

Assessment Requirements

Unit PO06K – Knowledge of Repairing Minor Paint Defects

Content:

Minor surface defects to include:

- i. scratches
- ii. chips
- iii. dents
- iv. corrosion
- v. contamination
- vi. blisters (including micro-blisters)
- vii. fading
- viii. loss of gloss
- ix. chalking

Types of paint finishes likely to be found in modern vehicles

- a. Types of substrate to include:
 - i. steel
 - ii. aluminium
 - iii. all plastics
 - iv. coated steels
 - v. high bake enamels (o e finishes)
 - vi. 2 k paints
 - vii. 1k paints
 - viii. clear over bases
 - ix. polyester fillers
- b. Substrates to determine selection of undercoat with reference to:
 - i. condition of surface
 - ii. type of substrate
 - iii. process requirements
 - iv. material requirement
- c. The physical properties of a substrate to include:
 - i. surface condition
 - ii. adhesion
 - iii. flexibility
 - iv. porosity
 - v. texture

Methods used in determining types of vehicle paint finishes

- a. Workshop tests to determine paint substrates to include:
 - i. compound small area
 - ii. solvent wipe test (1k or 2k)
 - iii. colour of flattening sludge (straight colour or c o b)
 - iv. VIN plate

Vehicle cleaning and protection procedures during paint defect rectification processes

- a. Vehicle must be thoroughly washed and cleaned prior to refinishing to include:
 - i. outside body panels
 - ii. under arches
 - iii. under bonnet
 - iv. all apertures

- v. degreased
- b. The reasons for masking components adjacent to repair areas.
- c. The correct preparation of parts prior to painting to include products used for the removal of:
 - i. wax
 - ii. grease
 - iii. skin oils
 - iv. dust
 - v. water
 - vi. abrasive contaminates
 - vii. environmental pollution
- d. Materials used for conditioning processes such as:
 - i. wax and grease removers
 - ii. spirit wipes
 - iii. acid based
 - iv. water based
- e. The correct and safe use of the above materials.
- f. The properties of pre-preparation material to include:
 - i. neutralisation
 - ii. ability to alter the surface
 - iii. reaction with oxide

Identification of the common minor paint defects and list their causes

The reasons for the defects in vehicle finish such as:

- i. environmental pollution
- ii. ultra violet reaction
- iii. industrial pollution
- iv. accidental damage

Which rectification procedure to use for each of the minor paint defects

- a. The procedures for the rectification of minor defects to include:
 - i. compound/polish surface
 - ii. flat/polish surface
 - iii. local paint removal/repaint
 - iv. panel/edge-to-edge repaint

Tools and equipment used for the rectification of minor paint defects

- a. The hand tools and equipment used by a paint refinisher to include:
 - i. flatting block
 - ii. squeegee
 - iii. leather
 - iv. trimming knife
 - v. masking dispensers
 - vi. sander
 - vii. DA random orbital
 - viii. orbital flat bed
 - ix. belt sander
 - x. polishing equipment
 - xi. spray guns
 - xii. sealer guns
 - xiii. air dusters
 - xiv. vacuum extraction
 - xv. compressed air systems

The selection, operation and maintenance of listed tools and equipment for paint defect rectification

- a. The above tools and equipment with regard to their:
 - i. selection
 - ii. correct and safe use
 - iii. adjustment
 - iv. maintenance
 - v. accessories
- b. The function and correct use of each of the sanders listed:
 - i. rotary
 - ii. DA random orbital
 - iii. orbital flat bed
 - iv. belt
- c. Comparison of the above sanders in terms of:
 - i. selection
 - ii. abrasive pattern produced
 - iii. aggressiveness
 - iv. heat produced
 - v. adjustment
 - vi. abrasive change
- d. The equipment required for polishing to include:
 - i. air polisher
 - ii. electric polisher
 - iii. foam compound mop
 - iv. foam polishing mop
 - v. lambs-wool mop
 - vi. types of paste compound
 - vii. types of liquid compound
 - viii. types of polishing cloth
 - ix. lubricants
 - x. specialist de-nib equipment
- e. The maintenance requirement of these tools.

Adjust, set up and use listed tools and equipment for paint defect rectification

- a. The process of using a polishing machine to refurbish paint work to include:
 - i. speed of polishing machine
 - ii. application of the machine to the surface
 - iii. application of compound to the surface
 - iv. operation of polishing machine
 - v. awareness of polishing near to edges and swage lines
 - vi. avoiding burn marks
 - vii. removal of dried polish
- b. the process of using sanders to prepare surface defects to include:
 - i. choosing correct sander for job in hand
 - ii. selection of appropriate grade of abrasive
 - iii. correct technique with regard to pressure applied
 - iv. avoiding sanding to bare metal on edges
 - v. use of dust extraction
- c. The methods of paint application for defect repair to include:
 - i. touch-up brushes
 - ii. coloured film patches
 - iii. aerosols
 - iv. touch-up spray guns and air brushes
 - v. standard spray guns
 - vi. adjusting spray guns for optimum atomisation

Tools and equipment must be kept free from contamination to avoid further defects

- a. The methods of cleaning tools and equipment after use:
 - i. washing polishing/compound heads to remove residues
 - ii. cleaning spray guns and brushes with appropriate solvents
 - iii. explain that failure to carry out these procedures may lead to defects to include:
 - iv. surface scratches
 - v. surface contamination
 - vi. silicone cratering
 - vii. staining of painted surfaces
 - viii. equipment malfunction

Materials used for the rectification of minor paint defects

- a. Types and uses of abrasives to include:
 - i. aluminium oxide
 - ii. silicon carbide
 - iii. wet and dry types
 - iv. open coat
 - v. closed coat
 - vi. p grades
 - vii. papers, pastes and woven plastics
- b. The properties of compounds used to refurbish paintwork including:
 - i. cutting compounds
 - ii. cutting creams
 - iii. surface polishes
 - iv. protective waxes
 - v. sponge cutting heads
 - vi. polishing mops
 - vii. polishing cloths
- c. Types and uses of filler materials to include:
 - i. 2k polyester filler paste
 - ii. 2k and 1k stopper
- d. Types and uses of paints to include:
 - i. touch-up pots
 - ii. self-adhesive coloured paint film
 - iii. aerosols
 - iv. standard 2k and 1k paints

Select the correct materials for rectifying listed paint defects

- a. Selection of materials for rectification will depend on:
 - i. type of surface defect to be repaired
 - ii. severity of defect
 - iii. size of area to be repaired
 - iv. equipment available
 - v. expertise of operator
 - vi. customer preference

Correct preparation and use of materials for rectifying paint defects

- a. The preparation of listed materials for defect rectification to include:
 - i. replacing worn or used abrasive papers, pads and discs
 - ii. checking compound and polish pastes for contamination
 - iii. mixing of 2k fillers and stoppers to correct ratios
- b. The preparation required prior to paint application to include:
 - i. stirring/shaking paint containers
 - ii. mixing touch-up and standard paints to correct ratios

- iii. carrying out viscosity checks on mixed paint materials

Touch-in techniques as required for the rectification of some paint defects

- a. Touch-in techniques:
 - i. may not exactly match factory (OE) finish
 - ii. may be viewed as a temporary repair
 - iii. should be confined to small areas

Procedures for the safe disposal of waste material and the consequences of failing to follow disposal regulations

- a. How the disposal of products is influenced by the duty of care regulations.
- b. The disposal procedures for used products to include:
 - i. waste paper and card
 - ii. empty containers
 - iii. waste thinners
 - iv. body filler dust
 - v. spray booth filters
 - vi. soiled rags
 - vii. body panels
 - viii. damaged vehicle parts
- c. Documentation required for correct disposal of the above items.
- d. The penalties for non compliance.
- e. The effects on the environment of non compliance.