Brakes: Master Cylinder Testing and Service

Student/intern information:

Name _____ Date _____ Class _____

Vehicle used for this activity:

Year _____ Make _____ Model _____

Odometer _____ VIN _____

Time off _____

Time on _____

Total time _____

Learning Objective/Task	CDX Tasksheet Number	2013 MLR NATEF Reference Number; Priority Level	2013 AST NATEF Reference Number; Priority Level	2013 MAST NATEF Reference Number; Priority Level
• Measure brake pedal height, travel, and free play (as applicable); determine necessary action.	C622	5B1; P-1	5B2; P-1	5B2; P-1
• Check master cylinder for external leaks and proper operation.	C946	5B2; P-1		
• Check master cylinder for internal/external leaks and proper operation; determine necessary action.	C704		5B3; P-1	5B3; P-1
• Remove, bench bleed, and reinstall master cylinder.	C235		5B4; P-1	5B4; P-1
• Measure and adjust master cylinder pushrod length.	C556		5E5; P-3	5E5; P-3

Materials Required

- Depending on the type of concern, special diagnostic tools may be required. See your supervisor/instructor for instructions to identify what tools may be required.
- Tape measure
- Vehicle or simulator
- Work light and shop rag
- Line wrenches

Some Safety Issues to Consider

- If you need to start the vehicle, you should ensure that the parking brake is firmly applied; if necessary, use wheel chocks to prevent the vehicle from moving when the vehicle is started to verify the completion of these tasks.
- When running any vehicles in the shop, make sure you use the shop's exhaust ventilation system to discharge all exhaust gas safely outside.
- Only students who have their supervisor's/instructor's direct permission should perform this task due to the safety concerns involved.
- Diagnosis of this fault may require test-driving the vehicle on the school grounds. Attempt this task only with full permission from your supervisor/instructor and follow all the guidelines exactly.

- **Caution:** Most types of brake fluid are harmful to painted surfaces. Be sure to prevent brake fluid from coming into contact with a vehicle's paint. Use fender covers to minimize this risk and be sure to wipe up any spilled brake fluid immediately with a wet rag.
- 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 local, state, and federal safety and environmental regulations.

Performance Standard

0—No exposure: No information or practice provided during the program; complete training required

1—Exposure only: General information provided with no practice time; close supervision needed; additional training required

2—Limited practice: Has practiced job during training program; additional training required to develop skill

3—Moderately skilled: Has performed job independently during training program; limited additional training may be required

4—Skilled: Can perform job independently with no additional training