

## CDX Tasksheet Number: MHT3B007

### 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 brake 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.
- Caution: If you are working in an area where there could be brake dust present (it may contain asbestos, which has been determined to cause cancer when inhaled or ingested), ensure you wear and use all OSHA-approved asbestos protective/removal equipment.
- 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.
- Air lines may contain pressurized air so be aware of the potential energy release while working with air brake components. Release the air pressure in the system before attempting any repairs.

► **TASK** Inspect and clean air dryer systems, filters, valves, heaters, wiring, and connectors; determine needed action.

**MTST**  
III.B.7; 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 \_\_\_\_\_

**Note:** Most vehicles do not operate under the same types of conditions so maintenance intervals may vary.

Procedure:	Step Completed
1. Reference the appropriate manufacturer's repair information.	<input type="checkbox"/>
2. Place an appropriate container under air tank drain valves; drain tank to check for moisture or contaminants in the system.	
a. Moisture or contaminants present: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
( <b>Note:</b> A small amount of oil is not uncommon in the system and is not a reason to replace the desiccant in the air dryer.)	<input type="checkbox"/>
3. Test the outlet port one-way check valve by building air pressure to the system governor cut-out specification. The air dryer should purge air out of the exhaust port rapidly at first and then taper off until the purge volume is completely exhausted. This can take up to 30 seconds. If the valve is operating properly, air from the primary and secondary reservoirs will not flow out of the air dryer purge valve, emptying those reservoirs. Confirm this by observing the reservoir pressure gauges.	<input type="checkbox"/>
a. Record system cutoff pressure:	<input type="checkbox"/>
b. Outlet check valve operation: Good: <input type="checkbox"/> Bad: <input type="checkbox"/>	<input type="checkbox"/>
4. Check all lines leading to the air dryer itself for any possible leakage by utilizing a spray bottle with a soap and water solution or equivalent. This must be done during charging and purge cycles as air pressure is present in these lines depending on the cycle.	<input type="checkbox"/>
a. Are leaks present? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
5. In servicing of the air dryer (depending on the type), follow the manufacturer's repair information procedure to replace filters and desiccants.	<input type="checkbox"/>
a. If service is required, list the procedure to service the air dryer:	<input type="checkbox"/>
6. Inspect and test the heater element by utilizing a DMM to check for the correct resistance at the connector.	<input type="checkbox"/>
a. Record the manufacturer's specified resistance value: _____ ohms	<input type="checkbox"/>
b. Record the actual resistance value: _____ ohms	<input type="checkbox"/>
c. Condition of the heater: Good: <input type="checkbox"/> Bad: <input type="checkbox"/>	<input type="checkbox"/>
7. Inspect the electrical supply to the heater by utilizing a DMM to check for the proper electrical voltage.	<input type="checkbox"/>
a. Record the manufacturer's specified supply voltage: _____ volts	<input type="checkbox"/>

b. Record the actual supply voltage at the connector: _____ volts	<input type="checkbox"/>
c. Is the correct voltage supplied? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
8. If any of the electrical components in the system need to be replaced, consult the manufacturer's repair information for the proper procedure and record it.	<input type="checkbox"/>
9. Return the vehicle to its beginning condition, and return any tools you used to their proper locations.	<input type="checkbox"/>
10. 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 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 readings 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> <total # of points /4 = %>				

### Supervisor/Instructor:

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

### Comments:

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

### Comments: