



Installation Instructions for Flathead Power®: S&S Super E and G Universal Stealth Air Cleaner Kit for 1936–1992 Big Twin and 1957–1990 XL

DISCLAIMER:

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, especially in states where pollution laws may apply. 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.

The words Harley®, Harley-Davidson®, H-D®, Sportster®, Evolution®, and all H-D part numbers and model designations are used in reference only. S&S Cycle is not associated with Harley-Davidson, Inc.

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.

Kit Contents:

- Backplate
- Fast idle lever kit
- Filter
- Filter top plate
- 243 blue Loctite®
- QTY of 3 – ¼" X 20 backplate screws
- QTY of 2 – ¼" X 20 flanged button head screws
- Cover screw
- Backplate gasket
- Carburetor support bracket mounting kit

⚠ WARNING

- **The safety of the motorcycle rider is dependent of proper installation of this product. If you are not certain of your capabilities or do not have the correct tools for this installation, please consult a shop to have it done. Improper installation of this product could result in injury or death to the rider.**
- **Be sure to disconnect the battery of your motorcycle before starting on this procedure. Accidental starting of the motorcycle could cause injury to you or others around you during the installation.**

Disassembly

S&S® Air Cleaner Removal

- 1 – Disconnect the negative battery cable from the motorcycle and route it away from any metal parts in the area.
- 2 – Remove the S&S air cleaner cover and backplate assembly from the bike you are working on.

Installation

Installing the Carburetor Support Bracket

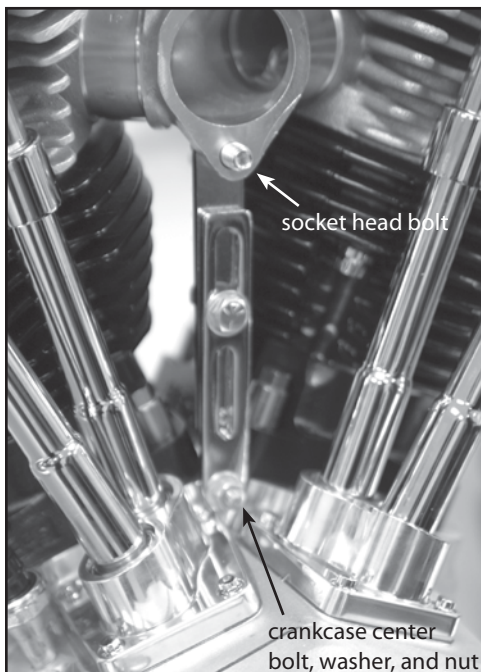
- 1 – Locate the carburetor support bracket
- 2 – Remove the bottom socket head bolt from the carburetor manifold and the nut and washer from the center bolt on the crankcase and attach the carburetor support bracket. **Picture 1** illustrates the location of the bottom carburetor bolt and the crankcase center bolt, nut and washer with the carburetor support bracket installed.
- 3 – Adjust and torque fasteners as illustrated in **Picture 2**.

Torque fasteners as follows:

crankcase center bolt - 12-15 ft.-lbs.

carburetor manifold bolt - 85 in.-lbs.

support bracket fastener - 7-10 ft.-lbs.



Picture 1



Picture 2

Installing the Fast Idle Lever Assembly to the Backplate

1 – Locate the fast idle lever package.

2 – Install the fast idle lever assembly as shown in **Figure 1**. Apply a small amount 243 blue Loctite® to the threads of the screw and thread into the backplate. Be careful not to over tighten.

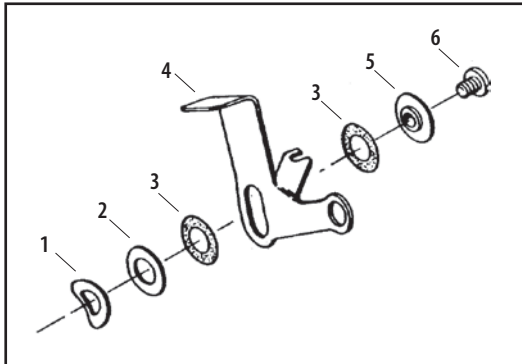


Figure 1

- 1- Fast idle friction washer
- 2- Fast idle steel washer
- 3- Fast idle nylon washer
- 4- Enrichment lever
- 5- Fast idle brass washer
- 6- Fast idle screw

3 – Once the fast idle lever is assembled on the backplate, move it up and down to making sure it functions properly.

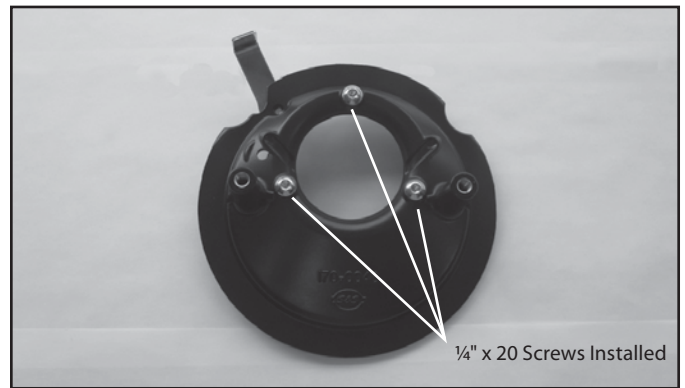
Installing the S&S® Stealth AC Kit

1 – Locate the S&S backplate and the three backplate screws. See **Picture 3**.

2 – Install the three ¼" X 20 screws in the backplate as illustrated in **Picture 4**.

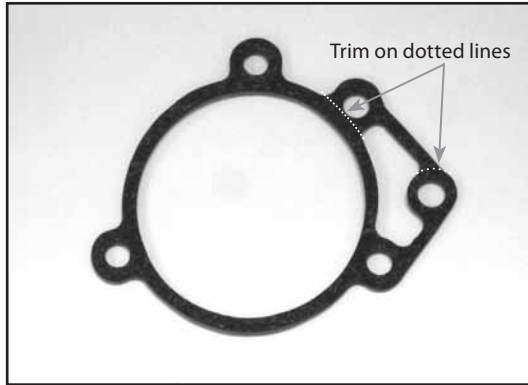


Picture 3

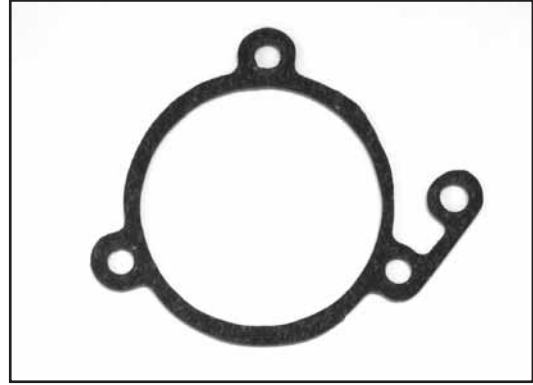


Picture 4

3 – The S&S® backplate gasket will need trimmed to better fit the backplate. With a pair of scissors trim the gasket in the area illustrated in **Picture 5, below left**. **Picture 6, below right** illustrates what the gasket looks like after trimming.



Picture 5



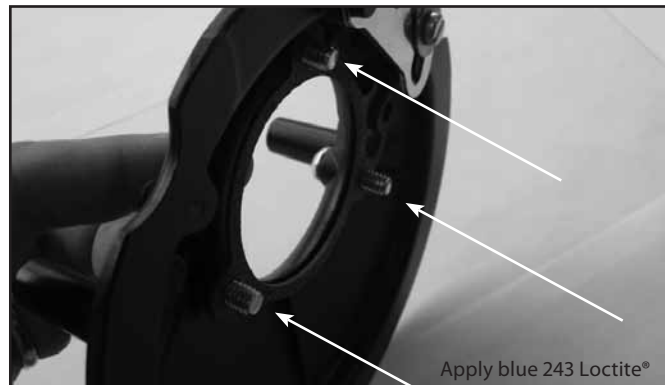
Picture 6

4 – Place the gasket over the screws as illustrated in **Picture 7**.



Picture 7

5 – Apply a drop of 243 blue Loctite® to the threads of each screw. **Picture 8** illustrates all three fasteners that require 243 blue Loctite.



Picture 8

6 – Fit the backplate to the carburetor. Start the threads of all three screws and tighten evenly until the backplate is snug.

7 – Now that the backplate is positioned, finish torque the ¼" X 20 fasteners to 72 in.-lbs. as illustrated in **Picture 9**.



Picture 9

8 – Locate the filter, plastic filter top plate and the two ¼" X 20 flanged head fasteners as illustrated in **Picture 10**.

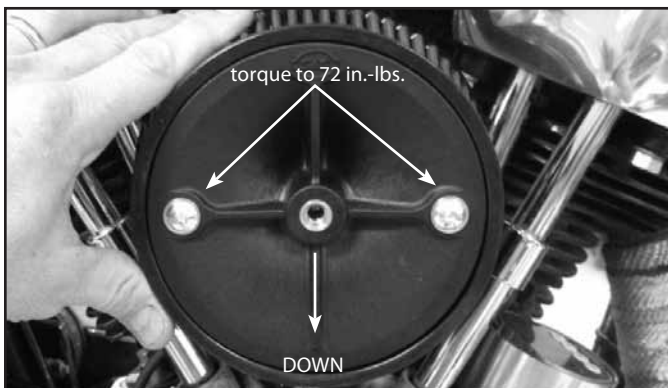


Picture 10

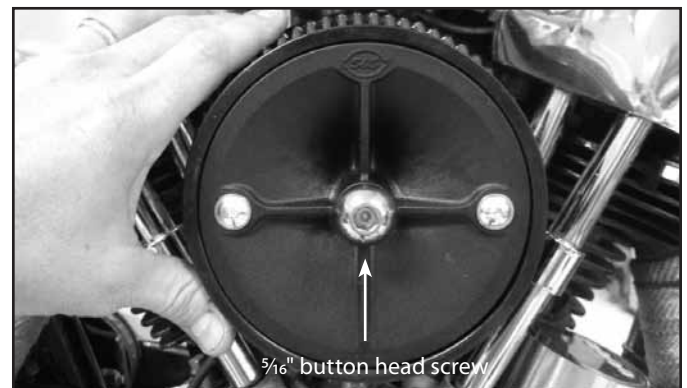
9 – Apply a drop of 243 blue Loctite® to the threads of each ¼" X 20 flanged head screw and set aside.

10 – Hold the filter on the backplate and put the filter top plate on top of the filter making sure that the word “Down” is facing down and sitting flat on the filter and locked into the groove. Pass the ¼" X 20 flanged head screws through the plastic top filter plate, thread in and tighten down evenly until snug and then finish torque to 72 in.-lbs. as illustrated in **Picture 11**.

11 – Remove the 5/16" button head screw from the plastic top filter plate. **Picture 12** illustrates the button head screw.

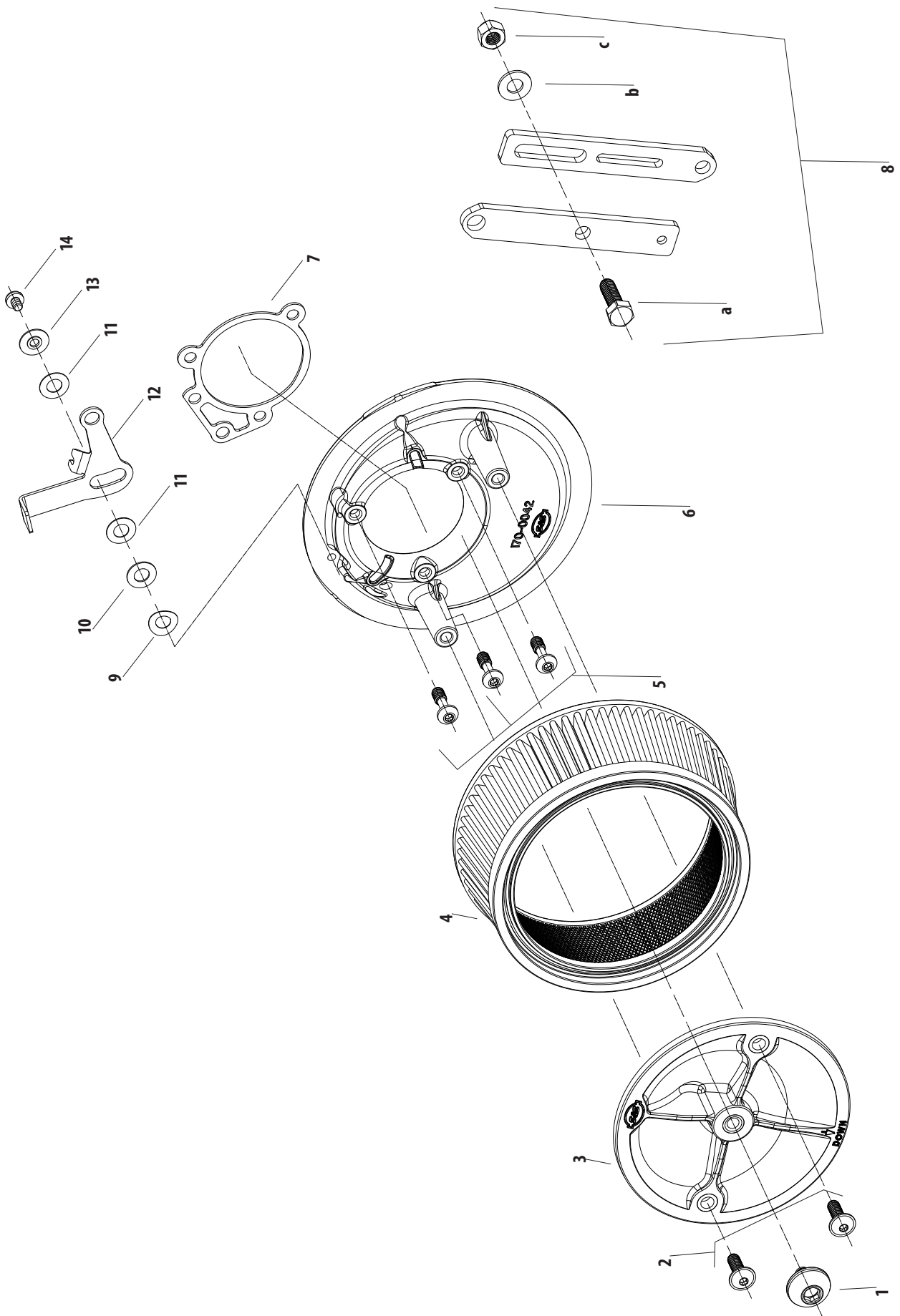


Picture 11



Picture 12

12. – Install air cleaner cover to the stealth air cleaner kit by installing the 5/16" button head screw with 243 blue Loctite® applied to the threads and torque to 10 ft.-lbs.



1. Screw, SHCB, 5/16-18 x .500", Polished, Stainless Steel	500-0051
2. Screw, SHC, Flanged Button, 1/4-20 UNC x .750" (Each) 2 required	500-0060
3. Plate, Top, Air Filter, Molded, Plastic.....	170-0026
4. Filter, Air, Tapered, Standard Pleated, 5.500" x 6.000" x 2.375", Cotton, Stealth Air Cleaner Kit	170-0043
5. Screw, SHCB, 1/4-20 UNC X .825" (Each) 3 required	500-0059
6. Backplate, Air Cleaner, Super E/G, Flathead Power®, Machined, Powdercoated, Black, Die Cast, 1936-'99 bt,1957-'90 xl	170-0179
7. Gasket, Backplate, Super E/G,CV Adapter, .0625"	106-1724
8. Bracket, Kit, Support, Carb, Case To Manifold, w/ Hardware,1966-'99 bt, 1957-1990 xl (includes 50-0108, 50-5021, & 50-7034).....	16-0471
a. Bolt, Hex Head, Gr5, 5/16-18 x 1", Zinc.....	50-0108
b. Washer, Flat, .344" x .688" x .065", Zinc, Steel.....	50-7034
c. Nut, Lock, HH, 5/16-18 UNC-2B x .359", Zinc, Steel/Nylon.....	50-5021
9. Washer, Friction, Curved, .329" x .625" x .015", Zinc, Steel.....	50-7035
10. Washer, Flat, .325" x .625" x .032", Zinc, Steel	50-7037
11. Washer, Flat, .323" x .625" x .020", Nylon (Each) 2 required.....	50-7036
12. Lever, Enrichment Super E/G,	17-0327
13. Washer, Flat, Stepped, .195" x .620" x .030", Brass.....	50-7007
14. Screw, PH, 10-24 x 1/4", Zinc, Steel.....	50-0041

