Great Oaks Automotive Service Technician Essential Skills Profile

This profile provides an outline of the skills required for successful completion of this career program. Additional information is located on the Great Oaks website at https://hs.greatoaks.com/future-students/essential-skills-for-high-school-programs and selecting the corresponding career program.

Recommended WorkKeys® Scores for Automotive Service Technician

Applied Mathematics – 3
Workplace Documents – 4
Graphic Literacy – 4

*Practice tests and more information at https://jobseeker.ohiomeansjobs.monster.com/Assessments/Home.aspx

Recommended Essential Skills to Successfully Complete the Program			
Rating Key:	**Low = Slightly Essential**	**Medium = Essential**	**High = Very Essential**

Key Vocational Factors		**Rating**
Visual Acuity	The ability to detect differences/details visually	High
Auditory Acuity	The ability to detect differences in pitch/sound	High
Oral Communication	The ability to express/explain ideas	Medium
Oral Expression	The ability to verbally explain and express self in an intelligible manner so others will understand	Medium
Written Communication	The ability to communicate in a written format and record information accurately	Medium
Physical Mobility/Strength	The ability to lift 50 pounds or more, bending, stooping	High
Eye-Hand-Arm Coordination and Dexterity	The ability to use tools to ensure work is completed	High

Worker Trait Skills	**Rating**
Ability to get along with others	Medium
Ability to work independently, without close supervision	High
Ability to work toward work including tasks of minimal interest	Medium
Ability to stick to assigned task to a positive/expected conclusion	Medium
Ability to work accurately, recheck and correct work to industry standards	High
Ability to follow and retain:	
Multistep oral instructions	High
Written instructions/technical manuals - multistep	High
Simple to complex diagram instructions	High
Visual models or demonstrated instructions	High
Ability to use tools of trade (voltage or current meters, specialty wrenches, pullers, pneumatic vacuum equipment, brake repair kits, etc.)	High

Ability to use numerical data (count, measure, compute, etc.) in applied setting	High
Ability to discriminate between objects of similar:	
Size	Medium
Shape	Medium
Color	Medium
Spatial Relationship	Medium
Dexterity-Fine and gross finger/motor	High
Ability to organize work process/follow defined procedures	Medium
Able to sequence events or follow a sequence as necessary	Medium
Active Listening: Give full attention to what other people are saying, taking time to understand the points being made, asking appropriate questions and not interrupting	High

Applied Mathematics Skills * Recommended WorkKeys® Scores 3	
Understanding of numbers	Work with whole numbers and decimals
Mathematical calculations	Convert fractions and decimals and relate this information to percentages
Solving problems with math	Convert between familiar units of money and time (e.g. one hour equals 60 minutes or ½ of a dollar equal $0.50)
Workplace Documents Skills * Recommended WorkKeys® Scores 4	
Complexity	Mostly clear and direct but with multiple details, may have complex sentences and/or conditional situations
Information and detail	May need to meet inferences, differentiate/interpret details
Vocabulary	Industry jargon, acronyms, use context to understand words
Document type	Informational, instructional and policy-type documents
Graphic Literacy Skills * Recommended WorkKeys® Scores 4	
Using charts/graphs	Locate information in charts or graphs, compare information found another graphic
Interpreting information	Interpret and understand steps in charts or graphs, compare two or more pieces of information, make an inference/decision

Additional Recommended Abilities

Manual Dexterity	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
Manual Dexterity	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.

Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
Tech Prep Requirements	Attendance requirement of 95%; minimum Grade of C in algebra; 2.0 overall grade point average or higher
Work Preferences	Detail oriented, computer savvy, dirty/greasy, inside work with crawling, bending, and stooping

Knowledge Required in Automotive Service Technician

Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Automotive Service Technician Activities

Inspect vehicles for damage and record findings so that necessary repairs can be made.	Estimate costs of vehicle repair.
Troubleshoot fuel, ignition, and emissions control systems, using electronic testing equipment.	Repair, overhaul, or adjust automobile brake systems.
Test electronic computer components in automobiles to ensure proper operation.	Repair or replace defective ball joint suspensions, brake shoes, or wheel bearings.
Align wheels, axles, frames, torsion bars, and steering mechanisms of automobiles, using special alignment equipment and wheel-balancing machines.	Tune automobile engines to ensure proper and efficient functioning.
Repair, replace, or adjust defective fuel injectors, carburetor parts, and gasoline filters.	Rebuild, repair, or test automotive fuel injection units.
Change spark plugs, fuel filters, air filters, and batteries in hybrid electric vehicles.	Conduct visual inspections of compressed natural gas fuel systems to identify cracks, gouges, abrasions, discoloration, broken fibers, loose brackets, damaged gaskets, or other problems.
Diagnose and replace or repair engine management systems or related sensors for flexible fuel vehicles (FFVs) with ignition timing, fuel rate, alcohol concentration, or air-to-fuel ratio malfunctions.	Replace hydraulically assisted systems with electric-powered systems, such as power steering pumps or air conditioning compressors, to improve fuel economy.

Service or repair butane gas, ethanol, methane, or other alternative or biofuel systems.	Install or repair air conditioners and service components, such as compressors, condensers, and controls.
Service internal combustion engine systems for hybrid electric vehicles.	Install, adjust, or repair hydraulic or electromagnetic automatic lift mechanisms used to raise and lower automobile windows, seats, and tops
Diagnose and repair regenerative braking systems or hydraulic systems in hybrid vehicles.	Repair or rebuild clutch systems.
Repair or replace automobile leaf springs.	Replace defective mufflers and tailpipes.
Service biodiesel fuel tanks for algae or sludge accumulation by cleaning, changing filters, or adding algaecides.	Diagnose, troubleshoot, repair & install the following: brakes, electrical/electronics, engine repair, steering & suspension, engine performance.

Technology

Project Management Software	Facilities Management Software
Information Retrieval or Search Software	Database Reporting Software
Analytical Scientific Software	Billing/Invoicing Software

Certifications Students Can Earn

Credential	Ohio Graduation Points
ASE Maintenance and Light Repair	12
ASE Student – Automotive Service Technology	4
ASE Student – Automotive Automatic Transmission/Transaxle	4
ASE Student – Automotive Brakes	4
ASE Student – Automotive Electronic/Electrical Systems	4
ASE Student – Automotive Engine Performance	4
ASE Student – Automotive Engine Performance	4
ASE Student – Automotive Engine Repair	4
ASE Student – Automotive Heating and Air Conditioning	4
ASE Student – Automotive Maintenance and Light Repair	4
ASE Student – Automotive Manual Drive Train and Axles	4
ASE Student – Automotive Suspension and Steering	4
Snap-On Multimeter	3
Snap-On Battery Charging	3
CPR/First Aid	1
SP2 Automotive Safety	N/A
Refrigerant Recovery and Recycling	N/A

Possible College Credits

College Credit Plus (CCP)	The CCP program provides Ohio high school students an opportunity to complete college courses and earn transcripted credit.
Career Technical Assurance Guides (CTAGs)	CTAGs award college credit for career-technical coursework to students who complete an approved course and earn a qualifying score on the end of course exam.
Articulated Credit	Some Great Oaks career-technical programs have agreements with colleges where student can earn credit toward a specific degree.

Please speak with your school counselor, Great Oaks counselor and/or career technical instructor to learn more about these potential opportunities.

Possible Career Pathways

Dealership Technician	Entry-level Technician
Tire/lube Technician	Parts Specialist
Entrepreneur (Run your own shop)	Assistant Service Manager
Service Manager	Service Advisor