

Instruction 510-0662

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S&S® Cycle, Inc.

14025 Cty Hwy G
Viola, Wisconsin 54664

Phone: 608-627-1497

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

Technical Service Email: sstech@sscycle.com

Website: www.sscycle.com



Installation Instructions: for S&S Head Bolts for M8 Models Kit pn 900-1006

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.

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 an 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.

CAUTION

The following torque sequence must be followed. Failure to do so will result in engine failure not covered under warranty.

1. Before installation of the cylinder head, ensure that all mating surfaces are free of debris and defects that may affect installation
2. Apply clean oil to the internal threads and underside of the head of the new head bolts.
3. Installation instructions for Multi-Layer Steel (MLS) head gaskets. For graphite composite head gaskets skip to step 4.

Start with the front head then the rear head

- a. Tighten each bolt finger tight using the sequence in **Figure 1**.
 - b. Tighten each bolt to 10 ft-lbs using the same sequence.
 - c. Tighten each bolt to 20 ft-lbs using the same sequence.
 - d. Tighten each bolt to 30 ft-lbs using the same sequence.
 - e. Fully loosen each bolt ¼ turn at a time in the reverse sequence.
 - f. Tighten each bolt finger tight using the sequence in **Figure 1**.
 - g. Tighten each bolt to 10 ft-lbs using the same sequence.
 - h. Tighten each bolt to 20 ft-lbs using the same sequence.
 - i. Tighten each bolt to 25 ft-lbs using the same sequence.
 - j. Tighten each bolt to 30 ft-lbs using the same sequence.
 - k. Tighten each bolt to 35 ft-lbs using the same sequence.
 - l. Final tighten each bolt to 45 ft-lbs using the same sequence.
 - m. Wait 15 minutes then recheck each bolt at 45 ft-lbs using the same sequence
4. Installation instructions for graphite composite style head gaskets.

Start with the front head then the rear head.

- a. Tighten each bolt finger tight using the sequence in **Figure 1**.
- b. Tighten each bolt to 10 ft-lbs using the same sequence.
- c. Tighten each bolt to 20 ft-lbs using the same sequence.
- d. Tighten each bolt to 25 ft-lbs using the same sequence.
- e. Tighten each bolt to 30 ft-lbs using the same sequence.
- f. Tighten each bolt to 35 ft-lbs using the same sequence.
- g. Final tighten each bolt to 45 ft-lbs using the same sequence.
- h. Wait 15 minutes then recheck each bolt at 45 ft-lbs using the same sequence

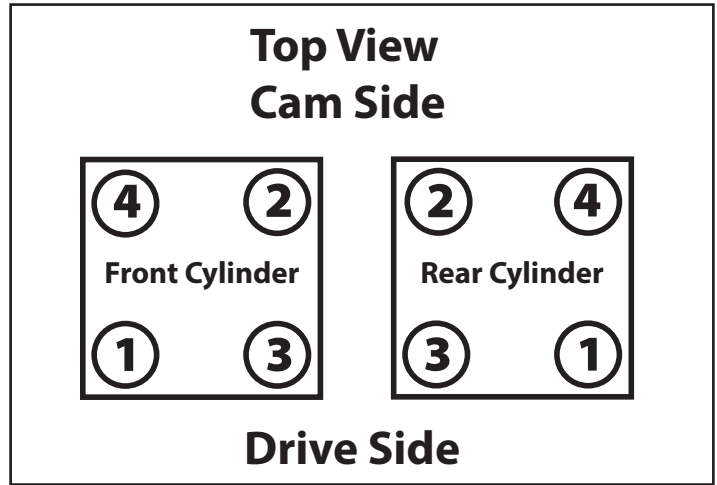


Figure 1

5. Assemble the remaining items according the Harley-Davidson® service manual specific to your motorcycle.



Instructions for M-Series Cylinder Stud (310-1172)

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Installation Instructions 2017-up M-Series Cylinder Studs

Installation:

1. Remove oil that may be on the cylinder stud threads from the manufacturing process. Remove oil and old thread locker from the threaded holes in the crankcase.
2. Apply red loctite to internal threads of the crankcase. Allow the loctite to flow into the root of the threads. Do not use excessive amounts of loctite.
3. Use the double nut technique to install the studs. Torque to 25 ft*lbs.
4. Remove excess loctite from around the studs.

Removal:

1. Secure the crankcase on a suitable work surface.
2. Place a box end wrench over the stud.
3. Install two hex nuts onto the stud. Use a 2nd wrench to lock the nuts together.
4. Use a suitable heat source to heat the crankcase near the cylinder stud in order to soften the threadlocker.
5. Use the box end wrench to remove the cylinder stud.
6. Re-apply heat to the crankcase if the cylinder stud becomes difficult to remove.