



# Radiator Testing with an Infrared Pyrometer

**Meets NATEF Task:** (A1-D-3, A8-A-14) Perform cooling system pressure tests; check coolant condition; inspect and test radiator, pressure cap, coolant recovery tank, and hoses. (P-1s)

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Name \_\_\_\_\_ Date \_\_\_\_\_ Time on Task \_\_\_\_\_

Make/Model/Year \_\_\_\_\_ VIN \_\_\_\_\_ Evaluation: 4 3 2 1

\_\_\_\_\_ 1. Check to see if an infrared pyrometer can be aimed to most areas of the radiator from the engine side.

**NOTE:** The fan(s) shroud may have to be removed to gain access.

\_\_\_\_\_ 2. What had to be removed to allow access? \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ 3. Start the engine and operate until normal operating temperature is achieved and the thermostat is fully open.

\_\_\_\_\_ 4. Using an infrared pyrometer, measure the radiator at the inlet, middle, and outlet sections and record the readings.

Inlet = \_\_\_\_\_ (should be the hottest)  
Middle = \_\_\_\_\_ (should be cooler than the inlet section)  
Outlet = \_\_\_\_\_ (should be cooler than the middle)

**OK** \_\_\_\_\_ **NOT OK** \_\_\_\_\_

\_\_\_\_\_ 5. Aim the infrared pyrometer to all sections of the radiator and look for any areas that are cooler than the surroundings which indicate a restricted or clogged portion of the radiator.

**OK** \_\_\_\_\_ **NOT OK** \_\_\_\_\_

\_\_\_\_\_ 6. Reinstall any shrouds removed to gain access to the radiator.

\_\_\_\_\_ 7. Based on the inspection and temperature tests, what is the necessary action?

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