

# Exploring Careers Through Technical Routes

## Motor Vehicle



### The Industry

Motor vehicle is an exciting industry to work in if you love cars and are passionate about fixing things. It is continually changing with the focus on tackling emissions and improving air quality, the development of new technologies and the safety requirements for vehicles.

A vehicle mechanic works out what has gone wrong with a vehicle and then how to repair it. You could work for a garage, fast-fit outlet, car dealership, manufacturer's service centre, in freight or commercial transport, for a construction company, vehicle hire or a breakdown organisation.

This is a practical hands-on job. Daily tasks may include: cleaning vehicle and machine interiors, exteriors, engines or engine components; assessment and diagnosis of mechanical problems; using diagnostic testing; estimating how long it will take to carry out repairs.

Autocity, run by The Institute of the Motor Industry (IMI), has information about careers in the motor vehicle industry  
<http://www.autocity.org.ukorg.uk>

### Skills and Requirements

To be a successful vehicle mechanic you will need to have:

- Excellent friendly customer service skills to maintain or develop relations with customers
- The ability to carry out written and verbal instructions
- Strong practical skills and problem solving abilities
- The ability to quickly grasp new information
- Physical fitness and able to work in confined spaces
- Good eyesight and to carry out colour identification such as for wires and paint
- Ability to demonstrate knowledge and understanding of mechanical and/or electrical components
- Ability to build good working relationships
- A can do attitude to work with attention to detail
- Good timekeeping skills enabling efficient, economic and safe servicing/repair of customer vehicles
- Knowledge and understanding of the implications of legislation including data protection laws on sensitive customer information and health & safety on working practice.

You will also need to keep your skills and knowledge up to date with the evolution of new technologies.

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## Working and Learning in Motor Vehicle



### Job Roles & Progression

#### Study Programme

##### Level 2

Motor Vehicle Engineering.  
Light Vehicle Maintenance and Repair Principles.  
Vehicle Technology.

##### Level 3

Automotive Engineering.  
Light/Heavy Vehicle Maintenance and Repair Principles.  
Vehicle Technology.



#### Further study

##### Level 4

Advanced Automotive Diagnostic Techniques.  
Diploma Automotive Master Technicians.

##### HNC

Automotive Diagnostics and Management Principles.

##### BSc (Hons)

Automotive Engineering.

##### BEng (Hons)

Automotive Mechanical and Automotive Engineering.



#### Apprenticeships

##### Advanced

Light Vehicle Mechanic.



#### Career roles

Senior technician, workshop supervisor, garage manager or breakdown engineer.

Specialise e.g. motorsport engineering, electric and hybrid cars or tuning and modifying vehicles.  
Join the armed forces.

### Calculation including problem solving

#### Tasks

1. Prepare a customer repair quote including costs of parts, labour and VAT if applicable.
2. Maintain a daily spreadsheet of all tasks e.g. fast fit operations, diagnostics, valeting, and align to each cost centre of the business.
3. Estimate the amount of screen wash and water you will need to fill all the washers for cars being serviced in a day.
4. Find the best price for 24 new spark plugs to order from a range of suppliers.
5. Work out the payroll month by month for the staff.

#### Links to GCSE Maths

1. **Geometry and measure** (units of measure - unit pricing).
2. **Number** (whole numbers - multiplication and division; decimals - adding and subtracting decimals).
3. **Ratio, proportion and rates of change** (ratio in context - scale factors).  
**Number** (approximation - estimating calculations).
4. **Number** (whole numbers - multiplication, division, using a calculator).  
**Ratio, proportion and rates of change** (percentages - percentage change).
5. **Number** (financial maths – wages and salaries).

### Communication, all forms

#### Tasks

1. Work safely at all times in line with HSE requirements.
2. Refer a customer to the correct person if you need help with their enquiry or complaint.
3. Clarify customer and vehicle needs by referring to the vehicle data manual and operating procedures.
4. Use your company's recording system accurately and report on work carried out weekly.
5. Draft a promotional email to customers on your database about a special offer on tyres.

#### Links to GCSE English Language

1. **Analysing non-fiction** (non-fiction text types - instruction manual).
2. **Spoken language** (speaking and listening; personal presence - body language, eye contact; voice - tone).
3. **Analysing non-fiction** (non-fiction text types - manual; context - publication; purpose and audience).
4. **Writing** (writing non-fiction – writing a report; organising information and ideas - paragraphs, building sentences; literary techniques - informative language; vocabulary - use precise verbs).
5. **Writing** (writing non-fiction - writing an email; literary techniques – persuasive devices).  
**Spelling, punctuation and grammar.**