Optimum Placement Of Camshaft Bearing Oil Feed Hole Location

The AERA Technical Committee offers the following important information on optimum placement of camshaft bearing oil feed hole location during installation. This information should be considered any time camshaft bearing replacement is being done.

Maximum camshaft support will be realized by installing the cam bearing oil feed hole to the optimum clock location. Blocks and heads using a 360° oil groove located behind the bearing oil feed, allow one to move the clock position of the cam bearing oil feed hole. This way you can adjust the clock position during cam bearing installation to make sure that the optimum location for the best hydrodynamic wedge is selected. Locating and installing the cam bearing to take advantage of this hydrodynamic wedge will supply the maximum support for the camshaft during engine operation. The direction of camshaft rotation and the engine oil entry point into the bearing control the placement of the hydrodynamic wedge.

Note: If the oil feed passage in the block or head is just a hole without a 360° groove, the bearing oil hole must line up with the oil feed passage in the block or head. In some instances, the bearing oil feed hole in the cam bearing also lines up with a groove cut in the camshaft journal. In those instances, the location of the bearing oil feed hole in the bearing is also very critical fore and aft and may not match up 100% with the hole in the block or head.

The illustration in Figure 1 below shows the optimum engine oil feed hole location for a camshaft that is turning clockwise as viewed from the front of the engine.

Note: If the camshaft being used is driven with a gear-to-gear arrangement, or is a reverse rotation engine with a chain drive, the cam bearing oil feed hole will require...
repositioning to the opposite lower side. This is due to the fact that the camshaft is turning in the opposite direction as noted above.

The AERA Technical Committee

Bulletin Diagram: FIGURE 1, OIL HOLE LOCATIONS - CYLINDER BLOCK

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