



Installation Instructions for S&S® Billet Primary Cover for 1989-'06 Harley-Davidson® Softail® and 1991-'05 Dyna® Models with Forward and Mid Controls

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 effect 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.

56-4041, 56-4042 Fit 89-06 Harley-Davidson® Softail® models and 91-05 Dyna® models with forward controls.
56-4050, 56-4051 Fit 89-06 Softail models and 91-05 Dyna models with mid controls.

This kit was designed to allow the output, inspection and derby covers to be removed without the need of changing seals. Care should be taken when installing o-rings into ring grooves, damaged o-rings will cause fluid leaks.

Race and Street Derby covers are interchangeable. The Race Derby cover was designed for larger lock-up race clutches and is offset further from the engine; this takes away ground clearance in cornering. The street version will fit stock, S&S and most aftermarket stock replacement clutches.

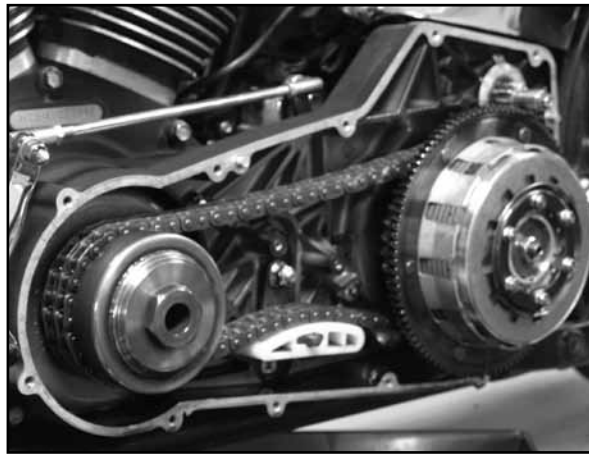
WARNING

Study the procedures listed in these instructions and the appropriate Service Manual. This kit should be professionally installed by a certified motorcycle mechanic. Failure to install this kit properly could result in death or serious injury.

NOTE: On bikes equipped with floorboards. It may be necessary to loosen the floorboard mounts to install the cover. On some mid-control models foot-pegs may need to be removed.

Models with forward controls

- 1- Disconnect the battery cables to prevent accidental start up, see your service manual for location and procedure.
- 2- Remove the stock primary cover following the factory service manual. Note: inspection cover must be removed before the outer primary cover can be removed.
- 3- Clean the gasket surface on inner primary case to insure a proper seal. **See Picture 1.**

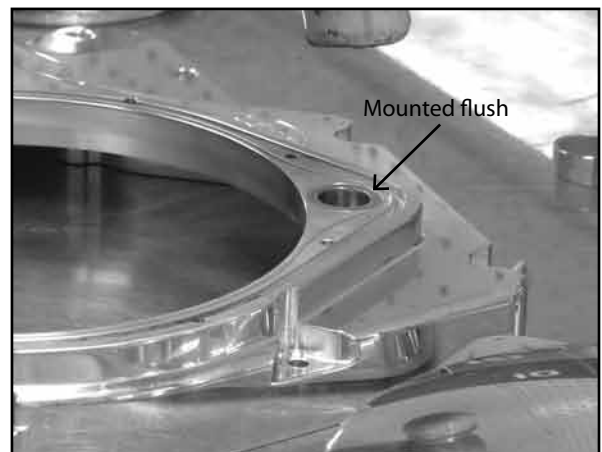


Picture 1

- 4- Select the correct starter pinion bushing provided in the kit, per year model and press the bushing into the outer primary cover so it is flush with inside of the cover. **(See Pictures 2 and 3).** 1993 and earlier models use the bushing with large inner diameter (50-0422). 1994 and later models use the smaller inner diameter bushing (50-0421).



Picture 2



Picture 3

- 5- Before installing the outer cover, carefully position the output cover 5" ID o-ring in the channel. Apply blue threadlock to the 8-32 x 3/4" fasteners and install the output cover. Torque to 60 in-lbs.
- 6- Install the drain plug at the bottom right side of the outer primary cover with PTFE thread sealant.
- 7- Install a new primary gasket on the locating dowels and slide the new S&S® outer primary cover into place. **See Picture 4.**



Picture 4

- 8- Apply blue thread locker to the 1/4-20 x 1 1/8" fasteners and follow the factory torque sequence. The fasteners should be tightened to 100-110 in-lbs of torque.
- 9- Install the new derby cover o-ring. Apply blue thread locker to the 8-32 x 5/8" fasteners and tighten them to 60 in-lbs. **See Picture 5.**



Picture 5

- 10- Add the appropriate amount of factory recommended primary case oil through the inspection cover hole. **See Picture 6.**
- 11- Install the inspection cover 4 1/8" ID x 1/16" o-ring seal into the o-ring groove and set the inspection cover into place. **See Picture 7.**



Picture 6



Picture 7

- 12- Apply blue thread locker to the 4, 1/4-20 x 3/8" low head cap screws and torque to 60 in-lbs.
- 13- Verify that there are no leaks around inner and outer primary covers, output, inspection and derby covers.

Models with mid controls

- 11- Follow steps 1-10 above.
- 12- Inspect the mid shift control shaft o-rings for wear or damage, replace if necessary, o-rings for the shaft are not included in this kit.
- 13- Install the inspection cover 4 1/8" ID x 1/16" o-ring seal into the o-ring groove and slide the mid control inspection cover over the shift shaft into place.
- 14- Apply blue thread locker to the 4, 1/4-20 x 3/8" low head cap screws and torque to 60 in-lbs.
- 15- Reinstall the mid shift lever and tighten to the recommended torque, see appropriate service manual. **See Picture 8.**



Picture 8

- 16- Verify that there are no leaks around inner and outer primary covers, output, inspection and derby covers.

REPLACEMENT PARTS FOR BILLET PRIMARY COVER

(1989-'06 Softail® and 1991-'05 Dyna® Models with Forward and Mid Controls)

Primary Cover 1989-'06 Harley-Davidson® Softail® and 1991-'05 Dyna® **56-4040**

- 1- Derby cover, primary, billet
 - Race **56-4043**
 - Street **56-4044**
- 2- Inspection cover, primary, billet
 - Mid control **56-4045**
 - Forward control **56-4046**
- 3- Output cover, primary, billet **56-4047**
- 4- Bushing
 - .700 ID (1994-later) **50-0421**
 - .875 ID (1993-earlier) **50-0422**
- 5- Cover, primary, gasket (10 pack) **56-4048**
- 6- SHCS 1/4-20 x 1 3/8 Stainless (12 pack) **50-1086**
- 7- SHCS 8-32 x 3/4 Stainless (17 pack) **50-1087**
- 8- LHSC 1/4-20 x 3/8 Stainless (12 pack) **50-1088**
- 9- Washer 1 7/64 x 1/2 x 1/16 Stainless (12 pack) **50-1089**
- 10- Magnetic plug, 1/8-27 **50-8334**
- 11- O-ring, Buna, 8 3/4 ID x 1/16 (10 pack) **50-1090**
- 12- O-ring, Buna, 5" ID x 1/16" (10 pack) **50-1091**
- 13- O-ring, Buna, 4 1/8" ID x 1/16" (10 pack) **50-1092**
- 14- SHCS 8-32 x 5/8" Stainless (10 pack) **106-2954**

