Lovejoy Junior Lab Off-Site Learning Packet Day 1

Instructor Michael Lovejoy **Date** 2019-2020

Program/Class JR AST **Period** 1 - 4

State Indicator/Competency

3.5. Lubrication and Cooling Systems: Inspect lubrication and cooling systems operation.
3.5.2. Perform lubrication, cooling system, and pressure and sensor tests.

Instructional Objective(s)

1. Student will be able to identify all components of a cooling system with 80 percent accuracy.

Materials

Handout: Activity Sheet #34: Identifying Cooling System Components

Method of Instruction

Individual Work

Activities

1. Individual Work

The student will use the internet to look up and label components on the worksheet # 34. Students can use their guided notes from chapter 11 through 13.
2. Student will be able to identify how the different cooling system components work together to complete the systems cooling function.

1. The coolant flows from around the heated piston cylinder bores to the thermostat that controls engine tempter by using a thermostatic coil that expands and contract with heat.
2. The coolant then flow to the radiator through the radiator hoses to the radiator then to the lower radiator hose then to the water pump there the coolant is pumped around the engine block and starts the process over again.
3. The heater control valve lets hot coolant into the heater hose then to the heater core.
4. Most engines have a drain plug mounted on the sides of the block to drain the coolant from the block.
5 Core plugs are put in place to allow sand from sand casting when block was made to drain out this is what makes the passage ways for coolant to flow around the block.
6. The v-belt and the fan work together they run of the crank turning the water pump the belt is driven off of the crank. The fan draws air through the radiator this cools the coolant. The water pump circulates the coolant through the system.
7. The overflow tanks holds extra coolant that expands from the coolant system as the coolant expands it needs a place to go then when the coolant cools it the is sucked back into the system. The overflow tube connects the tank to the radiator this works with the radiator cap as the pressure increases the valve in the cap opens lets extra coolant flow into the overflow tank then as it cools the cap lets the coolant flow back into the radiator.

Assessment

Informal: Student will receive 10 points for completing worksheet.
-This assignment will be graded and count for a homework grade.

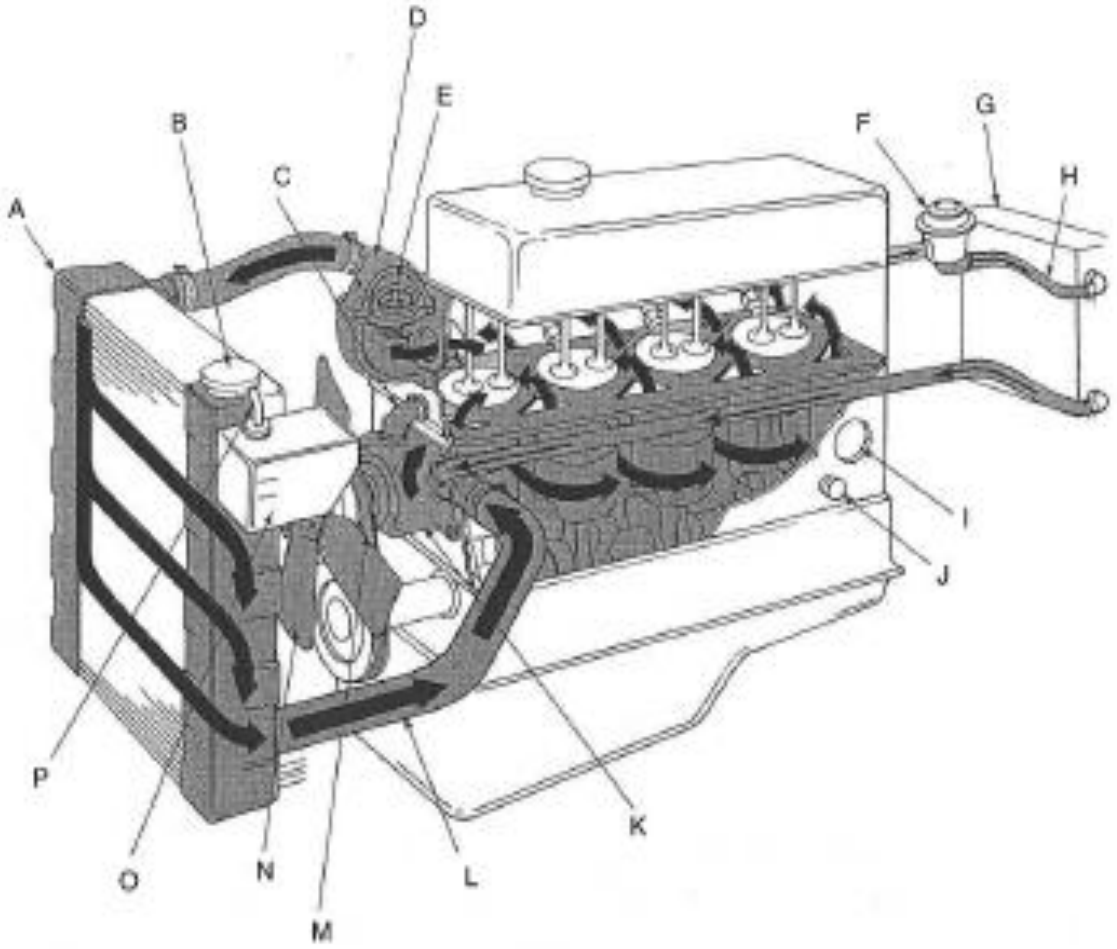
Instructor OK _____ Score _____

Activity Sheet #34

IDENTIFY COOLING SYSTEM COMPONENTS

Name_____ Class _____

Directions: Identify the cooling system components in the drawing. Place the identifying letter next to the name of the component.



V-Belt	____	Water Pump	____	Thermostat	____
Fan	____	Heater Supply Hose	____	Overflow Tube	____
Drain Plug	____	Thermostat Housing	____	Radiator	____
Coolant Recovery Tank	____	Heater Core	____	Pressure Cap	____
Core Plug	____	By-pass Hose	____	Radiator Hose	____
Heater Control Valve	____				

STOP