

## CDX Tasksheet Number: MHT6E003

### 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 air conditioning concerns
- 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** Understand how to recycle, label, and store refrigerant.

**MTST**  
VI.E.3; P1

**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 \_\_\_\_\_

| <b>Procedure:</b>   | <b>Step Completed</b>    |
|---|--------------------------|
| 1. Reference the appropriate manufacturer's repair information.   | <input type="checkbox"/> |
| a. Research how to handle, label, and store refrigerant in appropriate service information and safety data sheet (SDS) for the types of refrigerant in your workshop and list them below. Check state and federal requirements for this process.                      | <input type="checkbox"/> |
| 2. Recycle, label, and store the refrigerant.   | <input type="checkbox"/> |
| a. Obtain a DOT-approved refrigerant container. There are several sizes, from 15 lb to 500 lb (7 to 227 kg) tanks. The recommended size for most repair shops is a 60 lb (27 kg) container.   | <input type="checkbox"/> |
| b. Connect the air-conditioning machine's hoses to the tank with the appropriate adapters in an air-conditioning retrofit kit. Use the high- or low-side adapters from the retrofit kit to connect the quick chuck fittings to the 1/4 inch SAE fittings on the tank. | <input type="checkbox"/> |
| c. Open the tank valves. Open the quick chuck Schrader depressors on the quick chucks. At this point, you are ready to charge the tank just as you would charge a vehicle.  | <input type="checkbox"/> |
| d. Use the keypad on the air-conditioning machine and select the "charge" mode. Determine the amount of refrigerant you want to transfer, and enter that weight into the display.   | <input type="checkbox"/> |
| e. Begin to charge the refrigerant tank. Do not fill the tank to more than 60% of the total gross capacity of the tank.   | <input type="checkbox"/> |

|  |                          |
|--|--------------------------|
| i. The total gross capacity is written on the tank, and the technician must mathematically determine what 60% of it is.  | <input type="checkbox"/> |
| f. After the tank is filled with refrigerant, label the tank with the type and the weight of refrigerant. By labeling the tank with the type and weight, the next technician can determine the type and whether there is enough free space to charge any more refrigerant into the tank. | <input type="checkbox"/> |
| g. Close the tank valves and disconnect the hoses from the tank.   | <input type="checkbox"/> |
| h. Store the refrigerant in a cool, dry place where sunlight cannot directly hit the tank.   | <input type="checkbox"/> |
| 3. Return the vehicle to its beginning condition, and return any tools you used to their proper locations.   | <input type="checkbox"/> |
| 4. Discuss your findings with your supervisor/instructor.  | <input type="checkbox"/> |

| <b>Non-Task-Specific Evaluations:</b>   | <b>Step Completed</b>    |
|---|--------------------------|
| 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 operated diagnostic equipment 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.          |         |         |         |         |
| <b>Total Score:</b><br><total # of points /4 = %>                                |         |         |         |         |

#### Supervisor/Instructor:

Supervisor/instructor signature \_\_\_\_\_ Date \_\_\_\_\_

#### Comments:

Retest supervisor/instructor signature \_\_\_\_\_ Date \_\_\_\_\_

#### Comments:

