



GP117S-C CERAMIC COATED HEADER

**HAS EGR FITTING
S10/SONOMA TRUCK 4.3L 2WD ONLY
NO AIR INJECTION
GIBSON HEADERS ARE 50 STATE SMOG LEGAL**

*Thank you very much for purchasing our Gibson header
for your vehicle.*

*If you need further assistance, please do not hesitate to call our
Technical Department at
(800) 528-3044
Monday through Friday
8:00 a.m. to 5:00 p.m. PST.*

1270 WEBB CIRCLE CORONA, CA 92879

WHEN THESE INSTRUCTIONS ARE FOLLOWED PRECISELY, YOU WILL FIND THE INSTALLATION OF YOUR EXHAUST SYSTEM TO BE RELATIVELY SIMPLE. WE CANNOT OVER EMPHASIZE THE IMPORTANCE OF ADHERING STRICTLY TO THIS PROVEN APPROACH, AS IT WILL VIRTUALLY ELIMINATE ANY DIFFICULTIES, WHICH YOU MIGHT OTHERWISE ENCOUNTER.

NOTE: INSTALLATION OF HEADERS ON VEHICLES WITH CATALYTIC CONVERTERS AND/OR OTHER EMISSION CONTROL EQUIPMENT MUST BE ACCOMPLISHED IN ACCORDANCE WITH ALL GOVERNMENT REGULATIONS PERTAINING TO SUCH EMISSIONS STANDARDS

DUE TO RESTRICTED ROOM IN THE ENGINE COMPARTMENT, YOUR HEADERS MAY COME CLOSE TO CERTAIN BODY AND CHASSIS COMPONENTS. THIS IS A NORMAL CONDITION FOR AN INSTALLATION OF THIS TYPE.

WARNING: MAKE CERTAIN YOU HAVE ENOUGH CLEARANCE AROUND BRAKE, FUEL, AND ELECTRICAL LINES, ETC. IN SOME CASES, IT MAY BE NECESSARY TO RELOCATE ITEMS WHICH MIGHT BE ADVERSELY AFFECTED BY EXHAUST HEAT.

WARNING: INSTALLATION OF ANY TYPE OF "WRAPPING" MATERIAL ONTO THE HEADERS WILL DESTROY THE HEAT DISSIPATION PROPERTIES OF THE TUBING, CAUSING PREMATURE DETERIORATION OF THE METAL AND SUBSEQUENT FAILURE. USE OF ANY "WRAPPING" MATERIAL WILL VOID THE WARRANTY.

SUGGESTED TOOLS

7/16" WRENCHES (VARIOUS LENGTHS)

7/16" SOCKETS (SHALLOW AND DEEP)

$\frac{1}{2}$ " WRENCHES (VARIOUS LENGTHS)

9/16" SOCKETS (SHALLOW AND DEEP)

5/8" SPARK PLUG SOCKET

7/8 OPEN END WRENCH

15MM DEEP SOCKET

15MM BOX END WRENCH

31MM OPEN END WRENCH (A LINE WRENCH)

3", 6", AND 12" EXTENTIONS FOR SOCKETS

SCREWDRIVERS AND/OR NUT DRIVERS (FOR HOSE CLAMPS)

SAWZALL (HAND -HELD POWER HACK SAW)

LUG NUT WRENCH

HIGHT TEMP SILICONE (UNTRA COPPER BY PERMATEX)

GOOD RUST PENETRANT

IT IS CRITICAL THAT ALL BOLTS BE RE-TIGHTENED HOT AFTER ABOUT 20 MINUTES OF OPERATION TO PREVENT GASKET FAILURE.

NOTE: HEADERS ARE NOT MEANT TO SERVE AS "EXHAUST SYSTEM SUPPORT HANGERS". ADDITIONAL HANGERS MAY NEED TO BE ADDED AT THE TIME OF THE INSTALLATION OF THE HEADERS SO THAT THE EXHAUST SYSTEM SUPPORTS ITSELF WHEN THE COLLECTOR BOKTS ARE REMOVED. HEADERS THAT HAVE "SAGGED" DUE TO THE LACK OF SUFFICIENT EXHAUST SYSTEM SUPPORT WILL NOT BE REPLACED UNDER WARRANTY.

NOTE: HEADER BOLTS SHOULD BE INSPECTED FOR TIGHTNESS FROM TIME TO TIME TO ENSURE OPTIMUM GASKET LIFE. THE BOLTS WILL STRETCH SOME AT FIRST DUE TO THE EXHAUST HEAT; SO, THEY'LL LOOSEN WITHOUT TURNING UNTIL THEY "TAKE A SET". (BOLTS HARD ENOUGH NOT TO STRETCH WOULD BREAK!) WE'VE EXPERIMENTED WITH THE VARIOUS "LOCKING DEVICES" ON THE MARKET, WHICH PREVENT BOLTS FROM TURNING. THEY DON'T WORK ON HEADER BOLTS, AND THEY GREATLY COMPLICATE THE PROCESS OF RE-TIGHTENING THE BOLTS WHEN IT'S NECESSARY.

WHAT DOES WORK IS THIS:

GO OVER THE BOLTS AGAIN AFTER THE FIRST DAY OF DRIVING (OR ABOUT 100 MILES-WHICHEVER COMES FIRST) THEN AFTER THE FIRST WEEK, AFTER THE FIRST MONTH, AND THEN EVERY 6 MONTHS. OUR EXCLUSIVE GASKETS ARE SPECIALLY MADE SO THAT THE CYLINDER HEAD SHOULD BEGIN TO MELT BEFORE THE GASKETS CAN BURN UP. ABOUT THE ONLY WAY TO KILL THE GASKETS IS TO LET THE HEADERS GET LOOSE AND THEN KEEP DRIVING WITH A LEAK.

DUE TO VARYING CONDITIONS BETWEEN GEOGRAPHICAL LOCATIONS AND USAGE, WE STRONGLY RECOMMEND HAVING THE ENGINE RE-TUNE AT A REPUTABLE TUNE-UP SHOP AFTER THE INSTALLATION OF THE HEADERS. DOING SO WILL ENSURE THAT YOU GET THE MAXIMUM BENEFIT FROM THE INSTALLATION OF THE HEADERS.

GIBSON PERFORMANCE STRIVES TO DELIVER THE HIGHEST QUALITY MATERIALS, WORKMANSHIP, AND SERVICE. PLEASE DO NOT HESITATE TO CALL OUR TECHNICAL LINE IF YOU HAVE A QUESTION OR EXPERIENCE A PROBLEM.

INSTALLATION INSTRUCTIONS

1. Place 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 cable from the battery. Raise the front of the vehicle to obtain adequate access to the bottom exhaust manifold flanges. Use large-based jack stands to support the vehicle. Do not rely on the jack. Block the tires to prevent the vehicle from rolling off the jack stands.
2. Begin with the driver's side (It is more difficult of the two sides). Spray WD-40 or some type of penetrating oil on all accessible fasteners and fittings before attempting to remove them. For easier removal of the manifold and installing the header, you must **remove** the steering shaft. **Before removing**, you need to mark the alignment of the shaft.(See figure #1) Make sure the shaft goes back to its' stock location. **(NOTE: ALIGNMENT OF THE SHAFT IS VERY IMPORTANT FOR PROPER AIR-BAG SENSOR OPERATION!)** Remove driver side spark plug loom and remove the temperature sensor from the side of the engine block as seen in (figure #2). After this is done starting from the bottom unbolt the bottom flange nuts (where the manifold connects to the exhaust system). The stock nuts are intentionally deformed to prevent them from premature loosening. This also makes removal difficult. Apply as much torque as necessary to remove the nuts. The nuts may not turn and the stud may begin to unthread from the manifold. This is a problem because the studs have shoulders which will not pull through the exhaust flange. If the stud comes loose, reverse your wrench and tighten the stud back into the manifold solidly. Try again to remove the nuts. If the nuts are still jammed on, apply heat to the nut with an acetylene torch. Try again to remove the nuts. If all else fails cut the nuts off. The Headers are supplied with new bolts and nuts for reinstallation.
3. On the top side: **Unbolt the spark plug wire looms from the cylinder heads.** **DO NOT SKIP THIS STEP!** Otherwise the spark plug looms will hold the head flange out away from the head, preventing the heads from sealing. Disconnect the spark plug wires by grasping and gently twisting the spark plug wire boots. Do not pull on the wires. Set the wires and looms up out of the way. Brush or blow away any debris that may have collected around the manifolds and spark plugs. This will help prevent foreign matter from entering the combustion chambers when the manifolds are removed. **(NOTE: REMOVAL OF THE SPARK PLUGS WILL MAKE INSTALLATION EASIER!)** Disconnect the EGR tube from the manifold (See figure #3). Remove bolts attaching manifold to the head, and then remove manifold.
4. Using a small wire brush or other instrument, remove any carbon deposits left on the exhaust flange mating surface of the dry head. Thoroughly clean the surface with solvent or another cleaner. Remove the doughnut-shaped gasket from the lower flange (where the manifold bolts to the exhaust system). The headers use a steel dome in place of this gasket. Remove any excess carbon deposits from the lower flange.
5. On the driver's side use the 3/8"X 1" bolts supplied. Apply a thin coating of sealant to the collector dome, where it mates to the lower flange. Permatex Ultra-Copper High Temp Sealant is recommended. **DO NOT USE A SEALANT THAT IS NOT DESIGNED TO BE USED WITH O2 SENSORS!** (Also note that if excessive sealant is applied, clumps may fall into the

exhaust system and clog the Catalytic Converter). Bolt the header to the head. Torque all 6 fasteners by starting at the center of the manifold to factory specifications (30-35 ft./lbs.) Re-attach the EGR tube to the header and the engine temperature sending unit to the side of the head.

6. **Note on the driver side only DO NOT use spark plug bracket)** use supplied zip ties to tie the plug wires away from the header tubes for clearance.
7. Using the supplied fasteners, bolt the Header to the bottom flange. The nuts are jam nuts. Therefore they will not spin freely. This is normal. Torque to 30-35 ft/lbs.
8. Re-install spark plugs, then install supplied spark plug heat-wrap on the #5 cylinder spark plug wire 90° boot. Z-tie #3 and #5 plug wires to keep from laying on the header.(See figure #4)
9. Then re-install the steering shaft to the align mark on shaft. After the shaft is installed, install the 10" supplied heat-wrap and steel clamps to wrap around the shaft for heat protection. (See figure #5)
10. The Passenger Side (See figure #6): Unbolt the manifold from the exhaust system from under the vehicle as on the driver's side. Disconnect the spark plug wires from the spark plugs. Unbolt the spark plug looms and put them up out of the way. Also remove the spark plugs for easier removal of the manifold and installation of the headers. The dip stick tube is bolted to the head via the forward spark plug wire loom bolt. With the bolt removed the dip stick tube can be removed by wiggling the tube while pulling upward. (The bottom of the tube is pressed into a hole in the engine.) Unbolt the manifold from the head and remove. As with the driver's side, clean the head flange and lower flange where the header will attach to the exhaust system. Remember to remove the doughnut-shaped gasket. As with the driver's side, apply silicone to the dome flange and bolt the header to the head and exhaust system. Re-install the dip stick. Re-install the spark plugs. Before re-installing the wire loom reverse #'s 4 and 6 spark plug wire from distributor cap and engine. (Reason is this reverses for clearance of the header tubes.) Install the supplied heat-wrap over spark plug wires that are closest to the tubes.
11. RE-CHECK EVERYTHING!!
12. Start the engine and let it warm up. Check for leaks. Shut engine off and let it cool down. Check to make sure all fasteners are tight.
13. Periodically check and retighten the header bolts.

NOTE: IT IS NOT UNUSUAL WHEN INSTALLING HEADERS TO GET A BURNING SMELL. THIS IS NORMAL AND IT WILL GO AWAY!

PARTS LIST:

- (1) DRIVER'S SIDE HEADER ASSEMBLY
- (1) PASSENGER'S SIDE HEADER ASSEMBLY
- (12) 3/8"X 1" HEADER BOLTS AND LOCK WASHERS
- (2) HEADER GASKETS (HEADER TO HEAD FLANGE)
- (6) COLLECTOR BOLTS, NUTS AND WASHERS 3/8 x 2 1/2 long
- (4) 1/4" I.D. X 1/2" LONG TUBULAR SPACER FOR THE SPARK PLUG LOOMS
- (2) 1/4" X 1" BOLTS FOR THE SPARK PLUG LOOMS
- (3) 2" LONG SPARK PLUG WIRE HEAT-WRAP PIECES
- (1) 10" LONG STEERING SHAFT HEAT-WRAP
- (2) STEEL CLAMPS FOR STEERING HEAT-WRAP 3/4 x 1 3/4
- (3) Z-TIES

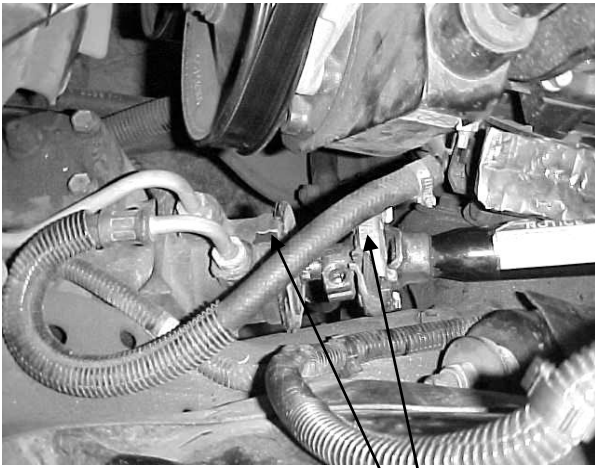


Figure #1

Mark alignment
pin at arrow and
then disconnect

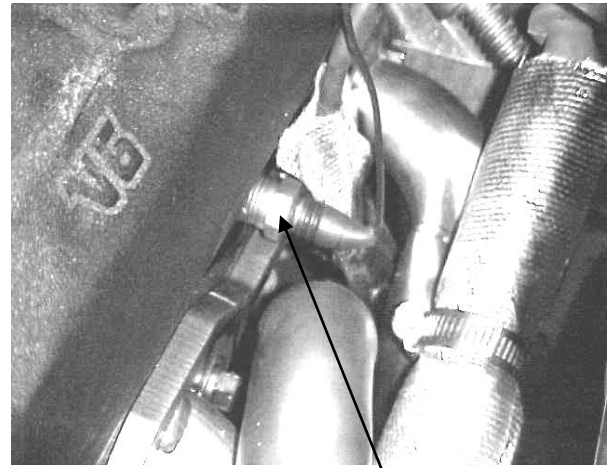


Figure #2

Engine coolant
temperature sensor



Figure #3

Disconnect here at EGR
tube.

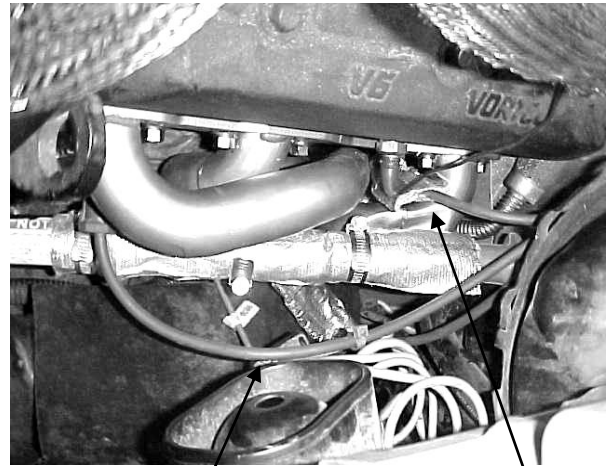


Figure #4

Zip tie wires
away from
header.

Install heat wrap
around #5 spark plug
wire

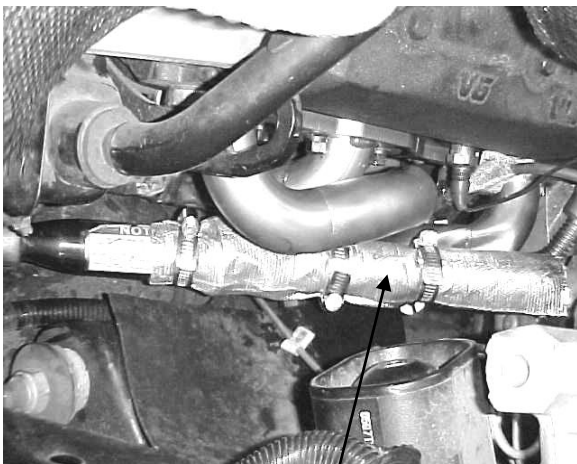


Figure #5

Heat wrap around steering column

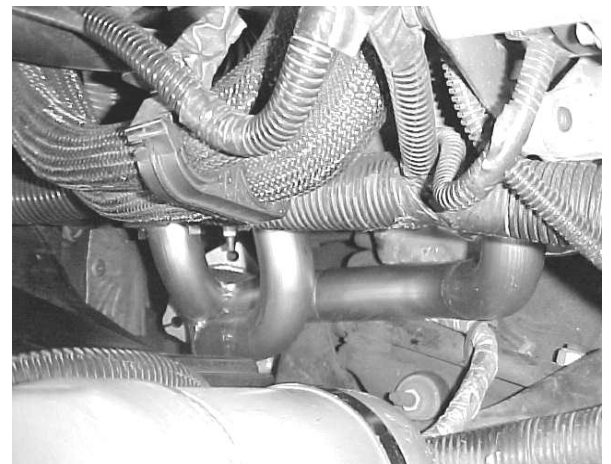


Figure #6

Passenger side header.