



**CENTRAL VIRGINIA  
MACHINE SERVICE**  
HOME OF THE INJUN ENGINE!



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- Installing headers is a difficult operation. It is important to have quality parts that fit. I recommend Hooker, but have recently heard reports of NAFTA in action, and some cleanup must be done to insure proper fit.
- If you have the 3-tube variety, life is much easier. 3-tube headers are easier to install, but make less power than the 4-tube variety.
- You will need to raise the car the full 24" (or more if possible), at both ends.
- Again, SAFETY FIRST! After raising the car, shake it vigorously to assure the stability, BEFORE crawling under it.
- You will need a good set of 3/8 sockets, a 10" extension (a 6" extension should also be handy), a 9/16 and 7/16 "wobbly" socket (swivel), a 9/16 deep socket, as small a 7/16 open-end wrench as you can find, and as many other good hand tools as are available to you.
- Disconnect the battery, from the ground (negative) side.
- Remove the distributor (if not already done), noting the position of the rotor for reinstallation.
- Remove the fan, if not already done.
- Disconnect the head pipes from the exhaust manifolds. If the bolts are rusty, go ahead and break them. We won't be needing them later.
- Remove the starter and oil filter housing. Note where the wires attached to the solenoid are located.
- Using the long extension and the 9/16 "wobbly", remove as many of the exhaust manifold bolts as you can reach. If these are rusty, treat with PB Blaster, WD40 or Marvel oil before trying to turn them. This may take a little patience. If one breaks in the head, it's a nightmare to repair in the car. Usually, on these heads, the 2 bolts just inside the outboard exhaust ports are the rusty ones. A little prevention could be order by soaking them down the night before you attack this. You can spray them from the top, and allow the penetrant to use gravity to help.
- Remove the motor mount pins from the front side.
- Place a block of wood under the harmonic balancer and raise the engine as high as you can. Be careful to not squash anything in the engine compartment (this is why we left out the distributor and fan).
- Remove the remaining bolts holding the exhaust manifolds in and remove the manifolds.
- Clean the manifold flange surfaces.
- Scrape the old gasket off the oil filter housing flange at this point. Wash with brake cleaner.
- If you have 4-tube headers, note the slotted hole in the flange just behind the center tubes. There's a large "eye" hole towards the rear, with a slot extending back up to the tube.
- Insert the 4th bolt back (on both sides) about three threads, with the header gasket in between the head and the bolt.
- Turn the header up on end and work it up into the space between the frame and the block.
- Put the head of the header bolt into the slotted hole and push the header backward until it stops against the end of the slot.
- While under there, insert the rear-most header bolt, being sure it goes through the gasket.
- Start the rest of the bolts. At this time DO NOT tighten any. All the while, be certain you are through the appropriate holes in the gasket.
- If you have 3-tube headers, slip the headers up into place and start the end bolts. There is no need for the gasket to be in place at this time, UNLESS the gasket is not slotted for the end holes (most are).
- Go up to the topside and insert the gasket.
- Start any bolts you can reach from the top. I use a stool or milk crate to stand on during this portion, to avoid all the jacking of the car.
- Go back under and start the remaining bolts. Again, be certain all the bolts are through the appropriate holes in the gasket.

- Now, begin tightening the bolts. That pesky one behind the center tube is always the most difficult. Use the small 7/16 open-end for this.
- Ease all the bolts up evenly to avoid binding the flange.
- Go back under and cinch down as many as can be reached with the extensions and 7/16 "wobbly". They should get at least 28 lb. ft.
- Come back up and tighten the one just behind the center tube as tight as you can (unless you're an arm wrestling champ, it will be difficult to over-tighten).
- Reinstall the filter housing. No sealant is required for the gasket. Note the amount of room the filter has to reside. If it has been diminished, you may need to go to a smaller diameter filter. I believe the 425 Cad ('77-'79) will fit nicely.
- Reinstall the starter, taking care to route the wires so they don't come in close proximity of the header tubes. Some creative thinking may be required here. Wrapping the wires in header blanket isn't a bad idea. Routing them through a plastic wire shield IS a bad idea.
- Lower the motor back into the mounts. Note that no tubes are touching the frame, and that no wires, cables, or brake/fuel/transmission tubing is being squished.
- Insert the mount pins and tighten to 45 lb. ft.
- Install the distributor and fan.
- You should be ready to take the car to the exhaust shop to have the head pipes cut to length and reducers welded in.
- You may wish to wait to break in the cam until after this, so you can properly hear any engine noises.