



# GP223S-C CERAMIC HEADER

**2005 FORD F250/F350 SUPERDUTY TRUCK 5.4L 2/4WD  
NEW BODY STYLE**

*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  
0107*

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.

**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

WRENCHES(VARIOUS LENGTHS)

5.5MM" 5/16, 12MM, 13MM, 15MM, 9/16 SOCKETS (SHALLOW&DEEP)

7/8" OPEN END WRENCH

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

SCREWDRIVERS AND/OR NUT DRIVERS (FOR HOSE CLAMPS)

HIGH TEMP SILICONE (ULTRA 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 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 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.

2. DISCONNECT STEERING SHAFT BY REMOVING THE SINGLE BOLT IN THE MIDDLE OF THE SHAFT. (NOTE REMOVING THE AIR INTAKE SYSTEM WILL HELP MAKE THIS STEP EASIER) MARK STEERING SHAFT TO MAKE SURE SHAFT IS RE-INSTALLED PROPERLY.



3. SPRAY WD-40 OR SOME TYPE OF PENETRATING OIL ON ALL ACCESSIBLE FASTENERS AND FITTINGS BEFORE ATTEMPTING TO REMOVE THEM.

4. REMOVE THE FACTORY EXHAUST SYSTEM BY WAY OF CLAMP BEHIND Y-PIPE. (NOTE: LUBRICATING RUBBER GROMMETS WILL MAKE FOR EASIER REMOVAL).



5. DISCONNECT ALL O2 SENSORS. THEN FROM UNDERNEATH THE VEHICLE, LOOSEN THE BOLTS CONNECTING THE Y-PIPE ASSEMBLY TO THE EXHAUST MANIFOLD. (ON 4X4 MODELS, DISCONNECT THE FRONT DRIVESHAFT BY REMOVING THE 4 BOLTS ON THE FLANGE, AND LET THE DRIVESHAFT HANG OUT OF THE WAY.)



6. TO HELP AID IN THE REMOVAL OF THE FACTORY MANIFOLDS IT IS SUGGESTED THE STARTER BE REMOVED TO MAKE FOR AN EASIER INSTALLTION. THIS CAN BE DONE BY REMOVING THE ( 3 ) 13MM BOLTS WHICH BOLT THE STARTER TO THE TRANSMISSION HOUSING, ONCE THIS HAS BEEN DONE LET THE STARTER HANG OUT OF THE WAY. NO NEED TO DISCONNECT THE STARTER WIRES.

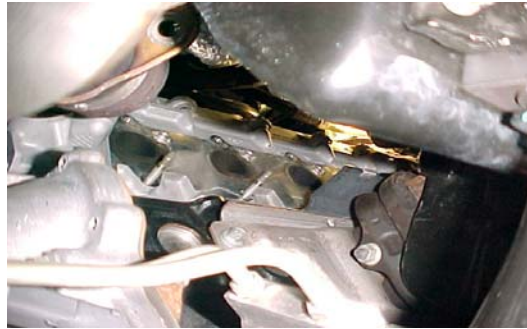


7. IT IS NOT NECESSARY TO REMOVE THE INNER FENDERWELLS, BUT IT MAKES THE INSTALL EASIER ON THE PASSENGER SIDE. TO REMOVE THE FENDERWELLS SIMPLY UNSCREW ALL THE SHEET METAL SCREWS AND FASTENERS ATTACHING IT TO THE FENDER AND FRAME AND THE FENDERWELL WILL DROP OUT.

8. STARTING ON THE DRIVER SIDE REMOVE ALL ( 8 ) NUTS ATTACHING THE MANIFOLD TO THE HEAD. REMOVE THE MANIFOLD. YOU MUST ALSO REMOVE THE MANIFOLD ATTACHING STUDS FROM THE HEAD. THE STUDS HAVE A 5.5mm HEX END ON THEM, A 1/4" DRIVE RATCHET AND A 5.5mm SOCKET WORK WELL FOR REMOVING THE STUDS.



9. ON THE PASSENGER SIDE, AGAIN WORKING THROUGH THE WHEELWELL, REMOVE THE NUTS ATTACHING THE MANIFOLD TO THE HEAD. REMOVE THE MANIFOLDS ATTACHING STUDS. (NOTE: MUST REMOVE ALL UPPER AND LOWER STUD BEFORE MANIFOLD WILL COME OUT.)



10. USING A SCRAPER REMOVE ALL CARBON DEPOSITS AND HIGH SPOTS FROM HEAD SURFACE, USE CARE NOT TO GOUGE THE ALUMINUM HEADS.

11. NOTICE ON THE DRIVERS SIDE HEADER THE UPPER BOLT HOLES ARE SLOTTED. INSTALL THE GASKET WITH THE HEADER BOLTS LEAVING AT LEAST 3/8 OF INCH GAP. APPLY GASKET SICLONE TO THE HEAD. BEFORE INSTALLING THE HEADER. (NOTE: IT IS RECOMENEDED TO USE A SMALL AMOUNT OF ANTI-SEIZE WHEN INSTALLING NEW HEADER BOLTS.



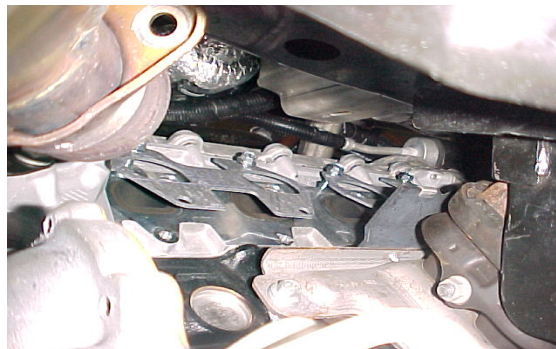
**\*Note: Header Gasket has a top and bottom. The bottom is flat and should be aiming down.**

12. INSTALL THE DRIVER SIDE HEADER FROM UNDERNEATH THE VEHICLE. SOME TWISTING AND WIGGLING OF THE HEADER IS NECESSARY. WHEN TORQING DOWN HEADER BOLTS BE SURE TO START WITH THE CENTER BOLTS AND WORK YOUR WAY TO THE OUTSIDE OF THE HEADER FLANGE.



13. BEFORE INSTALLING THE PASSENGER SIDE HEADER LOOSEN PASSENGER SIDE MOTOR MOUNT BOLTS AND RAISE ENGINE. BE SURE TO FIND A SECURE POINT TO RAISE ENGINE. ONCE ENGINE HAS BEEN RAISED SLIDE PASSENGER SIDE HEADER INTO PLACE FROM UNDERNEATH THE VEHICLE NOT USING ANY BOLTS. (NOTE: HAVING INSTALLED HEADER BOLTS AND GASKET BEFORE SLIDING HEADER INTO PLACE WILL INTERFERE WITH THE CORRECT AMOUNT OF CLEARANCE TO SLIDE HEADER IN.).

14. ONCE HEADER IS IN PLACE SLIP THE SUPPLIED GASKET BETWEEN THE HEADER FLANGE AND ENGINE HEAD SURFACE. WHILE DOING THIS START INSTALLING UPPER HEADER BOLTS TO HELP HOLD GASKET IN PLACE. MAKE SURE HEADER IS IN PLACE THEN INSTALL LOWER HEADER BOLTS. APPLY A SMALL AMOUNT OF ANTI-SEIZE TO THE THREADS OF THE BOLTS BEFORE TIGHTENING.



15. ONCE ALL BOLTS ARE SNUG. LOWER MOTOR BACK DOWN AND RE-TORQUE ENGINE MOUNT. TORQUE DOWN BOLTS STARTING WITH THE CENTER BOLTS FIRST. RECOMMENDED TORQUE SPECS. ARE 25-30 FOOT POUNDS OF TORQUE.

16. RE-CONNECT THE EXHAUST SYSTEM TO THE NEW HEADERS USING THE HARDWARE PROVIDED. (RE-CONNECT DRIVE SHAFT WHERE APPLICABLE)

17. RE-INSTALL THE INNER WHEELWELLS (IF REMOVED). CHECK TO ENSURE THAT THEIR ADEQUATE CLEARANCE ON ALL BRAKE LINES, WIRE LOOMS, A/C LINES, ETC.

18. RE-INSTALL THE FRONT WHEELS AND TORQUE TO FACTORY SPECS. (SEE OWNER'S MANUAL).

19. RE-INSTALL STARTER, RE-INSTALL STEERING SHAFT WITH LOCK TITE, RECONNECT THE BATTERY.

20. RE-CHECK EVERYTHING!

21. START THE ENGINE, CHECK FOR LEAKS AND TEST DRIVE. THEN LET THE ENGINE COOL AND THEN RE-TORQUE THE HEADER BOLTS. IT WILL BE NECESSARY TO RE-TORQUE THE HEADERS AFTER THE NEXT 100 MILES OR LESS.

22. PERIODICALLY CHECK AND RETIGHTEN THE HEADER BOLTS.



NOTE: IT IS NOT UNUSUAL WHEN INSTALLING HEADERS TO GET 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 (HEADER TO HEAD FLANGE)
- (4) COLLECTOR BOLTS AND NUTS, WASHERS
- (16) 8mm X 1.25mm BOLTS WITH STAR WASHERS