



**12. Lastly remove the two lower mounting studs from the frame**

**FREEDOM PERFORMANCE EXHAUST SYSTEM INSTALLATION**

1. Remove exhaust system from protective packaging it has been pre-assembled for easy installation. Place them in a non-abrasive surface such as a blanket or carpet. By doing this you can avoid scratching the parts in the in installation process. We recommend using painters tape to cover parts and accessories on areas where damage can occur during installation.
2. Install exhaust port flanges and retaining rings (from stock system) onto head pipes. (FREEDOM PERFORMANCE recommends replacement of exhaust port gaskets if damaged or worn out, Harley part number: 17048-98 or 65324-83A
3. Models without O2 sensors a plug must be installed in the header bung. The headers have an 18mm x 1.50 threads use the adapter and plug included in the kit to plug Oxygen sensor bungs. Models equipped with oxygen sensors Install oxygen sensor (from stock). If you have 18mm sensor just install the sensor, if you have 12mm sensors install the adapter first then the sensor, apply a small amount of anti-seize compound to the threads of the O2 sensors and install them into the new head pipes. NOTE: Be careful not to get anti-seize on sensor tip, it may affect sensor functionality.
4. Attach mounting bracket **MBK-S102-F2** using a 9/16 socket or wrench to motorcycle frame using 3/8-16 x 3/4" flange bolts (supplied) (If equipped, plastic plugs must be removed).
5. Attach two carriage bolts 3/8-16 x 3/4" and lock nuts to bracket slots with the head of the bolt facing outwards.
6. Install front head pipe **S230-F1** into exhaust ports by first carefully sliding the channel bracket welded on the head pipe to the head of the carriage bolt (on the mounting bracket) to engage and function as support as the header is aligned with the exhaust port. Install port flange nuts **NOTE: DO NOT TIGHTEN AT THIS TIME YET.**
7. Repeat step 6 with the rear header **S226-F1**
8. Align both pipes (headers run parallel to the frame) tighten to the mounting bracket first using a 9/16" wrench then to the exhaust port flanges using a 1/2" socket.
9. Install heat shields. For these steps it is imperative to use caution, space is very tight and scratches may occur. We recommend to use painters tape, cut a small piece and tape it to the edge of the heat shield where the clips are located (these are the clips inside the heat shield) now mark the center of the clip with a pen or marker. Slide the front shield (**S230-F2**) over the front pipe and carefully align it. Now insert the worm clamps in a way that they can be accessed to be tightened. Use clamps as follow: (#24) over the header (#28) over the muffler.
10. Repeat step # 9 with the rear heat shield (**S231-F2**) Note: we recommend for you to cover the heat shield on top right below where the rear pipe system is to be installed with a non-abrasive rag or painters tape to prevent scratches during installation of rear shield.
11. Tighten all hose clamps holding the shield to the head pipe using a 5/16" nut driver or flat screw driver.
12. If equipped re-install Oxygen sensor harness.
13. Models using a floor board and passenger floor board reinstall it.
14. Check for adequate clearance between all exhaust system components and motorcycle accessories prone to heat damage.
15. If equipped with sensor, use the plastic tie to hold the cable of the sensor against the frame as it was before installation.
16. Clean exhaust system with some chrome cleaner and remove painters tape (if used during installation) before turning on engine. Failure to follow this procedure may result in damages to the chrome finish as oils burn out leaving permanent marks.

**Note: Be sure to tighten all hardware before starting your engine. Retighten after the first 100 miles.**

**Re-jetting the carburetor or re-mapping is strongly recommended by FREEDOM PERFORMANCE**

*Every attempt has been made to provide improved cornering Clearance. However, due to design and space boundaries on some motorcycle models, ground and cornering clearance may not be improved and in some cases may even be reduced.*

**WARNING!**

**FREEDOM PERFORMANCE DOES NOT WARRANTY ANY CHROME OR CERAMIC BLACK PRODUCTS AGAINST DISCOLORATION.**

Note: use good and safe practices when removing and installing your new exhaust system to prevent injuries that includes but is not limited to such safety glasses and gloves. When installing make sure gloves are not abrasive or damage may occur like scratching parts. Always secure motorcycle before any work is done.