

Engine Exhaust and Sound Diagnosis

Meets NATEF Task: (A1-A-6) Diagnose engine noises and vibrations; determine necessary action. (P-2)

Name _____ Date _____ Time on Task _____

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

_____ 1. Start the engine and observe the exhaust.

- _____ OK (no visible exhaust smoke)
- _____ Light amount of visible steam (usually normal)
- _____ Heavy white steam or smoke (possible coolant leak into the combustion chamber)
- _____ Black exhaust smoke (usually caused by a rich air-fuel mixture)
- _____ Gray exhaust for a second or two, then no exhaust smoke (normal)
- _____ Blue exhaust smoke at start-up, then normal exhaust (usually caused by defective valve stem seals)
- _____ Blue exhaust smoke all the time (engine is using oil)
- _____ Other (describe) _____

_____ 2. Exhaust odor (exhaust does have some smell due to the various hydrocarbons used in the fuel).

- _____ Normal
- _____ Abnormal (if abnormal describe)



_____ 3. Exhaust sound

- _____ Normal
- _____ Hissing (check for exhaust leak) and describe the location _____
- _____ Loud (determine the reason and the necessary action to correct the fault) _____
- _____ Other (describe) _____

_____ 4. Based on the analysis above, check service information to determine the steps needed to correct the concerns. _____

_____ 5. What is the necessary action? _____