

**Instruction 51-1107
4-14-06**

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Because every industry has a leader

Installation Instructions: S&S® Crankcase Breather Stud Assembly

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.

The S&S® crankcase breather stud assembly is a replacement unit for 1948-'57 and 1964 Harley-Davidson® motorcycles with lost oil primary chain drive systems. It is a replacement for H-D® #24912-48 and is compatible with all S&S Generator Crankcases except those manufactured to 1965-1969 specifications.

Note: All reference to Harley-Davidson® part numbers is for identification purposes only. We in no way are implying that any of S&S® Cycle's products are original equipment parts or that they are equivalent to the corresponding Harley-Davidson® part number shown.

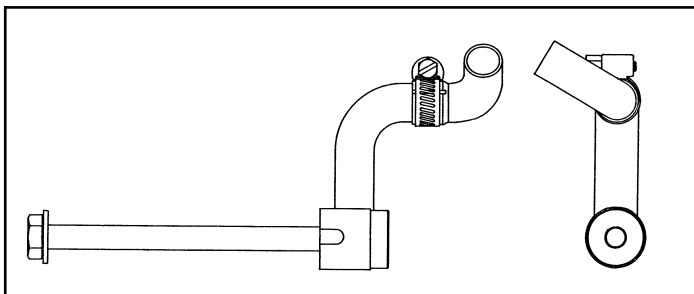
NOTE: S&S breather stud assembly may be used on most other big twins manufactured before 1965 if a 5/16" hole is drilled in inner primary cover. Many aftermarket inner primary covers have this hole and accept S&S breather stud without modification.

Please familiarize yourself with the kit contents and installation instructions before proceeding. A Harley-Davidson® Service Manual for the correct year and model should be referred to as necessary.

Contents:

Part 31-2036 - S&S Crankcase Breather Stud Assembly

Spigot, Crankcase Breather Stud	31-2036C
Deflector, Front Chain Oil (H-D® #24932-39)	31-2038
Screw, Hex head, 5/16-18 x 6 1/16" (Case Breather Stud)	50-0103
Clamp	19-0173
Washer, Flat	17-0321



Picture 1

INSTALLATION

1. Remove outer primary cover, noting position of breather stud spigot and oil deflector assembly in relation to primary chain.

NOTE: Breather stud is located at approximately eight o'clock position as viewed from right or cam side of engine. Harley-Davidson® Service Manual should be consulted for correct position of spigot and deflector in scratch build applications.

2. Remove primary drive assembly and inner primary cover.

NOTE: OEM breather stud may utilize metal or rubber oil deflector. If metal, deflector must be removed from spigot before inner primary cover can be removed. Clean both sides of crankcase around breather stud. Remove nut from old breather stud and remove stud from left side of engine.

3. Fit flat washer provided in kit over 6-1/16 x 5/16" bolt. Apply Loctite® 242 (blue) or equivalent to bolt threads. If desired, place thin bead of silicone or preferred sealant around edge of spigot that contacts crankcase and allow to cure per manufacturer's instructions.
4. Place spigot in same position as item removed in Step 1, insert bolt through crankcase from right side and tighten securely.

NOTE: Knucklehead drive side crankcases have locating pin that must engage dimple in spigot. Pin will position spigot for proper lubrication of chain. Panhead cases do not have pin. In panhead applications spigot must be installed in same position as original elbow noted in Step 1. Refer to Service Manual as necessary.

5. Install inner primary cover and primary drive.

NOTE: Breather opening in some inner primary covers may not align with S&S breather spigot. In such instances, hole may be cut in correct location using properly positioned breather spigot as guide.

6. Adjust chain according to Service Manual. Position oil deflector on elbow so as to direct air-oil mist to chain. Secure elbow with provided clamp.
7. Remove spark plugs and rotate engine several revolutions while observing movement of primary chain to confirm adequate clearance between chain and breather deflector. Install outer primary cover and spark plugs.

⚠ WARNING

Incorrectly installed oil deflector could loosen and lodge between chain and sprocket, causing damage to parts involved and possible loss of control of motorcycle with resulting personal injury or death to operator and others.

8. Observe primary chain for proper lubrication after 50-100 miles. Adjust and retighten deflector clamp as needed.