

# Specification

**Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF)**

**Edexcel Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF)**

**First registration November 2011**

Edexcel, a Pearson company, is the UK's largest awarding organisation offering vocational and academic qualifications and testing, to employers, training providers, colleges, schools, and other places of learning in the UK, and in over 85 countries worldwide.

Our specialist suite of qualifications include NVQs, Apprenticeships, WorkSkills, Functional Skills, Foundation Learning, as well as our exclusive range of BTECs, from entry level right through to Higher National Diplomas.

*References to third party material made in this specification are made in good faith. Edexcel does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)*

Authorised by Martin Stretton

Prepared by Natalie Muller

Publications Code AP029823

All the material in this publication is copyright

© Pearson Education Limited 2011

# Contents

---

<b>Qualification titles covered by this specification</b>	<b>1</b>
<b>Key features of the Edexcel Principles and Competence qualifications in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) (QCF) at Level 2</b>	<b>2</b>
What is the purpose and benefits of these qualifications?	2
Who are these qualifications for?	2
What are the potential job roles for those working towards these qualifications?	3
What progression opportunities are available to learners who achieve these qualifications?	3
<b>What is the qualification structure for the Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF)?</b>	<b>4</b>
<b>What is the qualification structure for the Edexcel Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF)?</b>	<b>6</b>
<b>How are the qualifications graded and assessed?</b>	<b>8</b>
Assessment strategy for competence-based qualifications (VCQs)	8
Types of evidence	9
<b>Centre recognition and approval</b>	<b>10</b>
Centre recognition	10
Approvals agreement	10
<b>Quality assurance</b>	<b>10</b>
<b>What resources are required?</b>	<b>11</b>
<b>Unit format</b>	<b>12</b>
<b>Units</b>	<b>13</b>
Unit 1: Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment	15
Unit 2: Skills in Health, Safety and Good Housekeeping in the Automotive Environment	27
Unit 3: Knowledge of Support for Job Roles in the Automotive Work Environment	33
Unit 4: Skills in Supporting Job Roles in the Automotive Work Environment	39

Unit 5:	Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	43
Unit 6:	Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	49
Unit 7:	Knowledge of Removing and Fitting Vehicle Mechanical Components	55
Unit 8:	Skills in Removing and Fitting Vehicle Mechanical Components	63
Unit 9:	Knowledge of Removing and Fitting Electrical Components	69
Unit 10:	Skills in Removing and Fitting Electrical Components	77
Unit 11:	Knowledge of Removing and Fitting Trim Components	81
Unit 12:	Skills in Removing and Fitting Trim Components	87
Unit 13:	Competency in Health, Safety and Good Housekeeping in the Automotive Environment	91
Unit 14:	Competency in Supporting Job Roles in the Automotive Work Environment	97
Unit 15:	Competency in Removing and Fitting Vehicle Mechanical Components	101
Unit 16:	Competency in Removing and Fitting Electrical Components	107
Unit 17:	Competency in Removing and Fitting Trim Components	111
<b>Further information</b>		<b>116</b>
<b>Useful publications</b>		<b>116</b>
How to obtain National Occupational Standards		116
<b>Professional development and training</b>		<b>117</b>
<b>Annexe A: Progression pathways</b>		<b>119</b>
The Edexcel qualification framework for the automotive sector		119
<b>Annexe B: Centre certification and registration</b>		<b>123</b>
What are the access arrangements and special considerations for the qualifications in this specification?		123
<b>Annexe C: Assessment Strategy</b>		<b>125</b>

# Qualification titles covered by this specification

---

This specification gives you the information you need to offer the Edexcel Principles and Competence qualifications in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) (QCF) at Level 2.

Qualification title	Qualification Number (QN)	Operational start date
Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF)	600/3716/7	01/11/2011
Edexcel Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF)	600/3717/9	01/11/2011

These qualifications have been accredited within the Qualifications and Credit Framework (QCF) and are eligible for public funding as determined by the Department for Education (DfE) under Section 96 of the Learning and Skills Act 2000.

The qualification titles listed above feature in the funding lists published annually by the DfE and the regularly updated website. They will also appear on the Learning Aim Reference Application (LARA), where relevant.

You should use the QCF Qualification Number (QN), when you wish to seek public funding for your learners. Each unit within a qualification will also have a unique QCF unit reference number, which is listed in this specification.

The QCF qualification title and unit reference numbers will appear on the learners' final certification document. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel.

# **Key features of the Edexcel Principles and Competence qualifications in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) (QCF) at Level 2**

---

These qualifications:

- are nationally recognised
- are based on the Accident Repair-MET National Occupational Standards (NOS). The NOS, assessment strategy, and qualification structures are owned by the Sector Skills Council The Institute of the Motor Industry (IMI).

The Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF) and the Edexcel Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF) have been approved as components in the IMI Intermediate apprenticeship framework in Vehicle Body and Paint.

## **What is the purpose and benefits of these qualifications?**

These qualifications give learners flexible access to industry supported Level 2 skills programmes, which act as a real alternative to academic qualifications for those who prefer this style of learning and achievement. As part of apprenticeship frameworks, the qualifications support learners in providing a career pathway into jobs and training at technician level and higher.

Learners will have the opportunity to learn and demonstrate their skills, knowledge and competence in assessing and repairing damage, and restoring mechanical, electrical and trim damage on a range of light and heavy vehicles.

## **Who are these qualifications for?**

These qualifications are for all learners aged 16 and above who are capable of reaching the required standards.

Edexcel's policy is that the qualifications should:

- be free from any barriers that restrict access and progression
- ensure equality of opportunity for all wishing to access the qualifications.

Centres should be aware that within the Level 2 qualifications in this specification, learners will be required to meet the demands of unit(s) at Level 3. Centres are advised to consider the support, guidance and opportunities they give to learners to meet the demands of the higher level units during delivery and assessment of the qualification.

**What are the potential job roles for those working towards these qualifications?**

- Mechanical and electrical trim technician
- Senior mechanical and electrical trim technician.

**What progression opportunities are available to learners who achieve these qualifications?**

Learners can progress on to other Edexcel automotive apprenticeship programmes and/or related qualifications detailed in *Annexe A*. Other progression routes include; further work or work experience, academic qualification(s) such as one or more GCSEs, higher education programmes and/or Foundation Degrees, or employment in a range of jobs at Levels 2 and 3.

# **What is the qualification structure for the Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF)?**

---

A total of 52 credits is required to achieve this qualification. 29 credits from the mandatory generic units in Group A and 23 credits from the mandatory specialist units in Group B.

Individual units can be found in the *Units* section.

<b>Unit No.</b>	<b>Unit Reference No.</b>	<b>Unit Title</b>	<b>Credit</b>	<b>Level</b>
<b>Group A – Mandatory generic units</b>				
Learners must achieve 29 credits from this group.				
1	D/601/6171	Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment	3	2
2	Y/601/7254	Skills in Health, Safety and Good Housekeeping in the Automotive Environment	7	2
3	T/601/6175	Knowledge of Support for Job Roles in the Automotive Work Environment	3	3
4	J/601/6262	Skills in Supporting Job Roles in the Automotive Work Environment	5	3
5	K/601/6237	Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	4	2
6	Y/601/6279	Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	7	2
<b>Group B – Mandatory specialist units</b>				
Learners must achieve 23 credits from this group.				
7	H/601/6026	Knowledge of Removing and Fitting Vehicle Mechanical Components	6	2
8	F/601/6048	Skills in Removing and Fitting Vehicle Mechanical Components	5	2
9	K/601/6030	Knowledge of Removing and Fitting Electrical Components	5	2

<b>Unit No.</b>	<b>Unit Reference No.</b>	<b>Unit Title</b>	<b>Credit</b>	<b>Level</b>
10	Y/601/6055	Skills in Removing and Fitting Electrical Components	2	2
11	A/601/6033	Knowledge of Removing and Fitting Trim Components	2	2
12	T/601/6063	Skills in Removing and Fitting Trim Components	3	2

# **What is the qualification structure for the Edexcel Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF)?**

---

A total of 63 credits is required to achieve this qualification. 29 credits from the mandatory generic units in Group A and 34 credits from the mandatory specialist units in Group B.

Individual units can be found in the *Units* section.

<b>Unit No.</b>	<b>Unit Reference No.</b>	<b>Unit Title</b>	<b>Credit</b>	<b>Level</b>
<b>Group A – Mandatory generic units</b>				
Learners must achieve 29 credits from this group.				
13	A/601/6338	Competency in Health, Safety and Good Housekeeping in the Automotive Environment	7	2
1	D/601/6171	Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment	3	2
14	K/601/6366	Competency in Supporting Job Roles in the Automotive Work Environment	5	3
3	T/601/6175	Knowledge of Support for Job Roles in the Automotive Work Environment	3	3
5	K/601/6237	Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	4	2
6	Y/601/6279	Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	7	2
<b>Group B – Mandatory specialist units</b>				
Learners must achieve 34 credits from this group.				
15	R/601/6118	Competency in Removing and Fitting Vehicle Mechanical Components	10	2
7	H/601/6026	Knowledge of Removing and Fitting Vehicle Mechanical Components	6	2
16	D/601/6123	Competency in Removing and Fitting Electrical Components	5	2

<b>Unit No.</b>	<b>Unit Reference No.</b>	<b>Unit Title</b>	<b>Credit</b>	<b>Level</b>
9	K/601/6030	Knowledge of Removing and Fitting Electrical Components	5	2
17	F/601/6132	Competency in Removing and Fitting Trim Components	6	2
11	A/601/6033	Knowledge of Removing and Fitting Trim Components	2	2

# How are the qualifications graded and assessed?

---

The overall grade for the qualifications is a 'pass'. The learner must achieve all the required units within the specified qualification structure.

To pass a unit the learner must:

- achieve **all** the specified learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion
- show that the evidence is their own.

The qualifications are designed to be assessed:

- in the workplace or
- in conditions resembling the workplace, as specified in the assessment requirements/strategy for the sector, or
- as part of a training programme.

## Assessment strategy for competence-based qualifications (VCQs)

The assessment strategy for the competence-based qualification (VCQ) in this specification has been included in *Annexe C*. It has been developed by IMI in partnership with employers, training providers, awarding organisations and the regulatory authorities. The assessment strategy includes details on:

- criteria for defining realistic working environments
- roles and occupational competence of assessors, expert witnesses, internal verifiers and standards verifiers
- quality control of assessment
- evidence requirements.

Evidence of competence may come from:

- **current practice** where evidence is generated from a current job role
- **a programme of development** where evidence comes from assessment opportunities built into a learning/training programme whether at or away from the workplace
- the **Recognition of Prior Learning (RPL)** where a learner can demonstrate that they can meet the assessment criteria within a unit through knowledge, understanding or skills they already possess without undertaking a course of learning. They must submit sufficient, reliable and valid evidence for internal and standards verification purposes. RPL is acceptable for accrediting a unit, several units or a whole qualification
- a **combination** of these.

It is important that the evidence is:

<b>Valid</b>	relevant to the standards for which competence is claimed
<b>Authentic</b>	produced by the learner
<b>Current</b>	sufficiently recent to create confidence that the same skill, understanding or knowledge persist at the time of the claim
<b>Reliable</b>	indicates that the learner can consistently perform at this level
<b>Sufficient</b>	fully meets the requirements of the standards.

## Types of evidence

To successfully achieve a unit the learner must gather evidence which shows that they have met the required standard in the assessment criteria. Evidence can take a variety of different forms including the examples below. Centres should refer to the assessment strategy for information about which of the following are permissible.

Centres should also refer to the assessment strategy (for competence-based qualifications (VCQs)) and the assessment requirements/evidence requirements section within each individual unit.

- direct observation of the learner's performance by their assessor (O)
- outcomes from oral or written questioning (Q&A)
- products of the learner's work (P)
- personal statements and/or reflective accounts (RA)
- outcomes from simulation, where permitted by the assessment strategy (S)
- professional discussion (PD)
- assignment, project/case studies (A)
- authentic statements/witness testimony (WT)
- expert witness testimony (EWT)
- evidence of Recognition of Prior Learning (RPL).

The abbreviations may be used for cross-referencing purposes.

Learners can use one piece of evidence to prove their knowledge, skills and understanding across different assessment criteria and/or across different units. It is, therefore, not necessary for learners to have each assessment criterion assessed separately. Learners should be encouraged to reference the assessment criteria to which the evidence relates.

Evidence must be made available to the assessor, internal verifier and Edexcel standards verifier. A range of recording documents is available on the Edexcel website [www.edexcel.com](http://www.edexcel.com). Alternatively, centres may develop their own.

# Centre recognition and approval

---

## Centre recognition

Centres that have not previously offered Edexcel qualifications need to apply for and be granted centre recognition as part of the process for approval to offer individual qualifications. New centres must complete both a centre recognition approval application and a qualification approval application.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by the new qualification and the conditions for automatic approval are met. Centres already holding Edexcel approval are able to gain qualification approval for a different level or different sector via Edexcel online.

## Approvals agreement

All centres are required to enter into an approvals agreement which is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and any linked codes or regulations. Edexcel will act to protect the integrity of the awarding of qualifications, if centres do not comply with the agreement. This could result in the suspension of certification or withdrawal of approval.

# Quality assurance

---

Quality assurance is at the heart of vocational qualifications. Assessment on BTEC and NVQ/Competence programmes is completed by your centre. You use quality assurance to ensure that your managers, internal verifiers and assessors are standardised and supported. We use quality assurance to check that all centres are working to national standards. It gives us the opportunity to identify and provide support where it is needed in order to safeguard certification. It also allows us to recognise and support good practice.

For the qualifications in this specification, the Edexcel quality assurance model will follow one of the three processes listed below.

- 1 Delivery of the **Competence and Principles** qualifications as part of a BTEC apprenticeship (single click registration)
  - integrated annual visits by a Standards Verifier to review centre-wide quality assurance systems and sampling of internal verification and assessor decisions

- 2 Delivery of the **Competence** qualifications outside the apprenticeship
  - annual visits to centres by a Centre Quality Reviewer to review centre-wide quality assurance systems
  - annual visits by a Standards Verifier for sampling of internal verification and assessor decisions for the qualification
- 3 Delivery of the **Principles** qualifications outside the apprenticeship
  - annual visits to centres by a Centre Quality Reviewer to review centre-wide quality assurance systems
  - Lead Internal Verifier accreditation. This involves online training and standardisation of Lead Internal Verifiers using our OSCA platform, accessed via Edexcel Online. Please note that not all qualifications are covered by Lead Internal Verifier accreditation. Where this is the case we will allocate a Standards Verifier annually to conduct postal sampling of internal verification and assessor decisions for the Principal Subject Area.

For further details, go to the UK BTEC Quality Assurance Handbook  
<http://www.edexcel.com/quals/BTEC/quality/Pages/documents.aspx>

## What resources are required?

---

Each qualification is designed to support learners working in the automotive sector. Physical resources need to support the delivery of the qualifications and the assessment of the learning outcomes and must be of industry standard.

For competence- based qualifications (VCQs), centres must meet any specific resource and staff requirements outlined in *Annexe C: Assessment strategy*.

# Unit format

Each unit in this specification contains the following sections.

<b>Unit title:</b>	The unit title is approved on the QCF and this form of words will appear on the learner's Notification of Performance (NOP).				
<b>Unit reference number:</b>	This code is a unique reference number for the unit.				
<b>QCF level:</b>	All units and qualifications within the QCF have a level assigned to them, which represents the level of achievement. There are nine levels of achievement, from Entry level to level 8. The level of the unit has been informed by the QCF level descriptors and, where appropriate, the NOS and/or other sector/professional.				
<b>Credit value:</b>	All units have a credit value. The minimum credit value is one, and credits can only be awarded in whole numbers. Learners will be awarded credits when they achieve the unit.				
<b>Guided learning hours:</b>	A notional measure of the substance of a qualification. It includes an estimate of the time that might be allocated to direct teaching or instruction, together with other structured learning time, such as directed assignments, assessments on the job or supported individual study and practice. It excludes learner-initiated private study.				
<b>Unit summary:</b>	This provides a summary of the purpose of the unit.				
<b>Assessment requirements/evidence requirements:</b>	The assessment/evidence requirements are determined by the SSC. Learners must provide evidence for each of the requirements stated in this section.				
<b>Learning outcomes:</b>	<b>Assessment criteria:</b>	<b>Evidence type:</b>	<b>Portfolio reference:</b>	<b>Date:</b>	
Learning outcomes state exactly what a learner should know, understand or be able to do as a result of completing a unit.		The assessment criteria of a unit specify the standard a learner is expected to meet to demonstrate that a learning outcome, or a set of learning outcomes, has been achieved.		The learner should use this box to indicate where the evidence can be obtained eg portfolio page number.	
Learners must reference the type of evidence they have and where it is available for quality assurance purposes. The learner can enter the relevant key and a reference. Alternatively, the learner and/or centre can devise their own referencing system.					

# **Units**



**Unit 1:****Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment**

**Unit reference number:** D/601/6171

**QCF level:** Level 2

**Credit value:** 3

**Guided learning hours:** 30

---

**Unit Summary**

This unit enables the learner to develop an understanding of:

- routine maintenance and cleaning of the automotive environment and using resources economically
- health and safety legislation and duties of everyone in the motor vehicle environment. It will provide an appreciation of significant risks in the automotive environment and how to identify and deal with them. Once completed the learner will be able to identify hazards and evaluate and reduce risk.

**Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*).

This unit must adhere to the IMI Knowledge Unit Syllabus as set out below:

**Economic use of Resources**

- a consumable materials eg grease, oils, split pins, locking and fastening devices etc

**Requirement to maintain work area effectively**

- a cleaning tools and equipment to maximise workplace efficiency
- b requirement to carry out the housekeeping activities safely and in a way that minimises inconvenience to customers and staff
- c risks involved when using solvents and detergents
- e advantages of good housekeeping

## **Spillages, leaks and waste materials**

- a relevance of safe systems of work to the storage and disposal of waste materials
- b requirement to store and dispose of waste, used materials and debris correctly
- c safe disposal of special/hazardous waste materials
- d advantages of recycling waste materials
- e dealing with spillages and leaks

## **Basic legislative requirements**

- a Provision and Use of Work Equipment Regulations 1992
- b Power Presses Regulations 1992
- c Pressure Systems and Transportable Gas Containers Regulations 1989
- d Electricity at Work Regulations 1989
- e Noise at Work Regulations 1989
- f Manual Handling Operations Regulations 1992
- g Health and Safety (Display Screen Equipment) Regulations 1992
- h Abrasive Wheel Regulations (current)
- i Safe Working Loads
- j Working at Height Regulations (current)

## **Routine maintenance of the workplace**

- a Trainees personal responsibilities and limits of their authority with regard to work equipment
- b Risk assessment of the workplace activities and work equipment
- c Workplace person responsible for training and maintenance of workplace equipment
- d When and why safety equipment must be used
- e Location of safety equipment
- f Particular hazards associated with their work area and equipment
- g Prohibited areas
- h Plant and machinery that trainees must not use or operate
- i Why and how faults on unsafe equipment should be reported
- j Storing tools, equipment and products safely and appropriately
- k Using the correct PPE
- l Following manufacturers' recommendations
- m Location of routine maintenance information eg electrical safety check log

### **Legislation relevant to health and safety**

- a HASAWA
- b COSHH
- c EPA
- d Manual Handling Operations Regulations 1992
- e PPE Regulations 1992

### **General regulations to include an awareness of:**

- a Health and Safety (Display Screen Equipment) Regulations 1992
- b Health and Safety (First Aid) Regulations 1981
- c Health and Safety (Safety Signs and Signals) Regulations 1996
- d Health and Safety (Consultation with Employees) Regulations 1996
- e Employers Liability (Compulsory Insurance) Act 1969 and Regulations 1998
- f Confined Spaces Regulations 1997
- g Noise at Work Regulations 1989
- h Electricity at Work Regulations 1989
- i Electricity (Safety) Regulations 1994
- j Fire Precautions Act 1971
- k Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985
- l Pressure Systems Safety Regulations 2000
- m Waste Management 1991
- n Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) 2002
- o Control of Asbestos at Work Regulations 2002

### **Legislative duties**

- a The purpose of a health and safety policy
- b The relevance of the Health and Safety Executive
- c The relevance of an initial induction to health and safety requirements at your workplace
- d General employee responsibilities under the HASAWA and the consequences of non-compliance
- e General employer responsibilities under the HASAWA and the consequences of non-compliance
- f The limits of authority with regard to health and safety within a personal job role
- g Workplace procedure to be followed to report health and safety matters

**Precautions to be taken when working with vehicles, workshop materials, tools and equipment including**

- a Electrical safety, pneumatics and hydraulics
- b Accessing and interpreting safety information
- c Seeking advice when needed
- d Seeking assistance when required
- e Reporting of unsafe equipment
- f Storing tools, equipment and products safely and appropriately
- g Using the correct PPE
- h Following manufacturers recommendations
- i Following application procedures eg hazardous substances
- j The correct selection and use of extraction equipment

**PPE to include:**

- a Typical maintenance procedures for PPE equipment to include:
  - i typical maintenance log
  - ii cleaning procedures
  - iii filter maintenance
  - iv variation in glove types
  - v air quality checks
- b Choice and fitting procedures for masks and air breathing equipment
- c Typical workplace processes which would require the use of PPE to include:
  - i welding
  - ii sanding and grinding
  - iii filling
  - iv panel removal and replacement
  - v drilling
  - vi cutting
  - vii chiselling
  - viii removal of broken glass
  - ix removal of rubber seals from fire damaged vehicles
  - x removal of hypodermic needles
  - xi servicing activities
  - xii roadside recovery
- d Unserviceable PPE

- e PPE required for a range automotive repair activities. To include appropriate protection of:
  - i eyes
  - ii ears
  - iii head
  - iv skin
  - v feet
  - vi hands
  - vii lungs

### **Fire and extinguishers**

- a Classification of fire types
- b Using a fire extinguisher effectively. Types of Extinguishers:
  - i foam
  - ii dry powder
  - iii CO<sub>2</sub>
  - iv water
  - v fire blanket

### **Action to be taken in the event of a fire to include:**

- a The procedure as:
  - i raise the alarm
  - ii fight fire only if appropriate
  - iii evacuate building
  - iv call for assistance

### **Product warning labels to include:**

- a Reasons for placing warning labels on containers
- b Warning labels in common use, to include:
  - i toxic
  - ii corrosive
  - iii poisonous
  - iv harmful
  - v irritant
  - vi flammable
  - vii explosive

## **Warning signs and notices**

- a Colours used for warning signs:
  - i red
  - ii blue
  - iii green
- b Shapes and meaning of warning signs:
  - i round
  - ii triangular
  - iii square
- c The meaning of prohibitive warning signs in common use
- d The meaning of mandatory warning signs in common use
- e The meaning of warning notices in common use
- f General design of safe place warning signs

## **Hazards and risks to include:**

- a The difference between a risk and a hazard.
- b Potential risks resulting from:
  - i the use and maintenance of machinery or equipment
  - ii the use of materials or substances
  - iii accidental breakages and spillages
  - iv unsafe behaviour
  - v working practices that do not conform to laid down policies
  - vi environmental factors
  - vii personal presentation
  - viii unauthorised personal, customers, contractors etc entering your work premises
  - ix working by the roadside
  - x vehicle recovery
- c The employee's responsibilities in identifying and reporting risks within their working environment
- d The method of reporting risks that are outside your limits of authority
- e Potential causes of:
  - i fire
  - ii explosion
  - iii noise
  - iv harmful fumes
  - v slips

- vi trips
- vii falling objects
- viii accidents whilst dealing with broken down vehicles

### **Personal responsibilities**

- a The purpose of workplace policies and procedures on:
  - i the use of safe working methods and equipment
  - ii the safe use of hazardous substances
  - iii smoking, eating , drinking and drugs
  - iv emergency procedures
  - v personal appearance
- b The importance of personal appearance in the control of health and safety

### **Action to be taken in the event of colleagues suffering accidents**

- a The typical sequence of events following the discovery of an accident such as:
  - i make the area safe
  - ii remove hazards if appropriate ie switch off power
  - iii administer minor first aid
  - iv take appropriate action to re-assure the injured party
  - v raise the alarm
  - vi get help
  - vii report on the accident
- b Typical examples of first aid which can be administered by persons at the scene of an accident:
  - i check for consciousness
  - ii stem bleeding
  - iii keep the injured person's airways free
  - iv place in the recovery position if injured person is unconscious
  - v issue plasters for minor cuts
  - vi action to prevent shock ie keep the injured party warm
  - vii administer water for minor burns or chemical injuries
  - viii wash eyes with water to remove dust or ingress of chemicals (battery acid)
  - ix need to seek professional help for serious injuries

- c Examples of bad practice which may result in further injury such as:
  - i moving the injured party
  - ii removing foreign objects from wounds or eyes
  - iii inducing vomiting
  - iv straightening deformed limbs

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand the correct personal and vehicle protective equipment to be used within the automotive environment	1.1	explain the importance of wearing the types of PPE required for a range automotive repair activities			
		1.2	identify vehicle protective equipment for a range of repair activities			
		1.3	describe vehicle and personal safety considerations when working at the roadside			
2	Understand effective housekeeping practices in the automotive environment	2.1	describe why the automotive environment should be properly cleaned and maintained			
		2.2	describe requirements and systems which may be put in place to ensure a clean automotive environment			
		2.3	describe how to minimise waste when using utilities and consumables			
		2.4	state the procedures and precautions necessary when cleaning and maintaining an automotive environment			
		2.5	describe the selection and use of cleaning equipment when dealing with general cleaning, spillages and leaks in the automotive environment			
		2.6	describe procedures for correct disposal of waste materials from an automotive environment			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	2.7 describe procedures for starting and ending the working day which ensure effective housekeeping practices are followed			
3 Understand key health and safety requirements relevant to the automotive environment	3.1 list the main legislation relating to automotive environment health and safety 3.2 describe the general legal duties of employers and employees required by current health and safety legislation 3.3 describe key, current health and safety requirements relating to the automotive environment 3.4 describe why workplace policies and procedures relating to health and safety are important			
4 Understand about hazards and potential risks relevant to the automotive environment	4.1 identify key hazards and risks in an automotive environment 4.2 describe policies and procedures for reporting hazards, risks, health and safety matters in the automotive environment 4.3 state precautions and procedures which need to be taken when working with vehicles, associated materials, tools and equipment 4.4 identify fire extinguishers in common use and which types of fire they should be used on			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
		4.5	identify key warning signs and their characteristics that are found in the vehicle repair environment			
		4.6	state the meaning of common product warning labels used in an automotive environment			
5	Understand personal responsibilities	5.1	explain the importance of personal conduct in maintaining the health and safety of the individual and others			
		5.2	explain the importance of personal presentation in maintaining health safety and welfare			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_ (if sampled) Date: \_\_\_\_\_



**Unit 2:****Skills in Health, Safety and Good Housekeeping in the Automotive Environment****Unit reference number:** Y/601/7254**QCF level:** Level 2**Credit value:** 7**Guided learning hours:** 60

---

**Unit Summary**

This unit will enable the learner to develop the skills required to:

- carry out day to day work area cleaning, clearing away, dealing with spillages and disposal of waste, used materials and debris
- identify hazards and risks in the automotive environment and complying with relevant legislation and good practice
- work safely at all times within the automotive environment, both as an individual and with others.

**Assessment Requirements/Evidence requirements:**

This unit must adhere to the IMI Skills Unit Assessment Requirements as set out below:

**You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out in your training workshop as managed and organised by an approved centre
- 3 be observed by an assessor as defined by the IMI Assessment Strategy
- 4 produce evidence of use of personal and vehicle protection, cleaning the work environment and disposal of waste on **2** separate **occasions**
- 5 produce evidence of identifying risks which may result from at least **2** of the items listed below:
  - the use and maintenance of machinery or equipment
  - the use of materials or substances
  - working practices which do not conform to laid down policies
  - unsafe behaviour

- accidental breakages and spillages
  - environmental factors
- 6 produce evidence of identifying risks
- 7 produce evidence of following at least **2** of the workplace policies listed below:
- the use of safe working methods and equipment
  - the safe use of hazardous substances
  - smoking, eating, drinking and drugs
  - what to do in the event of an emergency
  - personal presentation
- 8 produce evidence of following workplace policies.

## Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Be able to use correct personal and vehicle protection within the automotive environment	<p>1.1 select and use personal protective equipment throughout activities. To include appropriate protection of:</p> <ul style="list-style-type: none"> <li>a eyes</li> <li>b ears</li> <li>c head</li> <li>d skin</li> <li>e feet</li> <li>f hands</li> <li>g lungs</li> </ul> <p>1.2 select and use vehicle protective equipment throughout all activities</p>			
2 Be able to carry out effective housekeeping practices in the automotive environment	<p>2.1 select and use cleaning equipment which is of the right type and suitable for the task</p> <p>2.2 use utilities and appropriate consumables, avoiding waste</p>			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	2.3 use materials and equipment to carry out cleaning and maintenance duties in allocated work areas, following automotive work environment policies, schedules and manufacturers instructions			
	2.4 perform housekeeping activities safely and in a way which minimizes inconvenience to customers and staff			
	2.5 keep the work area clean and free from debris and waste materials			
	2.6 keep tools and equipment fit for purpose by regular cleaning and keeping tidy			
	2.7 dispose of used cleaning agents, waste materials and debris to comply with legal and workplace requirements			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
4	Be able to conduct themselves responsibly	4.1 show personal conduct in the workplace which does not endanger the health and safety of themselves or others		
		4.2 display suitable personal presentation at work which ensures the health and safety of themselves and others at work		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*



**Unit 3:****Knowledge of Support for Job Roles in the Automotive Work Environment**

**Unit reference number:** T/601/6175

**QCF level:** Level 3

**Credit value:** 3

**Guided learning hours:** 20

---

**Unit Summary**

This unit enables the learner to develop an understanding of how to keep good working relationships with all colleagues in the automotive work environment by using effective communication and support skills.

**Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*).

This unit must adhere to the IMI Knowledge Unit Syllabus as set out below:

**The structure of a typical vehicle repair business**

- a How these areas relate to each other within the business
  - i body shop
  - ii vehicle repair workshop
  - iii paint shop
  - iv valeting
  - v vehicle parts store
  - vi main office
  - vii vehicle sales
  - viii reception
- b Sources of information
  - i other staff
  - ii manuals
  - iii parts lists
  - iv computer software and the internet
  - v manufacturer
  - vi diagnostic equipment

## **Communication requirements when carrying out vehicle repairs**

- a Locating and using correct documentation and information for:
  - i recording vehicle maintenance and repairs
  - ii vehicle specifications
  - iii component specifications
  - iv oil and fluid specifications
  - v equipment and tools
  - vi identification codes
- b Procedures for:
  - i referral of problems
  - ii reporting delays
  - iii additional work identified during repair or maintenance
  - iv keeping others informed of progress

## **Methods of Communication**

- a verbal
- b signs and notices
- c memos
- d telephone
- e electronic mail
- f vehicle job card
- g notice boards
- h SMS text messaging
- i letters

## **Organisational and Customer requirements:**

- a importance of time scales to customer and organization
- b relationship between time and costs
- c meaning of profit

## **Choice of Communication**

- a distance
- b location
- c job responsibility

**Importance of maintaining positive working relationships:**

- a morale
- b productivity
- c company image
- d customer relationships
- e colleagues

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand key organisational structures, functions and roles within the automotive work environment	1.1	identify the purpose of different sections of a typical automotive work environment			
		1.2	explain organisational structures and lines of communication within the automotive work environment			
		1.3	explain levels of responsibility within specific job roles in automotive workplace. To include:			
			a trainee b skilled technician c supervisor d manager			
2	Understand the importance of obtaining, interpreting and using information in order to support their job role within the automotive work environment	2.1	explain the importance of different sources of information in a automotive work environment			
		2.2	explain how to find, interpret and use relevant sources of information			
		2.3	describe the main legal requirements relating to the vehicle, including road safety requirements			
		2.4	explain the importance of working to recognised procedures and processes			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	2.5 explain when replacement units and components must meet the manufacturers' original equipment specification			
	2.6 explain the purpose of how to use identification codes			
3 Understand the importance of different types of communication within the automotive work environment	3.1 explain where different methods of communication would be used within the automotive environment			
	3.2 explain the factors which can determine your choice of communication			
	3.3 explain how the communication of information can change with the target audience to include uninformed and informed people			
4 Understand communication requirements when carrying out vehicle repairs in the automotive work environment	4.1 explain how to report using written and verbal communication			
	4.2 explain the importance of documenting information relating to work carried out in the automotive environment			
	4.3 explain the importance of working to agreed timescales			
5 Understand how to develop good working relationships with colleagues and customers in the automotive workplace	5.1 describe how to develop positive working relationships with colleagues and customers			
	5.2 explain the importance of developing positive working relationships			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
		5.3	explain the importance of accepting other peoples' views and opinions			
		5.4	explain the importance of making and honouring realistic commitments to colleagues and customers			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_  
*(if sampled)* Date: \_\_\_\_\_

**Unit 4:****Skills in Supporting Job Roles in  
the Automotive Work  
Environment**

**Unit reference number:** J/601/6262

**QCF level:** Level 3

**Credit value:** 5

**Guided learning hours:** 40

---

**Unit Summary**

This unit will help the learner develop the skills required to keep good working relationships with all colleagues and customers in the automotive work environment by using effective communication and support.

**Assessment Requirements/Evidence requirements:**

This unit must adhere to the IMI Skills Unit Assessment Requirements developed for the unit as set out below:

**You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out in your training workshop as managed and organised by an approved centre
- 3 be observed by an assessor as defined by the IMI Assessment Strategy.
- 4 produce witness testimony from your peers **and** supervisor **or** tutor that you have worked well with others
- 5 produce evidence carrying out the above whilst performing your normal duties.

## Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Be able to work effectively within the organisational structure of the automotive work environment	1.1 respond promptly and willingly to requests for assistance from customers and colleagues 1.2 refer customers and colleagues to the correct person should requests fall outside their responsibility and capability			
2 Be able to obtain and use information in order to support their job role within the automotive work environment	2.1 select and use legal and technical information, in an automotive work environment			
3 Be able to communicate with and support colleagues and customers effectively within the automotive work environment	3.1 use methods of communication with customers and colleagues which meet their needs 3.2 give customers and colleagues accurate information 3.3 make requests for assistance from or to customers and colleagues clearly and courteously			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
4	Be able to develop and keep good working relationships in the automotive work environment	4.1	contribute to team work by initiating ideas and co-operating with customers and colleagues			
		4.2	treat customers and colleagues in a way which shows respect for their views and opinions			
		4.3	make and keep achievable commitments to customers and colleagues			
		4.4	inform colleagues promptly of anything likely to affect their own work			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*



## **Unit 5:**

# **Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment**

**Unit reference number:** K/601/6237

**QCF level:** Level 2

**Credit value:** 4

**Guided learning hours:** 40

---

## **Unit Summary**

This unit enables the learner to develop an understanding of:

- the correct selection, care and use of key hand tools and measuring devices for modification, fabrication and repair in the automotive environment
- the correct preparation and use of common automotive environment equipment
- the correct selection and fabrication of materials used when modifying and repairing
- the correct application of automotive engineering fabrication and fitting principles.

## **Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*).

This unit must adhere to the IMI Knowledge Unit Syllabus as set out below:

### **Common types of hand tools used for fabricating and fitting in the automotive workplace. To include:**

- a files
- b hacksaws and snips
- c hammers
- d screwdrivers
- e pliers
- f spanners

- g sockets
- h punches
- i types of drill and drill bits
- j taps and dies
- k stud removers
- l marking out tools

**Common measuring devices used for fabrication and fitting in the automotive workplace. To include:**

- a rule/tape
- b callipers
- c feeler gauge
- d volume measures
- e micrometer
- f dial gauges
- g torque wrenches
- h depth gauges

**Common electrical measuring tools used in the repair of vehicles and components. To include:**

- a ammeter
- b voltmeter
- c ohmmeter
- d multi-meter

**Common electrical terms when measuring:**

- a voltage
- b current
- c resistance

**Workshop equipment (including appropriate PPE). To include:**

- a hydraulic jacks
- b axle stands
- c pillar drills
- d air tools
- e vehicle lifts
- f cranes
- g hoists
- h electrical power tools

**Properties, application and limitations (to include safe use) of ferrous and non-ferrous metals used when constructing, modifying and repairing vehicles and components. Materials to include:**

- a carbon steels
- b alloy steels
- c cast iron
- d aluminium alloys
- e brass
- f copper
- g lead

**Properties, application and limitations (to include safe use) of non-metallic materials used when constructing, modifying and repairing vehicles and components. Materials to include:**

- a glass
- b plastics (inc. GRP)
- c Kevlar
- d rubber

**Terms relating to the properties of materials. To include:**

- a hardness
- b toughness
- c ductility
- d elasticity
- e tenacity
- f malleability
- g plasticity

## Learning outcomes and assessment criteria

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>1 Understand how to select, use and care for hand tools and measuring devices in the automotive environment</p>	<p>1.1 identify and explain the use of common types of hand tools used for fabricating and fitting in the automotive environment</p> <p>1.2 Identify and explain the use of common measuring devices used for fabrication and fitting in the automotive environment</p> <p>1.3 describe, within the scope of their responsibilities, how to select, prepare and maintain hand tools, measuring devices and PPE used for fabrication, repair and fitting in the automotive environment</p> <p>1.4 state the limitations of common hand tools and measuring devices used for fabricating, repair and fitting in the automotive workplace</p> <p>1.5 explain how common hand tools and measuring devices used for fabricating, repair and fitting in the automotive environment should be stored and maintained</p> <p>1.6 identify common electrical measuring tools used in the repair of vehicles and components</p> <p>1.7 explain the preparation and safe and correct use of common electrical tools when measuring voltage, current and resistance</p>			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
2	Understand how to prepare and use common workshop equipment	2.1 describe the preparation and safe use of workshop equipment 2.2 explain the term: safe working load		
3	Understand how to select materials when fabricating, modifying and repairing vehicles and fitting components	3.1 describe the properties, application and limitations of ferrous and non-ferrous metals, including their safe use 3.2 describe the properties, application and limitations of common non-metallic materials, including their safe use 3.3 define common terms relating to the properties of materials		
4	Understand how to apply automotive engineering, fabrication and fitting principles when modifying and repairing vehicles and components	4.1 describe how to tap threads, file, cut and drill plastics and metals when modifying or repairing vehicles 4.2 describe how to measure, mark out, shape and join materials when fabricating 4.3 describe the selection and fitting procedures of the following: a gaskets and seals b sealants and adhesives c fittings and fasteners d electrical circuit components		

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
		4.4	identify locking, fastening and fixing devices			
		4.5	state the importance of correct operating specifications for limits, fits and tolerances in the automotive environment			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*

## **Unit 6: Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment**

**Unit reference number:** Y/601/6279

**QCF level:** Level 2

**Credit value:** 7

**Guided learning hours:** 60

---

### **Unit Summary**

This unit helps the learner to develop the skills required for:

- the correct selection, care and use of key hand tools and measuring devices for modification, fabrication and repair in the automotive environment
- the correct preparation and use of common work environment equipment
- the correct selection and fabrication of materials used when modifying and repairing
- the correct application of automotive engineering fabrication and fitting principles.

### **Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (Annexe C).

This unit must adhere to the IMI Skills Unit Assessment Requirements developed for the unit as detailed below:

#### **You must**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out in your training workshop as managed and organised by an approved centre
- 3 be observed by an assessor as defined by the IMI Assessment Strategy

- 4 produce evidence of undertaking basic routine checks of hand tools, measuring devices and workshop equipment covering all of those listed below:
  - electrical
  - mechanical
  - pneumatic
  - hydraulic
- 5 produce evidence of fabricating **at least 1 item** from suitable materials to known tolerances, which includes the following processes:
  - filing
  - tapping threads
  - cutting
  - drilling
  - joining
- 6 be observed by your assessor carrying out routine checks and during stages of fabrication.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to select, maintain and use and hand tools and measuring devices in the automotive environment	1.1 select, maintain and use suitable hand tools safely when fabricating and fitting in the automotive workplace	1.2 select, maintain and use suitable measuring devices safely when fabricating and fitting in the automotive environment			
		1.3 select, maintain and use suitable PPE for fabrication, repair and fitting in the automotive environment.				
		1.4 select, maintain and use suitable electrical measuring tools safely when repairing vehicles and components				
2	Be able to prepare and use common workshop equipment	2.1 use suitably maintained workshop equipment safely	2.2 use correct interpretation of 'safe working load' on lifting and supporting equipment.	2.3 report any faulty or damaged tools and equipment to the relevant persons clearly and promptly.		
		2.4 store work tools and equipment in a safe manner which permits ease of access and identification for use.				

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
3	Be able to select materials when fabricating, modifying and repairing vehicles and fitting components	3.1 select and use appropriate materials whilst constructing, fitting, modifying or repairing vehicles and components.		
4	Be able to apply automotive engineering, fabrication and fitting principles when modifying and repairing vehicles and components	4.1 use correct procedures when: a filing, b tapping threads c cutting plastics and metals d drilling plastics and metals. e fitting  4.2 use appropriate techniques when fabricating, repairing and modifying vehicles and components  4.3 select and use: a gaskets b seals c sealants d fittings and fasteners  4.4 apply modification and repair techniques to automotive electrical circuits  4.5 select and use locking, fixing and fastening devices		

Learner name:	Date:
Learner signature:	Date:
Assessor signature:	Date:
Internal verifier signature: <i>(if sampled)</i>	Date:



## **Unit 7:**

# **Knowledge of Removing and Fitting Vehicle Mechanical Components**

**Unit reference number:** H/601/6026

**QCF level:** Level 2

**Credit value:** 6

**Guided learning hours:** 45

---

## **Unit Summary**

This unit enables the learner to develop knowledge in order to carry out the removal and fitting of a range of mechanical vehicle components. It also covers functional testing of fitted components.

## **Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*).

This unit must adhere to the IMI Knowledge Unit Syllabus as set out below:

### **The identification and operation of:**

- a Engine Cooling Systems
- b Exhaust
- c Fuel
- d Supplementary Restraint Systems
- e Suspension – with no Electronic Control
- f In vehicle entertainment – Audio only
- g Electro-Mechanical Locking
- h Air Conditioning – Evacuation, Re-gas and Oil of System, RRR of Dryer, Condenser & Pipe Work, Legislation around Refrigerant Handling
- i Engines components
- j Drivelines and Hubs
- k Final Drive Assemblies
- l Steering components
- m Braking components
- n Tow Bars

**The specific manufacturers and workshop procedures for the removal, renewal and replacement of components and systems**

- a The procedure and methods used to remove and fit exhaust systems addressing the following:
  - i oxygen/gas sensors (explain why hammers or pneumatic tools should not be used)
  - ii catalytic converters (explain why hammers or pneumatic tools should not be used)
  - iii mounting systems
  - iv seals and gaskets
  - v alignment
- b The procedure for the removal and fitting of brake system components:
  - i fluid
  - ii callipers
  - iii discs
  - iv drums
  - v cables
  - vi pipes and hoses
- c Suspension systems and specific procedures relating to:
  - i coil spring (McPherson strut)
  - ii air
  - iii hydrolastic
  - iv leaf spring
  - v torsion bar
- d The procedure for the removal and fitting of interior items:
  - i seats (including pre-tensioner)
  - ii In Car Entertainment (I.C.E). systems – audio only
  - iii Supplementary Restraint System (S.R.S). systems deployed and undeployed
- e The procedure for the removal and fitting of security devices:
  - i mechanical locks
  - ii electro-mechanical locks
  - iii electronic 'drop glass' systems (note: glass will not be easily movable when door is removed)
  - iv mechanical 'drop glass' systems

- f The procedure for the removal and fitting of cooling system components
  - i radiator and cowlings
  - ii cooling fans
  - iii drive belts
  - iv pipes, hoses and sensors
  - v air locks and bleeding techniques
- g The system components for power and non power steering and the removal/renewal and fitting of them
- h The procedure for the removal of fuel tanks
  - i The procedure for the removal and fitting of transmission systems
  - ii operating mechanisms; pedal and lever, mechanical systems, cable
  - iii clutch components; pressure plate, centre plate, release bearing hydraulic system; master cylinder, slave cylinder, hydraulic pipes
  - iv gearboxes
  - v propshafts
  - vi drive shafts
  - vii universal joints
  - viii sliding couplings
  - ix constant velocity joints
- j the reasons for using flexible couplings and sliding joints in transmissions systems
- k The reason for using constant velocity joints in drive shafts incorporating steering mechanisms
- l The importance of using approved parts, components and procedures:
  - i operation
  - ii warranty

### **Techniques and tools to carry out operational checks**

- a Equipment and process of checking and steering geometry:
  - i skid plates
  - ii two wheel alignment tracking gauges
  - iii four wheel alignment tracking gauges
  - iv castor
  - v camber
  - vi K.P.I.
  - vii toe-in/out

- b The tools and processes for checking fluid levels/pressures:
  - i cooling system (pressure, level, thermostat operation, cooling fan operation and antifreeze protection level)
  - ii steering, engine, transmission and braking systems
  - iii tyre pressures
  - iv tyre types and sizes relating to the mixing of tyres of different construction type

**Procedures to prevent damage to the vehicle, components and contents when removing, storing and refitting components**

- a The methods that can be used to protect undamaged items to ensure they are removed and refitted without causing unnecessary damage
- b The procedures for the correct storage of vehicle contents
- c The process for the reporting of extra damage and items that may have broken when removed or refitted

**Types of clips and fixings**

- a The following types of clips and identify reasons and limitations for their use:
  - i speed
  - ii 'c'
  - iii 'd'
  - iv 'j' type captive nut
  - v 'r'
  - vi 'u' type captive nut
  - vii cable clip
  - viii trim clips
- b The following types of fixings and identify reasons and limitations for their use:
  - i pop rivet
  - ii plastic rivet
  - iii plastic capture nut
  - iv nut and bolt
  - v shoulder bolt
  - vi 'Nyloc' type nuts
  - vii washers
  - viii 'Spring' type washers
  - ix self tapping screws and bolts
  - x quick release plastic trim fastenings

- xi trim tapes
- xii adhesives and sealers

### **The processes involved when carrying out quality checks**

- a Items that may have been 'workshop' soiled and describe processes for rectifying:
  - i door cards
  - ii seats
  - iii carpets
  - iv boot and bonnet trims
- b Methods for checking gaps
  - i The process for checking and aligning components

### **Mechanical Components**

- a Road Wheels
- b Engine Cooling Systems
- c Exhaust
- d Fuel
- e Supplementary Restraint Systems
- f Suspension with no Electronic Control
- g In vehicle entertainment – Audio only
- h Central locking systems
- i Air Conditioning – Evacuation, Re-gas and Oil of System, RRR of Dryer, Condenser & Pipe Work, Legislation around Refrigerant Handling
- j External Engine components
- k Drivelines and Hubs
- l Final Drive Assemblies
- m Steering components
- n Braking components
- o Tow Bars

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand how to carry out the removal and fitting of vehicle mechanical components	1.1	identify the procedures involved in carrying out the systematic removal and fitting of vehicle mechanical components to the standard required			
		1.2	explain the methods and procedures for storing removed vehicle mechanical components			
		1.3	identify the procedures involved in working with supplementary safety systems when fitting vehicle mechanical components			
		1.4	identify the different types of fastenings and fixings used when removing and fitting vehicle mechanical components			
		1.5	describe the reasons for the use of different types of fastenings and fixings used in vehicle mechanical components			
		1.6	describe the procedures, methods and reasons for ensuring correct alignment of vehicle mechanical components			
		1.7	identify the quality checks that can be used to ensure correct alignment and operation of components to manufacturers specification			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
		1.8	identify correct conformity of vehicle mechanical systems against vehicle mechanical specification and legal requirements on completion			
		1.9	explain the procedure for reporting damage to vehicle mechanical components and units			
2	Understand how mechanical vehicle systems operate	2.1	identify common vehicle mechanical system components			
		2.2	describe the construction and operation of common vehicle mechanical systems			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*



## **Unit 8:**

# **Skills in Removing and Fitting Vehicle Mechanical Components**

**Unit reference number:** F/601/6048

**QCF level:** Level 2

**Credit value:** 5

**Guided learning hours:** 45

---

## **Unit Summary**

This unit enables the learner to develop skills to carry out the removal and fitting of a range of vehicle mechanical components. It also covers functional testing of fitted components.

## **Assessment Requirements/Evidence requirements:**

This unit must adhere to the IMI Skills Unit Assessment Requirements developed for the unit as set out below:

### **You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out in your training workshop as managed and organised by an approved centre
- 3 be observed by an assessor as defined in the IMI Assessment Strategy
- 4 remove and replace **at least 5 different** mechanical components **from the 13 listed below:**
  - road wheels
  - engine cooling systems
  - exhaust system or sections
  - Supplementary restraint systems
  - suspension with no electronic control
  - in vehicle entertainment – audio only
  - central locking systems
  - RRR of dryer, condenser & pipe work
  - External engine components
  - drivelines and hubs
  - steering components (give examples)

- brake system components
- tow bars.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out the removal and fitting of vehicle mechanical components	1.1	wear suitable personal protective equipment and use suitable vehicle coverings throughout all motor vehicle removal and fitting of vehicle mechanical components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, people and the environment			
2	Be able to use relevant information to carry out the task	2.1	select suitable sources of technical information to support vehicle removal and fitting activities including: a vehicle technical data b removal and fitting procedures c legal requirements			
		2.2	use technical information to support vehicle removal and fitting activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out the removal and fitting of vehicle mechanical components			
		3.2	ensure that equipment has been calibrated and is in a safe working condition to meet manufacturers' and legal requirements			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	3.3 use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting of vehicle mechanical components			
4 Be able to carry out removal and fitting of vehicle mechanical components	4.1 remove and refit vehicle mechanical components	4.2 remove and refit vehicle mechanical components adhering to the correct specifications and tolerances for the vehicle and following: a the manufacturer's approved removal and fitting methods b recognised researched removal and fitting methods	4.3 ensure that the removal and fitting of vehicle mechanical components conforms to the vehicle operating specification and any legal requirements	4.4 ensure no damage occurs to other components when removing and fitting vehicle mechanical components
	4.5 ensure all components are stored safely and in the correct location			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
5	Be able to record information and make suitable recommendations	<p>5.1 produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required</p> <p>5.2 make suitable and justifiable recommendations for cost effective repairs</p> <p>5.3 record and report any additional faults noticed during the course of their work promptly in the format required</p>		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
(if sampled)



**Unit 9:****Knowledge of Removing and Fitting Electrical Components**

**Unit reference number:** K/601/6030

**QCF level:** Level 2

**Credit value:** 5

**Guided learning hours:** 45

---

**Unit Summary**

This unit enables the learner to develop knowledge in order to carry out the removal and fitting of a range of electrical components. It also covers functional testing of fitted components.

**Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*).

This unit must adhere to the IMI Knowledge Unit Syllabus as set out below:

**Basic electrical and electronic principles and electrical circuits**

a Quantities:

- i basic volt (electrical pressure)
- ii ampere (electrical current)
- iii ohm (electrical resistance)
- iv watt (power)

b The requirements of an electrical circuit:

- i battery
- ii cables
- iii switch
- iv current consuming device

c The direction of current flow and electron flow

d Simple series and parallel circuits

e Earth and insulated return

f Cable sizes and colour codes

g Types of connectors, terminals and circuit protection devices

h Common electrical and electronic symbols

- i The meaning of:
  - i short circuit
  - ii open circuit
  - iii bad earth
  - iv high resistance
  - v electrical capacity
- j The basic principle of vehicle electronics and solid state
- k procedures involved in carrying out the systematic removal and fitting of electrical components
  - i batteries
  - ii headlamps
  - iii wiper systems
  - iv electric window systems
- l electrical system components
  - i batteries
  - ii headlamps
  - iii wiper systems
  - iv electric window systems

### **Vehicle electrical wiring diagrams**

- a Interpret circuits to include:
  - i vehicle lighting
  - ii auxiliary circuits
  - iii indicators

### **Vehicle batteries**

- a The construction and principles of vehicle batteries

### **Vehicle lighting and auxiliary systems**

- a Identify the function and operating principles of:
  - i types of switches
  - ii circuit protection devices
  - iii relays
  - iv types of bulb
  - v front and tail lamps
  - vi main and dip beam headlamps
  - vii lighting and dip switch
  - viii window winding

- ix heating and ventilation systems, fan and heater
- x door mirror mechanisms
- xi interior lights and switching
- xii directional indicators
- b The statutory lighting requirements when using a vehicle on the road
- c The need for headlamp adjustment

### **Requirements of electrical and electronic systems**

- a The requirements for checking security and cleanliness of components, connections, correct operation of components and instruments, battery electrolyte, headlamp alignment, drive belt wear and tension
- b The basic procedures for checking the operation of electrical circuits:
  - i use of multi-meters, volt, amps, ohms
  - ii checking voltage supply
  - iii checking current flow and consumption
  - iv checking resistance and volt drop
  - v checking lamp operation, dip and main beam
  - vi checking indicators
- c Safety precautions when working on electrical and electronic circuits to include:
  - i disconnection and connection of battery
  - ii avoidance of short circuits
  - iii circuit protection

### **Procedures to prevent damage to the vehicle, components and contents when removing, storing and refitting components**

- a The methods that can be used to protect undamaged items to ensure they are removed and refitted without causing unnecessary damage
- b The procedures for the correct storage of vehicle contents
- c The process for the reporting of extra damage and items that may have broken when removed or refitted

### **Types of clips and fixings**

- a The following types of clips and identify reasons and limitations for their use:
  - i speed
  - ii 'c'
  - iii 'd'
  - iv 'j' type captive nut
  - v 'r'

- vi 'u' type captive nut
- vii cable clip
- viii trim clips
- b The following types of fixings and identify reasons and limitations for their use:
  - i pop rivet
  - ii plastic rivet
  - iii plastic capture nut
  - iv nut and bolt
  - v shoulder bolt
  - vi 'Nyloc' type nuts
  - vii washers
  - viii 'Spring' type washers
  - ix self tapping screws and bolts
  - x quick release plastic trim fastenings
  - xi trim tapes
  - xii adhesives and sealers

### **The processes involved when carrying out quality checks**

- a Items that may have been 'workshop' soiled and describe processes for rectifying:
  - i door cards
  - ii seats
  - iii carpets
  - iv boot and bonnet trims
- b Methods for checking gaps
- c The process for checking and aligning headlamps:
  - i address handling procedures for halogen bulbs
  - ii address handling and health and safety issues relating to xenon bulbs and systems
- d Operational checks and rectification methods to include:
  - i lights
  - ii washers and wipers
  - iii Supplementary Restraint Structure (SRS) systems (checking not rectification)
  - iv charging system (checking not rectification)
  - v horn
  - vi fluid levels

- vii interior switches
- viii operation of door lock mechanisms

### **Electrical Components**

- a Batteries
- b Headlamps
- c Wiper systems
- d Electric Window Systems

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand how to carry out the removal and fitting of electrical components	1.1	identify the procedures involved in carrying out the systematic removal and fitting of common electrical components			
		1.2	explain the methods and procedures for storing removed vehicle electrical components			
		1.3	identify the procedures involved in working with supplementary safety systems when fitting vehicle components			
		1.4	identify the procedures involved in working with gas discharge headlamp systems			
		1.5	describe the procedures, methods and reasons for ensuring correct alignment of vehicle electrical components			
		1.6	identify the quality checks that can be used to ensure correct alignment and operation of components to manufacturers specification			
		1.7	identify correct conformity of vehicle systems against vehicle specification and legal requirements on completion			
		1.8	explain the procedure for reporting damage to vehicle electrical components and units			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
2	Understand how electrical systems operate	2.1	identify common electrical system components			
		2.2	describe the construction and operation of the main electrical systems			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*



## **Unit 10: Skills in Removing and Fitting Electrical Components**

**Unit reference number:** Y/601/6055

**QCF level:** Level 2

**Credit value:** 2

**Guided learning hours:** 20

---

### **Unit Summary**

This unit will help the learner to develop skills in order to carry out the removal and fitting of a range of electrical vehicle components. It also covers functional testing of fitted components.

### **Assessment Requirements/Evidence requirements:**

This unit must adhere to the IMI Skills Unit Assessment Requirements developed for the unit as set out below:

#### **You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out in your training workshop as managed and organised by an approved centre
- 3 be observed by an assessor as defined in the IMI Assessment Strategy
- 4 remove and replace **key** electrical components from **2** of the systems listed below
  - battery/charging
  - lighting – low voltage
  - electric window systems
  - electrical auxiliary systems.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out the removal and fitting of electrical vehicle components	1.1	Wear suitable personal protective equipment and use suitable vehicle coverings throughout all motor vehicle removal and fitting of electrical vehicle components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, people and the environment			
2	Be able to use relevant information to carry out the task	2.1	select suitable sources of technical information to support vehicle removal and fitting activities including: a vehicle technical data b removal and fitting procedures c legal requirements			
		2.2	use technical information to support vehicle removal and fitting activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out the removal and fitting of electrical components			
		3.2	ensure that equipment has been calibrated and is in a safe working condition to meet manufacturers' and legal requirements			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>3.3 use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting of electrical components</p>			
<p>4 Be able to carry out the removal and fitting of electrical vehicle components</p>	<p>4.1 remove and refit common electrical vehicle components</p> <p>4.2 remove and refit the electrical vehicle components adhering to the correct specifications and tolerances for the vehicle and following:</p> <ul style="list-style-type: none"> <li>a the manufacturer's approved removal and fitting methods</li> <li>b recognised researched removal and fitting methods</li> </ul> <p>4.3 ensure that the removal and fitting of electrical vehicle components conforms to the vehicle operating specification and any legal requirements</p> <p>4.4 ensure no damage occurs to other components when removing and fitting electrical vehicle components</p> <p>4.5 ensure all components are stored safely and in the correct location</p>			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
5	Be able to record information and make suitable recommendations	<p>5.1 produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required</p> <p>5.2 make suitable and justifiable recommendations for cost effective repairs</p> <p>5.3 record and report any additional faults noticed during the course of their work promptly in the format required</p>		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*

## **Unit 11:**

## **Knowledge of Removing and Fitting Trim Components**

**Unit reference number:** A/601/6033

**QCF level:** Level 2

**Credit value:** 2

**Guided learning hours:** 20

---

### **Unit Summary**

This unit enables the learner to develop knowledge in order to carry out the removal and fitting of a range of trim components. It also covers functional testing of fitted components.

### **Assessment Requirements/Evidence requirements:**

If this unit is offered within a competence qualification (VCQ) it must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*).

This unit must adhere to the IMI Knowledge Unit Syllabus as set out below:

#### **Procedures to prevent damage to the vehicle, components and contents when removing, storing and refitting components**

- a The methods that can be used to protect undamaged items to ensure they are removed and refitted without causing unnecessary damage:
  - i trims
  - ii mouldings
  - iii bumpers
  - iv door cards
  - v headlamps
  - vi window and waist mouldings
  - vii bonnet and boot lid trim
  - viii sunroof systems
  - ix carpets
  - x headlining
  - xi spoilers
- b The procedures for the correct storage of vehicle contents
- c The process for the reporting of extra damage and items that may have broken when removed or refitted

## **Tools and equipment**

- a the use of the following:
  - i trolley jack
  - ii axle stands
  - iii two post ramp
  - iv four post ramp with 'wheel free'
  - v torque wrenches
  - vi trim tools
  - vii general hand tool selection
  - viii manufacturers specialist tools
  - ix air drills and bits
  - x impact drivers
  - xi rivet guns

## **The processes involved when handling batteries**

- a The procedure for the removal, storage and refitting of batteries
- b The procedure for the disposal of batteries
- c Battery checks as appropriate:
  - i electrolyte
  - ii discharge
  - iii specific gravity
- d The charging process and procedures:
  - i trickle charge
  - ii normal charge
  - iii boost/start
- e The health and safety issues involved when charging (explosive gasses)

## **Types of clips and fixings**

- a The following types of clips and identify reasons and limitations for their use:
  - i speed
  - ii 'c'
  - iii 'd'
  - iv 'j' type captive nut
  - v 'r'
  - vi 'u' type captive nut
  - vii cable clip
  - viii trim clips

- b The following types of fixings and identify reasons and limitations for their use:
- i pop rivet
  - ii plastic rivet
  - iii plastic capture nut
  - iv nut and bolt
  - v shoulder bolt
  - vi 'Nyloc' type nuts
  - vii washers
  - viii 'Spring' type washers
  - ix self tapping screws and bolts
  - x quick release plastic trim fastenings
  - xi trim tapes
  - xii adhesives and sealers

### **The processes involved when carrying out quality checks**

- a Items that may have been 'workshop' soiled and describe processes for rectifying:
- i door cards
  - ii seats
  - iii carpets
  - iv boot and bonnet trims
  - v headlamps
  - vi window and waist mouldings
  - vii bonnet and boot lid trim
  - viii sunroof systems
  - ix carpets
  - x headlining
  - xi spoilers
- b Methods for checking gaps

### **Principle Trim Components**

- a Bumpers
- b Door Trim
- c Window and Waist Mouldings
- d Bonnet and Boot lid Trim
- e Sunroof Systems
- f Carpets

g Headlining

h Spoilers

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand how to carry out the removal and fitting of trim components	1.1	identify the procedures involved in carry out the systematic removal and fitting of trim components to the standard required			
		1.2	explain the methods and procedures for storing removed trim components			
		1.3	describe the procedures, methods and reasons for ensuring correct alignment of trim components			
		1.4	identify the quality checks that can be used to ensure correct alignment and operation of components to manufacturers specification			
		1.5	identify correct conformity of vehicle systems against vehicle specification and legal requirements on completion			
		1.6	explain the procedure for reporting damage to vehicle components and units			
2	Understand the types of common trim components and securing methods	2.1	identify common trim system components			
		2.2	describe the construction and fastening methods used for common trim components and systems			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*

## **Unit 12: Skills in Removing and Fitting Trim Components**

**Unit reference number:** T/601/6063

**QCF level:** Level 2

**Credit value:** 3

**Guided learning hours:** 20

---

### **Unit Summary**

This unit will help the learner to develop skills in order to carry out removal and fitting of a range of trim components. It also covers functional testing of fitted components.

### **Assessment Requirements/Evidence requirements:**

This unit must adhere to the IMI Skills Unit Assessment Requirements Developed for the unit as set out below:

#### **You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out in your training workshop as managed and organised by an approved centre
- 3 be observed by an assessor as defined in the IMI Assessment Strategy
- 4 remove and replace at least **4 different** trim units or components from the **10** listed below:
  - bumpers
  - headlamp units
  - door trim
  - window and waist mouldings
  - bonnet components
  - boot lid/ tailgate trim
  - sunroof systems
  - carpets
  - headlinings
  - spoilers.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out the removal and fitting of trim components	1.1	Wear suitable personal protective equipment and use suitable vehicle coverings throughout all motor vehicle removal and fitting of trim components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, people and the environment			
2	Be able to use relevant information to carry out the task	2.1	select suitable sources of technical information to support vehicle trim removal and fitting activities including:			
			a vehicle technical data b removal and fitting procedures c legal requirements			
3	Be able to use appropriate tools and equipment	2.2	use technical information to support vehicle trim removal and fitting activities			
		3.1	select the appropriate tools and equipment necessary for carrying out the removal and fitting of trim components			
		3.2	ensure that equipment has been calibrated and is in a safe working condition			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
		3.3 use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting of trim components		
4	Be able to carry out removal and fitting of trim components	4.1 remove and refit common trim components 4.2 remove and refit trim components adhering to the correct specifications and tolerances for the vehicle and following: a the manufacturer's approved removal and fitting methods b recognised researched removal and fitting methods	4.3 ensure that the removal and fitting trim components conforms to the vehicle operating specification and any legal requirements 4.4 ensure no damage occurs to other components when removing and fitting trim components 4.5 ensure all components are stored safely and in the correct location	

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
5	Be able to record information and make suitable recommendations	5.1 produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required 5.2 make suitable and justifiable recommendations for cost effective repairs 5.3 record and report any additional faults noticed during the course of their work promptly in the format required		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_  
*(if sampled)*

**Unit 13:****Competency in Health, Safety and Good Housekeeping in the Automotive Environment**

**Unit reference number:** A/601/6338

**QCF level:** Level 2

**Credit value:** 7

**Guided learning hours:** 60

---

**Unit Summary**

This unit will enable the learner to develop competency in order to:

- carry out day to day work area cleaning, clearing away, dealing with spillages and disposal of waste, used materials and debris
- identify hazards and risks in the automotive environment and complying with relevant legislation and good practice
- work safely at all times within the automotive environment, both as an individual and with others.

**Assessment Requirements/Evidence requirements:**

This unit must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*) and adhere to the IMI Competency Unit Assessment Requirements as detailed below:

**You must:**

- 1 evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or as defined within the IMI VCQ Assessment Strategy as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk
- 3 be observed by an assessor as defined in the IMI VCQ Assessment Strategy
- 4 produce evidence of use of personal and vehicle protection, cleaning the work environment and disposal of waste on **3** separate **occasions**
- 5 be observed by your assessor on at least **1** occasion carrying out the above

- 6 produce evidence of identifying risks which may result from at least **2** of the items listed below:
  - the use and maintenance of machinery or equipment
  - the use of materials or substances
  - working practices which do not conform to laid down policies
  - unsafe behaviour
  - accidental breakages and spillages
  - environmental factors
- 7 be observed by your assessor on at least **1** occasion carrying out the above
- 8 produce evidence of following at least **4** of the workplace policies listed below:
  - the use of safe working methods and equipment
  - the safe use of hazardous substances
  - smoking, eating, drinking and drugs
  - what to do in the event of an emergency
  - personal presentation
- 9 be observed by your assessor following workplace policies on at least **1** occasion.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to use correct personal and vehicle protection within the automotive environment	1.1	Select and use personal protective equipment throughout activities. To include appropriate protection of: a eyes b ears c head d skin e feet f hands g lungs			
2	Be able to carry out effective housekeeping practices in the automotive environment	1.2	select and use vehicle protective equipment throughout all activities			
		2.1	select and use cleaning equipment which is of the right type and suitable for the task			
		2.2	use utilities and appropriate consumables, avoiding waste			
		2.3	use materials and equipment to carry out cleaning and maintenance duties in allocated work areas, following automotive work environment policies, schedules and manufacturers instructions			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
	<p>2.4 perform housekeeping activities safely and in a way which minimizes inconvenience to customers and staff</p> <p>2.5 keep the work area clean and free from debris and waste materials</p> <p>2.6 keep tools and equipment fit for purpose by regular cleaning and keeping tidy</p> <p>2.7 dispose of used cleaning agents, waste materials and debris to comply with legal and workplace requirements</p>			
3 Be able to recognise and deal with dangers in order to work safely within the automotive workplace	<p>3.1 name and locate the responsible persons for health and safety in their relevant workplace</p> <p>3.2 identify and report working practices and hazards which could be harmful to themselves or others</p> <p>3.3 carry out safe working practices whilst working with equipment, materials and products in the automotive environment</p> <p>3.4 rectify health and safety risks encountered at work, within the scope and capability of their job role</p>			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
4	Be able to conduct themselves responsibly	4.1 show personal conduct in the workplace which does not endanger the health and safety of themselves or others		
		4.2 display suitable personal presentation at work which ensures the health and safety of themselves and others at work		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*



**Unit 14:****Competency in Supporting Job Roles in the Automotive Work Environment**

**Unit reference number:** K/601/6366

**QCF level:** Level 3

**Credit value:** 5

**Guided learning hours:** 40

---

**Unit Summary**

This unit will help the learner develop competency in order to keep good working relationships with all colleagues and customers in the automotive work environment by using effective communication and support.

**Assessment Requirements/Evidence requirements:**

This unit must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*) and adhere to the IMI Competency Unit Assessment Requirements as detailed below:

**You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or as defined within the IMI VCQ Assessment Strategy as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk
- 3 be observed by an assessor as defined in the IMI VCQ Assessment Strategy
- 4 produce evidence that you have worked well with others in the automotive industry
- 5 be observed by your assessor on at least **3** occasions carrying out the above whilst performing your normal work duties.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work effectively within the organisational structure of the automotive work environment	1.1	respond promptly and willingly to requests for assistance from customers and colleagues			
		1.2	refer customers and colleagues to the correct person should requests fall outside their responsibility and capability			
2	Be able to obtain and use information in order to support their job role within the automotive work environment	2.1	select and use legal and manufacturers information, in an automotive work environment			
3	Be able to communicate with and support colleagues and customers effectively within the automotive work environment	3.1	use methods of communication with customers and colleagues which meet their needs			
		3.2	give customers and colleagues accurate information			
		3.3	make requests for assistance from or to customers and colleagues clearly and courteously			
		3.4	report any anticipated delays in completion to the relevant persons promptly			
4	Be able to develop and keep good working relationships in the automotive work environment	4.1	contribute to team work by initiating ideas and co-operating with customers and colleagues			

<b>Learning outcomes</b>		<b>Assessment criteria</b>	
		<b>Evidence type</b>	<b>Portfolio reference</b>
			<b>Date</b>
	4.2 treat customers and colleagues in a way which shows respect for their views and opinions		
	4.3 make and keep achievable commitments to customers and colleagues		
	4.4 inform colleagues promptly of anything likely to affect their own work		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*



## **Unit 15:**

# **Competency in Removing and Fitting Vehicle Mechanical Components**

**Unit reference number:** R/601/6118

**QCF level:** Level 2

**Credit value:** 10

**Guided learning hours:** 90

---

## **Unit Summary**

This unit enables the learner to demonstrate competency in order to remove and fit a range of vehicle mechanical components. It also covers functional tested of fitted components.

## **Assessment Requirements/Evidence requirements:**

This unit must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*) and adhere to the IMI Competency Unit Assessment Requirements as detailed below:

### **You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or as defined within the IMI VCQ Assessment Strategy as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk
- 3 be observed by an assessor as defined in the IMI VCQ Assessment Strategy
- 4 produce evidence from your normal workplace of removing and replacing **at least 7 different** mechanical components **from the 13 listed below\***:
  - road wheels
  - engine cooling system
  - exhaust system or sections
  - Supplementary restraint systems
  - suspension with no electronic control

- in vehicle entertainment – audio only
  - central locking systems
  - condenser & pipe work
  - External engine components
  - drivelines and hubs
  - steering components (give examples)
  - brake system components
  - tow bars
- 5 be observed by your assessor in **your normal workplace** on **at least 1 occasions** carrying out the removal and replacement from one of the mechanical units or components listed.

\*However, you must prove to your assessor that you have the necessary knowledge and understanding to be able to perform competently in respect of **all** the systems/components listed above.

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out the removal and fitting of vehicle mechanical components	1.1	Wear suitable personal protective equipment and use suitable vehicle coverings throughout all motor vehicle removal and fitting of vehicle mechanical components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, people and the environment			
2	Be able to use relevant information to carry out the task	2.1	select suitable sources of technical information to support vehicle removal and fitting activities including: a vehicle technical data b removal and fitting procedures c legal requirements			
		2.2	interpret technical information to support vehicle removal and fitting activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out the removal and fitting of vehicle mechanical components			
		3.2	ensure that equipment has been calibrated and is in a safe working condition to meet manufacturers' and legal requirements			

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
<p>4 Be able to carry out removal and fitting of vehicle mechanical components</p>	<p>3.3 use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting of vehicle mechanical components</p>			
	<p>4.1 remove and refit vehicle mechanical components</p>	<p>4.2 remove and refit vehicle mechanical components adhering to the correct specifications and tolerances for the vehicle and following:</p> <ul style="list-style-type: none"> <li>a the manufacturer's approved removal and fitting methods</li> <li>b recognised researched removal and fitting methods</li> </ul>	<p>4.3 ensure that the removal and fitting of vehicle mechanical components conforms to the vehicle operating specification and any legal requirements</p>	
			<p>4.4 ensure no damage occurs to other components when removing and fitting vehicle mechanical components</p>	
			<p>4.5 ensure all components are stored safely and in the correct location</p>	
			<p>4.6 work to the specified timescale for the activity</p>	

<b>Learning outcomes</b>		<b>Assessment criteria</b>			
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>	
5	Be able to record information and make suitable recommendations	5.1 produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required			
		5.2 make suitable and justifiable recommendations for cost effective repairs			
		5.3 identify and report any expected delays in completion to the relevant person(s) promptly in the format required			
		5.4 record and report any additional vehicle unit and component faults noticed during the course of their work promptly in the format required			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_  
(if sampled) Date: \_\_\_\_\_



## **Unit 16:**

## **Competency in Removing and Fitting Electrical Components**

**Unit reference number:** D/601/6123

**QCF level:** Level 2

**Credit value:** 5

**Guided learning hours:** 45

### **Unit Summary**

This unit will help the learner to demonstrate competency in order to remove and fit a range of electrical vehicle components. It also covers functional tested of fitted components.

### **Assessment Requirements/Evidence requirements:**

This unit must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*) and adhere to the IMI Competency Unit Assessment Requirements as detailed below:

#### **You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or as defined within the IMI VCQ Assessment Strategy as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk
- 3 be observed by an assessor as defined in the IMI VCQ Assessment Strategy
- 4 produce evidence from your normal workplace of removing and replacing **key electrical components** from **each** of the systems listed below on at least **1** occasion:
  - battery/charging
  - lighting – low voltage
  - electric window systems
  - electrical auxiliary systems
- 5 be observed by your assessor on **at least 1 occasion** carrying out the removal and replacement of electrical components

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out the removal and fitting of electrical vehicle components	1.1	wear suitable personal protective equipment and use suitable vehicle coverings throughout all motor vehicle removal and fitting of electrical vehicle components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, people and the environment			
2	be able to use relevant information to carry out the task	2.1	select suitable sources of technical information to support vehicle removal and fitting activities including: a vehicle technical data b removal and fitting procedures c legal requirements			
		2.2	interpret technical information to support vehicle removal and fitting activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out the removal and fitting of electrical components			
		3.2	ensure that equipment has been calibrated and is in a safe working condition to meet manufacturers' and legal requirements			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
		3.3	use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting of electrical components			
4	Be able to carry out the removal and fitting of electrical vehicle components	4.1	remove and refit common electrical vehicle components			
		4.2	remove and refit the electrical vehicle components adhering to the correct specifications and tolerances for the vehicle and following: a the manufacturer's approved removal and fitting methods b recognised researched removal and fitting methods			
		4.3	ensure that the removal and fitting of electrical vehicle components conforms to the vehicle operating specification and any legal requirements			
		4.4	ensure no damage occurs to other components when removing and fitting electrical vehicle components			
		4.5	ensure all components are stored safely and in the correct location			
		4.6	work to the specified timescale for the activity			

<b>Learning outcomes</b>		<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>
5	Be able to record information and make suitable recommendations	<p>5.1 produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required</p> <p>5.2 make suitable and justifiable recommendations for cost effective repairs</p> <p>5.3 identify and report any expected delays in completion to the relevant person(s) promptly in the format required</p> <p>5.4 record and report any additional vehicle unit and component faults noticed during the course of their work promptly in the format required</p>		

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_  
*(if sampled)* Date: \_\_\_\_\_

## **Unit 17:**

## **Competency in Removing and Fitting Trim Components**

**Unit reference number:** F/601/6132

**QCF level:** Level 2

**Credit value:** 6

**Guided learning hours:** 45

---

### **Unit Summary**

This unit will help the learner to demonstrate competency in order to remove and fit a range of trim components. It also covers functional tested of fitted components.

### **Assessment Requirements/Evidence requirements:**

This unit must be assessed in accordance with the IMI Assessment Strategy (*Annexe C*) and adhere to the IMI Competency Unit Assessment Requirements as detailed below:

#### **You must:**

- 1 produce evidence to show you meet **all** of the Learning Outcomes
- 2 produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or as defined within the IMI VCQ Assessment Strategy as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk
- 3 be observed by an assessor as defined in the IMI VCQ Assessment Strategy
- 4 produce evidence from your normal workplace of removing and replacing **at least 5 different** trim units or components **from the 10 listed below\***:
  - bumpers
  - headlamp units
  - door trim
  - window and waist mouldings
  - bonnet components
  - boot lid/ tailgate trim
  - sunroof systems
  - carpets

- headlinings
  - spoilers
- 5 be observed by your assessor in **your normal workplace** on **at least 1 occasion** carrying out the removal and replacement from the range of 3 trim units or components listed.

\*However, you must prove to your assessor that you have the necessary knowledge and understanding to be able to perform competently in respect of **all** the components listed above

## Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out the removal and fitting of trim components	1.1	wear suitable personal protective equipment and use suitable vehicle coverings throughout all motor vehicle removal and fitting of trim components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, people and the environment			
2	Be able to use relevant information to carry out the task	2.1	select suitable sources of technical information to support vehicle trim removal and fitting activities including: a vehicle technical data b removal and fitting procedures c legal requirements			
		2.2	use technical information to support vehicle trim removal and fitting activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out the removal and fitting of trim components			
		3.2	ensure that equipment has been calibrated and is in a safe working condition			

<b>Learning outcomes</b>	<b>Assessment criteria</b>		
		<b>Evidence type</b>	<b>Portfolio reference</b>
			<b>Date</b>
	3.3 use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting of trim components		
4 Be able to carry out removal and fitting of trim components	4.1 remove and refit common trim components		
	4.2 remove and refit trim components adhering to the correct specifications and tolerances for the vehicle and following:		
	a the manufacturer's approved removal and fitting methods		
	b recognised researched removal and fitting methods		
	4.3 ensure that the removal and fitting trim components conforms to the vehicle operating specification and any legal requirements		
	4.4 ensure no damage occurs to other components when removing and fitting trim components		
	4.5 ensure all components are stored safely and in the correct location		
	4.6 work to the specified timescale for the activity		

<b>Learning outcomes</b>		<b>Assessment criteria</b>			
		<b>Evidence type</b>	<b>Portfolio reference</b>	<b>Date</b>	
5	Be able to record information and make suitable recommendations	5.1 produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required			
		5.2 make suitable and justifiable recommendations for cost effective repairs			
		5.3 identify and report any expected delays in completion to the relevant person(s) promptly in the format required			
		5.4 record and report any additional vehicle unit and component faults noticed during the course of their work promptly in the format required			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **Further information**

---

Our customer service numbers are:

BTEC and NVQ	0844 576 0026
GCSE	0844 576 0027
GCE	0844 576 0025
The Diploma	0844 576 0028
DiDA and other qualifications	0844 576 0031

Calls may be recorded for training purposes.

## **Useful publications**

---

Related information and publications include:

- *Centre Handbook for Edexcel QCF NVQs and Competence-based Qualifications* published annually
- Functional Skills publications – specifications, tutor support materials and question papers
- *Regulatory Arrangements for the Qualification and Credit Framework* (published by Ofqual, August 2008)
- the current Edexcel publications catalogue and update catalogue.

Edexcel publications concerning the Quality Assurance System and the internal and standards verification of vocationally related programmes can be found on the Edexcel website.

NB: Some of our publications are priced. There is also a charge for postage and packing. Please check the cost when you order.

### **How to obtain National Occupational Standards**

To obtain the National Occupational Standards go to  
[www.ukstandards.org.uk](http://www.ukstandards.org.uk).

# **Professional development and training**

---

Edexcel supports UK and international customers with training related to NVQ and BTEC qualifications. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building Functional Skills into your programme
- building effective and efficient quality assurance systems.

The national programme of training we offer can be viewed on our website ([www.edexcel.com/training](http://www.edexcel.com/training)). You can request customised training through the website or by contacting one of our advisers in the Training from Edexcel team via Customer Services to discuss your training needs.

The training we provide:

- is active
- is designed to be supportive and thought provoking
- builds on best practice
- may be suitable for those seeking evidence for their continuing professional development.



## Annexe A: Progression pathways

### The Edexcel qualification framework for the automotive sector

<b>Level</b>	<b>BTEC vocationally-related qualifications</b>	<b>BTEC specialist qualification / professional</b>	<b>NVQ/competence</b>
<b>5</b>	BTEC Level 5 HND Diploma in Vehicle Operations Management (QCF)		
<b>4</b>	BTEC Level 4 HNC Diploma in Vehicle Operations Management (QCF)		
<b>3</b>		Edexcel BTEC Level 3 Diploma in Light Vehicle Maintenance and Repair Principles (QCF) Edexcel BTEC Level 3 Diploma in Heavy Vehicle Maintenance and Repair Principles (QCF) Edexcel BTEC Level 3 Diploma in Auto Electrical and Mobile Electrical Principles (QCF) Edexcel BTEC Level 3 Diploma in Vehicle Fitting Supervisory Principles (QCF) Edexcel BTEC Level 3 Diploma in Vehicle Accident Repair Body Principles (QCF) Edexcel BTEC Level 3 Diploma in Vehicle Accident Repair Paint Principles (QCF)	Edexcel Level 3 Diploma in Light Vehicle Maintenance and Repair Competence (QCF) Edexcel Level 3 Diploma in Heavy Vehicle Maintenance and Repair Competence(QCF) Edexcel Level 3 Diploma in Auto Electrical and Mobile Electrical Competence (QCF) Edexcel Level 3 Diploma in Vehicle Fitting Supervisory Competence (QCF) Edexcel Level 3 Diploma in Vehicle Accident Repair Body Competence (QCF) Edexcel Level 3 Diploma in Vehicle Accident Repair Paint Competence (QCF)

Level	BTEC vocationally-related qualifications	BTEC specialist qualification/ professional	NVQ/competence
<b>3</b>		Edexcel BTEC Level 3 Diploma in Lift Truck Maintenance & Repair Principles (QCF) Edexcel BTEC Level 3 Diploma in Motorcycle Maintenance and Repair Principles (QCF) Edexcel BTEC Level 3 Diploma in Vehicle Sales Principles (QCF) Edexcel BTEC Level 3 Diploma in Body Building Principles (QCF)	Edexcel Level 3 Diploma in Lift Truck Maintenance & Repair Competence (QCF) Edexcel Level 3 Diploma in Motorcycle Maintenance and Repair Competence (QCF) Edexcel Level 3 Diploma in Vehicle Sales Competence (QCF) Edexcel Level 3 Diploma in Body Building Competence (QCF)
<b>2</b>			Edexcel BTEC Level 2 Diploma in Light Vehicle Maintenance and Repair Principles (QCF) Edexcel BTEC Level 2 Diploma in Heavy Vehicle Maintenance and Repair Principles (QCF) Edexcel BTEC Level 2 Diploma in Auto Electrical and Mobile Electrical Principles (QCF) Edexcel BTEC Level 2 Diploma in Vehicle Fitting Principles (QCF) Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Paint Principles (QCF) Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Body Principles (QCF)

<b>Level</b>	<b>BTEC vocationally-related qualifications</b>	<b>BTEC specialist qualification / professional</b>	<b>NvQ/competence</b>
<b>2</b>	Level 2 Diploma in Lift Truck Maintenance & Repair Principles (QCF) Edexcel BTEC Level 2 Diploma in Motorcycle Maintenance and Repair Principles (QCF) Edexcel BTEC Level 2 Diploma in Vehicle Sales Principles (QCF) Edexcel BTEC Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF) Edexcel BTEC Level 2 Diploma in Body Building Principles (QCF) Edexcel BTEC Level 2 Diploma in Heavy Vehicle Trailer Maintenance & Repair Principles (QCF)	Edexcel Level 2 Diploma in Lift Truck Maintenance & Repair Competence (QCF) Edexcel Level 2 Diploma in Motorcycle Maintenance and Repair Competence (QCF) Edexcel Level 2 Diploma in Vehicle Sales Competence (QCF) Edexcel Level 2 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF) Edexcel Level 2 Diploma in Body Building Competence (QCF) Edexcel Level 2 Diploma in Heavy Vehicle Trailer Maintenance & Repair Competence (QCF)	
<b>1</b>			
<b>Entry</b>			



## Annexe B: Centre certification and registration

---

Edexcel Standards Verifiers will provide support, advice and guidance to centres to achieve Direct Claims Status (DCS). Edexcel will maintain the integrity of Edexcel QCF NVQs through ensuring that the awarding of these qualifications is secure. Where there are quality issues identified in the delivery of programmes, Edexcel will exercise the right to:

- direct centres to take action
- limit or suspend certification
- suspend registration.

The approach of Edexcel in such circumstances is to work with the centre to overcome the problems identified. If additional training is required, Edexcel will aim to secure the appropriate expertise to provide this.

### What are the access arrangements and special considerations for the qualifications in this specification?

Centres are required to recruit learners to Edexcel qualifications with integrity.

Appropriate steps should be taken to assess each applicant's potential and a professional judgement should be made about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should consult Edexcel's policy on learners with particular requirements.

Edexcel's policy on access arrangements and special considerations for Edexcel qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the Equality Act 2010) without compromising the assessment of skills, knowledge, understanding or competence. Please refer to *Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications* for further details. [www.edexcel.com](http://www.edexcel.com).

Please refer to Edexcel's Equality Policy for further details,  
[www.edexcel.co/policies/pages/home.aspx](http://www.edexcel.co/policies/pages/home.aspx)





# Assessment Strategy

For

# **Vocational Competency Qualifications (VCQs)**

## **Introduction**

This document sets out the recommendations of IMI for the assessment of VCQ qualifications based on IMI developed National Occupational Standards. The Strategy is designed to operate across all four nations, bringing parity to all learners. Awarding Organisations wishing to operate VCQs in the retail motor sector must take full part in the IMI Awarding Body Forum.

This is the overarching strategy for the assessment and verification of competency based qualifications (VCQs) that are based upon National Occupational Standards from the IMI and will come into force on the 30<sup>th</sup> June 2010, it will apply to any new competence -based units and qualifications.

## **Assessment**

VCQs are a type of qualification which reflect the unique needs of the workplace. They should be assessed in a holistic way by technically competent assessors. The primary method of assessment should always be direct workplace observation. Some use of simulation is allowed (please see section, Workplace Assessment/Simulation).

Additionally Awarding Organisations are encouraged to make use of naturally occurring quality assurance and monitoring systems where they exist in workplace assessment environments.

The Institute of the Motor Industry require Awarding Organisations delivering VCQs to participate in an Awarding Body Forum. This will, as a minimum, involve an annual meeting to discuss issues of assessment and verification.

VCQ must attest to competence in an occupational role (where competence is defined as the ability to apply knowledge, understanding, practical and thinking skills to be effective in work: these skills will usually include problem-solving, being flexible to meet changing demands and the ability to work with or alongside others).

Any assessment must attest to competence in an occupational role (where competence is defined as the ability to apply knowledge, understanding, practical and thinking skills to be effective in work: these skills will usually include problem-solving, being flexible to meet changing demands and the ability to work with or alongside others)

## **Evidence Requirements for VCQ**

Candidates working towards a VCQ must provide evidence from the workplace that covers a minimum of a 4 month, (16 week), period.

All evidence for VCQs must be assessed by suitably qualified assessors and must adhere to the requirements for the QCF units being assessed.

## **Rules of combination**

Rules of combination must be that determined by the IMI SSC.

## **Evidence other than from direct workplace observation Workplace Assessment/Simulation.**

IMI credit-based units are work/competency based and therefore candidates are to be assessed under normal workplace conditions. It is recognised however, that there are situations where the workplace may not be appropriate or that waiting for naturally occurring evidence is impractical. In these situations IMI will allow centres to set up or devise assessment situations.

These assessment situations can only be set up after:

- all possible routes for the collection of naturally occurring evidence have been exhausted
- the exact make up and content of the centre devised assessment has been agreed and approved by the external verifier
- the assessor can assure that the simulation will provide evidence that is valid reliable and authentic.

We suggest that centres seek written confirmation before proceeding with assessment. The need for simulation may result from consideration of:

- Safety
- Legislation
- Regulation
- Contingency
- Cost
- Frequency.

In addition, IMI recognises that candidates using these credit-based units in the context of a Level 1 qualification may be in a learning environment and not in a workplace. In these situations, centres may set up or devise assessment situations as required, with prior written agreement of the external verifier.

Any simulation must be carried out using actual vehicles; the use of engine rigs or electrical boards is not permitted.

IMI re-iterates that its credit-based units have been designed to be capable of assessment in the normal workplace and that subject to the arrangements for simulation described above this should be the case.

Simulation will be monitored by the Awarding Organisations and where it is found to be the 'norm' rather than the exception suitable action will need to be taken.

## **Realistic Work Environment**

The IMI requires that candidates are assessed within their normal workplace, or in exceptional circumstances as described previously via simulation. The use of approved simulation means therefore that RWE, Realistic Work Environment is not to be used.

## **Expert Witnesses**

The use of **witness testimony** and **expert witness testimony** are appropriate

methods for assessors to collect supplementary evidence on candidates' performance.

**Witness testimonies** can be obtained from people that are occupationally competent and who may be familiar with the national occupational standards, such as the candidate's line manager.

The assessor must judge the validity of the witness testimony and these may vary depending on the source. Witness testimonies can only support the assessment process and may remove or reduce the need to collect supplementary evidence, however, the awarding organisation's/body's quality assurance requirements must be met. Additionally the person or persons providing the witness testimony evidence must make themselves available to the external verifier for confirmation of evidence validity if required.

## **Remote Observation**

The use of direct observation from a remote location is permitted as long as the centre seeks and receives the approval of their awarding organisation prior to its use and the awarding organisation discusses and agree this with the IMI prior to its use.

## **Assessor Requirements**

The assessment of VCQs must be carried out by approved industry competent assessors.

Assessors will be responsible for, and accountable for, the validity, reliability and authenticity of evidence.

The primary responsibility of the assessor is to ensure that candidates satisfy the requirements of the national occupational standards. It is important that an assessor can recognise occupational competence as specified by the national occupational standards. Assessors therefore need to have a thorough understanding of assessment and quality assurance practices, as well as have in depth technical competence related to the qualifications for which they are assessing candidates.

It will be the responsibility of the approved centre to select and appoint assessors.

It will be the responsibility of the Awarding Organisation to approve centre selected assessors.

To be an approved assessor the person must:

- have sufficient and relevant technical/occupational competence in the Unit, at or above the level of the unit being assessed
- have in- depth knowledge of the qualification or credit- based unit evidence requirements.
- hold or be working towards a relevant assessors award as specified by the Institute of the Motor Industry. This will include, but not be limited to the Assessor qualifications, Level 3 Award in Assessing Competence in the Work Environment, Level 3 Award in Assessing Vocationally Related Achievement, Level 3 Certificate in Assessing Vocational Achievement. (and by implication legacy Assessor units A1, A2 and D32/33 unit) but may be an appropriate equivalent as defined by the IMI, SSC)..
- assessors working towards a relevant assessor qualification must achieve their qualification within 12 months.
- demonstrate knowledge and understanding of the competencies that a learner is required to demonstrate for the qualification that they are undertaking
- provide evidence of completing 5 days working/job shadowing in industry within their professional area in a 24 month period.
- provide evidence of 30 hours of technical/qualification related CPD within a 12 month period.(This is in addition to working/job shadowing).
- be approved by the Awarding Organisation to carry out assessments for the VCQs they are competent in.

Approval of assessors can be removed.

Assessors cannot assess the VCQ if they are not currently approved by, or have had their approval removed by, the Awarding Organisation.

## **Internal Verifier Requirements**

VCQs must be underpinned by quality assurance appropriate to workplace based delivery. At a minimum this should reflect the principles outlined below.

Internal Verification of VCQ shall be the responsibility of approved industry competent internal verifiers.

The primary responsibility of the internal verifier is to assure the quality and consistency of assessments by the assessors for whom they are responsible. Internal verifiers therefore need to have a thorough understanding of quality assurance and assessment practices, as well as technical competence related to the qualifications that they are internally verifying.

Internal verifiers will be responsible for, and accountable for consistency, quality and reliability of evidence and assessors.

It will be the responsibility of the approved centre to select and appoint internal verifiers .

It will be the responsibility of the Awarding Organisation to approve centre selected internal verifiers.

To be an approved internal verifier the person must:

- have in-depth knowledge of the occupational standards and credit-based unit evidence requirements.
- be occupationally aware of the relevant industry sector being internally verified
- hold or be working towards a relevant verifier award as specified by the Institute of the Motor Industry. This will include, but not be limited to the Quality Assurance qualifications Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice, Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice, (and by implication legacy Internal Verifier unit V1 D34 unit) but may be an appropriate equivalent as defined by the SSC.
- verifiers working towards a relevant qualification must achieve their qualification within 12 months.
- provide evidence of CPD totalling not less than 30 hours from within their professional area within a 12 month period.
- be approved by the Awarding Organisation to carry out internal verification for relevant VCQ(s)
- demonstrate knowledge and understanding of the quality assurance processes required by the centre and the awarding organisation

Approval of internal verifiers can be **removed**.

Internal Verifiers **cannot** verify the VCQ if they are not approved by, or have had their approval removed by the Awarding Organisation.

## **Multi Discipline Assessors and Internal Verifiers**

Assessors and Internal Verifiers who work across multi disciplines must agree to a programme of CPD that will, over an agreed period of time, show their competence across all areas that they assess.

The programme of CPD and the timescale must be agreed for each multi discipline assessor by their External Verifier and may be subject to scrutiny by the IMI.

It is the responsibility of the centre to keep a record of these agreements.

## **External Verifier Requirements**

Awarding Organisations will be responsible for selection and appointment of external verifiers.

To be an approved external verifier or moderator the person must:

- hold or be working towards an appropriate qualification as specified by the Institute of the Motor Industry, confirming their competence to externally verify VCQ assessments This will include, but not be limited to the Level 4 Award in Externally Assuring the Quality of Assessment Processes and Practice, Level 4 Certificate in Leading the External Quality Assurance of Assessment Processes and Practice, (and by implication legacy External Verifier unit V2 and D35 units) but may be an appropriate equivalent as defined by the SSC.
- external verifiers working towards a relevant qualification must achieve their qualification within 12 months.
- have experience of working within the automotive industry gained through current or prior employment in order to have an up- to- date technical awareness relevant to the VCQ they are seeking to externally verify
- have a sound and in-depth knowledge of the VCQ requirements
- demonstrate their commitment to maintaining their industry knowledge by providing evidence of CPD totalling not less than 30 hours from within their professional area within a 12 month period.

## **External Quality Control**

It is expected that the awarding of qualifications will be underpinned by quality assurance appropriate to workplace based delivery. At a minimum this should reflect the principles outlined below.

External quality control of assessment is the responsibility of the Awarding Organisations, they must ensure that common approaches are employed and that consistent, high standards are achieved.

External verifiers will be required to implement rigorous risk management strategies consistently across all centres for which they are responsible.

IMI recommends that Awarding Organisations adopt a risk rating and risk management system for centres offering IMI VCQs.

IMI recommend that such systems identify:

- commercial risk – is there potential for commercial pressures to ensure that candidates achieve qualifications within unduly short time frames?
- assessment/verification risk – are factors apparent in the relationship between candidates, assessors and verifiers that might prejudice a fair and consistent assessment process?

Where risks or potential risks are identified, IMI expects that the Awarding Organisation, via the external verifier takes appropriate action to ensure that the credibility of the assessment process is not prejudiced.

Awarding Organisations will be responsible for and accountable for the quality of VCQs delivered and assessed by their approved assessment centres.

**Publications Code AP029823 December 2011**

**For more information on Edexcel and BTEC qualifications please  
visit our website: [www.edexcel.com](http://www.edexcel.com)**

**Pearson Education Limited. Registered in England and Wales No. 872828  
Registered Office: Edinburgh Gate, Harlow, Essex CM20 2JE. VAT Reg No GB 278 53712**