

Practical Assessment Workbook

Diploma in Accident Repair Body and Alignment Principles at SCQF Level 6

4391 –13

Centre logo here

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 and Alignment Principles at SCQF Level 6

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
006	Level 7 Skills in How to Make Learning Possible through Demonstrations and Instructions	Assignment	Results entry	5
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
056	Level 7 Knowledge of How to Make Learning Possible through Demonstrations and Instructions	Assignment	Results entry	5
113	Level 6 Skills in Removing and Replacing Motor Vehicle Body Panels	Assignment	Results entry	5
114	Level 6 Skills in Motor Vehicle Body Panel Major Repairs	Assignment	Results entry	5
117	Level 6 Skills in Identifying and Rectifying Motor Body Vehicle Misalignment	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
163	Level 6 Knowledge of Removing and Replacing Structural Motor Vehicle Body Panels	Multiple Choice	On-line test	6
164	Level 6 Knowledge of Motor Vehicle Body Panel Major Repairs	Multiple Choice	On-line test	6
167	Level 6 Knowledge of Identifying and Rectifying Motor Body Vehicle Misalignment	Multiple Choice	On-line test	6
169	Level 5 Knowledge of 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	2
008	Level 6 Skills to Identify and Agree Motor Vehicle Customer Service Needs	Assignment	Results entry	5
058	Level 6 Knowledge of How to Identify and Agree Motor Vehicle Customer Service Needs	Multiple Choice	On-line test	5

121	Level 6 Skills in Motor Vehicle Body Metal Inert Gas (MIG) Brazing Operations	Assignment	Results entry	5
122	Level 6 Skills in Motor Vehicle Body Aluminium Metal Inert Gas (MIG) Welding Operations	Assignment	Result entry	5
123	Level 6 Skills in Motor Vehicle Body Tungsten Inert Gas (TIG) Welding 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
171	Level 6 Knowledge of Motor Vehicle Body Metal Inert Gas (MIG) Brazing Operations	Multiple Choice	On-line test	5
172	Level 6 Knowledge of Motor Vehicle Body Aluminium Metal Inert Gas (MIG) Welding Operations	Multiple Choice	On-line test	5
173	Level 6 Knowledge of Motor Vehicle Body Tungsten Inert Gas (TIG) Welding 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

**Level 3 Diploma in Accident Repair Body and Alignment Principles 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.

Diploma in Accident Repair Body and Alignment Principles at SCQF Level 6 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) 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.

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.

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 4 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.

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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 __/__/__

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

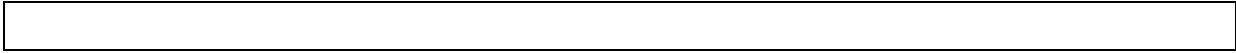
PRN Numbers use boxes as appropriate			
VRQ Tick when competence observed			
Respond to requests			
Refer customers/colleagues			
Use manufacturer's legal information			
Communicate with customer/colleagues			
Give accurate information			
Report any delays where applicable			
Contribute to a team			
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 __/__/__



Identify and Agree the Motor Vehicle Customer Needs

<p>Overview This unit is about developing the practical skills and knowledge required to Identify and support customers needs in the automotive working environment.</p> <p>Specific performance objectives To ensure that candidates work with customers to gain vehicle information, provide information and agree work to be undertaken. Candidates will need to show that all relevant records have been completed. For more on what the candidate must understand, see the full unit details</p> <p>Evidence requirements: VRQ (skills) One piece of evidence must be observed by your assessor to cover all four outcomes. Evidence can come from the workplace or a simulated situation</p> <p>Essential Knowledge will be assessed by using oral and/or written questioning. Please see sample assignment on City & Guilds website (unit 058).</p> <p>At the end, the assessor must sign this form to confirm that all evidence identified above has been carried out competently by the candidate</p>	<p style="text-align: right;">Obs = observation Wit = witness CA = centre assessment Q = questions</p> <p style="text-align: right;">PRN Numbers use boxes as appropriate</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="5" style="text-align: center;">VRQ</th> </tr> <tr> <th colspan="5" style="text-align: center;">Tick when observed competence</th> </tr> <tr> <th style="width: 30%;">Outcomes</th> <th style="width: 20%;">Type of evidence (circle)</th> <th colspan="3" style="width: 30%;">VCQ Competence</th> <th style="width: 10%;">VRQ Skills</th> </tr> </thead> <tbody> <tr> <td>1. Obtain relevant information from the customer</td> <td>Obs, Wit, CA, Q</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td rowspan="4" style="background-color: #cccccc;"></td> </tr> <tr> <td>2. Provide relevant information for the customer</td> <td>Obs, Wit, CA, Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Agree work undertaken for the customer</td> <td>Obs, Wit, CA, Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. Ensure all records are completed</td> <td>Obs, Wit, CA, Q</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Terms and conditions</td> <td colspan="3" style="text-align: center;">Costs</td> <td colspan="2" style="text-align: center;">Timescales</td> </tr> </tbody> </table> <p style="margin-top: 20px;">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's name _____ Signature _____ date __/__/__</p> <p>Internal verifier _____ Signature _____ date __/__/__</p> <p>External verifier _____ Signature _____ date __/__/__</p>	VRQ					Tick when observed competence					Outcomes	Type of evidence (circle)	VCQ Competence			VRQ Skills	1. Obtain relevant information from the customer	Obs, Wit, CA, Q					2. Provide relevant information for the customer	Obs, Wit, CA, Q				3. Agree work undertaken for the customer	Obs, Wit, CA, Q				4. Ensure all records are completed	Obs, Wit, CA, Q				Terms and conditions	Costs			Timescales	
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Terms and conditions	Costs			Timescales																																								

Unit G8 Assessment Workbook

4391-13/058

Knowledge of how to identify and agree Motor Vehicle customer service needs

Candidate _____

Candidate's Name: _____ . Enrolment Number: _____

This assignment is provided for candidates who need to provide evidence for the knowledge unit of how to identify and agree Motor Vehicle customer service needs

The assignment will need to be marked by the assessor to make sure it meets the requirements of the unit

Feedback by the assessor should give a clear outcome for this assignment.

All three outcomes will need a **pass** mark to complete the full knowledge unit

Outcome 1	Feedback
Outcome 2	Feedback
Outcome 3	Feedback
Assessor's name	Assessor's signature/date
<p>Internal verifier sampling Date __/__/__</p> <p>Name: Signature</p>	
<p>External verifier sampling Date __/__/__</p> <p>Name: Signature</p>	

Outcome 1

Understand legislative and organizational requirements and procedures

Assessor's marking and feedback

1.1 Describe the fundamental legal requirements of current consumer legislation and the consequences of your own actions in respect of this legislation

____ 1.2 Describe the content and limitations of company and product warranties for the vehicles dealt with by your company

____ 1.3 Explain the limits of your own authority for accepting vehicles

Signature _____ Date ___/___/_____

Outcome 1

Understand legislative and organizational requirements and procedures

Assessor's marking and feedback

1.4 Explain the importance of keeping customers informed of progress

1.5 Describe your workplace requirements for the completion of records

_____ 1.6 Explain how to complete and process all the necessary documentation

Signature _____ Date ___/___/___

Outcome 2

Understand how to communicate and care for customers

Assessor's marking and feedback

2.1 Explain how to communicate effectively with customers

2.2 Describe how to adapt your language when explaining technical matters to non technical customers

2.3 Explain how to use effective questioning techniques

2.4 Describe how to care for customers and achieve customer satisfaction

Signature _____ Date ___/___/___

Outcome 3

Understand company products and services

Assessor's marking and feedback

3.1 Describe the range of options available to resolve vehicle problems

3.2 Describe the range and type of services offered by your company

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

3.4 Explain how to access costing and work completion time information

Signature _____ Date ___/___/___

Skills in Removing and Replacing Motor Vehicle Body Panels

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	113
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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 removing and replacing a combination of Three panels/sections from each line of the listed motor vehicle body panels

Indicate below which of the components have been assessed

- | | | | | | | | | | |
|-----------------------------|--------------------------|-------------------|--------------------------|---------------|--------------------------|---------------------|--------------------------|------------------|--------------------------|
| a) Bolted wing | <input type="checkbox"/> | Door | <input type="checkbox"/> | Bonnet | <input type="checkbox"/> | Boot lid/tailgate | <input type="checkbox"/> | Inner wing panel | <input type="checkbox"/> |
| b) Welded wing | <input type="checkbox"/> | Bonded wing | <input type="checkbox"/> | Quarter panel | <input type="checkbox"/> | Sill panel | <input type="checkbox"/> | Front panel | <input type="checkbox"/> |
| c) Rear wheel arch assembly | <input type="checkbox"/> | Front chassis leg | <input type="checkbox"/> | B-C Post | <input type="checkbox"/> | Front cross members | <input type="checkbox"/> | Roof 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 vehicle body panels

Use suitable personal protective equipment 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 removal and fitting activities

Be able to use appropriate tools and equipment:

Select the appropriate tools and equipment necessary for carrying out removal and fitting of vehicle body 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 vehicle body panels

Be able to carry out removal and fitting of vehicle body panels

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

Carry out the removal and fitting of non permanently fixed, welded and bonded vehicle body panels

Carry out the removal and fitting of body panels to specification and tolerance following:

Manufacturers approved methods

Recognised researched methods

Health and safety

Workplace procedures

Ensure all test weld pieces conform to the current industry standard for appearance and penetration

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

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

Ensure the components are realigned to the manufacturers tolerance

Ensure damage to mating surfaces is minimised and any additional damage caused correctly reinstated

Ensure panels are replaced without causing 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 how to identify the manufacturers' joining techniques and how they may differ from the repair method used.
2. List **four** the quality checks that can be used to ensure correct alignment and contour of panels.
3. Explain the procedures involved in the removal and replacement of vehicle door skins.
4. Explain how to remove a bonded panel and state the Health & Safety implications that could occur.
5. State **two** recognised methods of checking a resistance spot weld strength

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 Panel Major Repairs

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	114
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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 major repairs to Four panels/sections from each line from the listed motor vehicle body panels

Indicate below which of the components have been assessed

a) Wing	<input type="checkbox"/>	Door	<input type="checkbox"/>	Bonnet	<input type="checkbox"/>	Boot lid/tailgate	<input type="checkbox"/>	Roof panel	<input type="checkbox"/>
b) Front chassis leg	<input type="checkbox"/>	B-C Posts	<input type="checkbox"/>	Quarter panel	<input type="checkbox"/>	Sill panel	<input type="checkbox"/>	Front 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 major repairs to motor vehicle 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:

Vehicle technical data

Removal and fitting procedures

Legal requirements

Use technical information to support light vehicle removal and fitting activities

Be able to use appropriate tools and equipment:

Select the appropriate tools and equipment necessary for carrying out removal and fitting of vehicle body panels

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

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

Be able to carry major repairs to motor vehicle body panels

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

Ensure the methods of preparation leave sub-structure body panels clean, free from materials likely to hinder repair and free of surface finishes when required

Prepare and reinstate vehicle body panels using the equipment recommended and following::

Manufacturers approved methods

Recognised researched methods for removal and fitting methods

Health and safety requirements

Carry out major repairs to motor vehicle body panels so they are restored to their original contour and dimensions using hand /power tools and filling materials effectively

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

Ensure all test weld pieces conform to the current industry standard for appearance and penetration

Ensure any damage is minimised to mating surfaces and any damage caused should be reinstated

Ensure all completed repairs are finished to and agreed standard ready for he 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 Explain the methods used to check for panel contours for accuracy after panel reshaping.
- 2 Explain how to prepare the panel surface prior to filling with plastic filler.
- 3 Explain the process of hot and cold shrinking and give **two** advantages for both.
- 4 State the techniques for identifying the type of plastic used for manufactured components.
- 5 State how heat can affect the properties of high strength steel (HSS).

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									
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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 Identifying and Rectifying Motor Vehicle Body Misalignment

Unit/s covered on this evidence record

Candidate's name:

Date: ___/___/___

001

117

Vehicle

Make/Model:

Year of manufacture:

Number of
doors

Type of body:

Details of work activity

Candidates need to be observed by their assessor carrying out identifying and rectifying motor vehicle body misalignment on Two vehicles using ether a bracket less or bracketed jig system

Indicate below which of the components have been assessed

Preparing the vehicle Preparing the jig system Mounting the vehicle on the jig system

Setting up the measuring system to the manufacturers specification

Attaching the pulling system in the correct place for the initial pull to begin

Rectification of misalignment completed to the required specification

Assessment Record

Assessor to indicate when correct use demonstrated and or knowledge confirmed

Be able to work safely when carrying out identification and rectification to motor vehicle body misalignment

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:

Vehicle technical data

Removal and fitting procedures

Equipment data specific to the vehicle

Legal requirements

Use technical information to support light vehicle removal and fitting activities

Be able to use appropriate tools and equipment:

Select appropriate tools and equipment necessary for carrying out identification and rectification to motor vehicle body misalignment

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

Use the tools and equipment in the way specified by manufacturers when carrying out identification and rectification to motor vehicle body misalignment

Be able to carry identification and rectification to motor vehicle body misalignment

Load and secure the vehicle to the body jig correctly following:

Manufacturers approved instructions

Recognised researched methods

Health and safety requirements

Establish the extent of vehicle misalignment accurately and completely

Align and anchor areas adjacent to the damage in away that prevents further damage to the vehicle

Attach the pulling system in a way that minimises the risk of injury to yourself and others

Operate the pulling system in a way that minimises the risk of injury to yourself and others

Ensure all completed rectification activities restore the vehicle to the correct specification and tolerances

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 how to use rectification equipment including safety chains, hydraulic push and pull and body alignment jigs (bracket system and or measuring)

- system.
- 2 Describe the geometric principles of alignment in the absence of a data sheet.
 - 3 State the difference between direct and indirect damage on a vehicle.
 - 4 State the possible consequences of failing to follow the manufacturers repair methods, instructions and data sheets.
 - 5 Describe the function of pulling systems and the criteria used for their selection.

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 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									
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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 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 Aluminium Metal Inert Gas (MIG) Welding Operations

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	122
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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) aluminium 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 body aluminium MIG welding operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body aluminium MIG 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 aluminium MIG welding operations activities including:

Vehicle technical data

Welding procedures

Legal requirements

Use technical information to support motor vehicle body aluminium MIG welding 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 aluminium MIG welding operations

Ensure 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 aluminium MIG welding operations

Clean and store PPE and equipment in the appropriate manner

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

Prepare surface to ensure a good aluminium weld is achieved

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

Carry out aluminium welding operations including

Lap seam

Fillet joint

Butt joint

Carry out aluminium 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 the weld area without reducing material thickness 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 aluminium 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 aluminium 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 MIG welding process.
- 2 Describe the **Fillet** welding technique used in aluminium MIG welding.
- 3 State the type of shielding gas that should be used when aluminium MIG welding.
- 4 State **two** advantages and **two** disadvantages of aluminium MIG 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								
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 Tungsten Inert Gas (TIG) Welding Operations

Unit/s covered on this evidence record

Candidate's name:	Date: ___/___/___		001	123	
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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 tungsten inert gas (TIG) welding operations 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 body TIG welding operations

Use suitable personal protective equipment and vehicle coverings throughout all motor vehicle body TIG 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 TIG welding operations activities including:

Vehicle technical data

Welding procedures

Legal requirements

Use technical information to support motor vehicle body TIG welding 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 TIG welding operations

Ensure 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 TIG welding operations

Clean and store PPE and equipment in the appropriate manner

Be able to carry out motor vehicle body TIG welding operations

Prepare surface to ensure a good TIG weld is achieved

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

Carry out TIG welding operations including

Lap seam

Fillet joint

Butt joint

Carry out TIG 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 the weld area without reducing material thickness 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 TIG 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 TIG 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 TIG welding process.
- 2 State the angles the welding torch and filler rod should be held at when TIG welding.
- 3 State the type of shielding gas that should be used when TIG welding.
- 4 State **two** advantages and **two** disadvantages of TIG 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								
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

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: ____ / ____ / ____	