IMIVPR06	IMIARC13
Repair minor paint defects on automotive vehicles	**Identify and rectify automotive paint defects and faults**
	Overview
This standard is about conducting repairs to minor paint defects on automotive vehicles.	This NOS is about rectifying a range of faults which may often require the removal of materials to a sound substrate in order for rectification to take place. This standardrequires the ability to undertake the complete rectification process, including the preparation and application of foundation materials and top coats.
Performance criteria	**Performance criteria**
You must be able to:	You must be able to:
P1 use the appropriate personal protective equipment when carrying out the repair of minor paint defects	P1 use the appropriate personal protective equipment when carrying out the repair of paint defects and faults
P2 protect the vehicle and its contents effectively when carrying out the repair of minor paint defects	P2 protect the vehicle and its contents effectively when carrying out the repair of paint defects and faults
P3 identify any defects and their cause with the correct rectification process	
P4 support repair activities by reviewing:	P3 support your rectification activities by reviewing:
P4.1 product data	P3.1 product data
	P3.2 the vehicle manufacturer's technical data
	P3.3 colour libraries
P4.2 work instructions	P3.4 work instructions
P5 prepare, check and adjust all the tools and equipment required, following manufacturer's instructions, prior to use	P4 prepare, test and adjust all the tools and equipment required following manufacturer's instructions, prior to use
	P5 identify the body panel substrate accurately prior to undertaking any rectification work
P6 correct defects using the approved tools, equipment and materials following:	P6 identify and correct paint defects and faults effectively using the approved tools, equipment, refinishing systems and materials following:
P6.1 manufacturer's instructions	P6.1 manufacturer's instructions
P6.2 the correct methods and techniques	P6.2 the correct methods and techniques
P6.3 health and safety requirements	P6.3 health and safety requirements
	P6.4 environmental requirements
P7 ensure the paint surface finish produced is free from contamination and defects	P7 ensure the finish produced is free from contamination and defects and meets the required work specification
P8 dispose of waste materials to conform with legal, environmental and workplace requirements	P8 dispose of waste materials to conform with legal, environmental and workplace requirements
P9 leave tools, equipment and work environment in a clean and serviceable condition, as appropriate	
P10 complete all paint repair activities within the agreed timescale and to an agreed quality control process	P9 complete all paint repair activities within the agreed timescale

P11 promptly report any anticipated delays in completion to the relevant person(s)	P10 report any anticipated delays in completion to the relevant person(s) promptly
Knowledge and understanding	**Knowledge and understanding**
You need to know and understand:	You need to know and understand:
	Legislative and organisational requirements and procedures
K1 the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection	K1 the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection
K2 the importance of disposing of waste safely and in compliance with environmental requirements and the consequences of not doing so to the business, others and the environment	K2 the importance of disposing of waste safely and the consequences of not doing so to others, the business and the environment
K3 the importance of selecting, using and maintaining the appropriate personal and vehicle protective equipment when repairing minor paint defects	K3 the importance of selecting, using and maintaining the appropriate personal protective equipment when repairing paint defects and faults
K4 the vehicle work specification agreed and how to interpret product manufacturer's instructions	K4 the vehicle work specification agreed
K5 your workplace procedures for:	K5 your workplace procedures for:
K5.1 the referral of problems	K5.1 the referral of problems
K5.2 reporting of delays to the completion of work	K5.2 reporting of delays to the completion of work
K5.3 personal protection	K5.3 personal protection
K6 the requirements for protecting the vehicle and contents from damage before, during and after repairing minor paint defects	K6 the requirements for protecting the vehicle and contents from damage before, during and after repairing paint defects and faults
K7 the importance of working to agreed timescales and keeping others informed of progress or delays	K7 the importance of working to agreed timescales and keeping others informed of progress
K8 the relationship between time, cost and productivity	K8 the relationship between time, cost and profitability
	K9 the importance of reporting anticipated delays to the relevant person(s) promptly
	Tools and equipment
K9 how to prepare, check and adjust all the tools and equipment required for the repair of minor paint defects	K10 how to prepare, test, use and adjust all the refinishing tools and equipment required for the identification and repair of paint defects and faults
	K11 spray gun faults, their cause and their rectification
	K12 the types of fault that can be caused by faulty and misused refinishing tools and equipment and how to rectify them

K10 how to use polishing machines, denibbing blocks and flatting equipment	**Materials**
K11 how to select, prepare and use compounds, flatting papers, polishes, pre-prepared paints and glazes	K13 how to select, prepare and use refinishing systems and materials
K12 the factors affecting the choice and use of materials	K14 the properties of refinishing systems and materials and the factors affecting their choice and use
Covered in IMIVPR04	**Foundation and top coat preparation**
	K15 how to recognise damage to substrates and ancillary fittings
	K16 how to recognise substrates
	K17 how the substrate affects the preparation process
	K18 how to interpret manufacturer's preparation schedules
	K19 how to prepare new and repaired panels using the appropriate methods and techniques
	K20 how to carry out masking procedures to avoid material wastage and vehicle contamination for each stage of the preparation process
	K21 how to prepare panels and parts adjacent to the area being painted
	K22 the factors governing the choice of panel preparation methods for appropriate substrate
	K23 the types and grades of available abrasives and the factors governing their use for different substrates
	K24 the implications of not following the correct abrasive process and its effect on the overall quality process
	K25 the implications of static when working with plastic components
	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
	K28 methods of protecting panels and parts adjacent to the areas being painted and the circumstances in which they should be used
	K29 methods and techniques of masking (including paper and sheet masking) and the circumstances in which they should be used
Coverd in IMIVPR05	**Preparation and application of foundation materials**
	K30 how to find, interpret and use sources of information relevant to the mixing and application of foundation coatings
	K31 how to condition and clean substrates prior to the application of foundation coats
	K32 how to rectify substrate defects
	K33 how to apply foundation coatings
	K34 how to avoid application defects

Covered in IMIVPR09	K35 how to dispose of waste foundation materials following environmental requirements
	K36 the importance of viscosity and its effect on the substrate finish
	K37 the importance of proper cleaning and using the correct foundation material to ensure adequate adhesion of the paint system
	K38 the importance of using and how to use extraction equipment
	K39 the manufacturer's approved instructions for working when applying foundation materials
Covered in IMIVPR10, 11 and 12	**Applying top coats**
	K40 how to find, interpret and use sources of information relevant to the refinishing of vehicles
	K41 how to apply top coat materials using edge to edge, fade out and blending techniques when undertaking a complete repaint and spot repairs, avoiding contamination and defects
	K42 how to dry top coats
	K43 how to assess and evaluate colour match, blending and the final finish
	K44 how to dispose of waste materials following environmental requirements
	K45 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues
	K46 how to minimise the spray area when carrying out spot repairs
	K47 the effect of the spray environment and natural environment on vehicle finishes
	K48 how application can affect colour variation and tone
	K49 the importance of using and how to use extraction equipment
	Rectification of paint faults
	K50 how to find, interpret and use sources of information relevant to the rectification of paint faults and defects
K13 how to identify the existing paint surface finish on which the defect has occurred	K51 how to identify the existing paint finish on which the defect has occurred
K14 how to identify minor paint defects, their cause and method(s) of rectification suitable for the paint surface finish	K52 how to identify the cause of, and rectify, paint defects and faults
K15 how to carry out flatting, burnishing, polishing and touch-in techniques to correct minor paint defects	K53 how to carry out methods and techniques to correct paint faults and defects
	K54 the importance of using and how to use extraction equipment
K16 how to prevent further paint damage during rectification	K55 how to prevent further paint damage during rectification
K17 how to dispose of waste materials in compliance with any environmental requirements/legislation and workplace procedures	K56 how to dispose of waste materials following environmental requirements

K18 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues	K57 how to work safely avoiding damage to vehicles, personal injury and injury to colleagues
K19 the importance of cleaning prior to and after paint rectification work	K58 the importance of proper cleaning prior to and after paint rectification work
K20 the importance of keeping equipment and materials clean and free from contamination during rectification work	K59 the importance of keeping tools, equipment and materials clean and free from contamination during rectification work
	K60 the importance of following manufacturer's instructions and using their approved methods of working (including use of materials and equipment)
	K61 the consequences of failing to follow manufacturer's instructions
	K62 the importance of working to agreed timescales and keeping others informed of progress and anticipated delays promptly
K21 the implications of not following an agreed quality control process	
	Scope/range
	1 **Paint defects and faults** are those arising from:
	1.1. poor application
	1.2. environmental conditions
	1.3. contamination
	1.4. corrosion
	1.5. wear and tear
	1.6. adverse chemical reactions
	1.7. panel deformations
	1.8. poor preparation
	2 **Methods and techniques** are for:
	2.1. de-greasing
	2.2. flatting
	2.3. burnishing
	2.4. removing materials to a sound substrate
	2.5. feathering out
	2.6. masking
	2.7. recoating
	2.8. polishing
	2.9. plastic preparation
	3 **Tools and equipment** are:
	3.1. polishing machines
	3.2. denibbing blocks
	3.3. flatting equipment
	3.4. masking material dispensers

	3.5. dust extraction
	3.6. paint mixing and application equipment
	3.7. viscosity measuring equipment
	3.8. air supply equipment
	3.9. spray booth
	3.10. drying equipment
	4 **Refinishing systems and materials** are:
	4.1. compounds
	4.2. flatting papers
	4.3. polishes
	4.4. etch primers
	4.5. fillers
	4.6. surfacers
	4.7. anti-stone chip treatment
	4.8. anti-corrosion treatments
	4.9. cleaning agents
	4.10. conditioning agents
	4.11. adhesion promoters
	4.12. metallic clear over base paints
	4.13. non-metallic clear over base paints
	4.14. mica clear over base paints
	4.15. dilutants
	4.16. tinters
	4.17. additives
	4.18. hardeners
	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