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General Assessment Information

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Test Type: The Automotive Technician-Core assessment is included in NOCTI's Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from secondary, post-secondary, and business/industry representatives from the states of Connecticut, Kentucky, Michigan, New Jersey, North Carolina, Pennsylvania, and West Virginia.



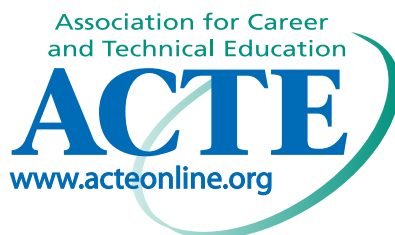
47.0604- Automobile/
Automotive Mechanics
Technology/Technician



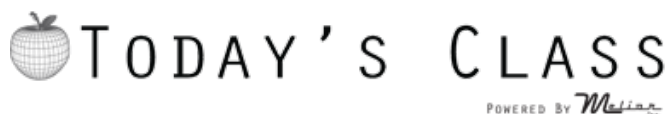
Career Cluster 16-
Transportation, Distribution,
and Logistics



49-3023.01- Automotive
Master Mechanics



The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!



Today's Class delivers web-based interactive educational programs and has determined that there is significant alignment between their Automotive curriculum and NOCTI's Automotive Technician-Core technical skill assessment. The alignment suggests that use of the Today's Class program curriculum may enhance student scores on NOCTI's assessment.



NATIONAL COLLEGE CREDIT RECOMMENDATION SERVICE
University of the State of New York - Regents Research Fund

In the lower division
baccalaureate/associate degree
category, 1 semester hour in
Automotive Trades or Automotive
Technician

Written Assessment

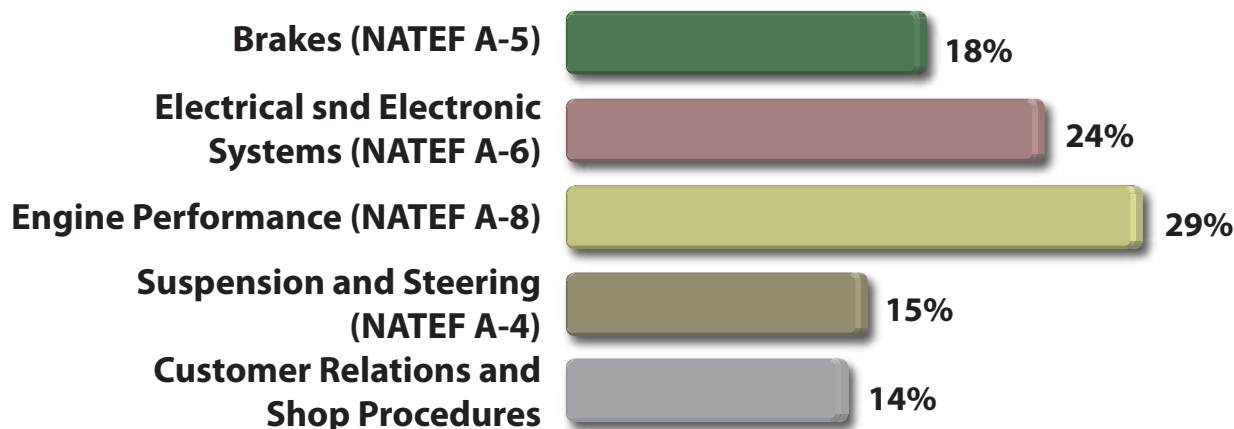
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 127

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Competencies and Skills Tested in this Assessment

Brakes (NATEF A-5)

- Diagnose and repair hydraulic systems
- Diagnose and repair drum brakes
- Diagnose and repair disc brakes
- Diagnose and repair power assist systems
- Diagnose and repair parking brake systems
- Diagnose and repair ABS (antilock brake systems) and TCS (traction control systems)

Electrical and Electronic Systems (NATEF A-6)

- Perform electrical/electronic system diagnosis
- Perform battery diagnosis and service
- Diagnose and repair starting systems
- Diagnose and repair charging systems
- Diagnose and repair lighting systems
- Diagnose and repair accessory devices and systems
- Diagnose and repair gauges, warning devices, and driver information systems

Engine Performance (NATEF A-8)

- Diagnose general engine performance
- Diagnose ignition systems
- Diagnose and repair fuel, air induction, and exhaust systems
- Diagnose and repair emissions control systems
- Diagnose and repair computerized engine control systems and intermittent issues
- Perform engine related service



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Specific Competencies and Skills (continued)

Suspension and Steering (NATEF A-4)

- Diagnose, service, and repair steering systems
- Diagnose, service, and repair suspension systems
- Perform wheel alignment diagnosis, adjustment, and repair
- Diagnose, service, and repair wheels and tires

Customer Relations and Shop Procedures

- Interpret and estimate repair and work orders
- Utilize shop service information
- Exhibit understanding of appropriate customer interactions
- Exhibit understanding of environmental requirements
- Display understanding of safe working environment and shop procedures



Sample Questions

What component is the brain of the anti-lock brake system (ABS)?

- A. electronic controller
- B. fluid reservoir
- C. vacuum booster
- D. solenoid body

The waste spark ignition system will fire

- A. two plugs at different times
- B. one plug at a time
- C. two plugs at the same time
- D. three plugs at the same time on a V-6

A bulge in the tread of a tire could indicate

- A. a broken belt in the tire
- B. the tire is over inflated
- C. the shocks are worn out
- D. the wheel is bent

The service charge for a job that requires 42 minutes at \$60.00 an hour would equal

- A. \$28.50
- B. \$34.40
- C. \$42.00
- D. \$72.10

Most fuel pressure regulators increase fuel pressure as

- A. the vacuum decreases
- B. oil pressure increases
- C. the vacuum increases
- D. oil pressure decreases

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Sample Questions (continued)

A battery load test is performed by

- A. loading the battery at half the cold cranking amps for 15 seconds
- B. loading the battery at the cold cranking amps for 15 seconds
- C. cranking the engine for 3 minutes
- D. removing the surface charge

In an evaporative system, the _____ stores fuel vapors.

- A. purge solenoid
- B. diverter valve
- C. carbon canister
- D. PCV valve

A customer insists on a road test immediately. The service writer should

- A. have the lube, oil, and filter (LOF) technician go along
- B. ask the other customers to please wait
- C. tell the customer to wait a few moments
- D. call the supervisor for assistance

A technician accidentally scratches the dash on a customer's vehicle. The technician should

- A. take the vehicle to a body shop
- B. use touch-up paint to cover the scratch
- C. return the vehicle to customer
- D. ask the service consultant to call the customer

A map sensor provides information to the PCM by

- A. measuring engine vacuum
- B. metering the volume of air coming into the engine
- C. calculating air fuel ratio
- D. measuring throttle angle

Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 1 hour and 40 minutes

Number of Jobs: 4

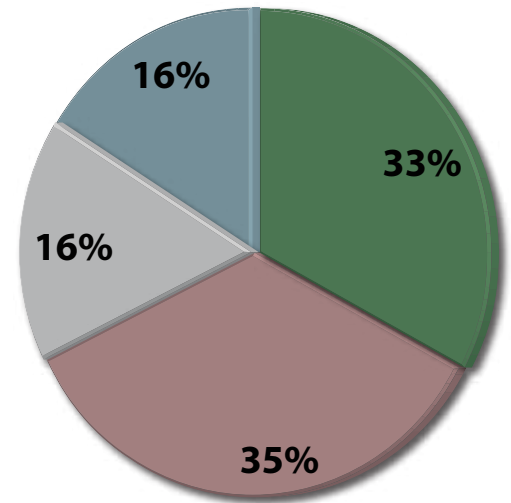
Areas Covered:

33% Brakes (NATEF A-5): Disc Brake Assembly Service

Remove caliper mounting bolts, remove and replace brake pads, record caliper mounting bolt torque specs, remount and torque caliper, measure and record rotor thickness, record manufacturer's discard specs, set up rotor on lathe and resurface, measure and record post-cut rotor thickness, rotor specifications, and time to complete Job 1.

35% Electrical/Electronic System (NATEF A-6): Test and Diagnose Battery, Starting, and Charging System

Perform open circuit voltage test, look up and record battery load test specs, perform battery capacity test, record findings, look up and record starter draw specs, perform starter draw test, record findings, perform ground circuit voltage drop test, record findings, look up and record manufacturer's alternator output specs, perform alternator output test and record findings, record alternator recommendations, and time to complete Job 2.



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Areas Covered (continued)

16% Engine Performance (NATEF A-8): Test Electronic Engine Control Component

Retrieve and document numerical trouble codes, use service information to identify trouble code(s), set, identify and locate trouble code components, do not clear codes or repair, and time to complete Job 3.

16% Suspension and Steering (NATEF A-4): Tire Service and Balance

Dismount the tire from the wheel, mount replacement tire on wheel, inflate tire to 28 psi, balance tire and wheel assembly, and time to complete Job 4.

Sample Job

Suspension and Steering (NATEF A-4): Tire Service and Balance

Maximum Time: 20 minutes

Participant Activity: The participant will dismount the tire from the wheel, mount replacement tire on wheel, inflate to 28 psi, balance tire and wheel assembly, and notify evaluator for inspection.

