

<b>UNIT REF: PO01K</b>	<b>UNIT TITLE: KNOWLEDGE OF TOOLS AND EQUIPMENT USED IN VEHICLE REFINISHING</b>
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<b>Level: 2</b>	<b>Route: Knowledge</b>	<b>Credit Value: 5</b>	<b>GLH: 45</b>
<b>Mapping: This unit is mapped to the IMI NOS PO1</b>			
<b>Rationale:</b> This unit enables the learner to develop an understanding for the correct selection, maintenance and use of hand and power tools used in vehicle refinishing and the correct preparation, use and maintenance of vehicle refinishing equipment			

<b>LEARNING OUTCOMES</b>	<b>ASSESSMENT CRITERIA</b>
<b>The Learner will:</b>	<b>The Learner can:</b>
1. Understand how to select, use and care for hand and power tools used in vehicle refinishing	1.1. Describe the use of common types of hand and power tools used for vehicle refinishing 1.2. Identify the main components of a spray gun 1.3. Describe, within the scope of their responsibilities, how to select, prepare and maintain hand and power tools used in vehicle refinishing 1.4. State the limitations of hand and power tools used in vehicle refinishing 1.5. Explain how hand and power tools used in vehicle refinishing should be stored 1.6. Describe the methods of adjusting compressed air pressures by use of: a. transformer/regulator b. spray gun pressure gauge 1.7. Describe the operation of gun cleaning machines to include the use of solvent and water based gun cleaners 1.8. Describe the cleaning and maintenance of Suction/Gravity feed guns 1.9. Identify spray gun faults, their cause and how they should be rectified
2. Understand how to prepare, use and care for vehicle refinishing equipment.	2.1. Identify workshop equipment used in vehicle refinishing 2.2. Describe the preparation and safe use of workshop equipment 2.3. Describe the maintenance requirements of a compressed air system oil level

**Content:**
**Equipment used in Vehicle Refinishing**

- a Flatting block
- b Sponge
- c Squeegee
- d Chamois leather
- e Trimming knife
- f Polishing mop
- g Denibbing blocks
- h Sealer gun
- i Air duster
- j Rotary sander
- k DA random orbital sander
- l Orbital flat bed sander
- m Belt sander
- n Vacuum extraction sander
- o Specialist extraction for aluminium particles (explosive)
- p Suction feed spray gun
- q Gravity feed spray gun
- r Pressure feed spray gun
- s HVLP spray guns
- t Identify spray gun cleaning machines

**Workshop equipment**

- a. Combi-booth
- b. Separate oven
- c. Infra-red drying
- d. Compressor
- e. Main air line
- f. Transformer/regulator
- g. Water traps
- h. Flexible air and fluid hoses
- i. Pressure gauges
- j. Automatic paper/tape dispenser
- k. Plastic sheeting dispenser
- l. Complete car covers dispenser
- m. Wheel covers dispenser
- n. Viscosity measuring equipment
- o. Paint mixing schemes
- p. Air feed breathing equipment
- q. Smart scales

**Paint Gun Cleaning and Maintenance**

- a. Loading
- b. Cleaning cycle
- c. Coagulant (water-based paints only)
- d. Filtration of solids
  
- a. Partial strip of paint spaying gun
- b. Complete strip of paint spraying gun
- c. Washer cycle
- d. Blow through
- e. Re-assembly
- f. Lubrication

**Content: Contd****Main parts of a Spray gun:**

- a. Trigger
- b. Body
- c. Packing gland
- d. Air valve
- e. Fluid needle
- f. Fluid tip (nozzle)
- g. Air cap
- h. Paint volume control
- i. Fan width control
- j. Material cup
- k. Filters

**Compressed air systems:**

- a. Tank drainage
- b. Ring drainage
- c. Regular maintenance and service logs
- d. Air quality checks (breathable air)
- e. Air filter/cartridge changes (breathable air)