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The rocker arm kit you have purchased is for use with flat faced hydraulic lifter and hydraulic roller tappet equipped engines only. Make sure you follow the instructions step-by-step to insure they are correctly installed and you have the proper lifter preload for maximum performance. We highly recommend that you read these directions through completely before you start your installation. Having a service manual available for your particular vehicle will also assist you with the work.

1. After removing the necessary accessory brackets and the valve covers, remove all stock rocker arm parts, as none will be reused.
2. Clean the cylinder head surface where the new guide channel will sit, and also clean the threaded rocker hold-down bolt holes.
3. Remove the pushrods, clean and reinstall them, making sure that the pushrod is in the lifter seat. Once the pushrod is seated in the lifter, we recommend you use a squirt can with engine oil to fill the pushrods, one at a time, as you install each rocker arm. This insures immediate lubrication of the rocker arm.
4. Working on one cylinder at a time, turn the engine by hand, watching the pushrods. When both pushrods are at their lowest point and appear to be at an equal height, you are in the correct position to install the cylinder's rocker arms. This will occur when the cylinder is at top-dead-center, on its compression stroke. Since both pushrods will also be at an equal height, but not as far down, when the cylinder is at top-dead-center on the overlap stroke, you should rotate the engine twice to insure that you have the pushrods at their lowest point.
5. Install one rocker arm at a time by inserting the 5/16" bolt through the top of the rocker arm, **MAKING SURE THAT THE FLAT SIDE OF THE FULCRUM IS FACING THE BOLT HEAD.** After this is done, slide the pedestal onto the bolt with the curved area of the saddle contacting the rounded side of the fulcrum. Next, slide the guide channel onto the bolt with the raised edge facing up toward the rocker arm, then loosely thread the bolt into the head, while making sure that the pedestal is in the channel and the saddle is in the correct location on the fulcrum. Refer to the diagrams to insure that the rocker arms are properly seated. (To better illustrate the correct fulcrum position, the two drawings to the right show the fulcrum separately.) Repeat this process with the cylinder's other rocker arm.
6. To check and adjust the lifter preload, turn the bolt by hand until there is no clearance between the front roller and the valve stem and the pushrod is seated in the rocker arm pushrod seat. Slowly torque the bolt to 18-20 ft/lbs. Since you are pushing down the plunger in the hydraulic lifter as you torque the bolt, it will probably take a minute or two for you to get the correct setting. You should be able to turn the bolt between 1/4 & 1 turn before you reach the correct torque setting. This will give you the correct lifter preload of .020" to .060". If you can turn the bolt more than one

turn to achieve the proper torque, you will have to shim the pedestal. Two different thickness shims are provided for each rocker arm to assist you. A thick shim represents approximately one turn.

If you cannot turn the bolt at least 1/4 turn after first contact with the roller and valve stem, you will have to install longer pushrods to obtain proper hydraulic lifter preload. Pushrods are available in different lengths, specifically for this purpose. There are many modifications that may have been made to the engine which will change the lifter preload, such as a valve job, different camshaft, or different thickness head gaskets, and factory tolerances can also affect the lifter preload on stock engines.

Note: You may find that the lifer preload is different between a cylinder's intake and exhaust or between one side of the engine and the other. Because of this, we recommend you check the lifter preload on each rocker arm.

7. Repeat this process on the remaining cylinders. Make sure that each rocker arm is properly seated and torqued into position.
8. Once completed, place a valve cover on the cylinder head, without a gasket or bolts. Hold the valve cover in place by hand and rotate the engine, without starting it, and make sure the rocker arms do not contact the valve cover. If minor interference occurs, this can often be eliminated by using a thick valve cover gasket or by modifying the cover or its baffles. Taller, aftermarket valve covers will also solve the problem, but make sure they will clear the intake assembly and/or any accessory brackets. Intake manifold to valve cover clearance can be a problem on engines with factory fuel injection. Before installing the valve covers for the final time, we recommend that you fill each rocker arm with engine oil to insure lubrication during initial start up.

If you encounter any difficult during the installation or have any questions regarding these instructions, please contact the Crane Cams Technical Service Department.

