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Specification

Edexcel BTEC Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair Principles (QCF)

Edexcel BTEC Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair Competence (QCF)

For first registration November 2011

A PEARSON COMPANY

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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.

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Contents

Qualification titles covered by this specification

This specification gives you the information you need to offer the Edexcel Principles and Competence qualifications in Heavy Vehicle Trailer Maintenance and Repair (QCF) at Level 2.

Qualification title	Qualification Number (QN)	Operational start date
Edexcel BTEC Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair Principles (QCF)	600/3508/0	01/11/2011
Edexcel Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair Competence (QCF)	600/3561/4	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 Heavy Vehicle Trailer Maintenance and Repair (QCF) at Level 2

These qualifications:

- are nationally recognised
- are based on the Maintenance and Repair – Heavy Vehicle Trailer National Occupational Standards (NOS). The NOS, assessment strategy and qualification structure(s) are owned by the Sector Skills Council The Institute of the Motor Industry (IMI).

The Edexcel BTEC Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair (QCF) and the Edexcel Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair (QCF) have been approved as components of the Intermediate apprenticeship framework in Heavy Vehicle Trailer Maintenance and Repair.

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 qualification supports 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 a range of heavy vehicle trailers.

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?

- Service 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 Degree, or employment in a range of jobs at Level 2 and 3.

What is the qualification structure for the Edexcel BTEC Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair Principles (QCF)?

A minimum of 59 credits is required to achieve this qualification. 29 credits from the mandatory generic units in Group A, 24 credits from the mandatory specialist units in Group B and a minimum of 6 credits achieved by selecting one of the 2 option groups from Group C. All subcomponents of the chosen groups must be completed.

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

Unit No.	Unit Reference No.	Unit Title	Credit	Level
Group A – Mandatory generic units Learners must complete 29 credits from this group.				
1	D/601/6171	Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment	3	2
2	K/601/6237	Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	4	2
3	Y/601/6279	Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	7	2
4	Y/601/7254	Skills in Health, Safety and Good Housekeeping in the Automotive Environment	7	2
5	J/601/6262	Skills in Supporting Job Roles in the Automotive Work Environment	5	3
6	T/601/6175	Knowledge of Support for Job Roles in the Automotive Work Environment	3	3
Group B – Mandatory specialist units Learners must complete 24 credits from this group.				
7	H/602/6460	Knowledge of Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components	6	2
8	K/602/6458	Knowledge of Routine Heavy Vehicle Trailer Maintenance	3	2
9	M/602/6459	Knowledge of Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units and Components	5	2
10	A/602/6464	Skills in Routine Commercial Heavy Vehicle Trailer Maintenance	2	2

Unit No.	Unit Reference No.	Unit Title	Credit	Level
11	F/602/6465	Skills in Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units	4	2
12	L/602/6467	Skills in Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components	4	2
Group C – Optional groups Learners must complete a minimum of six credits from one of the option groups. All subcomponents of the chosen group must be completed.				
Group C1 – Optional group 1 If this group is chosen, learners must complete 10 credits from this group.				
13	M/601/6286	Skills to Identify and Agree Motor Vehicle Customer Service Needs	5	3
14	R/601/6247	Knowledge of how to Identify and Agree Motor Vehicle Customer Service Needs	5	3
Group C2 – Optional group 2 If this group is chosen, learners must complete six credits from this group.				
15	K/602/6461	Knowledge of Inspecting Heavy Vehicle Trailers	4	2
16	R/602/6468	Skills in Inspecting Heavy Vehicle Trailers using Prescribed Methods	2	2

What is the qualification structure for the Edexcel Level 2 Diploma in Heavy Vehicle Trailer Maintenance and Repair Competence (QCF)?

A minimum of 77 credits is required to achieve this qualification. 29 credits from the mandatory generic units in Group A, 39 credits from the mandatory specialist units in Group B and a minimum of 9 credits achieved by selecting one of the 2 option groups from Group C. All subcomponents of the chosen groups must be completed.

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

Unit No.	Unit Reference No.	Unit Title	Credit	Level
Group A – Mandatory generic units Learners must complete 29 credits from this group.				
1	D/601/6171	Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment	3	2
2	K/601/6237	Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	4	2
3	Y/601/6279	Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	7	2
6	T/601/6175	Knowledge of Support for Job Roles in the Automotive Work Environment	3	3
17	A/601/6338	Competency in Health, Safety and Good Housekeeping in the Automotive Environment	7	2
18	K/601/6366	Competency in Supporting Job Roles in the Automotive Work Environment	5	3
Group B – Mandatory specialist units Learners must complete 39 credits from this group.				
7	H/602/6460	Knowledge of Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components	6	2
8	K/602/6458	Knowledge of Routine Heavy Vehicle Trailer Maintenance	3	2
9	M/602/6459	Knowledge of Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units and Components	5	2
19	L/602/6453	Competency in Routine Heavy Vehicle Trailer Maintenance	7	2

Unit No.	Unit Reference No.	Unit Title	Credit	Level
20	R/602/6471	Competency in Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components	9	2
21	Y/602/6455	Competency in Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units and Components	9	2
Group C – Optional groups Learners must complete a minimum of nine credits from one of the option groups. All subcomponents of the chosen group must be completed.				
Group C1 – Optional group 1 If this group is chosen, learners must complete 10 credits from this group.				
14	R/601/6247	Knowledge of how to Identify and Agree Motor Vehicle Customer Service Needs	5	3
22	K/601/6383	Competency in Identifying and Agreeing Motor Vehicle Customer Service Needs	5	3
Group C2 – Optional group 2 If this group is chosen, learners must complete nine credits from this group.				
15	K/602/6461	Knowledge of Inspecting Heavy Vehicle Trailers	4	2
23	Y/602/6472	Competency in Inspecting Heavy Vehicle Trailers using Prescribed Methods	5	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 qualifications (VCQs) 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:

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

Types of evidence (to be read in conjunction with the assessment strategy in *Annexe C* and the assessment/evidence requirements guidance within individual Knowledge, Skills and Competence Units)

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. 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 Competency qualifications 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** qualification 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** qualification 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 annually allocate a Standards Verifier 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 2011-12 http://www.edexcel.com/quals/BTEC/quality/Pages/documents.aspx

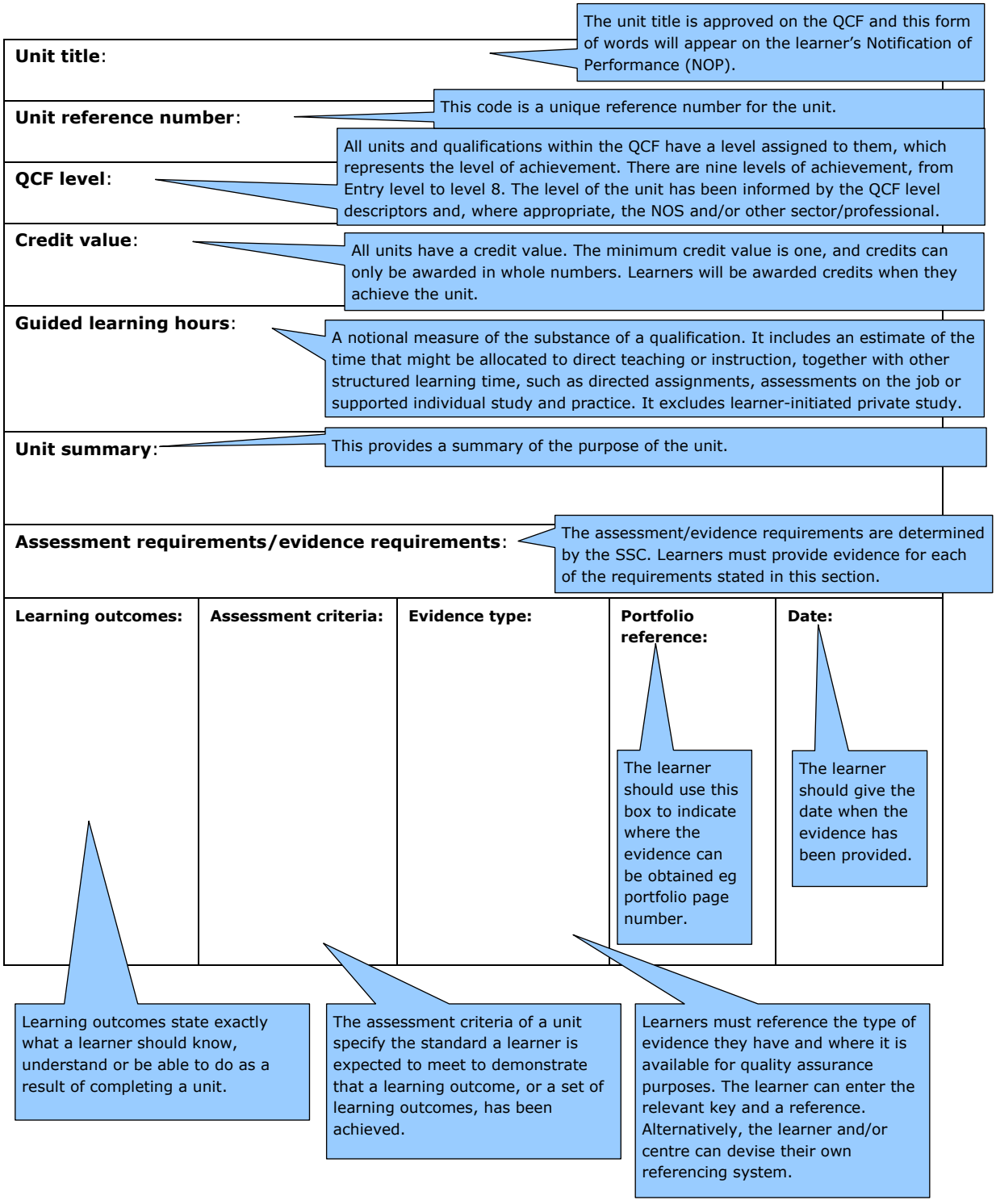
What resources are required?

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.



Units

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

Unit reference number: D/601/6171

QCF 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:

Content:

Economic use of Resources

a consumable materials e.g. 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

d 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

i Safe Working Loads

j Working at Height Regulations (date)

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 electrical safety, pneumatics and hydraulics

a accessing and interpreting safety information

b seeking advice when needed

c seeking assistance when required

d reporting of unsafe equipment

e storing tools, equipment and products safely and appropriately

f using the correct PPE

g following manufacturers recommendations

h following application procedures e.g. hazardous substances

i 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

c types of extinguishers:

- i foam
- ii dry powder
- iii CO2
- 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 i.e. 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 i.e. 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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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			
		4.5	identify key warning signs and their characteristics that are found in the vehicle repair environment			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		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: _____ Date:_____
(*if sampled*)

Unit 2: Knowledge of Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment

Unit reference number: K/601/6237

QCF 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:

Content:

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
1	Understand how to select, use and care for hand tools and measuring devices in the automotive environment	1.1	identify and explain the use of common types of hand tools used for fabricating and fitting in the automotive environment			
		1.2	identify and explain the use of common measuring devices used for fabrication and fitting in the automotive environment			
		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			
		1.4	state the limitations of common hand tools and measuring devices used for fabricating, repair and fitting in the automotive workplace			
		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			
		1.6	identify common electrical measuring tools used in the repair of vehicles and components			
		1.7	explain the preparation and safe and correct use of common electrical tools when measuring voltage, current and resistance			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 c sealants and adhesives d fittings and fasteners e electrical circuit components			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		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 3: Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment

Unit reference number: Y/601/6279

QCF 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:

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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		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: _____ Date:_____
(*if sampled*)

Unit 4: Skills in Health, Safety and Good Housekeeping in the Automotive Environment

Unit reference number: Y/601/7254

QCF 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:

General Requirements

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

7 produce evidence of identifying risks

8 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

9 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	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			
		1.2	select and use vehicle protective equipment throughout all activities			
2	Be able to carry out effective housekeeping practices in the automotive environment	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
		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			
3	Be able to recognise and deal with dangers in order to work safely within the automotive workplace	3.1	name and locate the responsible persons for health and safety in their relevant workplace			
		3.2	identify and report working practices and hazards which could be harmful to themselves or others			
		3.3	carry out safe working practices whilst working with equipment, materials and products in the automotive environment			
		3.4	rectify health and safety risks encountered at work, within the scope and capability of their job role			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 5: Skills in Supporting Job Roles in the Automotive Work Environment

Unit reference number: J/601/6262

QCF 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 as set out below:

General Requirements

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			
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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		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 6: Knowledge of Support for Job Roles in the Automotive Work Environment

Unit reference number: T/601/6175

QCF 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:

Content:

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 organisation
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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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			
		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: _____ Date:_____
(*if sampled*)

Unit 7: Knowledge of Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components

Unit reference number: H/602/6460

QCF level: 2

Credit value: 6

Guided learning hours: 45

Unit Summary

This unit enables the learner to develop an understanding of the construction and operation of common steering, suspension and braking systems (including wheels and tyres) on heavy vehicle trailers. It also covers the procedures involved in the removal and replacement of system components and the evaluation of their performance.

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:

Content:

Steering

a the action and purpose of steering geometry:
   - i castor angle
   - ii camber angle
   - iii kingpin or swivel pin inclination
   - iv negative offset
   - v wheel alignment (tracking) (toe in and toe out)
   - vi toe out on turns
   - vii steered wheel geometry
   - viii multi axle steered wheel geometry

b the following terms associated with steering:
   i Ackerman principle
   ii slip angles
   iii self-aligning torque oversteer and understeer
   iv neutral steer
   v rear steer
   vi self-steer
c steering system defects to include:
   i uneven tyre wear
   ii wear on outer edge of tyre
   iii wear on inner edge of tyre
   iv uneven wear
   v flats on tread
   vi steering vibrations
   vii wear in linkage
   viii damaged linkage
   ix incorrect axle alignment
   x incorrect steering geometry

Suspension

a the layout and components of suspension systems:
   i air suspension
   ii electronically controlled air suspension (ECAS)
   iii rubber suspension
   iv hydraulic suspension
   v multi axle suspension
   vi lifting axles
b the operation of suspension systems and components:
   i leaf springs
   ii air springs
   iii air suspension levelling mechanism (mechanical and electronic)
   iv rubber springs
   v hydraulic dampers
   vi trailing arms
   vii ball joints
   viii bump stops

ix anti-roll bars

x stabiliser bars

xi swinging arms

c the advantages of different systems including:

i air suspension (mechanical)

ii air suspension (electronically controlled)

iii leaf spring suspension

iv rubber suspension

v lifting axles

d the principles of electronically controlled air suspensions systems.

e the forces acting on suspension systems during braking and cornering.

f the methods of locating the road wheels against braking and cornering forces

g the methods of controlling cornering forces by fitting anti-roll torsion members

h suspension terms:

i rebound

ii bump

iii yaw

iv dive

v pitch

vi roll

vii compliance

i the procedures used for inspecting the serviceability and condition of the suspension system

j suspension system defects:

i wheel hop

ii ride height (unequal and low)

iii wear

iv noises under operation

v air leakage

vi excessive travel

vii excessive tyre wear

viii bounce

ix worn dampers

x worn joints

xi damaged linkages

xii trailer "crabbing"

Brakes

a the construction and operation of drum brakes:

i leading and trailing shoe construction

ii self-servo action

iii slack adjusters

iv brake actuators

v cam expanders

vi wedge expanders

vii automatic adjusters

viii backing plates

ix parking brake system

x wear indicators and warning lamps

b the construction and operation of disc brakes:

i disc pads

ii calliper

iii brake disc

iv ventilated disc

v disc pad retraction

vi parking brake system

vii wear indicators and warning lamps

c the construction and operation of the hydraulic braking system:

i single and dual line layout

ii master cylinders

iii wheel cylinders

iv disc brake caliper & pistons

v brake pipe

vi warning lights

vii parking brakes

viii equalising valves

ix trailer brake line couplings

d the construction and operation of the pneumatic braking system
   i tractor/trailer couplings (palm + "C" type couplings)
   ii pressure regulating valves
   iii charging valves
   iv air reservoirs
   v emergency relay valves
   vi load sensing valves (mechanical and automatic)
   vii brake actuators
   viii parking brake mechanisms
   ix trailer control valves (fitted to the tractor unit but an integral part of trailer emergency braking)
   x two-line trailer brake system
   xi warning light/buzzer systems
   xii air pipes
   xiii valve port numbering
e the requirements and hazards of brake fluid:
   i boiling point
   ii hygroscopic action
   iii manufacturer's change periods
   iv fluid classification and rating
   v potential to damage paint surfaces
f terms associated with air and hydraulic braking systems:
   i braking efficiency
   ii brake fade
   iii brake balance
   iv trailer brake delay
   v threshold pressure
   vi predominance
g the procedures used for inspecting the serviceability and condition of the braking system
h braking system defects:
   i worn shoes or pads
   ii worn or scored brake surfaces
   iii abnormal brake noises
   iv brake judder
   v fluid contamination of brake surfaces

vi fluid/air leaks

vii pulling to one side

viii poor braking efficiency

ix loss of air pressure

x brake drag

xi brake grab

xii brake fade

ABS

a the construction and operation of trailer ABS systems

i category three (1S/1M)

ii category two (2S/1M)

iii category one (2S/2M)

iv wheel speed sensors

v modulators

vi electronic control unit

b terms associated with ABS systems

i individual control

ii modified individual control

iii select low

c the procedures used for inspecting the serviceability and condition of the ABS system

Wheel and tyres

a the construction of different types of tyre:

i radial

ii cross ply

iii bias belted

iv tread patterns

v tyre mixing regulations

vi tyre applications

b tyre markings:

i tyre and wheel size markings

ii speed rating

iii direction of rotation

iv profile

v load rating

vi ply rating

vii tread-wear indicators

c wheel construction:
   i light alloy
   ii pressed steel
   iii one-piece rims
   iv two-piece rims
   v three piece rims
d wheel retention
   i conical seating
   ii spherical seating
   iii spigot mounted
e types of bearing used for wheel bearing arrangements and their adjustment:
   i taper roller
   ii angular contact ball
   iii integrated
f the procedures used for inspecting the serviceability and condition of:
   i tyres and wheels
   ii bearings
g the defects associated with tyres and wheels:
   i abnormal tyre wear
   ii cuts
   iii side wall damage
   iv wheel vibrations
   v loose wheel retainers
   vi tyre over heating
   vii tread separation

General

The procedures for dismantling, removal and replacement of chassis system components

a the preparation:
   i testing and use of tools and equipment
   ii electrical meters and equipment used for dismantling
   iii removing and replacing chassis systems and components
b appropriate safety precautions:
   i PPE
   ii trailer protection when dismantling
   iii removing and replacing chassis systems and components

c the importance of logical and systematic processes

d the inspection and testing of chassis systems and components

e the preparation of replacement units for re-fitting or replacement of chassis systems or components

f identify the reasons why replacement components and units must meet the original specifications (OES):

  i warranty requirements

  ii to maintain performance

  iii safety requirements

g refitting procedures

h the inspection and testing of units and systems to ensure compliance with manufacturer's, legal and performance requirements

i the inspection and re-instatement of the trailer following repair to ensure customer satisfaction:

  i cleanliness of trailer interior and exterior

  ii security of components and fittings

  iii re-instatement of components and fittings

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand how heavy vehicle trailer steering systems operate	1.1	identify fundamental trailer steering system components			
		1.2	describe the construction and operation of heavy vehicle trailer steering systems			
		1.3	compare key trailer steering system components and assemblies against alternatives to identify differences in construction and operation			
		1.4	identify the key engineering principles that are related to trailer steering systems a steering geometry b steering angles c hydraulic damping d stress and strain			
		1.5	state common terms used in trailer steering system design			
2	Understand how heavy vehicle trailer suspension systems operate	2.1	identify trailer suspension system components			
		2.2	describe the construction and operation of trailer suspension systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		2.3	compare key trailer suspension system components and assemblies against alternatives to identify differences in construction and operation			
		2.4	identify the key engineering principles that are related to trailer suspension systems a. hydraulic damping b. stress and strain			
		2.5	state common terms used in trailer suspension system design			
3	Understand how heavy vehicle trailer braking systems operate	3.1	identify trailer braking system components			
		3.2	describe the construction and operation of trailer braking systems			
		3.3	compare key trailer braking system components and assemblies against alternatives to identify differences in construction and operation			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.4	identify the key engineering principles that are related to trailer braking systems a laws of friction b hydraulic machines c pneumatic machines d properties of fluids e properties of air f braking efficiency			
		3.5	state common terms used in trailer braking system design			
4	Understand how heavy vehicle trailer wheel and tyre systems operate	4.1	identify trailer wheel and tyre components			
		4.2	describe the construction and operation of trailer wheels and tyres			
		4.3	compare key trailer wheel and tyre components and assemblies against alternatives to identify differences in construction and operation			
		4.4	identify the key engineering principles that are related to trailer wheel and tyre systems a friction b un-sprung weight c dynamic and static balance			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	state common terms used in trailer wheel and tyre design			
5	Understand the health and safety aspects when working on loaded heavy vehicle trailers	5.1	identify types of hazards when working on loaded trailers including: a flammable liquids b gases i lighter than air ii heavier than air c increased trailer mass d raised tipper bodies e raised centre of gravity			
6	Understand how to check, replace and test heavy vehicle trailer chassis units and components	6.1	describe how to remove and replace heavy vehicle trailer chassis units and components			
		6.2	describe common types of testing methods used to check the operation of chassis units and components and their purpose			
		6.3	explain how to test and evaluate the performance of replacement units against trailer specification			
		6.4	explain common faults found in trailer chassis units and components			

Learner name: _____ Date:_____

Learner signature: _____ Date:_____

Assessor signature: _____ Date:_____

Internal verifier signature: _____ Date:_____
(*if sampled*)

Unit 8: Knowledge of Routine Heavy Vehicle Trailer Maintenance

Unit reference number: K/602/6458

QCF level: 2

Credit value: 3

Guided learning hours: 20

Unit Summary

This unit enables the learner to develop the knowledge required to conduct routine maintenance, adjustment and replacement activities as part of the periodic servicing of heavy vehicle trailers.

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:

Content:

Trailer maintenance, adjustment and record findings

Vehicle inspection techniques used in routine maintenance including:

a aural

b visual and functional assessments on:

- i steering systems
- ii braking systems
- iii wheels and tyres
- iv suspension systems
- v electrical and electronic systems
- vi exterior trailer body
- vii auxiliary engines and equipment
- viii side-guards and rear under-run devices

The procedures used for inspecting the condition and serviceability of the following:

a brake linings

b pads

c tyres

d lights

e auxiliary equipment

Preparation and appropriate use of equipment to include:

a test instruments

b wheel alignment

c tyre tread depth gauges

d kingpin gauge

Procedures for checking and replenishing fluid levels:

a oil (auxiliary engine, axle hubs)

b water (auxiliary engine coolant)

c hydraulic fluids (tipper body, tail lift)

Procedures for replacement of lubricants and filters:

a replace auxiliary engine oil and filters

b replace hydraulic oil and filters

c types of oil

d cleanliness

e disposal of old oil and filters

Procedures for carrying out adjustments on vehicle systems or components:

a clearances

b settings

c alignment

d ride height

Procedures for checking electrical systems:

a operation

b security

c performance

Importance and process of detailed inspection procedures:

a following inspection checklists

b checking conformity to manufacturer's specifications

c UK and European legal requirements

Importance and process of completing all relevant documentation relating to routine maintenance:

a inspection records

b job cards

c trailer repair records

d trailer service history

The need to check the trailer following routine maintenance

The need to inspect the trailer following routine maintenance:

a professional presentation of trailer

b customer perceptions

The basic checks of trailer following routine maintenance:

a removal of oil and grease marks

b body panels

c paint surfaces

d re-instatement of components

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand how to carry out routine heavy vehicle trailer maintenance	1.1	explain how to conduct a scheduled routine examination and assessment against the heavy vehicle trailer manufacturers specification			
		1.2	identify the assessment methods used to check for conformity			
		1.3	identify the different systems to be inspected while carrying out heavy vehicle trailer routine maintenance			
		1.4	describe the procedures used for checking the condition and serviceability of heavy vehicle trailer systems and components			
		1.5	describe the procedures for checking and replenishing fluid levels			
		1.6	describe the procedures for the replacement of lubricants and fluids			
		1.7	identify adjustments that need to be carried out on a heavy vehicle trailer routine maintenance			
		1.8	explain the procedure for reporting cosmetic damage to heavy vehicle trailer components and units outside normal service items			
		1.9	identify the operating specifications for the systems being checked while carrying out heavy vehicle trailer routine maintenance			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Understand the legal requirements applicable to carrying out commercial vehicle trailer maintenance	2.1	describe the fundamental requirements of heavy vehicle trailer maintenance arrangements as part of the operator licence criteria			
		2.2	describe the legal requirement relating to the retention of heavy vehicle trailer maintenance records			

Learner name: _____ Date:_____

Learner signature: _____ Date:_____

Assessor signature: _____ Date:_____

Internal verifier signature: _____ Date:_____
(*if sampled*)

Unit 9: Knowledge of Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units and Components

Unit reference number: M/602/6459

QCF level: 2

Credit value: 5

Guided learning hours: 35

Unit Summary

This unit enables the learner to develop an understanding of the principles, construction and operation of common electrical and electronic systems and components fitted to heavy vehicle trailers. It also covers the procedures involved in the removal and replacement of system components and the evaluation of their performance

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:

Content:

Electrical/electronic principles

a electrical units:
   i volt (electrical pressure)
   ii ampere (electrical current)
   iii ohm (electrical resistance)
   iv watt (power)

b the requirements for an electrical circuit:
   i battery
   ii cables
   iii switch
   iv current consuming device
   v continuity

c the direction of current flow and electron flow.

d series and parallel circuits to include:

  i current flow

  ii voltage of components

  iii volt drop

  iv resistance

  v the effect on circuit operation of open circuit component(s)

e chassis and insulated return systems.

f cable sizes and colour codes.

g different 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 principles of trailer electronic systems and components.

k interpret trailer wiring diagrams to include:

  i trailer lighting

  ii auxiliary circuits

  iii indicators

  iv trailer ABS supply

l function and construction of electrical components including:

  i circuit relays

  ii bulb types

  iii circuit protection

m the safety precautions when working on electrical and electronic systems to include:

  i disconnection and connection of power source

  ii avoidance of short circuits

  iii power surges

  iv prevention of electric shock

  v protection of electrical and electronic components

  vi protection of circuits from overload or damage

n the set-up and use of:
   i digital and analogue multi-meters
   ii voltmeter
   iii ammeter
   iv ohmmeter
   v oscilloscope
   vi manufacturer's dedicated test equipment
o electrical and electronic checks for electrical and electronic systems to include:
   i connections
   ii security
   iii functionality
   iv performance to specifications
   v continuity, open circuit
   vi short circuit
   vii high resistance
   viii volt drop
   ix current consumption
   x output patterns (oscilloscope)
p symptoms and faults associated with electrical and electronic systems to include:
   i high resistance
   ii loose and corroded connections
   iii short circuit
   iv excessive current consumption
   v open circuit
   vi malfunction
   vii poor performance
   viii battery faults to include flat battery
   ix failure to hold charge
   x low state of charge
   xi overheating
   xii poor starting

Trailer power supply

a the construction and operation of trailer auxiliary batteries including:
   i low maintenance and maintenance free
   ii lead acid and nickel cadmium types
   iii cells
   iv separators
   v plates
   vi electrolyte

b the construction and operation of the auxiliary engine charging system:
   i alternator
   ii rotor
   iii stator
   iv slip ring
   v brush assembly
   vi three phase output
   vii diode rectification pack
   viii voltage regulation
   ix phased winding connections
   x cooling fan
   xi alternator drive system

c the construction and operation of trailer auxiliary power supply:
   i jump leads
   ii isolator switches
   iii Anderson connectors

Lighting

a function and construction of electrical components including:
   i marker lamps and tail lamps
   ii rear high intensity lamps
   iii directional indicators
   iv interior lamps
   v reversing lamps and audible warnings
   vi "clang" plugs

b the circuit diagram and operation of components for:
   i marker lamps and tail lamps
   ii rear high intensity lamps
   iii directional indicators
   iv interior lamps
   v reversing lamps and audible warnings
c the statutory requirements for trailer lighting when using a trailer on the road

Auxiliary Systems

a function and construction of electrical auxiliary units and components including:
   i fridge operating and control system
   ii anti theft devises, tracking, security and alarm systems
   iii tyre pressure monitoring systems
   iv video trailer monitoring systems
   v axle weight monitoring systems
   vi tail-lift control systems
b the circuit diagram and operation of components for:
   i fridge operating and control system
   ii anti theft devises, tracking, security and alarm systems
   iii tyre pressure monitoring systems
   iv video trailer monitoring systems
   v axle weight monitoring systems
   vi tail-lift control systems

General

a the preparation, testing and use of:
   i tools and equipment
   ii electrical meters and equipment used for dismantling
   iii removal and replacement of electrical and electronic systems and components
b appropriate safety precautions:
   i PPE
   ii trailer protection when dismantling
   iii removal and replacing electrical and electronic components and systems
c the importance of logical and systematic processes

d preparation of replacement units for re-fitting or replacement of electrical and electronic components and systems

e the reasons why replacement components and units must meet the original specifications (OES) – warranty requirements, to maintain performance, safety requirements

f refitting procedures

g the inspection and testing of units and systems to ensure compliance with manufacturer's, legal and performance requirements

h inspection and re-instatement of the trailer following repair to ensure:

  i customer satisfaction

  ii presentation of trailer (cleanliness etc.)

  iii security of components and fittings

  iv re-instatement of components and fittings

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand heavy vehicle trailer electrical and electronic principles	1.1	identify electrical symbols and units found in trailer circuits			
		1.2	describe how to interpret simple trailer wiring diagrams			
		1.3	describe the operation of key trailer circuit protection devices and why these are necessary			
		1.4	describe trailer earthing principles and earthing methods			
		1.5	identify the use of different cables and connectors used in trailer circuits			
		1.6	describe the operation of electrical and electronic sensors and actuators and their application			
		1.7	describe the key electrical and electronic control principles that are related to trailer electrical circuits			
		1.8	state common terms used in trailer electrical circuits			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Understand how heavy vehicle trailer electrical and auxiliary systems operate	2.1	identify trailer electrical and auxiliary system components			
		2.2	describe the construction and operation of trailer electrical and auxiliary systems			
		2.3	compare trailer electrical and auxiliary system components and assemblies against alternatives to identify differences in construction and operation			
		2.4	state common terms used in trailer auxiliary system design			
3	Understand how to check, replace and test heavy vehicle trailer electrical and auxiliary systems and components	3.1	describe how to remove and replace heavy vehicle trailer electrical and auxiliary units and components			
		3.2	describe common types of testing methods used to check the operation of heavy vehicle trailer electrical and auxiliary systems and components and their purpose			
		3.3	explain how to test and evaluate the performance of replacement units against specifications			
		3.4	identify common faults found in heavy vehicle electrical and auxiliary systems and components			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(*if sampled*)

Unit 10: Skills in Routine Commercial Heavy Vehicle Trailer Maintenance

Unit reference number: A/602/6464

QCF level: 2

Credit value: 2

Guided learning hours: 20

Unit Summary

This unit allows the learner to demonstrate the skills required when carrying out routine maintenance, adjustments and replacement activities as part of the periodic servicing of heavy vehicle trailers.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 normal workplace or in a Realistic Work Environment as managed and organised by an approved centre

3 be observed by an assessor as defined by the IMI Assessment Strategy

4 be observed by your assessor carrying out servicing activities on **at least 1 trailer** which covers the Learning Outcomes

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out heavy vehicle trailer routine maintenance	1.1	use suitable personal protective equipment throughout all heavy vehicle trailer routine maintenance activities			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 heavy vehicle trailer routine maintenance activities including: a technical data b maintenance procedures c legal requirements			
		2.2	interpret technical information to support heavy vehicle trailer inspection activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out routine maintenance			
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			
		3.3	use the correct tools and equipment in the way specified by manufacturers when carrying out routine maintenance			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Be able to carry out heavy vehicle trailer routine maintenance	4.1	carry out heavy vehicle trailer services using prescribed methods, adhering to the correct specifications and tolerances for the trailer and following: a the manufacturer's approved inspection methods b recognised researched inspection methods c health and safety requirements			
		4.2	carry out adjustments, replacement of trailer components and replenishment of consumable materials following the manufacturer's current specification for: a the particular service interval b working methods and procedures c use of equipment d the tolerances for the trailer			
		4.3	ensure the examination methods identify accurately any trailer system and or component problems falling outside the maintenance schedule are specified			
		4.4	ensure that the trailer conforms to operating specification and any legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	ensure any comparison of the trailer against specification accurately identifies any: a. differences from the trailer specification b. trailer appearance and condition faults			
		4.6	use suitable testing methods to evaluate the performance of all replaced and adjusted components and systems accurately			
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: _____ Date:_____
(*if sampled*)

Unit 11: Skills in Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units

Unit reference number: F/602/6465

QCF level: 2

Credit value: 4

Guided learning hours: 32

Unit Summary

This unit allows the learner to demonstrate the skills needed when removing and replacing heavy vehicle trailer electrical and auxiliary system components. It also covers the evaluation of performance of the replaced units and systems.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 normal workplace or in a Realistic Work Environment as managed and organised by an approved centre

3 be observed by an assessor as defined by the IMI Assessment Strategy

4 be observed by your assessor carrying out the removal and replacement of Vehicle Electrical Units and Components from **3 different systems out of the 5 listed below:**

- lighting systems
- fridge or body operating systems
- tracking, security and alarm systems
- audible systems
- monitoring and instrumentation systems (inc. encripta etc)

Learning outcomes and assessment criteria

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

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.3	use the tools and equipment in the way specified by manufacturers to remove and replace heavy vehicle trailer electrical and auxiliary systems			
4	Be able to use appropriate tools and equipment	4.1	remove and replace the trailer's electrical and auxiliary systems and components, adhering to the correct specifications and tolerances for the vehicle and following: a the manufacturer's approved removal and replacement methods b recognised researched repair methods c health and safety requirements			
		4.2	ensure that replaced trailer electrical and auxiliary units and components conform to the trailer operating specification and any legal requirements			
		4.3	use suitable testing methods to evaluate the performance of the reassembled system			
		4.4	ensure that the reassembled trailer electrical and auxiliary system performs to the trailer operating specification and meets any legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
5	Be able to carry out removal and replacement of heavy vehicle trailer electrical and auxiliary units and components	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 heavy vehicle trailer electrical 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: _____ Date:_____
(*if sampled*)

Unit 12: Skills in Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components

Unit reference number: L/602/6467

QCF level: 2

Credit value: 4

Guided learning hours: 35

Unit Summary

This unit allows the learner to demonstrate the skills required when removing and replacing heavy vehicle trailer steering, suspension and braking units (including wheels and tyres). It also covers the evaluation of performance of the replaced units and systems.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 normal workplace or in a Realistic Work Environment as managed and organised by an approved centre

3 be observed by an assessor as defined by the IMI Assessment Strategy

4 be observed by your assessor carrying out the removal and replacement of **2 different units or components** – each from different systems. Your evidence must include demonstration of skill **in each** aspect of mechanical and hydraulic and/or pneumatic unit or component removal and replacement.

- steering
- suspension
- braking

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out removal and replacement activities	1.1	use suitable personal protective equipment and appropriate coverings when working on heavy vehicle trailer chassis systems and components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 trailer chassis unit and component removal and replacement activities including: a technical data b removal and replacement procedures c legal requirements			
		2.2	use technical information to support trailer chassis unit and component removal and replacement activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for removal and replacement of heavy vehicle trailer chassis systems			
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.3	use the tools and equipment in the way specified by manufacturers to remove and replace trailer chassis systems			
4	Be able to carry out removal and replacement of heavy vehicle trailer chassis units and components	4.1	remove and replace the trailer's chassis systems and components, adhering to the correct specifications and tolerances for the trailer and following: a the manufacturer's approved removal and replacement methods b recognised researched repair methods c health and safety requirements			
		4.2	ensure that replaced trailer chassis units and components conform to the trailer operating specification and any legal requirements			
		4.3	use suitable testing methods to evaluate the performance of the reassembled system			
		4.4	ensure that the reassembled trailer chassis system performs to the trailer operating specification and meets any legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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: _____ Date:_____
(*if sampled*)

Unit 13: Skills to Identify and Agree Motor Vehicle Customer Service Needs

Unit reference number: M/601/6286

QCF level: 3

Credit value: 5

Guided learning hours: 40

Unit Summary

This unit helps the learner to develop the skills required to gain information from customers on their perceived needs; give advice and information and agree a course of action; contract for the agreed work and complete all necessary records and instructions.

Assessment Requirements/Evidence requirements:

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

General Requirements

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, including records, to show that you have dealt with **3 different customers**

5 be observed by your assessor on at least **1** occasion

Evidence from real activity **or role-play is acceptable** for this unit.

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to obtain relevant information from the customer	1.1	obtain and interpret sufficient, relevant information, from the customer to make an assessment of their needs			
		1.2	clarify customer and vehicle needs by referring to vehicle data and operating procedures			
2	Be able to provide relevant information to the customer	2.1	provide customers with accurate, current and relevant advice and information, in a form that the customer will understand			
		2.2	demonstrate techniques which encourage customers to ask questions and seek clarification during conversation			
3	Be able to agree work undertaken with the customer	3.1	summarise and record work agreed with the customer, before accepting the vehicle			
		3.2	implement confirmation of the agreement by ensuring customer understanding			
4	Be able to ensure recording systems are implemented correctly	4.1	use recording systems which are accurate and complete, in the required format and signed by the customer where necessary			
		4.2	perform the next stage in the process by passing on completed records to the correct person promptly			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.3	demonstrate correct procedures for customer approval where the contracted agreement is likely to be exceeded			

Learner name: _____ Date:_____

Learner signature: _____ Date:_____

Assessor signature: _____ Date:_____

Internal verifier signature: _____ Date:_____
(*if sampled*)

Unit 14: Knowledge of how to Identify and Agree Motor Vehicle Customer Service Needs

Unit reference number: R/601/6247

QCF level: 3

Credit value: 5

Guided learning hours: 45

Unit Summary

This unit enables the learner to develop an understanding of how to gain: information from customers on their perceived needs; give advice and information and agree a course of action; contract for the agreed work and complete all necessary records and instructions.

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:

Content:

Organisational Requirements

a explain the organisation's terms and conditions applicable to the acceptance of customer vehicles

b explain the content and limitations of vehicle and component warranties for the vehicles dealt with by your organisation

c detail what, if any, limits there are to the authority for accepting vehicles

d detail why it is important to keep customers advised of progress and how this is achieved within the organisation

e detail the organisation's procedures for the completion and processing of documentation and records, including payment methods and obtaining customer signatures as applicable

Principles of Customer Communication and Care

a first impressions

b listening skills – 80:20 ratio

c eye contact and smiling

d showing interest and concern

e questioning techniques and customer qualification

f giving clear non-technical explanations

g confirming understanding (statement/question technique, reflective summary)

h written communication – purpose, content, presentation and style

i providing a high quality service – fulfilling (ideally exceeding) customer expectations within agreed time frames

j obtaining customer feedback and corrective actions when dissatisfaction expressed

k dealing with complaints

Company Products and Services

a service standards

- i national
- ii manufacturer
- iii organisational

b the range and type of services offered by the organisation.

- i diagnostic
- ii servicing
- iii repair
- iv warranty
- v MOT testing
- vi fitment of accessories/enhancements
- vii internal

c the courses of action available to resolve customer problems

- i the extent and nature of the work to be undertaken
- ii the terms and conditions of acceptance
- iii the cost
- iv the timescale
- v required payment methods

d the effect of resource availability upon the receipt of customer vehicles and the completion of work

- i levels and availability of equipment
- ii levels and availability of technicians
- iii workshop loading systems

e how to access costing and work completion time information

i manuals

ii computer based

Vehicle Information Systems, Servicing and Repair Requirements

a accessing technical data including diagnostics

b servicing to manufacturer requirements/standards

c repair/operating procedures

d MOT standards/requirements

e quality controls – interim and final

f requirements for cleanliness of vehicle on return to customer

g handover procedures

Consumer Legislation. To include:

a consumer protection

b sale of goods

c data protection

d product liability

e health and safety

f discrimination

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand legislative and organisational requirements and procedures	1.1	describe the fundamental legal requirements of current consumer legislation and the consequences of their own actions in respect of this legislation			
		1.2	describe the content and limitations of company and product warranties for the vehicles dealt with by their company			
		1.3	explain the limits of their own authority for accepting vehicles			
		1.4	explain the importance of keeping customers informed of progress			
		1.5	describe their workplace requirements for the completion of records			
		1.6	explain how to complete and process all the necessary documentation			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Understand how to communicate and care for customers	2.1	explain how to communicate effectively with customers			
		2.2	describe how to adapt your language when explaining technical matters to non-technical customers			
		2.3	explain how to use effective questioning techniques			
		2.4	describe how to care for customers and achieve customer satisfaction			
3	Understand company products and services	3.1	describe the range of options available to resolve vehicle problems			
		3.2	describe the range and type of services offered by their company			
		3.3	explain the effect of resource availability upon the receipt of customer vehicles and the completion work			
		3.4	explain how to access costing and work completion time information			

Learner name: _____ Date: _____

Learner signature: _____ Date: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____
(*if sampled*)

Unit 15: Knowledge of Inspecting Heavy Vehicle Trailers

Unit reference number: K/602/6461

QCF level: 2

Credit value: 4

Guided learning hours: 30

Unit Summary

This unit enables the learner to develop an understanding of carrying out a range of inspections on heavy vehicle trailers using a variety of testing and inspection methods.

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:

Content:

Different types of trailer inspection

a types of inspection:
- i pre-delivery/pre purchase
- ii pre-MOT Inspection
- iii scheduled safety inspections
- iv daily vehicle checks
- v pre-rental/post rental inspection

Trailer inspections and maintenance records

b the purpose and scope of the different types of trailer inspection

c trailer inspection techniques for different types of inspection including:
- i systematic inspections
- ii aural
- iii visual and functional assessments
- iv chassis systems
- v wheels and tyres

vi electrical and electronic systems

vii load handling systems

viii body exterior

ix body interior

d the procedure for inspection of the trailer for damage, corrosion, air and fluid leaks, wear, security, mounting security and condition to include;

i auxiliary systems

ii brakes

iii steering

iv suspension

v wheels

vi tyres

vii body

viii electrical and electronic systems and components

e preparation and use of appropriate inspection equipment and tools including:

i brake testing

ii wheel alignment

iii torque setting

iv specialist diagnostic equipment

v tyre tread depth gauges

f inspection procedures following inspection checklists

g checking conformity to manufacturer's specifications and legal requirements

i workshop manuals

ii heavy goods vehicle inspection manual

h testing and operation of trailer systems and trailer condition including workshop based tests and road tests

i the completion and maintenance of:

i documentation

ii defect reports

iii inspection records

iv job cards

v vehicle records

j make recommendations based on results of trailer inspections.

k the implications of not carrying out trailer inspections correctly including:

i legal aspects (impact on Operator Licence)

ii safety aspects

iii financial aspects

iv customer retention

v customer relationships

The need for vehicle protection prior to carrying out vehicle inspection

a protection relating to:

i trailer body interior (refrigerated trailers, tankers designed to carry foodstuffs etc.)

ii paint surfaces

iii wings, sideguards and under-run bars

b checks to be made following maintenance and repair:

i vehicle body panels

ii paint surfaces

iii trailer presentation/appearance

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Understand how to carry out inspections on heavy vehicle trailers using prescribed methods	1.1	explain the difference between the various prescribed trailer inspection methods			
		1.2	identify the different systems to be inspected when using the prescribed inspection methods			
		1.3	identify the procedures involved to carry out the systematic inspection of the prescribed inspection methods on trailers			
		1.4	identify conformity of vehicle systems and condition on trailer inspections			
		1.5	compare test and inspection results against trailer specification and legal requirements			
		1.6	explain how to record and complete the inspection results in the format required			
		1.7	identify the recommendations that can be made based on results of the trailer inspections			
		1.8	explain the implications of failing to carry out trailer inspection activities correctly			
		1.9	explain the implications of signing workplace documentation and vehicle records			
		1.10	explain the procedure for reporting damage to trailer components and units outside normal inspection items			

Learner name: _____ Date:_____

Learner signature: _____ Date:_____

Assessor signature: _____ Date:_____

Internal verifier signature: _____ Date:_____
(*if sampled*)

Unit 16: Skills in Inspecting Heavy Vehicle Trailers using Prescribed Methods

Unit reference number: R/602/6468

QCF level: 2

Credit value: 2

Guided learning hours: 20

Unit Summary

This unit allows the learner to demonstrate they can carry out a range of inspections on heavy vehicle trailers using a variety of equipment manufacturer or customer prescribed testing and inspection methods.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 normal workplace or in a Realistic Work Environment as managed and organised by an approved centre

3 be observed by an assessor as defined by the IMI Assessment Strategy

4 be observed by your assessor carrying out **at least 2** different inspections from the following:

- pre-delivery and pre-purchase
- daily vehicle checks
- pre and post rental inspections

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out heavy vehicle trailer inspections using prescribed methods	1.1	use suitable personal protective equipment and vehicle coverings throughout all trailer inspection activities			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 heavy vehicle trailer inspection activities including: a technical data b inspection procedures c legal requirements			
		2.2	use technical information to support heavy vehicle trailer inspection activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out a range of inspections on heavy vehicle trailer systems including: a pre-delivery and pre-purchase b daily vehicle checks c pre and post rental inspection			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			
		3.3	use the tools and equipment in the way specified by manufacturers when carrying out a range of inspections on heavy vehicle trailer systems			
4	Be able to carry out heavy vehicle trailer inspections using prescribed methods	4.1	carry out trailer inspections using prescribed methods, adhering to the specifications and tolerances for the trailer and following: a the manufacturer's approved inspection methods b recognised researched inspection methods c health and safety requirements d prescribed documentation			
		4.2	ensure that the inspected trailer conforms to the trailer operating specification and any legal requirements			
		4.3	ensure any comparison of the trailer against specification accurately identifies any: a differences from the trailer specification b trailer appearance and condition faults			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.4	use suitable testing methods to evaluate the performance of the inspected systems			
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: _____ Date:_____
(*if sampled*)

Unit 17: Competency in Health, Safety and Good Housekeeping in the Automotive Environment

Unit reference number: A/601/6338

QCF 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 Competence Unit Assessment Requirements as set out below:

General Requirements

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 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			
		1.2	select and use vehicle protective equipment throughout all activities			
2	Be able to carry out effective housekeeping practices in the automotive environment	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
		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			
3	Be able to recognise and deal with dangers in order to work safely within the automotive workplace	3.1	name and locate the responsible persons for health and safety in their relevant workplace			
		3.2	identify and report working practices and hazards which could be harmful to themselves or others			
		3.3	carry out safe working practices whilst working with equipment, materials and products in the automotive environment			
		3.4	rectify health and safety risks encountered at work, within the scope and capability of their job role			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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			

Learner name: _____ Date:_____

Learner signature: _____ Date:_____

Assessor signature: _____ Date:_____

Internal verifier signature: _____ Date:_____
(*if sampled*)

Unit 18: Competency in Supporting Job Roles in the Automotive Work Environment

Unit reference number: K/601/6366

QCF 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 Competence Unit Assessment Requirements as set out below:

General Requirements

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			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 19: Competency in Routine Heavy Vehicle Trailer Maintenance

Unit reference number: L/602/6453

QCF level: 2

Credit value: 7

Guided learning hours: 60

Unit Summary

This unit allows the learner to demonstrate the skills required when carrying out routine maintenance, adjustments and replacement activities as part of the periodic servicing of heavy vehicle trailers.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 trailers 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 carrying out servicing activities on **at least 3 different trailers** which collectively cover the Learning Outcomes

5 be observed by your assessor **in your normal workplace** carrying out a range of servicing activities on **at least 1 occasion**

Evidence from simulated activities is **not** acceptable for this unit.

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out heavy vehicle trailer routine maintenance	1.1	use suitable personal protective equipment and vehicle coverings throughout all trailer routine maintenance activities			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 trailer routine maintenance activities including: a technical data b maintenance procedures c legal requirements			
		2.2	use technical information to support trailer inspection activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out routine maintenance			
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			
		3.3	use the correct tools and equipment in the way specified by manufacturers when carrying out routine maintenance			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Be able to carry out heavy vehicle trailer routine maintenance	4.1	carry out trailer services using prescribed methods, adhering to the correct specifications and tolerances for the trailer and following: a. the manufacturer's approved inspection methods b. recognised researched inspection methods c. health and safety requirements			
		4.2	carry out adjustments, replacement of trailer components and replenishment of consumable materials following the manufacturer's current specification for: a. the particular service interval b. working methods and procedures c. use of equipment d. the tolerances for the trailer			
		4.3	ensure the examination methods identify accurately any trailer system and or component problems falling outside the maintenance schedule are specified			
		4.4	ensure that the trailer conforms to operating specification and any legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	ensure any comparison of the trailer against specification accurately identifies any: a differences from the trailer specification b trailer appearance and condition faults			
		4.6	use suitable testing methods to evaluate the performance of all replaced and adjusted components and systems accurately			
		4.7	complete all trailer maintenance activities within the agreed timescales			
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 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: _____
(*if sampled*)

Unit 20: Competency in Removing and Replacing Heavy Vehicle Trailer Chassis Units and Components

Unit reference number: R/602/6471

QCF level: 2

Credit value: 9

Guided learning hours: 86

Unit Summary

This unit allows the learner to demonstrate the skills required when removing and replacing heavy vehicle trailer steering, suspension and braking units (including wheels and tyres). It also covers the evaluation of performance of the replaced units and systems.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 trailers 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 removing and replacing **3 different units or components** in total which **must include items from** suspension and braking systems. Your evidence must include demonstration of competence **in each** aspect of mechanical, electrical and hydraulic and/or pneumatic units

5 be observed in your normal workplace on at least **1 occasion** removing and replacing units and components from one of the following systems:

- steering
- suspension
- braking

Evidence from simulated activities is **not** acceptable for this unit.

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out removal and replacement activities	1.1	use suitable personal protective equipment and appropriate coverings when working on heavy vehicle trailer chassis systems and components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 trailer chassis unit and component removal and replacement activities including: a technical data b removal and replacement procedures c legal requirements			
		2.2	use technical information to support trailer chassis unit and component removal and replacement activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for removal and replacement of heavy vehicle trailer chassis systems			
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.3	use the tools and equipment in the way specified by manufacturers to remove and replace trailer chassis systems			
4	Be able to carry out removal and replacement of heavy vehicle trailer chassis units and components.	4.1	remove and replace the trailer's chassis systems and components, adhering to the correct specifications and tolerances for the trailer and following: a the manufacturer's approved removal and replacement methods b recognised researched repair methods c health and safety requirements			
		4.2	ensure that replaced trailer chassis units and components conform to the trailer operating specification and any legal requirements			
		4.3	use suitable testing methods to evaluate the performance of the reassembled system			
		4.4	ensure that the reassembled trailer chassis system performs to the trailer operating specification and meets any legal requirements			
		4.5	complete all removal and replacement activities within the agreed timescales			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
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 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:_____
(*if sampled*)

Unit 21: Competency in Removing and Replacing Heavy Vehicle Trailer Electrical and Auxiliary Units and Components

Unit reference number: Y/602/6455

QCF level: 2

Credit value: 9

Guided learning hours: 86

Unit Summary

This unit allows the learner to demonstrate the competency needed when removing and replacing heavy vehicle trailer electrical and auxiliary system components. It also covers the evaluation of performance of the replaced units and systems.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 trailers 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 removing and replacing **at least 3*** units or components, **each** from a **different** electrical system listed below. At least **2** of these **3** pieces of evidence **must** come from work **in your normal workplace**

   – lighting systems

   – fridge or body operating systems

   – tracking, security and alarm systems

   – audible systems

   – monitoring and instrumentation systems (inc. encripta etc)

5 be observed by your assessor on **at least 1 occasion in your normal workplace** carrying out the removal and replacement of electrical units and components**:**

*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 listed above

Simulated activity **will be** acceptable to assess candidates' removal and replacement competence on **no more than 1** occasion.

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out removal and replacement activities	1.1	use suitable personal protective equipment and vehicle coverings when working on heavy vehicle trailer electrical and auxiliary systems and components			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 heavy vehicle trailer electrical and auxiliary unit and component removal and replacement activities including: a technical data b removal and replacement procedures c legal requirements			
		2.2	use technical information to support heavy vehicle trailer electrical and auxiliary unit and component removal and replacement activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for removal and replacement of heavy vehicle trailer electrical and auxiliary systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			
		3.3	use the tools and equipment in the way specified by manufacturers to remove and replace heavy vehicle trailer electrical and auxiliary systems			
4	Be able to carry out removal and replacement of heavy vehicle trailer electrical and auxiliary units and components.	4.1	remove and replace the trailer's electrical and auxiliary systems and components, adhering to the correct specifications and tolerances for the vehicle and following: a the manufacturer's approved removal and replacement methods b recognised researched repair methods c health and safety requirements.			
		4.2	check that replaced trailer electrical and auxiliary units and components conform to the trailer operating specification and any legal requirements			
		4.3	use suitable testing methods to evaluate the performance of the reassembled system			
		4.4	ensure that the reassembled trailer electrical and auxiliary system performs to the trailer operating specification and meets any legal requirements			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	complete all trailer electrical repair activities within the agreed timescales			
5	Be able to record information and make suitable recommendations	5.1	produce work records that are accurate, complete a and passed to the relevant person(s) promptly in b the format required			
		5.2	make suitable and justifiable recommen-dations for a 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 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:_____
(*if sampled*)

Unit 22: Competency in Identifying and Agreeing Motor Vehicle Customer Service Needs

Unit reference number: K/601/6383

QCF level: 3

Credit value: 5

Guided learning hours: 40

Unit Summary

This unit helps the learner to develop competency in order to: gain information from customers on their perceived needs; give advice and information and agree a course of action; contract for the agreed work and complete all necessary records and instructions.

Assessment Requirements/Evidence requirements:

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

General Requirements

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, including records, to show that you have dealt with **3 different customers**

5 be observed by your assessor in your normal workplace dealing with **at least 1 customer**

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to obtain relevant information from the customer	1.1	obtain and interpret sufficient, relevant information, from the customer to make an assessment of their needs			
		1.2	clarify customer and vehicle needs by referring to vehicle data and operating procedures			
2	Be able to provide relevant information to the customer	2.1	provide customers with accurate, current and relevant advice and information, in a form that the customer will understand			
		2.2	demonstrate techniques which encourage customers to ask questions and seek clarification during conversation			
3	Be able to agree work undertaken with the customer	3.1	summarise and record work agreed with the customer, before accepting the vehicle			
		3.2	implement confirmation of the agreement by ensuring customer understanding			
4	Be able to ensure recording systems are implemented correctly	4.1	use recording systems which are accurate and complete, in the required format and signed by the customer where necessary			
		4.2	perform the next stage in the process by passing on completed records to the correct person promptly			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.3	demonstrate correct procedures for customer approval where the contracted agreement is likely to be exceeded			

Learner name: _____ Date:_____

Learner signature: _____ Date:_____

Assessor signature: _____ Date:_____

Internal verifier signature: _____ Date:_____
(*if sampled*)

Unit 23: Competency in Inspecting Heavy Vehicle Trailers using Prescribed Methods

Unit reference number: Y/602/6472

QCF level: 2

Credit value: 5

Guided learning hours: 40

Unit Summary

This unit allows the learner to demonstrate they can carry out a range of inspections on heavy vehicle trailers using a variety of equipment manufacturer or customer prescribed testing and inspection methods.

Assessment Requirements/Evidence requirements:

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

General Requirements

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 trailers 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 carrying out **at least 2** different inspections on **2 occasions each** from the following**:**

- pre-delivery and pre-purchase
- daily vehicle checks
- pre and post rental inspections

5 be observed by your assessor **in your normal workplace** carrying out an inspection on **at least 1 occasion**

Evidence from simulated activities is **not** acceptable for this unit.

Learning outcomes and assessment criteria

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to work safely when carrying out heavy vehicle trailer inspections using prescribed methods	1.1	use suitable personal protective equipment and vehicle coverings throughout all trailer inspection activities			
		1.2	work in a way which minimises the risk of damage or injury to the vehicle, trailer, 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 heavy vehicle trailer inspection activities including: a technical data b inspection procedures c legal requirements			
		2.2	use technical information to support heavy vehicle trailer inspection activities			
3	Be able to use appropriate tools and equipment	3.1	select the appropriate tools and equipment necessary for carrying out a range of inspections on heavy vehicle trailer systems including: a pre-delivery and pre-purchase b daily vehicle checks c pre and post rental inspection			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		3.2	ensure that equipment has been calibrated to meet manufacturers' and legal requirements			
		3.3	use the tools and equipment in the way specified by manufacturers when carrying out a range of inspections on heavy vehicle trailer systems			
4	Be able to carry out heavy vehicle trailer inspections using prescribed methods	4.1	carry out trailer inspections using prescribed methods, adhering to the specifications and tolerances for the trailer and following: a the manufacturer's approved inspection methods b recognised researched inspection methods c health and safety requirements d prescribed documentation			
		4.2	ensure that the inspected trailer conforms to the trailer operating specification and any legal requirements			
		4.3	ensure any comparison of the trailer against specification accurately identifies any: a differences from the trailer specification b trailer appearance and condition faults			
		4.4	use suitable testing methods to evaluate the performance of the inspected systems			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
		4.5	complete all trailer inspection activities within the agreed timescales			
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 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:_____
(*if sampled*)

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.

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). 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

Level	BTEC vocationally-related qualifications	BTEC specialist qualification/ professional	NVQ/competence
5	BTEC Level 5 HND Diploma in Vehicle Operations Management (QCF)		
4	BTEC Level 4 HNC Diploma in Vehicle Operations Management (QCF)		
3		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
3		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 and 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)
2		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)	Edexcel Level 2 Diploma in Light Vehicle Maintenance and Repair Competence(QCF) Edexcel Level 2 Diploma in Heavy Vehicle Maintenance and Repair Competence (QCF) Edexcel Level 2 Diploma in Auto Electrical and Mobile Electrical Competence (QCF) Edexcel Level 2 Diploma in Vehicle Fitting Competence (QCF) Edexcel Level 2 Diploma in Vehicle Accident Repair Paint Competence (QCF) Edexcel Level 2 Diploma in Vehicle Accident Repair Body Competence (QCF)

Level	BTEC vocationally-related qualifications	BTEC specialist qualification/ professional	NVQ/competence
2		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 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)
1			
Entry			

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.

Please refer to Edexcel's Equality Policy for further details, www.edexcel.co/policies/pages/home.aspx

THE INSTITUTE OF THE MOTOR INDUSTRY

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 30th June 2010, it will apply to any new competence based units and qualifications.

Assessment

VCQs are a type of qualification which reflects 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 page 4).

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 additional 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.

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