

LCB File No. R029-09

**PROPOSED REGULATION OF THE  
STATE BOARD OF EDUCATION**

(This regulation was previously proposed as T040-09)

**Explanation:** Matter in *italics* or underlined is new; matter in brackets ~~---~~ is material to be omitted.

**AUTHORITY:** NRS 385.080 & (if necessary, provide other statutory authority)

Section 1. NAC 389 is hereby amended as follows:

**NAC 389.597 Automotive technology: Advanced program.** (NRS 385.080, 385.110) A course of study in automotive technology must be designed so that pupils meet the following performance standards by the completion of an advanced program of instruction:

1. For the area of safety, demonstrate safe work practices while performing operations in an automotive technology laboratory, as demonstrated by the pupil's ability to:

(a) Demonstrate adherence to the general rules of shop safety *and fire safety*, including, without limitation, the:

(1) Proper use of safety apparel;

(2) Proper use and care of hand and power tools;

(3) Proper use and care of heavy equipment; and

(4) Safe handling, storage and disposal of chemicals and hazardous materials in accordance with local, state and federal statutes and regulations.

*(5) Following of fire safety rules and procedures.*

~~[(b) Demonstrate adherence to the specific rules and procedures of shop safety regarding fire safety, including, without limitation, the:~~

~~—(1) Proper use of fire extinguishers; and~~

~~—(2) Safe handling, storage and disposal of chemicals and hazardous materials in accordance with local, state and federal statutes and regulations.]~~

~~[2. For the area of engine repair, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform:~~

~~—(a) General diagnosis of an engine and the removal and reinstallation of an engine;~~

~~—(b) Diagnosis and repair of a cylinder head and valve train;~~

~~—(c) Assembly, diagnosis and repair of an engine block; and~~

~~—(d) Diagnosis and repair of the lubrication and cooling system.]~~

*2. For the area of general lab procedures, understand proper use of tools and equipment, retrieval of service information, vehicle preparation and basic vehicle service, as demonstrated by the pupil's ability to:*

*(a) Properly use tools and equipment common to the automotive lab;*

*(b) Retrieve and apply vehicle service information*

*(c) Prepare a vehicle for service and return the vehicle to the customer;*

*(d) Perform basic vehicle service.*

~~[3. For the area of automatic transmissions and transaxles, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform:~~

- ~~—(a) General diagnosis of a transmission and transaxle;~~
- ~~—(b) Maintenance and adjustment of a transmission and transaxle;~~
- ~~—(c) Repair of a transmission and transaxle while the transmission and transaxle are in the vehicle; and~~
- ~~—(d) Repair of a transmission and transaxle while the transmission and transaxle are off the vehicle.]~~

*3. For the area of engine repair, understand how to perform general engine service and maintenance, as demonstrated by the pupil's ability to:*

*(a) Perform general engine service and maintenance*

~~[4. For the area of manual drive train and axles, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform diagnosis and repair of a:~~

- ~~—(a) Clutch on rear wheel drive vehicles;~~
- ~~—(b) Transmission and transaxle;~~
- ~~—(c) Drive shaft and half shaft, universal and constant velocity joint;~~
- ~~—(d) Drive axle; and~~
- ~~—(e) Four wheel and all wheel drive component.]~~

*4. For the area of automatic transmissions, understand how to perform general automatic transmission/transaxle service as demonstrated by the pupil's ability to:*

*(a) Perform general automatic transmission/transaxle service that includes visual inspections, replacement of fluids and filters, retrieval and interpretation of diagnostic codes, identification of components, and identification of fluid types, levels and condition concerns.*

~~[5. For the area of suspension and steering, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform:~~

- ~~—(a) Diagnosis and repair of a steering system;~~
- ~~—(b) Diagnosis and repair of a suspension system;~~
- ~~—(c) Diagnosis, adjustment and repair for wheel alignment; and~~
- ~~—(d) Diagnosis and repair of wheels and tires.]~~

*5. For the area of manual drive trains and axles, understand the automotive service requirements as demonstrated by the pupil's ability to perform:*

*(a) Service requirements to include clutch, transmission and transaxle, drive shaft and half shaft, universal and constant-velocity (CV) joint and drive axles.*

~~[6. For the area of brakes, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform diagnosis and repair of:~~

- ~~—(a) Hydraulic systems;~~
- ~~—(b) Drum brakes;~~
- ~~—(c) Disc brakes;~~
- ~~—(d) Power assists units;~~

- ~~—(e) Anti-lock brake systems; and~~
- ~~—(f) Other items relating to the proper service of brakes, including, without limitation, wheel bearings, parking brakes and electrical systems.]~~

**6. For the area of suspension and steering, understand the service and repair requirements for suspension and steering systems and wheel and tire systems as demonstrated by the pupil's ability to:**

- (a) Perform general service for suspension and steering systems;**
- (b) Perform general service for wheels and tires.**

~~[7. For the area of electrical and electronic systems, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform:~~

- ~~—(a) General diagnosis of the electrical system;~~
- ~~—(b) Diagnosis and repair of a battery;~~
- ~~—(c) Diagnosis and repair of a starting system;~~
- ~~—(d) Diagnosis and repair of a charging system;~~
- ~~—(e) Diagnosis and repair of a lighting system; and~~
- ~~—(f) Diagnosis and repair of a horn and windshield wiper and washer.]~~

**7. For the area of brakes, understand the service requirements for brake systems, as demonstrated by the pupil's ability to perform:**

- (a) Perform general service hydraulic systems, power assist units, parking brakes and anti-lock braking systems (ABS);**
- (b) Perform general service for disc brake systems;**
- (c) Perform general service for drum brake systems.**

~~[8. For the area of heating and air conditioning, understand the requirements for automotive service, as demonstrated by the pupil's ability to perform:~~

- ~~—(a) Diagnosis and repair of an air conditioning system;~~
- ~~—(b) Diagnosis and repair of a refrigeration system component;~~
- ~~—(c) Diagnosis and repair of a heating, ventilation and engine cooling system;~~
- ~~—(d) Diagnosis and repair of operating systems and related controls; and~~
- ~~—(e) Recovery, recycling and handling of refrigerants.]~~

**8. For the area of electrical/electronic systems, understand the requirements for general diagnosis and service as demonstrated by the pupil's ability to:**

- (a) Perform general service for electrical systems;**
- (b) Perform general service and testing for batteries;**
- (c) Perform general service for starting and charging systems.**

~~[9. For the area of engine performance, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform:~~

- ~~—(a) General diagnosis of an engine;~~
- ~~—(b) Diagnosis and repair of computerized engine controls;~~
- ~~—(c) Diagnosis and repair of an ignition system;~~
- ~~—(d) Diagnosis and repair of fuel, air induction and exhaust systems;~~

- ~~—(e) Diagnosis and repair of emissions control systems; and~~
- ~~—(f) Other services related to an engine.]~~

**9. For the area of heating and air conditioning, understand the general service requirements as demonstrated by the pupil's ability to:**

**(a) Demonstrate knowledge of heating and air conditioning systems through visual inspections, identification of location and types of refrigerants, and performance testing using manifold gauges.**

~~[10. For the area of skills necessary to obtain employment, demonstrate:~~

- ~~—(a) Skills necessary for solving problems;~~
- ~~—(b) Skills of critical thinking;~~
- ~~—(c) The ability to speak, write and listen effectively;~~
- ~~—(d) The ability to select, apply and maintain the appropriate technology necessary for a career;~~
- ~~—(e) Skills of leadership and teamwork;~~
- ~~—(f) An awareness of the ethical behavior appropriate for the workplace;~~
- ~~—(g) An ability to effectively manage resources in the workplace;~~
- ~~—(h) Skills necessary for the planning and development of a career; and~~
- ~~—(i) Skills necessary for retaining a job and continuation of learning throughout a career.]~~

**10. For the area of engine performance, understand the requirements of automotive service, as demonstrated by the pupil's ability to perform:**

- (a) General engine performance diagnosis and repair.**
- (b) Fuel and ignition system diagnosis and repair.**

**11. For the area of alternative fuels and vehicles, demonstrate general knowledge by the pupil's ability to:**

- (a) Demonstrate knowledge of alternative fuels;**
- (b) Demonstrate knowledge of alternative fuel vehicles.**

**10. For the area of skills necessary succeed in the workplace, understand workplace readiness requirements as demonstrated by the pupil's ability to:**

- (a) Solve problems and think critically;**
- (b) Speak, write and listen effectively;**
- (c) Select, apply and maintain the appropriate technology necessary for a career;**
- (d) Demonstrate leadership and teamwork skills;**
- (e) Demonstrate ethical behavior appropriate for the workplace;**
- (f) Effectively manage resources in the workplace;**
- (g) Demonstrate career and development skills; and**
- (h) Demonstrate knowledge of job-retention and lifelong learning skills.]**