

Overview

This standard is about repairing damage to alloy wheels.





Performance criteria

You must be able to

- P1. wear suitable personal protective equipment and use vehicle coverings throughout all alloy wheel repair activities (where appropriate)
- P2. assess the extent of the damage to the alloy wheel and surrounding area
- P3. recommend the relevant process to ensure a safe method of repair
- P4. inspect, prepare and use all the tools and equipment required following manufacturer's instructions prior to use
- P5. prepare all the refinishing systems and materials required following health and safety requirements and using:
 - P5.1. materials which conform to the specification required
 - P5.2. the manufacturer's approved method
 - P5.3. the manufacturer's approved equipment
- P6. ensure your methods of preparation leave the alloy wheel and surrounding area:
 - P6.1. clean and free from contamination
 - P6.2. free from materials likely to hinder repair
- P7. prepare and reinstate alloy wheels using the equipment recommended and following:
 - P7.1. the manufacturer's methods/instructions
 - P7.2. your workplace procedures
 - P7.3. health, safety and legal requirements
- P8. seek guidance from the relevant person(s) promptly where there is the potential for your work to disturb other vehicle systems
- P9. ensure all alloy wheels are repaired to an acceptable standard
- P10. apply all refinishing systems and materials using approved tools and equipment and following:
 - P10.1. the manufacturer's instructions
 - P10.2. the correct methods and techniques
 - P10.3. the correct application techniques for managing colour and tone variables
 - P10.4. health and safety requirements
- P11. dry all refinishing applied materials following health and safety requirements and using:
 - P11.1. the manufacturer's approved method
 - P11.2. the manufacturer's approved equipment



- P12. carry out the refinishing process to an acceptable standard
- P13. complete all repair activities within the agreed timescale
- P14. dispose of waste materials to conform with legal, environmental and workplace requirements
- P15. promptly report any anticipated delays in completion to the relevant person(s)





Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

- K1 the health and safety legislation, environmental requirements and workplace procedures relevant to workshop practices and personal and vehicle protection when repairing alloy wheels
- K2 the requirements of manufacturer's warranty agreements
- K3 the work specification agreed
- K4 your workplace procedures for:
 - K4.1 the referral of problems
 - K4.2 reporting of delays to the completion of work
 - K4.3 personal protection
- K5 the requirements for protecting the vehicle and contents from damage before, during and after repairing alloy wheels
- 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 promptly reporting anticipated delays to the relevant persons(s)

Tools and equipment

- K10 the principles governing the selection and use of hand tools for alloy wheel repairs
- K11 how to prepare, test, use and maintain the tools and equipment required to repair alloy wheels
- K12 the properties of the alloy wheel materials involved in the repair process
- K13 the types and selection of filling materials, their preparation and application
- K14 the properties, types, grades and use of abrasives used in the alloy wheel repair process
- K15 the implications of not following the correct abrasive process and its effect on the overall quality process
- K16 the properties and safe use of types of filling materials used to repair alloy wheels



- K17 how to mix and apply alloy wheel fillers
- K18 spray gun faults, their cause and their rectification

Materials

- K19 how to prepare refinishing systems and materials for use
- K20 the properties of refinishing systems and materials and the factors affecting their use

Prepare and repair alloy wheel

- K21 how to prepare the alloy wheel and surrounding area to avoid contamination
- K22 how to assess the extent of damage, including corrosion damage
- K23 the principles of alloy wheel construction
- K24 how alloy wheel damage can affect other components and the operation of other vehicle systems
- K25 the factors determining the use of specific preparation and repair methods
- K26 the consequences of using inappropriate repair methods
- K27 the type of quality control checks that can be used to ensure the correct contour and standard of finish
- K28 how to interpret and use sources of information relevant to the repair of alloy wheels and components
- K29 how to prepare damaged areas to facilitate repairs
- K30 how to prepare the alloy wheel surface prior to filling
- K31 how to repair corrosion damage
- K32 how to remove protective materials
- K33 how to repair and reinstate alloy wheel contours using the appropriate methods, equipment and materials
- K34 how to finish repairs to a suitable condition in preparation for refinishing
- K35 how to work safely avoiding damage to the vehicle and its systems

Refinishing alloy wheels

- K36 how to find, interpret and use sources of information relevant to the refinishing of alloy wheels
- K37 how to apply top coat materials using application techniques avoiding contamination and defects



- K38 how to dry top coats
- K39 how to assess and evaluate colour match and the final finish
- K40 how to dispose of waste materials following environmental requirements
- K41 the effect of the spray environment and natural environment on alloy wheel finishes
- K42 how application can affect colour variation and tone
- K43 the importance of following manufacturer's instructions and using their approved methods of working (including the use of refinishing systems and materials and equipment)
- K44 the consequences of failing to follow manufacturer's instructions
- K45 the importance of using and how to use extraction equipment



Scope/range

1. Refinishing systems and materials are:

- 1.1. compounds
- 1.2. flatting papers
- 1.3. polishes
- 1.4. etch primers
- 1.5. fillers
- 1.6. surfacers
- 1.7. anti-stone chip treatments
- 1.8. anti-corrosion treatments
- 1.9. cleaning agents
- 1.10. conditioning agents
- 1.11. adhesion promoters
- 1.12. metallic clear over base paints
- 1.13. non-metallic clear over base paints
- 1.14. mica clear over base paints
- 1.15. dilutants
- 1.16. tinters
- 1.17. additives
- 1.18. hardeners

2. Tools and equipment are:

- 2.1. polishing machines
- 2.2. flatting equipment
- 2.3. masking material dispensers
- 2.4. dust extraction
- 2.5. paint mixing and application equipment
- 2.6. viscosity measuring equipment
- 2.7. air supply equipment
- 2.8. spray booth
- 2.9. drying equipment

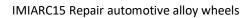


3. Repair activities are:

- 3.1. scuffs
- 3.2. scrapes
- 3.3. kerb damage
- 3.4. corrosion
- 3.5. pot hole/obstacle damage
- 3.6. custom finishes

4. Alloy wheels are:

- 4.1. magnesium alloy
- 4.2. aluminium alloy
- 4.3. polished wheel



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