

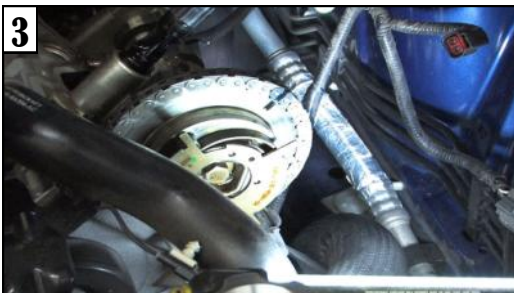
Cheat Sheet: Installing Comp's Thumper Cams in a Ford Modular



1 **The Guinea Pig:** The subject of this camshaft upgrade is a 2006 Ford Mustang GT powered by the 4.6 liter, three-valve V8 with a cold air intake and a mild tune.



2 **Dig In:** If you are already familiar with Mustangs, this is an install that can be completed in an afternoon. The first step is to gain access to the camshafts. This will require removing any engine covers, wiring, disconnecting a few fuel lines, removing the coil packs and unbolting the cam covers.



3 **Mark Your Spot:** To get the old cam out you will have to separate it from the timing gear, but before you do use a permanent marker to mark the position of both the chain and the timing sprocket. This will help you ensure the new cams are properly timed up on reassembly. The chains shouldn't have to come off, but this is good insurance.

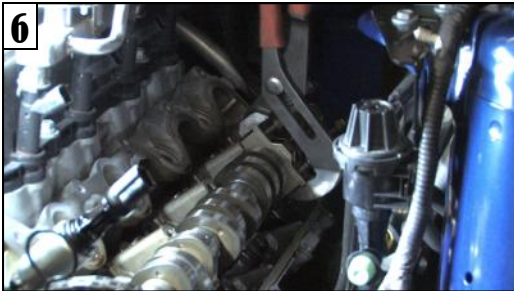


4 **Release the Tension:** The chain tensioners on each side will need to be pulled back enough to allow some slack in the timing chains so that the sprockets can be slid off the end of the cams. The tough way to do this is to remove the front cover to access the tensioners, but Ford sells a tool (it's actually just a nylon wedge on the end of a wire) that you can use to wedge between the tensioner and the chain without having to remove the front cover.

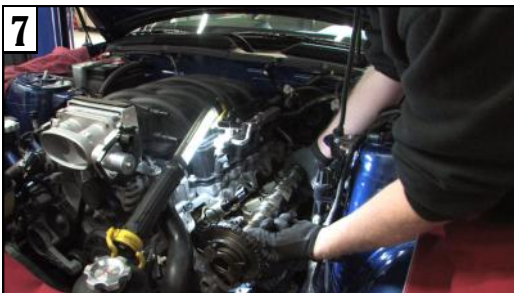
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5 Pull the Sprocket: Remove the cam bolt that holds the timing sprocket and the cam phaser (in front of the sprocket) to the camshaft. You may have to wedge a small pry bar or large screwdriver behind the sprocket to help pull the sprocket off. If you can help it, don't remove the timing chain from the sprocket.



6 Off with the Caps: Officially, you need to remove the roller followers before unbolting the caps, but if you are careful and loosen them all up in stages, you can pull the cam tower caps without removing the followers. A large pair of slotted pliers can make the job easier. Also, make sure each cap is marked so that it goes back into its original position on reassembly.



7 De-cam: Now you are ready to pull the stock cam right out. Make sure the camshaft housing bores in the head are clean then prepare them for the new cams by applying some assembly lube to them as well as the caps.



8 Tighten Up: The Comp Thumpr cams we're using are designed to work with the stock valvesprings, so they won't need to be replaced. These cams spec out to 226/246 duration at 0.050 lift. For installation, simply reverse the disassembly process, making sure to torque the cam caps (with oil on the threads) in stages until you get to 89 inch pounds. Begin with the center cap and work your way outward.

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Don't Recycle: The stock bolt holding the cam phaser and timing sprocket to the camshaft is a torque-to-yield bolt and should not be reused. Purchase a new bolt from your local Ford dealer and install it to 30 ft/lbs and then turn it an additional 90 degrees.



Back Together: Now repeat the process on the other side of the engine, and once you've finished bolt everything back up. Crank the engine and take a few moments to check for leaks and/or strange sounds. Having your engine professionally dyno tuned to take advantage of the more aggressive cams is also a good idea.