

PCM Service Update

Information on Setting CAM Retard

#SUP2003-06

Engines Affected: 2002-2004 2002-2004	5.0L MPI (Pro Ski) ALL 5.7L MPI (Excalibur) ALL	Model Number: Last Digit "M"
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This is an informational update in order to provide you with some information that may assist you in setting the CAM retard on ALL 2002-2004 PCM 5.0L (Pro Ski) and 5.7L (Excalibur) engines.

The ignition system on the affected engines is unique to any ignition system PCM has built in the past. There could be a misunderstanding as to what a technician is doing to the engine when the distributor assembly is rotated. In the past, rotating the distributor would advance or retard the ignition timing. This was done in order to properly set the base ignition timing.

However, when rotating the distributor on the affected engines, you are not setting ignition timing. The ignition timing is not affected by rotating the distributor. The ignition timing is 100% computer controlled on these applications.

When rotating the distributor on the affected engines, you are adjusting what is called "CAM Retard." This parameter represents the position of the distributor rotor relative to the proper terminal in the distributor cap when the spark is delivered. This parameter MUST be 43-47 degrees or driveability problems will exist. Some of the symptoms, but not limited to, are as follows:

- Backfire
- Loss of power
- Sluggish
- Hesitation

In order to properly set the CAM retard, one of the following scan tools MUST be used:

Hand-held Scan Tool:

Rinda Techmate

(Purchased through Rinda Technologies, P/N 94040)

PC Based Diagnostic Software:

Diacom

(Purchased through PCM, P/N RT0086)

1. Hook up the scan tool or laptop to the data link connector.
2. Per the tool instructions, navigate through the tool in order to view ECM data.
3. Find the engine parameter labelled "CAM Retard."
4. Engine must be running in order to view the CAM Retard value.
5. CAM Retard value MUST be set at 43-47 degrees. If the value is within specifications, make sure the distributor hold down bolt is tight.
6. If the value is outside the specifications, loosen the distributor hold down bolt and slowly rotate the distributor until a value of 43-47 degrees is achieved. Tighten the hold down bolt securely, making sure the CAM Retard value does not go outside of the specification. Once the distributor hold down is tightened, verify the value still remains between 43-47 degrees.

Important: The basic principle that the distributor must be installed into the engine properly still exists. If the proper CAM Retard cannot be achieved, check the installation of the distributor.

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