

CS-34A Compensator Installation Instructions

Read all installation instructions first! Verify primary chain sprocket alignment using supplied washers / spacers before final installation. Refer to OEM Service Manual for removal and installation of stock primary drive components. Note* CS-34A is fully assembled with minimal amount of Anti-seize from the factory and **must be disassembled completely before following these instructions.**

1. Safely support and secure motorcycle.
2. Disconnect the battery as per service manual.
3. Drain primary fluid into pan.
4. Remove outer primary cover and gasket.



5. Remove existing sprocket or compensator. Primary chain and clutch basket if needed. Visibly mark primary chain to ensure same rotation on sprockets.



6. To assemble CS-34A apply a thin coat of Anti-seize to the sprocket carrier threads as needed. Apply a thin coat of assembly lube to the larger Nylatron washer and install washer over threads of sprocket carrier, to the face of the flange.



7. Apply a thin coat of Anti-seize to the threads of the CS-34A sprocket. Note the recessed surfaces of the sprocket, the larger recess faces larger Nylatron washer and carrier body.



8. Thread sprocket onto carrier body until sprocket stops and locks against the washer and carrier body flange fully seating Nylatron washer into recess of sprocket. DO NOT PINCH NYLATRON WASHER BETWEEN FLANGE AND SPROCKET. This can / will cause compensator to operate incorrectly, and may cause compensator failure.



9. Install clutch basket and primary chain back onto motorcycle.



10. Apply a thin coat of assembly lube to the smaller Nylatron washer.



11. Fully seat smaller Nylatron washer into recess on CS-34A sprocket, then install outer flange. Align CS-34A assembly and outer flange with splines on sprocket shaft and install.



Note: DO NOT PINCH EITHER OF THE NYLATRON WASHERS BETWEEN SPROCKET, CARRIER BODY, AND THE OUTER FLANGE.

12. Install the “thin” then “thick” sprocket shaft bolt washers onto bolt. Install bolt using OEM recommended thread locker and torque to H-D specifications.



13. Install primary chain tensioner, clutch components, adjust clutch, install new primary cover gasket, outer cover, torque to H-D specifications, install drain plug and fill with H-D approved primary fluid. Any questions on reinstallation of H-D parts, refer to the OEM service manual.



Note* The CS-34A is designed to lock up as a direct drive sprocket during use. The CS-34A will remain in a lock up position until the torque of the engine with the wrap of the primary chain need to compensate. Then the CS-34A will do its job and absorb the shock then go right back to the lock up position. You will not be able to break the CS-34 loose by hand once it has seated itself under operation.

Belt Drives Ltd. Patent # US 6,234,909

FITS 2007 – 2016 BIG TWINS, IMPORTANT NOTE FOR ALL 2007 – 2010, THERE IS NO NEED TO CHANGE THE STATOR ROTOR

THE CS-34A WORKS WITH EITHER STYLE OF STATOR ROTOR, 2007-2010 & 2011-2016. USE THE STEEL SPACERS AS NEEDED TO ACHIEVE THE CORRECT PRIMARY SPROCKET & CHAIN ALIGNMENT. ALSO YOU MUST USE THE SUPPLIED 9/16”-12x3.250” LONG HEX HEAD BOLT WITH RED THREAD LOCKER, LET THREAD LOCKER CURE 24 HOURS BEFORE STARTING MOTORCYCLE.

THE STEEL SPACERS GO BETWEEN STATOR ROTOR AND CS-34A CARRIER BODY ASSEMBLY

CS-34A Compensator Sprocket Complete Parts List Breakdown

CS-34A-TW-1 Thick Washer, 1ea.
CS-34A-TW-2 Thin Washers, 2ea.

CS-34A-SP, Sprocket

CS-34A-SC-1 Sprocket
Carrier Body



SSBW-1, Sprocket Shaft
Bolt Washer "Thin"

CS-34A, OF-1,
Outer Flange

NW-100, Small
Nylatron Washer

NW-200, Large
Nylatron Washer

SSB-3250, Sprocket Shaft
Bolt, 9/16-12x3.250

SSBW-2, Sprocket Shaft
Bolt Washer "Thick"

**BELT DRIVES LTD.
PRODUCT UPDATE**

08-01-2020

CS-34A WASHER UPDATE

Belt Drives LTD. has updated the compensator bolt washer kit to include a new .185" thick washer to be installed in between Part #'s TW-1 and TW-2. See below photos.



New washer .185" thick



New bolt and washer kit



Install as shown



SHOWN ASSEMBLED CS-34A FACING OUTWARD