insider info.

Models Equipped With Knock Sensors

The knock sensor is designed to sense knocking signals from each cylinder. The knock sensor is a piezo-electric type element which converts knocking vibrations into electrical signals. The electrical signal is sent to the ECM, which changes the ignition timing to reduce the engine knock or ping. For this system to work correctly, the sensor must first hear the engine ping. The driver of the vehicle may also hear a small engine ping. A delay of approximately 1-2 seconds is normal, depending on the fuel quality, engine load, air temp, etc. At this time, the ECM will retard the timing.

This function can be viewed on the Select Monitor RTRD mode. When the knock is eliminated, the timing is gradually advanced to the specified setting. If engine ping is heard again this process is repeated. This will continue until the knock sensor no longer hears the engine knock or ping.

Note: this is normal operation of the knock sensor. Do not try to repair it.

When you have a customer complaint of an engine ping, make sure you ask the right questions.

Before Repair:

1. When do you hear the engine ping (hot, cold, engine load, uphill, etc.)?
2. How long does it last (seconds)?
3. What type of fuel is in the vehicle (is it the right fuel, turbo/SVX)?
4. When did this condition start (since new or at what mileage)?

When Repairing:

1. Always duplicate the condition first (maybe it's a normal condition).
2. Always check the engine with the select monitor.
3. Always check the fuel quality at the filter (dirt, water, etc.).