

## CDX Tasksheet Number: MHT3C003

### 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)
- Vehicle lifting equipment, if applicable

### 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.
- Lifting equipment such as vehicle jacks and stands, vehicle hoists, and engine hoists are important tools that increase productivity and make the job easier. However, they can also cause severe injury or death if used improperly. Make sure you follow the manufacturer's operation procedures. Also make sure you have your supervisor's/instructor's permission to use any particular type of lifting 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.

Time off \_\_\_\_\_

Time on \_\_\_\_\_

Total time \_\_\_\_\_

**► TASK** Check camshafts (S-cam), tubes, rollers, bushings, seals, spacers, retainers, brake spiders, shields, anchor pins, and springs; perform needed action.

**MTST**  
III.C.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.

Procedure:	Step Completed
1. Reference the appropriate manufacturer's repair information.	<input type="checkbox"/>
2. Inspect and test the service brake(s), including internal components.	<input type="checkbox"/>
a. Using the vehicle manufacturer's repair information, research the description and operation of the brake system for this vehicle, including the drum brake inspection and servicing procedures plus wheel assembly and brake drum(s) removal/installation procedures:	<input type="checkbox"/>
b. List the procedure for servicing the service brake, noting all safety precautions listed by the manufacturer:	<input type="checkbox"/>
3. Discuss your findings with your supervisor/instructor.	<input type="checkbox"/>
4. If instructed by your supervisor/instructor, carry out the inspection procedure.	<input type="checkbox"/>
5. Referencing the manufacturer's repair information, remove and disassemble the wheel and drum assembly.	<input type="checkbox"/>
a. Inspect the serviceability of each component.	<input type="checkbox"/>
b. Cam shaft:	<input type="checkbox"/>
i. Within specifications: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	

ii. If no, list the problem and your recommendation(s):	<input type="checkbox"/>
c. Tubes: i. Within specifications: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
ii. If no, list the problem and your recommendation(s):	<input type="checkbox"/>
d. S-cam rollers: i. Within specifications: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
ii. If no, list the problem and your recommendation(s):	<input type="checkbox"/>
e. Cam shaft bushings, seal spacers, and retainers: i. Within specifications: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
ii. If no, list the problem and your recommendation(s):	<input type="checkbox"/>
f. Brake spider(s): i. Within specifications: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
ii. If no, list the problem and your recommendation(s):	<input type="checkbox"/>
g. Dust shield, anchor pins, and springs: i. Within specifications: Yes: <input type="checkbox"/> No: <input type="checkbox"/>	<input type="checkbox"/>
ii. If no, list the problem and your recommendation(s):	<input type="checkbox"/>
6. If directed by your supervisor/instructor, carry out this service procedure.	<input type="checkbox"/>

7. Return the vehicle to its beginning condition, and return any tools you used to their proper locations.	<input type="checkbox"/>
8. 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 disassembly and inspection 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:

