

Instruction 510-0581

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Grand National® 2:2 Exhaust for 2018 Harley-Davidson® Softail® models (except Fat Boy® & Breakout® models)

DISCLAIMER:

Many S&S parts are designed for high performance, closed course, racing applications and are intended for the very experienced rider only. The installation of S&S parts may void or adversely affect your factory warranty. In addition such installation and use may violate certain federal, state, and local laws, rules and ordinances as well as other laws when used on motor vehicles used on public highways. Always check federal, state, and local laws before modifying your motorcycle. It is the sole and exclusive responsibility of the user to determine the suitability of the product for his or her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties, and risks associated therewith.

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on any EPA pollution controlled motor vehicle.

SAFE INSTALLATION AND OPERATION RULES:

Before installing your new S&S part, it is your responsibility to read and follow the installation and maintenance procedures in these instructions and follow the basic rules below for your personal safety.

- Gasoline is extremely flammable and explosive under certain conditions and toxic when breathed. Do not smoke. Perform installation in a well ventilated area away from open flames or sparks.
- If motorcycle has been running, wait until engine and exhaust pipes have cooled down to avoid getting burned before performing any installation steps.
- Before performing any installation steps, disconnect battery to eliminate potential sparks and inadvertent engagement of starter while working on electrical components.
- Read instructions thoroughly and carefully so all procedures are completely understood before performing any installation steps. Contact S&S with any questions you may have if any steps are unclear or any abnormalities occur during installation or operation of motorcycle with an S&S part on it.
- Consult an appropriate service manual for your motorcycle for correct disassembly and reassembly procedures for any parts that need to be removed to facilitate installation.
- Use good judgment when performing installation and operating motorcycle. Good judgment begins with a clear head. Don't let alcohol, drugs or fatigue impair your judgment. Start installation when you are fresh.
- Be sure all federal, state and local laws are obeyed with the installation.
- For optimum performance and safety and to minimize potential damage to carb or other components, use all mounting hardware that is provided and follow all installation instructions.
- Motorcycle exhaust fumes are toxic and poisonous and must not be breathed. Run motorcycle in a well ventilated area where fumes can dissipate.

IMPORTANT NOTICE:

Statements in this instruction sheet preceded by the following words are of special significance.



WARNING

Means there is the possibility of injury to yourself or others.



CAUTION

Means there is the possibility of damage to the part or motorcycle.

NOTE

Other information of particular importance has been placed in italic type.

S&S recommends you take special notice of these items.

WARRANTY:

All S&S parts are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of twelve (12) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at S&S's option if the parts are returned to us by the purchaser within the 12 month warranty period or within 10 days thereafter.

In the event warranty service is required, the original purchaser must call or write S&S immediately with the problem. Some problems can be rectified by a telephone call and need no further course of action.

A part that is suspect of being defective must not be replaced by a Dealer without prior authorization from S&S. If it is deemed necessary for S&S to make an evaluation to determine whether the part was defective, a return authorization number must be obtained from S&S. The parts must be packaged properly so as to not cause further damage and be returned prepaid to S&S with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. If after an evaluation has been made by S&S and the part was found to be defective, repair, replacement or refund will be granted.

ADDITIONAL WARRANTY PROVISIONS:

- (1) S&S shall have no obligation in the event an S&S part is modified by any other person or organization.
- (2) S&S shall have no obligation if an S&S part becomes defective in whole or in part as a result of improper installation, improper maintenance, improper use, abnormal operation, or any other misuse or mistreatment of the S&S part.
- (3) S&S shall not be liable for any consequential or incidental damages resulting from the failure of an S&S part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or for any other breach of contract or duty between S&S and a customer.

NOTE - The following installation procedure assumes that a stock exhaust system is being removed. If the bike you are working on has something other than the factory exhaust system, you may need to source some of the fasteners listed below

1. Unplug stock oxygen sensors. Front O2 sensor connector is located near regulator at front right lower motor mount. Rear O2 sensor connector is located near starter and shock adjuster.
2. Loosen stock muffler clamps. Remove muffler mount bolts and remove mufflers. Remove header mount bolts. If necessary, loosen heat shield hose clamps to ease removal.
3. Remove exhaust system and set aside, taking care not to scratch cylinder heads. Remove stock flanges, retaining rings, and O2 sensors, save for reuse.
4. Remove stock muffler mount from frame.
5. Install provided exhaust bracket to frame, torque to 15-18 lb./ft.
6. New conical exhaust gaskets are supplied in kit. Replace as necessary to prevent exhaust leaks.
7. Install flanges and retaining rings onto S&S header. Oxygen sensors and supplied adapters should be installed at this time. Use anti-seize on all O2 adapter and sensor threads.
8. Install front header heat shield, then rear header heat shield. Connect and loosely tighten all worm gear clamps. Position screw heads according to parts diagram arrows.
9. Apply anti-seize to exhaust studs, and loosely install the new header using supplied 5/16-24 hex flange nuts. Seat the rear pipe first then the front. Exert a firm pull forward on the front pipe, while keeping the rear pipe seated. Be careful not to damage gaskets. Do not fully tighten the flange nuts yet.
10. Put gaskets on header.
11. Slide top muffler on and tighten loosely to frame mounted exhaust bracket.
12. Attach mounting bracket to bottom muffler, slide muffler onto header and tighten muffler bracket loosely to frame bracket.
13. Arrange heat shield clearance and alignment, then set position of rear muffler. Tighten heat shield clamps.
14. Tighten top muffler clamp to 42 lb./ft.
15. Tighten muffler brackets together. Tighten bracket hardware to 15-18 lb./ft and bottom muffler clamp to 42 lb./ft.
16. Torque the port flange nuts evenly to 100-120 in-lbs. To ensure there are no leaks and the system is properly aligned the front and rear port nuts must be evenly torqued.
17. Reconnect oxygen sensor electrical plugs.
18. Before operating motorcycle, clean pipes and mufflers with soap and water or window cleaner. Any grease or oil will permanently burn onto pipes. Dry thoroughly.
19. Check all mounting hardware to be sure it is tight before and after first operation of motorcycle. Periodically, check tightness of all mounting hardware.

Replacement Parts

| | |
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| 1. Pipe,Header,2 Into 2,Weldment,M8 SOFTAIL..... | 551-0547 |
| 2. Front Shield, Black | 551-0551 |
| Chrome | 551-0553 |
| 3. Rear Shield, Black..... | 551-0557 |
| Chrome | 551-0559 |
| 4. Lower Rear Shield, Black..... | 551-0661 |
| Chrome | 551-0663 |
| 5. Muffler Body, Black..... | 551-0474 |
| Chrome | 551-0477 |
| 6. Bracket,Mounting,2 Into 2,Black,M8 SOFTA..... | 551-0562 |
| 7. Bracket,Bottom,Mounting,2 Into 2,Black,M..... | 551-0563 |
| 8. Gasket, Muffler, 3.25", 2018 M8 Softail® | 551-0360 |
| 9. Clamp,Muffler,Band Style, 1.75"..... | 551-0028 |
| 10. Gasket,Exhaust,Tapered,Stainless Steel,1984-up bt, 1986-up xl..... | 106-5029 |
| 11. Adapter, Oxygen Sensor, 12mm to 18mm, Stainless Steel | 550-0375 |
| 12. Nut, HSFH, 5/16-18 UNC-2B x .283", Zinc, Steel..... | 50-5053-S |
| 13. Clamp, Hose, Worm Drive, SAE #20..... | 551-0527 |
| 14. Plate,Nut,5/16-18 x 2",Clear,Zinc..... | 551-0469 |
| 15. Screw, bhc,5/16-18 x 5/8", Zinc Plated..... | 551-0763 |
| 16. Screw,SHCS,3/8-16 x 1"..... | 50-0161 |
| 17. Screw,Flanged,5/16-18 x 5/8",Zinc Plated..... | 500-0984 |

