

Overview

This standard is about repairing complex and difficult to access damage to a range of body panel types using a variety of preparation and reinstatement techniques, including hydraulic reforming and panel beating to retain panel contour and structural integrity.

DRAFT

Performance criteria

- You must be able to:
- P1 identify component materials involved in the construction of the vehicle in the areas that will be worked on during repair, prior to working on the vehicle
 - P2 select suitable personal protective equipment to wear and use vehicle coverings throughout all vehicle body panel repair activities
 - P3 inspect, prepare and use the tools and equipment required following manufacturers' instructions prior to use
 - P4 use technical information to check that a repair is allowed
 - P5 ensure your methods of preparation leave sub-structure body panels clean, free from materials likely to hinder repair/replacement and free of surface finishes when required
 - P6 prepare and reinstate vehicle body panels using the equipment recommended and following
 - P6.1 the equipment manufacturer's methods/instructions,
 - P6.2 recognised researched repair methods,
 - P6.3 your workplace procedure as well as
 - P6.4 health, safety and legal requirements
 - P7 promptly seek guidance from the relevant person(s) where there is the potential for your work to disturb other vehicle systems
 - P8 ensure all repaired body panels are reinstated to their original specified shape, strength and dimensions
 - P9 complete repaired components to an agreed condition ready for refinishing processes
 - P10 complete all repair activities within the agreed timescale
 - P11 promptly report any anticipated delays in completion to the relevant person(s)

Knowledge and understanding

You need to know and understand:

- K1 the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection when repairing vehicle body panels
- K2 the requirements of manufacturer's warranty agreements
- K3 the vehicle work specification agreed
- K4 your workplace procedures for the referral of problems, reporting of delays to the completion of work and personal protection
- K5 the requirements for protecting the vehicle and contents from damage before, during and after repairing vehicle body panels
- K6 the importance of working to agreed timescales and keeping others informed of progress
- K7 the relationship between time, cost and profitability
- K8 your workplace procedures for the referral of problems
- K9 the importance of reporting anticipated delays to the relevant persons(s) promptly
- K10 the principles governing the selection and use of hand tools for metal finishing and plastic filling repairs
- K11 the selection and use of panel beating and hydraulic reforming equipment, including specialist pulling systems
- K12 how to prepare, test, use and maintain the tools and equipment required to repair vehicle body panels
- K13 how to adapt hydraulic push equipment to perform pulling operations
- K14 the properties of component materials involved in the construction of the vehicle in the areas that will be worked on during repair
- K15 the types and selection of filling materials, their preparation and application
- K16 the properties, types, grades and use of abrasives used in the vehicle body panel repair process
- K17 the properties and safe use of types of filling materials used to repair panels
- K18 how to mix and apply fillers and stoppers used in repair
- K19 how to prepare the vehicle to avoid contamination

- K20 how to assess the extent of damage, including corrosion damage
- K21 the principles of chassis frame and monocoque vehicle construction
- K22 how body panel and component damage can affect other panels and the operation of vehicle systems
- K23 the factors determining the use of specific preparation and repair methods
- K24 the repair and joining technique implications of working with mild, high and ultra high strength steels, aluminium alloys, galvanised coatings
- K25 the consequences of using inappropriate repair methods
- K26 the principles associated with hot and cold shrinking
- K27 how heat can be used to assist reforming
- K28 how heating can affect the properties of steels
- K29 the techniques for identifying the type of plastics used for manufactured components
- K30 the procedures for reinstating anti-corrosion, sealant and sound deadening materials
- K31 the causes and rectification of distortion resulting from welding
- K32 the manufacturer's approved methods of working for the preparation and repair of vehicle body panels and components and the implications of not following them
- K33 the specification for panel shapes, dimensions and tolerances for the vehicles worked upon
- K34 the type of quality control checks that can be used to ensure the correct contour and standard of finish
- K35 how to interpret and use sources of information relevant to the repair of vehicle body panels and components
- K36 how to prepare damaged areas to facilitate repairs
- K37 how to prepare the panel surface prior to filling
- K38 how to repair corrosion damage
- K39 how to remove protective materials
- K40 how to repair and reinstate vehicle body panel contours and retain structural integrity to components
- K41 the techniques for reshaping damaged vehicle body panels using hand and specialist tools
- K42 how to check the accuracy of reinstated vehicle body panel shape

- K43 how to complete repair to an agreed condition ready for refinishing process
- K44 how to work safely avoiding damage to the vehicle and its systems
- K45 how pedestrian safety aspects affect the repairability of vehicles
- K46 understand what can/can't be repaired for safety reasons (ADAS for example), manufacturer and industry agreed standards for these and why these standards must be adhered to

DRAFT

Scope/range

All of the items listed below form part of this National Occupational Standard.

1. **Repair activities** are:
 - 1.1. correction of severely distorted panels
 - 1.2. to difficult to access panel damage
 - 1.3. to fractures on plastic panels
2. Vehicle **body panels** are:
 - 2.1. non-permanently fixed panels
 - 2.2. permanently fixed component
 - 2.3. sub-structure component
 - 2.4. bonded panels
3. **Reinstatement methods** are:
 - 3.1. panel beating
 - 3.2. panel shrinking
 - 3.3. hydraulic reforming
 - 3.4. body filling operations
 - 3.5. metal finishing
 - 3.6. plastic repair
 - 3.7. specialist dent removal methods
4. **Tools and Equipment** are:
 - 4.1. workshop equipment
 - 4.2. generic hand tools
 - 4.3. manufacturer's specified and specialist tools

Developed by	IMI
Version number	3
Date approved	31 March 2023
Indicative review date	31 March 2026
Validity	Current
Status	Original
Originating organisation	IMI Ltd
Original URN	IMIARBBP13
Relevant occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Key words	Major; repairs; motor; vehicle; body; panels;