

**Instruction 51-1072
4-17-06**

Copyright © 1997, 2005, 2006
by S&S Cycle, Inc.

All rights reserved.
Printed in the U.S.A.

S&S® Cycle, Inc.

235 Causeway Blvd.
La Crosse, Wisconsin 54603
Phone: 608-627-1497 • Fax: 608-627-1488
Technical Service Phone: 608-627-TECH (8324)
Technical Service Email: sstech@sscycycle.com
Website: www.sscycycle.com



Because every industry has a leader

Service Bulletin No. 18

Clearancing Harley-Davidson® Sportster® Model Flywheels for S&S® 34-7800 Connecting Rods

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.

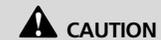
IMPORTANT NOTICE:

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.

Current S&S® 34-7800 connecting rods are wider in certain areas than those manufactured previously. This results in interference between lower portion of female connecting rod and inner rim of stock Harley-Davidson® flywheels. Material must be removed from flywheels to obtain proper clearance. Although it remains the engine builder's responsibility to confirm all clearances as described in S&S Connecting Rod Instruction 51-1025, connecting rod-to-flywheel clearance should be adequate when using S&S flywheels.

NOTE: Because amount of metal removed from flywheel is minimal, engine balance should not be affected. It is recommended that flywheel balance be checked, however, if more than a few grams of metal are removed. Refer to Instruction 51-1025 for additional comments on balancing flywheels for S&S connecting rods.

⚠ CAUTION

Failure to follow recommended clearancing procedures may cause damage to rods and/or other engine components.

⚠ WARNING

Removing material from connecting rod will weaken it, possibly causing it to break without warning. This can result in catastrophic engine failure with subsequent loss of control of motorcycle and severe injury to rider and others.

Clearancing Procedure

1. Place crankpin in drive side flywheel, followed by pre-lubricated bearings, bearing retainers and female connecting rod. Locate rod in relieved area of flywheel rim insuring that thrust face of rod rests against flywheel. Gently rotate rod forward on crankpin until it contacts flywheel. Mark flywheel at contact area and rotate rod in opposite direction until flywheel is contacted again. Mark second contact area.
2. Remove connecting rod and bearing assembly from flywheel.
3. Remove sufficient metal from contact areas of flywheels to provide .060" clearance between flywheel and rods.

NOTE: It is not necessary to remove metal around entire rim of flywheel. Slight bevel where corners contact rod should be sufficient.

⚠ WARNING

Metal particles are potentially harmful. Always wear safety glasses, hearing protection, gloves and other protective clothing when grinding, filing or otherwise machining metal.

4. Repeat procedure on other flywheel.
5. Carefully remove burrs and smooth relieved areas to eliminate possible stress risers.
6. Proceed with assembly according to Connecting Rod Instruction 51-1025.



Because every industry has a leader