## Analysis of Employment Environment – Automotive Service Technicians and Mechanics

<table>
<thead>
<tr>
<th>Information to Consider</th>
<th>Characteristics/Demands</th>
<th>Necessary Skills</th>
<th>Sources of Assessment Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristics of the Physical Environment</strong></td>
<td>Indoors in well-ventilated, well-lighted</td>
<td>Noise tolerance</td>
<td>Review of medical records</td>
</tr>
<tr>
<td></td>
<td>Shops may be drafty and noisy</td>
<td>Good physical health</td>
<td>Interview with baseball coach</td>
</tr>
<tr>
<td></td>
<td>Work with dirty and greasy parts in awkward positions</td>
<td>Sensory tolerance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Body coordination</td>
<td></td>
</tr>
<tr>
<td><strong>Levels and Types of Social Interactions</strong></td>
<td>Communicate with car owners to identify problems and concerns</td>
<td>Social skills</td>
<td>Transition Behavior Scale</td>
</tr>
<tr>
<td></td>
<td>Communicate with repair service estimator or service advisor</td>
<td>Active listening</td>
<td>Interview with English Teacher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral expression</td>
<td>Automotive Technology I</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Competency List</td>
</tr>
<tr>
<td><strong>Characteristics of Climates and Cultures</strong></td>
<td>Potential for workplace injuries</td>
<td>Safety awareness</td>
<td>Interview with Automotive Teacher</td>
</tr>
<tr>
<td></td>
<td>High-level technology-related work</td>
<td>Technology skills</td>
<td>Automotive Technology I</td>
</tr>
<tr>
<td></td>
<td>Required to wear safety equipment</td>
<td>Safety compliance</td>
<td>Competency List</td>
</tr>
<tr>
<td></td>
<td>Must follow Occupational Safety and Health Administration (OSHA) procedures</td>
<td>Safety compliance</td>
<td>Interview with Automotive Technology teacher</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transition Behavior Scale</td>
</tr>
<tr>
<td>Information to Consider</td>
<td>Activities/Tasks</td>
<td>Necessary Skills</td>
<td>Sources of Assessment Data</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>---------------------------</td>
</tr>
</tbody>
</table>
|                         | Use computerized shop equipment and a variety of testing equipment to diagnose problems | Technology skills  
Numerical ability  
Analytical skills  
Reasoning ability | Automotive Technology I  
Competency List  
Occupational Aptitude Survey |
|                         | Work with electronic components and electronic diagnostic equipment | Accuracy  
Finger dexterity  
Technology skills | Crawford Small Parts Dexterity Test  
Automotive Technology I  
Competency List |
|                         | Read digital manuals and reference materials | Reading comprehension  
Near vision | Woodcock-Johnson III  
Review of medical records |
|                         | Test components and systems | Accuracy  
Mechanical aptitude  
Hearing sensitivity | Interview with automotive technology teacher  
Bennett Mechanical Comprehension Test |
|                         | May test drive a vehicle | Ability to become a licensed driver | Interview with student |
|                         | Lubricate engines and other major components | Manual and finger dexterity  
Body coordination | Bennett Hand Tool Dexterity Test  
Interview with baseball coach |
|                         | Repair or replace worn parts | Manual and finger dexterity  
Body coordination  
Depth perception | Bennett Hand Tool Dexterity Test  
Interview with baseball coach  
Interview with automotive technology teacher |
|                         | Follow a checklist | Reading | Brigance Test of Basic Skills |
|                         | Use a variety of tools – power and hand tools | Manual and finger dexterity  
Gross-motor skills  
Safety awareness | Bennett Hand Tool Dexterity Test  
Automotive Technology I  
Competency List |
|                         | Compare computerized readouts with benchmarked standards | Numerical aptitude  
Clerical aptitude | Occupational Aptitude Survey |
|                         | Review technical manual updates to keep up with common problems and learn new procedures | Reading comprehension  
Mechanical aptitude | Interview with automotive technology teacher  
Brigance Test of Basic Skills |
|                         | Lift heavy parts and tools | Physical capacity and stamina | Interview with baseball coach  
Automotive technology teacher |
Training and Other Qualifications:

Completion of a formal automotive service technology training program in high school or in a postsecondary vocational school or community college or associate’s degree in automotive technology

Acquire National Institute for Automotive Service Excellence (ASE) certification

Continuing Education:

Employers send experienced automotive service technicians to manufacturer training centers to learn to repair new models or receive special training in the repair of components

Recommended High School Coursework: Automotive repair, electronics, physics, chemistry, English, computers, and mathematics

Source:


Virginia Education Wizard, Virginia Community College Systems, [https://www.vawizard.org/vccs/Main.action](https://www.vawizard.org/vccs/Main.action)