▶ TASK Inspect vacuum-type power booster unit for leaks; inspect the check valve for proper operation; determine needed action.

MAST 5E3

Time off_____

Time on_____

Total time_____

CDX Tasksheet Number: C809

1. **Test the ability of the power booster to hold a vacuum.**
    a. **Without starting the vehicle, depress the brake pedal several times with moderate pressure.**
    b. **After the vacuum has bled off, approximately how far down does the brake pedal go? _____ in/mm**

NOTE This removes any vacuum from the brake booster and allows you to feel the brakes without vacuum assist.

2. **Start the engine, wait a few seconds, and depress the brake pedal once.**

NOTE This allows you to feel the brakes with vacuum assist. This is how the brake pedal should respond if the vacuum booster is holding a vacuum properly.

    a. **Approximately how far down does the brake pedal go now? _____ in/mm**

3. **Let off the brakes, turn off the engine, and wait the specified time the power booster should hold a vacuum listed previously.**

4. **After waiting the designated time and without starting the vehicle, depress the brake pedal once.**
    a. **Does the brake pedal feel the same as in step 2? Yes: _____ No: _____**

5. **If yes, the power booster and check valve are capable of holding a vacuum, which means the system doesn't have an external vacuum leak (it may still have an internal leak).**

6. **If no, the brake pedal responded as if it had no vacuum assist. Start the vehicle and do the following:**
    a. **Use the electronic stethoscope or the heater hose to listen for vacuum leaks around the outside of the power booster.**
    b. **Listen under the dash at the power booster control valve assembly. List observations found:**

7. **Inspect the check valve for proper operation.**

    a. **Carefully remove the check valve from the power booster, leaving it inserted in the vacuum hose. Start the vehicle and feel whether air is being drawn through the check valve. If it is, this indicates that the valve is not plugged or stuck closed. List observations found:**

    b. **Reinsert the check valve into the power booster and allow the engine to run for 30 seconds to evacuate the booster. Turn off the engine, wait for the specified minimum time that the power booster should hold a vacuum (listed previously), and then remove the check valve from the booster. There should be a large rush of air into the booster. If there is, the check valve is holding a vacuum and is okay. List observations found:**

8. **Perform an internal leak test.**

    a. **Start the engine and let it idle. Apply the brake pedal with moderately firm pressure (20–30 lb) and hold it steady. Without moving your foot, shut off the engine and observe the pedal for approximately one minute. If it stays steady, there are no internal leaks. If the pedal rises, there is an internal leak in either the diaphragm or control valve. List observations found:**

9. **Based on your observations, determine any necessary actions:**

10. **Return the vehicle to its beginning condition and return any tools you used to their proper locations.**

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

Performance Rating **CDX Tasksheet Number: C809**

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4

Supervisor/instructor signature _____ Date _____