
Overview

This NOS is about the ability to undertake the complete vehicle refinishing process, including the preparation and application of foundation materials, on repaired and new vehicle panels.

Performance criteria

- You must be able to:
- P1 wear suitable personal protective equipment and use the specified environmental safety equipment throughout all **vehicle refinishing** operations
 - P2 support **vehicle refinishing** operations by reviewing:
 - P2.1 product data
 - P2.2 the vehicle manufacturer's technical data
 - P2.3 colour libraries
 - P2.4 work instructions
 - P3 identify the body panel **substrates** accurately prior to undertaking any **vehicle refinishing** work
 - P4 prepare, test and adjust 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 all paints you prepare meet the specification required for colour and viscosity prior to application
 - P7 apply all **refinishing systems and materials** using approved **tools and equipment** and following:
 - P7.1 the manufacturer's instructions
 - P7.2 the correct **methods and techniques**
 - P7.3 the correct **application techniques** for managing colour and tone variables
 - P7.4 health and safety requirements
 - P8 dry all refinishing applied materials following health and safety requirements and using:
 - P8.1 the manufacturer's approved method
 - P8.2 the manufacturer's approved equipment
 - P9 ensure the finish produced:
 - P9.1 meets the requirements of the manufacturer's warranty

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- P9.2 meets the refinishing specification required and customer needs
 - P9.3 blends with the existing finish
 - P9.4 is free from contaminants and defects
 - P10 dispose of waste materials to conform with legal, environmental and workplace requirements
 - P11 complete all refinishing activities within the agreed timescale
 - P12 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 and environmental legislative requirements specific to **vehicle refinishing** operations and why it is important that these are followed
- K2 workplace procedures and workshop practices relevant to personal and vehicle protection before, during and after **vehicle refinishing** operations
- K3 the importance of disposing of waste safely and the consequences of not doing so to others, the business and the environment
- K4 the vehicle work specification agreed
- K5 your workplace procedures for:
 - K5.1 the referral of problems
 - K5.2 reporting delays to the completion of work
 - K5.3 personal and vehicle protection
- K6 the importance of working to agreed timescales and keeping others informed of progress
- K7 the relationship between time, cost and profitability
- K8 the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

You need to know and understand:

- K9 how to prepare, test, adjust and use all the **tools and equipment** required for **vehicle refinishing** operations
- K10 spray gun faults, their cause and their rectification

Materials

You need to know and understand:

- K11 how to prepare **refinishing systems and materials** for use
- K12 the properties of **refinishing systems and materials** and the factors affecting their use

Foundation and top coat preparation

You need to know
and understand:

- K13 how to recognise damage to **substrates** and ancillary fittings
- K14 how to recognise **substrates**
- K15 how the **substrate** affects the preparation process
- K16 how to interpret manufacturer's preparation schedules
- K17 how to prepare new and repaired panels using appropriate **methods and techniques**
- K18 how to carry out masking procedures to avoid material wastage and vehicle contamination for each stage of the preparation process
- K19 how to prepare panels and parts adjacent to the area being refinished
- K20 the factors governing the choice of panel preparation methods for the **substrate** identified
- K21 the types and grades of available abrasives and the factors governing their use for different **substrates**
- K22 methods of protecting panels and parts adjacent to the areas being painted and the circumstances in which they should be used
- K23 **methods and techniques** of masking (including paper and sheet masking) and the circumstances in which they should be used
- K24 the implications of static when working with plastic components
- K25 the implications of not following the correct abrasive process and its effect on the overall quality process
- K26 the importance of using and how to use extraction equipment
- K27 the implications of cross-contamination of dissimilar metals when using abrasive and extraction equipment

Preparation and application of foundation materials

You need to know
and understand:

- K28 how to find, interpret and use sources of information relevant to the mixing and application of foundation coatings
- K29 how to condition and clean **substrates** prior to the application of foundation coats
- K30 how to rectify **substrate** defects
- K31 how to apply foundation coatings
- K32 how to avoid application defects

- K33 how to dispose of waste foundation materials following environmental requirements
- K34 the importance of viscosity and its effect on the **substrate** finish
- K35 the importance of proper cleaning and using the correct foundation material to ensure adequate adhesion of the refinishing system
- K36 the manufacturer's approved instructions for working when applying foundation materials
- K37 the importance of using and how to use extraction equipment

Applying top coats

You need to know
and understand:

- K38 how to find, interpret and use sources of information relevant to the **refinishing** of vehicles
- K39 how to apply top coat materials using **application techniques** avoiding contamination and defects
- K40 how to dry top coats
- K41 how to assess and evaluate colour match, blending and the final finish
- K42 how to dispose of waste materials following environmental requirements
- K43 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues
- K44 how to minimise the spray area when carrying out spot repairs
- K45 the effect of the spray environment and natural environment on vehicle finishes
- K46 how application can affect colour variation and tone
- K47 the importance of following manufacturer's instructions and using their approved methods of working (including the use of **refinishing systems and materials** and equipment)
- K48 the consequences of failing to follow manufacturer's instructions
- K49 the importance of using and how to use extraction equipment

Additional information**Scope/range**

- 1 **Vehicle refinishing** operations covers:
 - 1.1. preparation
 - 1.2. application
 - 1.3. drying
 - 1.4. polishing

- 2 **Tools and equipment** are:
 - 2.1. polishing machines
 - 2.2. denibbing blocks
 - 2.3. flatting equipment
 - 2.4. masking material dispensers
 - 2.5. dust extraction
 - 2.6. paint mixing and application equipment
 - 2.7. viscosity measuring equipment
 - 2.8. air supply equipment
 - 2.9. spray booth
 - 2.10. drying equipment

- 3 **Refinishing systems and materials** are:
 - 3.1. compounds
 - 3.2. flatting papers
 - 3.3. polishes
 - 3.4. etch primers
 - 3.5. fillers
 - 3.6. surfacers
 - 3.7. anti-stone chip treatments
 - 3.8. anti-corrosion treatments
 - 3.9. cleaning agents
 - 3.10. conditioning agents
 - 3.11. adhesion promoters
 - 3.12. metallic clear over base paints
 - 3.13. non-metallic clear over base paints

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- 3.14. mica clear over base paints
 - 3.15. dilutants
 - 3.16. tinters
 - 3.17. additives
 - 3.18. hardeners
- 4 **Application techniques** are:
- 4.1. edge to edge
 - 4.2. fade out
 - 4.3. blending colour into adjacent panels
 - 4.4. spot repair
- 5 **Substrates** are:
- 5.1. electro-coated panels
 - 5.2. repaired panels
 - 5.3. original manufacturer's finish
 - 5.4. plastic components
 - 5.5. zinc coated panels
 - 5.6. steel panels
 - 5.7. aluminium panels
 - 5.8. composite panels
 - 5.9. previously primed panels
- 6 **Methods and techniques** are:
- 6.1. de-greasing
 - 6.2. flatting
 - 6.3. burnishing
 - 6.4. removing materials to a sound substrate
 - 6.5. feathering out
 - 6.6. masking
 - 6.7. recoating
 - 6.8. polishing
 - 6.9. plastic preparation
 - 6.10. tack off

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