



## Installation and Tuning Instructions For S&S® Super G Carburetor Kit #110-0120 For S&S T143 Engines For 1999-2006 Harley-Davidson® Big Twins

### 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'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.

## Manifold Installation

1. Install MAP sensor on manifold
2. Secure MAP sensor with the hold down bracket and screw. Use blue thread locker and torque to 18 in-lb. See **Picture 1**.

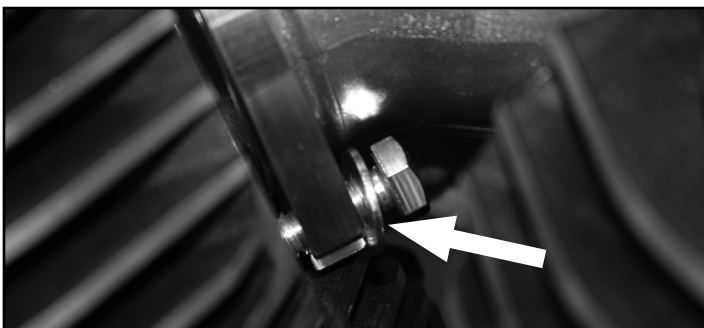


**Picture 1**

3. Install  $\frac{5}{16}$ "-18 x 1" Hex head bolts and washers into the lower manifold bolt holes in front and rear cylinder heads.
4. Install flanges and seals on manifold. The flange goes on the manifold first followed by the seal. The slotted ends of the flanges go towards the bottom of the manifold. Flanges are marked front and rear. See **Picture 2**.



**Picture 2**

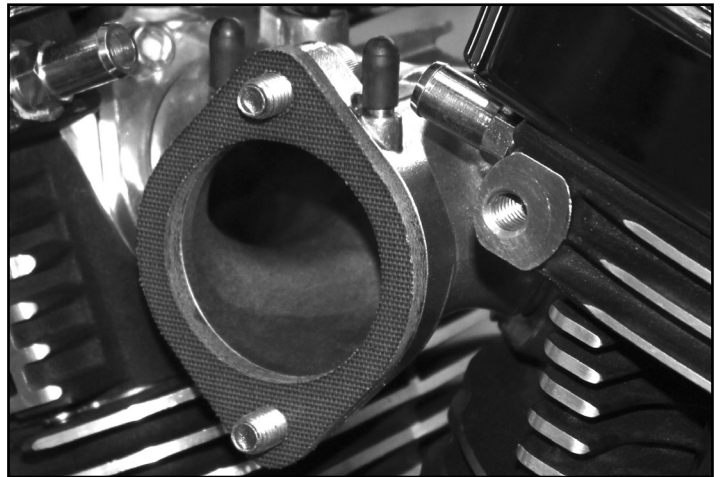


**Picture 3**

5. Slide the manifold and flanges into place ensuring that the slotted end of the manifold goes onto the bolts behind the washers. See **Picture 3**.
6. Install the two  $\frac{5}{16}$ "-18 x 1" SHC screws into the upper manifold flange holes. Do not tighten the manifold bolts at this time. The bolts should be left loose enough that the manifold can be moved up and down slightly.

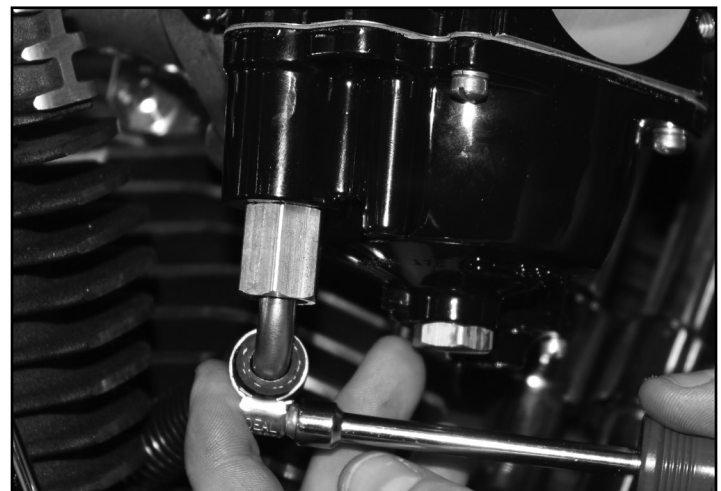
## Carburetor Installation

1. Install the two  $\frac{3}{8}$ -16 x 1  $\frac{1}{4}$ " SHC screws through the manifold and insulator block. The o-ring in the insulator block goes toward the manifold See **Picture 4**.



**Picture 4**

2. Using a long T-handled  $\frac{3}{8}$ " Allen driver, install the carb to the manifold. Torque to 10-12 ft-lb.
3. Mount the supplied throttle cable guide on the carb with the supplied screw and washer. Use blue Loctite and torque to 25 in-lb.
4. Install throttle cables. Fit barrel ends of cables in the openings in the S&S throttle wheel. Insert cable housings in cable guides. Cable with the spring is the closing cable.
5. Install fuel line and fuel line protective cover with the supplied hose clamps. See **Picture 5**.



**Picture 5**

6. Install the overflow hose and route the hose to a dead air space.

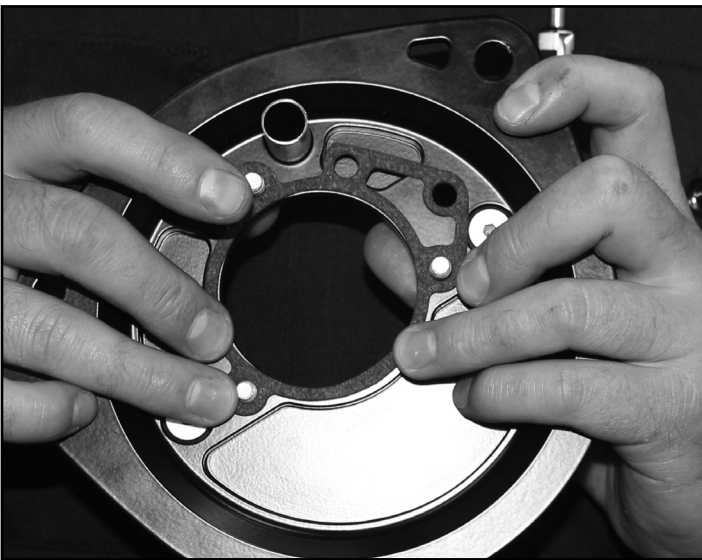
## Install Air Cleaner

1. Mount the air filter stand offs to the air cleaner back plate with the two  $\frac{1}{4}$ "-20 x  $\frac{3}{4}$ " screws. Hex end of stand off goes toward the back plate. Use blue Loctite and torque to 72 in-lb. See **Picture 6**.



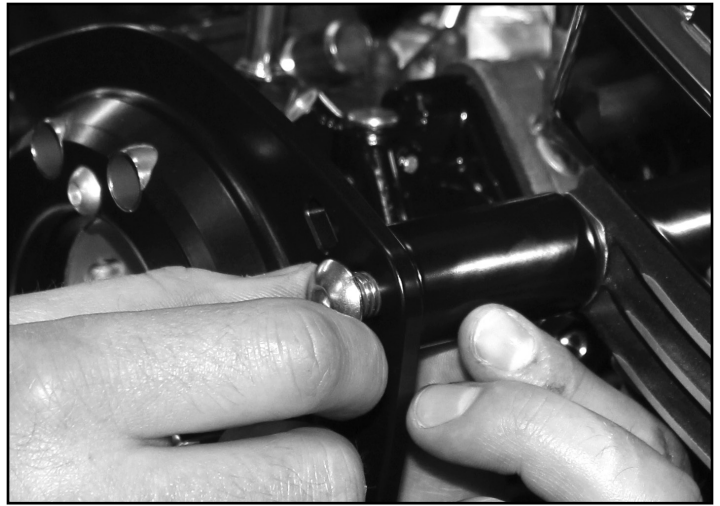
**Picture 6**

2. Thread the three  $\frac{1}{4}$ "-20 x .825" backplate screws through the back plate.
3. Place the intake gasket over the screws and apply blue thread locker to the screw threads. See **Picture 7**



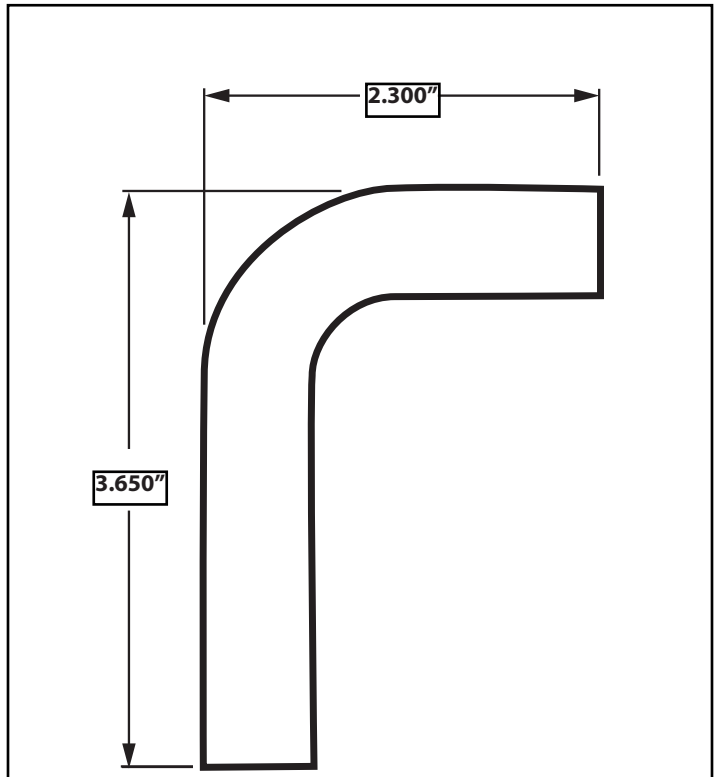
**Picture 7**

4. Install the back plate onto the carb. Leave the three screws slightly loose at this time
5. Place the spacers between the back plate and cylinder head and install the  $\frac{3}{8}$ -16 x 2 $\frac{1}{2}$ " button head cap screws through the back plate and spacer into the cylinder head. Use blue thread locker and torque to 10-12 ft-lb. See **Picture 8**.



**Picture 8**

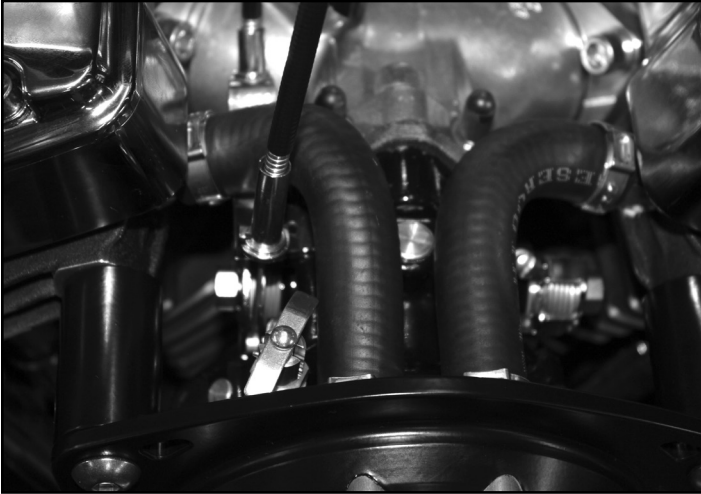
6. Torque the three screws on the front of the back plate to 72 in-lb
7. Tighten the four manifold flange bolts to 10-12 ft-lb.
8. Cut the two breather hoses to length. See **Figure 1**.



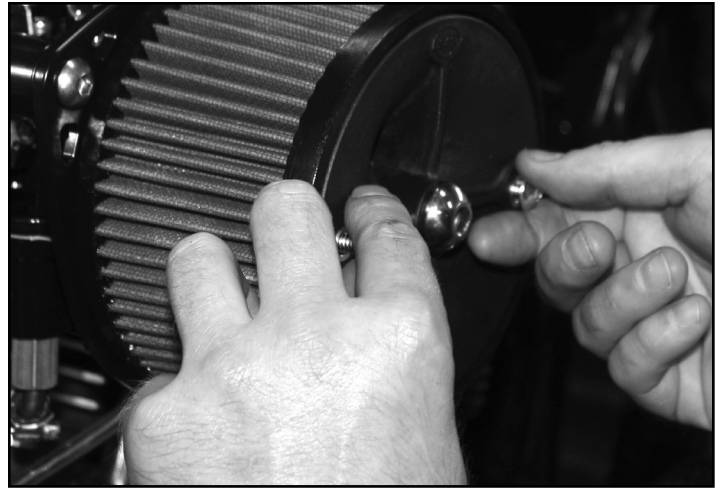
**Figure 1**



9. Install the front and rear breather hoses with the supplied hose clamps. Use crimping tool to tighten clamps when correctly positioned. See **Pictures 9 and 10.**



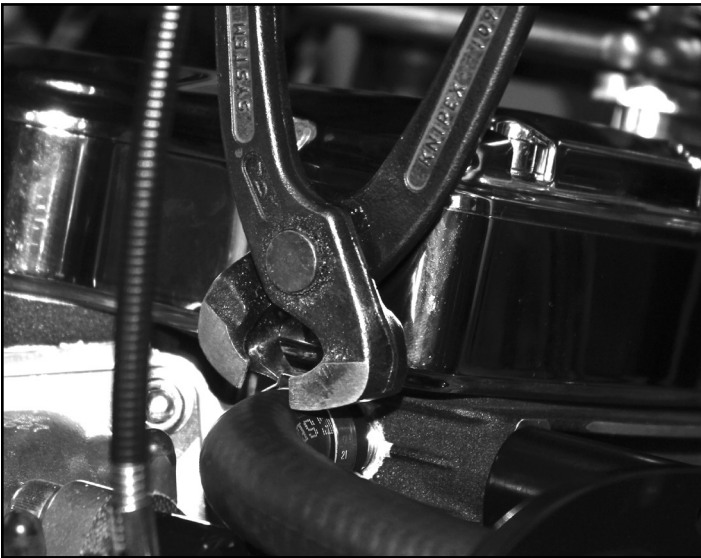
**Picture 9**



**Picture 11**

14. Finish torque to 72 in.-lbs.

15. Air filter can be run as is, or a stock or S&S air cleaner cover may be installed using the  $\frac{5}{16}$ " button head cap screw in the center of the top cover.



**Picture 10**

10. Locate the filter, plastic filter top plate and the two  $\frac{1}{4}$ " X 20 flanged head fasteners.
11. Apply a drop of blue thread locker to the threads of each  $\frac{1}{4}$ " X 20 flanged head screw and set aside.
12. 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.
13. Pass the  $\frac{1}{4}$ " X 20 flanged head screws through the plastic top filter plate, thread in and tighten down evenly until snug. See **Picture 11.**

**16. Replacement Parts For S&S Air Cleaner Kit #170-0277  
For Super G Carburetor - S&S T143 Engine 1999-2006**

1. Backplate, Assembly, Air Cleaner, Super G, T143, Goth Black, Billet, 1999-'06 bt ..... **NA**
2. Standoff, Hex, 1/2" x 2.33", Aluminum, 6061 ..... **NA**
3. Spacer, Powdercoated, 1.000" x .438" x 1.765, Goth Black, Aluminum, 6061-T6 ..... **NA**
4. Screw, BHC, 3/8-16 x 2.500", Polished, Stainless Steel ..... **NA**
5. Gasket, Backplate, Super E/G, CV Adapter, 0 ..... **106-1724**
6. Screw, SHCB, 1/4-20 UNC X .825" ..... **500-0059**

7. Screw, FHSC, 1/4-20 x 3/4", Zinc Plated ..... **50-0491**
8. Hose, Breather, 90°, .500" ..... **50-8291**
9. Clamp, Hose, Pinch Style ..... **50-0378-5**
10. Filter, Air, Tapered, Std Plt, 5.500" x 6.000" x ..... **170-0081**
11. Plate, Top, Air Filter, Molded, Plastic ..... **170-0026**
12. Screw, SHC, Flanged Button, 1/4-20 UNC x .750" ..... **500-0060**
13. Screw, SHCB, 5/16-18 x .500", Pol, Stnls Stl ..... **500-0051**
- Not Shown
14. Sealant; Loctite®; #243; 5ml ..... **51-9003**

