



## CRANKCASE ASSEMBLY INSTRUCTIONS

**CONGRATULATIONS!** You have just purchased the most innovative and improved version of the big twin engine cases ever offered by anyone, anywhere. Keep in mind that they are BETTER because they are **BULLETPROOF and AMERICAN MADE!** The differences in our cases are not subtle and will demand the envy and admiration of EVERYONE! Consult the appropriate H-D service manual for correct assembly procedures.

**NOTICE: If you are not experienced in engine building or do not feel confident in performing the following procedures; STOP and consult an experience engine builder or shop!**

**WARNING! Incorrect assembly could result in bodily harm, death, and or property damage.**

**ATTENTION TO DETAIL and CLEANLINESS** are the two most important factors in engine building – At Delkron we put forth every effort to ensure accuracy and cleanliness, don't let it be compromised by an oversight. Many good parts have been destroyed by a mistake as simple as running an oil line to the wrong fitting or forgetting to flush the oil tank that is contaminated with debris from a previous problem.

The following is a check list of operations required to prepare your cases for assembly.

1. Check your MSO (manufacturer's statement of origin) and make sure the serial number on the case matches the MSO.
2. Check for any burrs or flashing that may have slipped past our deburring process. (We try to be as thorough as possible.)
3. Thoroughly wash your new cases in hot soapy water and rinse. Blow them dry with compressed air, paying attention to all oil passages, making sure they are clear of debris or any obstructions.

4. Fit the cases into the frame to make sure that they clear the motor mounts. Check motor mount alignment and shim if necessary. Install voltage regulator and check clearance to motor mount rib. The next thing to check is the clearance between skid plate (if so equipped) and the crankcase inspection plate. It may require the use of spacers on the front motors mounts. We also suggest drilling a hole in the skid plate for the oil drain plug to facilitate easy access.

5. Assemble lower end as per service manual.

7. Once the lower end is assembled, torque case bolts to 18-22 ft. lbs. except the top case bolt (1/4-20), torque it to 10 ft. lbs.

**Caution:** for larger than 3 5/8 bore cylinders torque the 1/4-20 bolt to 96 inch pounds. Be sure to use a medium/serviceable grade threadlocker such as Locktite blue (242)

8. At this point it is advisable to check connecting rods to the case decks for proper wrist pin alignment. Don't assume the rods are straight.

9. Breather and cam timing can now be checked using the Delkron Space n Time tool (sold separately); with our Space n Time kit you can also check your cam and breather end play as well as timing!

10. Finish final assembly as per service manual and install engine.

11. All cases that have a serial number that starts with **DLK** now have an "O" Ring seal on the bottom inspection cover. Place the "O" Ring on the inspection cover first then install the cover onto the case making sure that the drain plug faces the back of the engine. It is not necessary to use sealant on the Inspection plate but if you wish to that would only reinforce the integrity of the seal.

**WARNING:** If using other than OEM oil screen plug insure that thread length does not exceed .300 inch or blockage of the oil passage to the lifter blocks will result in damage to the lifters.

**NOTE:** All threads in DELKRON products are standard thread, oil pump screws are 1/4 x 20.

**Caution:** Make sure that the timing plug clears the inner primary before final assembly.

**WARNING:** Some powder coating processes utilize excessive temperatures and can damage the case. **Any powder coating not performed by Delkron will void the warranty.**

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