



**EXHAUST SYSTEM # HD00808
TURN-OUT & SHORT MEGAPHONE
(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.

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 please do not hesitate to call us for any technical questions at (951) 898-4733

STOCK EXHAUST REMOVAL

1. there are different softtail 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 clamps 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 peg remove it. First remove retaining ring holding pin in place, pull pin out, now, pull peg assembly carefully as it is spring actuated and part will fly out. Using a T45 star wrench or bit remove screw holding peg bracket. This bracket will be relocated to upper hole on frame. (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*****
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 lubricating 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.



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.

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 7/16" 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 lubricant oil to ease removal. (See figure 3.4 & 3.5)
30. Models equipped with passenger peg refer to step #11. This bracket will be relocated to upper hole on frame.
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. Remove stock mounting bracket using a 5/16" hex key wrench. (See figure 3.10)
37. Models equipped with saddle bags have a support bar that attaches to stock mounting bracket, remove screw holding plastic grommet 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**
38. Remove Oxygen sensors from stock using a 14mm wrench.
39. *****Softail Sport Glide*****
40. Loosen muffler clamp using a socket 9/16" or wrench. (See figure 4.1)
41. Remove screws holding muffler to mounting bracket using a 3/16" hex key wrench. (See figure 4.2 & 4.3)
42. Remove slop on muffler by pulling it backwards (See figure 4.4)
43. Remove screw securing saddle bag bracket to mounting bracket. (See figure 4.5 & 4.6)
44. Remove mounting bracket. (See figure 4.7)
45. Remove entire system, refer to steps 19-25 to remove header assembly (See figure 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 the parts during 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 picture for hardware needed and list of components. (See figure 5.1)
4. Install system mounting bracket.
 - a. Wide tire models (Fat Boy and Breakout) use **MBK-S225-F4**.
 - b. Slim tire models (Street Bob, Heritage, Deluxe, low rider, Sport glide and Slim) use **MBK-S220-F4** use a 9/16" wrench or socket with two 3/4" hex screws and washers provided. (See figure 5.2 & 5.3)
5. Passenger peg Installation.\ instructions.
 - a. **(2018 Fat Boy and Breakout)** if passenger peg is to be installed a bracket relocater is required 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 5.4 5.5 & 5.6)
 - b. If peg relocater is installed use longer screw which comes on the peg relocater kit. Notice that 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 5.4)
 - c. 2019-up models have an extra treaded hole on the frame and there fore no adapter is necessary.
6. Models with stock saddle bags install bracket support adapter.
 - a. Fatboy and breakout models, in order to secure saddle bag support bracket to new system's bracket a special bracket is needed part # **AC00291** sold separately. Notice that the pin will engage in the hole to prevent from rotating. (See figure 5.7)
 - b. (2018 Fatboy and breakout) if installing **AC00248** peg relocater, there is no need to use saddle bag support bracket. Peg adapter has a hole designed to adapt saddlebag stock hardware. (See figure 5.8 and 2.9) **right side & (See figure 5.10 and 2.11) for left side.**
 - c. **(2019-up Fatboy and breakout AC00291** is required for saddlebags)
 - d. All narrow tire models like (FLSL-SLIM) (FXLR-LOW RIDER) (FXBB-STREET BOB) (FXDF-FAT BOB) (FLSTC-HERITAGE) (FLSTN-DELUXE) require saddle back bracket adapter part number **AC00249** sold separately.
7. Install exhaust port flanges and retaining rings (from stock system) onto head pipes.
 - a. FREEDOM PERFORMANCE recommends replacement of exhaust port gaskets and retaining rings if damaged, bent or worn out.
 - b. Install stock flanges make sure is inserted in the right direction.
 - c. Install retaining rings from stock. (See figure 5.12)
8. Install Oxygen sensors, these headers have an 18mm x 1.50 threads.
 - a. Apply a small amount of anti-seize compound to the threads of Oxygen sensors and adapters. **NOTE: Be careful not to apply anti-seize compound on sensor tip, it may affect sensor functionality.**
 - b. Install oxygen sensor (from stock). If you have 18mm sensor just install the sensor as is with no other hardware, use a 22mm or 7/8" wrench.
 - c. If you have stock sensors, install adapter using a 3/4" socket or wrench. (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.

- d. Install Oxygen sensor using a 14mm wrench. **(See figure 5.14)**
- e. If no sensor is to be installed, you will need a plug not included.
9. Insert barrel band clamp as shown, head od screw must point down.
10. Install header assembly
 - a. Install front pipe first, finger tight stock flange nuts all the way but do not tighten at this time yet, use a ½” socket or drive screw. **(See figure 5.16)**
 - b. Install rear header/muffler assembly, insert header assembly over front pipe at the same time rear header is aligned into engine port, now secure rear pipe using stock flange nuts. do not tighten at this time yet. **(See figure 5.17 & 5.1)**
 - c. Header/muffler assembly will be inserted as much as needed, in a way that both brackets (mounting bracket and bracket welded on muffler are flush to each other) this step is imperative if pipe is inserted too much or too little front heat shield will not align with rear heat shield.
 - d. Secure muffler to mounting bracket.
 - e. Insert back plate bracket into welded bracket on muffler, make sure flat side is facing towards mounting bracket.
 - f. Now secure it with two provided 5/16-18” x 5/8” serrated flange screws. Finger tight only.
11. Align entire exhaust system.
 - a. Tighten mounting bracket screws using a ½” open wrench (2 screws)
 - b. Tighten exhaust port flange nuts using a ½” socket.
 - c. Do not tighten barrel band clamp yet.
12. 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 on areas prone to scratches.
 - a. Cut a small piece of painter’s tape and tape it over heat shield where clips are located **(these are the clips welded inside heat shield)** now mark the center of the clip with a pen or marker.
 - b. Also mark an arrow pointing in the direction of hose clamp insertion as seen of the fig. **(See figure 5.19)**
 - c. Separate hose clamps as you have 4 different sizes (#24 #28 #40 and #56)
13. Install front shield.
 - a. Place front heat shield over front pipe and carefully align it.
 - b. Now insert worm clamps #24 in the direction of the arrow. **(See figure 5.20 & 5.21)**
 - c. Use a 5/16” nut driver or flat screw driver.
14. Repeat step with the rear heat shield 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 5.22)**
15. Align heat shields and tighten using a 5/16 nut driver.
 - a. Align both heat shields in a way that both shields are flush to each other at the back.
 - b. Tighten using a flat screw driver or 5/16” nut driver.
 - c. If necessary, you can rotate front heat shield to get it closer or further away from edge or rear heat shield.
16. Install muffler heat shield. **(See figure 5.23)**
 - a. You can install hose clamps before placing heat shield over muffler or when shield is placed on top, the choice is yours.
 - b. Insert hose clamp # 40 at the front oh heat shield.
 - c. Insert hose clamp # 56 at the back of heat shield.
 - d. Before tightening make sure there is a gap of about 1/16” between rear and front heat shields and muffler heat shield.
 - e. The apex of muffler heat shield (tip) should be placed in the middle of muffler holes, but you can rotate it to your liking.
17. Tighten barrel band clamp, there are two types of clamps, the only difference is the screw type.
 - a. Find out if you have a hex type or hex key (Allen) wrench type.
 - b. For hex type use a 10mm socket or wrench.
 - c. For hex key type (Allen) use a 5 mm hex key wrench.
18. Most Short systems have end caps pre-installed at the factory. **(See figure 5.24)**
 - a. Tighten end cap screws using a 5/32” hex key wrench.
 - b. If end cap was not installed at the factory install it now.
 - c. NOTE: System baffle is attached to end cap. When removing baffle or installing a quiet baffle, end cap has to be removed first. Once end cap screws have been removed you can pull backwards to remove baffle, to install simply align baffle to muffler outlet and push in until holes on muffler are aligned to end cap threaded holes.
19. Turn-out systems install end cap. **(See figure 5.25 and 5.26)**
 - a. All turn-out systems need to have end cap installed. You will need 3 button head screws and 3 split washers provided in hardware kit.
 - b. Elbow for turn-out comes installed from factory, make sure screws are tightened, use a 5/32” hex key wrench to tighten. There 3 screws for this elbow.
 - c. There are different styles of end caps for this system, insert end cap over elbow and rotate to your liking, once in the position you most like secure it with 3 button head screws and 3 split washers. Use a 5/32” hex key wrench.
 - d. Honeycomb end cap, place stainless steel honeycomb mesh into end cap then, insert end cap onto elbow. Now secure with screws. Mesh will be held between elbow and system end cap, push end cap backwards to make sure it squeezes mesh in place before tightening.
20. Reinstall right passenger peg.
 - a. Slim tire models remove plastic plug from threaded hole on frame and reinstall peg bracket. **(See figure 5.27 & 5.28)**
 - b. 2018 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 5.29)**
 - c. 2019-up wide tire models remove plastic plug and install peg bracket. **(See figure 5.27 & 5.28)**

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.

21. Connect Oxygen sensor harness.
 - a. Re-route and engage Oxygen sensor harness.
 - b. If necessary secure sensor wire with plastic ties. Cut excess tail of tie.
22. If peg or floorboards was removed to ease installation reinstall it now.
23. Check entire system and make sure all hardware is properly tightened.
24. If equipped with saddle bags install them now.
25. Check for adequate clearance between all exhaust system components and motorcycle accessories prone to heat damage.
26. 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.

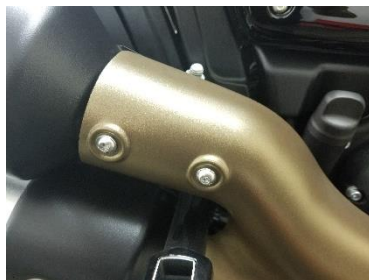


Fig. 1.1 remove screws



Fig. 1.2 (6 total)



Fig. 1.3 remove hose clamps

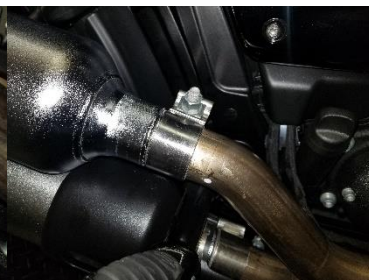


Fig. 1.4 remove shields



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

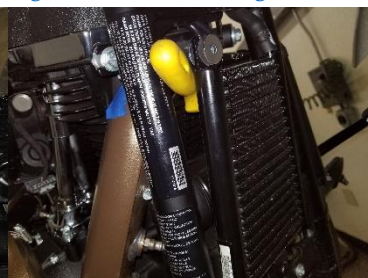


Fig. 1.15 space heat exchanger



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

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. 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

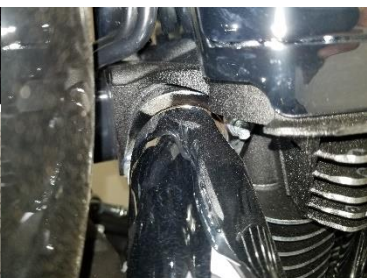


Fig. 3.8 remove rear flange nuts



Fig. 3.9 remove front flange nuts



Fig. 3.10 remove mounting bracket



Fig. 4.1 loosen clamp



Fig. 4.2 loosen screws



Fig. 4.3 remove screws



Fig. 4.4 remove slip on muffler



Fig. 4.5 remove saddle bag bracket screw



Fig. 4.6 disconnect saddle bag support bracket



Fig. 4.7 remove mounting bracket

Note: use good and safe practices when working on a motorcycle. Always wear 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 4.8 remove header assembly



Fig 5.1 hardware



Narrow tire models



Fat boy & breakout models



Fig 5.2 install mounting bracket



Saddlebag relocater bracket narrow tire models.



Fig 5.3 Saddlebag relocater bracket wide tire models.

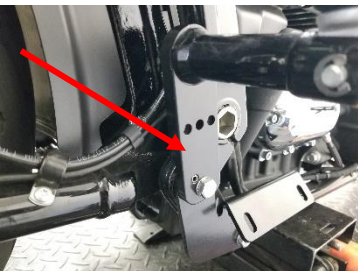


Fig 5.4 right peg relocater 2018 fat boy and breakout only.



Fig 5.5 left peg relocater



Fig 5.6 left side peg relocater



Fig 5.7 saddle bag adapter right side



Fig 5.8 2018 wide tide models with saddlebags & stock hardware. R/S



Fig 5.9 2018 wide tide models with saddlebags & stock hardware. R/S



Fig 5.10 passenger peg with stock saddlebag hardware L/S

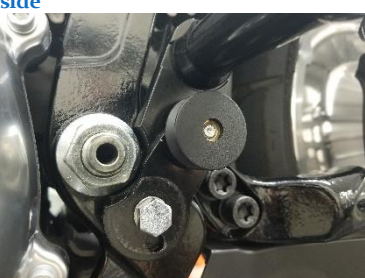


Fig 5.11 passenger peg with stock saddlebag hardware L/S



Fig 5.12 install flanges & retaining rings



Fig 5.13 install adapter

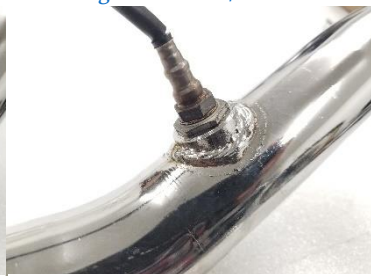


Fig 5.14 install Oxygen sensors



Fig 5.15 insert barrel band clamp



Fig 5.16 secure with lock nuts



Fig 5.17 Mark pipe shields as shown



Fig 5.18 install front shield



Fig 5.19 Mark center of clip and direction of clamp insertion



Fig 5.20 install front shield

it is not limited to such safety
 ire motorcycle before any work



Fig. 5.21 arrow indicate direction of insertion



Fig. 5.22 install rear heat shield



Fig. 5.23 install muffler shield



Fig. 5.24 straight systems end cap.



Fig. 5.25 turn-out elbow



Fig. 5.26 turn-out end cap



Fig. 5.27 remove plastic plug



Fig. 5.28 install peg right side



Fig 5.29 AC00248 2018 fat boy and breakout passenger peg adapter



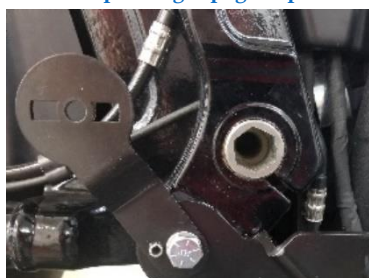
Good time for a good clean up



AC00248 2018 fat boy and breakout passenger peg adapter sold separately



AC00249 right side saddle bag relocater bracket fits all except fat boy and breakout sold separately



AC00291 right side saddle bag relocater bracket fits fat boy and breakout sold separately for 2019-up

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.