

# **GP403S STAINLESS HEADER**

Jeep Wrangler 3.8L

*Thank you very much for purchasing our Gibson header for your vehicle.*  WHEN THESE INSTRUCTIONS ARE FOLLOWED PRECISELY, YOU WILL FIND THE INSTALLATION OF YOUR EXHAUST SYSTEM TO BE RELITIVELY 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.

**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

- 10, 12, 13, 15mm and 9/16" WRENCHES (VARIOUS LENGTHS)
- 10, 12, 13, 15mm and 9/16" SOCKETS (SHALLOW AND DEEP)
- 3", 6", AND 12" EXTENSIONS FOR SOCKETS

SCREWDRIVERS AND/OR NUT DRIVERS (FOR HOSE CLAMPS)

GOOD RUST PENETRANT

IT IS <u>CRITICAL</u> 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 <u>WILL NOT</u> 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.

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

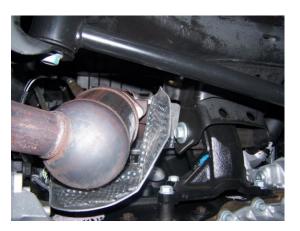
## **INSTALLATION INSTRUCTIONS**

**NOTE:** INSTALLATION OF THESE HEADERS REQUIRES AN ADEQUATE WORK SPACE, GENERAL MECHANIC'S TOOLS, GENERAL MECHANIC "KNOW-HOW" AND A REASONABLE DEGREE OF EXPERIENCE.

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.

DISCONNECT THE BATTERY CABLES 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. STARTING UNDERNEATH THE VEHICLE REMOVE FACTORY Y-PIPE ASSEMBLY FROM STOCK MANIFOLDS.





2. NOW STARTING UP TOP ON THE DRIVER SIDE, REMOVE STEERING SHAFT FOR REMOVAL OF FACTORY MANIFOLDS AND INSTALLATION OF HEADER. DISCONNECT ALL SPARK PLUG WIRES, REMOVE FACTORY HEAT SHIELDS AND MANIFOLD. MAKE SURE CYLINDER HEAD SURFACE IS CLEAN OF ANY DEBRIS BEFORE INSTALLATION OF HEADER.



3. NOW INSTALL GIBSON HEADER USING SUPPLIED GASKET RE-USING FACTORY BOLTS FOR INSTALL. TORQUE BOLTS FROM CENTER – OUT TO 30-35 FT-LBS. (NOTE: ON #4 CYLINDER AND SPARK PLUG WIRE, REMOVE STOCK SPARK PLUG BOOT USING A RAZOR BLADE MAKING SURE NOT TO CUT SPARK PLUG WIRE. USING WD-40 INSTALL NEW SUPPLIED 45<sup>°</sup> BOOT FOR HEAT CLEARANCE FROM HEADER.) ALSO INSTALL 2x6" SUPPLIED HEAT WRAP ON ALL SPARK PLUG WIRES FOR PROTECTION. AT THIS TIME USE SUPPLIED ZIP TIES TO KEEP SPARK PLUG WIRES FROM RESTING ON HEADER TUBES.



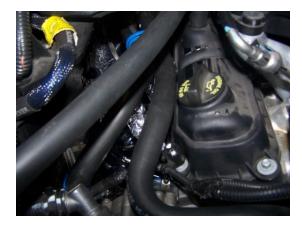
- 4. INSTALL THE HEAT SHIELD 5" X 8" ON THE PASSENGER SIDE # 1 CYLINDER TUBE TO PROTECT THE BATTERY BOX. THIS WILL PREVENT HEAT GOING TO COIL PACK ABOVE HEADER ASSEMBLY.
- 5. NOW RE-INSTALL STEERING SHAFT USING RED LOCKTITE BEFORE TORQUING FASTENER.



5. NOW ON PASSENGER SIDE REMOVE STOCK SHIELDS, SPARK PLUG WIRES, AND MANIFOLD. MAKE SURE TO CLEAN HEAD SURFACE OF ANY DEBRIS.



6. NOW INSTALL GIBSON HEADER WITH SUPPLIED GASKET RE-USING STOCK BOLTS TORQUING TO 30-35 FT-LBS FROM CENTER OUT. AFTER HEADER IS IN PLACE, USE SUPPLIED HEAT WRAP ON SPARK PLUG WIRES AND ZIP TIE TO KEEP AWAY FROM HEADER FOR HEAT PROTECTION. (NOTE: MAKE SURE ALL WIRES AND HOSES HAVE PROPER CLEARANCE FROM HEADER!)



7. AFTER HEADERS ARE IN PLACE. RE-INSTALL FACTORY Y-PIPE ASSEMBLY USING SUPPLIED BOLT KIT. NOW RE-CONNECT BATTERY. CHECK FOR ALL PROPER CLEARANCES THEN START VEHICLE AND THEN CHECK FOR ANY LEAKS. AFTER WARM-UP LET VEHICLE COOL DOWN AND RETORQUE ALL FASTENERS.



8. 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
(2) HEADER GASKETS
(1) BO-1060 BOLT KIT
(6) HEAT WRAP
(1) SPARK PLUG BOOT
(1) SPARK PLUG BOOT
(1) Heat shield P/S #500036
(2) CLAMP
(6) ZIP TIES