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GIBSON GP500S

Gibson GP500S Stainless Steel Performance Header

Instruction Manual

1. PRODUCT OVERVIEW

The Gibson GP500S Stainless Steel Performance Header is engineered to enhance engine performance by improving exhaust flow. This header is designed as a direct replacement for factory manifolds, utilizing stock crossover pipe connections. It is suitable for various vehicle configurations and meets EPA and CARB requirements, ensuring compliance with emissions standards.

Key features include:

- 1 5/8 inch tubing.
- Designed without air injection and without EGR.
- Includes flanges and gaskets for installation.
- Direct fit bolt-on replacement, requiring no welding.
- Uses OEM style connections for seamless integration.
- Heavy-duty laser-cut port flanges prevent warping and leaking.
- Premium gaskets and hardware are provided.



This image displays two perspectives of the Gibson GP500S Stainless Steel Performance Header. The top view shows the header with its primary tubes converging into a collector, featuring a multi-bolt flange for engine connection and a two-bolt flange for exhaust system attachment. The bottom view provides an alternative angle, emphasizing the smooth bends of the stainless steel tubing and the robust construction of the flanges. Both views illustrate the direct-fit design intended for easy installation.

2. INSTALLATION INSTRUCTIONS

Proper installation is crucial for optimal performance and safety. If you are not comfortable performing this installation, it is recommended to seek assistance from a qualified automotive technician.

2.1 Safety Precautions

- Ensure the vehicle is parked on a level surface and the engine is cool.
- Disconnect the negative terminal of the vehicle's battery.
- Use appropriate personal protective equipment, including safety glasses and gloves.
- Securely lift the vehicle using jack stands or a hoist. Never work under a vehicle supported only by a jack.

2.2 Required Tools

Standard automotive hand tools, including wrenches, sockets, ratchets, and possibly a torque wrench.

2.3 Installation Steps

1. **Preparation:** Allow the engine to cool completely. Disconnect the battery.
2. **Access:** Depending on the vehicle, it may be necessary to remove components such as spark plug wires, dipstick tubes, or other accessories to gain clear access to the factory exhaust manifolds.
3. **Remove Factory Manifolds:** Loosen and remove the bolts securing the factory exhaust manifolds to the cylinder heads. Disconnect the exhaust system from the manifolds. Carefully remove the old manifolds and gaskets.
4. **Clean Surfaces:** Thoroughly clean the cylinder head exhaust ports to ensure a proper seal with the new headers. Remove any old gasket material.
5. **Install New Gaskets:** Place the new premium gaskets provided with the Gibson GP500S headers onto the cylinder head studs or align them with the bolt holes.
6. **Position Headers:** Carefully position the Gibson GP500S headers onto the cylinder head studs, ensuring proper alignment with the exhaust ports.
7. **Secure Headers:** Install the provided hardware (bolts/nuts) to secure the headers to the cylinder heads. Tighten bolts evenly in a cross-pattern to the manufacturer's specified torque settings. Avoid over-tightening.
8. **Connect Exhaust System:** Reconnect the exhaust system to the header collectors using the provided flanges and hardware. Ensure a tight, leak-free connection.
9. **Reinstall Components:** Reinstall any components that were removed for access (e.g., dipstick tube, spark plug wires).
10. **Final Checks:** Double-check all connections and fasteners for tightness. Ensure there is adequate clearance around the headers and exhaust system to prevent contact with other vehicle components.
11. **Reconnect Battery:** Reconnect the negative terminal of the battery.
12. **Initial Start-up:** Start the engine and check for any exhaust leaks. Listen for unusual noises. It is normal to observe some smoke or odor during the first few minutes of operation as manufacturing oils burn off.

3. OPERATION AND PERFORMANCE

The Gibson GP500S Performance Header is designed to optimize exhaust gas flow, which can lead to several performance benefits:

- **Increased Horsepower and Torque:** Dyno-tuning ensures more usable horsepower and torque, particularly at low and mid-range RPMs, which is beneficial for highway speeds and towing.
- **Improved Engine Breathing:** The efficient design allows the engine to expel exhaust gases more effectively, improving overall engine efficiency.
- **Cooler Operating Temperature:** Enhanced exhaust scavenging can contribute to a cooler operating engine temperature.

4. MAINTENANCE

To ensure the longevity and continued performance of your Gibson GP500S Stainless Steel Performance Header, follow these maintenance guidelines:

- **Regular Inspection:** Periodically inspect the headers for any signs of damage, cracks, or loose connections. Check for exhaust leaks, which may manifest as a ticking sound or exhaust smell.
- **Fastener Torque:** After the initial heat cycles (e.g., after 500 miles), re-check the torque of all header bolts. Heat cycling can cause fasteners to loosen slightly.
- **Cleaning:** Stainless steel headers generally require minimal cleaning. If desired, use a mild automotive cleaner and a soft cloth to remove dirt and grime. Avoid abrasive cleaners or tools that could scratch the surface.
- **Gasket Integrity:** If an exhaust leak is detected, inspect the gaskets. Worn or damaged gaskets should be replaced promptly to maintain performance and prevent further issues.

5. TROUBLESHOOTING

If you encounter issues after installing your Gibson GP500S Performance Header, consider the following:

5.1 Exhaust Leaks

- **Symptom:** Hissing or ticking sound from the engine bay, exhaust smell, reduced performance.
- **Possible Cause:** Loose header bolts, improperly seated gaskets, damaged gaskets, or insufficient torque.
- **Solution:** Re-torque all header bolts evenly. Inspect and replace any damaged gaskets. Ensure mating surfaces are clean and free of debris.

5.2 Fitment Issues

- **Symptom:** Headers making contact with other engine components, chassis, or bodywork.
- **Possible Cause:** Incorrect installation, misaligned components, or manufacturing variation.
- **Solution:** Double-check the installation steps. Ensure all components are correctly aligned. If contact persists, consult a professional installer or contact Gibson Performance Exhaust for assistance.

5.3 Unusual Noises

- **Symptom:** Rattling, buzzing, or other abnormal sounds.
- **Possible Cause:** Loose heat shields, exhaust components vibrating against each other, or loose mounting hardware.
- **Solution:** Inspect all heat shields and exhaust hangers. Ensure all bolts and clamps are tight.

6. SPECIFICATIONS

Specification	Detail
Model Number	GP500S
Material	Stainless Steel
Tubing Size	1.63 Inches (Outlet Connection Size)
Number of Ports	2 (Outlet)
Outlet Connection Type	Flange
Exterior Finish	Stainless Steel
Dimensions (L x W x H)	24 x 10 x 10 inches

Item Weight	1.25 pounds
Compliance	EPA, CARB
GTIN / UPC	677418008586

7. WARRANTY INFORMATION

The Gibson GP500S Performance Header is designed to meet high-quality standards. Installation of this product will not affect the factory warranty of your vehicle. For specific warranty details regarding the Gibson product itself, please refer to the warranty documentation provided with your purchase or visit the official Gibson Performance Exhaust website.

8. SUPPORT

For technical assistance, installation questions, or troubleshooting beyond the scope of this manual, please contact Gibson Performance Exhaust customer support. It is recommended to have your product model number (GP500S) and purchase information available when contacting support.

You may also consult a certified automotive mechanic for professional installation or diagnostic services.