

Instruction 510-1107

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Version 1

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Installation Instructions:

Pinion shaft and Camshaft Bolt Kit (Part # 500-1910)

1999-2017 Big Twin Motors/2017-2024 M8 Motors (Except VVT Motors)

DISCLAIMER:

Many 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. 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.

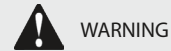
SAFE INSTALLATION AND OPERATION RULES:

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.

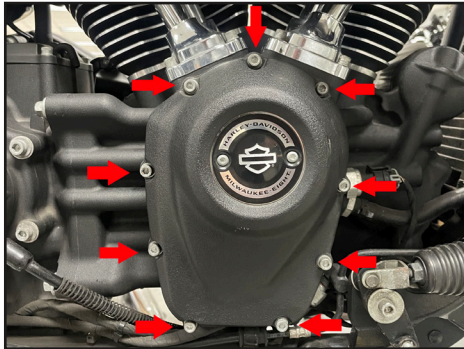
Before you start

Disconnect the ground cable on the negative terminal of the battery to prevent accidental engagement of the starter.

M8 Chain Drive

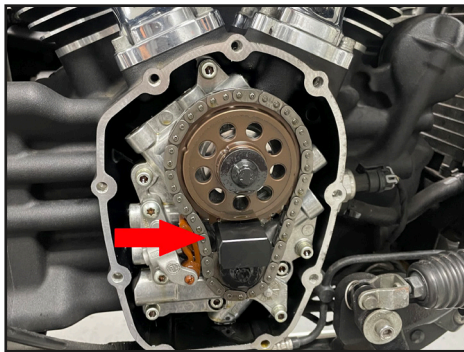
Removal:

1. Remove Exhaust, the right side foot control may have to be removed to do this.
2. Place a drain pan underneath the cam cover.
3. Remove 8 screws securing the cam cover, remove cover and allow the oil to drain out. (See Picture 1)



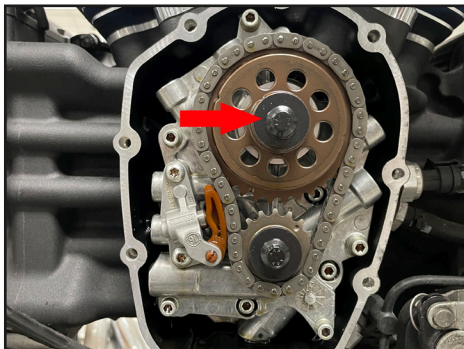
Picture 1

4. Install sprocket locking tool between cam sprocket and crank sprocket. It may be necessary to jack the rear of the bike up and rotate the rear wheel in gear to get the sprocket tool to line up. (See Picture 2)



Picture 2

5. Remove cam sprocket bolt. (See Picture 3)



Picture 3

6. Using brake clean, clean the oil out of the cam bolt hole and dry with compressed air.

7. Lightly oil the flange of the cam bolt and both faces of the cam washer. (NOTE the cam washer is the larger of the two washers).

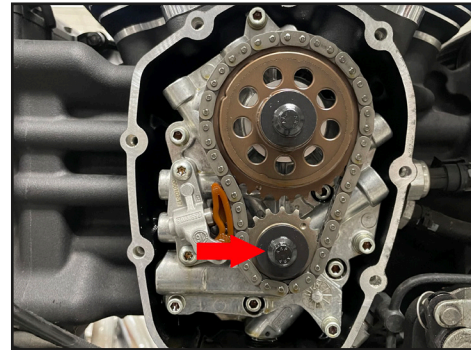
8. Apply Loctite 262 (red) to threads of cam bolt.

9. Torque the cam bolt to 15 ft-lbs.

10. Loosen the cam bolt one full revolution (360*)

11. Torque the cam bolt to 34 ft-lbs.

12. Remove crankshaft bolt. (See Picture 4)



Picture 4

13. Using brake clean, clean the oil out of the crankshaft bolt hole and dry with compressed air.

14. Lightly oil the flange of the crankshaft bolt and both faces of the crankshaft washer.

15. Apply Loctite 262 (red) to threads of crankshaft bolt.

16. Torque the crankshaft bolt to 15 ft-lbs.

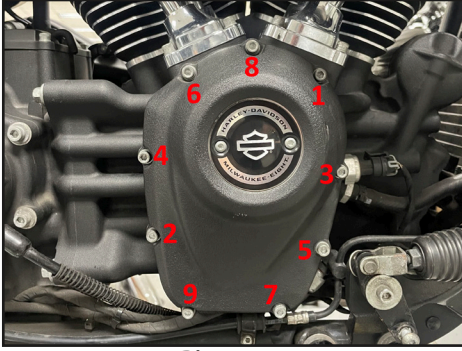
17. Loosen the crankshaft bolt one full revolution (360*)

18. Torque the crankshaft bolt to 24 ft-lbs.

19. Clean the mating faces of the cam cover and engine.

20. Install the cam cover with a new gasket and hand tighten all 8 screws.

21. Torque the cam cover bolts to 90-100 in-lbs in the sequence shown. (See Picture 5)



Picture 5

22. Re-install exhaust and foot control.

23. Start the bike and allow the oil to get warm. Check oil and add if needed.

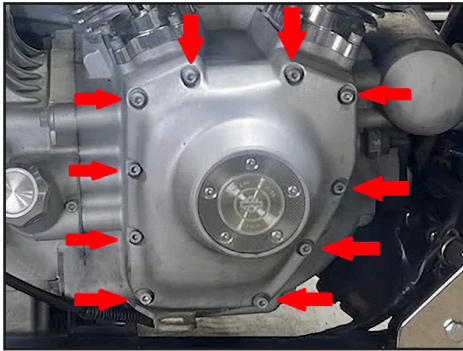
Before you start

Disconnect the ground cable on the negative terminal of the battery to prevent accidental engagement of the starter.

Twin Cam Gear Drive

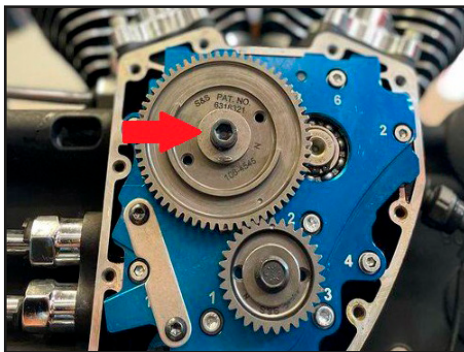
Removal:

1. Remove Exhaust, the right side foot control may have to be removed to do this.
2. Place a drain pan underneath the cam cover.
3. Remove 10 screws securing the cam cover, remove cover and allow the oil to drain out. (See Picture 6)



Picture 6

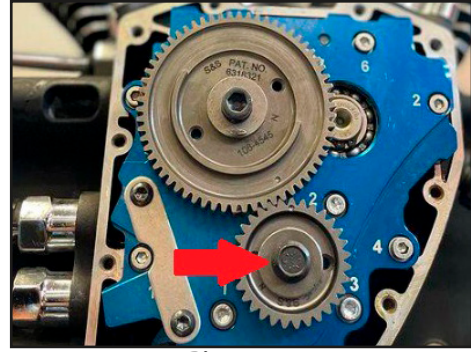
4. Remove the cam gear bolt. To lock the gears, place the bike in gear and depress the rear brake pedal while removing the bolt. (See Picture 7)



Picture 7

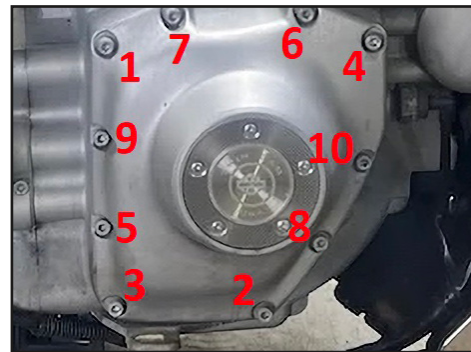
5. Using brake clean, clean the oil out of the cam bolt hole and dry with compressed air.
6. Lightly oil the flange of the cam bolt and both faces of the cam washer. (NOTE the cam washer is the larger of the two washers).
7. Apply Loctite 262 (red) to threads of cam bolt.
8. Torque the cam bolt to 15 ft-lbs.
9. Loosen the cam bolt one full revolution (360*)
10. Torque the cam bolt to 34 ft-lbs.

11. Remove crankshaft bolt. (NOTE Picture 8)



Picture 8

12. Using brake clean, clean the oil out of the crankshaft bolt hole and dry with compressed air.
13. Lightly oil the flange of the crankshaft bolt and both faces of the crankshaft washer.
14. Apply Loctite 262 (red) to threads of crankshaft bolt.
15. Torque the crankshaft bolt to 15 ft-lbs.
16. Loosen the crankshaft bolt one full revolution (360*)
17. Torque the crankshaft bolt to 24 ft-lbs.
18. Clean the mating faces of the cam cover and engine.
19. Install the cam cover with a new gasket and hand tighten all 8 screws.
20. Torque the cam cover bolts to 90-100 in-lbs in the sequence shown. (See Picture 9)



Picture 9

21. Re-install exhaust and foot control.
22. Start the bike and allow the oil to get warm. Check oil and add if needed.