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Technical Bulletin

1995½ - 1998 EFI Stock Crank Position Sensor Installation

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.

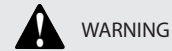
SAFE INSTALLATION AND OPERATION RULES:

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 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.

Removal of Crank Position Sensor Hole Cover Plate and Plug

The engine is shipped with a crank position sensor hole plug to prevent leakage of fluids during shipping. This plug must be removed to allow installation of the stock crank sensor.

- 1- Remove two Torx® #8-32 x 3/8" screws used to fasten cover plate. These screws can be used later to install the crank position sensor.
- 2- Insert a 1/4-20 bolt into the crank position sensor plug.
- 3- Use a pair of pliers to grip the 1/4-20 bolt and carefully extract the crank position sensor plug from the hole. Pull the plug straight out of the hole to avoid damaging the crank position sensor hole.

Installation of Stock Crank Position Sensor

IMPORTANT! *The crank position sensor mounting block used in stock applications is not used with the S&S engine. If this block is installed, the crank position sensor will be too far from the flywheel. This could cause the fuel injection system to operate improperly or not at all.*

- 1- Slide the stock O-ring (H-D®# 11170) around the crank position sensor up to the metal mounting bracket. Apply a small bead of high-temperature gasket material around the outer edge of the O-Ring to ensure a leak-proof seal.
- 2- Insert crank position sensor into crank position sensor hole.
- 3- Apply a small amount of Loctite® 222 to threads of Torx® #8-32 x 3/8" screws and use them to fasten the crank position sensor to the crankcase. Tighten screws to 17- 21 in-lb.

Upgrading your 1995½ - 1998 harness to accept the S&S® (1999-later) crank sensor (55-1051)

Some customers may choose to upgrade their crank position sensor to the one used on several S&S engines. This may be done by following the procedure below:

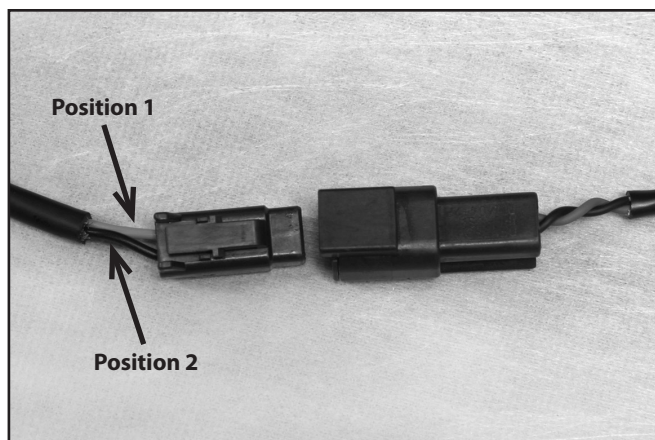
Modification of Crank Position Sensor Connector

Parts Needed:

- 106-0115 Service Kit, Two Position, Deutsch® DTM
- 55-1051 Crank Position Sensor Kit

Procedure:

- 1- Cut the wire for the crank position sensor connector (round 3 position connector) off the motorcycle harness near the connector.
- 2- Strip the wire shielding off to expose two internal wires.
- 3- Crimp on terminals and populate the 2 – way connector using the following position assignment:
 - 1: Signal, BE
 - 2: Signal Return, BK
- 4- Install locking wedge.



Picture 1

Installation of the 55-1051 Position Sensor

- 1- Remove cover plate and plug or stock crank position sensor (if installed).
- 2- Install the 55-1051 crank position sensor with the included 1/4" screw and lockwasher. Torque to 8-10 ft-lb.
- 3- Connect the harness to the modified motorcycle harness described above.