

# For Twin Cams w/ Aftermarket Support Plates

# **MADE IN THE USA!**

### **INSTRUCTIONS**

(Please read all instructions before beginning install)

#### Parts Included:

- 8- Hardened Brass Precision Tapered Bushings
- 1- Teflon Centering Tool
- 2- O-rings
- 1- Washer/Nut pkg.

### **Installations Steps:**

These instructions are meant to be used in conjunction with your Service Manual, and are not meant to be a substitute for your Service Manual.

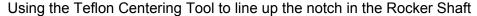
You will only be using 4 of the 8 Rocker Lockers. Once you have removed your Support Plate you will be able to see which set of 4 Rocker Lockers most closely fit the size of your Aftermarket Support plate. Use those 4.

- 1. Remove your rocker arm cover, make sure your cam is on the base circle and that neither valve is open or under pressure. Refer to Service Manual. (Steps 1-4 are done on the front cylinder, then repeated for the rear cylinder)
- **2.** Loosen the two umbrella breather bolts, loosen all four bolts holding down the rocker arm support plate, a little at a time going from bolt to bolt, gently letting off the pressure.
  - The Rocker Lockers can be installed on the bench or on the bike. Use either 3A <u>OR</u> 3B, depending on if you want to install on the bike, or on the bench by removing the rocker arm support plate from the bike. The Preferred method is on the bench, and it only takes an extra 5 minutes over doing it on the bike.
- **3A.** *Bench Installation* (This is the **Preferred Method**): Lift the Rocker Support Plate out and place it on your workbench. Remove the used O-ring under the Support Plate, it will be replaced with the new one included in the kit. Cover the open rocker box with a clean towel.
  - The Rocker Lockers go on the right side of the Rocker Arm Support Plate, looking forward, this is the carburetor/fuel injected (air cleaner) side. There are four Rocker Lockers in the kit, two for each cylinder, or one for each rocker arm shaft.

• It is VERY IMPORTANT to make sure the notch in the rocker shaft is centered in the bolt hole, allowing the Rocker Locker to slide in. Use the included Teflon Centering Tool, inserting it into the bolt hole, with the tapered part facing the shaft. Gently tap it past the shaft. This will get the shaft notch centered in the bolt hole. Use a pair of pliers and pull the tool out, or tap it on out thru the bottom, using a bolt.

**TIP:** Look into the bolt hole with a light, if any part of the shaft is still in the hole, the notch is not lined up correctly. Rocker Lockers cannot be installed without the notch being centered in the bolt hole.

On the bench you can use the rocker support plate bolt and a 5/16 nut with a washer between the nut and support plate. (See Picture below) Remember they are tapered, will only go in one way, put the small end in the hole. Repeat the process on the 2nd rocker shaft.





This photo shows the Rocker Locker being pressed into the support plate by slowly turning the bolt with a wrench, while holding the nut stationary with another wrench



Here is what it will look like installed.



**3B**. *Bike Installation:* For installation on the bike, you do not have to remove the plate, but it needs to be loose so that the Rocker Lockers can center the plate when it is tightened, it also takes the pressure off the shaft so that is can turn/get the notch lined up, and let the Rocker Locker pull past.



Pull a bolt out of the right side of the plate, (facing forward on the bike) this is the side that locks the shaft. Insert the Rocker Locker in the hole; they are tapered, put the small end in the hole.

**TIP:** Before installing the Rocker Locker, make sure the notch in the rocker shaft is centered in the bolt hole.

Using rocker plate bolt, gently tighten up the bolt, it will pull the Rocker locker into place. **Loosen that bolt**, and do the second bolt the same way. **Loosen that bolt** and you are ready to reassemble.

**4.** Before bolting the Rocker Support Plate in place, use some q-tips to clean out the bolt holes (compressed air will also work, but might be a bit messier than q-tips, if you use compressed air protect your eyes). You want to get rid of any debris and any oil that may be in the threads. Install your Rocker Arm Support Plate, using the new supplied O-ring, torque the Umbrella Breather bolts & Rocker Cover according to your Service Manual instructions & specs.

Remember to allow 30 minutes for the lifters to bleed down before proceeding to the 2nd Cylinder

#### **General Information:**

- The Harley Twin Cam motor has a gap between the rocker arm shaft and the bolt that is supposed to lock it. This gap allows the shaft to rotate and hit the bolt causing a tick.
- The Rocker Lockers eliminate the gap, locking the shaft from turning and striking the bolt and eliminate that annoying tick so many TC owners experience.
- The Rocker Lockers also center the rocker plate so that it is always located in the same position eliminating different wear patterns on the rocker arm/valve and a better alignment of the pushrod in the holes.
- Before installing the Rocker Locker, make sure the notch in the rocker shaft is centered in the bolt hole by using the Teflon Centering Tool.
- The Rocker Lockers are tapered so that they lock themselves in and wedge the bolt/shaft in place.
- Rocker Lockers will not quiet noisy lifters, noisy chains, tensioners or bearings. Rocker lockers keep the shaft from rotating and hitting the cam plate bolt.

## **Important Notes:**

- The rider's safety depends on the correct installation of this kit. Please do not attempt if you have any doubts of your ability to install.
- Torque Values, cleaning threads out, & thread locker are important, refer to your Service Manual. Using compressed air to clean any debris or oil out of the threads is one option, another is

to use some Q-tips to get the threads free of debris and oil. If you use compressed air protect your eyes.

- Remember to give your lifters time to bleed down before rotating your motor or you can
  damage your valve train. You should not have to remove your adjustable pushrods; however you
  might want to re-adjust them afterwards.
- The rocker cover gaskets can be re-used, but it is recommended by HD to get a new set prior to installation.
- We are NOT responsible for any damage done to you or your bike as a result of the installation of this product.
- If you ever need to remove the lockers, just use a punch and tap them out, they are usually reusable.

## www.DKCustomProducts.com

Note: The user shall determine suitability of this product for his or her use. The user shall assume all risk for damage and liability to the vehicle, and for compliance of any regulations and any incurred financial obligations for any reason.

Patent Pending

