



Overmilled Engine Castings Affect Camshaft Timing

When a cylinder head or cylinder block is surfaced, a certain amount of material is removed. On overhead camshaft (OHC) engines this reduces the distance between the camshaft and crankshaft. When this occurs the camshaft timing is adversely affected.

Locating the camshaft closer to the crankshaft will induce additional slack, in the timing chain or belt. While the tensioner compensates for the added slack it causes the camshaft to rotate backwards in relationship to the crankshaft, effectively retarding camshaft timing.

This misaligned camshaft timing may lead to abnormal combustion and/or damaging contact between the pistons and valves. Severe engine damage may be the result.

It is possible to maintain the proper distance between camshaft and crankshaft by installing a copper gasket shim between the cylinder head gasket and the cylinder block. Copper shims are available from several gasket manufacturers and are able to restore performance and minimize the possibility of engine damage.

The AERA Technical Committee

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