, L6/307 motor mounts and stands will **NOT** work.

NOTE: 70-72 Camaro **MUST** have Big Block Motor Mounts and Stands (frame brackets). Small block and universal aftermarket will **NOT** work.

NOTE: 1973-74 Chevelle/El Camino have a narrower frame than the earlier years. Due to the large 1 7/8" diameter of this header, it will be necessary to modify the #1 cylinder tube on the right side by denting it slightly for clearance. If you are not comfortable doing this, we suggest you install Doug's Headers part #D313 with 1 3/4" tubes instead.

NOTE: Will **NOT** fit with 825 Saginaw Power Steering box (will work with 625 box)

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 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. 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 2 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.
NOTE: Grasp spark plug boot, not the wire, and use a twisting motion while pulling the wire from the plug.
5. Disconnect the exhaust pipes from the exhaust manifolds and remove the manifolds. Remove the Dipstick, Oil Filter, Clutch Linkage, Air Conditioning compressor, and Power Steering pump if it is cylinder head/exhaust manifold mounted.
6. On Late 72-74 Chevelle/El Camino remove the frame support rods, the left side will not be re-used, right side will be modified as shown in Illustration B. The left side motor mount will need to be modified as shown in Illustration A.
7. Replace the spark plugs finger tight so debris will not get into the cylinders during the cleaning operation.
8. Remove 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. We recommend the use of a sharp gasket scraper to remove the bulk of material and to finish the operation with a sanding block to provide a clean flat sealing surface.
9. After cleaning is complete remove the spark plugs again.
10. At this point it may be necessary to cut or remove the exhaust pipes to allow room to install the headers. If you plan to reuse your existing exhaust, it is recommended that you remove the exhaust and then cut it to fit after the headers are installed.

INSTALLATION

LEFT SIDE

1. Place a jack with a board between the jack and the oil pan to support the motor. Loosen the transmission mount bolts or nuts. Remove the left side motor mount and jack the motor up 2" minimum. On late 72-74 Chevelle/El Camino modify the mount as shown in Illustration A.
2. Starting from below, work the header up through the chassis and into position.
3. Lower the engine back into position and replace the motor mount.
4. Start a bolt on each end of the header to hold in place. Do not tighten at this time.
5. With the header still loose, work the clutch linkage back into position.
6. Reinstall and fully tighten all linkages, transmission mount bolts, and the oil filter.
7. Slip the gasket into place and install all of the header bolts and lock washers supplied and hand tighten. Tighten all the bolts evenly to a torque of approximately 35 Foot Pounds working from the center outward.
8. See Illustration C (69-72) or D (73-74) to replace air conditioning compressor.
9. 1968 Chevelle/El Camino will require $\frac{3}{4}$ " spacer on Power Steering pump bolt to head. See Illustration E.
10. Re install oil filter, spark plugs and wires.

RIGHT SIDE

1. **Late 72-74 Chevelle/El Camino only**, modify the front cylinder header tube by denting slightly as shown in Illustration F. Be careful when doing this as once you have dented the tube the headers is not returnable.
2. **Late 72 Chevelle/El Camino only**, cut the upper control arm mounting bolts flush with the nuts to provide header tube clearance. See illustration H.
3. Starting from below, work the header up through the chassis and into position. Start a bolt on each end of the header to hold in place. Do not tighten at this time.

4. Slip the gasket in place and install all of the header bolts and lock washers supplied and hand tighten. Tighten all the bolts evenly to a torque of approximately 35 Foot Pounds on iron heads, working from the center outwards.
5. On 73-74 check for adequate clearance where you made the dent in the header tube.
6. On automatic transmission cars, check that the transmission cooler lines do not contact the header tubes. Re route as necessary.
7. 68 Chevelle/El Camino with Air Conditioning will require that you use the original exhaust manifold bolt and make a 3/8" long spacer to mount. See Illustration G.
8. Late 72-74 Chevelle/El Camino bend the frame support rod as shown in Illustration B and re install.
9. Install the reducers and determine the connection to the exhaust system.
10. Weld the reducers to the exhaust system and install them onto the headers utilizing the gaskets and bolts supplied.
11. Install the spark plugs and wires.
12. Re install the dipstick and check the oil level since you removed the filter.
13. 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.
14. Connect the battery cable.

START THE ENGINE

Start the engine and allow it to warm up to operating temperature. Check for any unusual noises or exhaust leaks. If everything 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

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.

PARTS LIST

Qty	Description
1	Left Side Header
1	Right Side Header
2	Header Gaskets
2	3 1/2" Reducers
2	3 1/2", 3 Bolt Collector Gaskets
16	3/8"-16 X 1" Header Bolts
22	3/8" Header Star Washers
6	3/8"-16 X 1 1/4" Hex Head Cap Screws
6	3/8"-16 Hex Nut
2	3/8" Spacers
1	3/4" Spacer

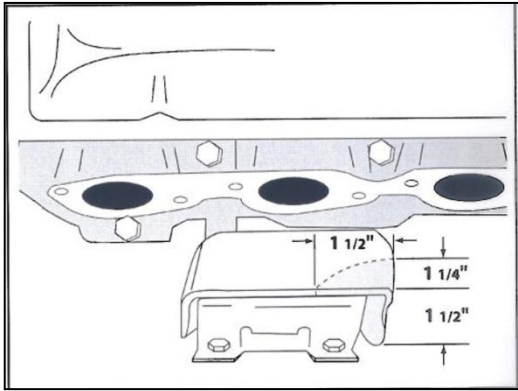


Illustration A (late 72-74 Chevelle)

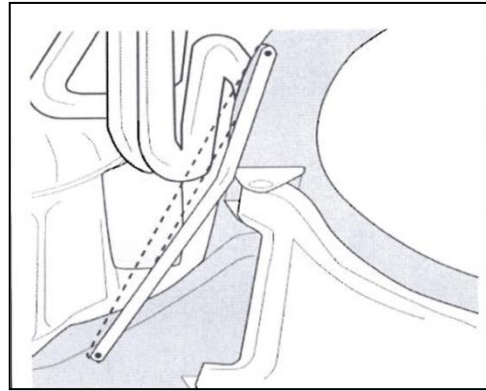


Illustration B (72-74 Chevelle)

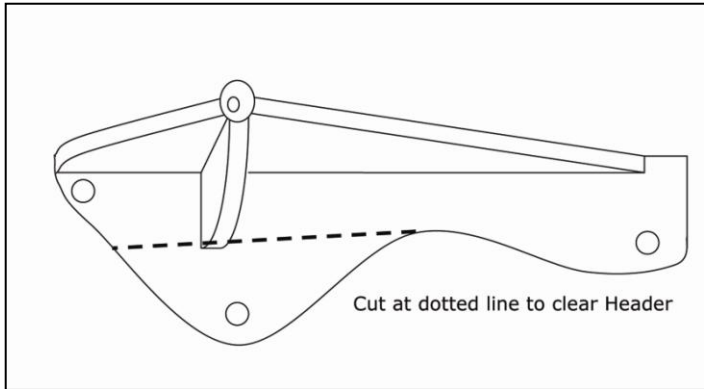


Illustration C (69-72 A/C Bracket)

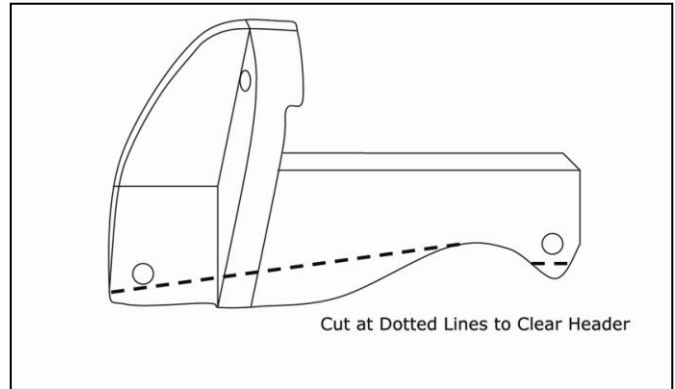


Illustration D (73-74 A/C Bracket)

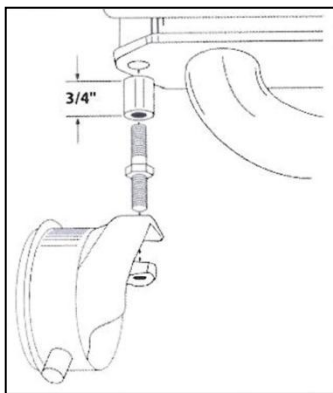


Illustration E (68 Power Steering)

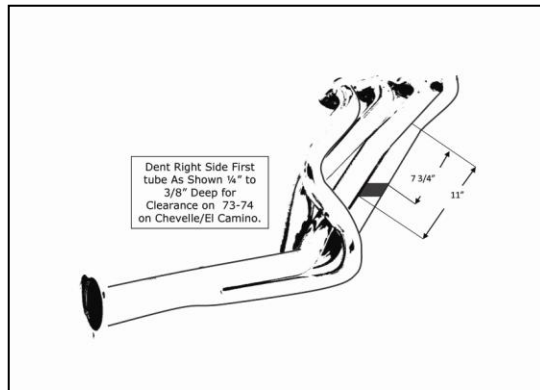


Illustration F (73-74 Right Side Tube Mod)

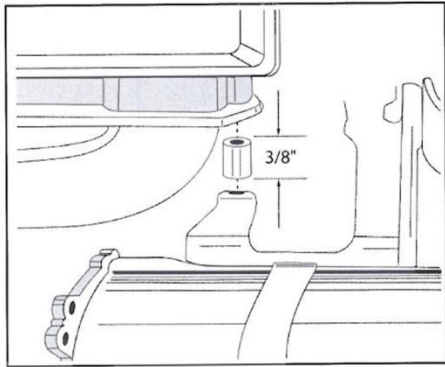


Illustration G (68 Chevelle A/C)

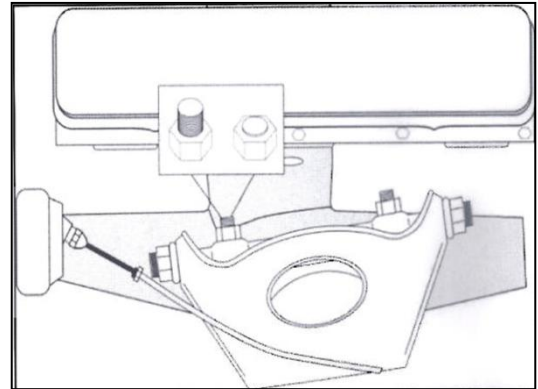


Illustration H (73-74 A Arm Bolts)

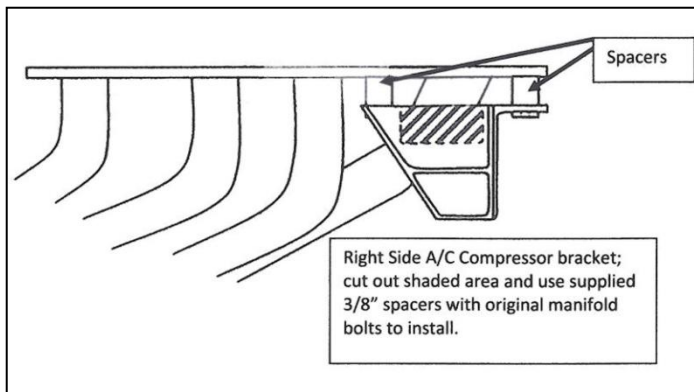


Illustration I (Right Side A/C Compressor bracket)