APPRENTICESHIP STANDARDS

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
Apprenticeship Standard - Motor Vehicle Service & Maintenance Technician (Light Vehicle)

F-Gas Certification (Air-Conditioning Certificate)

Study type
Day Release

Block Release for Maths & English if required

Level
3

Start date
October

Duration
36 Months

Fees
£15000 (16-18 years old = fully funded by government. 19+ years old 5% (£750) employer contribution to training)

Location
Worcester or Bromsgrove

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- 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

Maths & English GCSE Grade 4 or above are require for this apprenticeship.

Methods of 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 1¼ 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.

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Skill Set A

- 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)

Skill Set B

- Check for leak
- Measuring components and determine serviceability
- Diagnose mechanical braking fault
- Diagnose charging and starting systems • Diagnose suspension hydraulic faults

Skill Set C

- Diagnose brake hydraulic fault
- Diagnose steering/suspension mechanical faults
- Diagnose steering hydraulic faults
- Diagnose sensor fault
- Use computer based test equipment

Skill Set D

- 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

Skill Set E

- 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

Skill Set F

- 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.

Skill Set G

- 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

Skill Set H

- Remove and replace gasket
- Remove and replace an auxiliary electrical component
- Repair SRS fault
- carry out minor repairs to wiring loom

Skill Set I

- 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

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.