

Suspension and Steering Systems: Wheel and Tire Diagnosis

Student/intern information:

Name _____ Date _____ Class _____

Vehicle used for this activity:

Year _____ Make _____ Model _____

Odometer _____ VIN _____

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
• Inspect tire and wheel assembly for air loss; perform necessary action.	C580	4D5; P-1	4F8; P-1	4F8; P-1
• Repair tire using internal patch.	C552	4D6; P-1	4F9; P-1	4F9; P-1
• Measure wheel, tire, axle flange, and hub runout; determine necessary action.	C701		4F4; P-2	4F4; P-2
• Identify and test tire pressure monitoring systems (indirect and direct) for operation; verify operation of instrument panel lamps.	C935	4D7; P-2	4F10; P-2	
• Identify and test tire-pressure monitoring system (indirect and direct) for operation; calibrate system; verify operation of instrument panel lamps.	C937			4F10; P-2
• Diagnose wheel/tire vibration, shimmy, and noise; determine necessary action.	C855		4F2; P-2	4F2; P-2
• Diagnose tire pull problems; determine necessary action.	C796		4F5; P-2	4F5; P-2

Time off _____

Time on _____

Total time _____

Materials Required

- Leaky tire assigned by supervisor/instructor
- Tire-pressure gauge
- Tire inflator
- Tire valve core tool
- Vehicle hoist or floor jack and jack stand(s)
- Lug wrench (or impact wrench with appropriate impact socket)
- Tire dunk tank or soapy water in a spray bottle
- Torque wrench and appropriate socket
- Tire patching tools and supplies
- Dial indicator
- 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.

Some Safety Issues to Consider

- Worn or damaged tires may have steel cords sticking out of the tire. These wires are very sharp and will severely cut you. Do not rub your hand across a tire without checking first for exposed cords.
- Vehicle hoists are important tools that increase productivity and make the job easier. However, they also can cause severe injury or death if used improperly. Make sure you follow the hoist and vehicle manufacturer's operation procedures. Also make sure you have your supervisor's/instructor's permission to use a vehicle hoist.
- Compressed air can be very dangerous. Never blow it at someone. Never use it to remove dirt or dust from your skin or clothing. Never use it without an OSHA-approved nozzle.
- Over-inflating tires could cause the tire to explode with great force. Never exceed the maximum tire pressure for the tire you are working on. Use a tire cage when inflating a tire that has been removed from a rim or repaired.
- Lug nuts must always be torqued to the proper torque. Always use a properly calibrated torque wrench. Never use an impact wrench to tighten lug nuts. This could cause the wheel to come loose and fall off if under-tightened. Or, if over-tightened, the lug studs might get damaged which could also cause the wheel to fall off the vehicle. It could also cause the brake rotors to become warped.
- 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