

Practical Assessment Workbook

Diploma in Accident Repair Body Principles at SCQF Level 5

4391 –12

Training Provider

Candidate name

Start date with training provider

Registration date with City & Guilds

Expected completion date

City & Guilds Registration/ID Number

Work place or placement

Diploma in Accident Repair Body Principles at SCQF Level 5

This Diploma is made up of the following units

Unit number	Unit title	Assessment method	Entry type	Credit points
001	Level 5 Skills in Health, Safety and Good Housekeeping	Assignment	Results entry	7
003	Level 6 Skills in Supporting Job Roles in the Automotive Work Environment	Assignment	Results entry	5
004	Level 5 Skills in Materials, Fabrication, Tools and Measuring Devices used in the Automotive Environment	Assignment	Results entry	7
051	Level 5 Knowledge of Health, Safety and Good Housekeeping in the Automotive Environment	Assignment	Results entry	3
053	Level 6 Knowledge of Support for Job Roles in the Automotive Work Environment	Assignment	Results entry	3
054	Level 5 Knowledge of Materials Fabrication, Tools and Measuring Devices used in the Automotive Environment	Assignment	Results entry	4
102	Level 5 Skills in Removing and Fitting Non-Permanently Fixed Motor Vehicle Body Panels	Assignment	Results entry	2
105	Level 5 Skills in Removing and Replacing Exterior Motor Vehicle Body Panels Including Permanently Fixed Components	Assignment	Results entry	5
119	Level 5 Skills in Body Metal Active Gas (MAG) Welding Techniques	Assignment	Results entry	5
120	Level 5 Skills in Motor Vehicle Body Resistance Spot Welding Operations	Assignment	Results entry	5
152	Level 5 Knowledge of Removing and Fitting Non Permanently Fixed Motor Vehicle Body Panels	Multiple Choice	On-line test	2
155	Level 5 Knowledge of Removing and Replacing Exterior Motor Vehicle Body Panels Including Permanently Fixed Components	Multiple Choice	On-line test	6
169	Level 5 Knowledge of Motor Vehicle Body Metal Active Gas (MAG) Welding techniques	Multiple Choice	On-line test	5
170	Level 5 Knowledge of Motor Vehicle Body Resistance Spot Welding Operations	Multiple Choice	On-line test	5
176	Level 5 Knowledge of Motor Vehicle Construction and Materials	Multiple Choice	On-line test	5
101	Level 5 Skills in Removing and Fitting Motor Mechanical Electrical and Trim (MET) Components to Vehicles	Assignment	Results entry	2
106	Level 5 Skills in Carrying Out Minor Repairs to Motor Vehicle Exterior Body Panels	Assignment	Result entry	5

121	Level 6 Skills in Motor Vehicle Body Metal Inert Gas (MIG) Brazing Operations	Assignment	Results entry	5
124	Level 5 Skills in Motor Vehicle Body Mechanical Fastening Operations	Assignment	Results entry	2
125	Level 6 Skills in Motor Vehicle Body Adhesive Bonding Operations	Assignment	Results entry	2
151	Level 5 Knowledge of Removing and Fitting Motor Mechanical, Electrical and Trim (MET) Components to Vehicles	Multiple Choice	On-line test	2
156	Level 5 Knowledge of Minor Motor Vehicle Exterior Body Panel Repairs	Multiple Choice	On-line test	6
171	Level 6 Knowledge of Motor Vehicle Body Metal Inert Gas (MIG) Brazing Operations	Multiple Choice	On-line test	5
174	Level 5 Knowledge of Motor Vehicle Body Mechanical Fastening Operations	Multiple choice	On-line test	2
175	Level 5 Knowledge of Motor Vehicle Body Adhesive Bonding Operations	Multiple Choice	On-line test	2

Diploma assessment workbook
Candidate unit tracking assessment and verification page

PRN Number	Practical activity	Units worked upon	Assessor's Comments	Assessor	Date
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.		Internal verifier _____ Signature _____ Date ___/___/___			
14.		External verifier _____ Signature _____ Date ___/___/___			

Information

All the unit tasks can be completed as stand alone units or as a complete qualification made up of a combination of units.

Assessment

The vehicles used for assessment should have a realistic resemblance to current vehicles. Centres can use whole vehicles and specially prepared realistic vehicle rigs for training and assessment. It is expected that the technology used is similar to that used today.

Tools and equipment

Providers should have the tools and equipment to facilitate the vehicle types and units being worked upon; they should be in a safe condition to support learning and assessment.

Evidence submitted for assessment and verification

All units have a simple assessment document to cover the practical content. The knowledge element can be supported by a number of methods. Unit questions can be answered either orally, written or centre devised to support vehicle types, including photographic, video, tape and other recording methods. Product and evidence of components made during the assessment should also be made available.

Accident Repair Body Principles Skills Unit Practical Assessment Task Sheets

Purpose:

These assessment task work sheets are designed to support the light vehicle skills units. Candidates who are working towards individual skills units or following a complete qualification with rules of combination should find these units the most obvious choice.

Using them is not mandatory, some centres and candidates may prefer to use similar task activities and work sheets which also meet the same performance criteria needed to meet the skills units.

Using the workbook:

General Units – Skills (Units 001, 003, 051) By using these skills assessment task sheets, some of the necessary 'G' unit skills elements are integrated into the main units being undertaken. This means that evidence may be gathered for these units. For example, all of the units within this qualification incorporate Health & Safety (Unit 001). Evidence may be gathered for gathering data and information, identifying and using the correct tools and equipment, carrying out the work and recording essential test readings. Paper documentation is kept to a minimum which allows the candidates to concentrate more on quality practical learning and assessment time, (simplicity with quality).

Where it is not possible to generate evidence for the general units indicated through the technical tasks, centres will need to create additional tasks to ensure that the candidates are able to sufficiently cover the learning outcomes and assessment criteria of the unit.

General Units – Knowledge (Units 053)

City & Guilds has provided short answer questions for Units 053 which are available to download from the City & Guilds website. These may be used as is integrated whilst carrying out the relevant skills units, and candidates' responses recorded.

Completing the work sheets:

1. Candidates need to agree the assessments with their assessors before starting.
2. Write in the vehicle details, tools and equipment needed, gather and write in the vehicle data and make sure the work area is safe and risks identified
3. Carry out the assessment and complete the examination and test readings as necessary.
4. Evidence of Health & Safety, good housekeeping and working with others will need to be initialled, in the box, by the assessor to make sure the candidate has adhered to all good working practices.
5. Both the assessor and candidate will need to sign and date the record when work is successfully completed.

Skills:

Within each unit evidence can be seen for number skills, communication, ICT, problem solving, working with others and improving own learning, including personal learning and thinking skills (PLTS).

Candidates will always be gathering data, taking numerical test readings, using computers to fault find and access vehicle data, solving vehicle faults which in turn improves their own learning.

Units 004/054 (G4):

These units can be completed by either of the two work sheets; Centres who have in place activities to support this unit can use the blank work sheet providing they meet all the criteria. The second worksheet gives the opportunity to manufacture a workshop tool which encompasses the necessary skills and criteria to meet the unit in full.

The short-answer questions should be taken under supervised conditions as closed-book tests.

This means that all activities will be completed with the assessor, or other designated supervisor, present. Strict exam regulations do not apply; it is envisaged that most candidates will take the short-answer questions in their normal learning environment with their own tutor present or under full invigilated conditions.

Alternatively, assessors may prefer to ask the questions orally and record individual candidates' responses.

General Units – Skills (Units 001, 003, 051) By using these skills assessment task sheets, some of the necessary 'G' unit skills elements are integrated into the main units being undertaken. This means that evidence may be gathered for these units. For example, all of the units within this qualification incorporate Health & Safety (Unit 001). Evidence may be gathered for gathering data and information, identifying and using the correct tools and equipment, carrying out the work and recording essential test readings. Paper documentation is kept to a minimum which allows the candidates to concentrate more on quality practical learning and assessment time, (simplicity with quality).

Where it is not possible to generate evidence for the general units indicated through the technical tasks, centres will need to create additional tasks to ensure that the candidates are able to sufficiently cover the learning outcomes and assessment criteria of the unit.

General Units – Knowledge (Units 053)

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The short-answer questions should be taken under supervised conditions as closed-book tests.

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Alternatively, assessors may prefer to ask the questions orally and record individual candidates' responses.

Training for assessments:

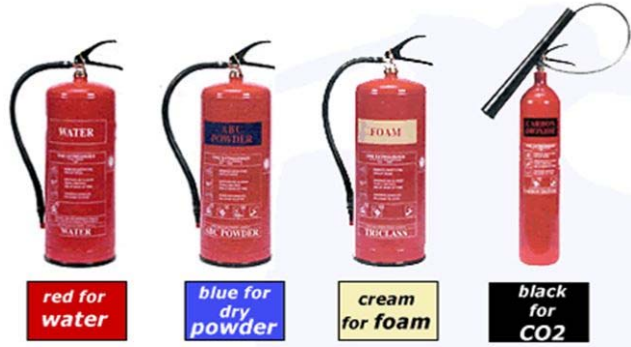
There is a practical training work book which supports this practical assessment skills workbook. It is not mandatory however it contains a comprehensive skills training leading to the assessment tasks.

Health & Safety and Good Housekeeping in the Automotive Environment

Units 001, 051 (G1/2)



Name: _____



This unit is about the knowledge and skills needed to work in an automotive engineering environment. This can be in a light vehicle, heavy vehicle, motorcycle or body and paint workshop.

Outcome 1

Keeping the workshop clean, tidy and safe in preparation for the start, during and at the end of the day

Describe the procedures needed to clean the following:

- tools and equipment
- preparation for the day start and end
- general tidiness
- spillages
- removing waste
- housekeeping rules

List 6 main tools and pieces of equipment, used in the workshop, and describe the checks and cleaning methods needed.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

What activities are required to be carried out for cleaning and maintaining the workshop at the start and finish of the day?

Take a tour of the workshop and identify any areas of untidiness and state how you would normally deal with this.

State what methods you use to clean the floor, including spillages, in your workshop.

Describe the waste policies that are in place and what your responsibilities for them are.

Metals

Cardboard

Oils

Plastics

State three housekeeping rules which must be adhered to in the workshop:

1. _____

2. _____

3. _____

Outcome 2:

Health & Safety at Work Act: initial statements

Basic Health & Safety requirements

- Health & Safety legislation
- General legal duties of the employee
- General legal duties of the employer
- Current Health & Safety requirements

General duties of employees at work

It shall be the duty of every employee, while at work, to take reasonable care for the Health & Safety of themselves and of other persons who may be affected by their acts or omissions at work; and as regards any duty or requirement imposed on their employer or any other person by or under any of the relevant statutory provisions, to co-operate with them so far as is necessary to enable that duty or requirement to be performed or complied with.

General duties of employers to their employees

It shall be the duty of every employer to ensure, in so far as is reasonably practicable, the health, safety and welfare at work of all their employees.

Without prejudice to the generality of an employer's duty under the preceding subsection, the matters to which that duty extends include in particular:

- the provision and maintenance of plant and systems of work that are, so far as is reasonably practicable, safe and without risks to health
- arrangements for ensuring, so far as is reasonably practicable, safety and absence of risks to health in connection with the use, handling, storage and transport of articles and substances
- the provision of such information, instruction, training and supervision as is necessary to ensure, so far as is reasonably practicable, the Health & Safety at work of their employees
- so far as is reasonably practicable as regards any place of work under the employer's control, the maintenance of it in a condition that is safe and without risks to health and the provision and maintenance of means of access to and egress from it that are safe and without such risks
- the provision and maintenance of a working environment for their employees that is, so far as is reasonably practicable, safe, without risks to health, and adequate as regards facilities and arrangements for their welfare at work.

Duties of the employer

Where is the Health & Safety at Work Act poster situated in your workplace? _____

State three main duties expected of your employer.

1. _____

2. _____

3. _____

Duties of the employees

State three main duties expected of employees.

1. _____

2. _____

3. _____

What are three main Health & Safety concerns, in your workshop, with regards to the type of environment you are working in

1. _____

2. _____

3. _____

Outcome 3

Know about the hazards in the workshops you work in

- Potential hazards
- Reporting risks
- Precautions with vehicles and equipment
- PPE (personal protective equipment)
- Identify fire extinguishers
- Warning signs
- Product warning labels

State 3 main potential hazards in your workshop

1. _____
2. _____
3. _____

Who do you report risks, hazards and dangers to?

Name of person: _____

List 3 precautions you should take when working with vehicles

1. _____
2. _____
3. _____

State the PPE which you use on a regular basis and state its main purpose

1. _____
2. _____
3. _____

Identify the fire extinguishers in your workplace and state where they are situated

1. _____
2. _____
3. _____
4. _____

What types of fire are each of the extinguishers, listed above, used for

1. _____
2. _____
3. _____
4. _____

In the space below sketch four main warning signs located in your workplace

1.

2.

3.

4.

In the space below Identify product warning labels in your workplace (toxic substances, COSHH, equipment labels, loads)

1.

2.

3.

4.

Outcome 4

Personal responsibilities

- The importance of all individuals to remain alert to Health & Safety in the workplace
- Importance of your own personal conduct in maintaining the Health & Safety of all individuals including those you work with
- The importance of your own personal presentation in maintaining Health & Safety and welfare

How do you make sure those activities you and others undertake support the prevention of accidents and safety concerns (list risk assessments, support work with other).

(List 3)

1. _____
2. _____
3. _____

What do you feel are the main concerns relating to personal conduct for yourself and others in your workplace

(List 3)

1. _____
2. _____
3. _____

Why do you feel it is important to present yourself in a way which maintains a safe environment? (time keeping, proper dress, behaviour, alcohol, drugs)

(List 3)

1. _____
2. _____
3. _____

Assessor's feedback

Name/Date:

Internal verifier's sampling

Name/Date:

External verifier's sampling

Name/Date:

Overview

This unit is about working in an engineering workshop and being able to:

- carry out day to day workshop cleaning activities
- identify hazards and risks and comply with relevant legislation and good practice.
- work safely at all times individually and with others

Evidence requirements: VRQ 001 (G1/G2) (skills)

Essential Knowledge will be primarily tested using practical and written assignment activities or similar to cover the assessment criteria; further knowledge can be assessed by using oral questioning. At the end, the assessor must sign this form to confirm that all evidence identified above has been carried out competently by the candidate.

	PRN Numbers use boxes as appropriate		
	VRQ Tick when competence observed		
Use correct personal protection			
Use correct vehicle protection			
Carry out workshop cleaning			
Use workshop cleaning materials			
Keep tools clean and stored			
Dispose of waste correctly			
Identify hazards(low, medium, high)			
Follow legal requirements			
Manufacturer's instructions			
Workplace policies			
Show good personal conduct			
Display personal presentation			
Direct observations PRNs			
Knowledge evidence PRNs Use as appropriate			

Signing this document below by the assessor indicates that the assessor and candidate have agreed that all components of the unit have been fully completed

Assessor name _____ Signature _____ date __/__/__

Internal verifier _____ Signature _____ date __/__/__

External verifier _____ Signature _____ date __/__/__

Support For Job Roles in the Automotive Work Environment

Overview

This unit is about developing the skills required to keep good working relationships with all colleagues and customers and being able to:

- communicate effectively
- provide effective support

Evidence requirements: VRQ 003 (G3) (Skills)

Essential Knowledge will be primarily tested using practical and written assignment activities or similar to cover the assessment criteria; further knowledge can be assessed by using oral questioning. At the end, the assessor must sign this form to confirm that all evidence identified above has been carried out competently by the candidate

	PRN Numbers use boxes as appropriate		
	VRQ Tick when competence observed		
Respond to requests			
Refer customers/colleagues			
Use manufacturer's legal information			
Communicate with customer/colleagues			
Give accurate information			
Report any delays where applicable			
Contribute to a team			
Show respect			
Inform colleagues of their own work			
Workplace policies			
Direct observations PRNs			
Knowledge evidence PRNs Use as appropriate			

Signing this document below by the assessor indicates that the assessor and candidate have agreed that all components of the unit have been fully completed

Assessor name _____ Signature _____ date __/__/__

Internal verifier _____ Signature _____ date __/__/__

External verifier _____ Signature _____ date __/__/__

**Materials, Fabrication, Tools and Measuring Devices
in the Automotive Environment
Units 004, 054 (G4)**

Candidate's Name:

All outcomes for this assignment must be completed to gain a pass. There is no grading, however candidates must demonstrate that they have a good understanding and the ability to use the tools and equipment in a safe and proper manner.

It can be taken as a standalone unit; however it can also be integrated when completing the skills and competence units.

Outcome	Outcome Title	Assessor's feedback
Outcome 1	Tools used for fabricating and fitting	
Outcome 2	Measuring devices used for fabrication, fitting, and electrical testing Use of workshop equipment	
Outcome 3	Properties, application and limitations of ferrous and non-ferrous metals	
Outcome 4	Properties, application and limitations of non-metallic materials	
Outcome 5	Terms relating to the properties of materials	

Candidate's Name: _____ . Signature: _____ . Date. ___/___/___

Assessor Name: _____ . Signature: _____ . Date. ___/___/___

Overall decision

Outcome 1

Common types of hand tools used for fabricating and fitting in the automotive workplace

Questions

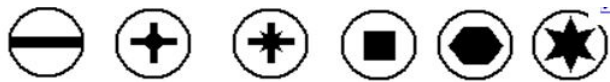
Name three types of hand files used in the workshop.

- 1.
- 2.
- 3.

Which way should the teeth face on a hacksaw?

State a safety precaution when using a ball pein hammer.

Name the screwdriver types shown:



- | | | |
|---|----|---|
| 1 | 2 | 3 |
| 4 | 5. | 6 |

State a use for pliers.

Name three spanner types commonly used in the workshop.

When would a centre punch be used?

What is the name of the drill bit used before drilling the main hole?

What is a thread tap used for?

What is a thread die used for?

What is an 'easy-out' and what would it be used for?

State three tools used for marking out metal prior to cutting, filing or drilling.

- 1.
- 2.
- 3.

How should tools be cared for and stored after use.

Outcome 2

Types of measuring devices used for fabrication, fitting, and electrical testing in the automotive workplace.

Use of workshop equipment

Name the tool shown and state an example of its use.



Name the tool shown.

State the three units of measurement needed when using Ohm's Law for calculations

- 1.
- 2.
- 3.

Name the tool shown and state an example of its use.



Draw the diagram used for remembering Ohm's Law



Name the tool shown and state an example of its use.



What would the equipment shown be used for?



What do the letters SWL stand for?

Name the tool shown and state an example of its use.



The image shows a two post ramp. State a safety check to carry out before use.



Name the tool shown and state an example of its use.



State two safety checks to carry out before using the equipment shown.



Outcome 3

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

Where on a motor vehicle would low carbon steel be used?

What are the properties of low carbon steel?

Where on a motor vehicle would high carbon steel be used?

What are the properties of high carbon steel?

Where on a motor vehicle would cast iron be used?

What are the properties of cast iron?

Where on a motor vehicle would aluminium alloys be used?

What are the properties of aluminium alloys?

Where on a motor vehicle would brass be used?

What are the properties of brass?

Where on a motor vehicle would copper be used?

What are the properties of copper?

Outcome 4

Properties, application and limitations of non-metallic materials used when constructing, modifying and repairing vehicles and components.

State the two types of glass normally used on modern vehicles.

1.

2.

What are their main properties of each type with regards to breakage and repair?

1.

2.

One use of rubber, on a vehicle, is for tyres; where else can it be used?

What happens to rubber with age?

What is a typical shelf life of a vehicles tyre?

Where on a vehicle could Glass Reinforced Plastic (GRP) be used?

What is GRP made up of?

Where on a motor vehicle could Kevlar be used?

What are the properties of Kevlar?

Where on a motor vehicle could carbon fibre be used?

What are the properties of carbon fibre?

State the main safety precautions when using GRP, glues and adhesives.

Outcome 5

Terms in connection with the properties of materials.

Name a type of metal, used in the construction of motor vehicles, which is very **hard**.

State two uses of this metal on a motor vehicle.

1.

2.

State a simple test to check for metal **hardness**.

What does the term **malleability** mean in relation to materials?

Give an example of the use of a material that has good malleability properties.

What does the term **ductility** mean in relation to materials?

Give an example of the use of a material that has good ductility properties.

What does the term **elasticity** mean in relation to materials?

Give an example of the use of a material that has good elasticity properties.

What does the term **toughness** mean in relation to materials?

Give an example of the use of a material that has good toughness properties.

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

<p>Overview This unit is about developing the practical skills and knowledge required to safely use tools, equipment and materials in the automotive working environment.</p> <p>Evidence requirements It is expected that this evidence will be generated when carrying out practical work and assessments in a workshop.</p> <ol style="list-style-type: none"> Candidates should list the tools and equipment normally used in the working environment on the job card. Candidates should state the health and safety and risk identified when using tools and equipment on the job card. Candidates should have the opportunity to generate practical evidence while working on projects using different materials and workshop equipment. <p>Observations are required to cover outcomes 1 and 2 Essential knowledge will be primarily assessed using practical observations, questions and written assignments to cover the assessment outcome criteria; further knowledge can be assessed by using oral questioning. At the end, the assessor must sign this form to confirm that all evidence identified above has been carried out to the required standard by the candidate. Assignments for knowledge and practical work are available for this unit</p>	PRN Numbers use boxes as appropriate				
	VRQ Tick when observed competence				
	Outcomes	Practical observation PRN number		Knowledge PRN number	
	1. Common hand tools				
	2. Measuring devices				
	3. Properties of ferrous/non ferrous metals	Covered in knowledge			
	4. Properties of non-metallic materials	Covered in knowledge			
	5. Terms relating to properties of materials	Covered in knowledge			
	Tools/measuring devices for outcomes 1 and 2: include others as appropriate. Highlight when used correctly				
	spanners	sockets	multi-meter	vehicle lift	tap and die
	files	hack saw	rule	jack and stands	easy-out
	hammer	air tool	electrical hand tool	torque wrench	screwdrivers
	<p>Signing this document below by the assessor indicates that the assessor and candidate have agreed that all components of the unit have been fully completed</p> <p>Assessor name _____ Signature _____ Date __/__/__</p> <p>Internal verifier _____ Signature _____ Date __/__/__</p> <p>External verifier _____ Signature _____ Date __/__/__</p>				

Light Vehicle Skills

Use of Hand Tools and Equipment in Motor Vehicle Engineering

Demonstrate the ability to file, cut, thread and drill materials

Unit/s covered on this evidence record

Candidate's name: _____	Date: ___/___/___	(G1/2) 001	(G3) 003	(G4) 004	
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State the activities you demonstrated to complete this unit: This can be products made, photographic or integrated within other units.

Details of work activity
 To complete this exercise you must show that you can use engineering equipment correctly and safely.
 You will need to make an engineering tool which will demonstrate the skills of cutting, filing, drilling, threading, measuring and understanding drawings.
 You can make a tool and or demonstrate these skills when repairing vehicle components.

Hack saw	Drills/bits	Taps/die	Files	Stock/wrench	Material types
----------	-------------	----------	-------	--------------	----------------

Evidence of Health and Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

1. Work with others when reporting finding	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)

Assessor's signature: _____

State how you checked your work against specification, disposed of waste, recycled materials

Assessor's knowledge questions								
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Assessor's feedback on evidence provided.

I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.

Assessor's name: _____ Signature: _____ Date: ___/___/___

Candidate's signature: _____ Date: ___/___/___

Light Vehicle Skills
Use of Hand Tools and Equipment in Motor Vehicle Engineering

Demonstrate the ability to File, cut, thread and drill materials Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___	(G1/2) 001	(G3) 003	(G4) 004	
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Details of work activity
 To complete this exercise you must show that you can use engineering equipment correctly and safely.
 You will need to make an engineering tool which will demonstrate the skills of cutting, filing, drilling, threading, measuring and understanding drawings.
 You can make a tool and or demonstrate these skills when repairing vehicle components.
 You must demonstrate that you have used all the tools listed below.

Hacksaw	Drills/bits	Taps/die	Files/hammer/punch	Stock/wrench	Steel
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Evidence of Health and Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

- | | |
|--|--|
| 1. Work with others when reporting finding | 5. Clear up spillages |
| 2. Dispose all waste correctly and safely | 6. Identify workshop policies |
| 3. Tools tidy, cleaned, checked and put away | 7. Wear and use correct PPE |
| 4. Sweep up | 8. Evidence of recycling and correct disposal of waste (ESDGC) |



Examples shown include:

- 1 pad saw
- 2 brake pie clamp
3. block and stud
 - block and stud with easy-out hole to simulate snapped stud

Assessor's signature: _____

Work found that requires further attention and any action taken:

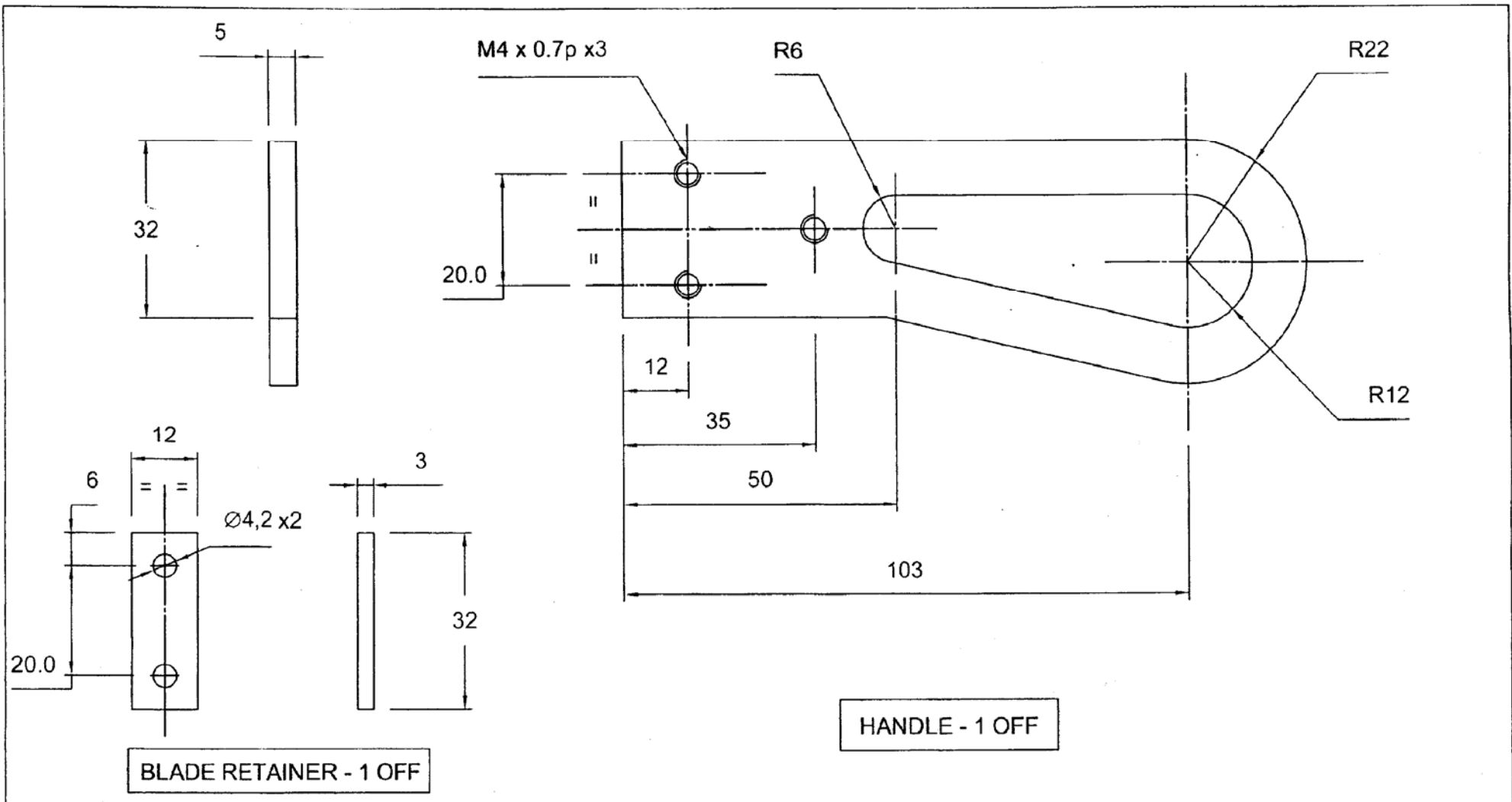
Assessor's knowledge questions							
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Assessor's feedback on evidence provided.

I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.

Assessor's name: _____ Signature: _____ Date: ____/____/____

Candidate's signature: _____ Date: ____/____/____



ISSUE	DETAIL	SIGN.	GEN. TOLERANCES +/- 0.5 DECIMAL DIMS 0.0 +/- 0.1 DECIMAL DIMS 0.00 +/- 0.025 UNLESS OTHERWISE STATED	SCALE 1:1	DATE 22/10/2007
2	REDRAWN 22/10/2007	A.C.C.		DIMENSIONS IN M/METRES	MATL. & FINISH B.D.M.S. POLISHED
			TITLE	DRAWN	DRAWING NUMBER
			PAD SAW		SHEET OF SHEETS

**Skills in Removing and Fitting Non Permanently
Fixed Motor Vehicle Body Panels**

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	102
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Vehicle

Make/Model: _____	Year of manufacture: _____	Number of doors _____	Type of body: _____
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Details of work activity

Candidates need to be observed by their assessor carrying out removal and fitting of three non permanently fixed motor vehicle body panels

Indicate below which of the components have been assessed

Wing Door Bonnet Boot lid Tailgate

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out removal and replacement activities:

Use suitable personal protective equipment and vehicle coverings throughout all light vehicle engine unit

And component removal and replacement activities

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use appropriate tools and equipment:

Select the appropriate tools and equipment necessary for carrying out removal and fitting of non-permanently fixed panels

Ensure that equipment has been calibrated to meet manufacturers' and legal requirements

Use the correct tools and equipment in the way specified by manufacturers when carrying out removal and fitting

of non-permanently fixed vehicle panels

Be able to carry out removal and fitting of non-permanently fixed vehicle panels

Carry out removal and fitting of non-permanently fixed vehicle panels

Carry out removal and fitting of non-permanently fixed vehicle panels adhering to the correct specifications and tolerances for the vehicle

Ensure that the removal and fitting of non-permanently fixed panels conforms to the vehicle operating specification and any legal requirements

Ensure the components are realigned correctly in a way which regains their original manufactured tolerance

Ensure no damage occurs to other components when removal and fitting of non-permanently fixed vehicle panels

Ensure all components and panels are stored safely and in the correct location

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

Assessors to select suitable 'component' based on assessment circumstances.

Answers to questions should be available for verification

1. How should you prepare the vehicle before removing panels.
2. State how you should protect the vehicle interior when removing doors.
3. State **two** methods of removing a seized fixing bolt.
4. State **three** quality checks that should be carried out on a refitted wing.
5. Why are cage nuts used when fitting doors, bonnets and wings?

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

1. Work with others when reporting findings	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)

Assessor's signature: _____

Work found that requires further attention and any action taken:

Assessor's knowledge questions									
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Assessor's feedback on evidence provided.

I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.

Assessor's name: _____ Signature: _____ Date: ____ / ____ / ____

Candidate's signature: _____ Date: ____ / ____ / ____

**Skills in Removing and Replacing Exterior Motor Vehicle Body Panels
including Permanently Fixed Components**

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	105
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Vehicle

Make/Model: _____	Year of manufacture: _____	Number of doors _____	Type of body: _____
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Details of work activity

Candidates need to be observed by their assessor carrying out removal and replacement of Two permanently fixed and Two non permanently fixed exterior vehicle body panel

Indicate below which of the components have been assessed

Wing	<input type="checkbox"/>	Door	<input type="checkbox"/>	Bonnet	<input type="checkbox"/>	Boot lid	<input type="checkbox"/>	Tailgate	<input type="checkbox"/>
Sill	<input type="checkbox"/>	Quarter panel	<input type="checkbox"/>	Welded wing	<input type="checkbox"/>	Bonded wing	<input type="checkbox"/>	Rear panel	<input type="checkbox"/>

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out removal and replacement of exterior vehicle panels including permanently fixed panels

Correctly use required PPE and vehicle coverings throughout all removal and replacement activities

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select and use suitable sources of technical information to support motor vehicle removal and recognised fitting activities including:

Vehicle technical data

Removal and fitting procedures

Legal requirements

Use technical information to support light vehicle engine unit and component removal and replacement activities

Be able to use appropriate tools and equipment

Select and use the appropriate tools and equipment necessary for carrying out removal and fitting of non-permanently fixed vehicle panels

Ensure that equipment has been calibrated to meet manufacturers' and legal requirements

Use the appropriate tools and equipment in the way specified by manufacturers when carrying removal and fitting of exterior body panels including permanently fixed vehicle panels

Be able to carry out removal and fitting of exterior vehicle panels including permanently fixed panels

Identify prior to working on the vehicle the component materials involved that will be worked on during the repair

Remove and re-fit adjacent exterior body panels including those that are permanently fixed

Carry out removal and fitting of non-permanently fixed vehicle panels adhering to the correct specifications and tolerances for the vehicle

Use and apply sealants and anti corrosion materials to the manufacturers specification

Ensure that the replacement panels conform to the vehicle specifications for dimension, material and functional capability

Ensure the components are realigned correctly in a way which regains their original manufactured tolerance

Ensure any damage is minimised to mating surfaces. Any damage caused should be correctly reinstated

Ensure permanently fixed panels are replaced without incurring damage to the vehicle systems

Ensure all components and panels are stored safely and in the correct location

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

Assessors to select suitable 'component' based on assessment circumstances.

Answers to questions should be available for verification

- 1 State a method of protecting adjacent panels from damage when removing or replacing a bolt on wing.
- 2 List **Two** advantages of a bonded wing over a bolted on wing.
- 3 List **Two** recommended methods of removing a spot welded component.
- 4 State why it is important that any materials used during the repair process needs to comply with the manufactures specifications.
- 5 State why it is important that any damaged caused during the repair process needs to be recorded

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)	
1. Work with others when reporting findings	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)
Assessor's signature: _____	
Work found that requires further attention and any action taken:	
Assessor's knowledge questions	
Assessor's feedback on evidence provided.	
I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.	
Assessor's name: _____ Signature: _____ Date: ____/____/____	
Candidate's signature: _____ Date: ____/____/____	

Skills in Carrying Out Minor Repairs to Motor Vehicle Exterior Body Panels

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	106
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Vehicle

Make/Model: _____	Year of manufacture: _____	Number of doors _____	Type of body: _____
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Details of work activity

Candidates need to be observed by their assessor carrying out minor repairs (roughing out a small dent and the use of body filler) to Five of the following motor vehicle exterior body panels

Indicate below which of the components have been assessed

Wing	<input type="checkbox"/>	Door	<input type="checkbox"/>	Bonnet	<input type="checkbox"/>	Boot lid	<input type="checkbox"/>	Tailgate	<input type="checkbox"/>
Sill	<input type="checkbox"/>	Quarter panel	<input type="checkbox"/>	Welded wing	<input type="checkbox"/>	Roof	<input type="checkbox"/>	Rear panel	<input type="checkbox"/>

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out minor repairs to motor vehicle exterior body panels

Use suitable personal protective equipment and vehicle coverings throughout all repair activities

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select and use suitable sources of technical information to support motor vehicle removal and recognised fitting activities including:

Manufacturers instructions

Vehicle technical data

Removal and fitting procedures

Legal requirements

Use technical information to support light vehicle engine unit and component removal and replacement activities

Be able to use appropriate tools and equipment

Select and use the appropriate tools and equipment necessary for carrying out repairs to motor vehicle exterior and body panels

Check that equipment has been calibrated to meet manufacturers' and legal requirements

Use the correct tools and equipment in the way specified by manufacturers when carrying repairs to motor vehicle exterior body panels

Be able to carry out minor repairs to motor vehicle exterior body panels

Identify prior to working on the vehicle the component materials involved that will be worked on during the repair

Carry out minor repairs to motor vehicle exterior body panels so they are restored to their original contour using hand tools and filling materials effectively

Carry out minor repairs to motor vehicle exterior body panels adhering to specifications and tolerances for

the vehicle and following

Replace any sealer, anti corrosion and sound deadening materials which were removed prior to the repair and conforming to the manufacturers specification

Ensure all plastic repairs regain the strength of the original part

Ensure any damage is minimised to mating surfaces. Any damage caused should be correctly reinstated

Ensure all completed repairs are finished to an agreed standard ready for the refinishing process

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

Assessors to select suitable 'component' based on assessment circumstances.

Answers to questions should be available for verification

- 1 State the importance of using a dust mask when rubbing down body filler
- 2 State how you could protect the vehicle from further damage when carrying out minor panel repairs'.
- 3 List the manufactures recommended process for the removal of paint before applying body filler.
- 4 State a safe method of removing sound deadening material prior to a repair
- 5 State why it is impotent that plastic components regain the original strength after a repair has been carried out.

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)									
1. Work with others when reporting findings					5. Clear up spillages				
2. Dispose all waste correctly and safely					6. Identify workshop policies				
3. Tools tidy, cleaned, checked and put away					7. Wear and use correct PPE				
4. Sweep up					8. Evidence of recycling and correct disposal of waste (ESDGC)				
Assessor's signature: _____									
Work found that requires further attention and any action taken:									
Assessor's knowledge questions									
Assessor's feedback on evidence provided.									
I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.									
Assessor's name: _____ Signature: _____ Date: ____/____/____									
Candidate's signature: _____ Date: ____/____/____									

Skills in Motor Vehicle Body Metal Active Gas (MAG) Welding Techniques

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___	001	119	
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Vehicle

Make/Model:	Year of manufacture:	Number of doors	Type of body:
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Details of work activity

Candidates need to be observed by their assessor carrying out metal active gas (MAG) welding techniques correctly on Three different occasions

Indicate below which of the components have been assessed

Setting up the welding machine Preparing the weld sample Prepare metal surface

Correct use of welding equipment Produce weld samples for testing

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out motor vehicle exterior body MAG welding operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body MAG welding operations

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select and use suitable sources of technical information to support motor vehicle body MAG welding operations:

Vehicle technical data

Welding procedures

Legal requirements

Use technical information to support motor vehicle body MAG welding operation activities

Be able to use appropriate tools and equipment

Select and use the appropriate tools and equipment necessary for carrying out repairs to motor vehicle body MAG welding operations

Ensure all tools and equipment that are required are in a safe working condition

Set up and use the appropriate tools and equipment in the way specified by manufacturers when carrying out motor vehicle body MAG welding operations

Clean and store PPE and equipment in the appropriate manner

Be able to carry out motor vehicle body MAG welding operations

Prepare surface to ensure a good MAG weld is achieved

Ensure alignment, mating and treatment of flanges to enable a suitable join to be achieved

Conduct MAG weld operations including

Lap plug Lap seam Butt joint Fillet joint

Conduct MAG weld operations following

Manufacturers processes, methods and procedures

Test procedures to provide test coupons on equivalent material in accordance with Industry Standards

Recognised researched repair methods

Dress the weld area without reducing material thickness and protect the area to inhibit corrosion where applicable

Recognise when the weld is not forming correctly and what action needs to be taken

Inspect and assess quality of welds in accordance with industry standards and manufacturers specification

Avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area.

Any damage caused should be correctly reinstated

Ensure no damage is incurred to other vehicle systems when MAG welding

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

**Assessors to select suitable 'component' based on assessment circumstances.
Answers to questions should be available for verification**

- 1 Describe the requirements for protecting the vehicle and contents from damage before, during and after the MAG welding process.
- 2 Describe the **Fillet** welding techniques used in MAG welding.
- 3 Describe the **Plug** welding techniques used in MAG welding.
- 4 State **two** advantages and **two** disadvantages of MAG welding over other welding methods.
- 5 State the importance and implications of checking and carrying out weld test pieces prior to carrying out the welding process.

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

1. Work with others when reporting findings	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)

Assessor's signature: _____

Work found that requires further attention and any action taken:

Assessor's knowledge questions									
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Assessor's feedback on evidence provided.

I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.

Assessor's name: _____ Signature: _____ Date: ____ / ____ / ____

Candidate's signature: _____ Date: ____ / ____ / ____

Skills in Motor Vehicle Body Resistance Spot Welding Operations

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	120	
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Vehicle

Make/Model: _____	Year of manufacture: _____	Number of doors _____	Type of body: _____
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Details of work activity

Candidates need to be observed by their assessor carrying out resistance spot welding operations correctly on Three different occasions

Indicate below which of the components have been assessed

Setting up the spot welding machine <input type="checkbox"/>	Preparing the weld sample <input type="checkbox"/>	Prepare metal surface <input type="checkbox"/>
Correct use of welding equipment <input type="checkbox"/>	Produce weld samples for testing <input type="checkbox"/>	

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out motor vehicle body resistance spot welding operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body resistance spot welding operations

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select suitable sources of technical information to support motor vehicle body resistance spot welding operation activities including:

Vehicle technical data

Welding procedures

Legal requirements

Use technical information to support motor vehicle body resistance spot welding operation activities

Be able to use appropriate tools and equipment

Select the appropriate tools and equipment necessary for carrying out motor vehicle body resistance spot welding operations

Ensure all tools and equipment that are required are in a safe working condition

Set up and use the correct tools and equipment in the way specified by manufacturers when carrying motor vehicle body resistance spot welding operations

Clean and store PPE and equipment in the appropriate manner

Be able to carry out motor vehicle body resistance spot welding operations

Carry out surface preparation to ensure a good resistance spot weld is achieved

Ensure alignment, mating and treatment of flanges to enable a suitable joint to be achieved

Produce resistance spot welding operations following:

Manufacturers processes, methods and procedures

Test procedures to provide test coupons on equivalent material in accordance with Industry Standards

Recognised researched repair methods

Dress and protect the area to inhibit corrosion where applicable

Identify when the weld is not forming correctly and what action needs to be taken

Inspect and assess all spot weld quality in accordance with industry standards and manufacturers specification

Ensure the integrity of the weld and record the type of weld achieved on the appropriate paperwork

Store and record all weld test pieces

Avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area.

Any damage caused should be correctly reinstated

Ensure no damage is incurred to other vehicle systems when resistance spot welding

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

**Assessors to select suitable 'component' based on assessment circumstances.
Answers to questions should be available for verification**

- 1 State the treatment that should be carried out before replacing a spot welded panel.
- 2 State the fault that could occur if spot welds are placed too close together.
- 3 List **three** visual checks that could be carried out on a spot welded sample that indicates a correct weld.
- 4 List **two** defects that can occur in resistance spot welding.
- 5 List **two** advantages and **two** disadvantages of resistance spot welding over other welding techniques.

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

1. Work with others when reporting findings	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)

Assessor's signature: _____

Work found that requires further attention and any action taken:

Assessor's knowledge questions

Assessor's feedback on evidence provided.

I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.

Assessor's name: _____ Signature: _____ Date: ____/____/____

Candidate's signature: _____ Date: ____/____/____

Skills in Motor Vehicle Body Metal Inert Gas (MIG) Brazing Opertaions

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___	001	121	
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Vehicle

Make/Model:	Year of manufacture:	Number of doors	Type of body:
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Details of work activity

Candidates need to be observed by their assessor carrying out metal inert gas (MIG) brazing operations correctly on Three different occasions

Indicate below which of the components have been assessed

Setting up welding equipment correctly <input type="checkbox"/>	Weld samples produced for testing <input type="checkbox"/>
Correct preparation of metal surfaces <input type="checkbox"/>	Correct welding techniques used <input type="checkbox"/>
Distortion control techniques used <input type="checkbox"/>	

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out motor vehicle body MIG brazing operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body MIG brazing operations

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select and use suitable sources of technical information to support motor vehicle MIG brazing operations activities including:

Vehicle technical data

Welding procedures

Legal requirements

Use technical information to support motor vehicle body MIG brazing operations activities

Be able to use appropriate tools and equipment

Select and use the appropriate tools and equipment necessary for carrying out repairs to motor vehicle body MIG brazing operations

Ensure all tools and equipment that are required are in a safe working condition

Set up and use the appropriate tools and equipment in the way specified by manufacturers when carrying out motor vehicle body MIG brazing operations

Clean and store PPE and equipment in the appropriate manner

Be able to carry out motor vehicle body MIG brazing welding operations

Prepare surface to ensure a good MIG brazing operation is achieved

Ensure alignment, mating and treatment of flanges to enable a suitable join to be achieved

Carry out MIG brazing operations including

Lap plug

Lap seam

Butt joint

Carry out MIG brazing operations following

Manufacturers processes, methods and procedures

Test procedures to provide test coupons on equivalent material in accordance with Industry Standards

Recognised researched repair methods

Dress the weld area without reducing material thickness and protect the area to inhibit corrosion where applicable

Recognise when the weld is not forming correctly and what action needs to be taken

Inspect and assess all MIG brazing operations for quality in accordance with industry standards and manufacturers specification

Ensure the integrity of the weld and record the type of weld achieved on the appropriate paperwork

Avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area, any damage caused should be reported

Ensure no damage is incurred to other vehicle systems when carrying out MIG brazing operations

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

Assessors to select suitable 'component' based on assessment circumstances.

Answers to questions should be available for verification

- 1 How should you prepare the vehicle before starting to weld?
- 2 State the correct welding technique when MIG brazing.
- 3 State **two** methods of distortion control when welding in the flat position.
- 4 State **two** advantages of MIG brazing.
- 5 How should you prepare the joint before welding?

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

1. Work with others when reporting findings	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)

Assessor's signature: _____

Work found that requires further attention and any action taken:

Assessor's knowledge questions									
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Assessor's feedback on evidence provided.

I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.

Assessor's name: _____ Signature: _____ Date: ____/____/____

Candidate's signature: _____ Date: ____/____/____

Skills in Motor Vehicle Body Mechanical Fastening Operations

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	124
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Vehicle

Make/Model: _____	Year of manufacture: _____	Number of doors _____	Type of body: _____
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Details of work activity

Candidates need to be observed by their assessor using vehicle body mechanical fasteners to secure All of the following exterior body panels

Indicate below which of the components have been assessed

Wing Door Bonnet Boot lid Tailgate

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out motor vehicle body mechanical fastening operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body mechanical fastening operations

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select suitable sources of technical information to support motor vehicle body mechanical fastening operations activities including:

Vehicle technical data

Joining procedures

Legal requirements

Use technical information to support motor vehicle body mechanical fastening operations activities

Be able to use appropriate tools and equipment

Select the appropriate tools and equipment necessary for carrying out motor vehicle body mechanical fastening operations

Ensure all tools and equipment that are required are in a safe working condition

Set up and use the correct tools and equipment in the way specified by manufacturers when carrying motor vehicle body mechanical fastening operations

Clean and store PPE and equipment in the appropriate manner

Be able to carry out motor vehicle body mechanical fastening operations

Prepare surface to ensure a good mechanical fastening is achieved

Ensure alignment, mating and treatment of flanges to enable a suitable join to be achieved

Carry out mechanical fastening operations following manufacturers processes, methods and procedures

Carry out mechanical fastening operations following recognised researched repair methods

Dress and protect the joint area to inhibit corrosion where applicable

Recognise when the joint is not forming correctly and what action needs to be taken

Ensure integrity of the joint and record the type of joint achieved on the appropriate paperwork

Avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area.

any damage caused should be correctly reinstated

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

Assessors to select suitable 'component' based on assessment circumstances.

Answers to questions should be available for verification

- 1 State the surface preparation that should be done before joining panels with mechanical fasteners.
- 2 State what is the **main** advantage of single sided riveting.
- 3 List **two** advantages and **two** disadvantages of mechanical fastening operations over other joining methods.
- 4 State how to use adhesives with the riveting technique.
- 5 State why it is important to keep accurate records.

Assessor feedback

Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)

1. Work with others when reporting findings

5. Clear up spillages

2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)
Assessor's signature: _____	
Work found that requires further attention and any action taken:	
Assessor's knowledge questions	
Assessor's feedback on evidence provided.	
I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.	
Assessor's name: _____ Signature: _____ Date: ____/____/____	
Candidate's signature: _____ Date: ____/____/____	

Skills in Motor Vehicle Body Adhesive Bonding Operations

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	125
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Vehicle

Make/Model: _____	Year of manufacture: _____	Number of doors _____	Type of body: _____
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Details of work activity

Candidates need to be observed by their assessor carrying out adhesive bonding operations correctly on Three different joint types

Indicate below which of the components have been assessed

Preparing the metal sample
 Prepare metal surface
 Correct use of bonding material

Produce bonded samples for testing

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out motor vehicle body adhesive bonding operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body adhesive bonding operations

Work in way which minimises the risk of damage or injury to vehicle people and the environment

Be able to use relevant information to carry out the task

Select suitable sources of technical information to support motor vehicle body adhesive bonding operations activities including:

Vehicle technical data

Joining procedures

Legal requirements

Use technical information to support motor vehicle body adhesive bonding operations activities

Be able to use appropriate tools and equipment

Select the appropriate tools and equipment necessary for carrying out motor vehicle body adhesive bonding operations

Ensure all tools and equipment that are required are in a safe working condition

Set up and use the correct tools and equipment in the way specified by manufacturers when carrying out motor vehicle body adhesive bonding operations

Clean and store PPE and equipment in the appropriate manner

Be able to carry out motor vehicle body adhesive bonding operations

Prepare surface to ensure a good adhesive bonding is achieved

Ensure alignment, mating and treatment of flanges to enable a suitable join to be achieved

Carry out adhesive bonding operations following manufacturers processes, methods and procedures

Carry out adhesive bonding operations following recognised researched repair methods

Dress and protect the joint area to inhibit corrosion where applicable

Identify when the joint is not forming correctly and what action needs to be taken

Avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area.

any damage caused should be correctly reinstated

Be able to record information and make suitable recommendations

Produce work records that are accurate, complete and passed to the relevant person(s) promptly in the format required

Make suitable and justifiable recommendations for cost effective repairs

Record and report any additional faults noticed during the course of their work promptly in the format required

Assessors to select suitable 'component' based on assessment circumstances.

Answers to questions should be available for verification

- 1 State the properties that a structural adhesive should have.
- 2 State **two** advantages of an **Offset Lap** joint when compared with other types of joints used in adhesive bonding process.
- 3 State the advantages of a two pack material when compared with single pack materials.
- 4 State **two** advantages and **two** disadvantages of adhesive bonding over other joining methods.
- 5 State the importance and implications of checking and carrying out adhesive test pieces prior to carrying out the joining process.

Assessor feedback

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Evidence of Health & Safety, good housekeeping and working with others. (Assessor to sign this area if the learner meets the requirements)	
1. Work with others when reporting findings	5. Clear up spillages
2. Dispose all waste correctly and safely	6. Identify workshop policies
3. Tools tidy, cleaned, checked and put away	7. Wear and use correct PPE
4. Sweep up	8. Evidence of recycling and correct disposal of waste (ESDGC)
Assessor's signature: _____	
Work found that requires further attention and any action taken:	
Assessor's knowledge questions	
Assessor's feedback on evidence provided.	
I confirm that the work carried out on this evidence record meets City & Guilds' requirements for validity, authenticity, currency and sufficiency.	
Assessor's name: _____ Signature: _____ Date: ____/____/____	
Candidate's signature: _____ Date: ____/____/____	