

TECHNOLOGY/1: AUTOMOTIVE SYSTEMS (90 Hours)

Course No.: 79-90-83

COMPETENCY CHECKLIST

Student Name _____

Teacher Name _____ School Site _____

Start Date _____ Completion Date _____ Certificate Date _____

Teacher Signature _____ Student Signature _____

Signature verifies completion of course competencies)

A. **ORIENTATION AND SAFETY** (2 hrs)

- _____ 1. Scope and purpose of course
- _____ 2. Course content as part of Linked Learning
- _____ 3. Classroom policies and procedures
- _____ 4. Class/workplace emergency procedures
- _____ 5. Occupations in industry for auto technicians
- _____ 6. Gender equality/non-traditional employment
- _____ 7. OSHA governance in workplace for auto techs
- _____ 8. EPA standards for transportation industry
- _____ 9. ARB legislation for transportation industry
- _____ 10. BAR standards for safety/environment
- _____ 11. MSDS in automotive industry
- _____ 12. Safety items required by feds/state/local
- _____ 13. Role of NATEF in auto technician training
- _____ 14. NATEF standards for protective clothing/gloves
- _____ 15. NATEF standards for respiratory gear in shop
- _____ 16. NATEF standards for protective eye gear
- _____ 17. NATEF standards for proper ventilation
- _____ 18. NATEF standards: chemical/material disposal
- _____ 19. Safety test

B. **RESOURCE MANAGEMENT** (1 hr)

- _____ 1. Resource management principles/techniques
- _____ 2. Management of resources in auto industry
- _____ 3. Examples of effective management
- _____ 4. Benefits of resource management in industry
- _____ 5. Environmentally responsible management

C. **MEASUREMENTS** (5 hrs)

- _____ 1. Measurement pre-test
- _____ 2. Features/functions of auto measuring tools
- _____ 3. Measuring with various tools for autos

D. **TOOLS AND EQUIPMENT** (5 hrs)

- _____ 1. Features/function of common auto hand tools
- _____ 2. Selection and safe use of hand tool for job
- _____ 3. Features/function of power tools/equipment
- _____ 4. Selection and safe use of power tools for job

E. **ENGINE DESIGNS: DOMESTIC** (10 hrs)

- _____ 1. Feature/function of major parts of auto engine
- _____ 2. Four-stroke cycle
- _____ 3. Various domestic cylinder configurations

F. **ENGINE COOLING SYSTEMS** (15 hrs)

- _____ 1. Features/function of air/liquid cooling systems
- _____ 2. Liquid cooling system components
- _____ 3. Function of antifreeze/coolant
- _____ 4. Diagnose problem/replace cooling system parts

G. **ENGINE LUBRICATION SYSTEMS** (15 hrs)

- _____ 1. Features/functions of lubrication system
- _____ 2. Various lubrication system components
- _____ 3. Motor oils/top end & lower end of engine
- _____ 4. Diagnose problem/perform lube system service

H. **BASIC AUTOMOTIVE ELECTRICITY** (15 hrs)

- _____ 1. Principles of automotive electricity
- _____ 2. Automotive electrical devices/systems
- _____ 3. Solve problems using Ohm's Law

I. **CHARGING SYSTEMS** (10 hrs)

- _____ 1. Features and functions of the charging system
- _____ 2. Charging system components
- _____ 3. AC current to DC current
- _____ 4. Diagnose and repair system malfunctions

J. STARTING SYSTEMS (10 hrs)

- _____ 1. Features and functions of starting system
- _____ 2. Starting system components
- _____ 3. Diagnose problem/remove & replace components

K. EMPLOYABILITY SKILLS (2 hrs)

- _____ 1. Employer requirements in an employee
- _____ 2. Identify potential employers thru job search
- _____ 3. Social networking in job search
- _____ 4. Sample resume/cover letters
- _____ 5. Accurate, legible application
- _____ 6. Complete sample job applications
- _____ 7. Enthusiasm on the job
- _____ 8. Appropriate appearance on a job
- _____ 9. Upgrading of skills on a job
- _____ 10. Customer service to build relationships
- _____ 11. Appropriate interviewing techniques
- _____ 12. Resources for a successful job interview
- _____ 13. Sample follow-up letters
- _____ 14. Appropriate follow-up procedures