








RA01/V70

Carry Out Roadside Diagnostic Activities

 Further guidance available	 Observation of your task/work	 Evidence recording	 Computer based testing	 Verbal Questioning
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Evidence requirements

To complete this unit you will be required to undertake knowledge and practical tests.

For the knowledge test you must pass the City & Guilds computer based (GOLA) multiple choice knowledge test. This test will be arranged by your tutor or assessor.



If you are completing an apprenticeship which includes both N/SVQ & VRQ (Technical Certificate) you will only take this test once.

The practical tests will depend upon the qualification you are taking and are covered in the VRQ or NVQ information sections.

You must also complete the attached recording forms to the satisfaction of your assessor. These forms, when completed and signed by you and your assessor, provide confirmation that you have met both practical and knowledge requirements.



If you are undertaking an apprenticeship you need only complete one set which combines VRQ (Technical certificate) and N/SVQ evidence.



Your tutor or assessor will be able to offer you further guidance on the evidence you need to provide.

Information for VRQs (Technical Certificates).

To complete this unit you must:

1. Carry out diagnosis of one fault on each of the following vehicle areas:
 - a. engine area
 - b. transmission area
 - c. chassis or frame area
 - d. electrical area.

Your tutor or assessor will either set or observe a practical assessment task, which has been designed to cover the performance objectives, or you may be observed by your assessor in your workplace. If this qualification forms part of an **apprenticeship** workplace observation will also provide N/SVQ evidence.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your tutor or assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the practical task you are performing.

VRQ



Information for N/SVQs

General Requirements

You must:

1. Produce evidence to show you meet all of the performance objectives consistently
2. Produce evidence to show that you have covered all the items listed in the scope for this unit
3. Produce evidence to show that you possess all the knowledge required.
4. Produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or in a realistic working environment (RWE) as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk.
5. Be observed by a qualified assessor carrying out work in
 - Your normal workplace
 - And approved centre, or
 - A combination of both
6. Evidence from simulated activities is not acceptable for this unit.

Specific Performance Evidence for this Unit

You must:

7. Produce evidence of diagnosing 8 faults, comprising of 2 different faults from each of the vehicle areas below. Each fault diagnosed must relate to a different system in the vehicle area.
 - engine area
 - transmission area
 - chassis or frame area
 - electrical area.

Your identification of faults must have involved a 2 or more step diagnostic activity using a prescribed process or format.

8. Your assessor must observe you diagnosing 3 faults from at least 2 of the vehicle areas listed above (i.e. carrying out at least 3 different jobs).
9. Your evidence must include at least 6 instances of diagnosing faults within your normal workplace. Ideally, your evidence will include different types of roadside situations.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed. All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the task you are performing.


If this qualification forms part of an **apprenticeship** workplace observation will also provide VRQ evidence.

NVQ

SVQ



Evidence reference summary

	Note: Refer to the General and Specific Performance Evidence requirements for details of locations and types of assessment for this unit.	Portfolio reference number (PRN)		
		VRQ	N/SVQ	N/SVQ
		Observed assessment	Approved centre or workplace	Observed assessment
Diagnosing engine area 1			*	
Diagnosing engine area 2			*	
Diagnosing transmission area 1			*	
Diagnosing transmission area 2			*	
Diagnosing chassis or frame area 1			*	
Diagnosing chassis or frame area 2			*	
Diagnosing electrical area 1			*	
Diagnosing electrical area 2			*	

* Any **three** tasks

Supplementary evidence (if used) PRN			
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On line test reference for this unit PRN	
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Unit assessment and verification declaration

<p>VRQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>	<p>N/SVQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>
<p>VRQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>	<p>N/SVQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>
<p>VRQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <ul style="list-style-type: none"> <input type="checkbox"/> sampling candidate and assessment evidence <input type="checkbox"/> observation of assessment practice <input type="checkbox"/> discussion with candidate <input type="checkbox"/> other – please state: <p>I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>	<p>N/SVQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <ul style="list-style-type: none"> <input type="checkbox"/> sampling candidate and assessment evidence <input type="checkbox"/> observation of assessment practice <input type="checkbox"/> discussion with candidate <input type="checkbox"/> other – please state: <p>I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>

Performance objective checklist

To be competent you must ensure that:	PRN
Wear suitable personal protective equipment throughout all diagnostic activities.	
Support the identification of faults by reviewing vehicle: <ul style="list-style-type: none"> • Technical data • Diagnostic test procedures 	
Prepare, connect and test all the equipment required prior to use, following manufacturers' instructions.	
Use diagnostic methods which are relevant to the symptoms presented.	
Collect diagnostic information in a systematic way relevant to the diagnostic methods used	
Collect sufficient diagnostic information to enable an accurate diagnosis of faults.	
Identify and record the system deviation from acceptable limits accurately.	
Make suitable recommendations for rectification based upon your analysis of the diagnostic information gained.	
Ensure you records are accurate, complete and passed to the relevant person(s) promptly, in the format required.	
Report any anticipated delays in completion to the relevant person(s) promptly.	
Ensure your working practices are safe and conform to legal, current industry Code of Practice for Safe Roadside Working and workplace requirements.	

Scope of this unit

All of the items listed below form part of this National Occupational Standard.	PRN
1. Diagnostic methods are:	
a. road tests	
b. simulated tests	
c. measurements	
d. functional	
e. electrical and electronic systems testing	
2. Equipment is:	
a. hand tools	
b. electrical and electronic testing equipment	
c. measuring instruments	

In signing this sheet the Assessor and Candidate confirm that all the objectives and scope statements were met at least once during the practical assessment tasks by the named candidate and that the safe working practices were observed at all times.

Assessor	Date
Candidate	Date

Essential knowledge

You need to understand:	PRN
<p>Legislative and organisational requirements and procedures</p> <p>1.the health and safety legislation, current industry Code of Practice for Safe Roadside Working and workplace procedures relevant to roadside working practices and personal and vehicle protection when diagnosing faults.</p> <p>2.legal requirements relating to the vehicle (including road safety requirements).</p> <p>3.your workplace procedures for</p> <ul style="list-style-type: none"> - recording diagnostic activities and recommendations - the referral of problems - reporting delays to the completion of work <p>4.the importance of, documenting diagnostic and rectification information.</p> <p>5.the importance of keeping others informed of progress.</p> <p>6.the relationship between time, costs and profitability.</p> <p>7.the importance of reporting anticipated delays to the relevant person(s) promptly.</p>	
<p>Electrical and electronic principles</p> <p>8.electrical and electronic principles associated with vehicle systems, including types of sensors and actuators, their application and operation; digital and fibre optics principles.</p> <p>9.how electrical and electronic vehicle systems operate, including electrical component function, electrical inputs, outputs, voltages and oscilloscope patterns.</p> <p>10.the interaction between electrical, electronic and mechanical components within vehicle systems</p> <p>11.electrical symbols, units and terms.</p> <p>12.electrical safety procedures.</p>	
<p>Use of diagnostic equipment</p> <p>13.how to prepare and test the accuracy of diagnostic equipment used at the roadside</p> <p>14.how to use the diagnostic equipment used at the roadside.</p>	
<p>Vehicle system faults and their diagnosis</p> <p>15.how to find, interpret and use sources of information on technical data, diagnostic test procedures and statutory requirements.</p> <p>16.how the vehicle systems within each of the vehicle areas operate (i.e. engine area, transmission area, chassis or frame area and electrical area).</p> <p>17.the possible causes of faults in vehicle systems within the engine area, transmission area, chassis or frame area and electrical area.</p> <p>18. the vehicle operating specifications for limits, fit and tolerances.</p> <p>19.how to carry out systematic diagnostic testing of faults in vehicle systems within the engine area, transmission area, chassis or frame area and electrical area for the classification of vehicle worked upon using the diagnostic methods listed in the Scoping Statement for this unit.</p> <p>20.the relationship between diagnostic methods and the symptoms presented by the vehicle.</p> <p>21.how to select the most appropriate diagnostic testing method for the symptoms presented.</p> <p>22.how to interpret test results and vehicle data in order to identify the location and cause of system faults accurately.</p> <p>23.how to make cost effective recommendations for rectification.</p>	

<p>In signing this sheet the Assessor and Candidate confirm that all the essential knowledge has been met by the named candidate.</p>	
<p>Assessor</p>	<p>Date</p>
<p>Candidate</p>	<p>Date</p>

Key and core skills signposting

Key Skills	Core Skills
Communication: C1.1; C1.3; C2.2	Communication: Access 3, Outcomes 2 and 3 Intermediate 1, Outcome 1
Application of Number: N2.1; N2.2; N2.3	Numeracy: Intermediate 1, Outcomes 1, 2 and 4
Information Technology: ICT1.1; ICT1.2; ICT1.3	Information Technology: Access 3, Outcomes 1,2 and 3?
Working with Others: WO2.1; WO2.2	Working with Others: Intermediate 1, Outcomes 1 and 2
Improving Own Learning and Performance: Not applicable	<i>No parallel unit.</i>
Problem Solving: PS3.1; PS3.2; PS3.3	Problem Solving: Intermediate 2, Outcomes 1, 2 and 3

Syllabus

Carry Out Roadside Diagnostic Activities

This unit is about carrying out a series of mechanical, electrical and electronic diagnostic tests on a variety of vehicle systems, and making suitable recommendations for cost effective rectification work.

Course Outline

To assist Centres in developing training courses, further guidance is given relating to the NVQ essential knowledge statements. The outline syllabus is a requirement for Technical Certificate courses. This is presented as a number of outcomes that in turn each have a number of objectives and expanded content detail.

Reference should also be made to the National Occupational Standards.

Outcomes

On completion of this unit, the candidate must be able to:

1. Demonstrate an understanding of the procedures, tools and equipment required for roadside diagnosis
2. Demonstrate an understanding of the situations and operating principles of vehicle components and systems which require roadside diagnosis
3. Demonstrate an understanding of roadside diagnostic procedures and make recommendations
4. Demonstrate an understanding of the systems used to record roadside activities and dispose of waste materials

Outcome 1

Demonstrate an understanding of the procedures, tools and equipment required for roadside diagnosis.

Objectives

To achieve this outcome the candidate has to:

- 1) State the current legal requirements governing roadside assistance activities and diagnosing faults
 - a) national regulations
 - b) local bye-laws
 - c) local regulations
 - d) health and safety legislation
 - e) Code of Practice for Safe Roadside Working and workplace procedures
 - f) legal and road safety requirements relating to the vehicle.
- 2) Describe the use of Personal Protective Equipment (PPE) recommended by the current industry Code of Practice for Safe Roadside Working
 - a) reflective safety garments
 - b) safety footwear
 - c) safety gloves
 - d) safety glasses
 - e) vehicle protection.
- 3) Describe the preparation and use of equipment required for roadside recovery activities
 - a) hand tools
 - b) electrical and electronic testing equipment
 - c) measuring instruments.
- 4) State the diagnostic procedures as comprising two or more stages using a prescribed process to identify the cause of the fault.

Outcome 2

Demonstrate an understanding of the situations, and operating principles of vehicle components and systems which require roadside diagnosis.

Objectives

To achieve this outcome the candidate has to describe:

- 1) Vehicle engine systems which require diagnosis
 - a) engine mechanical components
 - b) cooling and lubrication
 - c) electronic ignition
 - d) petrol and diesel fuel injection
 - e) management and exhaust gas re-circulation.
- 2) Vehicle transmission systems which require diagnosis
 - a) clutch assemblies and operating systems
 - b) manual and automatic gearboxes (including electronic control)
 - c) drivelines and hubs (front and rear)
 - d) final drive assemblies.
- 3) Vehicle chassis and frame systems which require diagnosis
 - a) suspension systems
 - b) steering systems
 - i. non assisted
 - ii. assisted
 - c) braking systems including
 - i. ABS
 - ii. traction control
 - d) wheels and tyres.
- 4) Vehicle electrical systems which require diagnosis
 - a) start/charge systems
 - b) body electrical systems
 - i. wiring harnesses
 - ii. lighting
 - iii. auxiliaries
 - iv. vehicle condition and monitoring systems
 - v. comfort and convenience systems
 - vi. alarm systems
 - c) supplementary restraint systems (SRS)
 - d) heating and air conditioning systems
 - e) the roadside situations where diagnosis is required
 - i. rural roads
 - ii. urban roads

- iii. motorways
- iv. hazardous and non-hazardous.

Outcome 3

Demonstrate an understanding of roadside diagnostic procedures and make recommendations.

Objectives

To achieve this outcome the candidate has to:

- 1) Describe the diagnostic methods used
 - a) road tests
 - b) simulated tests
 - c) measurements
 - d) functional
 - e) electronic and electrical systems testing.
- 2) Describe how to obtain diagnostic information
 - a) mechanical condition
 - i. wear
 - ii. pressures and compressions
 - iii. flow and leakage
 - iv. brake operations
 - b) electrical measurements and electronic systems data
 - i. voltage and pulse displays
 - ii. fault codes
 - iii. sensor measurements
 - iv. control unit outputs and signals.
- 3) Describe how to make recommendations following diagnosis
 - a) servicing
 - b) dismantling for further inspection and testing
 - c) repair
 - d) replacement
 - e) recovery.
- 4) Describe electrical and electronic principles associated with diagnosis
 - a) application and operation of sensors and actuators
 - b) digital and fibre optics
 - c) electrical component function and operating principles
 - d) electrical inputs and outputs
 - e) voltages
 - f) oscilloscope patterns
 - g) electrical symbols, units and terms
 - h) electrical safety procedures.
- 5) Describe the interaction between electrical, electronic and mechanical components within vehicle systems.
- 6) Describe the causes of faults and diagnostic procedures used within the

- a) engine area
 - b) transmission area
 - c) chassis or frame area
 - d) electrical/ electronic area.
- 7) Describe the relationship between diagnostic methods and the symptoms presented and how to select the most appropriate diagnostic procedure for these symptoms.
 - 8) Describe how to interpret the test results in order to precisely identify the fault(s).
 - 9) State how to make cost effective recommendations for rectification.
 - 10) State the vehicle operating specifications for limits, tolerances and fits.
 - 11) State how to find, interpret and use sources of information on diagnostic procedures, technical data and statutory requirements.
 - 12) Describe
 - a) workplace procedures for
 - i. recording diagnostic activities and recommendations
 - ii. the referral of problems
 - iii. reporting delays to the completion of work.
 - b) the importance of documenting diagnostic and rectification information
 - c) the importance of keeping others informed of progress
 - d) the relationship between time costs, costs and profitability
 - e) the importance of reporting anticipated delays to the relevant person(s) promptly.

Outcome 4

Demonstrate an understanding of the systems used to record roadside activities and dispose of waste materials.

Objectives

To achieve this outcome the candidate has to describe the:

- 1) Importance of documenting diagnostic procedures.
- 2) Procedures for recording diagnostic activities
 - a) computer based
 - b) hard copy.
- 3) Procedures for recording the faults identified on systems, components or units
- 4) Importance of ensuring the records are
 - a) accurate
 - b) complete
 - c) in the format required
 - d) passed promptly to the relevant person
- 5) Procedures for
 - a) disposing of waste material resulting from the diagnostic activities
 - b) returning defective units and components to storage or for re-cycling, including refrigerant handling requirements

Assessment

Essential knowledge assessment






Essential knowledge will be assessed using the GOLLA system. The test specification is as follows:

Outcome	Number of questions
1	5
2	5
3	12
4	3
Test duration 35mins	Total 25



RA02/V71

Carry Out Roadside Rectification Activities

 Further guidance available	 Observation of your task/work	 Evidence recording	 Computer based testing	 Verbal Questioning
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Evidence requirements

To complete this unit you will be required to undertake knowledge and practical tests.

For the knowledge test you must pass the City & Guilds computer based (GOLA) multiple choice knowledge test. This test will be arranged by your tutor or assessor.

If you are completing an apprenticeship which includes both N/SVQ & VRQ (Technical Certificate) you will only take this test once.

The practical tests will depend upon the qualification you are taking and are covered in the VRQ or NVQ information sections.

You must also complete the attached recording forms to the satisfaction of your assessor. These forms, when completed and signed by you and your assessor, provide confirmation that you have met both practical and knowledge requirements.

If you are undertaking an apprenticeship you need only complete one set which combines VRQ (Technical certificate) and N/SVQ evidence.

Your tutor or assessor will be able to offer you further guidance on the evidence you need to provide.



Information for VRQs (Technical Certificates).

To complete this unit you must:

1. Produce evidence of repairing 4 faults, comprising of 1 fault from each of the vehicle areas listed below:

- engine area
- transmission area
- chassis or frame area
- electrical area.

Your tutor or assessor will either set or observe a practical assessment task, which has been designed to cover the performance objectives, or you may be observed by your assessor in your workplace. If this qualification forms part of an **apprenticeship** workplace observation will also provide N/SVQ evidence.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your tutor or assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the practical task you are performing.

VRQ



Information for N/SVQs

General Requirements

You must:

1. Produce evidence to show you meet all of the performance objectives consistently
2. Produce evidence to show that you have covered all the items listed in the scope for this unit
3. Produce evidence to show that you possess all the knowledge required.
4. Produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or in a realistic working environment (RWE) as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk.
5. Be observed by a qualified assessor carrying out work in
 - your normal workplace
 - and approved centre, or
 - a combination of both
6. Evidence from simulated activities is not acceptable for this unit.

Specific Performance Evidence for this Unit

You must:

7. Produce evidence of repairing 8 faults, comprising of 2 faults from each of the vehicle areas listed below. Each fault repaired must related to a different system in the vehicle area:
 - engine area
 - transmission area
 - chassis or frame area
 - electrical area
8. Your evidence must include both temporary work and permanent repairs.
9. Your assessor must observe you rectifying 3 faults from at least 2 of the vehicle areas listed above (i.e. carrying out at least 3 different jobs).

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the task you are performing.


If this qualification forms part of an **apprenticeship** workplace observation will also provide VRQ evidence.

NVQ

SVQ



Evidence reference summary

	Note: Refer to the General and Specific Performance Evidence requirements for details of locations and types of assessment for this unit.	Portfolio reference number (PRN)		
		VRQ	N/SVQ	N/SVQ
		Observed assessment	Approved centre or workplace	Observed assessment
Repair fault from engine area 1			*	
Repair fault from engine area 2			*	
Repair fault from transmission area 1			*	
Repair fault from transmission area 2			*	
Repair fault from chassis or frame area 1			*	
Repair fault from chassis or frame area 2			*	
Repair fault from electrical area 1			*	
Repair fault from electrical area 2			*	

* Observe any **three** tasks

Supplementary evidence (if used) PRN			
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On line test reference for this unit PRN	
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Unit assessment and verification declaration

<p>VRQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>	<p>N/SVQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>
<p>VRQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>	<p>N/SVQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>
<p>VRQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <ul style="list-style-type: none"> <input type="checkbox"/> sampling candidate and assessment evidence <input type="checkbox"/> observation of assessment practice <input type="checkbox"/> discussion with candidate <input type="checkbox"/> other – please state: <p>I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>	<p>N/SVQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <ul style="list-style-type: none"> <input type="checkbox"/> sampling candidate and assessment evidence <input type="checkbox"/> observation of assessment practice <input type="checkbox"/> discussion with candidate <input type="checkbox"/> other – please state: <p>I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>

Performance objective checklist

To be competent you must ensure that:	PRN
Wear suitable personal protective equipment throughout all rectification activities .	
Use suitable sources of technical information to support your repair activities.	
Assess and prepare all the equipment required prior to use, following manufacturers' instructions.	
Use the equipment required correctly and safely throughout all rectification activities .	
Carry out all rectification activities following: <ul style="list-style-type: none"> Manufacturers' instructions Your workplace procedures Health and safety requirements The industry's current code of practice for safe roadside working 	
Work in a way which minimises the risk of: <ul style="list-style-type: none"> Damage to other vehicle systems Damage to other components and units Contact with leakages Contact with hazardous substances 	
Ensure your assessment of dismantled sub-assemblies, components and units identifies accurately their condition and suitability for repair or replacement.	
Inform the relevant person(s) promptly to arrange for recovery where repairs are uneconomic or unsatisfactory to perform at the roadside.	
Ensure all repaired and replaced components and unit conform to the vehicle operating specification and any legal requirements.	
Adjust components and units correctly, when necessary, to ensure they operate to meet system requirements.	
Record details of any additional faults you notice during the course of your work accurately, and report them to the relevant person(s) promptly.	
Use testing methods which are suitable for assessing the performance of the system repair completed.	
Ensure the repaired system performs to the vehicle operating specification and any legal requirements prior to return to the customer.	
Ensure your repair records are accurate, complete and passed promptly to the relevant person(s) in the format required.	
Report any anticipated delays in completion to the relevant person(s) promptly.	

Scope of this unit

All of the items listed below form part of this National Occupational Standard.	PRN
1. Equipment is:	
a. hand tools	
b. power tools	
c. electrical and electronic testing equipment	
d. measuring instruments	
e. jacking equipment	
f. specialist equipment	
2. Rectification activities are:	
a. dismantling	
b. replacement of units and components	
c. adjustment of units and components	
d. repairs to wiring and connectors	
e. re-programming vehicle systems	
f. reassembly	
g. performance testing	
h. vehicle recovery arrangements to a place of safety for repair	

In signing this sheet the Assessor and Candidate confirm that all the objectives and scope statements were met at least once during the practical assessment tasks by the named candidate and that the safe working practices were observed at all times.

Assessor Date	Date
Candidate Date	Date

Essential knowledge

You need to understand:	PRN
<p>Legislative and organisational requirements and procedures</p> <ol style="list-style-type: none"> 1. The health and safety legislation, current industry code of practice for safe roadside working and workplace procedures relevant to roadside working practices and personal and vehicle protection when rectifying faults. 2. Legal requirements relating to the vehicle (including road safety and refrigerant handling requirements). 3. Your workplace procedures for <ul style="list-style-type: none"> - Recording rectification activities - The referral of problems - Reporting delays to the completion of work 4. The importance of, documenting rectification information. 5. The importance of working to agreed timescales and keeping others informed of progress. 6. The relationship between time, costs and profitability. 7. The importance of reporting anticipated delays to the relevant person(s) promptly. 	
<p>Electrical and electronic principles</p> <ol style="list-style-type: none"> 8. Electrical and electronic principles associated with vehicle systems, including types of sensors and actuators, their application and operation; digital and fibre optics principles. 9. How electrical and electronic vehicle systems operate, including electrical component function, electrical inputs, outputs, voltages and oscilloscope patterns. 10. The interaction between electrical, electronic and mechanical components within vehicle systems. 11. Electrical symbols, units and terms. 12. Electrical safety procedures. 	
<p>Use of diagnostic equipment</p> <ol style="list-style-type: none"> 13. How to prepare and test the accuracy and functioning of rectification equipment required 14. How to use the rectification and testing equipment used at the roadside. 	
<p>Vehicle system faults and their rectification</p> <ol style="list-style-type: none"> 15. How to find, interpret and use sources of information on repair procedures and statutory requirements. 16. The vehicle operating specifications for limits, fit and tolerances for the type and classification of vehicle worked upon. 17. How the mechanical, electrical and electronic systems within all vehicle areas operate (i.e. engine area, transmission area, chassis or frame area, electrical area) for the classification of vehicle repaired. 18. How mechanical, electrical and electronic vehicle systems are constructed, dismantled and reassembled for the classification of vehicles repaired. 19. The possible causes of faults in mechanical, electrical and electronic systems for the classification of vehicles repaired. 20. The cost-benefit relationship between the repair and replacement of components and units. 21. The safety considerations affecting the decision to repair on site or recover the vehicle to a place of safety. 22. The appropriate performance testing methods to be used. 23. How to interpret test results 24. How to work safely avoiding damage to other vehicle systems, components and contact with leakage and hazardous substances. 25. How to identify the types and causes of faults and failures of systems, components and units. 26. How to assess the condition evidence within sub-assemblies, components and units. 27. How to carry out roadside repair activities for all systems within the engine area, transmission area, chassis or frame area and electrical area for the classification of vehicle worked upon, including temporary work. 28. How to make suitable adjustment to components and units. 29. How to test and evaluate the performance of repaired or replaced components and units against operating requirements. 30. What constitutes temporary work. 31. The importance of informing the customer where temporary work has been carried out. 	

In signing this sheet the Assessor and Candidate confirm that all the essential knowledge has been met by the named candidate.	
Assessor	Date
Candidate	Date

Key and core skills signposting

Key Skills	Core Skills
Communication: C1.1; C1.3; C2.2	Communication: Access 3, Outcomes 2 and 3 Intermediate 1, Outcome 1
Application of Number: N2.1; N2.2; N2.3?	Numeracy: Intermediate 1, Outcomes 1, 2 and 4
Information Technology: ICT1.1; ICT1.2; ICT1.3?	Information Technology: Access 3, Outcomes 1,2 and 3?
Working with Others: WO2.1; WO2.2	Working with Others: Intermediate 1, Outcomes 1 and 2
Improving Own Learning and Performance: Not applicable	<i>No parallel unit.</i>
Problem Solving: PS3.1; PS3.2; PS3.3	Problem Solving: Intermediate 2, Outcomes 1, 2 and 3

Syllabus

Carry Out Roadside Rectification Activities

This unit is about rectifying vehicle faults at the roadside. This may involve repair and or recovery.

Course Outline

To assist Centres in developing training courses, further guidance is given relating to the NVQ essential knowledge statements. The outline syllabus is a requirement for Technical Certificate courses. This is presented as a number of outcomes that in turn each have a number of objectives and expanded content detail.

Reference should also be made to the National Standards.

Outcomes

On completion of this unit, the candidate must be able to:

1. Demonstrate an understanding of the procedures, tools and equipment required for roadside rectification activities.
2. Demonstrate an understanding of the situations and operating principles of vehicle components and systems which require roadside rectification.
3. Demonstrate an understanding of roadside rectification procedures and carry out rectifications.
4. 4 Demonstrate an understanding of the systems used to record roadside rectification activities and dispose of waste materials.

Outcome 1

Demonstrate an understanding of the procedures, tools and equipment required for roadside rectification activities

Objectives

To achieve this outcome a candidate has to:

- 1) State the current legal requirements governing roadside assistance activities and rectification
 - a) national regulations
 - b) local bye-laws
 - c) local regulations
 - d) health and safety legislation
 - e) Code of Practice for Safe Roadside Working and workplace procedures
 - f) legal and road safety requirements relating to the vehicle .
- 2) Describe the use of Personal Protective Equipment (PPE) recommended by the current industry Code of Practice for Safe Roadside Working
 - a) reflective safety garments
 - b) safety footwear
 - c) safety gloves
 - d) safety glasses
 - e) vehicle protection.
- 3) Describe the preparation and use of equipment required for roadside recovery activities
 - a) hand tools
 - b) electrical and electronic testing equipment
 - c) measuring instruments
 - d) power tools
 - e) jacking equipment
 - f) specialist equipment.

Outcome 2

Demonstrate an understanding of the situations and operating principles of vehicle components and systems which require roadside rectification.

Objectives

To achieve this outcome the candidate has to:

- 1) State the rectification activities
 - a) dismantling
 - b) replacement and adjustment of units and components
 - c) repairs to wiring and connectors
 - d) re-programming vehicle systems
 - e) re-assembly
 - f) performance testing
 - g) vehicle recovery arrangements to a place of safety for repair.
- 2) Describe vehicle engine systems which require rectification
 - a) engine mechanical components
 - b) cooling and lubrication
 - c) electronic ignition
 - d) petrol and diesel fuel injection
 - e) management and exhaust gas re-circulation .
- 3) Describe vehicle transmission systems which require rectification
 - a) clutch assemblies and operating systems
 - b) manual and automatic gearboxes (including electronic control)
 - c) drivelines and hubs (front and rear)
 - d) final drive assemblies.
- 4) Describe vehicle chassis and frame systems which require rectification
 - a) suspension systems
 - b) steering systems
 - i. non assisted
 - ii. assisted
 - c) braking systems including
 - i. ABS
 - ii. traction control
 - d) wheels and tyres .
- 5) Describe vehicle electrical systems which require rectification
 - a) start/charge systems
 - b) body electrical systems
 - i. wiring harnesses
 - ii. lighting
 - iii. auxiliaries

- iv. vehicle condition and monitoring systems
 - v. comfort and convenience systems
 - vi. alarm systems
 - c) supplementary restraint systems (SRS)
 - d) heating and air conditioning systems .
- 6) State the roadside situations where rectification is required
- a) rural roads
 - b) urban roads
 - c) motorways
 - d) hazardous and non-hazardous.
- 7) Describe rectification requirements
- a) permanent repair to ensure that the repaired system performs to the vehicle operating specifications and legal requirements
 - b) temporary repair to allow for the completion of the journey or to a place for permanent repair or to a place of safety

Outcome 3

Demonstrate an understanding of roadside rectification procedures and carry out rectifications

Objectives

To achieve this outcome the candidate has to:

- 1) Describe the performance testing methods used
 - a) road tests
 - b) visual and aural
 - c) simulated testing
 - d) non-intrusive testing
 - e) electronic and electrical systems testing.
- 2) Describe how to obtain rectification information on repair procedures and statutory requirements.
- 3) State the vehicle operating specification for limits, fits and tolerances for the vehicle being worked on.
- 4) Describe how the mechanical, electronic and electrical within all vehicle areas
 - a) operate
 - b) are constructed
 - c) are dismantled and re-assembled
 - d) are assessed for faults and interpret the results of tests.
- 5) State the cost-benefit relationship between the repair and replacement of components and units.
- 6) Describe the safety considerations affecting the decision to repair on site or recover the vehicle to a place of safety
- 7) State how
 - a) to work safely avoiding damage to other vehicle systems, components and contact with leakage and hazardous substances
 - b) to identify the types and causes of faults and failures of systems, components and units
 - c) to assess the condition of sub-assemblies, components and units.
- 8) Describe how to carry out permanent and temporary rectification procedures within the
 - a) engine area
 - b) transmission area
 - c) chassis or frame area
 - d) electrical/ electronic area.
- 9) Describe how to test and evaluate the performance of repaired or replaced components and units against operating requirements.
- 10) State the importance of informing the customer where temporary work has been carried out.
- 11) Describe electrical and electronic principles associated with vehicle systems
 - a) application and operation of sensors and actuators
 - b) digital and fibre optics
 - c) electrical component function and operating principles

- d) electrical inputs and outputs
- e) voltages
- f) oscilloscope patterns
- g) electrical symbols, units and terms
- h) electrical safety procedures.

12) Describe

- a) workplace procedures for
 - i. recording diagnostic activities and recommendations
 - ii. the referral of problems
 - iii. reporting delays to the completion of work
- b) the importance of documenting diagnostic and rectification information
- c) the importance of keeping others informed of progress
- d) the relationship between time costs, costs and profitability
- e) the importance of reporting anticipated delays to the relevant person(s) promptly.

Outcome 4

Demonstrate an understanding of the systems used to record roadside activities and dispose of waste materials.

Objectives

To achieve this outcome the candidate has to describe the:

- 1) Importance of documenting rectification procedures
- 2) Procedures for recording rectification activities
 - a) computer based
 - b) hard copy.
- 3) Procedures for recording the faults identified on systems, components or units.
- 4) Importance of ensuring the records are
 - a) accurate
 - b) complete
 - c) in the format required
 - d) passed promptly to the relevant person .
- 5) Procedures for
 - a) disposing of waste material resulting from the diagnostic activities
 - b) returning defective units and components to storage or for re-cycling, including refrigerant handling requirements

Assessment

Essential knowledge assessment






Essential knowledge will be assessed using the GOLLA system. The test specification is as follows:

Outcome	Number of questions
1	5
2	5
3	12
4	3
Test duration 35mins	Total 25



RA03/V72

Assess and Secure the Roadside Situation

 Further guidance available	 Observation of your task/work	 Evidence recording	 Computer based testing	 Verbal Questioning
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Evidence requirements

To complete this unit you will be required to undertake knowledge and practical tests.

For the knowledge test you must pass the City & Guilds computer based (GOLA) multiple choice knowledge test. This test will be arranged by your tutor or assessor.



If you are completing an apprenticeship which includes both N/SVQ & VRQ (Technical Certificate) you will only take this test once.

The practical tests will depend upon the qualification you are taking and are covered in the VRQ or NVQ information sections.

You must also complete the attached recording forms to the satisfaction of your assessor. These forms, when completed and signed by you and your assessor, provide confirmation that you have met both practical and knowledge requirements.



If you are undertaking an apprenticeship you need only complete one set which combines VRQ (Technical certificate) and N/SVQ evidence.



Your tutor or assessor will be able to offer you further guidance on the evidence you need to provide.

Information for VRQs (Technical Certificates).

To complete this unit you must:

1. Produce evidence of assessing and securing the roadside situation
2. Produce evidence of dealing with a breakdown off a live carriageway.

Your tutor or assessor will either set or observe a practical assessment task, which has been designed to cover the performance objectives, or you may be observed by your assessor in your workplace. If this qualification forms part of an **apprenticeship** workplace observation will also provide N/SVQ evidence.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your tutor or assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the practical task you are performing.

VRQ



Information for N/SVQs

General Requirements

You must:

1. Produce evidence to show you meet all of the performance objectives consistently.
2. Produce evidence to show that you have covered all the items listed in the scope for this unit.
3. Produce evidence to show that you possess all the knowledge required.
4. Produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or in a realistic working environment (RWE) as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk.
5. Be observed by a qualified assessor carrying out work in
 - your normal workplace
 - and approved centre, or
 - a combination of both.
6. Evidence from simulated activities is not acceptable for this unit.

Specific Performance Evidence for this Unit

You must:

7. Produce evidence of assessing and securing the roadside situation on 4 different occasions comprising of:
 - 2 breakdowns off a live carriageway
 - 2 breakdown on a live carriageway.
8. Your assessor must observe you assessing and securing the roadside situation on at least 2 occasions, including at least once for each of the situations specified above.

Your evidence must include at least 3 instances of assessing and securing the roadside situation within your normal workplace.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the task you are performing.


If this qualification forms part of an **apprenticeship** workplace observation will also provide VRQ evidence.

NVQ

SVQ



Evidence reference summary

	<p>Note: Refer to the General and Specific Performance Evidence requirements for details of locations and types of assessment for this unit.</p>	Portfolio reference number (PRN)		
		VRQ	N/SVQ	N/SVQ
		Observed assessment	Approved centre or workplace	Observed assessment
Assessing and securing the roadside situation off a live carriageway 1				
Assessing and securing the roadside situation off a live carriageway 2				
Assessing and securing the roadside situation on a live carriageway 1				
Assessing and securing the roadside situation on a live carriageway 2				

Supplementary evidence (if used) PRN			
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On line test reference for this unit PRN	
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Unit assessment and verification declaration

<p>VRQ Candidate declaration: I confirm that the evidence listed for this unit is authentic and a true representation of my own work Candidate name:..... Candidate enrolment number:..... Candidate signature:..... Date:</p>	<p>N/SVQ Candidate declaration: I confirm that the evidence listed for this unit is authentic and a true representation of my own work Candidate name:..... Candidate enrolment number:..... Candidate signature:..... Date:</p>
<p>VRQ Assessor declaration: I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient. Assessor name: Assessor signature:..... Date: Countersignature: (if relevant)..... Date:</p>	<p>N/SVQ Assessor declaration: I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient. Assessor name: Assessor signature:..... Date: Countersignature: (if relevant)..... Date:</p>
<p>VRQ Internal verifier Declaration: (Leave blank if sampling of this unit did not take place.) I have internally verified the assessment work on this unit in the following ways (please tick): sampling candidate and assessment evidence observation of assessment practice discussion with candidate other – please state: I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification. Internal verifier name: Internal verifier signature: Date: Countersignature: (if relevant) Date:</p>	<p>N/SVQ Internal verifier Declaration: (Leave blank if sampling of this unit did not take place.) I have internally verified the assessment work on this unit in the following ways (please tick): sampling candidate and assessment evidence observation of assessment practice discussion with candidate other – please state: I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification. Internal verifier name: Internal verifier signature: Date: Countersignature: (if relevant) Date:</p>

Performance objective checklist

To be competent you must ensure that:	PRN
Wear suitable personal protective equipment throughout all roadside assessment and security activities.	
Secure and protect the incident site to comply with legal requirements, current industry codes of practice, prevailing weather conditions and the roadside situation .	
Secure the immediate safety of the driver and passengers effectively.	
Ensure your initial assessment of the incident identifies accurately: <ul style="list-style-type: none"> • The existence of any hazardous and potentially hazardous substances • Any real and potential fire risks • The need for any specialist assistance 	
Provide accurate information promptly and clearly to all relevant authorities and your control centre covering: <ul style="list-style-type: none"> • The existence of any injured persons • The prevailing weather conditions • The location and roadside situation • The nature of the incident • Real and potential hazards 	
Seek assistance and guidance promptly from the relevant authorities when you believe that hazardous substances are present.	
Ensure your initial assessment of the vehicle establishes: <ul style="list-style-type: none"> • The nature and extent of any vehicle damage and or breakdown • The feasibility of roadside repair 	
Make justifiable decisions for a course of action based upon the information gained from your initial assessment of the situation.	
Ensure your records are accurate and complete and passed to the relevant person(s) promptly.	

Scope of this unit

All of the items listed below form part of this National Occupational Standard.	PRN
1. Roadside situation is:	
a. off a live carriageway	
b. on a live carriageway	
2. Weather conditions are:	
a. poor visibility	
b. light	
c. dark	
d. dry	
e. rain	
f. snow	
g. ice	
h. wind	

In signing this sheet the Assessor and Candidate confirm that all the objectives and scope statements were met at least once during the practical assessment tasks by the named candidate and that the safe working practices were observed at all times.

Assessor	Date
Candidate	Date

Essential knowledge

You need to understand:	PRN
<p>Legal and organisational requirements and procedures</p> <ol style="list-style-type: none"> 1. The legal requirements and industry codes of practice governing site protection and recovery operations. 2. The range of services and resources available within your organization. 3. Your organisation's operating, reporting and recording procedures. 4. How to complete records and the importance of doing so. 	
<p>Assessing and securing the site</p> <ol style="list-style-type: none"> 5. The difference in requirements for securing and protecting a breakdown site and an accident site. 6. The sources of specialist advice and guidance. 7. How weather conditions affect the assessment and security of the roadside situation. 8. How to assess the immediate roadside situation surrounding an incident. 9. The circumstances in which to call for specialist assistance. 10. How to secure and protect incident sites in line with current industry codes of practice. 11. How to take steps to secure the safety of yourself and others. 12. How to use electronic and radio communication methods. 13. How to communicate with customers and relevant authorities 14. How to make an initial assessment of the extent of vehicle damage and or faults. 15. How to identify vehicles carrying hazardous substances. 16. How to interpret the results of your initial assessment and make justifiable decisions for a course of action. 17. The possible consequences of inaccurate roadside assessment. 18. The importance of wearing personal protective equipment. 	

<p>In signing this sheet the Assessor and Candidate confirm that all the essential knowledge has been met by the named candidate.</p>	
<p>Assessor</p>	<p>Date</p>
<p>Candidate</p>	<p>Date</p>

Key and core skills signposting

Key Skills	Core Skills
Communication: C2.1a; C2.1b; C1.3	Communication: Access 3, Outcome 2 Intermediate 1, Outcome 3
Application of Number: N1.1	Numeracy: Access 3, Outcome 1
Information Technology: Not applicable	Information Technology: Not applicable
Working with Others: WO2.1; WO2.2	Working with Others: Intermediate 1, Outcomes 1 and 2
Improving Own Learning and Performance: Not applicable	<i>No parallel unit.</i>
Problem Solving: PS2.1; PS2.2; PS2.3	Problem Solving: Intermediate 1, Outcomes 1, 2 and 3

Syllabus

Assess and Secure the Roadside Situation

This unit is about securing and making an initial assessment of the site and vehicle in order to make decisions for further action. Providing information to, and seeking guidance from, relevant specialist authorities where hazardous substances or situations may be involved.

Course Outline

To assist Centres in developing training courses, further guidance is given relating to the NVQ essential knowledge statements. The outline syllabus is a requirement for Technical Certificate courses. This is presented as a number of outcomes that in turn each have a number of objectives and expanded content detail.

Reference should also be made to the National Standards.

Outcomes

On completion of this unit, the candidate must be able to:

- 1. Describe the safety and legal requirements associated with assessing and securing the roadside situation.**
- 2. Describe the situations and procedures associated with securing the roadside situation.**
- 3. Demonstrate an understanding of the systems used to record roadside activities and dispose of waste materials.**

Outcome 1

Describe the safety and legal requirements associated with assessing and securing the roadside situation.

Objectives

To achieve this outcome the candidate has to:

- 1) Define a hazardous substance as being one which poses a risk to personnel or the environment.
- 2) Describe situations where incidents occur
 - a) accident site attendance
 - b) attending any vehicle for the purpose of
 - i. roadside repair
 - ii. recovery.
- 3) State the current
 - a) Industry Codes of Practice for Safe Roadside Working
 - b) legal requirements, including local bye-laws and regulations, applicable to securing and protecting the recovery site.
- 4) Describe a live carriageway as being that part of a road which normally carries running vehicles.
- 5) Describe Personal Protective Equipment (PPE) required for roadside working
 - a) reflective safety garments
 - b) safety footwear, glasses and gloves.
- 6) State the relevant authorities who may be associated with roadside situations
 - a) emergency services
 - b) contacts named on the casualty vehicle for use in the event of an emergency
 - c) fire, police, medical and ambulance
 - d) specialist services for recovering
 - i. commercial vehicles
 - ii. hazardous loads.

Outcome 2

Describe the situations and procedures associated with securing the roadside situation

Objectives

To achieve this outcome the candidate has to:

- 1) State the roadside situations as being
 - a) off a live carriageway
 - b) on a live carriageway.
- 2) Describe weather conditions which affect the roadside situation
 - a) poor visibility
 - b) light or dark
 - c) dry or rain
 - d) snow or ice
 - e) wind.
- 3) State the legal requirements and industry codes of practice governing site protection and recovery operations.
- 4) Describe within organisations the
 - a) range of services available
 - b) operating, reporting and recording procedures
 - c) systems used to complete records and the importance of doing so.
- 5) Describe the difference in requirements for securing and protecting a
 - a) breakdown site
 - b) accident site.
- 6) State the sources of specialist advice and guidance.
- 7) Describe
 - a) how weather conditions affect the assessment and security of the roadside situation
 - b) the circumstances in which to call for specialist assistance
 - c) how to take steps to secure the safety of all personnel
 - d) how to identify vehicles carrying hazardous substances
- 8) Describe how to
 - a) assess the immediate roadside situation surrounding an incident
 - b) secure and protect incident sites in line with current industry codes of practice
 - c) make an initial assessment of the extent of vehicle damage and/or faults
 - d) interpret the results of the initial assessment and make justifiable decisions for a course of action
 - e) ensure the initial assessment identifies
 - f) check for the existence of any hazardous or potentially hazardous substances
 - g) assess any real or potential fire risks and/or hazards
 - h) assess the need for specialist assistance
 - i) check for the existence of any injured persons

- j) assess the prevailing weather conditions
 - k) secure the location and roadside situation
 - l) check the nature and extent of any vehicle damage and/or breakdown
 - m) assess the feasibility of roadside repair.
- 9) Describe the possible consequences of inaccurate roadside assessment.
- 10) State how to
- a) use electronic and radio communication methods
 - b) communicate with
 - i. customers
 - ii. the relevant authorities.
- 11) state the importance of wearing PPE.

Outcome 3

Demonstrate an understanding of the systems used to record roadside activities and dispose of waste materials.

Objectives

To achieve this outcome the candidate has to describe the:

- 1) Importance of documenting procedures.
- 2) Procedures for recording roadside activities
 - a) computer based
 - b) hard copy.
- 3) Procedures for recording the faults or damage identified on vehicles, systems, components or units.
- 4) Importance of ensuring the records are
 - a) accurate
 - b) complete
 - c) in the format required
 - d) passed promptly to the relevant person.
- 5) Procedures for
 - a) disposing of waste material resulting from the roadside activities
 - b) returning defective units and components to storage or for re-cycling, including refrigerant handling requirements.

Assessment






Essential knowledge assessment

Essential knowledge will be assessed using the GOLLA system. The test specification is as follows:

Outcome	Number of questions
1	7
2	6
3	12
Test duration 35mins	Total 25

RA04/V73

Remove and Transport Vehicles from the Roadside

 Further guidance available	 Observation of your task/work	 Evidence recording	 Computer based testing	 Verbal Questioning
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Evidence requirements

To complete this unit you will be required to undertake knowledge and practical tests.

For the knowledge test you must pass the City & Guilds computer based (GOLA) multiple choice knowledge test. This test will be arranged by your tutor or assessor.



If you are completing an apprenticeship which includes both N/SVQ & VRQ (Technical Certificate) you will only take this test once.

The practical tests will depend upon the qualification you are taking and are covered in the VRQ or NVQ information sections.

You must also complete the attached recording forms to the satisfaction of your assessor. These forms, when completed and signed by you and your assessor, provide confirmation that you have met both practical and knowledge requirements.



If you are undertaking an apprenticeship you need only complete one set which combines VRQ (Technical certificate) and N/SVQ evidence.



Your tutor or assessor will be able to offer you further guidance on the evidence you need to provide.

Information for VRQs (Technical Certificates).

To complete this unit you must:

1. Produce evidence of removing and transporting a vehicle from the roadside
2. Produce evidence of removing and transporting a vehicle from hard standing

Your tutor or assessor will either set or observe a practical assessment task, which has been designed to cover the performance objectives, or you may be observed by your assessor in your workplace. If this qualification forms part of an **apprenticeship** workplace observation will also provide N/SVQ evidence.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your tutor or assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier. Your assessor will ask questions to ensure you understand the practical task you are performing.

VRQ



Information for N/SVQs

General Requirements

You must:

1. Produce evidence to show you meet all of the performance objectives consistently.
2. Produce evidence to show that you have covered all the items listed in the scope for this unit.
3. Produce evidence to show that you possess all the knowledge required.
4. Produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or in a realistic working environment (RWE) as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk.
5. Be observed by a qualified assessor carrying out work in
 - your normal workplace
 - and approved centre, or
 - a combination of both.
6. Evidence from simulated activities is not acceptable for this unit.

Specific Performance Evidence for this Unit

You must:

7. Produce evidence of removing and transporting vehicles from the roadside on 4 different occasions and from a similar hard, level standing on 2 different occasions, using at least 2 of the 11* types of recovery equipment.
8. Your assessor must observe you on at least 2 occasions, using a different type of equipment on each occasion.

*However, you must prove to your assessor that you have the necessary knowledge and understanding of all the types of recovery equipment listed in the Scoping Statement of this unit.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the task you are performing.


If this qualification forms part of an **apprenticeship** workplace observation will also provide VRQ evidence.

NVQ

SVQ



Evidence reference summary

	Note: Refer to the General and Specific Performance Evidence requirements for details of locations and types of assessment for this unit.	Portfolio reference number (PRN)		
		VRQ	N/SVQ	N/SVQ
		Observed assessment	Approved centre or workplace	Observed assessment
Removing and transporting vehicles from the roadside 1				
Removing and transporting vehicles from the roadside 2				
Removing and transporting vehicles from the roadside 3				
Removing and transporting vehicles from the roadside 4				
Removing and transporting vehicles from hard standing 1				
Removing and transporting vehicles from hard standing 2				

Supplementary evidence (if used) PRN			
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On line test reference for this unit PRN	
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Unit assessment and verification declaration

<p>VRQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>	<p>N/SVQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>
<p>VRQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>	<p>N/SVQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>
<p>VRQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <ul style="list-style-type: none"> <input type="checkbox"/> sampling candidate and assessment evidence <input type="checkbox"/> observation of assessment practice <input type="checkbox"/> discussion with candidate <input type="checkbox"/> other – please state: <p>I confirm that the candidate's work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>	<p>N/SVQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <ul style="list-style-type: none"> <input type="checkbox"/> sampling candidate and assessment evidence <input type="checkbox"/> observation of assessment practice <input type="checkbox"/> discussion with candidate <input type="checkbox"/> other – please state: <p>I confirm that the candidate's work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>

Performance objective checklist

To be competent you must ensure that:	PRN
Wear suitable personal protective equipment throughout all vehicle removal activities.	
Use a recovery vehicle and recovery equipment which: <ul style="list-style-type: none"> • Is suitable for the type, condition and weight of vehicle to be transported • Is suitable for the nature of the incident • Complies with legal requirements. 	
Use warning lights in a way which complies with legal requirements and current industry codes of practice.	
Report viable options to your recovery controller for action promptly where the recovery vehicle and equipment prove unsuitable.	
Make the vehicle safe for transportation.	
Inform the relevant authorities promptly where the condition of the vehicle and its removal presents a hazard.	
Position and rig the recovery vehicle and recovery equipment to: <ul style="list-style-type: none"> • Comply with industry codes of practice • Minimise the need to re-rig • Secure the best recovery advantage 	
Fit all necessary loading and securing equipment to comply with: <ul style="list-style-type: none"> • Legal requirements • Industry codes of practice • Manufacturers' operating instructions • Your organisation's requirements 	
Ensure your roadside working practices and procedures during all removal and loading activities comply with legal requirements and industry codes of practice for the type of road involved.	
Contact the relevant authority promptly where the loading manoeuvre is likely to obstruct the flow of traffic.	
Ensure the recovery site is left free from debris, waste, tools, equipment and cones prior to moving off.	
Transport the vehicle to the relevant destination without further damage.	
Unload the recovered vehicle to comply with: <ul style="list-style-type: none"> • Legal requirements • Industry codes of practice • Manufacturer's operating instructions • Your organisation's requirements 	
Ensure your records are accurate & complete & passed to relevant person(s) promptly.	

Scope of this unit

All of the items listed below form part of this National Occupational Standard.	PRN
1.Recovery equipment is:	
a. tow poles	
b. frames	
c. towing dollies	
d. dolly wheels	
e. transporters	
f. vehicle mounted recovery cranes	
g. winches	
h. truck mounted loaders	
i. underlifts	
j. trailers	
k. vehicles fitted with dedicated equipment for the recovery of motor cycles	
2. Roadside situation is:	
a. off a live carriageway	
b. on a live carriageway	
3. Weather conditions are:	
a. poor visibility	
b. light	
c. dark	
d. dry	
e. rain	
f. snow	
g. ice	
h. wind	

In signing this sheet the Assessor and Candidate confirm that all the objectives and scope statements were met at least once during the practical assessment tasks by the named candidate and that the safe working practices were observed at all times.	
Assessor	Date
Candidate	Date



Essential knowledge

You need to understand:	PRN
<p>Legal and organisational requirements and procedures</p> <ol style="list-style-type: none"> 1. The legal requirements and industry codes of practice governing site protection and recovery operations. 2. Your organisation's operating, reporting and recording procedures 3. The limits of your authority for dealing with hazardous substances. 4. The importance of wearing the specified personal protective equipment. 5. How to complete recovery records and the importance of doing so 	
<p>Vehicle Recovery Equipment</p> <ol style="list-style-type: none"> 6. The types, purpose and use of the vehicle recovery equipment in the Scoping Statement for this unit. 7. The safe working loads for recovery equipment, axle weights and stability. 	
<p>Vehicle Recovery</p> <ol style="list-style-type: none"> 8. How to assess the most suitable recovery method for the type of incident and the condition of the vehicle involved. 9. How to assess the weight of a vehicle, including a load where appropriate. 10. The effect of weather conditions on the feasibility of recovery operations and how they are conducted. 11. How to use suitable site to base communication methods. 12. How to give clear instructions to customers. 13. The circumstances in which to call for specialist advice and assistance. 14. The operation of braking and transmission systems. 15. The principles of loading and load containment. 16. on site recovery planning and control techniques. 17. How to prepare and secure vehicles for transportation. 18. How to check for and deal with any vehicle system and load leakage. 19. The dangers associated with roadside recovery operations and how to lessen the risks to yourself, customers and other road users. 20. How to identify vehicles carrying hazardous substances. 21. The importance of informing the authorities where roadside operations are likely to affect other traffic. 22. How to position and rig recovery vehicles. 23. How to fit towing, loading and transportation equipment for the types of vehicle you deal with. 24. How to work safely at the roadside following industry codes of practice. 25. How to perform safety checks on vehicles relevant to the types of vehicle you deal with. 26. How to clear the site prior to moving off. 27. How to use suitable warning lights. 28. How to avoid damage to vehicles during transportation. 	

<p>In signing this sheet the Assessor and Candidate confirm that all the essential knowledge has been met by the named candidate.</p>	
<p>Assessor</p>	<p>Date</p>
<p>Candidate</p>	<p>Date</p>

Key and core skills signposting

Key Skills	Core Skills
Communication: C1.3; C2.1a; C2.1b; C2.2	Communication: Access 3, Outcome 2 Intermediate 1, Outcomes 1 and 3
Application of Number: N2.1; N2.2; N2.3	Numeracy: Intermediate 1, Outcomes 1, 2 and 4
Information Technology: Not applicable	Information Technology: Not applicable
Working with Others: WO2.1; WO2.2	Working with Others: Intermediate 1, Outcomes 1 and 2
Improving Own Learning and Performance: Not applicable	<i>No parallel unit.</i>
Problem Solving: PS3.1; PS3.2; PS3.3	Problem Solving: Intermediate 2, Outcomes 1, 2 and 3

Syllabus

Remove and Transport Vehicles from the Roadside

This unit is about recovering and transporting upright vehicles from the roadside or similar hard, level standing.

Course Outline

To assist Centres in developing training courses, further guidance is given relating to the NVQ essential knowledge statements. The outline syllabus is a requirement for Technical Certificate courses. This is presented as a number of outcomes that in turn each have a number of objectives and expanded content detail.

Reference should also be made to the National Standards.

Outcomes

On completion of this unit, the candidate must be able to:

- 1) Demonstrate an understanding of the procedures, tools and equipment required for removing and transporting upright vehicles from the roadside.
- 2) Demonstrate an understanding of the situations and operating principles of vehicle components and systems when removing and transporting upright vehicles from the roadside.
- 3) Demonstrate an understanding of the principles and procedures associated with removing and transporting upright vehicles from the roadside.
- 4) Demonstrate an understanding of the systems used to record the removing and transporting of upright vehicles from the roadside and dispose of waste materials.

Outcome 1

Demonstrate an understanding of the procedures, tools and equipment required for removing and transporting upright vehicles from the roadside.

Objectives

To achieve this outcome a candidate has to:

- 5) Describe recovery equipment
 - a) tow poles and A frames
 - b) towing dollies and dolly wheels
 - c) transporters
 - d) vehicle mounted recovery cranes and winches
 - e) truck mounted loaders
 - f) underlifts
 - g) trailers
- 6) State the safe working loads (SWL) for recovery equipment, axle weights and stability
- 7) Describe Personal Protective Equipment (PPE) required for roadside activities and the importance of wearing it
 - a) reflective safety garments
 - b) safety footwear, glasses and gloves
- 8) State the situations where vehicle recovery is required
 - a) motorways, rural and urban roads
 - i. hazardous situations
 - ii. non-hazardous situations
 - b) driveways
 - c) forecourts
 - d) car parks
 - e) on or off a live carriageway
- 9) State a recovery vehicle as being any vehicle fitted with recovery equipment

Outcome 2

Demonstrate an understanding of the situations and operating principles of vehicle components and systems when removing and transporting upright vehicles from the roadside

Objectives

To achieve this outcome a candidate has to:

- 1) State the current
 - a) Industry Codes of Practice for Safe Roadside Working
 - b) legal requirements, including local bye-laws and regulations, applicable to securing and protecting the recovery site.
- 2) Describe weather conditions which affect the roadside situation
 - a) poor visibility
 - b) light or dark
 - c) dry or rain
 - d) snow or ice
 - e) wind.
- 3) Describe the operating principles of vehicle systems
 - a) braking systems
 - b) transmission systems
 - c) steering systems
 - d) suspension systems.
- 4) describe the limits of authority when recovering a vehicle carrying hazardous substances.

Outcome 3

Demonstrate an understanding of the principles and procedures associated with removing and transporting upright vehicles from the roadside.

Objectives

To achieve this outcome the candidate has to:

- 1) Describe how to assess the
 - a) most suitable recovery method for the type of vehicle involved and the type of incident
 - b) vehicle weight including any load(s)
 - c) effects of weather conditions on the feasibility of recovery operations and how they are conducted.
 - d) the circumstances which call for specialist advice
- 2) Describe how to
 - a) use suitable site-to-base communication methods
 - b) give clear instructions to customers
 - c) secure the immediate safety and drivers
 - d) use warning lights in a way which complies with legal requirements and current industry codes of practice.
- 3) State how to report options to the recovery controller promptly where the recovery vehicle and equipment are unsuitable for the situation.
- 4) State the need to inform authorities promptly where the condition of the vehicle and its removal presents a hazard.
- 5) describe how to position, rig and transport the recovery vehicle and associated equipment to
 - a) comply with industry codes of practice
 - b) minimise the need to re-rig
 - c) comply with legal requirements and industry codes of practice
 - d) comply with manufacturers and employers codes of practice and requirements.
- 6) Describe how to
 - a) contact the relevant authority promptly where the loading manoeuvre is likely to obstruct traffic flow
 - b) ensure the recovery site is left free of debris, waste, tools, equipment and cones prior to moving off
 - c) transport the vehicle to the relevant destination without further damage.
- 7) Describe the
 - a) principles of loading and containment
 - b) on site recovery planning and control techniques
 - c) methods used to prepare and secure vehicles for transportation
 - d) importance of checking and dealing with any leakages from vehicles and/or loads including hazardous substances.
- 8) Describe how to fit towing, loading and transportation equipment for different types of vehicle.

Outcome 4

Demonstrate an understanding of the systems used to record the removing and transporting of upright vehicles from the roadside and dispose of waste materials.

Objectives

To achieve this outcome the candidate has to describe the:

- 1) Importance of documenting procedures
- 2) procedures for recording roadside activities
 - a) computer based
 - b) hard copy.
- 3) Procedures for recording the faults or damage identified on vehicles, systems, components or units.
- 4) Importance of ensuring the records are
 - a) accurate
 - b) complete
 - c) in the format required
 - d) passed promptly to the relevant person.
- 5) Procedures for
 - a) disposing of waste material resulting from the roadside activities
 - b) returning defective units and components to storage or for re-cycling, including refrigerant handling requirements.

Assessment

Essential knowledge assessment






Essential knowledge will be assessed using the GOLA system. The test specification is as follows:

Outcome	Number of questions
1	5
2	5
3	12
4	3
Test duration 35mins	Total 25



RA05/V74

Recover Light Vehicles Following Accidents

 Further guidance available	 Observation of your task/work	 Evidence recording	 Computer based testing	 Verbal Questioning
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Evidence requirements

To complete this unit you will be required to undertake knowledge and practical tests.

For the knowledge test you must pass the City & Guilds computer based (GOLA) multiple choice knowledge test. This test will be arranged by your tutor or assessor.



If you are completing an apprenticeship which includes both N/SVQ & VRQ (Technical Certificate) you will only take this test once.

The practical tests will depend upon the qualification you are taking and are covered in the VRQ or NVQ information sections.

You must also complete the attached recording forms to the satisfaction of your assessor. These forms, when completed and signed by you and your assessor, provide confirmation that you have met both practical and knowledge requirements.



If you are undertaking an apprenticeship you need only complete one set which combines VRQ (Technical certificate) and N/SVQ evidence.



Your tutor or assessor will be able to offer you further guidance on the evidence you need to provide.

Information for VRQs (Technical Certificates).

To complete this unit you must:

1. Produce evidence of one accident recovery on road
2. Produce evidence of one accident recovery off road.

Your tutor or assessor will either set or observe a practical assessment task, which has been designed to cover the performance objectives, or you may be observed by your assessor in your workplace. If this qualification forms part of an **apprenticeship** workplace observation will also provide N/SVQ evidence.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your tutor or assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the practical task you are performing.

VRQ



Information for N/SVQs

General Requirements

You must:

1. Produce evidence to show you meet all of the performance objectives consistently
2. Produce evidence to show that you have covered all the items listed in the scope for this unit
3. Produce evidence to show that you possess all the knowledge required.
4. Produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or in a realistic working environment (RWE) as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk.
5. Be observed by a qualified assessor carrying out work in
 - your normal workplace
 - and approved centre, or
 - a combination of both
6. Because of the nature of this unit and the associated health and safety dangers, candidates may provide their evidence from simulated activities i.e. undertaking an actual vehicle recovery in an approved reconstructed accident situation.

Specific Performance Evidence for this Unit

You must:

7. Produce evidence of recovering 3 different casualty vehicles comprising of:
 - 1 accident on road
 - 1 accident off road
 - 1 overturned off road
8. Produce evidence of using **3 out of the 5*** types of recovery equipment listed in the Scoping Statement for this unit.
9. Your assessor must observe you on **all 3 occasions** specified above.

***However, you must prove to your assessor that you have the necessary knowledge and understanding to be able to perform competently in respect of all the types of recovery equipment listed.**

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the task you are performing.


If this qualification forms part of an **apprenticeship** workplace observation will also provide VRQ evidence.

NVQ

SVQ



Evidence reference summary

	<p>Note: Refer to the General and Specific Performance Evidence requirements for details of locations and types of assessment for this unit.</p>	Portfolio reference number (PRN)		
		VRQ	N/SVQ	N/SVQ
		Observed assessment	Approved centre or workplace	Observed assessment
Accident on road				
Accident off road				
Overtaken off road				

Supplementary evidence (if used) PRN			
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On line test reference for this unit PRN	
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Unit assessment and verification declaration

<p>VRQ Candidate declaration: I confirm that the evidence listed for this unit is authentic and a true representation of my own work Candidate name:..... Candidate enrolment number:..... Candidate signature:..... Date:</p>	<p>N/SVQ Candidate declaration: I confirm that the evidence listed for this unit is authentic and a true representation of my own work Candidate name:..... Candidate enrolment number:..... Candidate signature:..... Date:</p>
<p>VRQ Assessor declaration: I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient. Assessor name:</p>	<p>N/SVQ Assessor declaration: I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient. Assessor name:</p>
<p>VRQ Internal verifier Declaration: (Leave blank if sampling of this unit did not take place.) I have internally verified the assessment work on this unit in the following ways (please tick): sampling candidate and assessment evidence observation of assessment practice discussion with candidate other – please state: I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification. Internal verifier name:</p>	<p>N/SVQ Internal verifier Declaration: (Leave blank if sampling of this unit did not take place.) I have internally verified the assessment work on this unit in the following ways (please tick): sampling candidate and assessment evidence observation of assessment practice discussion with candidate other – please state: I confirm that the candidate’s work meets the standards specified for this unit and may be presented for external verification and/or certification. Internal verifier name:</p>

Performance objective checklist

To be competent you must ensure that:	PRN
Wear suitable personal protective equipment which complies with legal and industry codes of practice throughout all vehicle recovery activities.	
Use the most suitable recovery method based upon: <ul style="list-style-type: none"> Your initial assessment of the incident and roadside conditions Vehicle condition and position The risks and hazards involved Available resources. 	
Report viable options for action promptly to your recovery controller where the recovery vehicle and recovery equipment to hand prove unsuitable.	
Prior to commencing operations, inform the relevant person(s) promptly and clearly of: <ul style="list-style-type: none"> The recovery method to be used Any implications affecting them or the vehicle Gain their agreement to your plans 	
Store all personal effects and loads in a secure location	
Seek guidance and assistance from the relevant person(s) promptly where loads require specialist handling and transfer procedures.	
Make the casualty vehicle safe prior to commencing any recovery operation.	
Inform the relevant authorities promptly where the condition of the vehicle and its removal presents a hazard.	
When necessary, calculate accurately, the effort needed to right and winch vehicles back onto the road.	
Position, rig and operate all recovery vehicles and recovery equipment so as to gain maximum mechanical advantage and to comply with: <ul style="list-style-type: none"> Legal requirements Industry codes of practice for recovery operations The manufacturer's instructions Your organisation's requirements 	
Ensure your accident recovery working practices and procedures comply with legal requirements and industry codes of practice for safe operation.	
Ensure the casualty vehicle is secured safely on a suitable hard surface ready for towing and or transportation.	
Ensure the recovery site is left free of all debris, waster, tools and equipment prior to leaving.	
Ensure all your records are accurate and complete and passed to the relevant person(s) promptly.	

Scope of this unit

All of the items listed below form part of this National Occupational Standard.	PRN
1. Recovery equipment is:	
a. underlifts	
b. vehicle mounted recovery cranes	
c. winch and ancillary equipment	
d. truck mounted loaders	
2. Roadside covers:	
a. rural roads	
b. urban roads	
c. motorways	
d. on road	
e. off road	
3. Vehicle condition and position are:	
a. accident damaged	
b. overturned	

In signing this sheet the Assessor and Candidate confirm that all the objectives and scope statements were met at least once during the practical assessment tasks by the named candidate and that the safe working practices were observed at all times.

Assessor	Date
Candidate	Date

Essential knowledge

You need to understand:	PRN
<p>Legal and organisational requirements and procedures</p> <ol style="list-style-type: none"> 1. The relevant legal requirements and industry codes of practice governing site protection and recovery operations. 2. Your organisation's operating, reporting and recording procedures for accident recovery. 3. The limitations of your authority for dealing with hazardous substances and hazardous situations. 4. The importance of wearing the specified personal protective equipment. 5. How to complete records accurately and the importance of doing so. 	
<p>Vehicle recovery equipment and its use</p> <ol style="list-style-type: none"> 6. The purpose and use of specialist accident recovery equipment (i.e. underlifts, vehicle mounted recovery cranes, winch and ancillary equipment, air cushions and truck mounted loaders). 7. The basic principles of winch operation. 8. Safe working loads for recovery equipment, axle weights and stability. 9. How to gain mechanical advantage by the correct application of equipment. 10. How to position and rig vehicle recovery vehicles and equipment. 11. How to calculate the effort needed to winch a vehicle back onto hard standing. 	
<p>Vehicle recovery operations</p> <ol style="list-style-type: none"> 12. The effect of weather and roadside conditions on recovery operations. 13. The effect of the design and contents of the casualty vehicle on the recovery operation. 14. The effect of vehicle condition and position on the recovery operation. 15. The importance of reporting and seeking guidance from others when hazardous substances are present at an accident site. 16. Rolling resistance, gradient resistance and damage resistance forces. 17. The methods of calculating the forces needed to right an overturned vehicle. 18. The operation of vehicle braking and transmission systems. 19. The principles of loading and load containment. 20. The requirements for securing personal effects and loads 21. The circumstances which necessitate unloading of vehicles prior to recovery operations and specialist load transfer assistance. 22. On site accident recovery planning and control techniques 23. The authorities who may have an interest in accident situations and the importance of liaising with them and following their instructions 24. The dangers associated with accident recovery operations and how to lessen the risks to yourself, customers and other road users. 25. How to working safely and effectively at the scene of a vehicle accident recovery. 26. How to use site to base communication methods. 27. How to identify vehicles carrying hazardous substances. 28. How to assess the most suitable method of recovery. 29. How to recover casualty vehicles without inflicting unnecessary further damage. 30. How to prepare and secure vehicles for recovery. 31. How to check for and suitably deal with, any spillages and load loss. 32. How to clear and make safe accident sites prior to moving off. 	

<p>In signing this sheet the Assessor and Candidate confirm that all the essential knowledge has been met by the named candidate.</p>	
<p>Assessor</p>	<p>Date</p>
<p>Candidate</p>	<p>Date</p>

Key and core skills signposting

Key Skills	Core Skills
Communication: C1.3; C2.1a; C2.1b; C2.2	Communication: Access 3, Outcome 2 Intermediate 1, Outcomes 1 and 3
Application of Number: N2.1; N2.2; N2.3	Numeracy: Intermediate 1, Outcomes 1, 2 and 4
Information Technology: Not applicable	Information Technology: Not applicable
Working with Others: WO2.1; WO2.2	Working with Others: Intermediate 1, Outcomes 1 and 2
Improving Own Learning and Performance: Not applicable	<i>No parallel unit.</i>
Problem Solving: PS3.1; PS3.2; PS3.3	Problem Solving: Intermediate 2, Outcomes 1, 2 and 3

Syllabus

Recover Light Vehicles Following Accidents

This unit is about recovering overturned and accident damaged vehicles from on and off road positions to a suitable on road or hard standing ready for onward transportation. It also includes dealing with personal effects, loads, hazardous substances and situations.

Course Outline

To assist Centres in developing training courses, further guidance is given relating to the NVQ essential knowledge statements. The outline syllabus is a requirement for Technical Certificate courses. This is presented as a number of outcomes that in turn each have a number of objectives and expanded content detail.

Reference should also be made to the National Standards.

Outcomes

On completion of this unit, the candidate must be able to:

1. Demonstrate an understanding of the procedures, tools and equipment required for recovering light vehicles from the roadside.
2. Demonstrate an understanding of the situations and operating principles of vehicle components and systems when recovering light vehicles from the roadside.
3. Demonstrate an understanding of the principles and procedures associated with recovering light vehicles from the roadside.
4. 4 Demonstrate an understanding of the systems used to record the recovery of light vehicles from the roadside and dispose of waste materials.

Outcome 1

Demonstrate an understanding of the procedures, tools and equipment required for recovering light vehicles following accidents

Objectives

To achieve this outcome the candidate has to:

- 1) Identify light vehicles as those up to a Gross Vehicle Mass (GVM) of 2500kgs and could include a trailer or caravan.
- 2) Describe a recovery vehicle as being any vehicle fitted with recovery equipment.
- 3) Describe recovery equipment
 - a) underlifts
 - b) vehicle mounted recovery cranes
 - c) truck mounted loaders
 - d) winch and ancillary equipment.
- 4) Describe the roadside situation where recovery is required
 - a) motorways
 - b) rural and urban roads
 - c) on and off road.
- 5) Describe Personal Protective Equipment (PPE) required for roadside activities and the importance of wearing it
 - a) reflective safety garments
 - b) safety footwear, glasses and gloves
 - c) approved hazchem safety garments.
- 6) Describe the vehicle condition and positions as
 - a) accident damaged
 - b) overturned.

Outcome 2

Demonstrate an understanding of the situations and operating principles of vehicle components and systems when recovering light vehicles following accidents.

Objectives

To achieve this outcome the candidate has to:

- 1) state the current
 - a) Industry Codes of Practice for Safe Roadside Working
 - b) Legal requirements, including local bye-laws and regulations, applicable to securing and protecting the recovery site.
- 2) State who may be contacted
 - a) emergency services
 - b) any named on the casualty vehicle for contacting in an emergency
 - c) incident manager and/or controller
 - d) customers
- 3) Describe the operating principles of vehicle systems
 - a) braking systems
 - b) transmission systems
 - c) steering systems
 - d) suspension systems
- 4) Describe the limits of authority when dealing with hazardous substances and situations
- 5) Describe
 - a) the basic principles of winch operation
 - b) the safe working loads for recovery equipment, axle weights and stability
 - c) how to gain mechanical advantage by the correct application of equipment
 - d) how to position and rig vehicle recovery vehicles and equipment
 - e) how to calculate the effort needed to winch a vehicle back onto hard standing
- 6) State the importance of reporting and seeking guidance from others when hazardous substances are present at the accident site
- 7) Describe the
 - a) rolling resistance and gradient resistance
 - b) resistance to recovery caused by damage to the casualty vehicle
 - c) methods of calculating the forces needed to right an overturned vehicle
- 8) State how to use site-to-base communication methods
- 9) State how to identify vehicles carrying hazardous substances
- 10) Describe how to assess the most suitable method of recovery

Outcome 3

Demonstrate an understanding of the principles and procedures associated with recovering light vehicles following accidents.

Objectives

To achieve this outcome the candidate has to describe:

- 1) The effects of
 - a) the weather and roadside conditions on recovery operations
 - b) the design and contents of the casualty vehicle on the recovery operation
 - c) vehicle condition and position on the recovery operation.
- 2) The
 - a) principles of loading and load containment
 - b) requirements for securing personal effects and loads
 - c) on-site accident recovery planning and control techniques
 - d) principles of working safely and effectively at a vehicle accident recovery scene
- 3) How to recover casualty vehicles without inflicting further un-necessary damage
- 4) How to prepare and secure vehicles for recovery
- 5) How to check for and deal with any spillages or load loss
- 6) How to clear and make safe accident sites before moving off
- 7) How to make the casualty vehicle safe prior to commencing any recovery operation
- 8) The principles to be observed when positioning, rigging, and operating recovery vehicles and equipment to gain mechanical advantage and comply with
 - a) legal requirements
 - b) industry codes of practice for recovery operations
 - c) manufacturers instructions
 - d) employers' requirements.

Outcome 4

Demonstrate an understanding of the systems used to record the recovery of light vehicles following accidents and dispose of waste materials

Objectives

To achieve this outcome the candidate has to describe the:

- 1) Importance of documenting procedures.
- 2) Procedures for recording roadside activities
 - a) computer based
 - b) hard copy.
- 3) Procedures for recording the faults or damage identified on vehicles, systems, components or units to comply with employers requirements.
- 4) Importance of reporting to the controller or relevant person prior to commencing operations
 - a) the viable options where the recovery vehicle and/or equipment on hand prove unsuitable for the task
 - b) the recovery method to be used
 - c) the implications affecting them and/or the vehicle
 - d) gain agreement to the proposed procedures.
- 5) Importance of ensuring the records are
 - a) accurate
 - b) complete
 - c) in the format required
 - d) passed promptly to the relevant person.
- 6) Procedures for
 - a) disposing of waste material resulting from the roadside activities
 - b) returning defective units and components to storage or for re-cycling, including refrigerant handling requirements.

Assessment

Essential knowledge assessment






Essential knowledge will be assessed using the GOLA system. The test specification is as follows:

Outcome	Number of questions
1	5
2	5
3	12
4	3
Test duration 35mins	Total 25



RA06/V75

Recover Commercial Vehicles Following Accidents

 Further guidance available	 Observation of your task/work	 Evidence recording	 Computer based testing	 Verbal Questioning
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Evidence requirements

To complete this unit you will be required to undertake knowledge and practical tests.

For the knowledge test you must pass the City & Guilds computer based (GOLA) multiple choice knowledge test. This test will be arranged by your tutor or assessor.



If you are completing an apprenticeship which includes both N/SVQ & VRQ (Technical Certificate) you will only take this test once.

The practical tests will depend upon the qualification you are taking and are covered in the VRQ or NVQ information sections.

You must also complete the attached recording forms to the satisfaction of your assessor. These forms, when completed and signed by you and your assessor, provide confirmation that you have met both practical and knowledge requirements.



If you are undertaking an apprenticeship you need only complete one set which combines VRQ (Technical certificate) and N/SVQ evidence.



Your tutor or assessor will be able to offer you further guidance on the evidence you need to provide.

Information for VRQs (Technical Certificates).

To complete this unit you must produce evidence of recovering:

1. One accident off the road
2. One jack knifed vehicle.

Your tutor or assessor will either set or observe a practical assessment task, which has been designed to cover the performance objectives, or you may be observed by your assessor in your workplace. If this qualification forms part of an **apprenticeship** workplace observation will also provide N/SVQ evidence.

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your tutor or assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the practical task you are performing.

VRQ



Information for N/SVQs

General Requirements

You must:

1. Produce evidence to show you meet all of the performance objectives consistently.
2. Produce evidence to show that you have covered all the items listed in the scope for this unit.
3. Produce evidence to show that you possess all the knowledge required.
4. Produce performance evidence resulting from work you have carried out on real vehicles in your normal workplace or in a realistic working environment (RWE) as managed and organised by an approved centre when naturally occurring performance evidence does not occur at frequent intervals in your normal workplace or when safety is at risk.
5. Be observed by a qualified assessor carrying out work in
 - your normal workplace
 - and approved centre, or
 - a combination of both.
6. Because of the nature of this unit and the associated health and safety dangers, candidates may provide their evidence from simulated activities i.e. undertaking an actual vehicle recovery in an approved reconstructed accident situation.

Specific Performance Evidence for this Unit

You must:

7. Produce evidence of recovering 4 different casualty vehicles comprising of:
 - 1 jack-knifed on road
 - 1 accident on road
 - 1 accident off road
 - 1 overturned off road.
8. Produce evidence of using **3 out of the 5*** types of recovery equipment listed in the scoping statement for this unit.
9. Your assessor must observe you on **all 4 occasions** specified above.

***However, you must prove to your assessor that you have the necessary knowledge and understanding to be able to perform competently in respect of all the types of recovery equipment listed.**

With your assessor you must complete a suitable **City & Guilds evidence recording form** for **each** task. Your assessor will advise you on this. Other paperwork such as job cards, inspection sheets, servicing lists and reporting paperwork, appropriate to the task, should also be completed.

All work records/evidence should be numbered (portfolio reference number PRN) and entered where required on the recording forms. This evidence should be collected in a portfolio and may need to be made available to your internal verifier or the City & Guilds external verifier.

Your assessor will ask questions to ensure you understand the task you are performing.


If this qualification forms part of an **apprenticeship** workplace observation will also provide VRQ evidence.

NVQ

SVQ



Evidence reference summary

	Note: Refer to the General and Specific Performance Evidence requirements for details of locations and types of assessment for this unit.	Portfolio reference number (PRN)		
		VRQ	N/SVQ	N/SVQ
		Observed assessment	Approved centre or workplace	Observed assessment
Jack-knifed on road				
Accident on road				
Accident off road				
Overtaken off road				

Supplementary evidence (if used) PRN			
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On line test reference for this unit PRN	
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Unit assessment and verification declaration

<p>VRQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>	<p>N/SVQ Candidate declaration:</p> <p>I confirm that the evidence listed for this unit is authentic and a true representation of my own work</p> <p>Candidate name:.....</p> <p>Candidate enrolment number:.....</p> <p>Candidate signature:.....</p> <p>Date:</p>
<p>VRQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>	<p>N/SVQ Assessor declaration:</p> <p>I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.</p> <p>Assessor name:</p> <p>Assessor signature:.....</p> <p>Date:</p> <p>Countersignature: (if relevant).....</p> <p>Date:</p>
<p>VRQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <p> sampling candidate and assessment evidence</p> <p> observation of assessment practice</p> <p> discussion with candidate</p> <p> other – please state:</p> <p>I confirm that the candidate's work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>	<p>N/SVQ Internal verifier Declaration:</p> <p>(Leave blank if sampling of this unit did not take place.)</p> <p>I have internally verified the assessment work on this unit in the following ways (please tick):</p> <p> sampling candidate and assessment evidence</p> <p> observation of assessment practice</p> <p> discussion with candidate</p> <p> other – please state:</p> <p>I confirm that the candidate's work meets the standards specified for this unit and may be presented for external verification and/or certification.</p> <p>Internal verifier name:</p> <p>Internal verifier signature: Date:</p> <p>Countersignature: (if relevant) Date:</p>

Performance objective checklist

To be competent you must ensure that:	PRN
Wear suitable personal protective equipment which complies with legal and industry codes of practice throughout all vehicle recovery activities.	
Use the most suitable recovery method based upon: <ul style="list-style-type: none"> Your initial assessment of the incident and roadside conditions Vehicle condition and position The risks and hazards involved Available resources. 	
Report viable options for action promptly to your recovery controller where the recovery vehicle and recovery equipment to hand prove unsuitable.	
Prior to commencing operations, inform the relevant person(s) promptly and clearly of: <ul style="list-style-type: none"> The recovery method to be used Any implications affecting them or the vehicle Gain their agreement to your plans. 	
Store all personal effects and loads in a secure location.	
Seek guidance and assistance from the relevant person(s) promptly where loads require specialist handling and transfer procedures.	
Make the casualty vehicle safe prior to commencing any recovery operation.	
Inform the relevant authorities promptly where the condition of the vehicle and its removal presents a hazard.	
When necessary, calculate accurately, the effort needed to right and winch vehicles back onto the road.	
Position, rig and operate all recovery vehicles and recovery equipment so as to gain maximum mechanical advantage and to comply with: <ul style="list-style-type: none"> Legal requirements Industry codes of practice for recovery operations The manufacturer's instructions Your organisation's requirements. 	
Ensure your accident recovery working practices and procedures comply with legal requirements and industry codes of practice for safe operation.	
Ensure the casualty vehicle is secured safely on a suitable hard surface ready for towing and or transportation.	
Ensure the recovery site is left free of all debris, waster, tools and equipment prior to leaving.	
Ensure all your records are accurate and complete and passed to the relevant person(s) promptly.	

Scope of this unit

All of the items listed below form part of this National Occupational Standard.	PRN
1.Recovery equipment is	
a. underlifts	
b. vehicle mounted recovery cranes	
c. winch and ancillary equipment	
d. truck mounted loaders	
2. Roadside covers	
a. rural roads	
b. urban roads	
c. motorways	
d. on road	
e. off road	
3. Vehicle condition and position are	
a. accident damaged	
b. overturned	

In signing this sheet the Assessor and Candidate confirm that all the objectives and scope statements were met at least once during the practical assessment tasks by the named candidate and that the safe working practices were observed at all times.

Assessor	Date
Candidate	Date

Essential knowledge

You need to understand:	PRN
Legal and organisational requirements and procedures <ol style="list-style-type: none"> 1. The relevant legal requirements and industry codes of practice governing site protection and recovery operations. 2. Your organisation's operating, reporting and recording procedures for accident recovery. 3. The limitations of your authority for dealing with hazardous substances and hazardous situations. 4. The importance of wearing the specified personal protective equipment. 5. How to complete records accurately and the importance of doing so. 	
Vehicle recovery equipment and its use <ol style="list-style-type: none"> 6. The purpose and use of specialist accident recovery equipment (i.e. underlifts, vehicle mounted recovery cranes, winch and ancillary equipment, air cushions and truck mounted loaders). 7. The basic principles of winch operation. 8. Safe working loads for recovery equipment, axle weights and stability. 9. How to gain mechanical advantage by the correct application of equipment. 10. How to position and rig vehicle recovery vehicles and equipment. 11. How to calculate the effort needed to winch a vehicle back onto hard standing. 	
Vehicle recovery operations <ol style="list-style-type: none"> 12. The effect of weather and roadside conditions on recovery operations. 13. The effect of the design and contents of the casualty vehicle on the recovery operation. 14. The effect of vehicle condition and position on the recovery operation. 15. The importance of reporting and seeking guidance from others when hazardous substances are present at an accident site. 16. Rolling resistance, gradient resistance and damage resistance forces. 17. The methods of calculating the forces needed to right an overturned vehicle. 18. The operation of vehicle braking and transmission systems. 19. The principles of loading and load containment. 20. The requirements for securing personal effects and loads 21. The circumstances which necessitate unloading of vehicles prior to recovery operations and specialist load transfer assistance. 22. On site accident recovery planning and control techniques 23. The authorities who may have an interest in accident situations and the importance of liaising with them and following their instructions 24. The dangers associated with accident recovery operations and how to lessen the risks to yourself, customers and other road users. 25. How to working safely and effectively at the scene of a vehicle accident recovery. 26. How to use site to base communication methods. 27. How to identify vehicles carrying hazardous substances. 28. How to assess the most suitable method of recovery. 29. How to recover casualty vehicles without inflicting unnecessary further damage. 30. How to prepare and secure vehicles for recovery. 31. How to check for and suitably deal with, any spillages and load loss. 32. How to clear and make safe accident sites prior to moving off. 	

In signing this sheet the Assessor and Candidate confirm that all the essential knowledge has been met by the named candidate.

Assessor	Date
Candidate	Date

Key and core skills signposting

Key Skills	Core Skills
Communication: C1.3; C2.1a; C2.1b; C2.2	Communication: Access 3, Outcome 2 Intermediate 1, Outcomes 1 and 3
Application of Number: N2.1; N2.2; N2.3	Numeracy: Intermediate 1, Outcomes 1, 2 and 4
Information Technology: Not applicable	Information Technology: Not applicable
Working with Others: WO2.1; WO2.2	Working with Others: Intermediate 1, Outcomes 1 and 2
Improving Own Learning and Performance: Not applicable	<i>No parallel unit.</i>
Problem Solving: PS3.1; PS3.2; PS3.3	Problem Solving: Intermediate 2, Outcomes 1, 2 and 3

Syllabus

Recover Commercial Vehicles Following Accidents

This unit is about recovering overturned and accident damaged commercial vehicles from on and off road positions to a suitable on road or hard standing ready for onward transportation. It also includes dealing with personal effects, loads, hazardous substances and situations.

Course Outline

To assist Centres in developing training courses, further guidance is given relating to the NVQ essential knowledge statements. The outline syllabus is a requirement for Technical Certificate courses. This is presented as a number of outcomes that in turn each have a number of objectives and expanded content detail.

Reference should also be made to the National Standards.

Outcomes

On completion of this unit, the candidate must be able to:

1. Demonstrate an understanding of the procedures, tools and equipment required for recovering commercial vehicles from the roadside following accidents.
2. Demonstrate an understanding of the situations and operating principles of vehicle components and systems when recovering commercial vehicles from the roadside following accidents.
3. Demonstrate an understanding of the principles and procedures associated with recovering commercial vehicles from the roadside following accidents.
4. Demonstrate an understanding of the systems used to record the recovery of commercial vehicles from the roadside following accidents and dispose of waste materials.

Outcome 1

Demonstrate an understanding of the procedures, tools and equipment required for recovering commercial vehicles from the roadside following accidents.

Objectives

To achieve this outcome the candidate has to:

- 1) Identify light vehicles as those up to a Gross Vehicle Mass (GVM) of over 2500kgs and could include a trailer or caravan.
- 2) Describe a recovery vehicle as being any vehicle fitted with recovery equipment.
- 3) Describe recovery equipment
 - a) underlifts
 - b) vehicle mounted recovery cranes
 - c) truck mounted loaders
 - d) air cushions
 - e) winch and ancillary equipment.
- 4) Describe the roadside situation where recovery is required
 - a) motorways
 - b) rural and urban roads
 - c) on and off road.
- 5) Describe Personal Protective Equipment (PPE) required for roadside activities and the importance of wearing it
 - a) reflective safety garments
 - b) safety footwear, glasses and gloves
 - c) approved hazchem safety garments.
- 6) Describe the vehicle condition and positions as
 - a) accident damaged
 - b) overturned
 - c) jack-knifed (this also applies to a vehicle towing a trailer or caravan).

Outcome 2

Demonstrate an understanding of the situations and operating principles of vehicle components and systems when recovering commercial vehicles from the roadside following accidents

Objectives

To achieve this outcome the candidate has to:

- 1) State the current
 - a) Industry Codes of Practice for Safe Roadside Working
 - b) Legal requirements, including local bye-laws and regulations, applicable to securing and protecting the recovery site.
- 2) State who may be contacted
 - a) emergency services
 - b) any named on the casualty vehicle for contacting in an emergency
 - c) incident manager and/or controller
 - d) customers.
- 3) Describe the operating principles of vehicle systems
 - a) braking systems
 - b) transmission systems
 - c) steering systems
 - d) suspension systems.
- 4) Describe the limits of authority when dealing with hazardous substances and situations.
- 5) Describe
 - a) the basic principles of winch and air cushion operation
 - b) the safe working loads for recovery equipment, axle weights and stability
 - c) how to gain mechanical advantage by the correct application of equipment
 - d) how to position and rig vehicle recovery vehicles and equipment
 - e) how to calculate the effort needed to winch a vehicle back onto hard standing
 - f) how to seek guidance and assistance from the relevant person(s) promptly where loads require specialist handling and transfer procedures.
- 6) State the importance of reporting and seeking guidance from others when hazardous substances are present at the accident site.
- 7) Describe
 - a) rolling resistance and gradient resistance
 - b) the resistance to recovery caused by damage to the casualty vehicle
 - c) the methods of calculating the forces needed to right an overturned vehicle.
- 8) State how to use site-to-base communication methods.
- 9) State how to identify vehicles carrying hazardous substances.
- 10) Describe how to assess the most suitable method of recovery.

Outcome 3

Demonstrate an understanding of the principles and procedures associated with recovering commercial vehicles from the roadside following accidents.

Objectives

To achieve this outcome the candidate has to describe:

- 1) The effects of
 - a) the weather and roadside conditions on recovery operations
 - b) the design and contents of the casualty vehicle on the recovery operation
 - c) vehicle condition and position on the recovery operation.
- 2) The
 - a) principles of loading and load containment
 - b) requirements for securing personal effects and loads
 - c) on-site accident recovery planning and control techniques
 - d) principles of working safely and effectively at a vehicle accident recovery scene.
- 3) How to recover casualty vehicles without inflicting further un-necessary damage.
- 4) How to prepare and secure vehicles for recovery.
- 5) The circumstances which necessitate unloading vehicles prior to recovery operations and specialist load transfer assistance.
- 6) How to check for and deal with any spillages or load loss.
- 7) How to clear and make safe accident sites before moving off.
- 8) How to make the casualty vehicle safe prior to commencing any recovery operation.
- 9) The principles to be observed when positioning, rigging, and operating recovery vehicles and equipment to gain mechanical advantage and comply with
 - a) legal requirements
 - b) industry codes of practice for recovery operations
 - c) manufacturers instructions
 - d) employers requirements.

Outcome 4

Demonstrate an understanding of the systems used to record the recovery of commercial vehicles from the roadside following accidents and dispose of waste materials.

Objectives

To achieve this outcome the candidate has to describe the:

- 1) Importance of documenting procedures.
- 2) Procedures for recording roadside activities
 - a) computer based
 - b) hard copy.
- 3) Procedures for recording the faults or damage identified on vehicles, systems, components or units to comply with employers requirements.
- 4) Importance of reporting to the controller or relevant person prior to commencing operations
 - a) the viable options where the recovery vehicle and/or equipment on hand prove unsuitable for the task
 - b) the recovery method to be used
 - c) the implications affecting them and/or the vehicle
 - d) gain agreement to the proposed procedures.
- 5) Importance of ensuring the records are
 - a) accurate
 - b) complete
 - c) in the format required
 - d) passed promptly to the relevant person.
- 6) Procedures for
 - a) disposing of waste material resulting from the roadside activities
 - b) returning defective units and components to storage or for re-cycling, including refrigerant handling requirements.

Assessment

Essential knowledge assessment

Essential knowledge will be assessed using the GOLLA system. The test specification is as follows:

Outcome	Number of questions
1	5
2	5
3	12
4	3
Test duration 35mins	Total 25