



**PERFORMANCE EXHAUST SYSTEMS**

**952004S  
STAINLESS  
POWER EXHAUST SYSTEM**

**75-86 CHEVY 454  
CLASS "A" MOTORHOME  
SINGLE AIR PUMP**

*Thank you very much for  
purchasing our Gibson  
Exhaust System 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, California 92879**

## TOOLS SUGGESTED

1/4" ALLEN WRENCH

3/8" BOX END WRENCH AND/OR 3/8" DEEP SOCKET

7/16" SOCKETS (ONE SHALLOW/ONE DEEP)

1/2" COMBINATION WRENCH

1/2" SOCKET

9/16" COMBINATION WRENCHES

9/16" LINE WRENCH

5/8" THIN WALL SPARK PLUG SOCKET

15MM DEEP SOCKET

22MM OPEN END WRENCH

PLIERS

1/4" BOLT AT LEAST 1" LONG

HEATING TORCH AND SELECTION OF HAMMERS

HIGH TEMP SILICONE SEALER (RATED 600 DEGREES OR MORE)

MIG WELDER

EXHAUST JACK STAND

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.

**LEGAL STATUS:** THESE HEADERS ARE CONSIDERED A REPLACEMENT PART ON VEHICLES THAT DO NOT HAVE A CATALYTIC CONVERTER, AS LONG AS ALL ORIGINAL EMISSION CONTROL DEVICES ARE CONNECTED AND FUNCTIONING PROPERLY.

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.

# SPECIAL NOTES

- We highly recommend the SPARK PLUG WIRES be routed so they don't lay against the headers or the air injection lines. The wires to the starter should have enough clearance away from the starter shield and exhaust system. Improper installation of the above items could cause a spark that could lead to a fire!
  
- STARTER HEAT SHIELD may need to be notched out on one side for proper installation.
  
- We recommend ULTRA COPPER GASKET SEALER by PERMATEX for header gaskets. Apply to both sides. You can use black electrical tape to hold header gasket in place to header exhaust ports.
  
- STAINLESS STEEL TIP CLEANING: To clean use a Scott-Brite pad from your local grocery store. Apply clean motor oil to the pad and rub from side to side (just like you shine a pair of shoes). Wipe clean with a soft cloth and then use any type of aluminum cleaner.
  
- **454 MOTORHOMES WITH AIR INJECTION:** Remove your stock air injection rack from your stock manifolds. Install the air injection rack onto the headers. You do not need to use the stock inserts on your original stock air injection rack.

# DISASSEMBLY

1. Raise entire vehicle off of ground at least 24" and support with jack stands or other sturdy supports.

**WARNING:** It is highly recommended that all exhaust component bolts be sprayed with a good quality penetrator and be allowed plenty of time to soak before disassembly is begun to prevent bolt breakage. **NOTE:** Motorhome installations are greatly simplified by removing front tires at this time.

2. Remove air cleaner assembly and engine oil dipstick.
3. Remove positive battery cable from battery and secure out of the way.
4. Remove stock head pipes from exhaust manifolds. Check for HEAT RISER VALVE (attached to bottom of stock manifold).
5. If vehicle is equipped with two piece engine oil dipstick tube, remove bolt that secures bottom half to engine block with 1/2" wrench.
6. If vehicle is equipped with one-piece dipstick tube, gingerly thread the 1/4" bolt into the top of the tube to prevent crushing the tube during removal. Gently twist tube with pliers affixed to the top of tube (where bolt prevents tube from being crushed) to loosen tube. Lift tube out of hole and set aside.
7. Remove bottom row of valve cover stud nuts (or bolts) using a 3/8" wrench or deep socket in order to free up spark plug wire looms.
8. **NOTE:** SPARK PLUG LOCATION and remove spark plug wires beginning with a twisting motion so as not to damage the boots.
9. Leaving spark plug wires in stock looms, slide looms up and off of valve cover studs. Secure wires out of way.
10. Remove top row of exhaust manifold-to-head bolts with 9/16" wrench or socket. Mark and remove spark plug heat shields, paying close attention to stud that secures top half of two-piece oil dipstick tube (where applicable). This stud will be re-used with headers. Remove top half of two-piece dipstick tube at this point.
11. Remove spark plugs using thin-walled 5/8" spark plug socket.

**WARNING:** Thick-walled, lesser quality spark plug sockets tend to bind in the hole in the head causing spark plug breakage!

12. Remove A.I.R. harness (smog pump fittings) from stock exhaust manifolds while manifolds are still attached to engine, using 9/16" line (or flare nut) wrench.

13. Remove bottom row of exhaust bolts and both exhaust manifolds from top of engine compartment.
14. Separate stock head pipes from remainder of exhaust system.
15. Clean all traces of carbon deposits off of the exhaust port surface of the cylinder heads.

**NOTE:** Most header sealing problems occur because carbon deposits were left on the sealing surface!

- \* Now is a good time to replace questionable motor mounts. All engines are not mounted exactly the same in all vehicles at the factory. In some cases, the motor mounts need to be loosened and the engine shifted slightly in the frame to provide the maximum clearance from some components.
- \* While under vehicle check to make sure that the starter wiring is in good shape (not embrittled from previous heat damage) and that it is secured away from header.

# TRIAL ASSEMBLY

We strongly recommend that a "dry run" of assembly be performed before final installation of headers. Past experiences with factory tolerances have proven to us that it is worth the time and effort to trial fit EVERYTHING. To this end, the instructions will proceed through this process.

1. Trial fit the A.I.R. harnesses onto headers before placing headers onto vehicle. Remove harnesses from headers before installation.
2. Trial fit headers onto cylinder heads and mark "up and out" onto them.

**WARNING:** It is possible to install gaskets upside down and create a leak. THE FLAT EDGE OF CYLINDER HEAD GASKET GOES UP!

**NOTE:** In some cases, the gaskets must be notched to clear air conditioning brackets.

3. Place driver's side header into engine compartment from underneath vehicle.
4. Start at least two header bolts into convenient boltholes located towards end of header and tighten finger tight.

**NOTE:** DO NOT INSTALL GASKETS AT THIS TIME!

5. Trial fit driver's side A.I.R. harness with header in vehicle.
6. Place passenger side header into vehicle from underneath, and start at least two header bolts into convenient boltholes located towards ends of header.
7. Tighten finger tight.
8. Trial fit A.I.R. harness onto passenger side header while in vehicle.
9. Remove A.I.R. harness from headers.
10. Snug down all bolts used during "trial run" and check for alignment.
11. Cut existing exhaust system

**NOTE:** Now is the time to check for clearance problems and to re-route any fuel, brake, or electrical lines that may be too close to headers!

12. Remove the header-to-head bolts so that the header is freed up for

gasket installation (both sides).

## FINAL INSTALLATION

1. Install A.I.R. harness onto passenger side header (while still loose) and tighten finger tight.
2. Noting up and out markings, apply a bead of high-temp silicone gasket sealer (rated for 600 degrees or more) around each port to both sides.
3. Place headers against cylinder heads and start convenient header bolts into heads using star lock washers.
4. For vehicles having two-piece dipstick tube, install lower half of tub into oil pan. Install dipstick tube bracket bolt and tighten.
5. For vehicles having one-piece dipstick tube, install dipstick tube at this time.
6. Start all remaining header-to-head bolts. You may use a header bolt in place of the stud (if vehicle has a two piece dipstick) at this time to simplify this step.
7. Tighten all header-to-head bolts.
8. On models with two-piece dipstick tube, install top half of tube into bottom half. Remove header-to-head bolt at tube bracket location and leave top half of dipstick tube unsecured.
9. Install spark plugs using thin-walled 5/8" spark plug socket.  
  
**WARNING:** The use of "thick walled" (lesser quality) spark plug sockets has been found to result in the socket binding in the hole in the head. This feels like the spark plug tightening down, and has resulted in spark plugs being left loose!  
  
**NOTE:** We recommend the use of new spark plugs for optimum performance gains.
10. If using original equipment spark plug wire heat shields, remove upper header-to-head bolts.
11. Install spark plug heat shields. At two piece dipstick tube bracket location; install four (4) 3/8" flat washers to space stud out from header flange. Install tube bracket and tighten.
12. Re-install upper header-to-head bolts using star lock washers and tighten.



13. Tighten all remaining header-to-head bolts.
14. Tighten A.I.R. harnesses with line wrench.
15. Re-install all emission hoses and clamps.
16. Re-install spark plug wire and wiring harnesses. Tie back any wire that comes within 1" of any header tube for A.I.R. harness.
17. Re-install battery cable, air cleaner, and dipstick.
18. Start engine and check for leaks.

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

**CAUTION!** Gloves or other protection should be worn to protect installer from burns due to hot exhaust components during these final steps!

**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 bolts 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 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 these gaskets is to let the headers get loose and then keep driving with a leak.

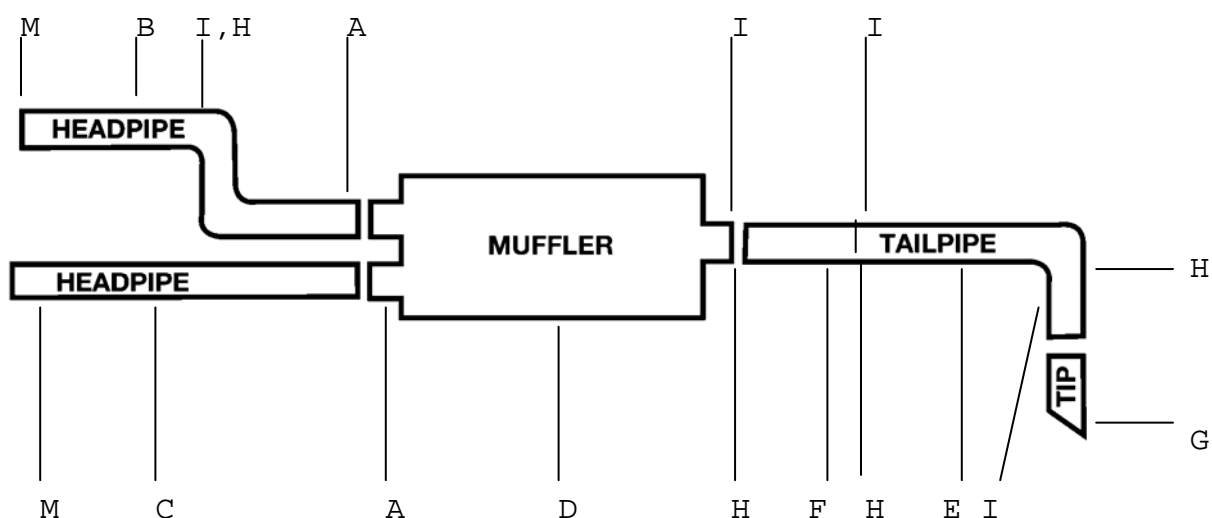
Due to varying conditions between geographical locations and usage, we strongly recommend having the engine re-tune at a reputable tune-up shop after the installation of the headers. Doing so will ensure that you get the maximum benefit from the installation of the headers.

GIBSON PERFORMANCE strives to deliver the highest quality materials, workmanship, and service. Please so not hesitate to call our technical line if you have a question or experience a problem.

***WE TRULY WISH TO HAVE ONLY SATISFIED CUSTOMERS***

# EXHAUST COMPONENTS

## 952004S



ITEM	PART #	QTY.	DESCRIPTION
	GP108S	1	TRI-Y STAINLESS HEADER
A	5757	2	2-1/2" CLAMP
B	616-500212S	1	2-1/2" SS PASSENGER SIDE HEADPIPE
C	617-500213S	1	2-1/2" SS DRIVER SIDE HEADPIPE
D	22865S	1	STAINLESS SUPERFLOW MUFFLER
E	618-50030LS	1	3" STAINLESS LEFTSIDE TAILPIPE
F	619-70036S	1	3" X 36" STAINLESS REAR EXTENSION PIPE
G	500360	1	3-1/2" STAINLESS STEEL TIP
H	OHD300	4	3" CLAMP
I	08269	4	10" METAL HANGER
I	BO-101	4	BOLT KIT FOR METAL HANGER
J	500030	1	STARTER HEAT SHIELD
K	14000-1	1	STARTER WIRE HEAT WRAP - 8"
L	14010	1	SPARK PLUG HEAT SLEEVE
M	OH6025	2	3 BOLT FLANGE
<b>ADDITIONAL PARTS FOR LONG WHEELBASE PART # 555555</b>			
	555555S	1	3" X 36" STAINLESS EXTENSION PIPE
	OHD300	1	3" CLAMP

# EXHAUST INSTALLATION INSTRUCTIONS

◆ WHEN INSTALLING THIS EXHAUST SYSTEM, MAKE SURE TO USE PROPER SAFETY PRECAUTIONS. USE JACK STANDS WHEN UNDER THE VEHICLE, ALONG WITH SAFETY GLASSES AND GLOVES. DO NOT WORK WITH HOT PIPES!

1. Lay out the GIBSON EXHAUST SYSTEM on the floor so it looks like the drawing.
2. Remove old exhaust using a hacksaw or cutting torch.
3. Insert the Hi-Temp gasket into each header collector and place the flange #M on top of the gasket and bolt down using clamps collector.
4. Bolt head pipes # B, and # C to the header collector flanges.  
Install  
metal hanger # I to passenger side head pipe and attach with clamp # H.
5. Install muffler# D with dual inlet towards the head pipes. Attach clamps # A to head pipes and muffler. Do not tighten at this time. Use a stand for support.
6. Install rear extension pipe # F and attach to muffler outlet. Attach to rear muffler outlet using hanger # I and clamp #H H down.
7. Hold up tailpipe #E in front of the rear tires to determine the correct length as needed for proper fit. Cut tailpipe for proper length as needed and attach to rear extension pipe and use hanger #I and clamp #H. Make sure all pipes have at least a 1" clearance from all structures.
8. Install stainless steel tip. To clean stainless tip use a Scott Brite pad or any stainless or aluminum cleaner.
9. Now go back and tighten all hangers and clamps.

**MAKE SURE YOU HAVE AT LEAST "1" CLEARANCE AWAY FROM ALL PIPES, RUBBER BRAKE LINES, FUEL LINES, SHOCK BOOTS, TIRES, ETC.**