Verify Engine Mechanical Timing

Meets ASE Task: A1 – A-6 – P-1

Name:_____ Date:_____ Time on Task:_____

Make/Model/Year:_____ VIN:_____

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

☐ 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: _____

_____

☐ 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): _____

_____