AUTO G004N: AUTOMOTIVE TIRE AND WHEEL SERVICE

Item	Value
Curriculum Committee Approval Date	11/07/2023
Top Code	094800 - Automotive Technology
Units	0 Total Units
Hours	48 Total Hours (Lecture Hours 12; Lab Hours 36)
Total Outside of Class Hours	0
Course Credit Status	Noncredit (N)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	Yes; Repeat Limit 3
Grading Policy	P/NP/SP Non-Credit (D)

Course Description

This noncredit course covers fundamental theory and skills required to work as a tire technician. Students will learn basic automotive safety, guidelines for aftermarket wheel and tire replacement, as well as the safe use of equipment for repairing and replacing tires used on most light truck and passenger vehicles. PREREQUISITE: AUTO G002N. Noncredit. Open Entry/Open Exit. NOT DEGREE APPLICABLE. Not Transferable.

Course Level Student Learning Outcome(s)

1. Course Objectives
2. Perform wheel and tire safety inspections
3. Perform precision torque applications.
4. Perform correct tire mounting and balancing techniques.
5. Demonstrate safe tire repair practices as outlined by industry standards.

Course Objectives

- 1. Mount and balance tires using industry accepted techniques.
- 2. Perform tire puncture repairs.
- 3. Diagnose wheel and tire related vibration concerns.
- 4. Perform a tire rotation on all types of vehicles.

Lecture Content

Tire Technician Opportunities and Responsibilities Job description Customer service Tire Technician Safety Tire handling Automotive lift safety Wheel balancer safety Tire Maintenance Tire service information locations Tire inflation Tire and Wheel Design Tire construction Tire nomenclature Wheel construction Wheel nomenclature Tools and Equipment Wheel fastener clamping force Wheel assembly removal tools Wheel assembly installation tools Wheel Removal/Installation Automotive lifting procedures Wheel assembly removal Tire rotation Wheel assembly installation Tire and Wheel Inspection Wheel inspection process Tire inspection process Hub and mounting surface inspection Visual brake inspection Tire Removal and Installation Types of tire machines Tire machine operation Tire removal Tire installation Tire Puncture Repair Types of punctures Puncture repair options Tire patch installation Wheel Balancing Wheel balance theory Types of wheel balancers Wheel balancer operation Road force variation Wheel weight installation TPMS (Tire Pressure Monitor Sensor) Service TPMS theory TPMS inspection TPMS replacement TPMS diagnosis

Lab Content

Wheel and Tire Inspection Locate Service Information Adjust Tire Pressure to Service Specifications Wheel Rotation Locate Tire Rotation Service Information Remove, Relocate, and Reinstall Wheels Inspect Hub Assembly Tire Remove/Install Remove Inspect Tire for Damage Install Tire Wheel Balance Proper Mounting of Wheel on Machine Balance Using Road Force Variation Procedure Accurate Wheel Weight Selection/ Installation Repair Puncture in Tire Determine appropriate Repair Prep Tire for Service Install Tire Patch TPMS Service Remove/Install a TPMS Service a TPMS Perform TPMS Relearn Procedure Diagnose TPMS Issues

Method(s) of Instruction

- Enhanced NC Lect (NC1)
- Enhanced NC Lab (NC2)

Reading Assignments

Instructor assigned reading.

Writing Assignments

Repair order documentation.

Out-of-class Assignments

Instructor assigned reading.

Demonstration of Critical Thinking

Determine the best course of action when given a tire with a puncture by a foreign object. Analyze to determine if the location of the puncture warrants a repair or replacement of the tire.

Required Writing, Problem Solving, Skills Demonstration

Mount a wheel and tire assembly on balancing equipment and install wheel weights in the position determined by the balancing machine.

Eligible Disciplines

Automotive technology: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.