


Lab - Cooling System Inspection

Students: 1. _____ Date: _____
 2. _____ Block: _____
 3. _____

Fill in each box with the appropriate information. Each team member will need to answer questions from the instructor about this lab in order to receive credit for it.

VEHICLE IDENTIFICATION			
Year:		Make:	
Model:		Colour:	
VIN Number:			
Circle as Appropriate			
Hoses:	Upper Radiator Hose [pliable][hard][cracked][rotten] Lower Radiator Hose [pliable][hard][cracked][rotten] Heater Core Hoses [pliable][hard][cracked][rotten]	Heater Control Valves:	[Proper operation] [Leakage] [Free moving]
Water Pump:	[Good] [Leakage] [Play in Bearings]	Frost Plugs:	# of Plugs: _____ [Good] [Leakage] [Rusty]
Radiator:	[Solid] [Leakage] [Rotting]	Radiator Cap:	[Good] [Leakage]
Draincock:	[Opens] [Leakage]	Head Gaskets:	[Good] [Leakage]
Overflow tank:	[Full] [Low] [Empty]	Overflow Fluid:	Colour:
STOP!!			INSTRUCTOR'S SIGNATURE: <input style="width: 100px; height: 30px;" type="text"/>
SYSTEM TESTING			
1	<input type="checkbox"/> Engine should be off, but at operating temperature <input type="checkbox"/> Cover cap with a rag and slowly remove radiator pressure cap <input type="checkbox"/> Coolant level should be flush with the top of the filler neck with overflow tank, 1" below if none	<div style="border: 2px solid black; padding: 5px; margin-bottom: 10px;">CAUTION!</div> <p>Engine coolant is HOT! Protect your hands and face. Remove the cap SLOWLY, releasing the pressure gradually!</p> <p>Any spilled coolant should be mopped up immediately.</p>	

	Is the coolant... <input type="checkbox"/> Murky? <input type="checkbox"/> Clear? <input type="checkbox"/> Reddish colour? <input type="checkbox"/> Green with a tinge of yellow? <input type="checkbox"/> Frothing?	Inspect the tubes inside the radiator. Are they plugged or corroded?
2	<input type="checkbox"/> Insert Antifreeze Tester into radiator filler, and draw coolant up to the marked line	Coolant tests good to - _____°F - _____°C Is that satisfactory? [Yes] [No]
3	<input type="checkbox"/> Pressurize the radiator cap and hold for 15 minutes	Radiator Cap is rated at _____psi Cap held pressure? [Yes] [No] Both valves in the cap working? [Yes] [No]
STOP!! INSTRUCTOR'S SIGNATURE: 		
4	<input type="checkbox"/> Pressurize the Cooling System and hold for 15 minutes (work on something else during this time) <input type="checkbox"/> Thoroughly inspect cooling system for any evidence of leakage if the system is unable to maintain pressure	<div style="border: 2px solid black; padding: 5px; margin-bottom: 10px;">CAUTION!</div>  DO NOT EXCEED THE RATED PRESSURE! You want to find leaks, not make them!
5	Clean up and put tools away	
6	Assume the cooling system is not operating adequately. What would cause the following situations? 1. Overheating while sitting in traffic? 2. Overheating while pulling long hills? 3. Never heating up?	
7	Notes to vehicle owner:	
STOP!! INSTRUCTOR'S SIGNATURE: 		