Camshaft Selection Process

When selecting a cam there are a number of important points to consider, but one outshines the rest – being realistic and honest about what you expect your engine to do. Even if you love the lobe of a monster cam, requiring that characteristic from a daily street driver may be unrealistic. By selecting the right cam for your engine, you can generate tons of torque, extend your engine’s rpm limit, retain reliability, and in some cases, even pick up a few extra miles per gallon.

Part of the cam selection process has nothing to do with power generation. In a street driven vehicle with various engine accessories, it is important to select a camshaft that generates the proper amount of engine vacuum. Next, honestly determine the rpm range in which you require your engine to operate. This will also help you choose the matching valve train components required to build the most power, torque and reliability.

At the core of the cam selection process is determining the lifter style that fits your needs. If you are looking for an inexpensive and uncomplicated lifter, then hydraulic flat tappet lifters are a good choice. Solid flat tappet lifters offer a great nostalgic sound and great performance but must be adjusted on a periodic basis. Today’s alternative is the long lasting and low maintenance hydraulic roller lifter, a favorite of many performance engine builders. But remember, when in doubt, our CAM HELP® experts are here to make sure you find the right cam for your engine, regardless of your application, so call us toll free at 1-800-999-0853 or visit www.camhelp.com.

The Proper Camshaft For Your Application

The chart below represents three different lobe designs and points out the differences between a mechanical roller (yellow), a hydraulic roller (blue) and a hydraulic flat tappet (red). The mechanical roller has a higher lift and a greater valve opening than the others, putting it at the top of the list of extreme racing applications. They hydraulic roller in the middle has a greater opening than the hydraulic flat tappet and is better suited in high performance street applications where power is the main concern. At the bottom of the chart is a lobe from a hydraulic flat tappet camshaft. This is a street cam with good vacuum and a mild idle. This camshaft was designed with low-end torque and mid-range power and is excellent for daily driven street machines.