JOB SHEET A5G5 Bleeding Electronic Brake Systems

Start Date: __________

End Date: __________

Name: ______________________  Make: __________

Model: ______________________ Year: __________

VIN: ______________________ Mileage: __________

Learning Objective/NATEF Task
- Bleed the electronic brake control system hydraulic circuits.
  - NATEF task A5/G5, P1. ICS 159

Tools and Materials
- Classroom vehicle and/or components
- OEM service manual
- Bleeder T-wrench
- Drain hose
- Clean container
- Scan tool
- Safety glasses

Procedure

1. You must understand and observe all State/Federal Regulations and personal safety procedures when carrying out the following task(s). Wear safety glasses for this entire procedure.


3. In the OEM service manual for your classroom vehicle, locate the procedure bleeding the air out of the electronic brake control system hydraulic circuits. Submit this procedure to your instructor or mentor for approval and then answer the following questions.

Your instructor must stamp or initial the box to the right before you can proceed with this job sheet.

Use extreme caution during this procedure; many ABS systems operate at pressures as high as 2800 psi and use an accumulator to store this high pressure brake fluid.
1. Verify the master cylinder reservoir is filled to at least the minimum-fill level with DOT 3 brake fluid from a clean, sealed container.

3. Make sure the master cylinder reservoir cap is securely fastened.

4. Install a scan tool and turn on the ignition.

5. Select the “Special Functions” menu on the scan tool.

6. Select “Pre-Charge Bleed.”

7. Activate the scan tool. The pre-charge pump runs for approximately three seconds, circulating fluid from the master cylinder fluid reservoir through the pre-charge pump and combination valve, then back to the master cylinder.

8. Evaluate the feel of the brake pedal. If the pedal feels spongy, perform a base brake system bleed. Refer to Hydraulic Brake System Bleeding in Job Sheet A5B12.

9. Verify the master cylinder reservoir is filled to at least the minimum-fill level with DOT 3 brake fluid from a clean, sealed container.

10. Verify the ignition is off.

11. What is the difference between a scan tool pre-charge bleed and an automatic bleed?

12. When do you perform an automatic bleed? ________________________

13. What do you do if the brake pedal still feels spongy?

14. Have your instructor or mentor road test the vehicle.
Task Summary
Now that you have completed this NATEF task, can you think of anything (tools, information, knowledge etc.) that would have made this task easier?
List a customer complaint together with the cause determined by this diagnostic/inspection task that might appear on a work order, and then list the NATEF task correction you would use to resolve the complaint.

**COMPLAINT:** ____________________________

1. Perform Checks/Inspect: ____________________________
2. Referencing Bulletin: ____________________________

**CAUSE:** ____________________________

1. Diagnosis: **USED THIS NATEF DIAGNOSIS TASK**
2. Operating as designed: ____________________________
3. Cause identified as: ____________________________

**CORRECTION:** ____________________________

1. Other Correction: ____________________________
2. Correction Verified By: ____________________________

Use this rubric to rate the completion of job sheet

1 = Demonstrates exposure/observation of the competency
2 = Applies the competency but only mastered a few essential attributes of the competency
3 = Capable of the competency but needs further practice
4 = Performs the competency satisfactorily
5 = Masters the competency

Instructor ____________________________ Mentor ____________________________