

Instruction 51-1119
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Because every industry has a leader

Installation Instructions: S&S® Cruise Control Brackets for Super E & G Carburetors

DISCLAIMER:

S&S parts are designed for high performance, off road, 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 inhaled. 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 judgement when performing installation and operating motorcycle. Good judgement begins with a clear head. Don't let alcohol, drugs or fatigue impair your judgement. 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 inhaled. 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.

INTRODUCTION

S&S® Cruise control brackets for Super E&G Carburetors are designed for use on big twin & Harley-Davidson® Twin Cam 88® model engines.

These brackets in conjunction with S&S E&G carburetors will work with factory cruise control systems on Harley-Davidson® motorcycles.

THIS INSTRUCTION SHEET SHOULD BE USED IN CONJUNCTION WITH S&S SUPER E&G CARBURETOR INSTRUCTION SHEET 51-1012.

Throttle Cable Requirements

These brackets are designed to use stock Throttle Cables from 1993 up Harley-Davidson® motorcycles.

⚠ WARNING

Gasoline is extremely flammable, explosive under certain conditions, and the fumes toxic when inhaled. Disconnect battery ground cable before installation to prevent sparks, do not smoke around gasoline, and perform installation in well ventilated area away from sparks or open flame.

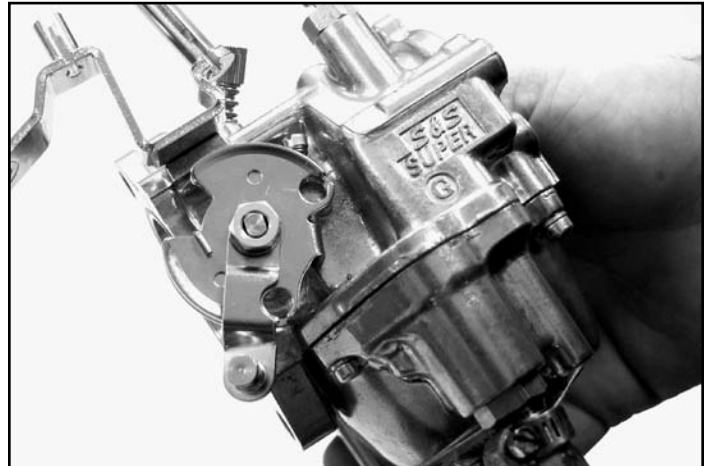
If motorcycle has been running, wait until engine and exhaust have cooled to avoid getting burned during installation.

- A. Remove the seat and disconnect the battery. See Harley-Davidson® service manual for proper procedure.
- B. Remove fuel tank from motorcycle. See Harley-Davidson® service manual for proper procedure.
- C. Remove carburetor from motorcycle. Refer to carburetor instruction sheet 51-1012.
 1. Once carburetor is removed and drained of all fuel, remove the top cable guide assembly.
 2. Using a small screw driver adjust idle speed screw out until it is just touching throttle spool stop with the throttle plate closed. See Picture 1.



Picture 1

3. Holding the carburetor firmly, remove throttle shaft nut and lock washer on throttle spool side of carburetor. Making sure the spool and return spring don't come off the shaft. Install new cruise control arm on throttle shaft with eyelet arm facing out. See Picture 2. Re-install lock washer and new thin nut 50-5027 supplied in kit. (Do not torque nut yet.) Adjust idle speed screw so it allows throttle plate to fully close in the carburetor bore. Carefully loosen (DO NOT REMOVE.) throttle plate screws. Once screws are loose, torque nut to 40 in-lbs.



Picture 2

⚠ CAUTION

Over tightening throttle shaft nut can cause irreversible damage to throttle shaft and nut.

NOTE: When you torque the throttle shaft nut the throttle plate will open, let it open until it hits the throttle stop on the carburetor body. make sure you don't let it snap shut, let it close slowly so you don't damage the bore of the carb body with the loose throttle plate.

4. Re-center the throttle plate in the bore of the carburetor. carefully move throttle plate so it centers in the bore of the carburetor body. (With the throttle closed you shouldn't see any gaps where the throttle plate and bore meet.) Once it is centered, remove one screw at a time and apply a very small drop of Loctite® 242 or equivalent to threads and tighten screws. Once screws are tightened, check to make sure throttle opens and closes without binding. Throttle should snap shut. If it binds repeat this step.
5. Readjust idle speed screw. Turn screw counter clockwise until it no longer contacts throttle linkage spool. Next turn screw clockwise until it just contacts spool. Then turn additional 1/2 turn clockwise to slightly open throttle plate.

NOTE: Throttle arms are different between kits 11-29261993-'97 or 11-22971998-Up. See Pictures 3 & 4.



Picture 3



Picture 4

6. Install new cruise control throttle cable bracket with new longer screw and flat washer 50-0093 and 50-7009. Apply small drop of Loctite® 242 or equivalent to threads.

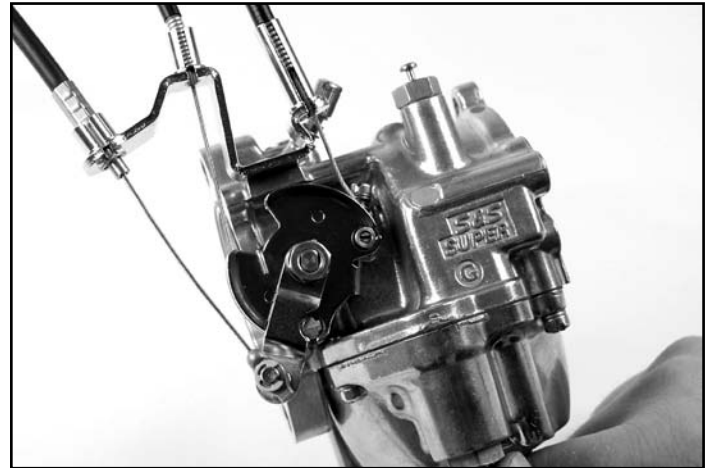
D. Remove cruise control cable zip ties from factory wiring harness to allow for repositioning of cable. Route cruise cable so it is positioned on the rear side of top engine alignment bracket. See Picture 5.



Picture 5

E. For big twin models 1993-'97.

1. Install open side throttle cable barrel fitting and throttle cable in throttle linkage and appropriate side of throttle cable housing bracket. Open side cable housing diameter is smaller and measures .190". See Picture 6.



Picture 6

2. Repeat step A for closing side throttle cable. Closing side cable has a spring around inner cable wire. See Picture 6.
3. Insert cruise control cable into bracket and install retaining ring 50-8075 into slot on cable. See Picture 6.
4. Insert cable eyelet on throttle arm pin, then install washer 50-7009 and retaining ring 50-8075. See Picture 6.
5. Relocate the throttle cables from the factory frame mount so the cables don't bind. See Picture 7.



Picture 7

6. Bolt carburetor and insulator block to intake manifold using the two $\frac{3}{8}$ -16 socket cap screws provided with your carburetor.
7. Secure cruise control cable with zip tie supplied with the kit 50-8003. On some models it may be necessary to remove lower factory cruise control cable tie for proper cable routing. See Picture 5.
8. Secure throttle cables with the three zip ties supplied in the kit 50-8003. See Picture 7.

9. Install the rest of the carburetor system. Install the fuel tank. See Harley-Davidson® service manual for proper installation of fuel tank.
10. See Section G for throttle cable adjustments.

F. For big twin and Harley-Davidson® Twin Cam 88® engines 1998-Up.

1. Install open side throttle cable barrel fitting and throttle cable in throttle linkage and appropriate side of throttle cable housing bracket. Open side cable housing diameter is smaller and measures .190". See **Picture 8**.



Picture 8

2. Repeat step A for closing side throttle cable. Closing side cable has a spring around inner cable wire. See **Picture 8**.
3. Insert cruise control cable into bracket and install retaining ring 50-8075 into slot on cable. See **Picture 8**.
4. Snap cruise control cable end fitting onto throttle arm. See **Picture 8**.
5. Relocate the throttle cables from the factory frame mount so the cables don't bind. See **Picture 7**.
6. Bolt carburetor and insulator block to manifold using 3/8"-16 cap screws provided in original carburetor kit.
7. Secure cruise control cable with zip tie supplied with the kit 50-8003. On some models it may be necessary to remove lower factory cruise control cable tie for proper cable routing. See **Picture 5**.
8. Secure throttle cables with the three zip ties supplied in the kit 50-8003. See **Picture 8**.
9. Install the rest of the carburetor system. Install fuel tank. See Harley-Davidson® service manual for proper installation of fuel tank.
10. See Section G throttle cable adjustment.

G. Adjusting throttle cables.

1. Due to the differences between year groups we ask that you use a Harley-Davidson® service manual for the proper procedure.

H. Cruise control cable adjustment for big twins 1993-'97.

1. With cruise control cable connected to carburetor bracket and cruise module, depress locking button and move upper cable housing in or out for proper slack. See **Picture 9**.



Picture 9

NOTES: If cruise cable is too tight, it may cause the following:

- Motorcycle will gain 1-2 mph when *RESISET* switch is pressed down to *SET* speed.
- Cruise cable will pull throttle spool off idle stop and prevent setting idle speed.
- If cruise cable is too loose, the *SET* speed may be 1-2 mph lower than speed present when cruise was *SET*.

I. Cruise control cable adjustment for 1998-Up models.

To set the correct cable lash, proceed as follows:

1. Push the cruise switch on the right handlebar to *RESUME* and hold.
2. Turn the fairing cap Cruise *ON/OFF* switch *ON*.
3. Turn the Ignition/Light key switch to *IGNITION*.
4. Start the engine. The green Cruise Engaged Lamp (capital letter "C") on the tachometer gauge will illuminate. Wait 3 seconds for the lamp to go off.
5. Release the Cruise Switch from the *RESUME* position.
6. Push the Cruise Switch to *RESUME* and hold. Cruise will pull in cable until change in RPM is detected. The number of motor steps required to rev the engine is stored in memory.
7. After engine revs and Cruise Engaged Lamp is extinguished, release the Cruise Switch from the *RESUME* position.
8. Turn the Ignition/Light Key to *OFF*.