



HARDWARE



BRACKETS

PACKER #: \_\_\_\_\_

## HARLEY SPORTSTER S MID PIPES

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

**WARNING: DUE TO THIS DESIGN SOME ACCESSORIES MAY INTERFERE WITH THIS EXHAUST SYSTEM SUCH AS SADDLE BAGS OR PASSENGER FOOT PEGS IN ORDER TO FIT PROPERLY IN SOME MODELS THEY HAVE TO BE RELOCATED.**



### Sportster S stock removal

- 1) Remove back side cover, pull up and set aside. refer to owners manual.
- 2) Remove seat, turn on key to release latch and lift seat. set aside.
- 3) Remove plastic cover using a 25 torxs wrench 2 screws total remove and set aside. Be careful not to scratch any components. Once screws are removed, pull cover outwards to disengage from grommet.
- 4) Remove plastic cover Heat shield using a Philips screw driver 2 screws total
- 5) Remove second plastic shield use a 25 torxs wrench 2 screws total
- 6) Remove aluminum heat shield using 25 torxs wrench 3 screws total 2 on top, One bottom now remove hose clamp holding shield to front pipe, use a 5/16 nut driver or flat screw driver, remove shield and set aside.
- 7) Remove emblem plastic cover, pull from grommets
- 8) locate O2 sensor harness and disengage refer to owners manual
- 9) remove joint clamps 2 use a deep socket 10mm, split open clamp and move to the side of junction as shown.
- 10) remove screw holding muffler to mounting bracket use a 30 or some assistance may be required. Pull screw out while holding muffler assembly, now remove assembly and place it aside.
- 11) remove hushing and gromet as shown
- 12) remove rear pip, using a 13mm socket w/ joint save flange nuts for re use.
- 13) repeat step with front pipe
- 14) remove O2 sensors from stuck pipe use a 17mm wrench some penetration oil may be necessary be careful note here for WD-40 on sensor tip.

## REMOVING STOCK EXHAUST SYSTEM





Fig.1.1 lift back plate.



Fig.1.2 this is how it should look after.



Fig.1.3 Insert key to remove the seat

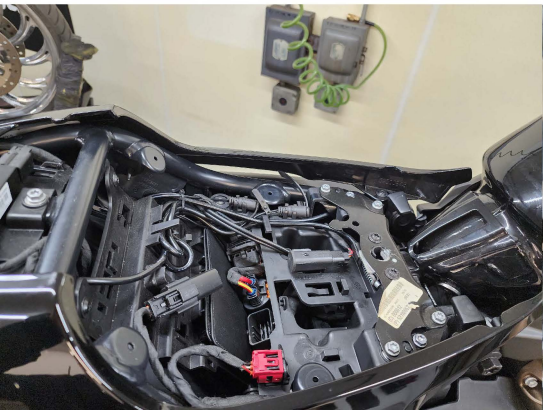


Fig.1.4 This is how it should look once seat is removed.



Fig.1.5 locate the front bolt holding down plastic cover and unscrew

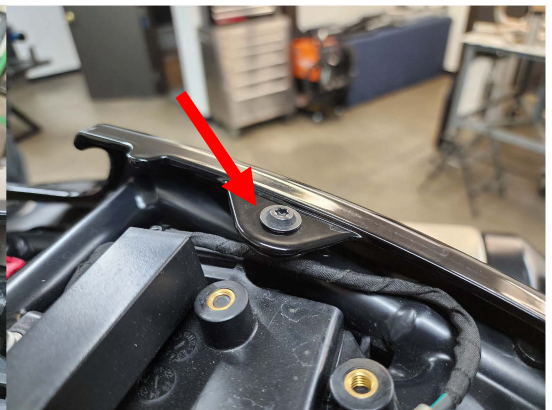


Fig.1.6 locate the back bolt holding plastic cover and unscrew



Fig.1.7 find these two and unscrew to remove plate



Fig.1.8 should look like this afterwards

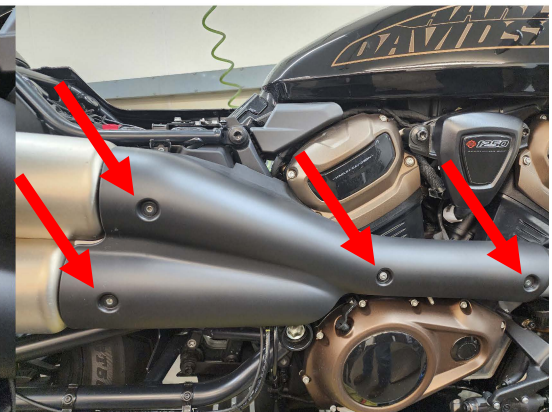


Fig.1.9 find these 4 screws and remove.

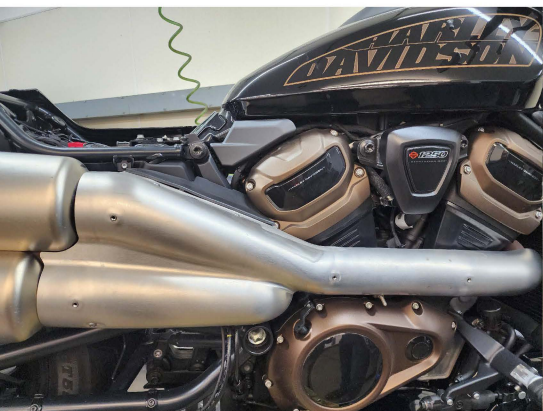


Fig.1.10 should like this afterwards



Fig.1.11 Locate these two top screws and remove them

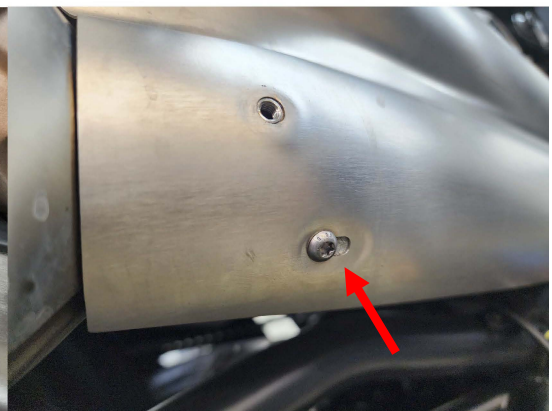


Fig.1.12 Locate this bottom screw and remove.





Fig.1.13 locate screw holding worm clamp and remove clamp and heat shield..



Fig.1.14 this is how it should look afterwards.



Fig.1.15 locate plastic emblem and remove

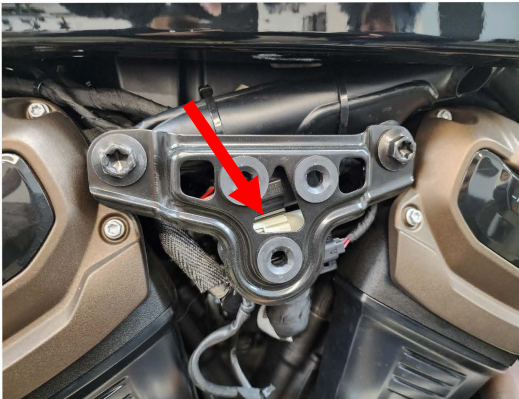


Fig.1.16. Once removed locate O2 sensor plugs and remove.

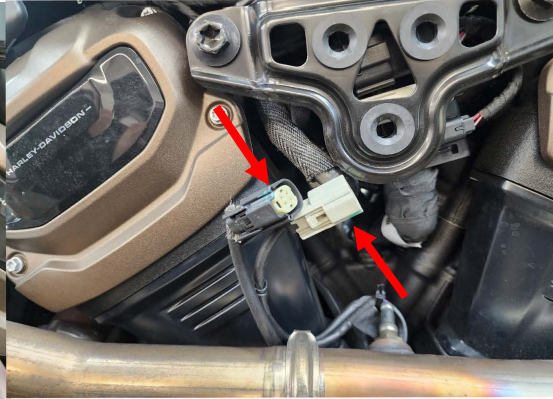


Fig.1.17 this is how the O2 plugs should look once removed

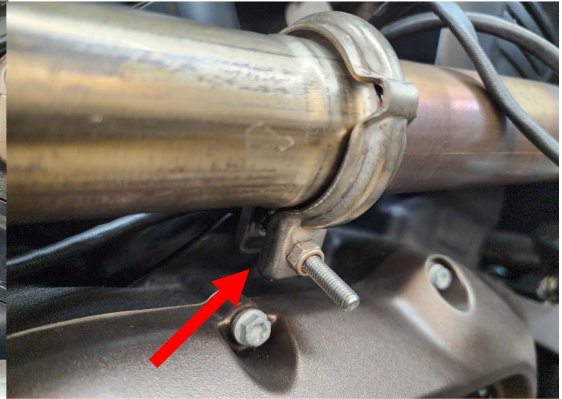


Fig.1.18 find the screw holding the joint clamps on the front header pipe and loosen.

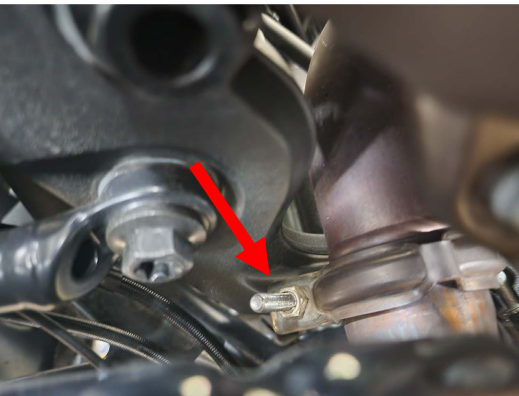


Fig.1.19 find the screw holding the joint clamps on the rear header pipe and loosen.



Fig.1.20 find screw holding muffler to mounting bracket and remove muffler.



Fig.1.21 this is how the mounting bracket should look afterwards.

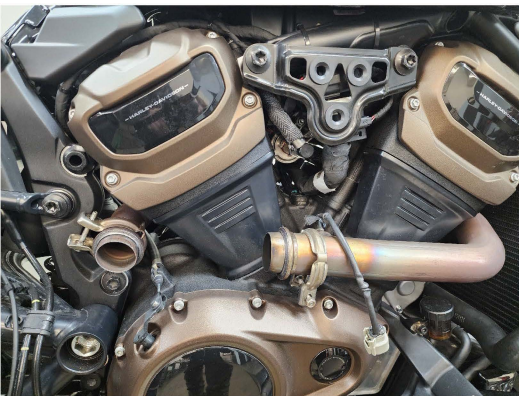


Fig.1.22 How your pipes should look after removing mufflers.

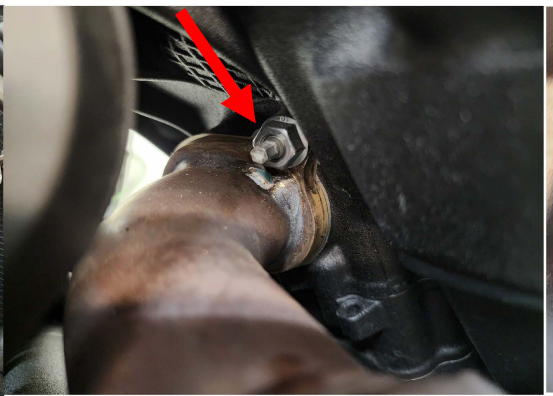


Fig.1.23 Locate the screws holding rear header pipe to the engine and remove.



Fig.1.24 Locate the screws holding front header pipe to the engine and remove.



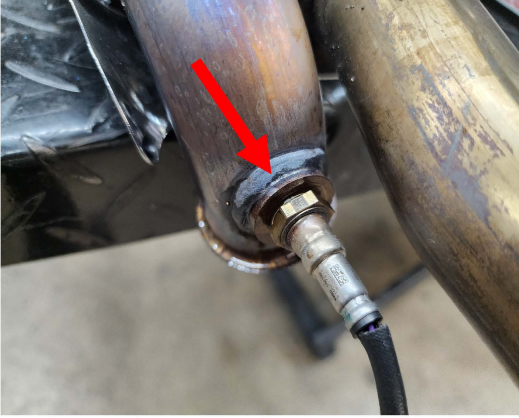


Fig.1.25 remove the O2 sensor attached to the rear pipe.



Fig.1.26 remove the O2 sensor attached to the front pipe.



Fig.1.27 this is how your bike should look finishing removal.



## Installation Instructions

### Install Instructions:

- Install mounting bracket (remove stock screw using a T30 wrench).
- Insert provided screws into bracket as shown.
- Use flat washer on screws.
- Install O2 adapter using  $\frac{3}{4}$  wrench or socket.
- Install O2 sensors using a 17mm wrench. Use anti seize compound.
- Install front pipe. Use stock flanges and a 13mm socket. Hand tighten ONLY.
- Repeat step with rear pipe.
- Insert barrel band clamps.
- Install muffler. Secure with 5/16-18 x  $\frac{5}{8}$  carriage bolts and lock nuts. Use  $\frac{1}{2}$  wrench.
- Mark H/S with tape. (Remove 1 #24 clamp)
- Install front H/S. Use 5/16 nut driver.
- Repeat step with rear shield.

NOTE: If your system came with end-caps, install them before installing shields.

Use a 5/32 hex key wrench.

- Reconnect O2 sensor harnesses / Tighten barrel band.
- Tighten header flange clamps with a 10mm socket.

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.

## **EXHAUST SYSTEM INSTALLATION**





Fig.2.1 Locate all hardware shown above.



Fig.2.2 Use long screws on bracket as shown.

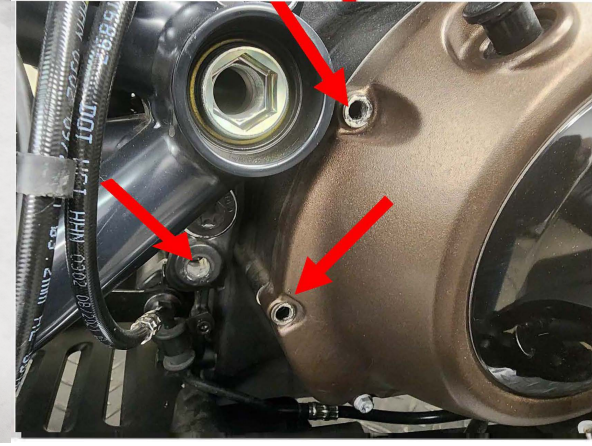


Fig.2.3 Screw the bracket into the holes shown above.



Fig.2.4 Once mounting bracket is put in it should look like this.



Fig.2.5 Dont forget to have the nut holding onto the screws for this bracket.



Fig.2.6 put in O2 adapters if needed into O2 holes.



Fig.2.7 put in the O2 sensors as shown into the header pipes.

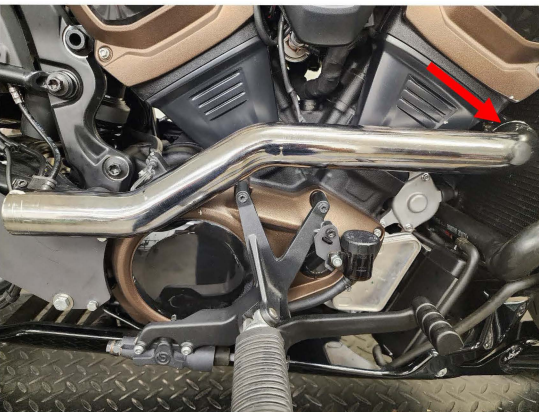


Fig.2.8 install front header pipe as shown make sure it is screwed on correctly.



Fig.2.9 Install rear header pipe as shown screwed in correctly.



Fig.2.10 this should be how it should look at the end.



Fig.2.11 put in muffler as shown with the clamps on.

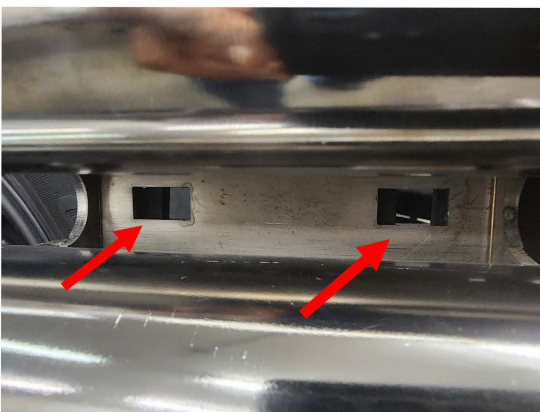


Fig.2.12 locate these two holes located on bracket for muffler to screw on the mounting bracket.





Fig.2.13 put in the screws and tighten



Fig.2.14 make sure to have the nuts on the back of the mounting bracket.



Fig.2.15 this is how it should look at the end.

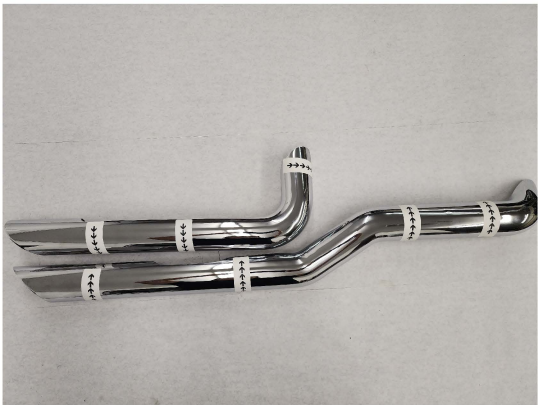


Fig.2.16 Locate your heat shields.



Fig.2.17 make sure worm clamp is inserted as shown above when installing this rear heatshield

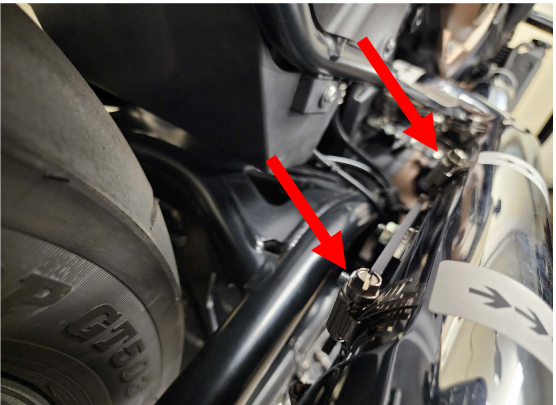


Fig.2.18 Make sure worm clamp is inserted as shown for the rest of the rear pipe.



Fig.2.19 Make sure all worm clamps are tightened to the pipe where they do not fall.



Fig.2.20 This should be the result if you do not have any end caps to install into your system!



Fig.2.21 If you have end-caps you must screw them on as shown and that should be all for this installation.

