



**EXHAUST SYSTEM # HD00767
 SHARK TAIL TRUE DUALS 32" (2-2)**

Feel the Power of Freedom

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.

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

PACKAGING HD00767-HW (*) =ASSEMBLED

| PART NUMBER | DESCRIPTION | QTY | PART NUMBER | DESCRIPTION | QTY |
|-------------|-----------------------------|-----|-------------|---|-----|
| S355-F1 | FRONT PIPE | 1 | HWC0002 | HOSE CLAMP # 24 STAINLESS STEEL | 12 |
| S356-F1 | REAR PIPE | 1 | HWC0003 | HOSE CLAMP # 28 STAINLESS STEEL | 6 |
| S355-F2 | FRONT HEAT SHIELD | 1 | HWC0011 | BARREL CLAMP # 60 | 3 |
| S356-F2 | REAR HEAT SHIELD | 1 | A125-O2-F14 | OXYGEN SENSOR ADAPTER (18-12) | 2 |
| S337-F1 | CROSSOVER PIPE | 1 | HWB0064 | 3/8"-16 X 3/4" HEX SCREW ZINC PLATED | 4 |
| S337-F2 | CROSSOVER SHIELD | 1 | HWB0008 | 3/8"-16 X 3/4" CARRIAGE BOLT ZINC PLATED | 6 |
| S338-F2 | LEFT SIDE SHIELD | 1 | HWB0051 | 1/4"-20 X 1/2" BUTTON HEAD SCREW ZINC PLATES* | 4 |
| S115-ST-F2 | RIGHT SIDE MUFFLER SHIELD | 1 | HWN0004 | 3/8"-16 TRI-LOCK NUT ZINC PLATED | 6 |
| S116-ST-F2 | LEFT SIDE MUFFLER SHIELD | 1 | HWW0007 | 3/8" SMALL DIAMETER FLAT WASHER ZINC PLATED | 4 |
| MS310-F5 | MUFFLERS | 2 | HWW0003 | 1/4" SPLIT WASHER ZINC PLATED* | 4 |
| MBK-S230-F4 | MOUNTING BRACKET SKINY TIRE | 1 | HD00767-INS | INSTRUCTION MANUAL | 1 |
| MBK-S231-F4 | MOUNTING BRACKET FAT TIRE | 1 | HD00767-HW | HARDWARE BOX | 1 |
| MBK-S232-F4 | TRASMMISSION BRACKET | 1 | | | |
| A221ECA-F9 | SYSTEM END CAPS* | 2 | | | |

STOCK EXHAUST REMOVAL

1. there are different softail models and every single one has a different exhaust system, although they are different, the procedure to uninstall stock exhaust system is very similar. Here we point out the main steps to uninstall stock system, refer to owner's manual for the specifics.
2. *****Softail Fat Bob***** remove torx screws holding heat shield to header using a torx # 25 bit, there are 6 screws in total to be removed. (See figure 1.1 & 1.2)
3. Remove hose claps holding muffler shields using a 5/16" nut driver or flat screw driver. There is one clamp per muffler, once clamp is removed detach heat shields as shown. (See figure 1.3 & 1.4)
4. Using a 9/16" deep socket or wrench loosen muffler clamps, we recommend using penetrating oil to ease muffler removal. (See figure 1.5)
5. Remove two screws holding lower muffler to mounting bracket using a 3/16" hex key wrench (See figure 1.6) now detach lower muffler from header. (See figure 1.7)
6. Repeat step with upper muffler and place it aside. (See figure 1.8)
7. Locate Oxygen sensor harness and disengage both front and rear sensors from harness. Refer to owner's manual for the proper procedures to remove it Make sure to remember the path of the wire as it will be re-routed thru the same path. (See figure 1.9 & 1.10)
8. Remove head port flange nuts using a 1/2" socket, two on each header. Some assistance may be required (See figure 1.11 & 1.12) Note: it may be necessary to remove heat exchanger cover to access front lower flange nut if this is the case follow the next step.
9. Using a #25 torx wrench or bit remove cover and place it aside. Slightly lift heat exchanger and place a rubber or plastic piece between frame and heat exchanger to allow space for the wrench to access head port nut. (See figure 1.13, 1.14 & 1.15) Note: if you wish to remove heat exchange entirely consult your owner's manual.
10. Remove header assembly some assistance may be required.
11. Models equipped with passenger pegs remove them. First remove retaining ring holding pin in place, pull pin out, now, pull out peg assembly carefully as it is spring actuated and parts will fly out. Using a T45 star wrench or bit, remove screw holding peg bracket. Right side bracket will be relocated to upper hole on frame and left side will remain the same but over the new muffler mounting bracket except for (Fat Boy and Breakout) (See figure 1.16 1.17 & 1.18)
12. Remove mounting bracket using a 5/16" hex key wrench. (See figure 1.19)
13. Remove stock Oxygen sensors using a M14 wrench identify which is front and which is rear.
14. *****Softail Fat Boy & Breakout*****



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.

15. Loosen muffler clamps using a 9/16" deep socket or wrench located in front of each muffler. *(See figure 2.1 & 2.2)*
16. Remove screws holding mufflers to mounting bracket using a 3/16" hex key wrench. Note: you may need to remove muffler shields first, if so use a 5/16" nut driver or flat screw driver. *(See figure 2.3 & 2.4)*
17. Remove upper muffler first (rear) by pulling and rotating at the same time you may need penetrating oil to ease removal. In some cases, you may need to rotate clamp to clear passenger peg. *(See figure 2.5)*
18. Repeat step with lower muffler (front) *(See figure 2.6)*
19. Locate Oxygen sensor harness and disengage both front and rear sensors from harness. Refer to owner's manual for the proper procedures to remove it Make sure to remember the path of the wire as it will be re-routed thru the same path. *(See figure 2.7 & 2.8)*
20. Remove head port flange nuts using a 1/2" socket, two on each header. *(See figure 2.9 & 2.10) Note: it may be necessary to remove heat exchanger cover to access front lower flange nut if this is the case refer to step 9.*
21. Remove header assembly some assistance may be required.
22. Models equipped with passenger peg refer to step #11
23. Remove mounting bracket using a 5/16" hex key wrench. *(See figure 2.11 & 2.12)*
24. Remove stock Oxygen sensors using a M14 wrench identify which is front and which is rear.
25. Passenger pegs for these models need to be relocated using a special adapter sold separately.
26. *****Softail Street Bob, Heritage, Deluxe, low rider and Slim*****
27. Remove screws holding muffler to mounting bracket using a 3/16" hex key wrench there are two screws per muffler. *(See figure 3.1 & 3.2)*
28. Loosen both muffler clamps using a 9/16" deep socket or wrench located at each muffler's nose. *(See figure 3.3)*
29. Remove mufflers and place them aside use penetrating oil to ease removal. *(See figure 3.4 & 3.5)*
30. Models equipped with passenger peg refer to step #11.
31. Locate and disconnect front and rear Oxygen sensor harness see owner's manual for proper procedures.
32. Models equipped with Mid-Controls remove screws using a T45 torx wrench or bit and let it hang. *(See figure 3.6 & 3.7)*
33. Remove head port flange nuts using a 1/2" socket, two on each header. *(See figure 3.8 & 3.9) Note: it may be necessary to remove heat exchanger cover to access front lower flange nut if this is the case refer to step 9.*
34. Remove header assembly some assistance may be required.
35. Models equipped with passenger peg refer to step #11
36. Models equipped with saddle bags have a support bar that attaches to stock mounting bracket, remove screw holding plastic grommet using a 1/2" wrench and save both for re-use, these are located at the end of the support bar. *Note: in order to re-install saddle bag support bar a bracket is needed part number AC00249 (See figure 3.10 & 3.11)*
37. Remove stock mounting bracket using a 5/16" hex key wrench. *(See figure 3.12 & 3.13)*
38. Remove Oxygen sensors from stock using a 14mm wrench.
39. *****Softail Sport Glide*****
40. Loosen clamp holding muffler to header system assembly using a 9/16" deep socket or wrench. *(See figure 4.1)*
41. Remove two screws holding muffler to mounting bracket using a 3/16" hex key wrench. *See figure 4.2 & 4.3)*
42. Remove muffler by pulling backwards away from header you may need some penetrating oil to ease removal. *See figure 4.4)*
43. Disconnect Oxygen sensors from harness, mark which one is front and which is rear.
44. Remove head port flange nuts using a 1/2" socket and safe for re-use. (two on each header) *Note: it may be necessary to remove heat exchanger cover to access front lower flange nut if this is the case refer to step 9.*
45. Remove entire system, some assistance may be required. *See figure 4.5)*
46. Remove screw with plastic grommet using a 1/2" socket or wrench and safe for re-use. *See figure 4.6)*
47. Remove two screws holding mounting bracket to motorcycle frame using a 5/16 hex key wrench. *See figure 4.7 & 4.8)*

EXHAUST INSTALLATION

1. Remove exhaust system from protective packaging it has been pre-assembled for you to see how its assembled, disassemble system and lay it down, place them in a non-abrasive surface such as a blanket or carpet. By doing this you can avoid scratching parts during the installation process.
2. Note: We recommend using painters tape to cover parts and accessories on motorcycle areas where damage can occur during installation.
3. Refer to picture for hardware needed and table of components at the top of the instructional sheet. *(See figure 5.1 & 5.2)*
4. **NOTE: this system is intended to fit narrow frame models (Street Bob, Heritage, Deluxe, low rider, Sport glide and Slim) for wide frame models (Fat Boy and Breakout) mounting brackets are sold separately part number AC00252.**
5. Install transmission bracket **MBK-S232-F4** narrow frame models (Street Bob, Heritage, Deluxe, low rider, Sport glide and Slim) and **MBK-SXXX-F4** for (Fat Boy and Breakout) using stock socket head screws and a 1/4" hex key wrench. *(See figure 5.3 & 5.4)*
6. Install muffler mounting brackets. Wide frame models (Fat Boy and Breakout) use **right side MBK-S???-F4** and **left side MBK-S???-F4** Slim frame models (Street Bob, Heritage, Deluxe, low rider, Sport glide and Slim) **right side MBK-S230-F4** and **left side MBK-S231-F4** use a 9/16" wrench or socket with two 3/4" hex screws and washers provided. *(See figure 5.5 & 5.6 narrow frame) (See figure 5.7 & 5.8 wide frame)*
8. For wide tire models (Fat Boy and Breakout) if passenger peg is to be installed a bracket relocater is needed part number **AC00248** sold separately which contains two relocater brackets one for the right and one for the left so that both pegs have the same height. *(See figure 5.9 & 5.10)* if peg relocater is installed use longer screw which comes on the peg relocater kit. Notice that the pin on the right side relocater bracket (longer) will engage in the hole to prevent from rotating. The shorter relocater bracket is for the left side *(See figure 5.11)*
9. Models with stock saddle bags, in order to secure right side saddle bag support to new system's bracket, a special bracket is needed part # **AC00249** sold separately. Notice that steel pin on right side will engage in the hole to prevent from rotating on the left side the cut out will prevent rotation. *(See figure 5.12)*
10. Models with saddle bags Install left side saddle bag bracket from stock on top of mounting bracket as shown. *(See figure 5.13)*

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.

11. Install Oxygen sensors, these headers have an 18mm x 1.50 threads. Install oxygen sensor (from stock). If you have 18mm sensor just install the sensor as is with no other hardware. If you have stock sensors install the adapter first then the sensor using a 14mm wrench. **(See figure 5.14 & 5.15)** 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. If no sensor is to be installed, use adapter and plug 12MM x 1.25
12. Install exhaust port flanges and retaining rings (from stock system) onto head pipes. **(See figure 5.16)** (FREEDOM PERFORMANCE recommends replacement of exhaust port gaskets and retaining rings if damaged, bent or worn out.
13. Slide 1 Barrel clamp (# 60) in front of the slotted end of each muffler **NOTE: both clamp screw heads must face down and towards the frame, see picture for details. (See figure 5.17)**
14. Install front head pipe **S355-F1** finger tight stock flange nuts all the way but do not tighten at this time yet, or use a 1/2" socket or drive screw, secure back end of pipe to transmission bracket with a supplied 3/8"-16 carriage bolt and lock nut. Do not tighten at this time yet. **(See figure 5.18 & 5.19)**
15. Insert a barrel band clamp over the slotted end of the crossover pipe as shown note that hex nut is facing down. **(See figure 5.20)**
16. Install crossover pipe all the way buy sliding slotted end over rear end of front pipe. **(See figure 5.21)**
17. Install rear head pipe **S356-F1**. **(See figure 5.22 & 5.23)**
18. Install mufflers, insert one muffler over right rear head pipe and the other muffler over the crossover pipe on the left side, secure both mufflers to mounting brackets using two 3/8" carriage bolts and lock nuts on each muffler. **NOTE: Brackets welded on muffler must be aligned flush at the back of mounting brackets. DO NOT TIGHTEN AT THIS TIME YET. (See figure 5.24 & 5.25)**
19. Align system, for this step it is imperative that the motorcycle is straight up as the mufflers and headers must be aligned correctly so that both left and right side have equal Hight from the ground to the bottom of the mufflers. We recommend lifting motorcycle with a motorcycle jack and leveling the frame, adjust as necessary you can lift or lower mufflers as well as mounting brackets by loosening screws. Adjust as needed if necessary.
20. Once system is aligned proceed to tighten starting with the muffler brackets using a 9/16" socket or wrench.
21. Tighten lock nuts holding head pipes to transmission bracket using a 9/16" wrench.
22. Tighten head port flange nuts using a 1/2" deep socket on both front and rear headers.
23. Tighten crossover barrel band clamp making sure front pipe is all the way into the crossover pipe and that clamp is clear from touching any part of motorcycle using a m10 socket or wrench.
24. 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 over the heat shield where the clips are located **(these are the clips welded inside the heat shield)** now mark the center of the clip with a pen or marker also mark an arrow pointing the direction of hose clamp insertion as seen of the fig. **(See figure 5.26)**
25. place front shield (**S355-F2**) over front pipe and carefully align it. Now insert the worm clamps in the direction of the arrow. **(See figure 5.27 & 5.28)** Use clamps as follow: (#24) over the header (#28) over the muffler.
26. Repeat step with the rear heat shield (**S356-F2**) Note: we recommend for you to cover front 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. **(See figure 5.29)**
27. Install crossover heat shield, follow the contour of the pipe this part will shield plastic components from pipe heat. **(See figure 5.30)**
28. Install left side shield as shown in the pictures. **(See figure 5.31)**
29. Install right side muffler shield by sliding and engaging mufflers from the back. Note that the muffler shield has a welded collar in front so that the pipe shield will sit on top of it and having a smooth transition from pipe shield to muffler shield. **(See figure 5.32)**
30. Repeat step with left side shield. **(See figure 5.33)**
31. Align all heat shields and tighten clamps using a 5/16 nut driver or flat screw driver.
32. Install system end caps or (shark tails) using a 5/32" hex key wrench, screws and split washers provided. If installed just make sure screws are tightened. If you need to rotate end cap to align it just loosen clamps holding muffler shield to muffler, rotate to align if necessary then retighten.
33. Tighten muffler barrel clamps (left and right) make sure clamps don't touch shield's edges, using a m10 socket or wrench. **(See figure 5.34 & 5.35)**
34. Reinstall right passenger peg. Slim tire models remove plastic plug from threaded hole on frame and reinstall peg bracket. **(See figure 5.36 & 5.37)** Wide tire models, install peg bracket on relocater bracket make sure the contour on both brackets match so that peg won't rotate. **(See figure 5.38 & 5.39)**
35. Re-route and engage Oxygen sensor harness.
36. Check for adequate clearance between all exhaust system components and motorcycle accessories prone to heat damage.
37. **Re-check all nuts and screws make sure everything is properly tightened.**
38. 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-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 BLACK FINISH 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.



Fig. 1.1 remove screws



Fig. 1.2 (6 total)



Fig. 1.3 remove hose clamps



Fig. 1.4 remove shields



Fig 1.5 loosen muffer clamps



Fig. 1.6 remove screws



Fig. 1.7 remove upper muffer.



Fig. 1.8 remove lower muffer



Fig. 1.9 disengage sensor harness



Fig. 1.10 locate front sensor



Fig. 1.11 remove rear flange nuts



Fig. 1.12 remove front flange nuts



Figure 1.13 remove screw



Fig. 1.14 remove cover



Fig. 1.15 space heat exchanger



Fig. 1.16 remove retaining ring



Fig. 1.17 pull pin and remove peg



Fig. 1.18 remove peg bracket



Fig. 1.19 remove mounting bracket



Fig. 2.1 loosen upper clamp



Fig.2.1 loosen lower clamp



Fig. 2.3 remove screws upper muffer



Fig. 2.4 remove lower muffer screws



Fig. 2.5 remove upper muffer

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Fig. 2.6 remove lower muffler



Fig. 2.7 disconnect rear sensor



Fig. 2.8 disconnect front sensor



Fig. 2.9 remove rear flange nuts



Fig. 2.10 remove front flange nuts



Fig. 2.11 remove mounting bracket



Fig. 2.12 mounting bracket removed



Fig. 3.1 remove upper muffler screws



Fig. 3.2 remove lower muffler screws



Fig. 3.3 loosen both muffler clamps



Fig. 3.4 remove upper muffler



Fig. 3.5 remove lower muffler



Fig. 3.6 remove mid control screws



Fig. 3.7 let it hang



Fig. 3.8 remove rear flange nuts



Fig. 3.9 remove front flange nuts



Fig. 3.10 remove plastic grommet



Fig. 3.11 remove bracket



Fig. 3.12 remove bracket



Fig. 3.13 bracket removed



Fig. 4.1 loosen clamps



Fig. 4.2 remove screws



Fig. 4.3 screws removed



Fig. 4.4 remove slip-on muffler

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Fig. 4.5 remove system



Fig. 4.6 remove screw & grommet



Fig. 4.7 remove bracket screws



Fig. 4.8 remove mounting bracket



Fig. 5.1 hardware narrow frame



Fig. 5.2 hardware wide frame sold separately



Fig. 5.3 install transmission bracket



Fig. 5.4 install transmission bracket



Fig. 5.5 right side bracket



Fig. 5.6 left side bracket



Fig. 5.7 right side bracket



Fig. 5.8 left side bracket



Fig. 5.9 peg adapter right side



Fig. 5.10 right side peg raiser



Fig. 5.11 left side peg riser

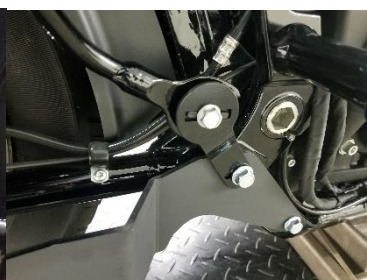


Fig. 5.12 install saddle bag bracket



Fig. 5.13 install left side saddle bracket



Fig. 5.14 install O2 adapters



Fig. 5.15 install O2 stock sensors



Fig. 5.16 install rings and flanges



Fig. 5.17 install barrel clamps.



Fig. 5.18 install front head pipe



Fig. 5.19 secure from transmission bracket



Fig. 5.20 insert barrel clamp with screw facing down

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Fig. 5.21 install crossover pipe screw faces down as shown

Fig. 5.22 install rear head pipe.

Fig. 5.23 secure front transmission bracket

Fig. 5.24 install right side bracket



Fig. 5.25 align flush at the back with mounting bracket

Fig. 5.26 mark the center of welded shield clips as shown

Fig. 5.27 install front shield

Fig. 5.28 arrows indicate insertion direction

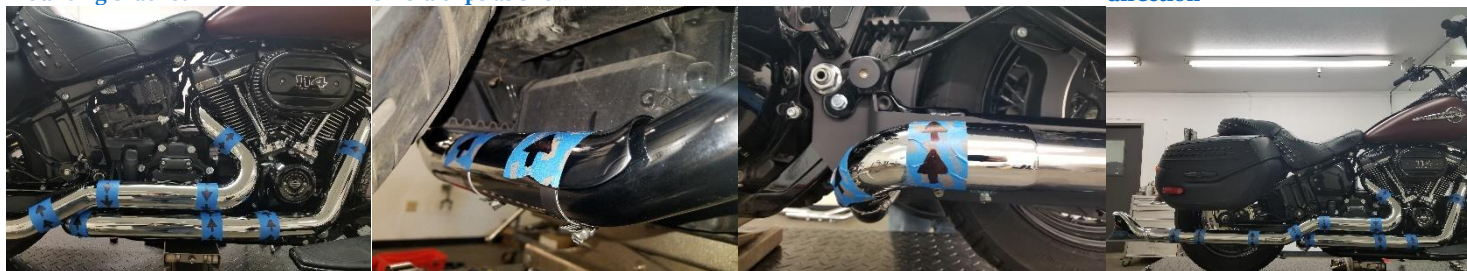


Fig. 5.29 install rear heat shield

Fig. 5.30 install crossover shield

Fig. 5.31 install left side shield

Fig. 5.32 install right muffer shield



Fig. 5.33 install rear heat shield

Fig. 5.34 tighten right barrel clamp

Fig. 5.35 tighten left barrel clamp

Fig. 5.36 install right side peg



Fig. 5.37 install left side peg

Fig. 5.38 install right side peg

Fig. 5.39 install right side peg

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.