

Instruction 510-0084

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Version 2

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**S&S® Cycle, Inc.**

14025 Cty Hwy G PO Box 215

Viola, Wisconsin 54664

Phone: 608-627-1497 • Fax: 608-627-1488

Technical Service Phone: 608-627-TECH (8324)

Technical Service Email: [sstech@sscycle.com](mailto:sstech@sscycle.com)

Website: [www.sscycle.com](http://www.sscycle.com)



## Installation Instructions: S&S B2 Cylinder Head Exhaust Flange Mounting Kit for S&S B2 Cylinder Heads Utilizing Stock or 2" OD Exhaust Systems

### 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.

NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES

### 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 a 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' 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:

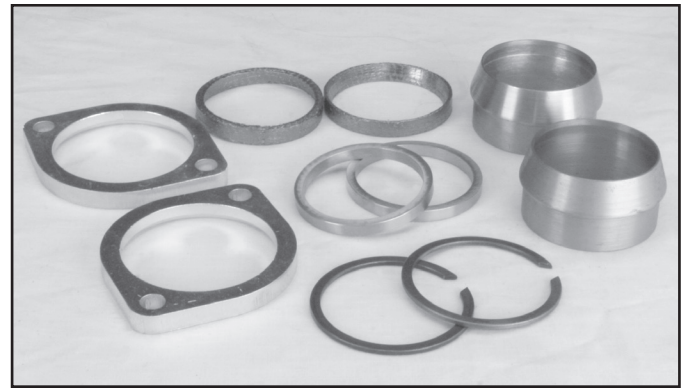
- (1) S&S shall have no obligation in the event an S&S part is modified by any other person or organization.
- (2) S&S shall have no obligation if an S&S part becomes defective in whole or in part as a result of improper installation, improper maintenance, improper use, abnormal operation, or any other 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.
- (4) S&S parts are designed exclusively for use in Harley-Davidson® and other American v-twin motorcycles. S&S shall have no warranty or liability obligation if an S&S part is used in any other application.

Thank you for choosing S&S® Cycle's B2 cylinder head universal exhaust flanges. This kit will aid in the installation of stock or 2" OD exhaust systems when mounting to B2 cylinder heads. Please read the following steps to help guide you through the proper installation of the kit.

**⚠ WARNING ⚠**

**S&S in no way is responsible for exhaust systems that are damaged due to the procedures outlined in this document. The following installation should be only done by a qualified technician with the proper tools and training. If you are not certain of your capabilities or do not have the correct tools for this installation, S&S recommends you consult a shop to have it done for you. Improper installation of this product could result in damage to the motorcycle and motorcycle components.**

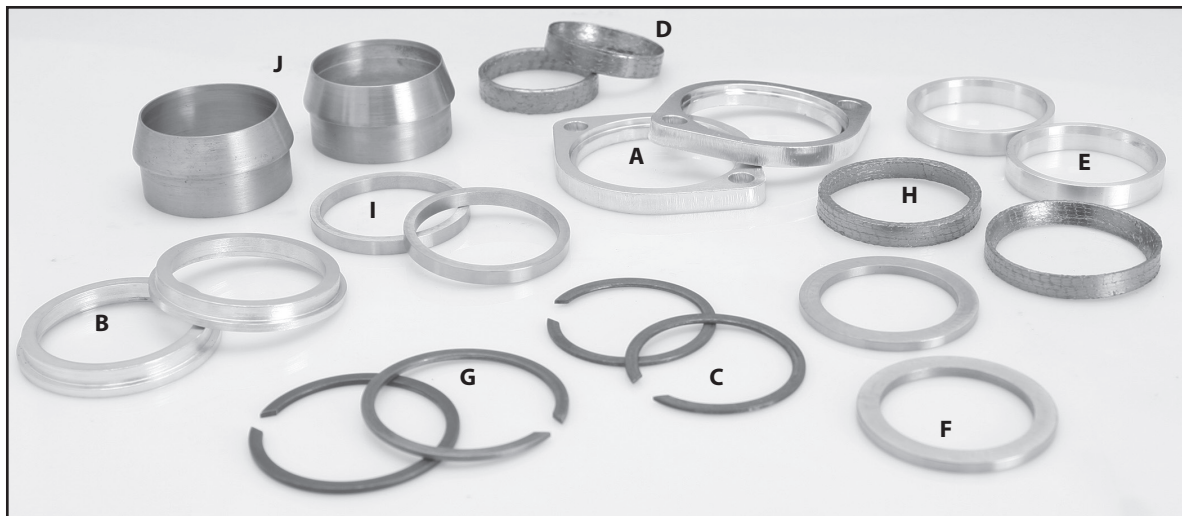
- 550-0216 kit is intended for B2 cylinder head systems with performance oriented 2" OD header pipe exhaust systems
- 550-0217 kit is intended for B2 cylinder head systems running stock header pipe size exhaust systems
- 550-0218 kit is the previous two kits combined for customers who currently own a stock header pipe size exhaust system but plan to upgrade to performance oriented 2" OD header pipe exhaust systems



**550-0216**



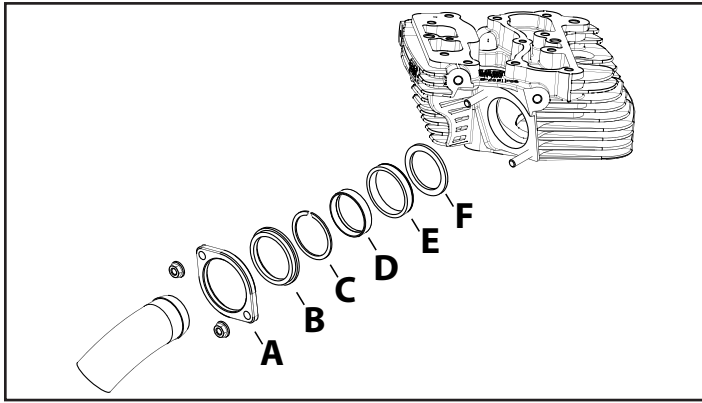
**550-0217**



**550-0218**

- A. **550-0223** Exhaust Flange, 1984–up S&S® B2 Heads
- B. **550-0224** Exhaust Adapter Flange for Stock Header Pipe, 1984–up S&S® B2 Heads
- C. **550-0226** Exhaust Flange Retaining Ring, 1.759" x .062"
- D. **106-5029** Exhaust Gasket, Tapered Stainless Steel, 1984–up bt, 1986–up xl
- E. **550-0225** Press-in Aluminum Retaining Ring, 1984–up S&S® B2 Heads
- F. **550-0220** Exhaust Gasket Backing Washer, 2.18" x 1.690" x .125"
- G. **50-8159-S** Exhaust Flange Retaining Ring, 2.125" x .078"
- H. **550-0221** Exhaust Gasket, Tapered, Stainless Steel, 1984–up S&S® B2 Heads
- I. **550-0219** Exhaust Gasket Backing Washer, 2.18" x 1.885" x .200"
- J. **550-0222** Weld-On Exhaust Header Pipe

**PART A: INSTALLATION FOR B2 HEADS USING STOCK HEADER PIPE SIZE EXHAUST SYSTEMS (Fig. 1)**



**Fig. 1**

1. Remove the existing exhaust system. It is up to the technician as to what other parts should be removed in order to successfully remove the exhaust system.
2. Once the exhaust system has been removed from the motorcycle, remove the stock retaining ring and flange from both the front and rear pipes.
3. Install the new S&S exhaust flange (A) over the stock pipe so that the step in the flange is on the side facing the cylinder head.
4. Next, install the S&S adapter flange (B) over the stock pipe so that the step in the adapter flange (B) mates with the exhaust flange (A). See **Picture 1 below** for reference.

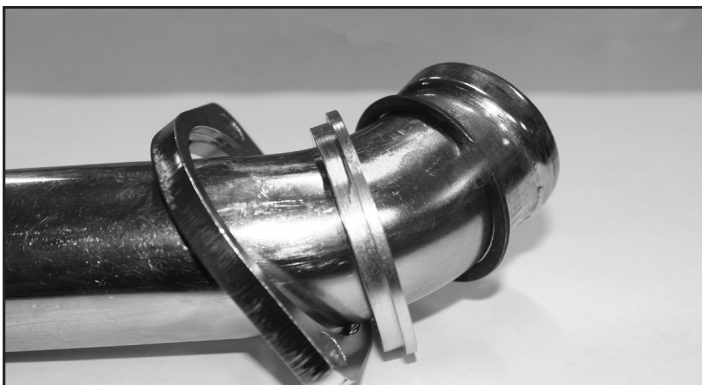


**CAUTION**



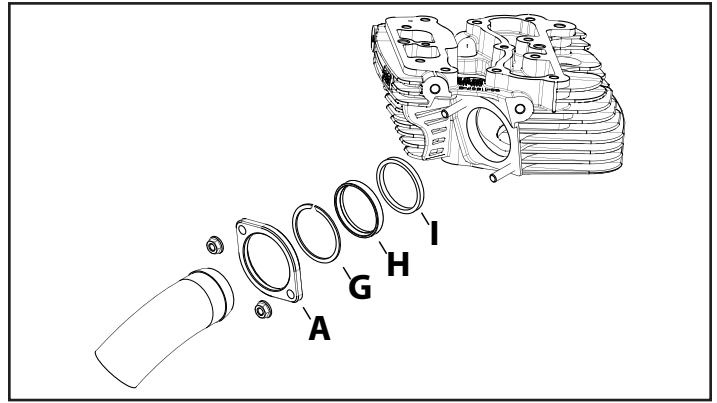
**Failure to install the flanges (A) & (B) correctly will result in insufficient clamping and/or a leaking exhaust system.**

5. Install the flange retaining ring (C) over the exhaust pipe.
6. Insert the backing washer (F) into the cylinder head.
7. With the backing washer (F) located in the cylinder head, press in the aluminum ring (E), tapered end first, until it seats in the bore against the backing washer (F). When pushing in the aluminum ring, be careful not to bend the ring. To prevent this from happening, find something slightly smaller than the outer diameter of the ring to push against.
8. Install the stock style exhaust gasket (D).
9. Repeat steps 3-8 for the other head pipe and cylinder head.
10. Re-install the stock header pipe size exhaust system.



**Picture 1**

**PART B: INSTALLATION FOR B2 HEADS USING A PRE-MADE 2" OD HEADER PIPE SIZE EXHAUST SYSTEMS (Fig. 2)**



**Fig. 2**



**WARNING**



**Depending on the manufacturing of certain 2" OD exhaust pipes it may still be necessary to perform PART C of these instruction sheets due to insufficient clamping after following PART B which may result in a leaking exhaust system. Also if you are installing a 2" OD system after you have installed a stock pipe size system it is necessary to remove the press-in aluminum ring (E from line drawing in Figure 1)**

1. Remove the existing exhaust system. It is up to the technician as to what other parts should be removed in order to successfully remove the exhaust system.
2. Remove the original retaining ring and flange from both the front and rear pipes of your 2" OD exhaust system.
3. Install the new S&S exhaust flange (A) over the 2" OD pipe so that the step in the flange is on the side facing the cylinder head.
4. Install the flange retaining ring (G) over the 2" OD exhaust pipe. See **Picture 2 below** for reference.



**CAUTION**



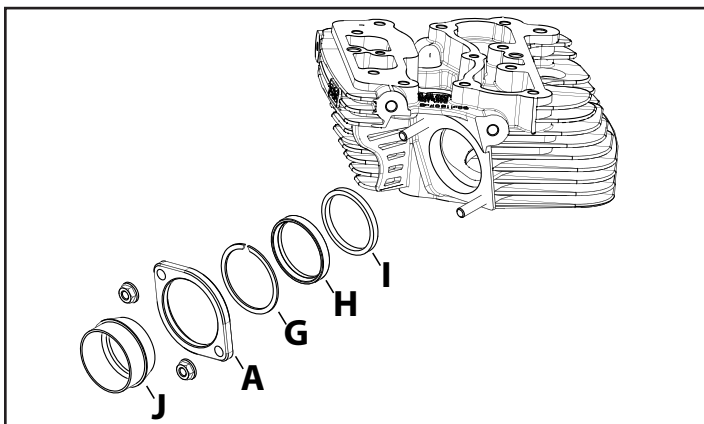
**Failure to install the flange (A) and retaining ring (G) correctly will result in insufficient clamping and/or a leaking exhaust system.**

5. Insert the backing washer (I) into the cylinder head.
6. With the backing washer (I) located in the cylinder head, install the exhaust gasket (H).
7. Repeat steps 3-6 for the other head pipe and cylinder head.
8. Re-install the 2" OD header pipe exhaust system.



**Picture 2**

**PART C: INSTALLATION FOR B2 HEADS MODIFYING OR MAKING A 2" OD HEADER PIPE SIZE EXHAUST SYSTEMS (Fig. 3)**



**Fig. 3**

1. Remove the existing exhaust system. It is up to the technician as to what other parts should be removed in order to successfully remove the exhaust system.
2. Insert the backing washer (I) into the cylinder head.
3. With the backing washer (I) located in the cylinder head, install the exhaust gasket (H).
4. Install the new S&S flange retaining ring (G) over the 2" weld-on pipe (J).
5. Install the exhaust flange (A) over the 2" weld-on pipe (J) so that the step in the flange is on the side facing the cylinder head and mates with the flange retaining ring (G). See **Picture 3 below** for reference.



**CAUTION**



**Failure to install the flange (A) and retaining ring (G) correctly will result in insufficient clamping and/or a leaking exhaust system.**

6. Insert the flange-pipe assembly into the cylinder head and snug the exhaust nuts to hold it in place.
7. Repeat steps 2-6 for the other head pipe and cylinder head.
8. Begin creating your own exhaust system or if you are modifying an existing system, cut the end of the head pipe to fit the weld-on pipe (A).

**NOTE:** The inner diameter of the 2" weld-on pipe (J) is designed to fit over 2" OD exhaust pipe.



**Picture 3**