

**Pearson
BTEC Level 2 Certificate in
Principles of Bus and Coach
Engineering and Maintenance
(Body) (QCF)**

**Pearson
BTEC Level 2 Certificate
in Principles of Bus and Coach
Engineering and Maintenance
(Electrical) (QCF)**

**Pearson
BTEC Level 2 Diploma in
Principles of Bus and Coach
Engineering and Maintenance
(Mechanical) (QCF)**

Specification

Pearson BTEC Specialist qualification

First teaching August 2014

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Authorised by Martin Stretton
Prepared by Amy Weaver

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Purpose of this specification

The purpose of a specification as defined by Ofqual is to set out:

- the qualification's objective
- any other qualification that a learner must have completed before taking the qualification
- any prior knowledge, skills or understanding that the learner is required to have before taking the qualification
- units that a learner must have completed before the qualification will be awarded and any optional routes
- any other requirements that a learner must have satisfied before they will be assessed or before the qualification will be awarded
- the knowledge, skills and understanding that will be assessed as part of the qualification (giving a clear indication of their coverage and depth)
- the method of any assessment and any associated requirements relating to it
- the criteria against which the learner's level of attainment will be measured (such as assessment criteria)
- any specimen materials
- any specified levels of attainment.

1 Introducing Pearson BTEC Specialist qualifications

For more than 25 years, Pearson BTECs have earned their reputation as well-established, enduringly effective qualifications. They have a proven track record of improving motivation and achievement. Pearson BTECs also provide progression routes to the next stage of education or to employment.

What are Pearson BTEC Specialist qualifications?

Pearson BTEC Specialist qualifications are qualifications from Entry to Level 3 on the Qualifications and Credit Framework (QCF). They are work-related qualifications and are available in a range of sectors. They give learners the knowledge, understanding and skills they need to prepare for employment. They also provide career development opportunities for those already in work. These qualifications may be full-time or part-time courses in schools or colleges. Training centres and employers may also offer these qualifications.

Some Pearson BTEC Specialist qualifications are knowledge components in Apprenticeship Frameworks, i.e. Technical Certificates.

There are three sizes of Pearson BTEC Specialist qualification in the QCF:

- Award (1 to 12 credits)
- Certificate (13 to 36 credits)
- Diploma (37 credits and above).

Every unit and qualification in the QCF has a credit value.

The credit value of a unit specifies the number of credits that will be awarded to a learner who has achieved the learning outcomes of the unit.

The credit value of a unit is based on:

- one credit for every 10 hours of learning time
- learning time – defined as the time taken by learners at the level of the unit, on average, to complete the learning outcomes to the standard determined by the assessment criteria.

2 Qualification summary and key information

Qualification title	Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Body) (QCF)
QCF Qualification Number (QN)	600/9733/4
Qualification framework	Qualifications and Credit Framework (QCF)
Regulation start date	13/06/2013
Operational start date	01/08/2014
Approved age ranges	16-18 19+
Credit value	34
Assessment	Centre-devised assessment (internal assessment)
Guided learning hours	226-271
Grading information	The qualification and units are at pass grade.
Entry requirements	No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification. However, centres must follow the Pearson Access and Recruitment policy (see <i>Section 10 Access and recruitment</i>)

Qualification title	Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Electrical) (QCF)
QCF Qualification Number (QN)	601/0113/1
Qualification framework	Qualifications and Credit Framework (QCF)
Regulation start date	03/07/2013
Operational start date	01/08/2014
Approved age ranges	16-18 19+
Credit value	20
Assessment	Centre-devised assessment (internal assessment)
Guided learning hours	170-227
Grading information	The qualification and units are at pass grade.
Entry requirements	No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification. However, centres must follow the Pearson Access and Recruitment policy (see <i>Section 10 Access and recruitment</i>)

Qualification title	Pearson BTEC Level 2 Diploma in Principles of Bus and Coach Engineering and Maintenance (Mechanical) (QCF)
QCF Qualification Number (QN)	600/9585/4
Qualification framework	Qualifications and Credit Framework (QCF)
Regulation start date	05/06/2013
Operational start date	01/08/2014
Approved age ranges	16-18 19+
Credit value	41
Assessment	Centre-devised assessment (internal assessment)
Guided learning hours	330-367
Grading information	The qualification and units are at pass grade.
Entry requirements	No prior knowledge, understanding, skills or qualifications are required before learners register for this qualification. However, centres must follow the Pearson Access and Recruitment policy (see <i>Section 10 Access and recruitment</i>)

QCF qualification number and qualification title

Centres will need to use the QCF Qualification Number (QN) when they seek public funding for their learners. As well as a QN, each unit within a qualification has a QCF unit reference number (URN).

The qualification title, unit titles and QN will appear on each learner's final certificate. You should tell your learners this when your centre recruits them and registers them with us. There is more information about certification in the *Edexcel Information Manual*, available on our website: www.edexcel.com

Objective of the qualification (Body)

The Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Body) (QCF) is for learners who work in, or want to work in the Passenger Transport Sector as a bus/coach body repairer for example.

It gives learners the opportunity to:

- develop knowledge related to repairing and maintaining bus and coach body components
- demonstrate occupational competence and knowledge within body cladding areas
- learn about bus and coach engineering and maintenance with specific reference to body components
- achieve a nationally-recognised Level 2 qualification
- develop their own personal growth and engagement in learning.

Objective of the qualification (Electrical)

The Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Electrical) (QCF) is for learners who work in, or want to work in the Passenger Transport Sector as a bus/coach electrical service technician for example.

It gives learners the opportunity to:

- develop knowledge related to repairing and maintaining electrical components on buses and coaches
- demonstrate occupational competence and knowledge within electrical areas
- learn about bus and coach engineering and maintenance with specific reference to electrical components
- achieve a nationally-recognised Level 2 qualification
- develop their own personal growth and engagement in learning.

Objective of the qualification (Mechanical)

The Pearson BTEC Level 2 Diploma in Principles of Bus and Coach Engineering and Maintenance (Mechanical) (QCF) is for learners who work in, or want to work in the Passenger Transport Sector as a bus/coach mechanical service technician for example.

It gives learners the opportunity to:

- develop knowledge related to repairing and maintaining mechanical components on buses and coaches
- demonstrate occupational competence and knowledge within mechanical areas
- learn about bus and coach engineering and maintenance with specific reference to mechanical components
- achieve a nationally-recognised Level 2 qualification
- develop their own personal growth and engagement in learning.

Apprenticeships

People 1st approve the Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Body) (QCF); Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Electrical) (QCF) and Pearson BTEC Level 2 Diploma in Principles of Bus and Coach Engineering and Maintenance (Mechanical) (QCF) as knowledge components for the Intermediate Apprenticeship in Bus and Coach Engineering and Maintenance.

Relationship with previous qualifications

These qualifications are replacements for the EDI Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Body) (QCF); EDI Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Electrical) (QCF) and EDI Level 2 Diploma in Principles of Bus and Coach Engineering and Maintenance (Mechanical) (QCF).

Progression opportunities through Pearson qualifications

Learners who have achieved the Level 2 Certificate/Diploma can progress to the Level 3 Certificate and Diplomas in Principles of Bus and Coach Engineering and Maintenance (QCF) in Body, Electrical, Mechanical or Mechanical/Electrical.

Industry support and recognition

These qualifications are supported by People 1st for Go Skills, the SSC for occupations in passenger transport.

Relationship with National Occupational Standards

These qualifications relate to the National Occupational Standards in Bus and Coach Engineering and Maintenance. The mapping document in *Annexe A* shows the links between the units within this qualification and the National Occupational Standards.

3 Qualification structures

Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Body) (QCF)

The learner will need to meet the requirements outlined in the table below before Pearson can award the qualification.

Minimum number of credits that must be achieved	34
Number of mandatory credits that must be achieved	32
Number of optional credits that must be achieved	2

Unit	Unit reference number	Mandatory units	Level	Credit	Guided learning hours
1	Y/502/8468	Understanding Health, Safety and Good Housekeeping in the Bus and Coach Environment	2	3	30
2	L/502/8466	Understanding Effective Working Relationships with Colleagues in the Bus and Coach Work Environment	3	3	20
3	R/502/8467	Understanding Materials, Fabrication, Tools and Measuring Devices used in the Bus and Coach Environment	2	4	40
8	J/502/8398	Understand Routine Assembly of Bus/Coach Body Components	2	8	39
11	Y/502/8406	Understand How to Identify and Repair Damage to Bus/Coach Body Panels and Components	2	14	77
Unit	Unit reference number	Optional units	Level	Credit	Guided learning hours
9	K/502/8474	Understand How to Carry Out Bus and Coach Servicing	2	2	20
6	D/502/8472	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Engine Systems and Components	2	8	60
12	Y/502/8471	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Chassis Systems and Components	2	8	60

Unit	Unit reference number	Optional units	Level	Credit	Guided learning hours
10	R/502/8470	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Transmission Systems and Components	2	8	60
4	F/502/8500	Understand How to Identify, Locate and Rectify Electrical Faults in Bus and Coach Systems and Components	2	8	60
7	H/502/8392	Understand Thermal Joining to Bus/Coach Components	3	10	60
13	R/502/8419	Understand How to Prepare and Treat Surfaces and Apply Paint Coats to Bus/Coach Body Panels and Components	3	13	65
14	T/502/8493	Understand How to Conduct Inspections of Buses and Coaches	3	5	40
Unit	Unit reference number	Optional unit (Mandatory for Apprenticeship Learners)	Level	Credit	Guided learning hours
15	L/602/5934	Employment Rights and Responsibilities in the Passenger Transport Sector	2	3	18

Centres should be aware that within the Level 2 qualification 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 unit(s) during delivery and assessment of the qualification.

Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Electrical) (QCF)

The learner will need to meet the requirements outlined in the table below before Pearson can award the qualification.

Minimum number of credits that must be achieved	20
Number of mandatory credits that must be achieved	18
Number of optional credits that must be achieved	2

Unit	Unit reference number	Mandatory units	Level	Credit	Guided learning hours
1	Y/502/8468	Understanding Health, Safety and Good Housekeeping in the Bus and Coach Environment	2	3	30
2	L/502/8466	Understanding Effective Working Relationships with Colleagues in the Bus and Coach Work Environment	3	3	20
3	R/502/8467	Understanding Materials, Fabrication, Tools and Measuring Devices used in the Bus and Coach Environment	2	4	40
4	F/502/8500	Understand How to Identify, Locate and Rectify Electrical Faults in Bus and Coach Systems and Components	2	8	60
Unit	Unit reference number	Optional units	Level	Credit	Guided learning hours
5	D/502/8469	Understand How to Provide Roadside Assistance and Recovery Assistance and Recovery for Buses and Coaches	2	6	47
6	D/502/8472	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Engine Systems and Components	2	8	60
7	H/502/8392	Understand Thermal Joining to Bus/Coach Components	3	10	60
8	J/502/8398	Understand Routine Assembly of Bus/Coach Body Components	2	8	39

Unit	Unit reference number	Optional units	Level	Credit	Guided learning hours
9	K/502/8474	Understand How to Carry out Bus and Coach Servicing	2	2	20
10	R/502/8470	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Transmission Systems and Components	2	8	60
14	T/502/8493	Understand How to Conduct Inspections of Buses and Coaches	3	5	40
11	Y/502/8406	Understand How to Identify and Repair Damage to Bus/Coach Body Panels and Components	2	14	77
12	Y/502/8471	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Chassis Systems and Components	2	8	60
Unit	Unit reference number	Optional unit (Mandatory for Apprenticeship Learners)	Level	Credit	Guided learning hours
15	L/602/5934	Employment Rights and Responsibilities in the Passenger Transport Sector	2	3	18

Centres should be aware that within the Level 2 qualification 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 unit(s) during delivery and assessment of the qualification.

Pearson BTEC Level 2 Certificate in Principles of Bus and Coach Engineering and Maintenance (Mechanical) (QCF)

The learner will need to meet the requirements outlined in the table below before Pearson can award the qualification.

Minimum number of credits that must be achieved	41
Number of mandatory credits that must be achieved	36
Number of optional credits that must be achieved	5

Unit	Unit reference number	Mandatory units	Level	Credit	Guided learning hours
1	Y/502/8468	Understanding Health, Safety and Good Housekeeping in the Bus and Coach Environment	2	3	30
2	L/502/8466	Understanding Effective Working Relationships with Colleagues in the Bus and Coach Work Environment	3	3	20
3	R/502/8467	Understanding Materials, Fabrication, Tools and Measuring Devices used in the Bus and Coach Environment	2	4	40
6	D/502/8472	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Engine Systems and Components	2	8	60
9	K/502/8474	Understand How to Carry out Bus and Coach Servicing	2	2	20
10	R/502/8470	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Transmission Systems and Components	2	8	60
12	Y/502/8471	Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Chassis Systems and Components	2	8	60

Unit	Unit reference number	Optional units	Level	Credit	Guided learning hours
5	D/502/8469	Understand How to Provide Roadside Assistance and Recovery Assistance and Recovery for Buses and Coaches	2	6	47
8	J/502/8398	Understand Routine Assembly of Bus/Coach Body Components	2	8	39
14	T/502/8493	Understand How to Conduct Inspections of Buses and Coaches	3	5	40
11	Y/502/8406	Understand How to Identify and Repair Damage to Bus/Coach Body Panels and Components	2	14	77
4	F/502/8500	Understand How to Identify, Locate and Rectify Electrical Faults in Bus and Coach Systems and Components	2	8	60
Unit	Unit reference number	Optional unit (Mandatory for Apprenticeship Learners)	Level	Credit	Guided learning hours
15	L/602/5934	Employment Rights and Responsibilities in the Passenger Transport Sector	2	3	18

Centres should be aware that within the Level 2 qualification 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 unit(s) during delivery and assessment of the qualification.

4 Assessment

The table below gives a summary of the assessment methods used in the qualifications.

Units	Assessment method
All units	Centre-devised assessment

Centre-devised assessment (internal assessment)

Each unit has specified learning outcomes and assessment criteria. To pass an internally assessed unit, learners must meet all the learning outcomes. Centres may find it helpful if learners index and reference their evidence to the relevant learning outcomes and assessment criteria.

Centres need to write assignment briefs for learners to show what evidence is required. Assignment briefs should indicate clearly which assessment criteria are being targeted.

Assignment briefs and evidence produced by learners must meet any additional requirements in the *Information for tutors* section of the unit.

Unless otherwise indicated in *Information for tutors*, the centre can decide the form of assessment evidence (for example, performance observation, presentations, projects, tests, extended writing) as long as the methods chosen allow learners to produce valid, sufficient and reliable evidence of meeting the assessment criteria.

Centres are encouraged to give learners realistic scenarios and maximise the use of practical activities in delivery and assessment.

To avoid over-assessment centres are encouraged to link delivery and assessment across units.

There is more guidance about internal assessment on our website. See *Section 13. Further information and useful publications*.

5 Recognising prior learning and achievement

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is a method of assessment (leading to the award of credit) that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and so do not need to develop through a course of learning.

Pearson encourages centres to recognise learners' previous achievements and experiences in and outside the workplace, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning.

RPL enables recognition of achievement from a range of activities using any valid assessment methodology. If the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification. Evidence of learning must be sufficient, reliable and valid.

Further guidance is available in the policy document *Recognition of Prior Learning Policy*, which is on our website, www.edexcel.com.

Credit transfer

Credit transfer describes the process of using a credit or credits awarded in the context of a different qualification or awarded by a different awarding organisation towards the achievement requirements of another qualification. All awarding organisations recognise the credits awarded by all other awarding organisations that operate within the QCF.

If learners achieve credits with other awarding organisations, they do not need to retake any assessment for the same units. The centre must keep evidence of credit achievement.

6 Centre resource requirements

As part of the approval process, centres must make sure that the resources requirements below are in place before offering the qualification.

- Centres must have appropriate physical resources (for example, equipment, IT, learning materials, teaching rooms) to support the delivery and assessment of the qualifications.
- Staff involved in the assessment process must have relevant expertise and occupational experience.
- There must be systems in place to ensure continuing professional development for staff delivering the qualifications.
- Centres must have appropriate health and safety policies in place relating to the use of equipment by learners.
- Centres must deliver the qualifications in accordance with current equality legislation. For further details on Pearson's commitment to the Equality Act 2010, please see *Section 10 Access and recruitment* and *Section 11 Access to qualifications for learners with disabilities or specific needs*. For full details on the Equality Act 2010, please go to the Home Office website, www.gov.uk/government/organisations/home-office

7 Centre recognition and approval centre recognition

Centres that have not previously offered Pearson qualifications need to apply for, and be granted, centre recognition as part of the process for approval to offer individual qualifications.

Existing centres will be given 'automatic approval' for a new qualification if they are already approved for a qualification that is being replaced by a new qualification and the conditions for automatic approval are met.

Guidance on seeking approval to deliver Pearson BTEC qualifications is available at www.edexcel.com.

Approvals agreement

All centres are required to enter into an approval agreement that is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and any associated codes, Conditions or regulations. Pearson 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.

8 Quality assurance of centres

Quality assurance is at the heart of vocational qualifications. The centre assesses Pearson BTEC qualifications. The centre will use quality assurance to make sure that their managers, internal verifiers and assessors are standardised and supported. Pearson use quality assurance to check that all centres are working to national standards. It gives us the opportunity to identify and provide support, if needed, to safeguard certification. It also allows us to recognise and support good practice.

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

- 1 Delivery of the qualification as part of a BTEC apprenticeship ('single click' registration):
 - an annual visit by a Standards Verifier to review centre-wide quality assurance systems and sampling of internal verification and assessor decisions
- 2 Delivery of the qualification outside the apprenticeship:
 - an annual visit to the centre 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 will include Lead Internal Verifier accreditation. Where this is the case, we will annually allocate annually 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* on our website.

9 Programme delivery

Centres are free to offer the qualifications using any mode of delivery (for example full time, part time, evening only, distance learning) that meets their learners' needs. Whichever mode of delivery is used, centres must make sure that learners have access to the resources identified in the specification and to the subject specialists delivering the units.

Those planning the programme should aim to enhance the vocational nature of the qualification by:

- liaising with employers to make sure a course is relevant to learners' specific needs
- accessing and using non-confidential data and documents from learners' workplaces
- developing up-to-date and relevant teaching materials that make use of scenarios that are relevant to the sector
- giving learners the opportunity to apply their learning in practical activities
- including sponsoring employers in the delivery of the programme and, where appropriate, in the assessment
- making full use of the variety of experience of work and life that learners bring to the programme.

Centres must make sure that any legislation taught is up to date.

10 Access and recruitment

Pearson's policy regarding access to our qualifications is that:

- they should be available to everyone who is capable of reaching the required standards
- they should be free from any barriers that restrict access and progression
- there should be equal opportunities for all those wishing to access the qualifications.

Centres are required to recruit learners to Pearson BTEC Specialist qualifications with integrity.

Applicants will need relevant information and advice about the qualification to make sure it meets their needs.

Centres should review the applicant's prior qualifications and/or experience, considering whether this profile shows that they have the potential to achieve the qualification.

For learners with disabilities and specific needs, this review will need to take account of the support available to the learner during teaching and assessment of the qualification. The review must take account of the information and guidance in *Section 11 Access to qualifications for learners with disabilities or specific needs*.

Learners may be aged between 14 and 16 and therefore potentially vulnerable. Where learners are required to spend time and be assessed in work settings, it is the centre's responsibility to ensure that the work environment they go into is safe.

11 Access to qualifications for learners with disabilities or specific needs

Equality and fairness are central to our work. Pearson's Equality Policy requires all learners to have equal opportunity to access our qualifications and assessments. It also requires our qualifications to be awarded in a way that is fair to every learner.

We are committed to making sure that:

- learners with a protected characteristic (as defined by the Equality Act 2010) are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve from undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

Learners taking a qualification may be assessed in British sign language or Irish sign language where it is permitted for the purpose of reasonable adjustments.

Further information regarding Access Arrangements can be found in the Joint Council for Qualifications (JCQ) document Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational qualifications. Further details on how to make adjustments for learners with protected characteristics are given in the Supplementary Guidance for Reasonable Adjustment and Special Consideration in Vocational Internally Assessed Units.

The documents are on our website at www.edexcel.com/policies

12 Units

Units have the following sections.

Unit title

The unit title is on the QCF and this form of words will appear on the learner's Notification of Performance (NOP).

Unit reference number

Each unit is assigned a unit reference number that appears with the unit title on the Register of Regulated Qualifications.

QCF level

All units and qualifications within the QCF have a level assigned to them. There are nine levels of achievement, from Entry to Level 8. The QCF Level Descriptors inform the allocation of the level.

Credit value

When a learner achieves a unit, they gain the specified number of credits.

Guided learning hours

Guided learning hours are the times when a tutor, trainer or facilitator is present to give specific guidance towards the learning aim for a programme. This definition covers lectures, tutorials and supervised study in, for example, open learning centres and learning workshops. It also includes assessment by staff where learners are present. It does not include time spent by staff marking assignments or homework where the learner is not present.

Unit aim

This gives a summary of what the unit aims to do.

Essential resources

This section lists any specialist resources needed to deliver the unit. The centre will be asked to make sure that these resources are in place when it seeks approval from Pearson to offer the qualification.

Assessment requirements

These requirements were set by People 1st (Go Skills) for all Bus and Coach knowledge qualifications.

Learning outcomes

The learning outcomes of a unit set out what a learner knows, understands or is able to do as the result of a process of learning.

Assessment criteria

Assessment criteria specify the standard required by the learner to achieve each learning outcome.

Unit 1: Understanding Health, Safety and Good Housekeeping in the Bus and Coach Environment

Unit reference number: Y/502/8468

QCF level: 2

Credit value: 3

Guided learning hours: 30

Unit aim

This unit covers the understanding required to maintain health and safety in the bus and coach environment. It includes knowledge of personal protective equipment, how to maintain a clean and orderly working environment, health and safety requirements and legislation, hazards, risks and personal responsibilities.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of use of personal and vehicle protection, cleaning the work environment and disposal of waste on **two** separate occasions.

Produce evidence of identifying risks which may result from at least **two** 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

Produce evidence of identifying risks.

Produce evidence of following at least **two** 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

Produce evidence of following workplace policies.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand the correct personal and vehicle protective equipment to be used within the bus and coach environment.	1.1	Explain the importance of wearing the types of Personal Protective Equipment (PPE) required for a range of bus and coach 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.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
2	Understand effective housekeeping practices in the bus and coach environment.	2.1	Describe why the bus and coach environment should be properly cleaned and maintained.				
		2.2	Describe requirements and systems which may be put in place to ensure a clean bus and coach 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 a bus and coach environment.				
		2.5	Describe the selection and use of cleaning equipment when dealing with general cleaning, spillages and leaks in the bus and coach environment.				
		2.6	Describe procedures for correct disposal of waste materials from a bus and coach environment.				
		2.7	Describe procedures for starting and ending the working day which ensure effective housekeeping practices are followed.				
3	Understand key health and safety requirements relevant to the bus and coach environment.	3.1	List the main legislation relating to bus and coach 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 bus and coach environment.				
		3.4	Describe why workplace policies and procedures relating to health and safety are important.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
4	Understand about hazards and potential risks relevant to the bus and coach environment.	4.1	Identify key hazards and risks in a bus and coach environment.				
		4.2	Describe policies and procedures for reporting hazards, risks, and health and safety matters in the bus and coach 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.				
		4.6	State the meaning of common product warning labels used in a bus and coach 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.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Short answer written assessment
- Observation of practical aspects during completion of other units

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 2: Understanding Effective Working Relationships with Colleagues in the Bus and Coach Work Environment

Unit reference number: L/502/8466

QCF level: 3

Credit value: 3

Guided learning hours: 20

Unit aim

This unit covers the understanding of bus and coach organisational structure and function, how best to communicate in bus and coach engineering and maintenance roles and how to work effectively with customers and colleagues in such organisations.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce witness testimony from your peers and supervisor or tutor that you have worked well with others.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand key organisational structures, functions and roles within the bus and coach work environment.	1.1	Identify the purpose of different sections of a typical bus and coach work environment.				
		1.2	Explain organisational structures and lines of communication within the bus and coach work environment.				
		1.3	Explain levels of responsibility within specific job roles in bus and coach workplace. To include: <ul style="list-style-type: none"> • trainee • skilled technician • supervisor • manager. 				
2	Understand the importance of different types of communication within the bus and coach work environment.	2.1	Explain where different methods of communication would be used within the bus and coach environment.				
		2.2	Explain the factors which can determine your choice of communication.				
		2.3	Explain how the communication of information can change with the target audience to include uninformed and informed people.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
3	Understand communication requirements when carrying out vehicle repairs in the bus and coach work environment.	3.1	Explain how to report using written and verbal communication.				
		3.2	Explain the importance of documenting information relating to work carried out in the bus and coach environment.				
		3.3	Explain the importance of working to agreed timescales.				
4	Understand how to develop good working relationships with colleagues and customers in the bus and coach workplace.	4.1	Explain why equality and diversity in the workplace is important.				
		4.2	Describe how to develop positive working relationships with colleagues and customers.				
		4.3	Explain the importance of developing positive working relationships.				
		4.4	Explain the importance of accepting other peoples' views and opinions.				
		4.5	Explain the importance of making and honouring realistic commitments to colleagues and customers.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Short answer written assessment
- Observation of practical aspects during completion of other units

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 3: Understanding Materials, Fabrication, Tools and Measuring Devices Used in the Bus and Coach Environment

Unit reference number: R/502/8467

QCF level: 2

Credit value: 4

Guided learning hours: 40

Unit aim

This unit covers the understanding required to appropriately use a range of hand tools, measuring devices and workshop tools when carrying out fabrication and repairs to materials used in buses and coaches. It also covers understanding of material selection and how to apply automotive engineering, fabrication and fitting principles.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

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

Produce evidence of fabricating at least **one** item from suitable materials to known tolerances, which includes the following processes:

- filing
- tapping threads
- cutting
- drilling
- joining

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

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: <ul style="list-style-type: none"> • gaskets and seals • sealants and adhesives • fittings and fasteners • electrical circuit components. 				
		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.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Practical project/assignment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 4: Understand How to Identify, Locate and Rectify Electrical Faults in Bus and Coach Systems and Components

Unit reference number: F/502/8500

QCF level: 2

Credit value: 8

Guided learning hours: 60

Unit aim

This unit covers the knowledge and skills required to repair electrical faults, including understanding the basic operation of electrical starting and charging systems (batteries) and auxiliary systems, their testing and replacement.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Be observed by your assessor carrying out the identification and rectification of faults from **three** different systems out of the **seven** listed below:

- lighting systems
- wiper systems
- security and alarm systems
- comfort and convenience systems
- infotainment/communication systems
- engine starting systems
- engine charging systems

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand Bus and Coach electrical and electronic principles.	1.1	Identify electrical symbols and units found in Bus and Coach circuits.				
		1.2	Describe how to interpret Bus and Coach wiring diagrams.				
		1.3	Describe the operation of key Bus and Coach circuit protection devices and why these are necessary.				
		1.4	Describe earthing principles and earthing methods.				
		1.5	Identify the use of different cables and connectors used in Bus and Coach 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 Bus and Coach electrical circuits.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
2	Understand how Bus and Coach batteries, starting and charging systems operate.	2.1	Identify Bus and Coach batteries, starting and charging system components.				
		2.2	Describe the construction and operation of Bus and Coach batteries, starting and charging system components.				
		2.3	Describe how to remove and replace batteries, starting and charging system units and components.				
		2.4	Compare Bus and Coach batteries, starting and charging system components and assemblies against alternatives to identify differences in construction and operation.				
		2.5	State common terms used in conjunction with Bus and Coach batteries, starting and charging systems.				
3	Understand how Bus and Coach auxiliary electrical systems operate	3.1	Identify Bus and Coach auxiliary system components.				
		3.2	Describe the construction and operation of Bus and Coach auxiliary systems.				
		3.3	Compare key Bus and Coach auxiliary system components and assemblies against alternatives to identify differences in construction and operation.				
		3.4	State common terms used in Bus and Coach auxiliary system design.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
4	Understand how to test, replace and check Bus and Coach electrical systems and components.	4.1	Identify the key hazards and risks to be considered when carrying out fault finding and replacement activities on Bus and Coach electrical system units and components.				
		4.2	Describe how to remove and replace Bus and Coach electrical system units and components.				
		4.3	Describe how to select, prepare and use testing equipment and methods when carrying out electrical fault finding on Buses and Coaches.				
		4.4	Describe common types of testing methods used to check the operation of Bus and Coach electrical systems and components and their purpose.				
		4.5	Explain the types of reports used and the importance of accuracy when identifying faults in Bus and Coach electrical systems and components.				
		4.6	Explain common faults found in Bus and Coach electrical systems and components.				
		4.7	Describe the procedures for reporting work progress and completion.				

Learning outcomes	Assessment criteria			Evidence type	Portfolio reference	Date
5 Be able to carry out removal and replacement of Bus and Coach electrical units and components	5.1	Remove and replace the bus and coach electrical systems and components, adhering to the specifications and tolerances for the vehicle and following: <ul style="list-style-type: none"> • the manufacturer’s approved removal and replacement methods • recognised researched repair methods • health and safety requirements. 				
	5.2	Ensure that replaced electrical units and components conform to the vehicle operating specification and any legal requirements.				
	5.3	Use suitable testing methods to evaluate the performance of the reassembled system.				
	5.4	Ensure that the reassembled electrical systems perform to the vehicle operating specification and meet any legal requirements.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 5: Understand How to Provide Roadside Assistance and Recovery Assistance and Recovery for Buses and Coaches

Unit reference number: D/502/8469

QCF level: 2

Credit value: 6

Guided learning hours: 47

Unit aim

This unit covers the knowledge required to safely deal with breakdowns and emergency situations involving buses and coaches in transit, including complying with legislation and reporting requirements.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of providing roadside assistance for broken down buses/coaches on **two** occasions, **one** of which must include a repair at the roadside.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand about organisational requirements and procedures.	1.1	Explain operating, reporting and recording procedures for a typical organisation involved in roadside assistance and recovery.				
		1.2	Explain how to complete records and the importance of doing so in a roadside assistance/ recovery context.				
2	Understand the legal requirements and codes of practice for site protection and recovery arrangements.	2.1	Describe the legal requirements and industry codes of practice governing site protection and recovery operations.				
		2.2	Explain the importance of wearing personal protective equipment.				

Learning outcomes	Assessment criteria			Evidence type	Portfolio reference	Date
3 Understand how to assess and secure a site.	3.1	Describe the difference in requirements for securing and protecting a breakdown site and an accident site.				
	3.2	Describe the sources of specialist advice and guidance.				
	3.3	Describe how weather conditions affect the assessment.				
	3.4	Explain how to approach the scene of an incident.				
	3.5	Describe the circumstances in which to call for specialist assistance.				
	3.6	Describe how to secure and protect incident sites in line with current industry codes of practice.				
	3.7	Describe how to take steps to secure the safety of yourself and others.				
	3.8	Describe how to communicate with customers and relevant authorities.				
	3.9	Describe how to make an initial assessment of the extent of vehicle damage and or faults.				
	3.10	Describe the essential skills required to operate a roadside breakdown vehicle and rectify faults in a time and efficient.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Practical demonstration
- Assignment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 6: Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Engine Systems and Components

Unit reference number: D/502/8472

QCF level: 2

Credit value: 8

Guided learning hours: 60

Unit aim

This unit enables the learner to develop knowledge and skills required to diagnose and rectify engine mechanical, electrical, hydraulic and fluid systems including testing of performance following repair.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Be observed by your assessor carrying out the identification and rectification of faults from engine mechanical units and components from **three** different systems out of the **five** listed below:

- engine mechanical systems
- cooling systems
- air supply and exhaust systems
- fuel systems
- lubrication systems

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand how the main Bus and Coach engine systems operate.	1.1	Identify Bus and Coach engine system components.				
		1.2	Describe the construction and operation of Bus and Coach compression ignition engine systems.				
		1.3	Compare key Bus and Coach engine system components and assemblies against alternatives to identify differences in construction and operation.				
		1.4	Identify the key engineering principles that are related to Bus and Coach engine systems.				
		1.5	State common terms used in Bus and Coach engine systems.				
2	Understand the legal requirements relating to European Emission Standards applicable to buses and coaches.	2.1	Describe legal requirements relating to the production of exhaust emissions from Bus and Coach engines (EU requirements).				
		2.2	Describe the effects of regulated pollutants.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
3	Understand how to test, replace and check engine system units and components.	3.1	Identify the key hazards and risks to be considered when carrying out fault finding and replacement activities on Bus and Coach engine systems, units and components.				
		3.2	Describe how to remove and replace Bus and Coach engine system units and components.				
		3.3	Describe how to select, prepare and use testing equipment and methods when carrying out fault finding on Bus and Coach engines.				
		3.4	Describe common types of testing methods used to check the operation of Bus and Coach engine systems and components and their purpose.				
		3.5	Explain the types of reports used and the importance of accuracy when identifying faults in Bus and Coach engine systems and components.				
		3.6	Explain common faults found in Bus and Coach engine systems and components.				
		3.7	Describe the procedures for reporting work progress and completion.				

Learning outcomes	Assessment criteria			Evidence type	Portfolio reference	Date
4 Be able to carry out removal and replacement of Bus and Coach engine units and components.	4.1	Remove and replace the Bus and Coach's engine systems and components, adhering to the specifications and tolerances for the vehicle and following: <ul style="list-style-type: none"> • the manufacturer's approved removal and replacement methods • recognised researched repair methods • health and safety requirements. 				
	4.2	Ensure that replaced Bus and Coach engine units and components conform to the vehicle 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 Bus and Coach engine systems perform to the vehicle operating specification and meets any legal requirements.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 7: Understand Thermal Joining to Bus/Coach Components

Unit reference number: H/502/8392

QCF level: 3

Credit value: 10

Guided learning hours: 60

Unit aim

The purpose of this unit is for learners to develop an understanding of how to prepare, complete and check compliance of welded Bus/Coach components.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of welding on bus/coach components covering a minimum of:

- **two** welding methods from MIG, TIG, MMA, Gas
- **three** different joints from butt, lap, fillet, plug
- **two** different welding positions from down hand, horizontal vertical, vertical up, vertical down, overhead.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand the effects of applying heat to bus/coach components.	1.1	Explain the effects of welding on bus/coach components.				
		1.2	Explain what is meant by the terms used to describe welding processes.				
2	Understand the techniques for making the different types and positions when welding bus/coach components.	2.1	Identify the different welding methods used on bus/coach components.				
		2.2	Identify the welding joints used on bus/coach components.				
		2.3	Identify the weld positions used on bus/coach components.				
		2.4	Describe the preparation required for welding bus/coach components.				
		2.5	Describe the techniques used for welding bus/coach components.				
		2.6	Explain the factors related to the design of production aids used for welding bus/coach components.				
3	Understand the advantages and limitations of welding on bus/coach components.	3.1	Select the welding method, type of weld and weld position.				
		3.2	Explain the advantages and limitations of the different fastening and joining methods used to repair bus/coach body components.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
4	Understand how to check compliance of welded bus/coach components.	4.1	Identify typical welding faults and defects.				
		4.2	Explain the common causes of the faults and defects in 4.1.				
		4.3	Describe methods and tests used to check the quality of welds.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 8: Understand Routine Assembly of Bus/Coach Body Components

Unit reference number: J/502/8398

QCF level: 2

Credit value: 8

Guided learning hours: 39

Unit aim

The purpose of this unit is for learners to develop an understanding of how to assemble bus/coach body components.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of assembling **two** different components including internal and external components.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand the tools and equipment used to assemble bus/coach body components.	1.1	Identify the tools and equipment for assembling bus/coach body components.				
		1.2	Select tools and equipment for assembling bus/coach body components.				
2	Understand the fasteners used to assemble bus/coach body components.	2.1	Identify the types of fastening method used in the assembly of bus/coach body components.				
		2.2	Select suitable fastening methods for the assembly of bus/coach body components.				
3	Understand the correct sequence when assembling bus/coach body components	3.1	Use instructions to interpret assembly sequence.				
		3.2	Check component parts to ensure they are fit for purpose.				
		3.3	Outline how to apply the principles of assembly when instructions are not available.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 9: Understand How to Carry Out Bus and Coach Servicing

Unit reference number: K/502/8474

QCF level: 2

Credit value: 2

Guided learning hours: 20

Unit aim

This unit covers the understanding and competence required to service buses and coaches. It covers regular maintenance activities from daily inspections to routine servicing, checking condition of components, replenishing fluids, making adjustments to meet manufacturer specifications, testing work completed and then recording work as required.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Be observed by your assessor carrying out servicing activities on at least **one** vehicle which covers the Learning Outcomes.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes	Assessment criteria	Evidence type	Portfolio reference	Date
1 Understand how to carry out Bus and Coach servicing.	1.1 Explain the difference between the various prescribed Bus and Coach maintenance procedures: <ul style="list-style-type: none"> • routine servicing • first use inspection • daily vehicle checks • scheduled safety inspection. 			
	1.2 Describe the procedures used for checking the condition and serviceability of Bus and Coach systems and components.			
	1.3 Describe the procedures for checking and replenishing fluid levels.			
	1.4 Describe the procedures for the replacement of lubricants and fluids.			
	1.5 Identify adjustments that need to be carried out on Bus and Coach systems and components.			
	1.6 Describe the requirements of Bus and Coach maintenance arrangements as part of the Operator Licence criteria and organisational procedures.			
	1.7 Explain the importance of accurately recording Bus and Coach maintenance activities.			

Learning outcomes	Assessment criteria		Evidence type	Portfolio reference	Date
	1.8	Describe procedures for the correct disposal of waste materials produced as a result of servicing operations.			
	1.9	Describe the procedures for reporting work progress and completion.			

Learning outcomes	Assessment criteria		Evidence type	Portfolio reference	Date
2 Be able to carry out Bus and Coach servicing activities.	2.1	Carry out Bus and Coach servicing using prescribed methods, adhering to the correct specifications and tolerances for the vehicle and following: <ul style="list-style-type: none"> • the manufacturer’s approved inspection methods • recognised researched inspection methods • health and safety requirements. 			
	2.2	Carry out adjustments, replacement of vehicle components and replenishment of consumable materials following the manufacturer’s current specification for: <ul style="list-style-type: none"> • the particular service interval • working methods and procedures • use of equipment • the tolerances for the vehicle. 			
	2.3	Ensure the examination methods identify accurately any vehicle system and or component problems falling outside the maintenance schedule are specified.			
	2.4	Ensure that the vehicle conforms to the vehicle operating specification and any legal requirements.			
	2.5	Ensure any comparison of the vehicle against specification accurately identifies any: <ul style="list-style-type: none"> • differences from the vehicle specification • vehicle appearance and condition faults. 			
	2.6	Use suitable testing methods to evaluate the performance of all replaced and adjusted components and systems accurately.			

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 10: Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Transmission Systems and Components

Unit reference number: R/502/8470

QCF level: 2

Credit value: 8

Guided learning hours: 60

Unit aim

This unit enables the learner to develop knowledge of diagnosis and rectification of bus and coach gearboxes, hubs and bearings, driveline shafts, clutches, differentials and final drive units. It also covers the evaluation of performance of the systems.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Be observed by your assessor carrying out the identification and rectification of faults from **one** unit or component from **two** of the areas as listed below:

- Clutch or fluid coupling
- Gearbox (manual or automatic)
- driveline (shafts, couplings, hubs and bearings)
- final drive.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand how the main Bus and Coach transmission systems operate.	1.1	Identify Bus and Coach transmission system components.				
		1.2	Describe the construction and operation of Bus and Coach transmission systems.				
		1.3	Compare key Bus and Coach transmission system components and assemblies against alternatives to identify differences in construction and operation.				
		1.4	Identify the key engineering principles that are related to Bus and Coach transmission systems.				
		1.5	State common terms used in Bus and Coach transmission systems.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
2	Understand how to test, replace and check transmission system units and components.	2.1	Identify the key hazards and risks to be considered when carrying out fault finding and replacement activities on Bus and Coach transmission systems, units and components.				
		2.2	Describe how to remove and replace Bus and Coach transmission system units and components.				
		2.3	Describe how to select, prepare and use testing equipment and methods when carrying out fault finding on Bus and Coach transmission systems.				
		2.4	Describe common types of testing methods used to check the operation of Bus and Coach transmission systems and components and their purpose.				
		2.5	Explain the types of reports used and the importance of accuracy when identifying faults in Bus and Coach transmission systems and components.				
		2.6	Explain common faults found in Bus and Coach transmission systems and components.				
		2.7	Describe the procedures for reporting work progress and completion.				

Learning outcomes	Assessment criteria			Evidence type	Portfolio reference	Date
3 Be able to carry out removal and replacement of Bus and Coach transmission units and components.	3.1	Remove and replace the Bus and Coach's transmission systems and components, adhering to the specifications and tolerances for the vehicle and following: <ul style="list-style-type: none"> • the manufacturer's approved removal and replacement methods • recognised researched repair methods • health and safety requirements. 				
	3.2	Ensure that replaced Bus and Coach transmission units and components conform to the vehicle operating specification and any legal requirements.				
	3.3	Use suitable testing methods to evaluate the performance of the reassembled system.				
	3.4	Ensure that the reassembled Bus and Coach transmission system performs to the vehicle operating specification and meets any legal requirements.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 11: Understand How to Identify and Repair Damage to Bus and Coach Body Panels and Components

Unit reference number: Y/502/8406

QCF level: 2

Credit value: 14

Guided learning hours: 77

Unit aim

This unit covers the understanding required to repair body panels and components, including how to identify damage, knowledge of different material types, selecting and recommending the appropriate repair technique and which tools to use in the process. It also covers the basic principles of repair work, including understanding the sequence of work required to repair and the process to check effectiveness of work completed.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of identifying and rectifying **one** GRP component and **one** other component from the following:

- Structural components
- Non structural components.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand the location and purpose of the main bus/coach body panels and components.	1.1	Identify bus/coach structural body panels and components.				
		1.2	Outline the purpose of the main bus/coach structural components.				
		1.3	Identify bus/coach non structural body panels and components.				
		1.4	Outline the purpose of non-structural bus/coach body panels and components.				
2	Understand the tools and equipment used in the repair bus/coach body components.	2.1	Identify the tools and equipment used when repairing bus/coach body components.				
		2.2	Select the tools and equipment for repairing bus/coach body component.				
3	Understand the applications of fasteners used in the repair of bus/coach body components.	3.1	Identify the different types of fastener used in the repair of bus/coach body components.				
		3.2	Select suitable fasteners for the repair of bus/coach body components.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
4	Understand methods used to identify damage to Bus/Coach body panels and components.	4.1	State how the properties of the materials used to manufacture body panels and components influence the repair technique.				
		4.2	Outline how to check the surrounding area for damage in preparation for repairs.				
		4.3	Outline the methods used to identify the extent of the damage to panels and components prior to the repair process.				
		4.4	Identify the different levels of damage to reinforced plastic components.				
5	Understand why/when to recommend a repair technique for damaged bus/coach body panels and components.	5.1	Outline the factors that influence the choice of repair method for damaged bus/coach body panels and components.				
		5.2	Outline how to select the repair method for damaged bus/coach body panels and components.				
6	Understand the sequence when repairing bus/coach body components.	6.1	Check component parts to ensure they are fit for purpose.				
		6.2	State the methods and techniques used to repair bus/coach body panels and components.				
		6.3	Outline the basic principles of repair when applied to bus/coach body panels and components.				
		6.4	State how to prepare damaged areas to facilitate repairs.				
		6.5	Identify the procedures for repairing damage to reinforced plastic components.				
		6.6	Outline the methods used to check repaired panels and components for compliance throughout the repair process.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 12: Understand How to Identify, Locate and Rectify Mechanical Faults in Bus and Coach Chassis Systems and Components

Unit reference number: Y/502/8471

QCF level: 2

Credit value: 8

Guided learning hours: 60

Unit aim

This unit allows the learner to demonstrate skills and knowledge to diagnose and rectify bus and coach braking, steering and suspension systems faults. It also covers the evaluation of performance of the replaced or repaired units and systems.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Be observed by your assessor carrying out the identification and rectification of faults from **three** different units or components – **one** from each system. 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, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand how the main Bus and Coach chassis systems operate.	1.1	Identify Bus and Coach chassis system components.				
		1.2	Describe the construction and operation of Bus and Coach chassis systems.				
		1.3	Compare key Bus and Coach chassis system components and assemblies against alternatives to identify differences in construction and operation.				
		1.4	Identify the key engineering principles that are related to Bus and Coach chassis systems.				
		1.5	State common terms used in Bus and Coach chassis systems.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
2	Understand how to test, replace and check chassis system units and components.	2.1	Identify the key hazards and risks to be considered when carrying out fault finding and replacement activities on Bus and Coach chassis systems, units and components.				
		2.2	Describe how to remove and replace Bus and Coach chassis system units and components.				
		2.3	Describe how to select, prepare and use testing equipment and methods when carrying out fault finding on Bus and Coach chassis systems.				
		2.4	Describe common types of testing methods used to check the operation of Bus and Coach chassis systems and components and their purpose.				
		2.5	Explain the types of reports used and the importance of accuracy when identifying faults in Bus and Coach chassis systems and components.				
		2.6	Explain common faults found in Bus and Coach chassis systems and components.				
		2.7	Describe the procedures for reporting work progress and completion.				

Learning outcomes	Assessment criteria			Evidence type	Portfolio reference	Date
3 Be able to carry out removal and replacement of Bus and Coach chassis units and components.	3.1	Remove and replace the Bus and Coach's chassis systems and components, adhering to the specifications and tolerances for the vehicle and following: <ul style="list-style-type: none"> • the manufacturer's approved removal and replacement methods • recognised researched repair methods • health and safety requirements. 				
	3.2	Ensure that replaced Bus and Coach chassis units and components conform to the vehicle operating specification and any legal requirements.				
	3.3	Use suitable testing methods to evaluate the performance of the reassembled system.				
	3.4	Ensure that the reassembled Bus and Coach chassis system performs to the vehicle operating specification and meets any legal requirements.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 13: Understand How to Prepare and Treat Surfaces and Apply Paint Coats to Bus/Coach Body Panels and Components

Unit reference number: R/502/8419

QCF level: 3

Credit value: 13

Guided learning hours: 65

Unit aim

This unit enables the learner to develop knowledge in order to prepare and paint bus/coach body panels and components.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of preparing and painting **one** flat, **one** shaped, **one** new, **one** repaired, **one** plastic and **one** metal panel or component.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand how to prepare Bus/Coach body panels and components for painting.	1.1	Explain how to prepare bus/coach body panels and components for painting.				
		1.2	Describe how to set up, use and maintain the tools and equipment used to paint bus/coach body panels and components.				
		1.3	Explain the function of the materials used to paint bus/coach body panels and components.				
		1.4	Describe the drying methods of the different types of paint used on bus/coach body panel's components.				
		1.5	Explain the procedures used to assist in the drying of painted bus/coach body panels and components including the use of infra red lamps and ovens.				
2	Understand how to paint Bus/Coach body panels and components.	2.1	Explain the advantages and limitation of the different methods of paint application used on bus/coach body panels and components including spray and hand painting.				
		2.2	Describe the order and procedures for applying the different paint coats to bus/coach body panels and components.				
		2.3	Describe the causes, prevention and rectification of paint faults that occur during the preparation, application and drying of paint materials used on bus/coach body panels and components.				

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 14: Understand How to Conduct Inspections of Buses and Coaches

Unit reference number: T/502/8493

QCF level: 3

Credit value: 5

Guided learning hours: 40

Unit aim

This unit enables the learner to develop knowledge in order to carry out a range of inspections on buses and coaches using a variety of testing and inspection methods.

Essential resources

There are no special resources needed for this unit.

Assessment requirements

Produce evidence of carrying out at least **two** different inspections from the following:

- pre-MOT inspection
- scheduled safety inspections (PMI)
- daily vehicle checks.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Understand how to carry out inspections on Buses and Coaches using prescribed methods.	1.1	Explain the fundamental requirements of the "O" licence with regards to maintaining vehicle roadworthiness.				
		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 Buses and Coaches.				
		1.4	Identify conformity of vehicle systems and condition on Bus and Coach inspections.				
		1.5	Compare test and inspection results against Bus and Coach 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 Bus and Coach inspections.				
		1.8	Explain the implications of failing to carry out Bus and Coach inspection activities correctly.				
		1.9	Explain the implications of signing workplace documentation and vehicle records.				
		1.10	Explain the procedure for reporting damage to Bus and Coach components and units outside normal inspection items.				

Learning outcomes	Assessment criteria		Evidence type	Portfolio reference	Date
2 Be able to carry out Bus and Coach inspections.	2.1	Carry out Bus and Coach inspections, adhering to the specifications and tolerances for the vehicle and following: <ul style="list-style-type: none"> • the manufacturer’s approved inspection methods • recognised researched inspection methods • health and safety requirements • workplace procedures. 			
	2.2	Ensure the inspected Bus and Coach complies to the vehicle operating specification and any legal requirements.			
	2.3	Use suitable testing methods to evaluate the performance of the inspected systems.			

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

The recommended methods of assessment for centres to use when assessing this unit are listed below;

- Multiple choice questions
- Practical demonstration
- Short answer written assessment

This guidance has been developed in consultation with awarding organisations and industry representatives to ensure consistency in assessment methodologies across the awarding organisations.

Unit 15: Employment Rights and Responsibilities in the Passenger Transport Sector

Unit reference number: L/602/5934

QCF level: 2

Credit value: 3

Guided learning hours: 18

Unit aim

This unit covers essential knowledge and understanding of learners' own rights and responsibilities and those of their employer. It covers knowledge such as statutory rights and responsibilities as specified in employment law, rights and responsibilities arising from employees' own contracts of employment or from company procedures, such as HR policies and codes of practice in health and safety. It also includes information on career pathways and sources of advice and support within the transport industry.

Essential resources

There are no special resources needed for this unit.

Learning outcomes, assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
1	Know employment rights and responsibilities of the employee and employer.	1.1	Identify the main points of legislation affecting employers and employees and their purpose relevant to own role, organisation and within own industry.				
		1.2	Identify where to find information and advice on employment rights and responsibilities both internally in own organisation and externally.				
		1.3	Identify sources of information and advice on own industry, occupation, training and own career pathway.				
		1.4	Identify sources of information on the different types of representative bodies related to own industry and their main roles and responsibilities.				
		1.5	Identify any issues of public concern that may affect own organisation and own industry.				

Learning outcomes		Assessment criteria			Evidence type	Portfolio reference	Date
2	Understand employment rights and responsibilities and how these affect organisations.	2.1	Describe organisational procedures, policies and codes of practice used by own organisation on employment rights and responsibilities.				
		2.2	Explain the purpose of following health, safety and other procedures and the effect on own organisation if they are not followed.				
		2.3	Describe employer and employee responsibilities for equality and diversity within own organisation.				
		2.4	Explain the benefits of making sure equality and diversity procedures are followed.				
		2.5	Describe the career pathways available within own organisation and own industry.				

Assessment

This unit should be assessed predominately in the workplace. Observation, witness testimony, questioning, professional discussion, written and product evidence are all sources of evidence, which can be used.

13 Further information and useful publications

To get in touch with us visit our 'Contact us' pages:

- Pearson Edexcel: **www.edexcel.com/contactus**
- Pearson BTEC: **www.btec.co.uk/contactus**
- Pearson Work Based Learning: **www.pearsonwbl.com/contactus**
- Books, software and online resources for UK schools and colleges: **www.pearsonschools.co.uk/contactus**

Other sources of information and publications available include:

- *Pearson Equality Policy*
- *Edexcel Information Manual* (updated annually)
- *Reasonable Adjustment and Special Considerations for BTEC and Edexcel NVQ Qualifications*
- *Recognition of Prior Learning Policy*
- *Quality Assurance Handbook* (updated annually)

Publications on the quality assurance of Pearson BTEC qualifications are available on our website

Our publications catalogue lists all the material available to support our qualifications. To access the catalogue and order publications, please go to www.edexcel.com/resources/Pages/home.aspx

Additional resources

If you need further learning and teaching materials to support planning and delivery for your learners, there is a wide range of BTEC resources available.

Any publisher can seek endorsement for their resources, and, if they are successful, we will list their BTEC resources on our website at: www.edexcel.com/resources

14 Professional development and training

Pearson supports UK and international customers with training related to Pearson 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.

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

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Regional support: our team of Curriculum Development Managers and Curriculum Support Consultants, based around the country, are responsible for providing advice and support in centres. They can help you with planning and curriculum developments. If you would like your Curriculum Development Manager to contact you, please get in touch with your regional office on: 0844 463 2535.

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- **Subject Advisors:** find out more about our subject advisor team – immediate, reliable support from a fellow subject expert via the 'contact us' page of the website.
- **Ask Edexcel:** submit your question online to our Ask Edexcel online service www.edexcel.com/ask and we will make sure your query is handled by a subject specialist.

Annexe A

Mapping with National Occupational Standards

The grid below maps the knowledge covered in the Pearson BTEC Level 2 Specialist qualifications in Principles of Bus and Coach Engineering and Maintenance (QCF) against the underpinning knowledge of the National Occupational Standards in Bus and Coach Engineering and Maintenance. Centres can use this mapping when planning holistic delivery and assessment activities.

KEY

- # indicates partial coverage of knowledge in the NOS unit
- A blank space indicates no coverage of the knowledge

NOS	Pearson BTEC Specialist units									
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
1	#		#		#	#			#	#
2		#								
3			#					#		
6	#	#	#						#	
7	#	#	#			#				#
8	#	#	#	#						
9								#		

Pearson BTEC Specialist units		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
NOS		#	#	#	#	#	#	#	#	#	#
10	Identify and Locate Mechanical Faults in Bus/Coach Systems and Components	#	#	#			#			#	#
11	Identify and Locate Electrical Faults in Bus/Coach Systems and Components	#	#	#	#					#	
12	Identify Bus/Coach damage and recommend suitable repair techniques								#		
13	Complete routine assembly of Bus/Coach body components								#		
14	Prepare and Treat Surfaces and Apply Paint Coats to Bus/Coach Body Panels and Components	#	#	#							
15	Provide roadside assistance for broken down Buses/Coaches	#	#	#	#	#	#				#
16	Drive the Bus/Coach for testing and vehicle recovery	#	#	#				#			
17	Complete Thermal Joining of Bus/Coach Components	#	#	#				#			
18	Conduct Inspections of Buses/Coaches	#	#	#	#		#				#
25	Repair Mechanical Faults in Bus/Coach Systems and Components	#	#	#			#				#
40	Operate an IT System in a Bus/Coach Engineering and Maintenance Environment				#		#			#	

Pearson BTEC Specialist units		Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
NOS		#	#	#		#
1	Contribute to Safe Working Practices in Bus/Coach Engineering and Maintenance	#	#			#
2	Achieve Effective Working Relationships with Colleagues in Bus/Coach Engineering and Maintenance					#
3	Use Hand Tools and Equipment in Bus/Coach Engineering and Maintenance	#		#		
6	Carry Out Bus/Coach Servicing					
7	Rectify mechanical faults in Bus/Coach systems and components		#			
8	Rectify electrical faults in Bus/Coach systems and components					
9	Rectify Body Damage on Bus/Coach Vehicle Body Components	#				
10	Identify and Locate Mechanical Faults in Bus/Coach Systems and Components		#			
11	Identify and Locate Electrical Faults in Bus/Coach Systems and Components					
12	Identify Bus/Coach damage and recommend suitable repair techniques	#				
13	Complete routine assembly of Bus/Coach body components					
14	Prepare and Treat Surfaces and Apply Paint Coats to Bus/Coach Body Panels and Components			#		

Pearson BTEC Specialist units		Unit 11	Unit 12	Unit 13	Unit 14	Unit 15
NOS						
15	Provide roadside assistance for broken down Buses/Coaches					
16	Drive the Bus/Coach for testing and vehicle recovery				#	
17	Complete Thermal Joining of Bus/Coach Components				#	
18	Conduct Inspections of Buses/Coaches		#		#	
25	Repair Mechanical Faults in Bus/Coach Systems and Components		#			
40	Operate an IT System in a Bus/Coach Engineering and Maintenance Environment		#		#	#

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