



HARDWARE



BRACKETS

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

**HARLEY SPORTSTER S**  
**2-into-1 Shorty/Turn-Out/Side-Dump**

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.) (see fig.1.1 & fig.1.2)
- 2) Remove seat, Turn-on key to release latch and lift seat. set aside. (see fig.1.3 & fig.1.4)
- 3) Remove plastic cover using a T25 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. (see fig.1.5 & fig.1.6)
- 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 T30 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 pipe, 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

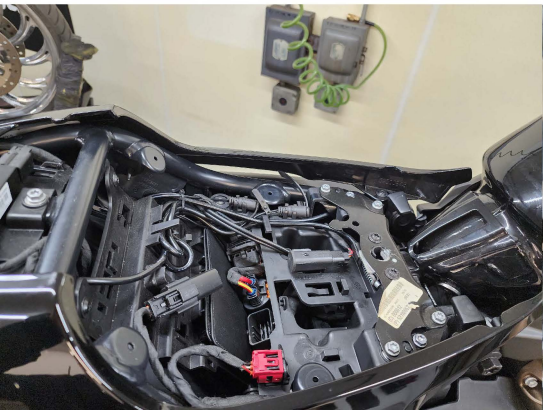


Fig.1.4 This is how it should look once seat is removed.



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

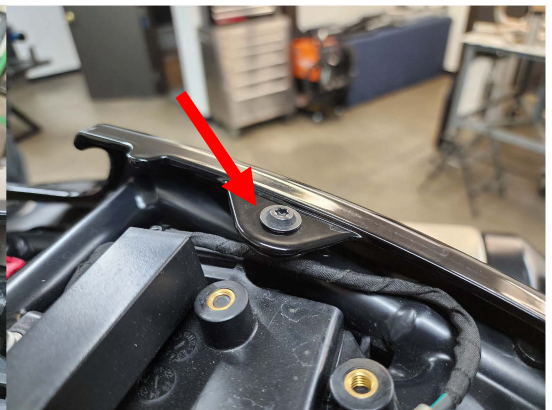


Fig.1.6 locate the back bolt holding plastic cover and unscrew



Fig.1.7 find these two and unscrew to remove plate



Fig.1.8 should look like this afterwards

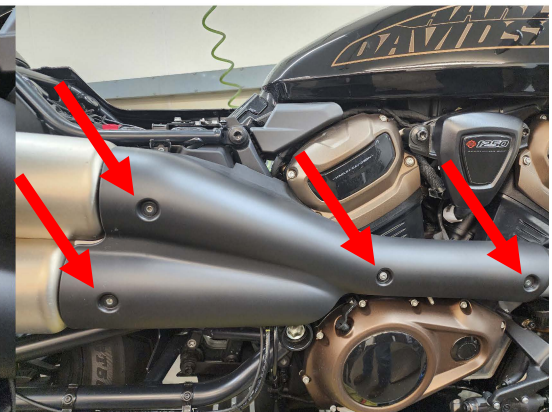


Fig.1.9 find these 4 screws and remove.

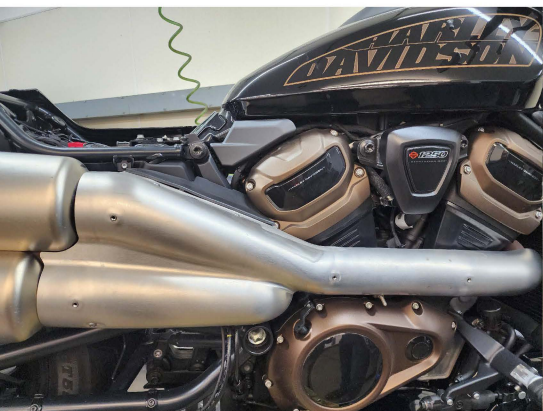


Fig.1.10 should look like this afterwards



Fig.1.11 Locate these two top screws and remove them

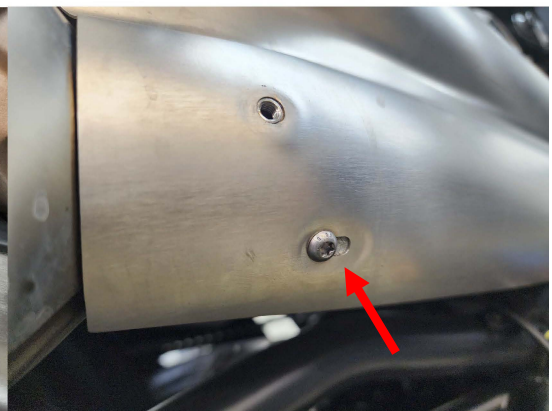


Fig.1.12 Locate this bottom screw and remove.





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 look afterwards.

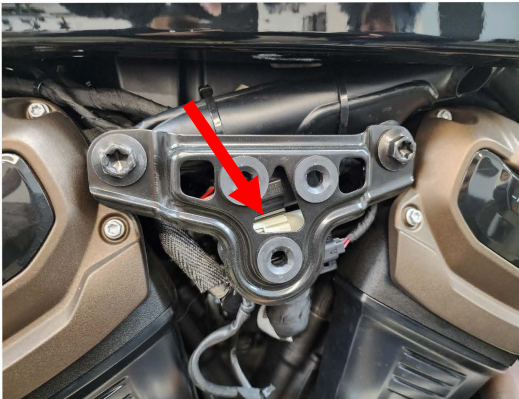


Fig.1.16. Once removed locate O2 sensor plugs and remove.

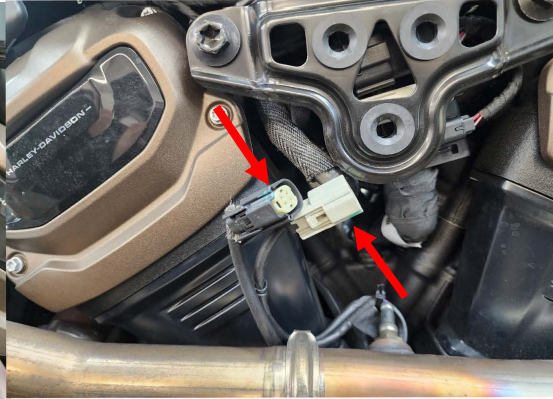


Fig.1.17 this is how the O2 plugs should look once removed

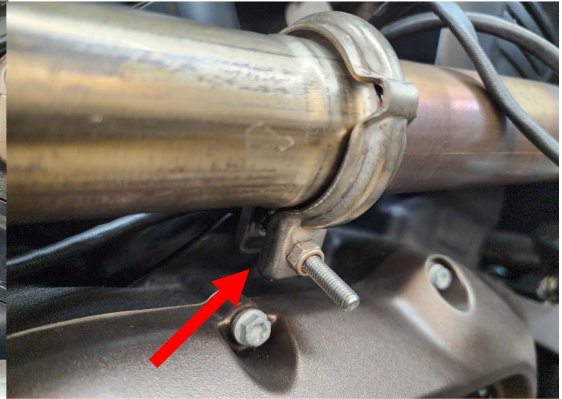


Fig.1.18 find the screw holding the joint clamps on the front header pipe and loosen.

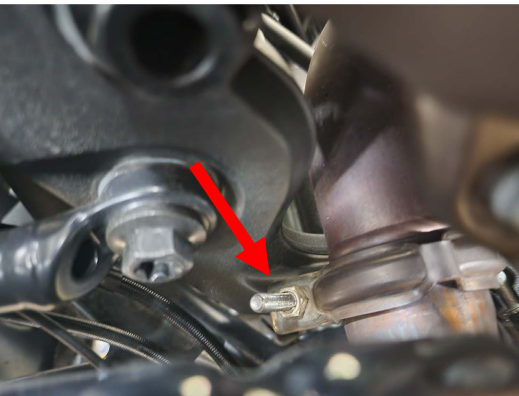


Fig.1.19 find the screw holding the joint clamps on the rear header pipe and loosen.



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



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

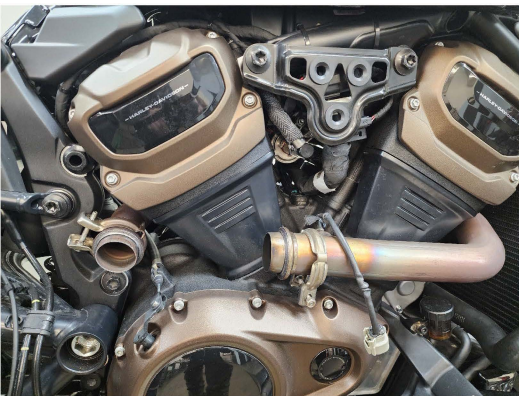


Fig.1.22 How your pipes should look after removing mufflers.

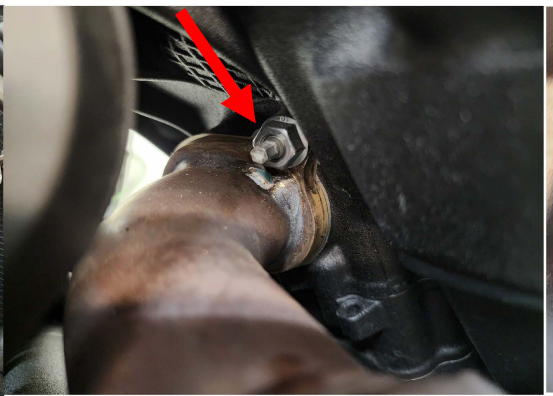


Fig.1.23 Locate the screws holding rear header pipe to the engine and remove.



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



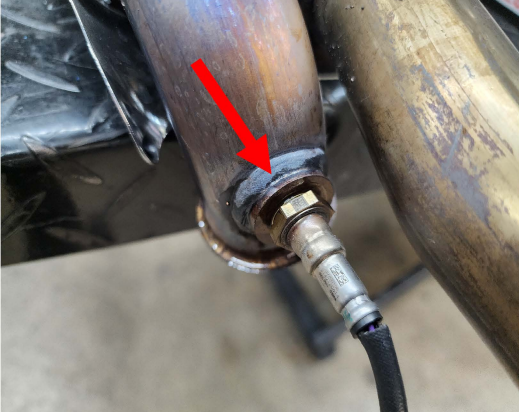


Fig.1.25 remove the O2 sensor attached to the rear pipe.



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:

- 1) Gather up all hardware provided as shown (see fig.2.2)
- 2) install 02 adapters using a 3/4 wrench or socket (see fig.2.3)
- 3) Install 02 Sensors using a 17mm wrench and apply anti-seize compound
- 4) loosely tighten front header as shown using a 13mm socket (see fig.2.4)
- 5) repeat process on rear header (see fig.2.6)
- 6) apply both 48-61 barrel clamps onto end of collector pipes as shown (clamp bolt facing upward) (see fig.2.7 & fig.2.8)
- 7) Slip both ends of header pipes into collector pipes as shown (see fig.2.8)
- 8) align muffler bracket onto stock hanging grommet as shown. Using stock hanger bolt and provided nut (see fig.2.9)
- 9) using a T30 torque socket with extension and a 10mm wrench tighten bracket bolt and nut
- 10) using a 13mm socket or wrench tighten up headers
- 11) Tighten up both barrel clamps using a 10mm socket
- 12) apply a No.24 hose clamp onto front of the upper heat shield, and 2 No.28 clamps on the rear upper shield (see fig.2.10 & fig.2.12)
- 13) assure that hose clamps follow directions of arrows as shown
- 14) repeat for lower heat shield (no.24 clamp on front part, and No.28 on rear part of shield) (see fig.2.11 & fig.2.13)
- 15) Apply No.40 hose clamp onto front part of the apex heat shield (see fig.2.14 & fig.2.15)
- 16) apply No.56 hose clamp in between muffler bracket as shown (see fig.2.15)
- 17) using a 8mm socket or flathead screwdriver tighten up all hose clamps
- 18) (skip this step if you have a shorty.) Install the elbow piece provided with the 1-20x1/2 screws
- 19) Get your end-cap and insert it into your Muffler/Elbow piece and use the 1-20x1/2 screws provided to hold it together and that should be all for the installation.





Fig.2.1 Grab all your tools for the installation refer to tool list needed.



Fig.2.2 Make sure you have all the hardware shown above.



Fig.2.3 Insert the O2 sensor adapter into the O2 bung hole for both front and back head-pipes.

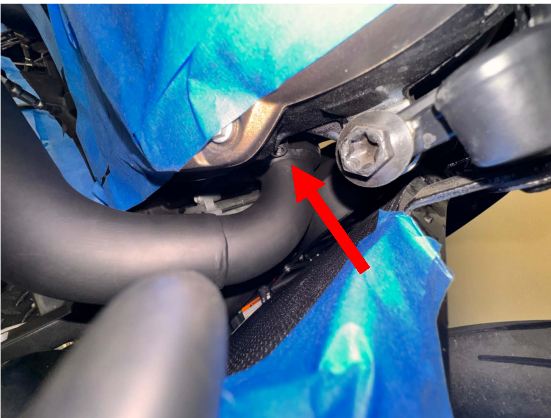


Fig.2.4 Insert the two screws to install the front header pipe as shown.



Fig.2.5 This is how it should look once finished (make sure to loosely tighten.)



Fig.2.6 Insert the two screws for the rear pipe for installation as shown. Both pipes should face back.



Fig.2.7 Connect the muffer into the head pipes as shown for both rear and front pipes with the clamp shown above.

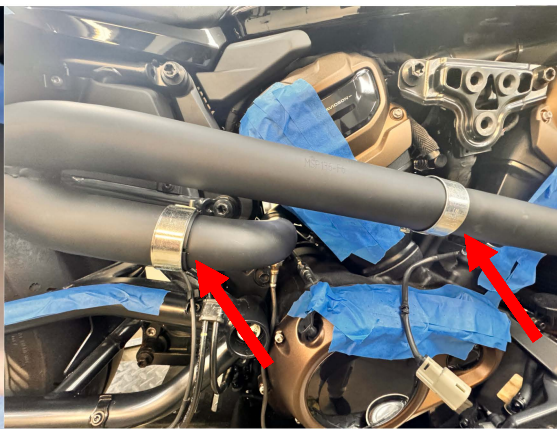


Fig.2.8 This should be the final result once you hand tighten them both into place



Fig.2.9 Align the muffer to the stock mounting bracket as shown and screw in (tighten all the headers and muffer clamps before putting on the heat-shields)



Fig.2.10 Grab the front heat-shield and insert worm clamps as shown above (do not tighten fully yet)



Fig.2.11 Grab the rear heat-shield and insert the worm clamps as shown above to install (do not tighten fully until both are on)



Fig.2.12 The worm clamps should look like this once put in the front heat-shield.



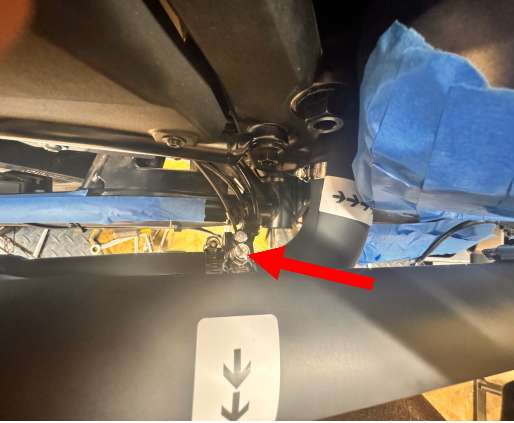


Fig.2.13 The worm clamps should look like this once put in the rear heat-shield.



Fig.2.14 Grab the Apex heat-shield provided and insert worm clamps as shown to install



Fig.2.15 The worm clamps should look like this once put in the Apex heat-shield

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.