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### INTRODUCTION

This kit is designed to convert 351-400 and 370-460 Ford cylinder heads equipped with bolt down pedestal mount style rocker arms to stud mounted rocker arms utilizing pushrod guideplates. This kit is also designed to be used in engine equipped with hydraulic flat tappet or hydraulic roller cams only.

In addition to normal hand tools, you will need the following:

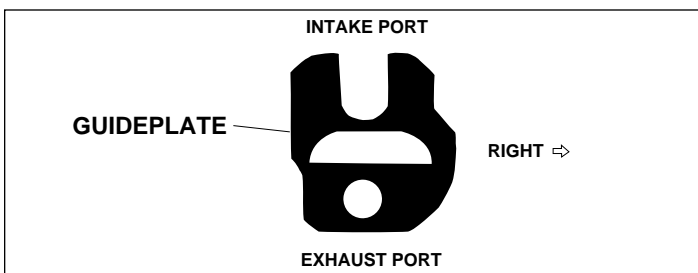
- Torque wrench with 5/8" socket
- A 3/16" long handle allen wrench
- One 8oz bottle of 99003-1 Super Lube Break-in Concentrate
- Rocker arms for 7/16" studs
- Solvent and thread cleaner

### SPECIAL INSTRUCTIONS FOR CYLINDER HEAD BOLTS

We recommend purchasing 10 of 1/2" by 4-1/2" allen head cap screws to be used in the top row to replace the the original head bolts on each head. This will allow you to remove or install the heads without removing the guideplates. The standard head bolt will not clear the guideplates.

### GENERAL INSTALLATION INSTRUCTIONS

1. Remove all stock rocker arm parts and pushrods.
2. Clean mounting pad area and threaded holes of any oil or dirt. Failure to properly clean these areas can result in stud and/or pushrod damage.
3. Start with one stud boss at a time, place the guideplate on the boss with the wide side of the plate to your right when the intake ports are facing away from you. (See diagram below).



**NOTE:** Some Ford cylinder heads may have core shift in the pedestal stands on the head. This may require the guideplate to be reversed and installed with the wide side to the left. The key is that the hole in the guideplate must line up with the hole in the pedestal stand.

4. In the kit you have one 7/16" adjusting nut to be used for installing the studs. Turn the set screw in the adjusting nut so it is flush with the hex end of the nut. Install the jam nut on the stud, turning it almost all the way down. Install the adjusting nut on the stud, turning it until the set screw contacts the top of the

stud. Apply the thread locking compound to the 5/16" threaded portion of the stud and install them through the guide plate and finger tighten only.

5. Holding the nut with a 5/8" box wrench, tighten the allen screw, then torque the set screw to 25 ft. lbs. **Do not over tighten.** Now, hold the installation nut firmly and back the the jam nut tightly up against it, using two wrenches. Tighten the allen screw, then torque the installation nut to 25 ft. lbs. Do not over-tighten. Repeat this procedure on the second stud of the pair.
6. **THIS IS THE MOST CRITICAL PART OF THE INSTALLATION.** Holding the hex of the installation nut, loosen the set screw. **The installation nut must not turn.** Continue holding the nut firmly and loosen the jam nut. Once loose, back off the two nuts by hand, making sure the stud doesn't turn.
7. Repeat steps 3, 4, 5, and 6 until all studs and guideplates are installed. Allow 4 to 6 hours drying time for the locking compound to cure before proceeding.
8. Inspect each of your pushrods for any burrs or a rough finish. Sand or polish them smooth to prevent premature bushing wear.
9. When installing the guideplate bushings, oil the grooves in the bushing. Install the guideplate bushings, then insert the pushrods through them and down to the lifters. Make sure the pushrods go into the pushrod seats in the lifters.
10. Working one cylinder at a time, rotate the engine by hand until the exhaust pushrod starts to rise. You can now install the intake rocker arm and adjust lifter preload .020" to .060". Once you have it adjusted, check for clearance between the underside of the rocker arm and the guideplate. If you do not have at least .030" clearance, you will need to install a slightly longer pushrod to obtain the necessary clearance. These pushrods are available from Crane.
11. Continue to rotate the engine in the same direction until the intake rocker arm opens and almost closes. Now stop rotating the engine and install the exhaust rocker arm. Adjust it and check for proper clearance as explained in step 10.
12. Repeat steps 10 and 11 for each cylinder until all of the rocker arms have been properly installed.
13. Place the valve cover on the cylinder head and check for clearance with the new rocker arms. If the cover fits flush on the head, hold it in place by hand and rotate the engine. **DO NOT START THE ENGINE.** If interference is encountered, it can often be corrected by modifying the valve cover or using double thickness gaskets, or purchasing an aftermarket performance valve cover.
14. Pour an 8 oz. bottle of Crane Super Lube Break-in Concentrate on the guideplate bushings and rocker arm fulcrums.
15. Periodically inspect the bushings for wear and replace as necessary. Replacement bushings are available from Crane.

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