

Instruction 51-1240
02-18-13

S&S[®] Cycle, Inc.



Copyright © 2006, 2013
by S&S Cycle, Inc.

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

14025 Cty Hwy G, PO Box 215
Viola, Wisconsin 54664
Phone: 608-627-1497 • Fax: 608-627-1488
Technical Service Phone: 608-627-TECH (8324)
Technical Service Email: sstech@sscycle.com
Website: www.sscycle.com

Installation Instructions for

S&S[®] Billet Oil Filter Mount with Oil Cooler Machining PN 31-4105

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.

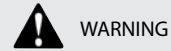
SAFE INSTALLATION AND OPERATION RULES:

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 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 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.

Fitment:

- 1970-'99 S&S® V-Series motors
- 1992-'99 Harley-Davidson® Evolution® engines

General:

This kit is designed for installation on engines with front mounted oil filter brackets. Oil lines and clamps are required components purchased separately to complete this kit. This kit comes with the appropriate fittings and hardware for assembly.

⚠ WARNING

Improper installation will cause engine damage. The rider's safety depends on the correct installation of this kit. 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.

Kit Contents:

- Oil Filter Bracket, Assembly 31-4105
- Oil Filter Bracket, Packet 31-4106

**REMOVING THE EXISTING OIL FILTER BRACKET**

- 1- Remove the oil drain plug from the engine and drain oil.
- 2- Depending on exhaust systems it may be easier to remove and install the oil filter bracket with the exhaust removed. (See appropriate Service Manual).
- 3- Detach the oil pump return line. Next detach the oil tank return line.
- 4- Remove old oil filter bracket located on front of engine. **See Picture 1.**



Picture 1

- 5- Clean mounting surface of dirt and debris.

INSTALLING THE S&S® FILTER MOUNT

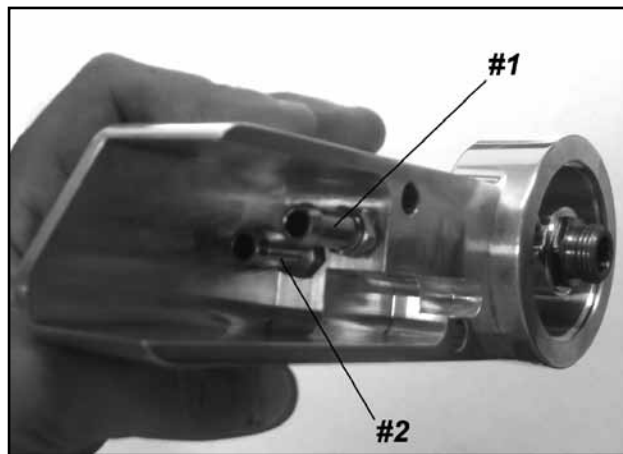
Installation with No External Oil Cooler

- 1- Apply PTFE plumber's thread sealer on the treads of the two 1/8"-27 pipe plugs and install them into the side of the S&S® oil filter bracket until flush. **See Picture 2.**



Picture 2

- 2- Apply thread sealer to two 1/8"-27 NPT barb fittings and thread them in the rear of the bracket until snug. **See Picture 3. Do not use the special 1/8"-27 NPT fitting (See Picture 9 & 10) in this application, the use of this fitting will block oil from returning to the tank, filling the engine with oil.**



Picture 3

- 3- Install the bracket using the hardware provided.
- 4- Measure the length of oil line needed from the bracket fittings to the oil pump and oil tank. (See service manual on location, removal and installation.) If steel braided lines are desired, universal compression-style fittings that work with 3/8" single barbs will be needed. **See Picture 4, 5 and 6.**



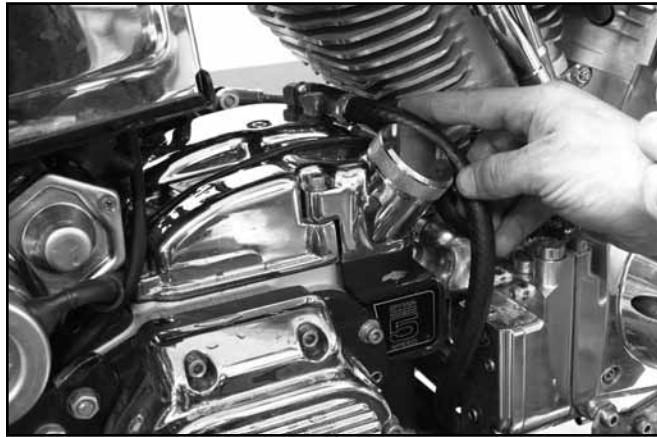
Picture 4

- 5- Route lines according to the factory service manual. Be sure that the lines will not come in contact with hot components or moving parts that could rub through the lines.

⚠ WARNING

Failure to properly install oil lines can cause engine failure, fire or death.

- 6- Remove the filter bracket for oil line installation
- 7- Connect the oil tank return line to bracket fitting location #1. **See Picture 3 and Picture 5.**



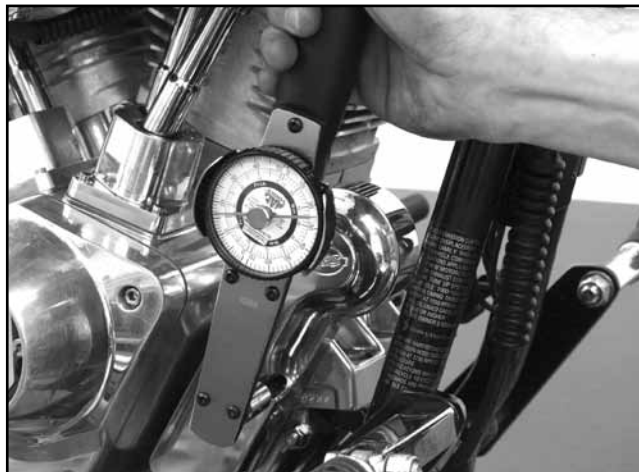
Picture 5

- 8- Connect the oil pump return line to bracket fitting location #2. **See Picture 3 and Picture 6.**



Picture 6

- 9- Use hose clamps or compression fittings to secure oil lines.
- 10- Install filter bracket with hardware and torque to 15-20 ft-lbs. **See Picture 7.**

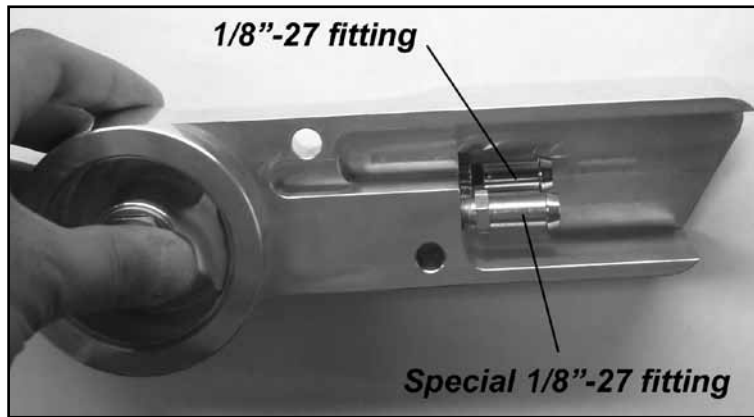


Picture 7

- 11- Install a new clean spin-on oil filter onto the bracket (S&S® PN 31-4101 Black, 31-4102 Chrome).
- 12- With the oil tank cap removed, start the engine. While looking through the oil fill hole, make sure oil is flowing through the system. Allow time for oil to run through the new lines and filter and back to the tank. If no oil is returning to the tank immediately stop engine and check for proper fitting installation and verify that there are no oil line restrictions.
- 13- Reinstall Exhaust system or any other components removed for installation.

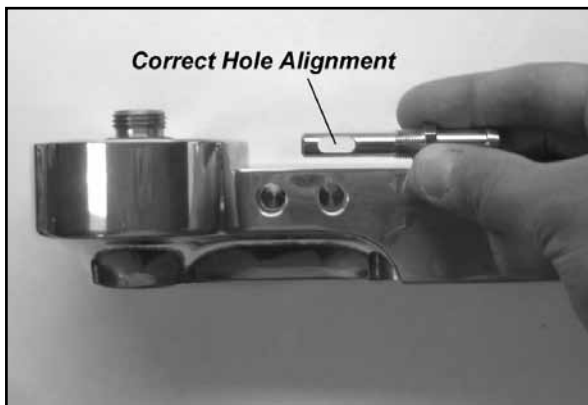
Installation with External Oil Cooler

- 1- Apply thread sealant to one 1/8"-27 NPT barb fitting. Thread it into hole furthest from the engine until it is tightened. **See Picture 8.**

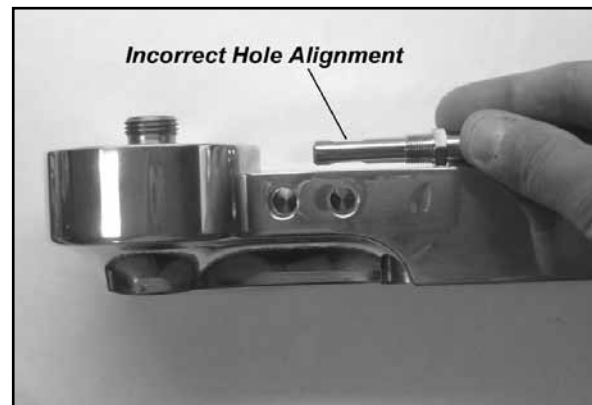


Picture 8

- 2- Apply thread sealant to the special 1/8"-27 NPT barb fitting. Thread it into hole closest from the engine until it is snug—but do not tighten it yet. **See Picture 8.** If this fitting is not used then oil will not flow into the oil cooler. Look through the threaded holes on the side of the filter bracket for the oil cooler lines, tighten the special fitting so that the slot is adjusted to the open position in the hole. **See Picture 9 and 10.**



Picture 9



Picture 10

NOTE: *If slot is not aligned to the hole the fitting will restrict oil flow.*

- 3- Apply thread sealant to the threads of two 1/8"-27 barb fittings and install them into the side of the S&S® oil filter bracket for the oil cooler lines. **See Picture 11.**



Picture 11

- 4- Install the bracket using the hardware provided.
- 5- Measure the length of oil line needed from the bracket fittings to the oil pump, oil tank and oil cooler. (See service manual on location, removal and installation.) If steel braided lines are desired a universal compression-style fittings that work with a 3/8" single barb will be needed. **See Picture 4, 5 and 6.**
- 6- Route lines according to the factory service manual. Be sure that the lines will not come in contact with hot components or moving parts that could rub through the lines.

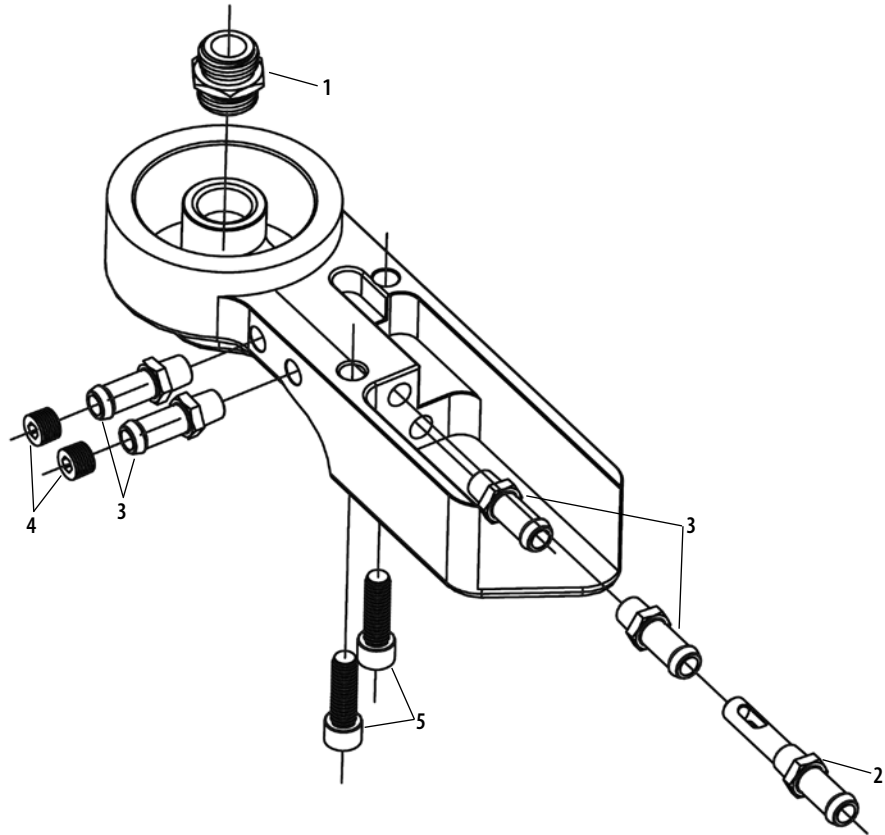
⚠ WARNING

Failure to properly install oil lines can cause engine failure, fire or death.

- 7- Remove the Filter Bracket for oil line installation
- 8- Connect the oil tank return line to bracket fitting location #1. **See Picture 3 & 5.**
- 9- Connect the Oil pump return line to bracket fitting location #2. **See Picture 3 & 6.**
- 10- Connect the Oil cooler inlet line to fitting #3. **See Picture 11.**
- 11- Connect the Oil Cooler return line to fitting #4. **See Picture 11.**
- 12- Use hose clamps or compression fittings to secure oil lines to appropriate fittings.
- 13- Install the filter bracket with the hardware provided and torque to 15-20 ft-lbs. **See Picture 7.**
- 14- Install a new clean spin-on oil filter onto the bracket (S&S PN 31-4101 Black, 31-4102 Chrome).
- 15- With the oil tank cap removed start the engine. While looking through the oil fill hole to make sure oil is flowing through the system. Allow time for oil to run through the new lines and filter and back to the tank. If no oil is returning to the tank immediately stop engine and check for proper fitting installation and verify that there are no oil line restrictions.
- 16- Reinstall exhaust system or any other components removed for installation.

**REPLACEMENT PARTS FOR S&S® BILLET OIL FILTER MOUNT
WITH OIL COOLER MACHINING 31-4105**

- 1- Oil Filter Fitting 50-8197
- 2- Special Fitting 1/8"-27 50-8218
- 3- Hose Fitting 1/8"-27 (5 pack)..... 50-1095
- 4- Plug 1/8"-27 (10 pack) 50-0145
- 5- Screw, SHC 3/16"-18 x 1" (10 pack) 50-0145



Because every industry has a leader



Because every industry has a leader