

MOTOR VEHICLE SERVICE AND MAINTENANCE TECHNICIAN

A motor vehicle service and maintenance technician service and repairs light vehicles such as cars and vans and works either in dealerships which focus on a particular manufacturer, or in an independent garage which deals with many different makes of vehicles.

Course Overview

The Requirements – Knowledge, Skills and Behaviours

Motor vehicle service and maintenance technicians have the following knowledge and understanding:

- The procedures for the maintenance of tools and the workshop;
- Routine servicing and inspection procedures;
- Steering and suspension geometries; electrical circuit requirements and calculations;
- Construction and operation of vehicle components and systems;
- Common fault types, causes and effects of different types of faults;
- How to diagnose faults using suitable fault-finding strategies;
- Vehicle emissions and legal requirements;
- Alternative fuels and hybrid and electric systems.

Motor vehicle service and maintenance technicians require the following skills, and will be able to:

- Contribute to the maintenance of a safe and efficient workshop.
- Demonstrate due regard for own safety and that of others in the workshop and minimise risk of injury and vehicle damage.
- Carry out fundamental tasks associated with removal and replacement procedures on a vehicle;
- Obtain diagnostic and repair information

Course code
AS3 Mtech

Award on successful completion
Motor vehicle service and maintenance technician level 3 standard

Study type
Day Release

Level
3

Start date
October 24

Duration
36 months

Fees
£16,000. Funded by government 16-21, 22+ 5% employer contribution unless levy

Location
Bromsgrove and Worcester campus

- Interpret diagnostic information and use electrical wiring diagrams to determine system serviceability.
- Use a range of diagnostic equipment.
- Test the function of repaired and fitted components.
- Adhere to business processes and complete documentation following workplace procedures.

Motor vehicle service and maintenance technicians demonstrate the following behaviours:

- Operate as an effective team member
- Build effective relationships with colleagues and customers
- Gain trust and pay attention to colleagues and customers concerns and needs
- Communicate effectively on a range of topics and with all sorts of different people
- Deliver excellent results and achieve challenging goals.
- Contribute to problem solving discussions and enjoy finding solutions to own and other people's problems.
- Suggest ways to make the business more efficient and contribute to its commercial growth.

Entry requirements

Minimum GCSE Grade 4 or above in Maths and English.

End Point Assessment

2 Online Knowledge Tests

Test 1 - 40 knowledge-based questions. Apprentices will have a maximum of 45 minutes to complete the test.

Test 2 - 60 randomly generated knowledge-based questions. Apprentices will have a maximum of 1 1/4 hours to complete the test.

Synoptic Professional Discussion

The discussion will last approximately 1 hour and will be in two parts: Part 1 lasting approximately 20 minutes and Part 2 lasting approximately 40 minutes which will all be based off the submitted logbook.

Part 1 Will examine the four behaviour elements involved in working in an automotive workshop.

Part 2 will examine knowledge and understanding involved in carrying out vehicle inspection and one of the four repairs chosen at random.

Skills Test

This is a 2 day skills assessment carried out by an independent assessor, the apprentice will be expected to carry out All requirements from Skill Set A will be assessed and 1 from Skill Sets B, C, D, E, F, G, H, I will be assessed during the skills test.

<p>Skill Set A</p> <ul style="list-style-type: none"> Remove and replace range of bolts and tighten correctly (using torque wrench when appropriate) Read and follow instructions to carry out procedures to set up a component (e.g. clutch, height adjustment) Carry out complex task (procedure involves a range of skills that need to be carried out in a specific methodical order) 	<p>Skill Set B</p> <ul style="list-style-type: none"> Check for leak Measuring components and determine serviceability Diagnose mechanical braking fault Diagnose charging and starting systems Diagnose suspension hydraulic faults 	<p>Skill Set C</p> <ul style="list-style-type: none"> Diagnose brake hydraulic fault Diagnose steering/suspension mechanical faults Diagnose steering hydraulic faults Diagnose sensor fault Use computer based test equipment
<p>Skill Set D</p> <ul style="list-style-type: none"> Test an auxiliary electrical component and determine if faulty Diagnose overheating faults Diagnose SRS fault Diagnose manual transmission or driveline faults Diagnose climate control faults Diagnose steering, suspension or brakes electrical faults Diagnose broken/shorted wire 	<p>Skill Set E</p> <ul style="list-style-type: none"> Diagnose turbo fault Diagnose engine mechanical fault Diagnose ECU faults Diagnose engine management fault Diagnose automatic transmission faults Diagnose advanced suspension systems Diagnose multiplex fault Diagnose emissions fault 	<p>Skill Set F</p> <ul style="list-style-type: none"> Remove and replace clips Remove and replace connectors Remove and replace trim Remove and replace tyre Handle fluids (antifreeze, oil, grease, acid. Sealant etc.) Balance a wheel Use ICT to create emails, or word process documents or carry out web based searches
<p>Skill Set G</p> <ul style="list-style-type: none"> Remove and replace hoses Remove and replace drive belts Bleed fluid system Carry out wheel alignment Use press to press rubber bush Replace road spring Time up engine component 	<p>Skill Set H</p> <ul style="list-style-type: none"> Remove and replace gasket Remove and replace an auxiliary electrical component Repair SRS fault Carry out minor repairs to wiring loom 	<p>Skill Set I</p> <ul style="list-style-type: none"> Free off seized components Remove component from a tapered shaft Use press to press bearing Remove and replace bearing Remove and replace seal At head gasket Replace loom
<p>Skill Set J</p> <p>Customer Service Skills Including:</p> <ul style="list-style-type: none"> Understanding Booking in Procedure Understanding of raising of Invoices Dealing with external customers Liaising with customers regarding extra costs etc Developing working relationships with colleagues (internal customers) 		

At the start of each task the apprentice will be presented with a fault and will be expected to:

- Ask questions to determine the exact fault;
- Explain any health and safety risks involved in the particular system;
- Carry out inspection, tests and measurements as appropriate to identify the repairs that need carrying out;
- Obtain relevant data;
- Present verbally what is involved with the repair and list the replacement parts involved;
- Obtain repair procedures;
- Carry out the repair;
- Present the repaired 'vehicle' and explain further action that may be required following on from the repair;
- Complete a job card.

