



Head Gasket Diagnosis

Meets NATEF Task: (A8-A-1) Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action. (P-1)

Name _____ Date _____ Time on Task _____

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

A blown (defective) head gasket is often difficult to diagnose. To verify that a head gasket is defective, perform the following tests and checks.

_____ 1. Is excessive white steam visual at the tail pipe (disregard normal steam that occurs in cold weather)?

OK _____ NOT OK _____

_____ 2. Check for visual signs of coolant or oil leakage between the block and the cylinder head.

OK _____ NOT OK _____

_____ 3. Is the level of coolant lower than normal? (Lower than normal coolant level can indicate a defective head gasket.)

OK _____ NOT OK _____

_____ 4. Does the engine run correctly (a blown head gasket often causes the engine to miss)?

OK _____ NOT OK _____

_____ 5. Remove the radiator cap after the engine has cooled and use an exhaust gas analysis kit to determine whether exhaust gases are present in the coolant. One common test involves drawing coolant into a container with blue liquid in it and if it changes color to a yellow/green, then exhaust gases are present in the coolant.

OK _____ NOT OK _____

_____ 6. Start the engine and use a 4- or 5-gas analyzer to check for CO and/or HC emissions above the open radiator cap.

OK _____ NOT OK _____

_____ 7. Based on the test results, what is the necessary action? _____
