

# Manual Drive Train and Axles: Transmission/Transaxle Diagnosis

## Student/intern information:

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

## Vehicle used for this activity:

Year \_\_\_\_\_ Make \_\_\_\_\_ Model \_\_\_\_\_

Odometer \_\_\_\_\_ VIN \_\_\_\_\_

| Learning Objective/Task   | CDX<br>Tasksheet<br>Number | 2013 MLR<br>NATEF<br>Reference<br>Number;<br>Priority<br>Level | 2013 AST<br>NATEF<br>Reference<br>Number;<br>Priority<br>Level | 2013 MAST<br>NATEF<br>Reference<br>Number;<br>Priority<br>Level |
|---|----------------------------|--|--|---|
| • Diagnose noise concerns through the application of transmission/transaxle powerflow principles.   | C609                       |  |  | 3C3; P-2  |
| • Diagnose hard shifting and jumping out of gear concerns; determine necessary action.              | C693                       |  |  | 3C4; P-2  |
| • Diagnose transaxle final drive assembly noise and vibration concerns; determine necessary action. | C887                       |  |  | 3C5; P-3  |

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

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

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

## Materials Required

- Vehicle(s) with specific concern(s)
- Vehicle hoist
- Powerflow flowcharts
- Stethoscope
- Job-specific tools
- Manufacturer-specific tools

## Some Safety Issues to Consider

- Vehicle 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.
- When running any vehicles in the shop, make sure you use the shop's exhaust ventilation system to discharge all exhaust gas safely outside.
- Diagnosis of this fault may require test-driving the vehicle on the school grounds. Attempt this task only with full permission from your instructor and follow all the guidelines exactly.
- Castings and machined parts may have sharp edges. Handle these parts with care.
- 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