

CDX Tasksheet Number: MHT6B009

Student/Intern Information

Name _____ Date _____ Class _____

Vehicle, Customer, and Service Information

Vehicle used for this activity:

Year _____ Make _____ Model _____

Odometer _____ VIN _____

Materials Required

- Vehicle with possible A/C concern
- Vehicle manufacturer's repair information
- Manufacturer-specific tools depending on the concern/procedure(s)

Task-Specific Safety Considerations

- Activities may require test-driving the vehicle on the school grounds or on a hoist, both of which carry severe risks. Attempt this task only with full permission from your supervisor/instructor, and follow all the guidelines exactly.
- Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with federal, state, and local regulations.
- Always wear the correct protective eyewear and clothing and use the appropriate safety equipment, as well as fender covers, seat protectors, and floor mat protectors.
- Make sure you understand and observe all legislative and personal safety procedures when carrying out practical assignments. If you are unsure of what these are, ask your supervisor/instructor.
- While working on the vehicle, wheel chocks must be placed on both sides of one set of tires or as directed by your supervisor/instructor.
- Exhaust evacuation hoses must be placed over exhaust outlets while the engine is used in the confined shop space.

► TASK Diagnose A/C system conditions that cause the protection devices (pressure, thermal, and/or control module) to interrupt system operation; determine needed action.

MTST
VI.B.9; P2

Student Instructions: Read through the entire procedure prior to starting. Prepare your workspace and any tools or parts that may be needed to complete the task. When directed by your supervisor/instructor, begin the procedure to complete the task and check the box as each step is finished.

Time off _____

Time on _____

Total time _____

Procedure:	Step Completed
1. Reference the appropriate manufacturer's repair information.	<input type="checkbox"/>
2. Research what causes protection devices (pressure, thermal, and electronic) to interrupt system operation; use the appropriate service information for the vehicle you are working on and list the causes below.	<input type="checkbox"/>
a. Causes of pressure protection devices interrupting system operation:	<input type="checkbox"/>
b. Causes of thermal protection devices interrupting system operation:	<input type="checkbox"/>
c. Causes of electronic protection devices interrupting system operation:	<input type="checkbox"/>
3. Examine the vehicle/simulator and identify A/C system problems that cause protection devices (pressure, thermal, and electronic) to interrupt system operation.	<input type="checkbox"/>
a. Both switches have resistors connected in parallel with the electrical contacts to allow diagnosing of sensor wiring and connector faults. This switch circuit is configured to provide a low-resistance current path when it closes.	<input type="checkbox"/>
b. The low-pressure switch contacts are open when the pressure is sufficiently high, above 34 psi (234 kPa). Contacts close when the pressure falls below approximately 10 psi (69 kPa) and reopen after the pressure climbs back above 34 psi (234 kPa). Low-pressure switch activity is the primary indicator of a loss of charge and is also used to prevent compressor operation in extremely cold temperatures.	<input type="checkbox"/>
c. Using a DVOM, measure resistance through the low pressure switch. Operates properly: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>

4. The high-pressure switch contacts are closed when the pressure is sufficiently low, below 260 psi (1793 kPa). Contacts open when the pressure climbs above approximately 300 psi (2068 kPa) and re-close after the pressure falls back below 260 psi (1793 kPa). The high-pressure switch is the primary control for the fan and is used to prevent compressor operation when excessive discharge pressures are present.	<input type="checkbox"/>
a. Using a DVOM, measure resistance through the high-pressure switch. Operates properly: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
5. Return the vehicle to its beginning condition, and return any tools you used to their proper locations.	<input type="checkbox"/>
6. Discuss your findings with your supervisor/instructor.	<input type="checkbox"/>

Non-Task-Specific Evaluations:	Step Completed
1. Tools and equipment were used as directed and returned in good working order.	<input type="checkbox"/>
2. Complied with all general and task-specific safety standards, including proper use of any personal protection equipment (PPE).	<input type="checkbox"/>
3. Completed the task in an appropriate time frame (recommendation: 1.5 or 2 times the flat rate).	<input type="checkbox"/>
4. Left the workspace clean and orderly.	<input type="checkbox"/>
5. Cared for customer property and returned it undamaged.	<input type="checkbox"/>

Student signature _____ Date _____

Comments:

Have your supervisor/instructor verify satisfactory completion of this procedure, any observations made, and any necessary action(s) recommended.

Evaluation Instructions: The scoring box below is intended to act as a guide for both student and supervisor/instructor. Each criterion listed will help students to understand what is expected of them and help supervisors/instructors to articulate the level of success at a particular task. The scoring is set up to allow a second attempt at each task (see the Test and Retest columns). Scoring is also designed only to award students points for task criteria that were completed correctly. Points are lost for failure to complete the employability requirements (see Non-Task-Specific Evaluation criteria). When all criteria are evaluated, tally the points for a total at the bottom of each column.

Tasksheet Scoring

	Test		Retest	
Evaluation Items	Pass	Fail	Pass	Fail
Task-Specific Evaluation	(1 pt)	(0 pts)	(1 pt)	(0 pts)
Student detailed the 3 Cs on the submitted repair order.				
Student used manufacturer's repair information.				
Student performed diagnostic measurements properly and made appropriate conclusions.				
Student completed repairs as directed by the supervisor/instructor.				
Non-Task-Specific Evaluation	(0 pts)	(-1 pt)	(0 pts)	(-1 pt)
Student successfully completed at least three of the non-task-specific steps.				
Student successfully completed all five of the non-task-specific steps.				
Total Score: <total # of points /4 = %>				

Supervisor/Instructor:

Supervisor/instructor signature _____ Date _____

Comments:

Retest supervisor/instructor signature _____ Date _____

Comments: