

## **2. EMPLOYMENT OPPORTUNITIES FOR DIPLOMA HOLDERS IN AUTOMOBILE ENGINEERING**

The following employment opportunities are identified for diploma holders in automobile engineering:

### **1.1 Supervisor in State Transport Workshops/Service Department of Government as well as Private Sector and Garages:**

Garage Supervisor/Foreman/Service Station Incharge/Junior Engineer in following organisations:

- State transport authorities
- Garages of municipal corporations and other public/private sector undertakings
- Maintenance department of Tractor and Agriculture equipment service centre
- Military engineering services

### **1.2 Supervisor in Automobile Industry**

Junior Engineer/Chargeman/Foreman in assembly, finished vehicle testing, marketing, sales and servicing in:

- Automobile Manufacturing Industry
- Ordnance Factory

### **1.3 Junior Engineer/Sectional Officer in Government departments like PWD/Electricity Boards/Railways/Dock Yards/Armed Forces**

### **1.4 Inspector**

- Motor Vehicle Authority
- Pollution Level Testing
- Driving Test

### **1.5 Surveyor in Insurance Companies**

### **1.6 Self Employment:**

- Some of diploma holders may start their own ventures like garages/service stations/annual maintenance contract

### **3. COMPETENCY PROFILE OF DIPLOMA HOLDERS IN AUTOMOBILE ENGINEERING**

Keeping in view the employment opportunities, a diploma holder in Automobile Engineering should have following competencies:

1. Development of knowledge and skills in communication, interpersonal relations, appropriate attitude and value system.
2. Development of competencies in preparing, reading and interpreting drawings pertaining to different components, subassemblies and assembly of automobiles.
3. Knowledge and skills regarding basic concepts, principles, constructional details and working of an automobile.
4. Understanding regarding specifications of materials of components used in the manufacture of an automobile.
5. Development of skills in inspection and testing of an automobile as per laid standards.
6. Development of skills in fault diagnosing and rectification of the same in an automobile.
7. Knowledge and skills to manage routine and preventive maintenance.
8. Development of knowledge about mechanisms of an automobile.
9. Development of competency to manage the inventory and spare parts in workshop.
10. Development of competency to estimate material cost; labour cost and repairing cost of material.
11. Development of managerial skills to plan and execute shop floor operations for the manufacturing/production of automobile as per laid targets/schedule and quality standards.
12. Skill of data collection, analyzing the feedback for product development/improvement.
13. Development of knowledge and skills in enforcing pollution control standards, fuel efficiency standards and safety standards.
14. Competency to manage a garage.
15. Understanding of resources system helping in the financing of small enterprise.

16. Development of basic understanding of the use of computer in automobile industry.
17. Knowledge of basic subjects, which will serve as foundation for Technology subjects.
18. Knowledge about Motor Vehicle Act and Regulations and labour laws.

#### 4. DERIVING CURRICULUM AREA FROM COMPETENCY PROFILE

Sr. No.	Competency	Curriculum Area
i)	Development of knowledge and skills in communication, interpersonal relations appropriate attitudes and value systems.	<ul style="list-style-type: none"> <li>Communication skills – II, II</li> <li>Industrial management</li> </ul>
ii)	Development of competencies in reading and interpreting drawing pertaining to different components sub assemblies and assembly of automobile.	<ul style="list-style-type: none"> <li>Engineering drawing – I, II</li> <li>Auto Engineering drawing – I, II</li> </ul>
iii)	Knowledge and skills regarding basic concepts, principles, constructional details and working of an automobile.	<ul style="list-style-type: none"> <li>Basic automobile Engg.</li> <li>Auto engine</li> <li>Chassis, body &amp; transmission</li> <li>Auto electrical &amp; electronics equipment</li> </ul>
iv)	Understanding regarding specifications of materials and components used in the manufacture of an automobile.	<ul style="list-style-type: none"> <li>Material and metallurgy</li> </ul>
v)	Development of skills in inspection and testing of an automobile as per laid standards.	<ul style="list-style-type: none"> <li>Auto workshop and driving practice</li> </ul>
vi)	Development of skills in diagnosing and fault finding and rectification of the same in an automobile.	<ul style="list-style-type: none"> <li>General workshop practice</li> <li>Auto workshop</li> <li>Fault diagnosis &amp; driving practice</li> <li>Manufacturing technology</li> </ul>
vii)	Knowledge and skills to manage routine and preventive maintenance.	<ul style="list-style-type: none"> <li>Auto workshop</li> </ul>
viii)	Development of knowledge about mechanism of an automobile.	<ul style="list-style-type: none"> <li>Basic of Mechanical Engg.</li> </ul>

ix)	Development of competency to manage the inventory and spare parts in workshop.	<ul style="list-style-type: none"> <li>Industrial Management</li> </ul>
x)	Development of competency to estimate material cost, manufacturing cost and repairing cost of material.	<ul style="list-style-type: none"> <li>Industrial Engineering</li> <li>Tractor and earth moving machinery</li> </ul>
xi)	Development of managerial skills to plan and execute shop floor operations for the manufacturing/production of automobile as per laid targets/schedule quality standards.	<ul style="list-style-type: none"> <li>Industrial management</li> </ul>
xii)	Skill of data collection, analyzing the feedback and carrying out product development/improvement.	<ul style="list-style-type: none"> <li>Industrial Engineering</li> </ul>
xiii)	Development of knowledge and skills of managing pollution control standards, fuel efficiency standards and safety standards.	<ul style="list-style-type: none"> <li>MVA and Transport Management</li> </ul>
xiv)	Competency to manage a garage.	<ul style="list-style-type: none"> <li>Garage equipment</li> </ul>
xv)	Understanding of resource system helping in the financing of small enterprise.	<ul style="list-style-type: none"> <li>Entrepreneurship development and management.</li> </ul>
xvi)	Development of basic understanding of the use of computer in automobile industry.	<ul style="list-style-type: none"> <li>Basics of Information Technology</li> <li>Computer applications in Mechanical Engineering</li> </ul>
xvii)	Knowledge of basic subjects, which will serve as foundation for technology subjects.	<ul style="list-style-type: none"> <li>Applied physics</li> <li>Applied chemistry</li> <li>Applied mathematics</li> <li>Basics of electrical and electronics engg.</li> </ul>
xviii)	Knowledge about Motor Vehicle Act and Regulations and labour laws.	<ul style="list-style-type: none"> <li>Industrial management</li> </ul>