



HARDWARE

BRACKETS

PACKER #: _____

**HARLEY SPORTSTER PATRIOT LONG
2004-PRESENT**

Congratulations, you have acquired the finest aftermarket performance exhaust system available for your motorcycle. Your Freedom Performance system was designed with the rider in mind. Performance, Style, quality, and undistinguishable sound are the core values of our company.

WARNING: FREEDOM PERFORMANCE WORKS WITH FACTORY STOCK MOTORCYCLES, ANY ALTERATION OR OTHER AFTERMARKET ACCESSORIES OR REPLACEMENT PARTS MAY INTERFERE WITH THIS EXHAUST SYSTEM AND IN ORDER TO PROPERLY FIT IN SOME CASES SUCH COMPONENTS MUST BE REMOVED.

Please follow installation instructions and do not hesitate to call us for any technical questions at (951) 898-4733 if any components are missing do **NOT** proceed with installation until you contact us.

PACKAGING LIST: HD00118-HW

SP130-F1 FRONT HEADER	1	SP130-F2 FRONT SHIELD	1	18MM O2 PLUG	2
SP131-F1 REAR HEADER	1	SP131-F2 REAR SHIELD	1	HD00114-INS	1
MBK-SP100-F4 BRACKET	1	MBK-A100-F7 STRAP BRACKET	1	PLASTIC ZIP TIGHT	1
WORM CLAMP # 20	3	3/8"-16X3/4" ZINC PLATED CARRIAGE BOLT	4	14"-20X1/2" BUTTON HEAD BOLT	2
WORM CLAMP # 28	4	3/8"-16 LOCK NUT ZINK PLATED	4		
1/4" SPLIT WASHER	2	A100-LCB-F8	2		

WARNING: When installing you new exhaust system always refer to owner's manual for torque specifications and follow safety precautions, make sure motorcycle is properly secure to prevent it from falling and that is not hot to prevent burning.

**STOCK EXHAUST SYSTEM REMOVAL**

1. When removing or installing accessories there is always a chance to scratch motorcycle components, use painters tape on areas prone to scratches during the installation such frame, chrome or painted parts
2. It is recommended to use penetrating oil on all nuts, bolts and slip joint to ease removal of stock exhaust system.
3. Loosen all heat shield worm clamps on both the front and rear head pipes.
4. Models equipped with O2 sensors unplug front oxygen sensor from harness. Carefully cut the cable tie holding the wiring. models without O2 sensors skip steps 4 and 5
5. Repeat step two to remove 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.
6. Remove cylinder exhaust port flange nuts from each head pipe, positioned at the cylinder head and save for re-installation.
7. If equipped, remove rear carriage bolt and clamp holding the rear head pipe to the belt cover bracket.
8. Remove bolt that holds mufflers to the transmission mounting bracket.
9. Remove complete exhaust system. Note: some assistance may be required.
10. Remove oxygen sensors from head pipes using a 7/8" or 22mm wrench and save for re-use on your new Freedom Performance exhaust system.
11. Remove drive belt cover to gain access to remove stock mounting bar.

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.

12. Using a T30 torx driver, loosen the brake rod from the rear eyelet section.
13. Now remove the stock mounting bar and set aside.
14. Remove both circlips and flanges from stock exhaust system using snapping pliers. Inspect sirclips prior to installation and they are damaged, replace them. Inspect gaskets if damaged or worn replace them. Exhaust port gaskets, Harley part number: 17048-98.

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 flanges and circlips (from stock) onto front and rear head pipe
3. Install oxygen sensor into place. Models without O2 sensors install sensor plug. It is recommended to apply a small amount of anti-seize compound to the threads of each oxygen sensor or plug but be very careful not to apply it to the oxygen sensor tip as it may have an effect on its functionality.
4. Attach mounting bracket MBK-SP100-F4 to motorcycle transmission using the two 3/8" Allen bolts and washers. (From stock) recommended torque 32 Ft/lbs. Note: make sure brake rod is set in the right position before tightening down bolts.
5. Now re-install drive belt cover recommended torque for 3/8" Allen bolt 32 Ft/lbs. the 1/4" Allen bolts 85-115 In/Lbs.
6. Re-install the brake rod. It is highly recommended to use some type of thread locking compound and torque to 120-180 in/lbs.
7. Install sirclips and flanges to both head pipes.
8. Attach 1 carriage bolt 3/8-16 x 3/4" to channel bracket slot on the front header first, Align header system to engine port and mounting bracket, attach lock nut to hold the header system to the mounting bracket but DO NOT tighten at this time yet.
9. Install port flange nuts and Repeat step 8 with the rear header. Note: do not tighten at this time yet.
10. Install strap bracket MBK-A100-F7 using the two remaining carriage bolts 3/8"-16 x 3/4" and lock nuts on the rear channel brackets
11. Align both pipes and tighten to the mounting bracket bolts first then strap bracket and finally to the exhaust port flanges.
12. Adjust both front and rear heat shield, then tighten worm clamps.
13. Models with O2 sensors reconnect front and rear oxygen sensors to harness. In the front oxygen sensor wire attach to the frame using a supplied cable tie.
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.

Re-mapping is strongly recommended by FREEDOM PERFORMANCE

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.

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.