

Timing Chain Diagnosis

Meets NATEF Task: (A1-B-12) Inspect and/or measure camshaft for runout, journal wear and lobe wear. (P-2)

Name _____ Date _____ Time on Task _____

Make/Model/Year _____ VIN _____ Evaluation: 4 3 2 1

A worn or stretched timing chain will cause the engine to produce lower than normal power at lower speeds but normal power at higher speeds.

- _____ 1. Disable the ignition system.
- _____ 2. Rotate the engine to TDC on the timing mark in normal direction of engine rotation (clockwise as viewed from the front of the engine).
- _____ 3. Remove the distributor cap (if equipped).
- _____ 4. Rotate the engine counterclockwise as viewed from the front of the engine until the rotor just starts to move.

NOTE: On engines equipped with a distributorless ignition, observe the movement of the valve train through the oil fill hole rather than the distributor rotor.

- _____ 5. 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 definitely required.

- _____ 6. What is the necessary action? _____

