CLOYES®
Gear and Products, Inc.

Installation Instructions For 9-keyway Crank Sprockets

Cloyes' 9-keyway crank sprockets give the installer the ability to correct or re-position camshaft timing during engine assembly. As a general rule, retarding the cam timing will increase high RPM horsepower, and advancing the cam timing will increase low-end torque. Additionally, some camshaft manufacturers instruct the user to advance or retard camshaft timing to enhance the characteristics of their camshaft. Using our 9-keyway crank sprocket, the camshaft can be advanced or retarded by positioning the crank sprocket in the 2°, 4°, 6°, or 8° advance or retard keyway. **Remember: The camshaft angle is half of the crankshaft angle, therefore the camshaft will correspondingly advance or retard 1°, 2°, 3°, or 4°.** The keyway and corresponding timing marks are stamped with an "A" or "R" and a number ("A" stands for advance and "R" stands for retard). The timing is achieved by placing the desired keyway over the crank key and aligning the corresponding timing mark with the timing mark on the cam sprocket.

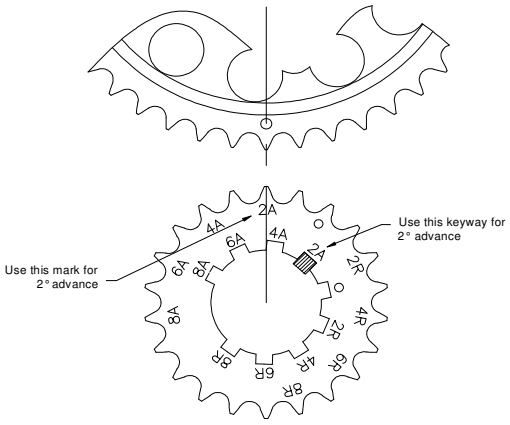
For GM and Chrysler applications, refer to Figure 1 below:
To advance the camshaft 1°, place the 2A keyway over the crank key and align the 2A timing mark with the mark on the cam sprocket.

For Ford applications, refer to Figure 2 below:
To advance the camshaft 1°, place the 2A keyway over the crank key and align the "o" above the 2A with the timing mark on the cam sprocket.

Notes:
After determining which setting to use, we advise marking (with white marker or similar) the corresponding timing mark and keyway. This will make them easier to identify during installation.

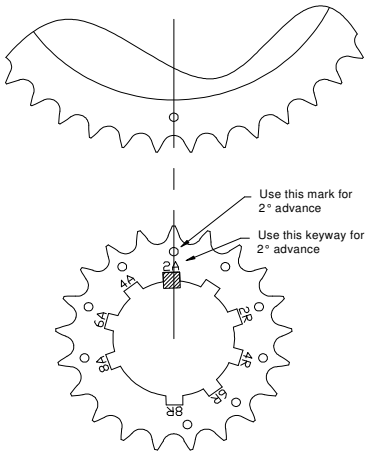
The use of a degree wheel is recommended for proper timing of the camshaft to the crankshaft.

During and after installation, observe for any interference between the timing set and engine block. If interference is found, remove or grind that area of the block so adequate clearance is obtained. When removing a press fit crank sprocket, a proper pulling tool should be used.



GM and Chrysler

Fig. 1



Ford

Fig. 2

Remember: 2° crank advance is 1° cam advance