Instruction 510-0010
09-30-10

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Installation Instructions: S&S® Barometric Pressure Sensor Relocation Kit

DISCLAIMER:

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, 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 Victory®, Victory Freedom®, and all Victory part numbers and model designations are used for reference only.

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.

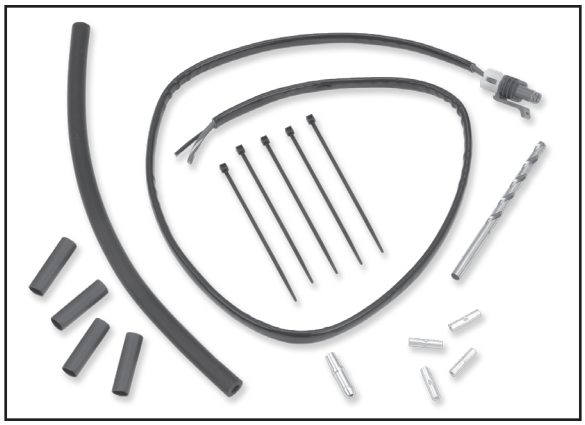
ADDITIONAL WARRANTY PROVISIONS:

(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) These S&S parts are designed exclusively for use in Victory motorcycles. S&S shall have no warranty or liability obligation if an S&S part is used in any other application.

Introduction
Some S&S® VFI calibrations require the relocation and attachment of the Barometric Pressure Sensor to a vacuum port on the intake manifold of 1999 through 2001 EFI touring models. This will make the Barometric Pressure Sensor function as a MAP (Manifold Absolute Pressure) sensor. Typically, this will be done with calibrations for engines using the S&S T-Series oil pump due to the elimination of the cam position sensor on this oil pump. Calibrations requiring the installation of this kit will be indicated with the term "MAP Synch" in the calibration title and a reference to the Baro Sensor Relocation Kit in the comment field of the calibration.

NOTE: *Be sure the calibration you are using is configured to use a MAP (Manifold Absolute Pressure) sensor before performing the procedure below.*

Kit Contents:
- Wiring Harness
- Cable Ties
- Butt Splices and Heat Shrink
- Vacuum Hose
- Drill Bit and Hose Fitting



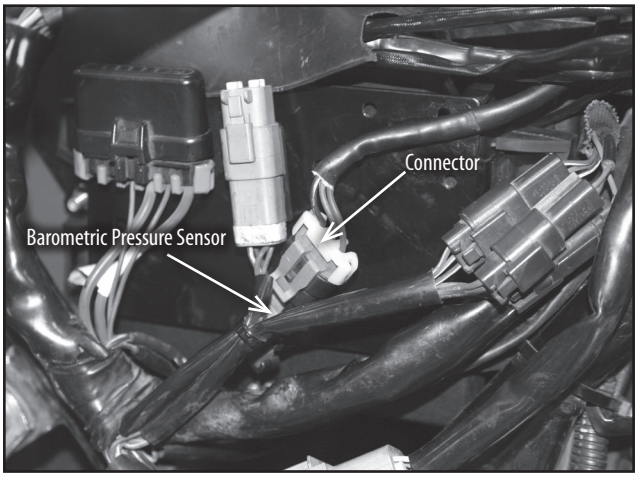
Kit Contents

Optional Accessories:
A new MAP Sensor may be purchased from S&S (S&S PN 55-5057).

Installation

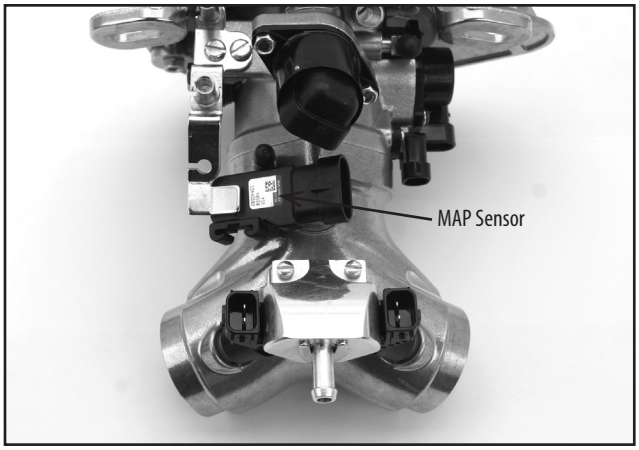
NOTE: *Be sure that the MAP sensor is installed with the pressure port facing down. This is important for preventing the buildup of moisture in the sensor. Also, do not tap into any engine breather/vent lines that may be attached to the manifold. Doing this, may result in sensor contamination and/or poor manifold pressure signal.*

1- Disconnect the negative battery cable.
2- Locate and remove the stock Barometric Pressure Sensor. **See Picture 1**. Usually, this is located behind the right-hand side cover on the mounting plate for the ECM (Engine/Electronic Control Module). Leave this portion of the motorcycle unassembled for later steps.



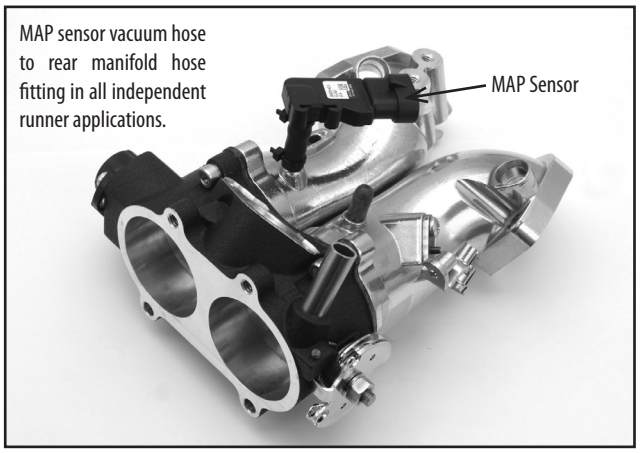
Picture 1

3- Most complete engines from S&S will include a MAP sensor already installed in the manifold. **See Picture 2.** If this is the case, you may proceed with Step 7. If not proceed with the following steps to install one.



Picture 2

4- Verify the location for mounting the MAP sensor. Most S&S manifolds are equipped with a hose fitting or machined boss for the MAP sensor. The mounting must be a location downstream of the throttle plate(s) and must be at or near the top of the manifold. For independent, dual runner systems, this must be located on the rear cylinder's intake manifold. **See Picture 3.** If your intake system is not equipped with the proper hardware for attaching the MAP sensor, proceed with the next step, otherwise, you may skip to Step 6.



Picture 3

5- Follow the instructions below for installing MAP sensor and hose fitting on the intake manifold based on the type of system:
   a- For common runner systems, **See Picture 2**. The MAP fitting must be located at the top of the manifold. We recommend finding a central location where the manifold is relatively thick and the MAP sensor will not interfere with other components. Use the supplied #13 drill bit to drill a hole in the top of the manifold. Do not allow any chips to fall in to the engine. Press the supplied hose fitting into the manifold.
   b- For independent, dual runner systems, (**See Picture 3**) use the supplied #13 drill bit to drill a hole in the top of the rear manifold. Do not allow any chips to fall into the engine. Press the supplied hose fitting into the drilled hole.

6- Install the Barometric Pressure Sensor on the intake manifold. This will make the Barometric Pressure Sensor function as a MAP sensor.
   a- If your manifold has a machined boss for accepting the MAP sensor directly, be sure that the orange, OEM rubber seal is installed on the MAP sensor and install the sensor in the machined boss. Be sure to use appropriate mounting hardware for your manifold to secure the MAP sensor. Failure to do so may result in a vacuum leak.
   b- If your manifold has a hose fitting for attaching the MAP sensor, first remove the orange, OEM rubber sealing grommet from the MAP sensor. Then, cut approximately 2" from the supplied hose. Use the 2" section of hose to attach the MAP sensor to the hose fitting. Attach a cable tie around each end of the MAP hose and tighten to secure the hose to the MAP sensor and fitting. Be sure that the MAP sensor is installed with the pressure port of the sensor facing down. **See Picture 3.**

NOTE: *Be sure that the MAP sensor is installed with the pressure port facing down. This is important for preventing the buildup of moisture in the sensor. Also, do not tap into any engine breather/vent lines that may be attached to the manifold. Doing this, may result in sensor contamination and/or poor manifold pressure signal.*

7- Attach the connector of the supplied relocation harness to the MAP sensor.
8- Run the harness along the backbone of the motorcycle to the stock location of the Barometric Pressure Sensor. Make sure the harness does not touch any hot components of the engine and allows enough slack for engine movement in the chassis. Use a portion of the supplied cable ties to secure the harness to the chassis.
9- Remove the stock Barometric Pressure Sensor connector. The connector will need to be cut off. Be sure to cut as close as possible to the connector to maximize the length of wire on the motorcycle.
10- Match the wire colors of the relocation harness to the wires of the stock harness. **See Figure A.** With each wire end stripped to approximately 3⁄16", use the supplied butt splices and heat shrink to splice and insulate the connections. We recommend that the splices be staggered (if possible) to prevent rubbing and shorting.

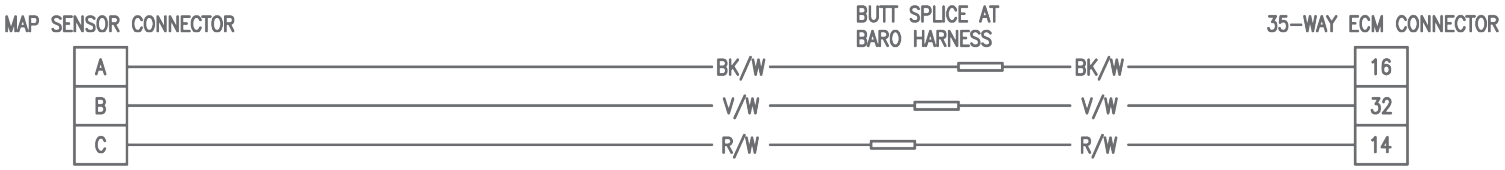


Figure A

11- Use remaining cable ties to secure any other loose wiring.
12- Reconnect the negative battery cable and reinstall any components removed during the installation.