[ ]  1. Using an appropriate scan tool check for codes in the powertrain control module related to camshaft and crankshaft timing. Check the data PIDs for cam/crank correlation information. Record the findings: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Evaluation (Enter number from 4, 3, 2, 1) :\_\_\_\_\_\_\_\_\_

Meets ASE Task: A1 – A-6 – P-1

Time on Task:\_\_\_\_\_\_\_\_\_\_\_\_\_

Make/Model/Year:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

VIN:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Verify Engine Mechanical Timing**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  2. Disable the ignition system.

[ ]  3. Rotate the engine to TDC (cylinder #1 on most engines) on the timing mark in normal direction of engine rotation (clockwise on most engines as viewed from the front of the engine).

[ ]  4. Confirm the timing marks on the camshaft(s) are in the proper location. Is the engine in time?

 \_\_\_\_\_\_\_ Yes \_\_\_\_\_\_\_ No

 [ ]  5. Describe the timing marks.

 \_\_\_\_\_\_\_ dots

 \_\_\_\_\_\_\_ arrows

 \_\_\_\_\_\_\_ dark or light chain links

 \_\_\_\_\_\_\_ other (describe) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 [ ]  6. Record the number of degrees of slack in the timing chain.

 \_\_\_\_\_\_\_ number of degrees of slack **OK \_\_\_\_\_\_\_ NOT OK \_\_\_\_\_\_\_**

 **Results**:

 **1.** less than 5° = normal.

 **2.** 5° ‑ 8° = some change in engine operation if the timing chain is replaced.

 **3.** over 8° = new timing chain required.

[ ]  6. What is the necessary action? (describe): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_