



## Installation Instructions: S&S Timing Pulley Repair Kit for S&S X-Wedge® Engines (S&S PN 370-0015)

### 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 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.

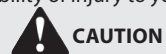
### IMPORTANT NOTICE:

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' 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.

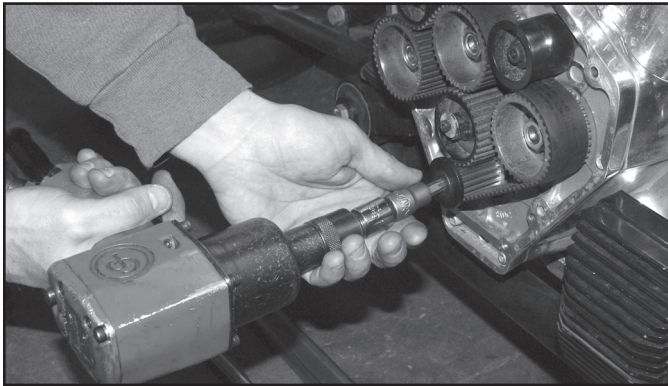
### ADDITIONAL WARRANTY PROVISIONS:

- (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.

**Please read entire instructions before starting.**

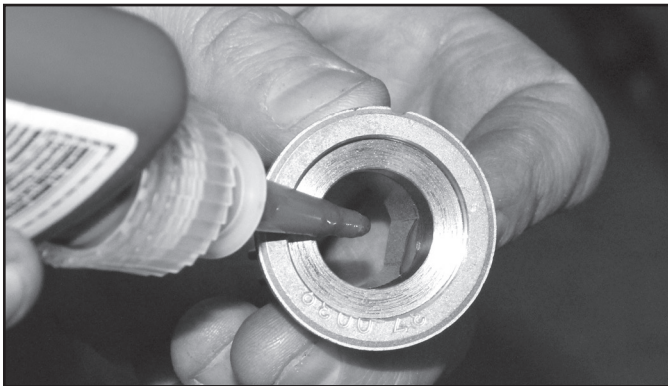
## PROCEDURE

1. Remove belt cover. Rotate engine to FTDC, and remove timing belt according to service manual. Note direction of belt so it will be installed in same direction.
2. Remove pinion pulley bolt using impact tool and Torx Plus 45 driver. **See Picture 1.** Remove the pulley. Slight discoloration of pulley will do no harm. Two pry bars may be used behind the pulley to remove it, using slight pressure against the cam cover to remove. Discard the old pulley and bolt.



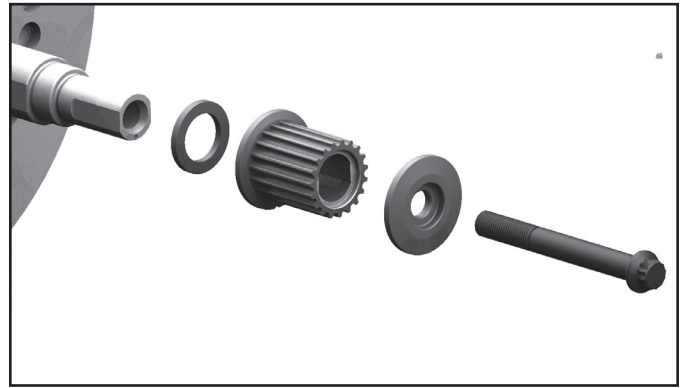
**Picture 1**

3. Clean the pinion shaft and inside surfaces of the new pulley with solvent and use the bottle tip or a swab to apply some loctite 243 (blue) around the inside of the new pulley where it contacts the pinion shaft. It is important to apply the loctite in this manner so it is spread evenly across the pinion shaft surface when installed. **See Picture 2.**



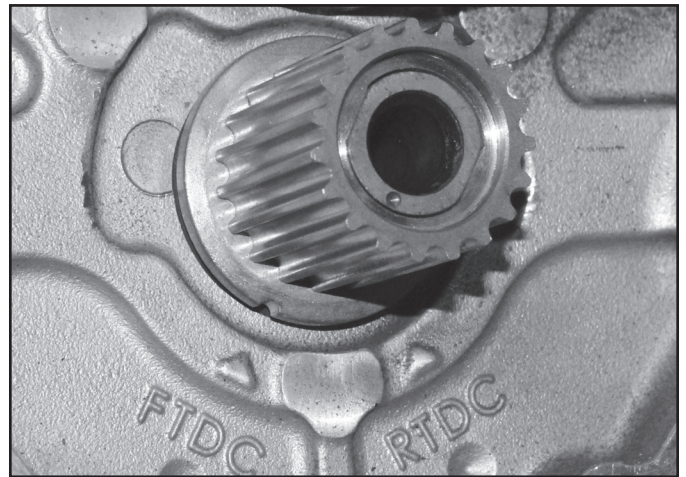
**Picture 2**

4. Install hardened washer and pulley onto pinion shaft as shown in **Picture 3.**



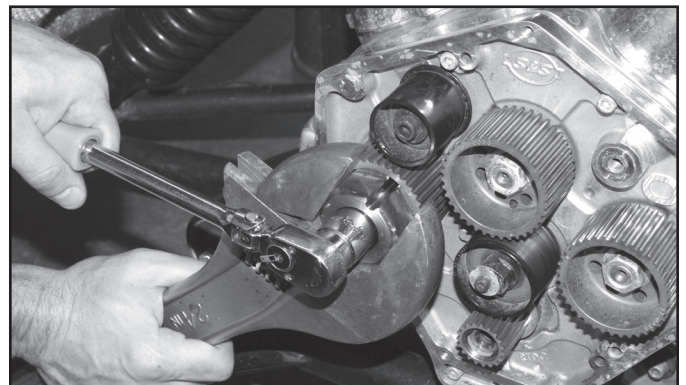
**Picture 3**

5. Make sure timing notch on pulley is lined with dot on crankshaft. **See Picture 4.**



**Picture 4**

6. Remove all timing dowel pins from the camshafts pulleys, using the spanner (part #530-0016) or 3/4" socket to relieve force if the pulley is under load.
7. Remove all three camshaft pulley nuts using 3/4" socket and special spanner (part #530-0016). **See Picture 5.**

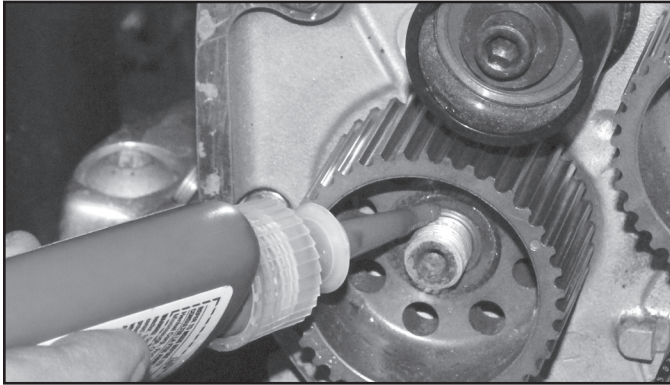


**Picture 5**



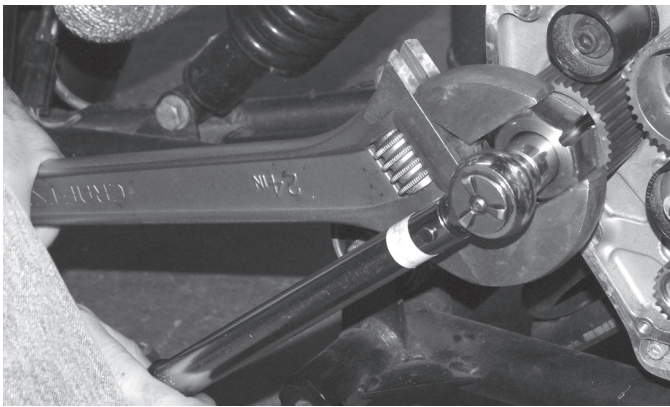
8. If pulleys can be easily removed, remove them from the cams, clean mating surfaces, and apply a dab of loctite 243 to the inside bore of the pulley and reassemble:

9. If camshaft pulleys cannot be easily removed, leave them in place and apply some Loctite 243(blue) around pulley/camshaft interface. **See Picture 6.**



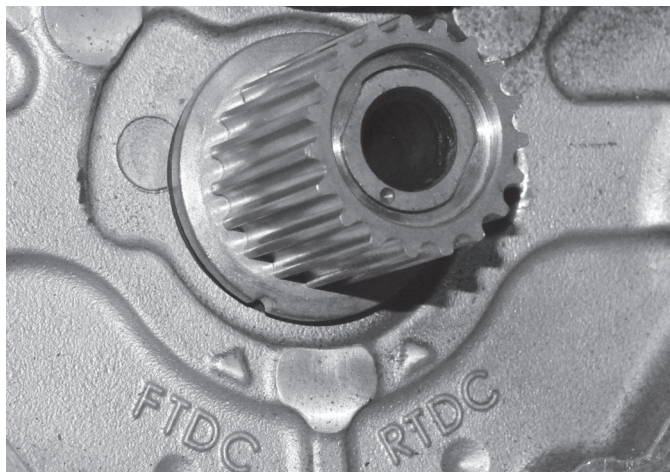
**Picture 6**

10. Apply some 243 (blue) loctite to the new unserrated flange nuts and install. Use the spanner wrench to assist in torquing the nuts to 60 ft-lbs. **See Picture 7.**



**Picture 7**

11. Reinstall the 3/16" timing dowel pins, using spanner wrench if needed. Make sure pinion shaft timing mark is on FTDC. **See Picture 4.**



**Picture 4**

12. Reinstall belt as outlined in the service manual, making sure it runs in the original direction. Apply some loctite 243 (blue) to new pinion bolt threads, and install new flange washer and bolt in pinion shaft. Torque to 60 ft-lbs.

13. We recommend installing belt cover spacer kit (500-0257) if not already installed.

