

## **CAMSHAFT DEVIATION VALUES IN RELATION TO ANY IMS REPAIRS**

**In the DME “Actual Values” section, you have these camshaft values noted in degrees of Crankshaft rotation:**

Actual (What the camshaft timing is BUT remember that this is an adapted value, not raw data).

Nominal (What it should be, which should be 0°).

Deviation (How far off it is from the Nominal specification).

**Here is my sliding scale for camshaft deviation valves in relation to ANY IMS repairs:**

0° - 3.0° is great and there are no issues, proceed with repairs.

3.5° - 4.0° is okay but not preferred, keep a close eye open for any other issues.

4.5° is pretty high and the engine should be scrutinized closely before any repairs performed.

5.0° and up is too high, NO IMS repairs should be performed without rectifying the camshaft deviation issue(s).

**I prefer the camshaft deviation numbers to be as close to 0° as possible.**

**Camshaft deviations should not exceed 4.5° period.**

**Now, please remember, that this is only one small portion of the IMS prequalification process. There are many other factors such as:**

-Owner attitude and willingness to work with you.

-Overall vehicle mileage.

-Run complete controller interrogation (Check for any Fault codes, Engine over-revs & Camshaft deviation- #'s, OBD-II ready status, Average Miles per hour, Etc...).

-Are there any pre-existing issues requiring repair, which would disqualify this engine?

-Perform Manometer test (value should be 4.0” – 6.0” H2O).

-Check over car, condition of complete vehicle.

-Cold start sounds of engine, listen for any chain rattle or other noises.

-Any metal (ferrous or nonferrous), plastic (black or brown) and or rubber debris in the engine sump plate.

-Any metal (ferrous or nonferrous), plastic (black or brown) and or rubber debris in the engine oil filter.