SEG Awards Level 2

Motor Vehicle Studies

**Underpinning Knowledge Evidence Record**

K/601/5427 Knowledge of Minor Motor Vehicle Exterior Body Panel Repairs

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| **Learners Name** |  |
| **SEG Awards Registration Number** |  |
| **Centre Name** |  |
| **Assessor 1 Name**  |  |
| **Assessor 2 Name**  |  |

**DECLARATION OF AUTHENTICITY**

This declaration must be completed and signed by the learner and countersigned by the tutor / assessor and covers all evidence submitted for moderation.

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| Learner Name |  |
| Unique Learner Number (ULN) |  | SEGLearner Reg. ID |  |
| Qualification Title |  |
| Centre Name |  |

# Learner statement of authenticity

**Before signing please read the guidance below**.

I confirm, that the attached assignment / portfolio is all my own work[[1]](#footnote-1) and does not include any work completed by anyone other than myself. I have completed the assignment / portfolio in accordance with SEG Awards’ instructions and within the time limits set by my centre.

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| Signature |  | Date |  |

# Centre confirmation of authenticity

On behalf of …………………………………….(insert centre name), I confirm that the above mentioned learner, to the best of my knowledge, is the sole author of the completed assignment / portfolio attached, and the assessments have been completed under the required conditions.

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| Signed |  | Date |  |
| Name |  |
| Title |  |

**Guidance for Learners**

You have been asked to sign this Declaration of Authenticity and place it at the front of your portfolio or course work assessment. It confirms that the work you have submitted for assessment is your own and that you have not copied it from someone else or allowed another learner to copy it from you.

When preparing any course work it is good practice to undertake research using information from published sources. If you quote directly from these sources then this must be indicated in your work by using quotation marks and referencing the document from which the quotation was taken. You must then comment in your own words on any ideas expressed.

Assessors, internal verifiers and SEG Awards’ external moderators and verifiers are subject specialists who can spot the use of published materials that may be passed as your own words or ideas.

If you do copy words from a published source and do not indicate their reference you will be committing plagiarism. This is considered a form of cheating and may result in your assessment being declared void

**Contents**

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| --- | --- | --- |
| **Task No** | **Title** | **Assessment Criteria** |
| 1 | Hand tools  | 1.1, 1.2, 1.3  |
| 2 | Material types and properties | 2.1, 2.2, 2.3, 2.4, 2.6 |
| 3 | Preparing body panels for repair | 3.1, 3.2, 3.3, 3.8 |
| 4 | Reshaping filler materials and plastics | 2.3, 2.4, 2.5, 2.6, 3.4, 3.5, 3.6, 3.7, 3.9 |
| 5 | Reinstating materials | 3.10, 3.11 |

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| **Task 1 - Hand tools**  | **Assessment Criteria 1.1, 1.2, 1.3**  |

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| **Identify and describe the selection and use of hand tools used for metal finishing and plastic filler repairs** |
| **Name of tools** | **Tools Used For;** | **State how to prepare, test, use and maintain the tools** |
| **Metal Finish**✔ | **Plastic Repair**✔ | **Reshape**✔ |
| **Panel beating hammers** |  |  |  |  |
| **Dolly blocks** |  |  |  |  |
| **Beating files** |  |  |  |  |
| **Body spoons** |  |  |  |  |
| **Power sanders** |  |  |  |  |
| **Dual action sanders** |  |  |  |  |
| **Dent removal tools** |  |  |  |  |

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| **Task 2 - Material types and properties** | **Assessment Criteria 2.1, 2.2, 2.3, 2.4, 2.6** |

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| **Complete the table below listing the material properties (e.g. hardness, flexibility, light weight) and where the materials are used in the vehicle construction.** |
| **Material** | **Properties** | **Use within vehicle construction** |
| **Steel** |  |  |
| **Aluminium** |  |  |
| **Coated steel** |  |  |
| **Thermo plastic** |  |  |
| **Thermo-setting plastic** |  |  |
| **Glass reinforced plastic (GRP)** |  |  |
| **Carbon fibre** |  |  |

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| **Task 3 - Preparing body panels for repair** | **Assessment Criteria 3.1, 3.2, 3.3, 3.8** |

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| **Describe how to prepare the vehicle prior to repair to avoid contamination** |
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| **Describe how to prepare damaged areas prior to roughing out and metal finishing** |
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| **Describe how to rough out and metal finish body panels** |
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| **In the table below describe how to carry out the following techniques and list the hand and specialist tools used** |
| **Techniques**  | **Description of techniques** | **Tools Used** |
| **Panel pulling** |  |  |
| **Hot shrinking** |  |  |
| **Direct hammering** |  |  |
| **Indirect hammering** |  |  |

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| **Task 4 - Reshaping filler materials and plastics** | **Assessment Criteria 2.3, 2.4, 2.5, 2.6, 3.4, 3.5, 3.6, 3.7, 3.9** |

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| **Complete the below table to identify a range of filling materials, their properties and processes used in minor repairs** |
| **Type of Filling Materials** | **Properties of Filler** | **Safe Use of Filler** | **Filler to Hardener Mixing Ratio** | **Type and Grade of Abrasives** |
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| **Select 2 different plastic body components and describe the techniques for identifying the types of plastic**  |
| **Plastic body component** | **Type of test or identification code** | **Result/Conclusion** | **Thermo Plastic**✔ | **Thermo-setting Plastic**✔ |
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| **Identify the processes used to repair plastic vehicle body components by ticking the relevant process(es) for each type of plastic below** |
| **Plastic body component** | **Thermal**✔ | **Adhesives**✔ |
| **Thermo plastic** |  |  |
| **Thermo-setting plastic** |  |  |

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| **Describe how to finish repairs to a suitable agreed condition to enable the next stage of repairs to proceed** |
| **Area of Damage** | **Procedures for** **re-shaping filling materials to match original contour** | **Types of Filler Used** | **Grades & types of abrasives used** | **List of tools used** |
| **Swage** |  |  |  |  |
| **Flat panel** |  |  |  |  |
| **Plastic** |  |  |  |  |

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| **Identify and describe 3 methods used to check accuracy of repaired contours after reshaping (the first method has been identified for you)** |
| **Method Used** | **Describe how to use the method to check accuracy of repaired contour** |
| **1. Profile gauge** |  |
| **2** |  |
| **3** |  |

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| **Task 5 – Reinstating materials** | **Assessment Criteria 3.10, 3.11** |

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| **In the table below explain the procedures for reinstating the following** |
| **Material** | **Explanation of Procedure** |
| **Anti-corrosion materials** |  |
| **Sealants** |  |
| **Sound deadening****materials** |  |

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| **Identify aspects of body repair that could affect pedestrian safety** |
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1. Unless otherwise stated e.g. for some entry level qualifications, learners can work together but should identify sections which are their own work. [↑](#footnote-ref-1)