



Feel the Power of Freedom

**EXHAUST SYSTEM # HD00048  
AMENDMENT (2-2)**

Congratulations, you have acquired the finest aftermarket performance exhaust system available for your motorcycle. Your FREEDOM PERFORMANCE exhaust system was designed to perform fit and give the optimum sound and style at a very affordable price.

Please follow the installation instructions and please do not hesitate to call us for any technical questions at (310) 324-0415

**PACKAGING HD00048-HW (\*) =ASSEMBLED**

PART NUMBER	DESCRIPTION	QTY	PART NUMBER	DESCRIPTION	QTY
D245-F1	FRONT HEAD PIPE	1	HWB0005	5/16"-18 X 1-1/2" SOCKET CAP SCREW ZINC PLATED	3
D246-F1	REAR HEAD PIPE	1	HWB0001	1/4"-20 X 3/8" BUTTON HEAD SCREW ZINC PLATED	2
D245-F3	FRONT HEAT SHIELD	1	HWB0008	3/8"-16 X 3/4" CARRIAGE BOLT ZINC PLATED	2
D246-F3	REAR HEAT SHIELD	1	HWN0004	3/8"-16 FLANGE TRI-LOCK NUT ZINC PLATED	2
MBK-D100-F4	MOUNTING BRACKET (06-UP)	1	HWW0005	5/16" FLAT WASHER ZINC PLATED	3
A100-LCB-F8	LOUVER CORE BAFFLE 12"	2	HWM0002	PLASTIC TIE DOWN 7" LONG BLACK	1
A125-O2-F14	18X1.50MM TO 12X1.25MM O2 ADAPTOR	2	HD00048-HW	HARDWARE BOX	1
HWC0002	STAINLESS STEEL HOSE CLAMP # 24	3	HD00048-INS	INSTRUCTION MANUAL	1
HWC0003	STAINLESS STEEL HOSE CLAMP # 28	4			

**REMOVING THE STOCK EXHAUST SYSTEM**

1. Loosen all heat shield worm clamps on both the front and rear head pipes.
2. There are two bolts holding the rectifier in the front of the frame, remove them to gain access to the front oxygen sensor connection. Open the plastic cover and unplug the oxygen sensor from harness. Carefully cut the cable tie holding the wiring.
3. The seat must be removed to gain access to the rear oxygen sensor connector, unplug the oxygen sensor from harness and guide the wiring out carefully. Make sure to remember the route of the cable for re-installation.
4. Remove cylinder exhaust port flange nuts from each head pipe, positioned at the cylinder head and save for re-installation.
5. If equipped, remove front carriage bolt and clamp holding the front head pipe
6. Remove bolt that holds mufflers to the transmission mounting bracket.
7. Remove complete exhaust system. Note: some assistance may be required.
8. Now remove the stock mounting bar and set aside.
9. If equipped remove the front bracket that was holding the clamp on the front head pipe.
10. Remove the two lower and left bolts from the transmission cover to allow the installation of the new mounting bracket.
11. Remove both retaining rings and flanges from stock exhaust system using snap ring pliers. Inspect retaining rings prior to installation and they are damaged, replace them. Inspect gaskets if damaged or worn replace them.
12. Models (06-13) Using a 22mm or 7/8 wrench remove both oxygen sensor from stock exhaust system, models (14-up) use a 14mm wrench and save sensors for re-use.



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.

## 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 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 strongly recommends replacement of exhaust port gaskets, Harley part number: 17048-98.)
3. Attach mounting bracket **MBK-D100-F4** to motorcycle transmission using three 5/16-18 x 1.500" head cap screws and washers. (Supplied) Remove stock screws from the transmission to allow installation of new bracket.
4. Install O2 sensors (from stock) on head pipes using anti-seize compound apply it to the thread only. Be careful not to use too much or to make contact with the tip of the sensor as it may affect its functionality. Models **(06-13)** install sensor in bong as it is with no adaptors. **(14-UP)** models install the adaptor to reduce from 18mm to 12mm bung now install the sensors in place
5. Lay each head pipe onto its corresponding heat shield and install each hose clamp by feeding tail end of clamps into heat shield clips. Take note of location of clamp screw head direction. (Screw head must be accessible when system is installed on motorcycle for adjustment purposes). Do not tighten at this time yet. Install hose clamps **#24** over the head pipe section and **#28** over the muffler section.
6. Attach two carriage bolts 3/8-16 x 3/4" to bracket slots.
7. Inspect both gaskets on the engine port and replace if damaged or worn-out.
8. Install front head pipe assembly first 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.
9. Install port flange nuts all the way but do not tighten at this time yet. Attach head pipe to bracket using a 3/8"-16 locknuts all the way but do not tighten at this time.
10. Repeat step 9 with the rear head pipe assembly.
11. Align both pipes and tighten to the mounting bracket bolts first then to the exhaust port flanges.
12. Adjust both front and rear heat shield, then tighten worm clamps using a 5/16" nut driver.
13. Reconnect front and rear oxygen sensors to harness. Front oxygen sensor wire, attach to the frame using a cable tie close and re-install rectifier. On rear oxygen sensor feed the wire to reach the harness, connect and re-install seat.
14. Now check for enough clearance between the exhaust system components and motorcycle accessories prone to heat damage.
15. It is vital when installing a new chrome exhaust system; please make sure that your hands are clean with no oil. Right after installation is done, in detail, clean your new exhaust system with a soft cloth (to prevent scratches) and you could use the following (chrome wax, glass cleaner, alcohol, or ammonia before starting the engine.

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

*At freedom performance Inc. attempts have been made to provide enhanced concerning Clearances. However, due to some designs and space boundaries, 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 PAINTED PRODUCTS AGAINST DISCOLORATION.**

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