



Federal Democratic Republic of Ethiopia

OCCUPATIONAL STANDARD TRAIN PAINTING

NTQF Level I-III



*Ministry of Education
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Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopian Occupational Standard (EOS) is the core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopia Occupational Standard which comprised of Units of Competence.

A Unit of Competence describes a distinct work activity. It is documented in a standard format that comprises:

- Occupational title, NTQF level
- Unit title
- Unit code
- Unit descriptor
- Elements and Performance criteria
- Variables and Range statement
- Evidence guide

Together all the parts of a Unit of Competence guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the occupation with all the key components of a Unit of Competence:

- chart with an overview of all Units of Competence for the level including the Unit Codes and the Unit Titles
- contents of each Unit of Competence listed in the chart
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

UNIT OF COMPETENCE CHART

Occupational Standard: Train Painting

Occupational Code: [INDTRP1](#)

NTQF Level I

<p>IND TRP1 01 0117 Prepare Spray Painting Materials and Equipment</p>	<p>IND TRP1 02 0117 Prepare Train Components for Paint Repairs</p>	<p>IND TRP1 03 0117 Carry-out Brazing Procedures</p>
<p>IND TRP1 04 0117 Carry-out Masking Procedures</p>	<p>IND TRP1 05 0117 Operate a Personal Computer</p>	<p>IND TRP1 06 0117 Perform Die Coating</p>
<p>IND TRP1 07 0117 Finish and Paint Train Body and Parts Surface</p>	<p>IND TRP1 08 0117 Apply Rust Prevention and Sound Deadening</p>	<p>IND TRP1 09 0117 Paint Train Chassis and Panel</p>
<p>IND TRP1 10 0117 Rework Train Paint Faults</p>	<p>IND TRP1 11 0117 Carry-out Denibbing, Buffing and Polishing</p>	<p>IND TRP1 12 0117 Apply Quality Standards</p>
<p>IND TRP1 13 0117 Work with Others</p>	<p>IND TRP1 14 0117 Receive and Respond to Workplace Communication</p>	<p>IND TRP1 15 0117 Demonstrate Work Values</p>
<p>IND TRP1 16 0117 Develop Understanding of Entrepreneurship</p>	<p>IND TRP1 17 0117 Apply 3S</p>	

NTQF Level II

IND TRP2 01 0117

Clean and Polish Train Exterior Paint

IND TRP2 02 0117

Clean Vehicle Bode and Door Cavities

IND TRP2 03 0117

Prepare Surfaces for Coating

IND TRP2 04 0117

Carry-out Basic Air Brush Application Techniques

IND TRP2 05 0117

Prepare Vehicle Components for Pint Repairs

IND TRP2 06 0117

Apply Paint Touch up Techniques

IND TRP2 07 0117

Apply Train Body Film Warping

IND TRP2 08 0117

Apply Fundamental Colour Matching

IND TRP2 09 0117

Perform Basic Penetration Test

IND TRP2 10 0117

Apply Air Dry and Polyurethane Enamel Refinishing

IND TRP2 11 0117

Participate in Workplace Communication

IND TRP2 12 0117

Work in Team Environment

IND TRP2 13 0117

Develop Business Practice

IND TRP2 14 0117

Standardize and Sustain 3S

NTQF Level III

IND TRP3 01 0117

Control Train Paint Line Production

IND TRP3 02 0117

Apply Clear over Base Multi Layer/Pearl Refinishing

IND TRP3 03 0117

Change Extrusion Die and Set up

IND TRP3 04 0117

Carry out Custom Painting Technique

IND TRP3 05 0117

Prepare and Paint Plastic Components

IND TRP3 06 0117

Carry out Paint-Less Dent Repairs

IND TRP3 07 0117

Service Air Compressor and Air Line

IND TRP3 08 0117

Repair Corroded Panels and Component

IND TRP3 09 0117

Repairs Body Component Using Lead Wiping

IND TRP3 10 0117

Carry out Paint Rectification and Touch-up Work for Solids

IND TRP3 11 0117

Restore Vehicle Exterior Paint

IND TRP3 12 0117

Monitor Implementation of Work Plan/Activities

IND TRP3 13 0117

Apply Quality Control

IND TRP3 14 0117

Lead Workplace Communication

IND TRP3 15 0117

Lead Small Teams

IND TRP3 16 0117

Improve Business Practice

IND TRP3 17 0117

Prevent and Eliminate MUDA

Occupational Standard: Train Painting Level I	
Unit Title	Prepare Spray Painting Materials and Equipment
Unit Code	IND TRP1 01 0117
Unit Descriptor	This unit covers the competence required to prepare spray painting materials and equipment for use. The unit includes identification and confirmation of work requirement, preparation for work, preparation of paint for spray guns, preparation of guns and associated equipment and completion of work finalisation processes, including clean-up and documentation.

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including methods and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Prepare paint for spray gun(s)	<p>2.1. Information is accessed and interpreted from manufacturer/component supplier specifications.</p> <p>2.2. Paints are mixed to conform to specification for type and colour, viscosity and temperature.</p> <p>2.3. A test card is used for comparison of colour and texture.</p> <p>2.4. Preparation activities are carried out according to industry regulations/ guidelines, OHS requirements, legislation and enterprise procedures/policies.</p> <p>2.5. Paint is prepared without causing damage to component or system.</p> <p>2.6. Waste materials are stored and/or disposed of in accordance with statutory and enterprise requirements.</p>
3. Prepare spray gun(s) for spraying	<p>3.1. Information is accessed and interpreted from manufacturer/component supplier specifications.</p> <p>3.2. Preparation, maintenance and adjustment of spray</p>

	<p>painting equipment conforms to requirements of manufacturer/component supplier specifications.</p> <p>3.3. Preparation activities are carried out according to industry regulations/ guidelines, OHS requirements, legislation and enterprise procedures/policies.</p> <p>3.4. Spray guns are prepared without causing damage to component or system.</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste and scrap are removed following workplace procedures.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range
Methods	<p>Include:</p> <ul style="list-style-type: none"> • spray gun techniques • various spraying techniques • drying procedures • paint mixing methods • paint straining methods • paint thinning methods
Tools and equipment	<p>May include:</p> <ul style="list-style-type: none"> • tinting air-operated agitators • hand paddles • mixing banks • spray gun stem strainers • funnel strainers • mesh strainers • vacuum paint strainers • viscosity measuring equipment • high-volume low-pressure spray guns • gravity feed spray guns • suction feed spray guns • pressure regulators • air compressors • spray booths

	<ul style="list-style-type: none"> • baking ovens • and heating • lighting systems
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Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • Prepared for work • Prepare paint for spray gun(s) • Prepare spray gun(s) for spraying • Cleaned up work area and maintain equipment
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • OHS cleaning materials, equipment, material and personal safety requirements • Environmental protection requirements • Paint application methods • Equipment preparation procedures • Work organisation and planning processes • Environmental protection.
Underpinning Skill	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • Apply material storage, handling and disposal/material safety data sheets • Identify types of paints, including acrylic lacquers, solids, clear over base, air dry and polyurethane and 2 component systems • Use spray guns and their application • Use manufacturer/component supplier specifications for spray gun set-up and maintenance • Ensure enterprise quality processes • Apply paint mixing techniques • Apply paint drying methods
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level I	
Unit Title	Prepare Train Components for Paint Repairs
Unit Code	IND TRP1 02 0117
Unit Descriptor	This unit of competency covers the skills and knowledge required to prepare body surfaces and apply primers and primer surfaces prior to final paint coats. Users are advised to check with the relevant regulatory authority. The unit includes identification and confirmation of work requirements, preparation for work, preparation of body surfaces for final paint by application of primers and primer surfaces, and completion of work finalisation processes, including clean-up and documentation. Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including method and materials type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. Workplace Health and Safety (WHS) requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Prepare train surfaces for painting	<p>2.1. Information is accessed and interpreted from manufacturer/components supplier specifications.</p> <p>2.2. Surfaces adjacent to the surfaces to be painted are protected using approved methods and material.</p> <p>2.3. Surfaces to be painted are cleaned of contaminants.</p> <p>2.4. Components and auxiliary fittings that can be affected by the painting process are protected and/or removed and stored securely.</p> <p>2.5. Surfaces to be painted are prepared using approved methods, material and equipment.</p> <p>2.6. Unrecorded damage to surfaces and ancillary equipment is noted and reported to persons.</p>

	<p>2.7. Surface preparation activities are carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.</p> <p>2.8. Waste material is disposed of in accordance with statutory and enterprise requirements.</p>
3. Apply primers	<p>3.1. Components and ancillary fittings that can be affected by application processes are protected and/or removed and stored safely.</p> <p>3.2. Primers/primer surfaces are applied using approved methods, materials and equipment.</p> <p>3.3. Application activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>3.4. Work is completed without causing damage to any component or system.</p>
4. Prepare primed surface for refinishing	<p>4.1. Surfaces to be refinished are prepared using approved methods, materials and equipment.</p> <p>4.2. Preparation activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>4.3. Work is completed without causing damage to any component or system.</p> <p>4.4. Waste materials are disposed of in accordance with statutory and enterprise requirements.</p>
5. Clean up work area and maintain equipment	<p>5.1. Material that can be reused is collected and stored.</p> <p>5.2. Waste and scrap is removed following workplace procedure.</p> <p>5.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>5.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>5.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>5.6. Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
Materials	Materials may include: <ul style="list-style-type: none"> • paint primers

	<ul style="list-style-type: none"> • cleaning materials 		
WHS	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of fire fighting equipment • enterprise first aid • hazard control • hazardous material • substances 		
Information	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions • signage • work schedules/plans/specifications • work bulletins • Memos • Material Safety Data Sheets (MSDS) • diagrams or sketches • safe work procedures related to the preparation of vehicle components for paint repair • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements 		
Components	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • in-situ panels • doors • plastic components • glasswork • bonnets 		
Preparation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • internal and external trim • accessories • lights • rubber seals • protective strips • decals • striping 		
Preparation methods	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • adhesive bonding • sanding (wet and dry) • masking • surface preparation • chemical cleaning • priming • paint touch-up 		
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Personal protective equipment	May include but not limited: <ul style="list-style-type: none"> • that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Safe operating procedures	May include , but are not limited to: <ul style="list-style-type: none"> • vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	May include but are not limited to: <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	May include, but are not limited to: <ul style="list-style-type: none"> • waste management • noise • dust • clean-up management
Quality requirements	May include, but are not limited to: <ul style="list-style-type: none"> • regulations, including Ethiopian standards • internal company quality policies and standards • enterprise operations and procedures
Statutory/regulatory authorities	may include: <ul style="list-style-type: none"> • federal • local authorities administering Acts • regulations • codes of practice
Tooling and equipment	may include but are not limited to: <ul style="list-style-type: none"> • hand tooling • power tooling • cleaning equipment • adhesive equipment • spray painting equipment • rubbing down equipment • paint rollers • hand touch-up equipment
Communications	May include, but are not limited to: <ul style="list-style-type: none"> • verbal and visual instructions and fault reporting • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers

Evidence Guide			
Critical Aspects of Competence	Demonstrate knowledge and skills to: <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • cleaning and masking the areas/equipment for paint repairs • removing components and ancillary fittings for protection • Applying primers to manufacturer/component supplier specifications. 		
Underpinning Knowledge and Attitudes	Required knowledge includes: <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements/material disposal and storage requirements • material safety data sheets • cleaning materials • preparation methods • industry codes of practice • primer/paint application methods, including rolling • rubbing down procedures • enterprise quality procedures • work organisation and planning processes 		
Underpinning Skills	Demonstrate skills to: <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backpedalling, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to calculate time, apply accurate measurements, calculate material requirements and establish quality checks • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise 		
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	<p>reworking and wastage</p> <ul style="list-style-type: none"> • use workplace technology, including the use of specialist tooling and equipment, measuring equipment, computerised technology and communication devices and the reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Carry-out Brazing Procedures
Unit Code	IND TRP1 03 0117
Unit Descriptor	This unit covers the competence required to carry out brazing procedures. The unit preparation for work and the completion of brazing procedures and work finalisation processes, including clean-up and documentation.

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including job sheets, quality and quantity of materials.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials for repairs and replacements are selected and inspected for quality.</p> <p>1.5. Hand, power tools and safety equipment are identified and checked for safe use.</p> <p>1.6. Products are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency.</p>
2. Complete brazing procedures	<p>2.1. Information is accessed from sources to enable brazing to be performed in accordance with vehicle and equipment manufacturer procedures.</p> <p>2.2. Brazing procedures are completed without causing damage to component or system.</p> <p>2.3. Brazing is carried out according to a standard that meets industry regulations/guidelines, OHS requirements, legislation and enterprise policy/procedures.</p>
3. Clean up work area and maintain equipment	<p>3.1. Material that can be reused is collected and stored.</p> <p>3.2. Waste and scrap is removed following workplace procedures.</p> <p>3.3. Equipment and work area are cleaned and inspected for serviceable conditions in accordance with workplace procedures.</p> <p>3.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>3.5. Operator maintenance is completed in accordance with manufacturer specifications and worksite procedures.</p>
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	3.6. Tool is maintained in accordance with workplace procedures.
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Variables	Range
OHS requirements	Include: <ul style="list-style-type: none"> • protective clothing and equipment • use of Tools and equipment • workplace environment and safety • handling of material • use of fire fighting equipment • enterprise first aid • hazard control • hazardous material • Substances
Brazing methods	Are to include equipment election and preparation, material selection/confirmation and preparation, the application of brazing techniques and the operator maintenance of equipment.
Tools and equipment	may include: <ul style="list-style-type: none"> • hand Tools • oxy acetylene/propane torch • brazing equipment • measuring and marking out equipment

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> • Prepared for work • Performed brazing procedures • Cleaned up work area and maintain equipment
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • Workplace guidelines regarding acceptable tolerance levels to be considered as per job sheet and manufacturer specification. • Work organisation and planning processes • Enterprise quality processes.
Underpinning Skills	Demonstrate skills to: <ul style="list-style-type: none"> • Use brazing materials, processes and techniques • Identify types of flux, rods and their application • Do equipment maintenance procedures • Follow procedures for reporting faults and material defects.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.

Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Carry-out Masking Procedures
Unit Code	IND TRP1 04 0117
Unit Descriptor	This unit covers the competence required to apply masking medium in preparation for vehicle/component painting. The unit includes preparation for work, application of masking medium in preparation for vehicle/component painting and completion of work finalisation processes, including clean-up and documentation.

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including job sheets, material types, dimensions and quantity.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Masking tooling and equipment are identified and checked for safe use.</p> <p>1.6. Procedures are determined to minimise waste materials.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Prepare vehicle body surfaces by masking	<p>2.1. Surfaces to be refinished are cleaned of contaminants.</p> <p>2.2. Components and ancillary fittings that can be affected by the refinishing process are protected and/or removed, tagged and stored securely.</p> <p>2.3. Surfaces adjacent to the surfaces to be refinished are protected using approved masking methods and materials.</p> <p>2.4. Preparation is completed without causing damage to component or system.</p> <p>2.5. Masking procedures are carried out according to industry regulations/guidelines, OHS requirements, legislation and enterprise procedures/policies.</p> <p>2.6. Waste materials are disposed of in accordance with statutory and enterprise requirements.</p>
3. Clean up work area and maintain equipment	<p>3.1. Materials that can be reused are collected and stored.</p> <p>3.2. Waste and scrap is removed following workplace procedures.</p>

	<p>3.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>3.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>3.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>3.6. Tooling is maintained in accordance with workplace procedures.</p>
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Variables	Range
Masking procedures and methods	<p>May Include:</p> <ul style="list-style-type: none"> • applied to panels • doors • plastic components • glass work • fenders • boots • bonnets • other relevant components • methods • masking • dispensing • spraying
Tools and equipments	<p>may include:</p> <ul style="list-style-type: none"> • cutting blades/scalpels • masking tape • dispensers • papers • spray gun equipments

Evidence Guide			
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • Prepared for work • Prepare vehicle body surfaces by masking • Cleaned up work area and maintain equipment 		
Underpinning Knowledge and Attitudes	<p>Demonstrate Knowledge of:</p> <ul style="list-style-type: none"> • OHS cleaning materials, equipment, material and personal safety requirements • Cleaning agents • Technical information • Operating procedure of equipment • Environmental protection. • Work organisation and planning processes 		
Underpinning Skill	<p>Demonstrate Skills to:</p>		
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	<ul style="list-style-type: none"> • Apply vehicle safety requirements • Use masking materials and procedures • Follow enterprise quality procedures • Use application methods
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Operate a Personal Computer
Unit Code	IND TRP1 05 0117
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to start up a personal computer or business computer terminal; to correctly navigate the desktop environment; and to use a range of basic functions.

Element	Performance Criteria
1. Start computer, system information and features	<p>1.1Workspace, furniture and equipment are adjusted to suit user ergonomic requirements.</p> <p>1.2Work organizations that meet organizational and Occupational Health and Safety (OHS) requirements for computer operation are ensured.</p> <p>1.3Computer is started or logged on according to user procedures.</p> <p>1.4Basic functions and features are identified using system information.</p> <p>1.5Desktop configurations are customized, if necessary, with assistance from appropriate persons.</p> <p>1.6Help functions are used as required.</p>
2. Navigate and manipulate desktop environment	<p>2.1Features are opened, closed and accessed by selecting correct desktop icons.</p> <p>2.2Desktop windows are opened, resized and closed by using correct window functions and roles.</p> <p>2.3Shortcuts are created from the desktop, if necessary, with assistance from appropriate persons.</p>
3. Organize files using basic directory and folder structures	<p>3.1Folders/subfolders are created with suitable names.</p> <p>3.2Files are saved with suitable names in appropriate folders.</p> <p>3.3Folders/subfolders and files are renamed and moved as required.</p> <p>3.4Folder/subfolder and file attributes are identified.</p> <p>3.5Folders/subfolders and files are moved using cut and paste, and drag and drop techniques.</p> <p>3.6Folders/subfolders and files are saved to appropriate media where necessary.</p> <p>3.7Folders/subfolders and files are searched using appropriate software tools.</p>

	3.8 Deleted folder/subfolders and files are restored as necessary
4. Print information	4.1 Information is printed from installed printer. 4.2 Progress of print jobs are viewed and deleted as required. 4.3 Default printer if installed and required is changed.
5. Shut down computer	5.1 All open applications are closed. 5.2 Computer is shut-down according to user procedures.

Variable	Range
<i>Ergonomic requirements</i>	May include: <ul style="list-style-type: none"> • avoiding radiation from computer screens • chair height, seat and back adjustment • document holder • footrest • keyboard and mouse position • lighting • noise minimization • posture • screen position • workstation height and layout
<i>Work organization</i>	May include: <ul style="list-style-type: none"> • exercise breaks • mix of repetitive and other activities • rest periods • Visual Display Unit (VDU) eye testing
<i>OHS requirements</i>	May include: <ul style="list-style-type: none"> • OHS guidelines related to the use of the screen equipment, computing equipment and peripherals, ergonomic work stations, security procedures, customization requirements • statutory requirements
<i>Desktop icons</i>	May include: <ul style="list-style-type: none"> • directories/folders • files • network devices • recycle bin and waste basket
<i>File attributes</i>	May include: <ul style="list-style-type: none"> • dates • size
<i>Appropriate media</i>	May include: <ul style="list-style-type: none"> • CDs • diskettes • local hard drive

	<ul style="list-style-type: none"> • other locations on a network • USB/ Flash/Thumb drives • zip disks
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Evidence Guide	
Critical Aspects of Competence	Demonstrate skills and knowledge in: <ul style="list-style-type: none"> • navigation and manipulation of the desktop environment within the range of assigned workplace tasks • knowledge of organizational requirements for simple documents and filing conventions • application of simple keyboard functions to produce documents with a degree of speed and accuracy relevant to the level of responsibility required
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as: OHS • basic ergonomics of computer use • main types and parts of computers, and basic features of different operating systems • suitable file naming conventions
Underpinning Skills	Demonstrate skills in: <ul style="list-style-type: none"> • literacy skills to identify work requirements, to comprehend basic workplace documents, to interpret basic user manuals and to proofread simple documents • communication skills to identify lines of communication, to request advice, to effectively question, to follow instructions and to receive feedback • problem-solving skills to solve routine problems in the workplace, while under direct supervision • technology skills to use equipment safely while under direction, basic keyboard and mouse skills and procedures relating to logging on and accessing a computer • basic typing techniques and strategies
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Perform Die Coating
Unit Code	IND TRP1 06 0117
Unit Descriptor	<p>This unit describes the performance outcomes required to coat dies for their later use in casting processes.</p> <p>It applies to those in locomotive and related component manufacturing environment and involves the application of skills and knowledge at a specialist level.</p>

Elements	Performance Criteria
1. Plan and prepare	<p>1.1. Job instructions and quality requirements are identified and confirmed with appropriate personnel</p> <p>1.2. Tools and equipment required for the job are selected and checked for faults and correct operation</p> <p>1.3. Materials required to complete the job are identified and prepared</p>
2. Disassemble and inspect dies	<p>2.1. Die is safely located in the coating area</p> <p>2.2. Die coating insulation materials are inspected for wear, and removed if required</p> <p>2.3. Dies are inspected and analysed for defects, and identified defects are rectified according to workplace procedures</p> <p>2.4. Dies are tested to ensure rectification has eliminated the fault, and adjustments are made if required</p>
3. Coat and assemble dies	<p>3.1. Die coating insulation material is selected and prepared according to workplace procedures</p> <p>3.2. Die is cleaned in preparation for coating and heated according to workplace and equipment manufacturer recommendations and Work Health and Safety (WHS) requirements</p> <p>3.3. Die coating insulation material is applied to the die, and die is assembled and checked in preparation for pressing according to workplace and equipment manufacturer recommendations</p> <p>3.4. Die is returned to production sequence</p>
4. Complete work processes	<p>4.1. Work area is cleaned, and materials disposed of or recycled according to workplace procedures</p> <p>4.2. Tools and equipment are cleaned, checked, maintained and stored according to workplace procedures</p> <p>4.3. Documentation is completed according to workplace procedures</p>

Variable	Range
Workplace procedures	May include but not limited to: <ul style="list-style-type: none"> • equipment use, maintenance and storage • recording and reporting • WHS requirements relating to die coating • Workplace quality and continuous improvement programs.

Evidence Guide	
Critical Aspects of Competence	Demonstrate knowledge and skills to: <ul style="list-style-type: none"> • workplace procedures to apply coating to production dies • methods of producing die castings • defects in production dies and their causes • Apply die coating according to Work Health and Safety (WHS) requirements and workplace procedures.
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • WHS requirements when applying die coating • die coating application methods and processes • principles of die casting • purpose of dies • die coat functions • procedures to inspect die castings • methods of die disassembling and re-assembling • damage that can be caused to castings through inappropriate handling and storage • minor rectification methods of die faults • methods of testing die re-work • die coat selection, cleaning and heating methods • Equipment used in die coating.
Underpinning Skills	Demonstrate skills to: <ul style="list-style-type: none"> • interpret workplace quality requirements • clean, inspect, assemble and disassemble dies • select and perform minor rectification to dies • manually handle dies
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Finish and Paint Train Body and Parts Surface
Unit Code	IND TRP1 07 0117
Unit Descriptor	This unit describes the performance outcomes required to finish and paint train body and part surfaces. It applies to those in an train manufacturing environment and involves the application of skills and knowledge at a production worker level.

Elements	Performance Criteria
1. Plan and prepare for work processes	<p>1.1. Work orders, instructions, reports and quality requirements are obtained and confirmed</p> <p>1.2. Spray booths, and hand and air tools are selected and checked for correct operation and faults are rectified or reported</p> <p>1.3. Paint materials are identified and selected from job specifications</p>
2. Prepare surface for painting	<p>2.1. Workplace procedures are identified and followed</p> <p>2.2. Surfaces are cleaned, degreased and prepared according to workplace procedures</p> <p>2.3. Final finishing is performed on components and panel surfaces to workplace standards</p> <p>2.4. Reject components and surfaces are identified, recorded and reported for rework or scrap according to workplace procedures</p>
3. Prime painted surfaces	<p>3.1. Paint materials are mixed and applied according to workplace procedures</p> <p>3.2. Painted surfaces are finished to workplace quality standard</p> <p>3.3. Reject paintwork is identified, recorded and reworked according to workplace procedures</p>
4. Complete work processes	<p>4.1. Work area is cleaned, and materials disposed of or recycled according to workplace procedures</p> <p>4.2. Tools and equipment are cleaned, checked and stored according to workplace procedures</p> <p>4.3. Faulty equipment is tagged and reported to supervisor</p> <p>4.4. Workplace documentation is completed according to workplace procedures</p>

Variable	Range
Workplace procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Original Equipment Manufacturer (OEM) vehicle

	<p>specifications</p> <ul style="list-style-type: none"> • workplace quality guidelines for finishing vehicle body and part surfaces • procedures for recording and reporting finishing processes of vehicle body and part surfaces • workplace waste disposal, recycling and re-use guidelines • WHS requirements for finishing vehicle body and part surfaces.
Final finishing	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • hand and mechanical sanding • Paint edge feathering.

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • methods of finishing painted body and part surfaces • procedures for finishing vehicle body and part surfaces for painting • mix and apply paint according to job specifications • identify and rectify paint defects according to workplace quality standards or specifications
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS and environmental procedures relating to finishing and painting vehicle and body part surfaces • procedures for painting vehicle body and part surfaces, including: <ul style="list-style-type: none"> • types, application and operation of vehicle body painting equipment • processes for calculating and mixing paint materials • techniques for applying paint material • paint viscosity • paint defects and paint defect rectification techniques • methods of sourcing and interpreting components of SDS relating to finishing and painting vehicle body and part surfaces.
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • perform work according to WHS and environmental procedures • clean, degrease and prepare vehicle body and part surfaces for painting • identify paint specifications and application methods • use spray painting tools and equipment safely and effectively • complete vehicle body and part surface finishing and painting work sheets.
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS</p>

	practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Apply Rust Prevention and Sound Deadening
Unit Code	IND TRP1 08 0117
Unit Descriptor	This unit covers the competence required to apply special treatment material such as rust prevention and sound deadening substances to vehicle body component parts. The unit includes preparation for work, preparation of surfaces for rust prevention and sound deadening treatment, application of special treatment materials and completion of work finalisation processes, including clean-up and documentation.

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including methods and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Prepare surfaces for rust prevention and sound deadening materials	<p>2.1. Surfaces are cleaned and dried to enable the rust prevention and sound deadening materials to adhere.</p> <p>2.2. Surfaces are prepared without causing damage to component or system.</p> <p>2.3. Preparation activities are carried out according to industry regulations/ guidelines, OHS requirements, legislation and enterprise procedures/policies.</p>
3. Apply special treatments and/or materials	<p>3.1. The environment is made ready for the application of special treatments or material conforms to requirements for temperature, extraction of fumes and cleanliness.</p> <p>3.2. Special treatments and/or materials are applied as per manufacturer/ component supplier recommendations.</p> <p>3.3. Special treatments or materials are dried using approved methods and equipment, as necessary.</p> <p>3.4. Application is completed without causing damage to component or system.</p>

	<p>3.5. Application of special treatments or materials is completed within established industry guidelines.</p> <p>3.6. The finished product is made to meet specifications for mechanical fastening and/or application for coverage depth, and texture, and is contaminant-free.</p> <p>3.7. Application activities are carried out according to industry regulations/ guidelines, OHS requirements, legislation and enterprise procedures/policies.</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste material is disposed of and/or stored in accordance with statutory and enterprise requirements.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults are identified in accordance with workplace procedures.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range
Methods	<p>Include:</p> <ul style="list-style-type: none"> • spray gun/heat gun techniques • drying techniques • hand brushing techniques • Mixing • Thinning • matching • spraying techniques • mechanical fastening techniques
Rust prevention and sound deadening materials	<p>may include:</p> <ul style="list-style-type: none"> • spray-on sound deadening materials • mechanically fastened sound deadening materials • under-body sealers • joint and seam sealants • paint protection • rust protection • upholstery protection
Tools and equipments	<p>May include :</p> <ul style="list-style-type: none"> • hand tooling • power tooling

	<ul style="list-style-type: none"> • spray guns • heat guns • air pressure regulators • heating and lighting systems • safety equipment • mixing equipment • stirring equipment • straining/thinning equipment • hand brushing equipment • paint pots • mechanical fastening equipment
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Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • Prepared for work • preparation for work, preparation of surfaces for rust • prevention and sound deadening treatment, • application of special treatment materials and • completion of work finalisation processes • Cleaned up work area and maintain equipment
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • Environmental procedures/material storage and disposal requirements • Material safety data sheets • Protective coatings and their use • Work organisation and planning processes • Environmental protection. • Application methods • Brushes and spray guns • Spray gun/heat gun and brush techniques • Paint drying methods • Enterprise quality procedures.
Underpinning Skill	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • Prepare for work • prepare for work, preparation of surfaces for rust • prevent and sound deadening treatment, • apply of special treatment materials and • complete of work finalisation processes • Clean up work area and maintain equipment
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test

	<ul style="list-style-type: none">• Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Paint Train Chassis and Panel
Unit Code	IND TRP1 09 0117
Unit Descriptor	<p>This unit describes the performance outcomes required to prepare and apply paint to produce a quality finish on vehicle chassis and panels.</p> <p>It applies to those in an automotive manufacturing environment and involves the application of skills and knowledge at a production worker level.</p>

Elements	Performance Criteria
1. Prepare for painting	<p>1.1. Paints and materials are identified and prepared according to workplace procedures</p> <p>1.2. Panels are masked off to ensure surrounding areas are protected from overspray</p> <p>1.3. Spraying equipment is selected and inspected, and faulty equipment identified, tagged and reported to appropriate personnel</p> <p>1.4. Paint colors are matched according to job specifications and vehicle paint code</p>
2. Operate spraying equipment	<p>2.1. Spray painting guns are checked and adjusted for spray pattern, fan width and paint flow</p> <p>2.2. Spray painting booths are inspected for correct operation and adjusted if required</p>
3. Apply paint	<p>3.1. Primers and paint are applied to ensure interior and exterior surfaces are coated</p> <p>3.2. Paint is applied according to manufacturer's recommended thickness, luster and surface finish</p> <p>3.3. Paint coatings are monitored for surface blemishes</p> <p>3.4. Paint viscosity is monitored and adjusted to ensure compliance with paint manufacturer specifications</p>
4. Inspect painted surfaces	<p>4.1. Painted surfaces are visually inspected and faults identified</p> <p>4.2. Painted surfaces with paint faults are redirected for rework and appropriate personnel are notified</p>
5. Complete work processes	<p>5.1. Spraying equipment are cleaned and inspected according to workplace procedures</p> <p>5.2. Work areas are cleaned, and unused materials stored</p> <p>5.3. Waste materials are removed and disposed of according to workplace environmental procedures</p> <p>5.4. Workplace job sheets or production schedules are completed</p>

Variable	Range
Paints and materials	<p>must include:</p> <ul style="list-style-type: none"> • abrasive papers • clear coats: 2k and 1k • etch primers • hi-fillers • masking tapes and materials • paint: 2k and 1k • paint reducers • polishing products • solvents and surface primers.
Workplace procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • procedures for recording and reporting the painting of the vehicle chassis and panels • WHS requirements for painting vehicle chassis and panels.
Equipment	<p>must include:</p> <ul style="list-style-type: none"> • air and hand sanding equipment • high pressure spray guns • high volume low pressure spray guns • paint and air recirculating systems • Safety equipment and PPE relevant to painting vehicle chassis and panels.

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • techniques for train painting • paint repair techniques and equipment • mask panels, prepare spraying equipment, and match paint colours • Complete painting work sheets.
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS requirements relating to painting vehicle chassis and panels • types of tools and equipment used when painting vehicle chassis and panels • techniques for identifying paint defects • processes for calculating, mixing and applying paint material • methods of sourcing and interpreting components of SDS relating to painting train chassis and panels • Procedures for paint material handling, storage and workplace waste management.
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • identify painting requirements from work sheets and work instructions

	<ul style="list-style-type: none"> • mix paint and apply to panels according to workplace procedures, job requirements and WHS requirements • check paint work is to job requirements and identify and rectify faults • clean work area, and maintain and store painting equipment according to workplace procedures and WHS requirements
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Rework Train Paint Faults
Unit Code	<u>IND TRP1 10 0117</u>
Unit Descriptor	<p>This unit describes the performance outcomes required to identify and rework train paint surface defects and faults.</p> <p>It applies to those in locomotive manufacturing environment and involves the application of skills and knowledge at a specialist level.</p>

Elements	Performance Criteria
1. Prepare for paint rework process	1.1 Paint faults are identified and repair methods planned 1.2 Causes of faults are identified to ensure faults are rectified during rework 1.3 Tools, equipment and materials are selected and inspected for quality
2. Prepare surfaces for rework	2.1 Masking is applied to surrounding panels to protect painted surfaces from overspray 2.2 Faulty paint surfaces are scuffed back and cleaned to required pre-paint standard 2.3 Prepared area is inspected to ensure paint fault has been removed
3. Apply primer, hi-fill and colour	3.1 Primer and hi-fill are applied and prepared according to manufacturer specifications 3.2 Paint color is matched according to vehicle paint code 3.3 Paint color is mixed to manufacturer-recommended viscosity 3.4 Paint color is applied and blended into the existing paint work using tools, equipment and materials according to workplace procedures and Work Health and Safety (WHS) requirements
4. Finish paint surfaces	4.1 Painted surfaces are dried according to paint manufacturer specifications 4.2 Repainted surfaces are polished to job specification 4.3 Surrounding areas are cleaned and any overspray removed according to workplace procedures
5. Complete work processes	5.1 Tools and equipment are cleaned and inspected 5.2 Faulty tools and equipment are identified, tagged, reported and sent for repair 5.3 Work area is cleaned, and materials disposed of or recycled according to workplace procedures

	5.4 Work job sheets are completed and supervisor is notified
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Variable	Range
Materials	<p>May include but not limited:</p> <ul style="list-style-type: none"> • abrasive papers • clear coat • colour paint • etch and surface primer • hi-fill • masking tapes and papers • paint reducer • plastic sheets • polishing agents • solvents and TAC rags.
Workplace procedures	<p>must include:</p> <ul style="list-style-type: none"> • workplace quality guidelines for reworking train paint faults • procedures for recording and reporting rework of train paint faults • workplace waste disposal, recycling and re-use guidelines • WHS and environmental requirements for reworking train paint faults relating to the disposal of unused paint products, contaminated rags and masking materials.

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • procedures for reworking train paint faults, including: • processes for calculating, mixing and applying paint materials • methods of finishing painted body and part surfaces • identify and apply paint rework practices • use mechanical and manual sanding techniques
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • workplace procedures and WHS requirements relating to identifying paint surface defects and techniques to repair them • WHS requirements relating to spray painting equipment • types, application and operation of train body painting equipment • techniques for applying paint material, including spray painting • paint viscosity • paint defects and paint defect rectification techniques • methods of sourcing and interpreting components of SDS relating to reworking vehicle paint faults

Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • use spray painting tools and equipment • prepare, mix and apply primers, fillers and paint according to workplace procedures, WHS requirements and job specifications • identify paint surface defects and techniques to repair them • use solvents to remove rust, grease and protective waxes • select and use appropriate sealants, adhesives, paints, tools and equipment • Complete work sheets detailing vehicle paint fault rework.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Carry-out Denibbing, Buffing and Polishing
Unit Code	IND TRP1 11 0117
Unit Descriptor	This unit covers the competence required to carry out denibbing, buffing and polishing procedures on a range of vehicle body refinishing materials. The unit includes identification and confirmation of work requirement, preparation for work, denibbing, buffing, polishing and completion of work finalisation processes, including clean-up and documentation

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including <i>methods</i> and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Denib work	<p>2.1. Surface materials and finish requirements are identified.</p> <p>2.2. Hazards are identified.</p> <p>2.3. Denibbing heads are installed and set-up according to enterprise procedures.</p> <p>2.4. Job surface is finished to enterprise requirements.</p> <p>2.5. All denibbing procedures are completed within recognised enterprise guidelines.</p> <p>2.6. Work is denibbed without causing damage to any component or system.</p> <p>2.7. All activities are carried out according to industry regulations/guidelines, OHS legislation, and enterprise procedures/ policies.</p>
3. Buff work	<p>3.1. Surface materials and finish requirements are identified.</p> <p>3.2. Hazards are identified.</p>

	<p>3.3. Buffing heads are installed and set-up according to enterprise procedures.</p> <p>3.4. Job surface is finished to enterprise requirements.</p> <p>3.5. All finishing procedures are completed within recognised enterprise guidelines.</p> <p>3.6. Work is buffed without causing damage to any component or system.</p> <p>3.7. All activities are carried out according to industry regulations/guidelines, OHS legislation, and enterprise procedures/policies.</p>
4. Polish work	<p>4.1. Surface materials and finish requirements are identified.</p> <p>4.2. Hazards are identified.</p> <p>4.3. Polishing heads are installed and set-up according to enterprise procedures.</p> <p>4.4. Job surface is finished to enterprise requirements.</p> <p>4.5. All finishing procedures are completed within recognised enterprise guidelines.</p> <p>4.6. Work is polished without causing damage to any component or system.</p> <p>4.7. All activities are carried out according to industry regulations/guidelines, OHS legislation, and enterprise procedures/policies.</p>
5. Clean up work area and maintain equipment	<p>5.1. Material that can be reused is collected and stored.</p> <p>5.2. Waste and scrap is removed following workplace procedure.</p> <p>5.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>5.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>5.5. Operator maintenance is completed in accordance with manufacturer specifications and worksite procedures.</p> <p>5.6. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range
Methods	<p>include:</p> <ul style="list-style-type: none"> • underhand and overhand techniques hand • machine grinding

	<ul style="list-style-type: none"> • denibbing • buffing • polishing.
Tools and equipment	<p>May include:</p> <ul style="list-style-type: none"> • power tooling, • flexible drive appliances

Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • Prepared for work • Buff • Denib • Polish • Cleaned up work area and maintain equipment
Underpinning Knowledge and Attitudes	<p>Demonstrates Knowledge of:</p> <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • Environmental protection.
Underpinning Skill	<p>Demonstrate Skills to:</p> <ul style="list-style-type: none"> • Apply processes to treat work • Identify surface materials and finish requirements • Apply denibbing buffing and polishing equipment • Operate procedures for denibbing, buffing and polishing equipment • Use denibbing, buffing and polishing procedures and techniques
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level I	
Unit Title	Apply Quality Standards
Unit Code	IND TRP1 12 0117
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in applying quality standards in the operational activities.

Elements	Performance Criteria
1. Assess own work	<p>1.1 Completed work is checked against organization standards relevant to the activity being undertaken.</p> <p>1.2 An understanding is demonstrated on how the work activities and completed work relate to the next process and to the final appearance of the service / product.</p> <p>1.3 Faulty service is identified and isolated in accordance with policies and procedures.</p> <p>1.4 Faults and any identified causes are recorded and reported in accordance with standard procedures.</p>
2. Assess quality of service rendered	<p>2.1 Services rendered are quality checked against standards and specifications.</p> <p>2.2 Service rendered are evaluated using the appropriate evaluation parameters and in accordance with standards.</p> <p>2.3 Causes of any identified faults are identified and corrective actions are taken in accordance with policies and procedures.</p>
3. Record information	<p>3.1 Basic information on the quality performance is recorded in accordance with organization procedures.</p> <p>3.2 Records of work quality are maintained according to the requirements of the organization / enterprise.</p>
4. Study causes of quality deviations	<p>4.1 Causes of deviations from final outputs or services are investigated and reported in accordance with standard procedures.</p> <p>4.2 Suitable preventive action is recommended based on organization quality standards and identified causes of deviation from specified quality standards of final service or output.</p>
5. Complete documentation	<p>5.1 Information on quality parameters and other indicators of service performance is recorded.</p> <p>5.2 All service processes and outcomes are recorded.</p>

Variable	Range
Quality check	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Visual inspection • Physical measurements • Check against specifications/preferences

Quality standards	May include but not limited to: <ul style="list-style-type: none"> • materials • service • output and processes/procedures
Quality parameters	May include but not limited to: <ul style="list-style-type: none"> • style/design/specifications • durability • service variations • materials • damage and imperfections

Evidence Guide

Critical Aspects of Competency	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> • Check completed work continuously against standard • Identify and isolate faulty service / workmanship • Check service rendered against organization standards • Identify and apply corrective actions on the causes of identified faults • Record basic information regarding quality performance • Investigate causes of deviations of services against standard • Recommend suitable preventive actions
Underpinning Knowledge	Demonstrates knowledge of: <ul style="list-style-type: none"> • Relevant quality standards, policies and procedures • Characteristics of services • Safety environment aspects of service processes • Relevant evaluation techniques and quality checking procedures • Workplace procedures • Reporting procedures
Underpinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> • Interpret work instructions, specifications and standards appropriate to the required work or service • Carry out relevant performance evaluation • Maintain accurate work records in accordance with procedures • Meet work specifications • Communicate effectively within defined workplace procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Work with Others
Unit Code	IND TRP1 13 0117
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to develop workplace relationship and contribute in workplace activities.

Element	Performance Criteria
1. Develop effective workplace relationship	<p>1.1. Duties and responsibilities are done in a positive manner to promote cooperation and good relationship</p> <p>1.2. Assistance is sought from workgroup when difficulties arise and addressed through discussions</p> <p>1.3. Feedback on performance provided by others in the team is encouraged, acknowledged and acted upon</p> <p>1.4. Differences in personal values and beliefs are respected and acknowledged in the development</p>
2. Contribute to work group activities	<p>1.1 Support is provided to team members to ensure workgroup goals are met</p> <p>1.2 Constructive contributions to workgroup goals and tasks are made according to organizational requirements</p> <p>1.3 Information relevant to work are shared with team members to ensure designated goals are met</p>

Variable	Range
Duties and responsibilities may include but not limited to:	<ul style="list-style-type: none"> • Job description and employment arrangements • Organization's policy relevant to work role • Organizational structures • Supervision and accountability requirements including OHS • Code of conduct
Work group may include but not limited to:	<ul style="list-style-type: none"> • Supervisor or manager • Peers/work colleagues • Other members of the organization
Feedback on performance may include but not limited to:	<ul style="list-style-type: none"> • Formal/Informal performance appraisal • Obtaining feedback from supervisors and colleagues and clients • Personal, reflective behavior strategies • Routine organizational methods for monitoring service delivery
Providing support to team members may include but not limited to:	<ul style="list-style-type: none"> • Explaining/clarifying • Helping colleagues • Providing encouragement • Providing feedback to another team member • Undertaking extra tasks if necessary
Organizational	May include but not limited to:

requirements	<ul style="list-style-type: none"> • Goals, objectives, plans, system and processes • Legal and organization policy/guidelines • OHS policies, procedures and programs • Ethical standards • Defined resources parameters • Quality and continuous improvement processes and standards
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Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> • Provide support to team members to ensure goals are met • Acton feedback from clients and colleagues • Access learning opportunities to extend own personal work competencies to enhance team goals and outcomes
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> • relevant legislation that affects operations, especially with regards to safety • reasons why cooperation and good relationships are important • the organization’s policies, plans and procedures • how to elicit and interpret feedback • workgroup member’s responsibilities and duties • importance of demonstrating respect and empathy in dealings with colleagues • how to identify and prioritize personal development opportunities and options
Underpinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> • understand the organization’s policies and work procedures • write simple instructions for particular routine tasks • interpret information gained from correspondence • request advice, receive feedback and work with a team • organize work priorities and arrangement • select and use technology appropriate to a task • relate to people from a range of social, cultural and ethnic backgrounds
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Receive and Respond to Workplace Communication
Unit Code	IND TRP1 14 0117
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to receive, respond and act on verbal and written communication.

Element	Performance Criteria
1. Follow routine spoken messages	<p>1.1 Required information is gathered by listening attentively and correctly interpreting or understanding information/instructions.</p> <p>1.2 Instructions/information is properly recorded.</p> <p>1.3 Instructions are acted upon immediately in accordance with information received.</p> <p>1.4 Clarification is sought from workplace supervisor on all occasions when any instruction/information is not clear.</p>
2. Perform workplace duties following written notices	<p>2.1 Written notices and instructions are read and interpreted correctly in accordance with organizational guidelines.</p> <p>2.2 Routine written instruction is followed in sequence.</p> <p>2.3 Feedback is given to workplace supervisor based on the instructions/information received.</p>

Variable	Range
Written notices and instructions	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Handwritten material • printed material • Internal memos • External communications • Electronic mail • Briefing notes • General correspondence • Marketing materials • Journal articles
Organizational guidelines	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Information documentation procedures • Company policies and procedures • Organization and service manuals

Evidence Guide			
Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Demonstrate knowledge of organizational procedures for handling verbal and written communications • Receive and act on verbal messages and instructions 		
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	<ul style="list-style-type: none"> • Record instructions/information
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • organizational policies/guidelines in regard to processing internal/external information • ethical work practices in handling communications • communication process
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • receive and clarify conciseness messages/information/communication • record messages/information accurately
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level I	
Unit Title	Demonstrate Work Values
Unit Code	IND TRP1 15 0117
Unit Descriptor	This unit covers the knowledge, skills and attitude required in demonstrating proper work values.

Elements	Performance Criteria
1. Define the purpose of work	<p>1.1 One's unique sense of purpose for working and the 'whys' of work are identified, reflected on and clearly defined for one's development as a person and as a member of society.</p> <p>1.2 Personal mission is achieved in harmony with company's values.</p>
2. Apply work values/ethics	<p>2.1 Work values/ethics/concepts are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines.</p> <p>2.2 Work practices are undertaken in compliance with industry work ethical standards, organizational policy and guidelines</p> <p>2.3 Personal behavior and relationships with co-workers and/or clients are conducted in accordance with ethical standards, policy and guidelines.</p> <p>2.4 Company resources are used in accordance with transparent company ethical standard, policies and guidelines.</p>
3. Deal with ethical problems	<p>3.1 Company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines.</p> <p>3.2 Work incidents/situations are reported and/or resolved in accordance with company protocol/guidelines.</p> <p>3.3 Resolution and/or referral of ethical problems identified are used as learning opportunities.</p>
4. Maintain integrity of conduct in the workplace	<p>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</p> <p>4.2 Instructions to co-workers are provided based on ethical, lawful and reasonable directives.</p> <p>4.3 Company values/practices are shared with co-workers using appropriate behavior and language.</p>

Variable	Range
Work values/ethics/ concepts	May include but are not limited to: <ul style="list-style-type: none"> • Commitment/ Dedication • Sense of urgency • Sense of purpose • Love for work • High motivation • Orderliness • Reliability and Dependability • Competence • Goal-oriented • Sense of responsibility • Being knowledgeable • Loyalty to work/company • Sensitivity to others • Compassion/Caring attitude • Balancing between family and work • Sense of nationalism
Work practices	May include but are not limited to: <ul style="list-style-type: none"> • Quality of work • Punctuality • Efficiency • Effectiveness • Productivity • Resourcefulness • Innovativeness/Creativity • Cost consciousness • 5S • Attention to details
Company resources	May include but are not limited to: <ul style="list-style-type: none"> • Consumable materials • Equipment/Machineries • Human • Time and Financial resources
Work incidents/ Situations	May include but are not limited to: <ul style="list-style-type: none"> • Violent/intense dispute or argument • Gambling • Use of prohibited substances • Pilferages • Damage to person or property • Vandalism • Falsification • Bribery • Sexual Harassment and Blackmail

Evidence Guide

Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Define one's unique sense of purpose for working • Clarify and affirm work values/ethics/concepts consistently in the workplace • Demonstrate work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines • Demonstrate personal behavior and relationships with co-workers and/or clients consistent with ethical standards, policy and guidelines • Use company resources in accordance with company ethical standard, policies and guidelines. • Follow company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct/behavior
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Occupational health and safety • Work values and ethics • Company performance and ethical standards • Company policies and guidelines • Fundamental rights at work including gender sensitivity • Work responsibilities/job functions • Corporate social responsibilities • Company code of conduct/values • Balancing work and family responsibilities
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • Interpersonal skills • Communication skills • Self awareness, understanding and acceptance • Application of good manners and right conduct
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level I	
Unit Title	Develop Understanding of Entrepreneurship
Unit Code	IND TRP1 16 0117
Unit Descriptor	This unit covers knowledge, skills and attitude required to understand the concepts, principles, functions, strategies and methods of entrepreneurship. It also covers identifying and developing the entrepreneurial competencies.

Elements	Performance Criteria
1. Describe and explain the concept, principles, and scope of entrepreneurship	<p>1.1 The concept and principles of entrepreneurship are analyzed and discussed.</p> <p>1.2 Entrepreneurial traits and distinguishing features, entrepreneurial motivations and types of entrepreneurs are identified and discussed.</p> <p>1.3 The role of entrepreneurship development for the Ethiopian economy is explained and discussed.</p> <p>1.4 Entrepreneurship for women and disables is discussed and analyzed.</p>
2. Discuss how to become an entrepreneur	<p>2.1 The positive mind set, attitude towards poverty and “can do mentality” is developed.</p> <p>2.2 Self-employment as an individual economic independence and personal growth is discussed and analyzed.</p> <p>2.3 Advantages and disadvantages of self-employment and being an employee are explained and discussed.</p> <p>2.4 Major competencies of successful entrepreneurs are identified and explained.</p> <p>2.5 Self-potential is assessed to determine if qualified to become an entrepreneur.</p> <p>2.6 The behaviors of successful entrepreneurs are identified and discussed.</p> <p>2.7 Business ideas are generated using appropriate tools, techniques and steps.</p> <p>2.8 Business opportunities are identified and assessed.</p>
3. Discuss how to start and organize an enterprise	<p>3.1 The concepts and legal forms of business enterprises in Ethiopia are identified and discussed</p> <p>3.2 Business Ethics is understood and developed.</p> <p>3.3 Facts about micro, small and medium enterprises are discussed, clarified and understood.</p> <p>3.4 Key success factors in setting up micro, small and medium businesses are identified and explained.</p>

	<p>3.5 Procedures for identifying suitable market for business are discussed and understood.</p> <p>3.6 Major factors to consider in selecting a location for a business are identified and discussed.</p> <p>3.7 Amount of money needed to start an enterprise is estimated and various sources of finance identified and discussed.</p>
4. Discuss how to operate an enterprise	<p>4.1 Processes of hiring and managing people are explained and discussed.</p> <p>4.2 The importance, techniques and application of self-management skills, negotiation skills and time management skills, decision skills are discussed and understood.</p> <p>4.3 The techniques and procedures of managing sales are explained and discussed.</p> <p>4.4 Factors to be considered in selecting suppliers and the steps to follow when doing business with them are identified and discussed.</p> <p>4.5 Awareness of how new technologies can affect micro, small and medium business is developed, and Characteristics of appropriate technology for use are explained and discussed.</p> <p>4.6 Risk assessment and management of business enterprise are performed regularly.</p> <p>4.7 Qualities are properly inspected and inventories properly managed.</p> <p>4.8 Basic concepts of Monitoring and Evaluation are explained and understood.</p>
5. Discuss how to prepare and use financial records	<p>5.1 Importance of financial source documents and record keeping is discussed.</p> <p>5.2 Financial recording documents are identified and prepared.</p> <p>5.3 Different types of cost and expense that occur in a business and how to manage them are discussed and understood.</p> <p>5.4 Factors and procedures in knowing the cost and expense of the enterprise are discussed and understood.</p> <p>5.5 Simple financial statements are prepared and understood</p>
6. Develop one's own business plan	<p>6.1 The concept, importance and process of preparing/ writing a business plan are discussed and understood</p> <p>6.2 Feasibility of the business idea is made clear and</p>

	<p>understood.</p> <p>6.3 Findings of the feasibility study are interpreted, assessed and analyzed.</p> <p>6.4 Standard structure and format are applied in preparing business plan.</p> <p>6.5 Problems that may arise or encounter when starting a business are identified and understand.</p>
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Variables	Range
Legal forms	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Sole proprietorship • Partnership • Cooperatives • Private Limited Company
Business Enterprises	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Micro • Small • Medium
Major factors	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Economics (local economy) • Population • Competition
Financial source documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Cash book • Vouchers • Invoices • Receipts • Check
Financial recording documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Journal • Ledger • Fixed asset records • Inventory record • Payroll sheet • Account receivable • Account payable and Daily sales record
Feasibility of the business	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • opportunities available • market competition • timing/ cyclical considerations • skills available • resources available • location and/ or premises available • risk related to a particular business opportunity, especially • in regard to Occupational Health and Safety and • environmental considerations

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Explain principles and concept of entrepreneurship • Discuss how to become entrepreneur • Discuss how to organize an enterprise • Discuss how to operate an enterprise • Discuss how to prepare and use financial records • Develop business plan
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Entrepreneurship concepts, principles, roles and types • Entrepreneurial traits, motivation and distinguishing features • Types of entrepreneurs • Entrepreneurial competencies • Entrepreneurial behaviors • Business ideas and business opportunities • Self potential assessment • Types of enterprises • Legal forms of business ownership • Risk assessment and evaluation • Self-employment and employment • Managing sales, people and time • Facts about micro, small and medium enterprises • Micro, Small and Medium Enterprises • Key success factors for setting up micro, small and medium enterprises • Procedures for identifying suitable markets • Business location • Major factors for selecting business location • Quality control • Inventory management • Monitoring and evaluation • New technologies • Startup capital • Investment capital • Working capital • Financing options • Financial records • Costs and expenses • Business plan and Feasibility study
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • Planning, organizing, hiring and leading skills • Self-management skills • Negotiation skills • Time management skills • Problem solving skills • Decision making skills
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	<ul style="list-style-type: none"> • Selling skills • Risk assessment skills • Presentation skills • Inventory controlling skills • Using technology • Financial record keeping skills • Preparing simple financial statement • Financial reporting skills • Managing money • Suppliers selection skills • Monitoring and evaluation skills
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level I	
Unit Title	Apply 3S
Unit Code	IND TRP1 17 0117
Unit Descriptor	This Unit Title covers the knowledge, skills and attitudes required by a worker to apply 3S techniques to his/her workplace. The unit assumes the worker has a particular job in the allocated workplace known by the individual.

Elements	Performance Criteria
1. Organize junior Kaizen Promotion Team (KPT).	<p>1.1. Basics, principles and stages of KPT are identified using appropriate procedures.</p> <p>1.2. Structure of Junior KPT is established in accordance with the organizational procedures.</p> <p>1.3. Effective and appropriate contributions are made to complement team activities and objectives using individual skills and competencies.</p> <p>1.4. Effective and appropriate forms of communications are used and undertaken with KPT members who contribute to know KPT activities and objectives.</p> <p>1.5. Kaizen Board (Visual Management Board) is prepared and used in harmony with different workplace contexts.</p>
2. Prepare for work.	<p>2.1. Work instructions are used to determine job requirements, including method, material and equipment.</p> <p>2.2. Job specifications are read and interpreted following working manual.</p> <p>2.3. OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.</p> <p>2.4. Appropriate materials are selected.</p> <p>2.5. Safety equipment and tools are identified and checked for safe and effective operation.</p>
3. Sort items.	<p>3.1. Plan is prepared to implement sorting activities.</p> <p>3.2. Cleaning activities are performed.</p> <p>3.3. All items in the workplace are identified following the appropriate procedures.</p> <p>3.4. Necessary and unnecessary items are listed using the appropriate format.</p> <p>3.5. Red tag strategy is used for unnecessary items.</p> <p>3.6. Unnecessary items are evaluated and placed in an appropriate place other than the workplace.</p>

	<p>3.7. Necessary items are recorded and quantified using appropriate format.</p> <p>3.8. Performance results are reported using appropriate formats.</p> <p>3.9. Necessary items are regularly checked in the workplace.</p>
4. Set all items in order.	<p>4.1. Plan is prepared to implement set in order activities.</p> <p>4.2. General cleaning activities are performed.</p> <p>4.3. Location/layout, storage and indication methods for items are decided.</p> <p>4.4. Necessary tools and equipment are prepared and used for setting in order activities.</p> <p>4.5. Items are placed in their assigned locations.</p> <p>4.6. After use, the items are immediately returned to their assigned locations.</p> <p>4.7. Performance results are reported using appropriate formats.</p> <p>4.8. Each item is regularly checked in its assigned location and order.</p>
5. Perform shine activities.	<p>5.1. Plan is prepared to implement shine activities.</p> <p>5.2. Necessary tools and equipment are prepared and used for shinning activities.</p> <p>5.3. Shine activity is implemented using appropriate procedures.</p> <p>5.4. Performance results are reported using appropriate formats.</p> <p>5.5. Regular shinning activities are conducted.</p>

Variable	Range
Junior KPT	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • 3S • 3MU (Mura, Muri and MUDA) • 4P (Policy, Procedure, People and Plant) • 4M (Material, Method, Man and Machine) • PDCA (Plan, Do, Check and Act)
OHS requirements	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • Legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances.

	<ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • dust masks / goggles • glove • working cloth • first aid and safety shoes
Items	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • tools • jigs/fixtures • materials/components • machine and equipment • manuals • documents • personal items (e.g. bags, lunch boxes and posters) • safety equipment and personal protective equipment • other items which happen to be in the work area
The appropriate procedures	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • steps for implementing 3S (sort, set in order and shine) activities. • written, verbal and computer based or in some other format.
Unnecessary items	<p>are not needed for current production or administrative operation and include but not limited to:</p> <ul style="list-style-type: none"> • defective or excess quantities of small parts and inventory • outdated or broken jigs and dies • worn-out bits • outdated or broken tools and inspection gear • old rags and other cleaning supplies • electrical equipment with broken cords • outdated posters, signs, notices and memos <p>some locations where unneeded items tend to accumulate may include but not limited to:</p> <ul style="list-style-type: none"> • in rooms or areas not designated for any particular purpose • in corners next to entrances or exists • along interior and exterior walls • next to partitions and behind pillars • under the eaves of warehouses

	<ul style="list-style-type: none"> • under desks and shelves and in desk and cabinet drawers • near the bottom of tall stacks of items • on unused management and production schedule boards • in tools boxes that are not clearly sorted
Appropriate format	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • all items, necessary and unnecessary items.
Red tag	<p>A format prepared with a red color paper or card which is filled and attached temporarily on the unnecessary items until decision is made. The red tag catch people's attention because red is a color that stands out. So to fill and attach red tag on items, asks the following three questions:</p> <ul style="list-style-type: none"> • Is this item needed? • If it is needed, is it needed in this quantity? • If it is needed, does it need to be located here?
Necessary items	<p>Are required in the workplace for current production or administrative operation in the amount needed.</p>
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • paint • hook • sticker • signboard • nails • shelves • chip wood • sponge • broom • pencil • shadow board/ tools board
Shine activity	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Inspection • Cleaning • Minor maintenance may include: <ul style="list-style-type: none"> ➢ Tightening bolts ➢ Lubrication and Replacing missing parts

Evidence Guide

Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Discuss how to organize KPT. • Describe the pillars of 5S. • Implement 3S in own workplace by following appropriate procedures.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Kaizen principle, pillars and concept • Key characteristic of Kaizen • Elements of Kaizen • Wastes/MUDA • Basics of KPT

	<ul style="list-style-type: none"> • Aims, benefits and principles of KPT • Stages of KPT • Structure and role of the components of Junior KPT • Concept and parts of Kaizen board • Concept and benefits of 5S • The pillars of 5S • Three stages of 5S application • Benefits and procedure of sorting activities • The concept and application of Red Tag strategy • OHS procedures • Benefits and procedure of set in order activities • Set in order methods/techniques • Benefits and procedure of shine activities • Inspection methods • Planning and reporting methods • Method of Communication
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> • Participating actively in KPT • technical drawing • communication skills • planning and reporting own tasks in implementation of 3S • following procedures to implement 3S in own workplace • using sorting formats to identify necessary and unnecessary items • improving workplace layout following work procedures • preparing labels, slogans, etc. • reading and interpreting documents • observing situations • gathering evidence by using different means • recording activities and results using prescribed formats • working with others • solving problems by applying 3S • preparing and using Kaizen board • preparing and using tools and equipment to implement 3S
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

NTQF Level II

Occupational Standard: Train Painting Level II	
Unit Title	Clean and Polish Train Exterior Paint
Unit Code	IND TRP2 01 0117
Unit Descriptor	This unit of competency covers the skills and knowledge required to carry out train body exterior paint cleaning and polishing. The unit includes identification and confirmation of work requirements, preparation for work, cleaning and polishing train body exterior paint work, and completion of work finalisation processes, including clean-up and documentation Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.

Elements	Performance Criteria
1. Prepare for work	<p>1.1 Work instructions are used to determine work requirements, including methods, material and equipment.</p> <p>1.2 Job specifications are read and interpreted.</p> <p>1.3 Workplace Health and Safety (WHS) requirements, including personal protection needs are observed throughout the work.</p> <p>1.4 Materials for work are selected.</p> <p>1.5 Equipment and tooling are identified and checked for safe and effective operation.</p> <p>1.6 Procedures are determined to minimize waste material.</p> <p>1.7 Procedures are identified for maximizing energy efficiency while completing the work.</p>
2. Clean train body exterior paint	<p>2.1 Tooling and equipment are selected and used according to workplace methods and customer requirements.</p> <p>2.2 Materials are selected according to train finish type, workplace methods and paint manufacturer/component supplier recommendations.</p> <p>2.3 Materials are used and stored according to manufacturer/ component supplier recommendations and regulatory requirement.</p> <p>2.4 Train body exterior finish is cleaned according to workplace and industry/product manufacturer/component supplier prescribed methods and procedures.</p> <p>2.5 Cleaning is completed without causing damage to component or system.</p>

	2.6 Train body exterior paint is cleaned according to industry standards/regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.
3. Train vehicle body exterior paint	<p>3.1 Tooling and equipment are selected and used according to workplace methods and customer requirements.</p> <p>3.2 Materials are selected according to train finish type, workplace methods and paint manufacturer/component supplier recommendations.</p> <p>3.3 Materials are used and stored according to manufacturer/ component supplier recommendations and regulatory requirements.</p> <p>3.4 Train body exterior paint is polished according to workplace, and industry/product manufacturer/component supplier prescribed methods and procedures.</p> <p>3.5 Polishing is completed without causing damage to component or system.</p> <p>3.6 Train body exterior finish is polished according to industry standards/regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.</p>
4. Clean up work area and maintain equipment	<p>4.1 Material that can be reused is collected and stored.</p> <p>4.2 Waste material is removed following workplace and environmental procedure.</p> <p>4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4 Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>4.5 Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6 Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
Methods	manual or machine assisted cleaning and polishing
WHS requirements	<p>may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety

	<ul style="list-style-type: none"> • handling of material • use of firefighting equipment • initiative first aid • hazard control • hazardous material • substances
Personal protection	that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Materials	may include: <ul style="list-style-type: none"> • cleaning • polishing agents • cleaning materials
Equipment and tooling	May include: <ul style="list-style-type: none"> • polishers
Safe operating procedures	May include but not limited to: <ul style="list-style-type: none"> • operational risk assessment and treatments associated with • locomotive movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in closeness to others • worksite visitors
Emergency procedures	May Include: <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite withdrawal/ evacuation
Environmental requirements	May include, but not limited to: <ul style="list-style-type: none"> • waste management • noise • dust • clean-up management
Quality requirements	May include, but not limited to: <ul style="list-style-type: none"> • regulations, including Ethiopian standards • internal company quality policies and standards • enterprise operations and procedures
Statutory/regulatory authorities	may include but not limited to: <ul style="list-style-type: none"> • federal • local authorities administering Acts • regulations • codes of practice
Communications	May include but not limited to: <ul style="list-style-type: none"> • verbal and visual instructions and fault reporting • worksite specific instructions • written instructions

	<ul style="list-style-type: none"> • plans or instructions related to job/task • telephones • pagers
Information/documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions • signage • work schedules/plans/specifications • work bulletins • Memos • Material Safety Data Sheets (MSDS) • diagrams or sketches • safe work procedures related to cleaning and polishing vehicle exterior paint • regulatory/legislative requirements pertaining to locomotive industry, including Ethiopian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Ethiopian standards

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • selecting and using material and equipment • Cleaning and polishing of a range of train body exterior paints.
Underpinning Knowledge and Attitudes	<p>Required knowledge of:</p> <ul style="list-style-type: none"> • WHS and environmental regulations/requirements, equipment, material and personal safety requirements • environmental requirements for storage, handling and disposal of substances • material safety data sheets • cleaning agents and their recommended applications • polishing agents and their recommended applications • cleaning and polishing procedures for train body exterior finish • enterprise quality procedures • work organisation and planning processes
Underpinning Skills	<p>Required skills include:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for train

	<p>cleaning and polishing</p> <ul style="list-style-type: none"> • identifying safety precautions • identifying recommended applications and procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • reading and interpreting product labels/directions • listening and following verbal instructions • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to calculate time, apply accurate measurements, calculate material requirements and establish quality checks • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and wastage • use workplace technology related to cleaning and polishing train exterior paint, including the use of measuring equipment and communication devices and the reporting/ documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Clean Vehicle Bode and Door Cavities
Unit Code	IND TRP2 02 0117
Unit Descriptor	<p>This unit of competency covers the skills and knowledge required to wash vehicle body exterior and clean door jambs, boot and bonnet surrounds and inner sill panels.</p> <p>The unit includes identification and confirmation of work requirements, preparation for work, washing/cleaning of vehicle body and door cavities, and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine work requirements, including method, material and equipment.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. Workplace Health and Safety (WHS) requirements, including personal protection needs are observed throughout the work.</p> <p>1.4. Materials for work is selected.</p> <p>1.5. Equipment and tooling are identified and checked for safe and effective operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the work.</p>
2. Wash/clean vehicle body exterior	<p>2.1. Tooling and equipment are selected and used according to workplace methods and customer requirements.</p> <p>2.2. Cleaning and protection agents are selected and used according to vehicle finish type, workplace methods and product manufacturer/component supplier recommended applications.</p> <p>2.3. Vehicle body exterior is washed and cleaned according to workplace/customer and product manufacturer/component supplier prescribed methods and procedures.</p> <p>2.4. Washing/cleaning is completed without causing damage to component or system.</p>

	<p>2.5. Vehicle body exterior is washed and cleaned according to industry standards/regulations/guidelines, WHS requirements, legislation and enterprise procedures/ policies.</p> <p>2.6. Cleaning and protection agents are stored according to manufacturer/component supplier recommendations and regulatory requirements.</p>
<p>3. Wash/clean door jambs, boot and bonnet surrounds and inner sill panels</p>	<p>3.1. Tooling and equipment are selected and used according to workplace methods and customer requirements.</p> <p>3.2. Cleaning/protection agents are selected and used according to vehicle finish type, workplace methods and product manufacturer/component supplier recommended applications.</p> <p>3.3. Vehicle body door/boot cavities are washed and cleaned according to workplace/customer and product manufacturer/component supplier prescribed methods and procedures.</p> <p>3.4. Washing/cleaning is completed without causing damage to component or system.</p> <p>3.5. .Vehicle door jambs, boot and bonnet surrounds and inner sills are washed and cleaned according to industry standards/regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.</p> <p>3.6. Cleaning/protection agents are stored according to manufacturer/component supplier recommendations and regulatory requirements.</p>
<p>4. Clean up work area and maintain equipment</p>	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste material is removed following workplace and environmental procedure.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
Methods	May include but are not limited to: <ul style="list-style-type: none"> • manual or machine assisted washing
WHS	May include: <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of firefighting equipment • initiative first aid • hazard control • hazardous material • substances
Personal protection	May include but not limited to: <ul style="list-style-type: none"> • that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Safe operating procedures	May include but not limited to: <ul style="list-style-type: none"> • operational risk assessment and treatments associated with • locomotive movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in closeness to others and worksite visitors
Emergency procedures	May Include: <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite withdrawal/ evacuation
Environmental requirements	May include, but not limited to: <ul style="list-style-type: none"> • waste management • noise • dust and clean-up management
Quality requirements	May include, but not limited to: <ul style="list-style-type: none"> • regulations, including Ethiopian standards • internal company quality policies and standards • enterprise operations and procedures
Statutory/regulatory authorities	may include but not limited to: <ul style="list-style-type: none"> • federal • local authorities administering Acts • regulations and codes of practice
Materials	may include: <ul style="list-style-type: none"> • cleaning and surface protection agents
Tooling and equipment	may include to clean body exterior and door/boot cavities, including pressure cleaning equipment
Communications	May include but not limited to:

	<ul style="list-style-type: none"> • verbal and visual instructions and fault reporting • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones and pagers
Information/documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions • signage • work schedules/plans/specifications • work bulletins • Memos • Material Safety Data Sheets (MSDS) • diagrams or sketches • safe work procedures related to cleaning and polishing vehicle exterior paint • regulatory/legislative requirements pertaining to locomotive industry, including Ethiopian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Ethiopian standards
Vehicle body and door cavities	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • body exterior • door jambs • boot and bonnet surrounds • internal ledge panels

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Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • selecting and using appropriate material and equipment • Washing and cleaning a range of vehicle body exteriors, door jambs, boot and bonnet surrounds and inner sill panels.
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental requirements for storage, handling and disposal of substances • material safety data sheets

	<ul style="list-style-type: none"> • cleaning/body protection agents and their recommended applications • washing and cleaning procedures for vehicle body exterior, door jambs, boot and bonnet surrounds and inner sill panels • work organisation and planning processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for washing a vehicle • identifying safety precautions • identifying recommended washing and body protection agents applications and procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • reading and interpreting product labels and directions • listening and following verbal instructions • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and wastage • use mathematical ideas and techniques to complete measurements and estimate material requirements required for the work, including measuring and mixing cleaning and protection fluids • use workplace technology related to the washing/cleaning of vehicle bodies, including the use of measuring equipment and communication devices and the reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Prepare Surfaces for Coating
Unit Code	IND TRP2 03 0117
Unit Descriptor	This competency covers the preparation of surfaces for the application of adhesives, primers, surface coatings or finishes by hand or machine and the resolving of routine problems to procedure.

Elements	Performance Criteria
1. Check work requirements.	<p>1.1. Work requirements are identified from production plan or request.</p> <p>1.2. Product, materials and equipment are checked to meet requirements for job(s).</p> <p>1.3. Sources of contamination are identified and excluded.</p> <p>1.4. Questions are asked of appropriate person to confirm unusual practice.</p> <p>1.5. Hazards associated with the job are identified and appropriate action is taken.</p> <p>1.6. Other pre-operational checks are performed in accordance with procedures.</p>
2. Prepare surface in accordance with procedures.	<p>2.1. Process is checked within required limits.</p> <p>2.2. Surface is prepared as required.</p> <p>2.3. Product is checked to required standard.</p> <p>2.4. Supply of material(s) is/are maintained as required.</p> <p>2.5. Logs and records are completed as required.</p> <p>2.6. Equipment and work area are kept clean.</p>
3. Respond to routine problems in accordance with procedures.	<p>3.1. Known faults that occur during the operation are recognised.</p> <p>3.2. Action is identified and taken on causes of routine faults.</p> <p>3.3. Problems are logged as required.</p> <p>3.4. Non-routine problems are identified and reported to designated person.</p>

Variable	Range
Hazards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Typical hazards include: • spills • hazardous materials and vapours (such as fumes from solvents or degreasers, or dust from sanding)

	<ul style="list-style-type: none"> • moving equipment • manual handling hazards
Problems	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • wear and breakage • overuse of tools, requiring rework • incorrect substrate used • Incorrect measurement of surface finish. • contamination of surface prior to polish • Damage to polished surface.
Tools and equipment	<p>May Include:</p> <ul style="list-style-type: none"> • hand finishing tools • scrapers • sandpaper • fans • polishes • Relevant personal protective equipment.

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Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • apply the required skills and knowledge to prepare surface for coating • Apply approved procedures. • Consistent performance should be demonstrated. For example, look to see that: • finishing production standards are met consistently • all safety procedures are followed
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • production workflow sequences and materials demand • accurately monitoring equipment operation and product quality • the potential effects of contamination on surface quality • surface finish measurement techniques • equipment, tools and consumables required to deliver the specified surface finish • different substrates and their preparation requirements • appropriate surface finish techniques for the substrates used • typical problems with each substrate • Correct selection and use of equipment, materials, processes and procedures (such as the combination of surface finish technique and the appropriate substrate).
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • plan own work, including predicting consequences and identifying improvements • identify when the operator is able to rectify faults, when assistance is required and who is the appropriate source for assistance

	<ul style="list-style-type: none"> • Identify and describe own role and role of others involved directly in the finishing process. • Prepare for neat work
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Carry-out Basic Air Brush Application Techniques
Unit Code	IND TRP2 04 0117
Unit Descriptor	<p>This unit of competency covers the skills and knowledge required to carry out fundamental airbrush application techniques on a variety of substrates.</p> <p>The unit includes identification and confirmation of work requirements, preparation for work, application of materials and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria		
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including job sheets, material type, color, quality and quantity.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. Workplace Health and Safety (WHS) requirements, including personal protection needs, breathing apparatus and full body protection, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>		
2. Describe common types of airbrush used	<p>2.1. Airbrush types, main parts and functions are identified and described.</p> <p>2.2. Correct cleaning and maintenance procedures are described and demonstrated.</p>		
3. Apply airbrush techniques over prepared stencils	<p>3.1. Surfaces are prepared for airbrush application.</p> <p>3.2. Prepared stencil mediums are airbrushed over to produce flat wash, graded wash, dimensional effects and geometric shapes.</p> <p>3.3. Accurate visual texture, light and shade on given subject matter is achieved.</p>		
4. Produce designs illustrations with one	<p>4.1. Controlled straight and curved work is carried out using airbrush graduation techniques.</p>		
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colour.	4.2. Shading patterns and designs are produced using airbrush graduation techniques.
5. Prepare a substrate ready to accept a clear top coat	<p>5.1. Correct abrasives to carry out substrate preparation for clear top coat finishes are identified and selected.</p> <p>5.2. Correct cleaning and drying procedures in relation to sludge removal are carried out.</p> <p>5.3. Preparation of the surface to accept clear top coats using solvent cleaners and tack rags is carried out.</p>
6. Apply clear top coat refinishing materials by spray gun	<p>6.1. Refinishing materials are applied without causing damage to any component or system.</p> <p>6.2. The finish produced meets specifications for, texture, depth and gloss and is contaminant-free.</p> <p>6.3. Surface refinishing is completed within approved timeframes.</p> <p>6.4. Application activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>
7. Clean up work area and maintain equipment	<p>7.1. Material that can be reused is collected and stored</p> <p>7.2. Waste material is removed and disposed of or stored according to statutory and workplace procedure.</p> <p>7.3. Spray equipment is cleaned as specified by manufacturer/ component supplier and/or workplace policy and procedures.</p> <p>7.4. Work area is cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>7.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>7.6. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>7.7. Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
Materials	<p>may include:</p> <ul style="list-style-type: none"> • templates • masking medium • stencils • tac rags • polishing buffs and pads • cleaning solvents • compounds

	<ul style="list-style-type: none"> • glazes • cleaning materials
Airbrush types	<p>may include:</p> <ul style="list-style-type: none"> • single action • double action • gravity feed • side feed
Airbrush main parts	<p>may include:</p> <ul style="list-style-type: none"> • air cap • fluid needle • fluid tip • fluid and adjustment screw • air valve • gun body • fluid needle packing gland • trigger • spreader adjustment valve
Refinishing materials	<p>may include:</p> <ul style="list-style-type: none"> • acrylic base coats • water-based and acrylic lacquers • paint reducers
WHS legislation	<p>may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of firefighting equipment • enterprise first aid • hazard control and hazardous materials and substances
Airbrush techniques	<p>may include:</p> <ul style="list-style-type: none"> • stencilling techniques • graduation techniques
Refinishing methods	<p>May include:</p> <ul style="list-style-type: none"> • air brush/spray gun selection • equipment protection and maintenance methods • various spraying techniques • drying procedures • paint mixing • compound polishing • detailing of surfaces
Personal protective equipment	that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Safe operating procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with locomotive movement • toxic substances

	<ul style="list-style-type: none"> • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in closeness to others • worksite visitors
Emergency procedures	<p>May Include:</p> <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite withdrawal/ evacuation
Environmental requirements	<p>May include, but not limited to:</p> <ul style="list-style-type: none"> • waste management • noise • dust • clean-up management
Quality requirements	<p>Quality requirements are to include, but are not limited to: regulations, including to standards internal company quality policies and standards enterprise operations and procedures</p>
Statutory/regulatory authorities	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • federal • local authorities administering Acts • regulations • codes of practice
Tooling and equipment	<p>may include:</p> <ul style="list-style-type: none"> • various air brushes • spray guns • air pressure regulators • air compressors • spray booths • baking ovens • heating and lighting systems • Strainers • measuring sticks • safety equipment
Communications	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal and visual instructions and fault reporting • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers
Information/documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions • signage • work schedules/plans/specifications • work bulletins

	<ul style="list-style-type: none"> • Memos • Material Safety Data Sheets (MSDS) • diagrams or sketches • safe work procedures related to cleaning and polishing vehicle exterior paint • regulatory/legislative requirements pertaining to locomotive industry, including Ethiopian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Ethiopian standards
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Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • preparing a surface ready to accept colour coats airbrushed applications • demonstrating custom graphic techniques including, pictorial reproduction, highlighting, special effects • preparing clear top coat paint refinishing materials • applying clear top coat refinishing materials
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements/substance disposal and storage requirements • Material Safety Data Sheets (MSDS) • types of paints used for airbrushing • types and main parts of airbrush • types of masking and plate mediums • types of clear coat refinishing materials • application methods • types of spray guns
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply research and interpretive skills to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures • apply analytical skills required for the identification and analysis of technical information • apply oral communication skills sufficient to convey information and concepts to customers

	<ul style="list-style-type: none"> • apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance • interact effectively with other persons both on a one-to-one basis and in groups, including understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal • establish safe and effective work processes which anticipate and/or resolve problems and lost time, to systematically develop solutions to avoid or minimise reworking and wastage • use mathematical ideas and techniques to calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks • use workplace technology related to the removal, replacement, fitting and testing of components/accessories, including the use of specialist tooling and equipment, measuring equipment and communication devices and the reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Prepare Vehicle Components for Pint Repairs
Unit Code	IND TRP2 05 0117
Unit Descriptor	This unit of competency covers the skills and knowledge required to prepare body surfaces and apply primers and primer surfaces prior to final paint coats. Users are advised to check with the relevant regulatory authority. The unit includes identification and confirmation of work requirements, preparation for work, preparation of body surfaces for final paint by application of primers and primer surfaces, and completion of work finalisation processes, including clean-up and documentation. Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including method and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. Workplace Health and Safety (WHS) requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Prepare vehicle surfaces for painting	<p>2.1. Information is accessed and interpreted from manufacturer/component s supplier specifications.</p> <p>2.2. Surfaces adjacent to the surfaces to be painted are protected using approved methods and material.</p> <p>2.3. Surfaces to be painted are cleaned of contaminants.</p> <p>2.4. Components and ancillary fittings that can be affected by the painting process are protected and/or removed and stored securely.</p> <p>2.5. Surfaces to be painted are prepared using approved methods, material and equipment.</p> <p>2.6. Unrecorded damage to surfaces and ancillary equipment is noted and reported to persons.</p>

	<p>2.7. Surface preparation activities are carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.</p> <p>2.8. Waste material is disposed of in accordance with statutory and enterprise requirements.</p>
3. Apply primers	<p>3.1. Components and ancillary fittings that can be affected by application processes are protected and/or removed and stored safely.</p> <p>3.2. Primers/primer surfaces are applied using approved methods, materials and equipment.</p> <p>3.3. Application activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>3.4. Work is completed without causing damage to any component or system.</p>
4. Prepare primed surface for refinishing	<p>4.1. Surfaces to be refinished are prepared using approved methods, materials and equipment.</p> <p>4.2. Preparation activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>4.3. Work is completed without causing damage to any component or system.</p> <p>4.4. Waste materials are disposed of in accordance with statutory and enterprise requirements.</p>
5. Clean up work area and maintain equipment	<p>5.1. Material that can be reused is collected and stored.</p> <p>5.2. Waste and scrap are removed following workplace procedure.</p> <p>5.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>5.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>5.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>5.6. Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
WHS requirements	may include: <ul style="list-style-type: none"> protective clothing and equipment

	<ul style="list-style-type: none"> • use of tooling and equipment • workplace environment and safety • handling of material • use of firefighting equipment • initiative first aid • hazard control • hazardous material • substances
Personal protection	that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Materials	may include: <ul style="list-style-type: none"> • paint primers and cleaning materials
Components	May include but are not limited to: <ul style="list-style-type: none"> • in-situ panels • doors • plastic components • glasswork • bonnets
Preparation	may include: <ul style="list-style-type: none"> • internal and external trim • accessories • lights • rubber seals • protective strips • decals • striping
Preparation methods	May include: <ul style="list-style-type: none"> • adhesive bonding • sanding (wet and dry) • masking • surface preparation • chemical cleaning • priming • paint touch-up
Safe operating procedures	May include but not limited to: <ul style="list-style-type: none"> • operational risk assessment and treatments associated with • locomotive movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in closeness to others • worksite visitors
Emergency procedures	May Include: <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires

	<ul style="list-style-type: none"> • enterprise first aid requirements • worksite withdrawal/ evacuation
Environmental requirements	<p>May include, but not limited to:</p> <ul style="list-style-type: none"> • waste management • noise • dust • clean-up management
Quality requirements	<p>May include, but not limited to:</p> <ul style="list-style-type: none"> • regulations, including Ethiopian standards • internal company quality policies and standards • enterprise operations and procedures
Statutory/regulatory authorities	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • federal • local authorities administering Acts • regulations • codes of practice
Tooling and equipment	<p>may include:</p> <ul style="list-style-type: none"> • hand tooling • power tooling • cleaning equipment • adhesive equipment • spray painting equipment • rubbing down equipment • paint rollers and hand touch-up equipment
Communications	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal and visual instructions and fault reporting • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones and pagers
Information/documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions • signage • work schedules/plans/specifications • work bulletins • Memos • Material Safety Data Sheets (MSDS) • diagrams or sketches • safe work procedures related to cleaning and polishing vehicle exterior paint • regulatory/legislative requirements pertaining to locomotive industry, including Ethiopian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Ethiopian standards

Evidence Guide			
Critical Aspects of Competence	Demonstrate knowledge and skills in: <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • cleaning and masking the areas/equipment for paint repairs • removing components and ancillary fittings for protection • Applying primers to manufacturer/component supplier specifications. 		
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements/material disposal and storage requirements • material safety data sheets • cleaning materials • preparation methods • industry codes of practice • primer/paint application methods, including rolling • rubbing down procedures • enterprise quality procedures • work organisation and planning processes 		
Underpinning Skills	Demonstrate skills to: <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to calculate time, apply accurate measurements, calculate material requirements and establish quality checks • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to 		
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	<p>systematically develop solutions to avoid or minimise reworking and wastage</p> <ul style="list-style-type: none"> • use workplace technology, including the use of specialist tooling and equipment, measuring equipment, computerised technology and communication devices and the reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Apply Paint Touch up Techniques
Unit Code	IND TRP2 06 0117
Unit Descriptor	This unit of competency covers the skills and knowledge required to prepare equipment and apply materials for paint touch-up or minor repairs. Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority. The unit includes identification and confirmation of work requirements, preparation for work, preparation of equipment for application of material for paint touch-up, and completion of work finalisation processes, including clean-up and documentation. Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.

Elements	Performance Criteria			
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including method and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. Workplace Health and Safety (WHS) requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>			
2. Prepare equipment	<p>2.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>2.2. Preparation is carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.</p>			
3. Prepare and apply materials	<p>3.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>3.2. Preparation and application of materials is carried out in accordance with manufacturer/component supplier specifications.</p> <p>3.3. Preparation and application of materials is carried out</p>			
Page 86 of 194	<table border="1"> <tr> <td>Ministry of Education Copyright</td> <td>Train Painting Ethiopian Occupational Standard</td> <td>Version I January 2017</td> </tr> </table>	Ministry of Education Copyright	Train Painting Ethiopian Occupational Standard	Version I January 2017
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	according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies.
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste and scrap are removed following workplace procedure.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
WHS requirements	<p>may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of material • use of firefighting equipment • initiative first aid • hazard control • hazardous material • substances
Personal protection	that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • oil-based paints • water-based paints • synthetic paints • vinyl paints, • undercoats • varnishes • coatings • paint thinners and paint reducers • paint • thinners • cleaning materials
Safe operating procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with locomotive movement

	<ul style="list-style-type: none"> • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in closeness to others • worksite visitors
Emergency procedures	<p>May Include:</p> <ul style="list-style-type: none"> • emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite withdrawal/ evacuation
Environmental requirements	<p>May include, but not limited to:</p> <ul style="list-style-type: none"> • waste management • noise • dust • clean-up management
Quality requirements	<p>May include, but not limited to:</p> <ul style="list-style-type: none"> • regulations, including Ethiopian Standards • internal company quality policy and standards • enterprise operations and procedures
Statutory/regulatory authorities	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • federal • local authorities administering Acts • regulations • codes of practice
Tooling and equipment	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • spray guns • air pressure regulators • air compressors • personal protective equipment • spray booths • heating and lighting systems • safety equipment • mixing equipment • paint stirring equipment • paint straining and thinning equipment • paint pots • machine buffs and polishes
Communications	<p>May include but not limited to:</p> <p>verbal and visual instructions and fault reporting</p> <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers
Information/documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions

	<ul style="list-style-type: none"> • signage • work schedules/plans/specifications • work bulletins • Memos • Material Safety Data Sheets (MSDS) • diagrams or sketches • safe work procedures related to cleaning and polishing vehicle exterior paint • regulatory/legislative requirements pertaining to locomotive industry, including Ethiopian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Ethiopian standards
Application systems and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • spray gun techniques • drying techniques • paint mixing • paint rolling • paint straining • paint thinning • paint matching • cleaning and polishing

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • preparing a range of equipment • preparing a range of materials • the completion of touch-up painting for a range of circumstances, including the use of spray equipment and brushes • applying a range of touch-up materials
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements/material disposal and storage • material safety data sheets • industry code of practice • the types, applications and preparation processes for

	<p>paints</p> <ul style="list-style-type: none"> • paint mixing procedures • spraying equipment procedures • equipment/material safety requirements • hand painting procedures, including rolling • application procedures • work organisation and planning processes
Underpinning Skills	<p>Required skills include to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for the preparation and use of equipment and material for paint touch-up techniques • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to use equipment and mix material required for the work • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and wastage • use workplace technology related to the preparation and use of equipment and material for paint touch-up techniques, including the use of specialised tooling and equipment, measuring equipment and communication devices and the reporting/documenting of results
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level II	
Unit Title	Apply Train Body Film Wrapping
Unit Code	IND TRP2 07 0117
Unit Descriptor	<p>This unit describes the performance outcomes required to prepare various train body surfaces and apply vinyl film wrapping materials.</p> <p>Work applies to the application of coloured vinyl film materials to train bodies. Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including required method of application, and type of film-wrapping material and equipment</p> <p>1.2. Workplace Health and Safety (WHS) requirements are identified and followed</p> <p>1.3. Film wrapping and other necessary materials are selected</p> <p>1.4. Tools and equipment are identified, checked and used correctly</p> <p>1.5. Application procedures are determined to minimize mistakes and waste and maximize energy efficiency while completing the job</p> <p>1.6. Train panel surface is assessed for quality</p>
2. Measure and cut film-wrapping materials	<p>2.1. Film supplier specifications are accessed and interpreted</p> <p>2.2. Measurement, cutting and template production are performed according to film supplier specifications, industry regulations and guidelines, WHS requirements, statutory and regulatory authority requirements, and workplace procedures</p> <p>2.3. Surfaces are measured, material patterns and templates are produced, and cut is made without causing damage to train body surface</p> <p>2.4. Workplace documents are completed relevant to film size cutting and application outcomes</p>
3. Prepare vehicle surface and apply film-wrapping material	<p>3.1. Surface is prepared using approved methods, materials and equipment, according to the specifications of film-wrapping material</p> <p>3.2. Film-wrapping materials are applied according to supplier specifications and quality requirements</p>

	<p>3.3. Film-wrapping applications are inspected and tested according to suppliers' recommended procedures</p> <p>3.4. Film-wrapping applications are completed without causing damage to train and according to industry regulations and guidelines, WHS requirements and workplace policies and procedures</p> <p>3.5. Workplace documents are completed</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored according to workplace sustainability practices</p> <p>4.2. Waste and scrap are removed following workplace and environmental procedures</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition according to workplace procedures</p> <p>4.4. Faulty equipment is identified and tagged according to workplace requirements</p> <p>4.5. Workplace emergency procedures are identified and followed when required</p> <p>4.6. Tools are maintained according to workplace procedures</p>

Variables	Range
Job requirements	<p>May include:</p> <ul style="list-style-type: none"> • identification of material and work requirements • preparation of film-wrapping materials • measuring and cutting of vehicle film-wrapping materials • preparation of surfaces • application of vehicle film wrapping • cutting of patterns and templates to suit vehicle body shapes • film-wrapping application and job completion processes • clean-up • documentation
WHS requirements	<p>May include:</p> <ul style="list-style-type: none"> • dust and fume collection • personal protective clothing and equipment, such as: <ul style="list-style-type: none"> ➤ eye protection ➤ personal protective clothing ➤ safety footwear • safe use of tools and equipment • safe handling of material • use of fire-fighting equipment • workplace first aid procedures

	<ul style="list-style-type: none"> hazard control, including control of hazardous materials and toxic substances
Materials	<p>May include:</p> <ul style="list-style-type: none"> film-wrapping materials patterns templates cleaning fluids cleaning cloths hand tools scrapers cleaning solutions
Tools and equipment	<p>May include:</p> <ul style="list-style-type: none"> hot-air gun hand tools scrapers plastic squeegees cutting and special application tools
Statutory and regulatory authority requirements	<p>May include:</p> <ul style="list-style-type: none"> federal and local authorities administering Acts regulations industry codes of practice
Quality requirements	<p>May include:</p> <ul style="list-style-type: none"> regulations, including Ethiopian standards industry standards supplier-recommended application procedures supplier specifications workplace quality policy
Environmental procedures	<p>May include:</p> <ul style="list-style-type: none"> waste management noise control dust and fume collection clean-up management
Emergency procedures	<p>May include:</p> <ul style="list-style-type: none"> emergency shutdown extinguishing fires workplace first aid requirements worksite evacuation

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> observe safety procedures and requirements select methods and techniques appropriate to film-wrapping application clean surfaces before and after applying film wrapping measure and cut film templates and material templates apply film to a range of locomotive body shapes
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	<ul style="list-style-type: none"> • follow film supplier specifications • follow workplace procedures
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • industry codes of practice relating to train body film wrapping • WHS, environmental and emergency requirements and procedures • locomotive film wrapping application techniques • workplace policies and procedures and quality requirements relating to film wrapping • procedures for the correct use of film wrapping tools and equipment
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • communication skills to follow work instructions • initiative and enterprise skills to recognise a workplace problem or potential problem and take action • learning skills to identify sources of information, assistance and expert knowledge to expand skills, knowledge and understanding • literacy skills to read and follow information in written job instructions, specifications, standard operating procedures, charts, lists, drawings and other reference documents • numeracy skills to measure and calculate film-wrapping materials • planning and organising skills to: <ul style="list-style-type: none"> ➤ plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed on time ➤ plan film-wrapping application following job specification ➤ identify risk factors and ➤ take action to minimise them • problem-solving skills to refer problems outside area of responsibility to appropriate person and suggest possible causes • self-management skills to: <ul style="list-style-type: none"> ➤ select and use appropriate film-wrapping products, materials, processes and procedures ➤ recognise own limitations and seek advice ➤ follow workplace policies and documentation, such as codes of practice • technical skills to use film-wrapping specialist tools and equipment • technology skills to use tools and equipment to collect and provide information on film-wrapping processes
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment,

	and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Apply Fundamental Colour Matching
Unit Code	IND TRP2 08 0117
Unit Descriptor	This unit covers the competence required to colour match paints using a colour mix test card.

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including methods and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Mix paint colors	<p>2.1. Mixing is performed using the appropriate method and/or system.</p> <p>2.2. Paint is mixed without causing damage to component or system.</p> <p>2.3. Mixing activities are carried out according to industry regulations/ guidelines, OHS requirements, legislation and enterprise procedures/policies.</p>
3. Prepare color test card and perform visual matching test	<p>3.1. Test card is prepared in the prescribed manner, to enable a visual comparison between matched and original paints.</p> <p>3.2. Visual matching tests are performed and findings noted.</p> <p>3.3. Matched and original paint comparisons are made and, if necessary, paint is remixed for further matching, prior to application.</p> <p>3.4. Activities are carried out according to industry regulations/ guidelines, OHS requirements, legislation and enterprise procedures/policies.</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste and scrap are removed following workplace procedure.</p>

	4.3. Equipment and work area are cleaned and made ready for next tasks in accordance with workplace procedures.
5.	5.1. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures. 5.2. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures. 5.3. Tooling is maintained in accordance with workplace procedures

Variables	Range
Methods	Include: <ul style="list-style-type: none"> • spray gun techniques • various spraying techniques • drying procedures • paint mixing methods • paint straining methods • paint thinning methods.
Tools and Equipment	Include: <ul style="list-style-type: none"> • Scales • air-operated agitators • hand paddles • mixing banks • spray gun stem strainers • funnel strainers • mesh strainers • vacuum paint strainers • viscosity measuring equipment • high-volume low-pressure spray guns • gravity feed spray guns • suction feed spray guns • pressure regulators • air compressors • spray booths • baking ovens • heating and lighting systems • polishing and cleaning equipment • safety equipment • metal/cardboard test cards

Evidence Guide			
Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> • Prepared for work • Colour match paints using a colour mix test card • Cleaned up work area and maintain equipment 		
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Underpinning knowledge	Demonstrate knowledge of: <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • Environmental protection requirements • Material safety data sheets • Colour codes and formulations/location • Environmental protection.
Underpinning skills	Demonstrate skills of: <ul style="list-style-type: none"> • Apply paint mixing techniques/mixing machines and systems set-up and operation • Apply fundamental colour mixing, matching and checking techniques • Follow work organisation and planning processes • Follow enterprise quality procedures.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Perform Basic Penetration Test
Unit Code	IND TRP2 09 0117
Unit Descriptor	<p>This unit covers performing basic penetrant testing procedures in a range of industrial applications.</p> <p>This unit applies to basic penetrant testing techniques on fabrications, structures and components across a wide range of industries and restricted to basic visible dye and/or process penetrant line methods.</p> <p>The work can relate to scheduled and unscheduled maintenance activities, using general tools, specific penetrant testing equipment as specified in maintenance documentation, testing procedures or operator instructions.</p> <p>Actual and potential defects are to be considered, together with ongoing abnormalities in fabrications, components and structures.</p> <p>Penetrant testing is performed on critical component or structural zones.</p>

Elements	Performance Criteria
1. Prepare inspection areas for basic penetrant testing	<p>1.1. Inspection areas are cleaned and prepared for testing using appropriate procedures and materials.</p> <p>1.2. Preparation processes are carried out in accordance with the relevant procedures and OHS requirements.</p> <p>1.3. Inspection areas are visually assessed and obvious discontinuities are identified.</p>
2. Perform basic penetrant testing	<p>2.1. Nominated test is identified from standard operating procedures.</p> <p>2.2. Test equipment is prepared in accordance with standard operating procedures.</p> <p>2.3. Test media is selected and applied in accordance with workplace practices and specifications.</p> <p>2.4. Penetrant test is carried out in accordance with relevant work instructions and OHS requirements.</p> <p>2.5. Penetrant testing equipment is maintained and stored in accordance with standard operating procedures and OHS requirements.</p>
3. Report the results of penetrant test(s)	<p>3.1. Basic indications are checked and defects are identified in accordance with enterprise standards and/or procedures.</p> <p>3.2. Basic indications are confirmed in accordance with enterprise standards and/or procedures.</p>

	3.3. Test results are reported in accordance with enterprise standards and/or procedures.
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Variable	Range
Preparation processes	Surface cleaning and drying
Obvious discontinuities	Observed changes in material homogeneity
Reporting	Accurate identification of location and size of discontinuities

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> preclearing methods and their areas of use - solvents, vapour degrease, etching, detergents, paint removers, mechanical methods consequences of incorrect preparation procedures and OHS requirements in relation to the preparation process basic concepts and principles of NDT; general terms, purpose of NDT and areas of application of NDT scope and basic description of test general properties of penetrants - penetrability, removability, visibility emulsifier types developer types use of standard test panels established inspection procedures and techniques types of discontinuities and their consequences procedure for carrying out penetrant testing penetrant application dwell times penetrant removal developer application dry powder development time factors affecting indications non-relevant indications post-cleaning methods and their areas of use basic maintenance and storage procedures for testing equipment OHS requirements including storage requirements

	<ul style="list-style-type: none"> • definition of a defect and common basic defects • methods/procedures for reporting test results
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • preparing inspection areas • identifying discontinuities • applying procedures
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level II	
Unit Title	Apply Air Dry and Polyurethane Enamel Refinishing
Unit Code	<u>IND TRP2 10 0117</u>
Unit Descriptor	This unit covers the competence required to apply air dry and polyurethane enamel refinishing materials to a variety of vehicle substrates by spray gun application and determine causes and rectification procedures for paint finish faults. The unit includes identification and confirmation of work requirement, preparation for work, application of materials, the rectification of faults and completion of work finalisation processes, including clean-up and documentation

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including job sheets, material type, colour, quality and quantity.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. OHS requirements, including personal protection needs, breathing apparatus and full body protection, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Identify paint faults, causes and rectification procedures	<p>2.1. Paint faults are identified according to industry and workplace procedures.</p> <p>2.2. Paint fault causes are determined according to industry and workplace procedures.</p> <p>2.3. Rectification procedures are determined according to fault and type of finish material according to industry standard practices and workplace requirements.</p> <p>2.4. Identification and determination activities are carried out according to industry regulations/guidelines, OHS legislation, and enterprise procedures/ policies.</p>
3. Apply air dry and polyurethane enamel refinishing materials by spray gun	<p>3.1. The environment for application of refinishing materials conforms to requirements for temperature, extraction of fumes and cleanliness.</p> <p>3.2. Refinishing materials are applied at</p>

	<p>manufacturer/component supplier recommended intervals using approved methods.</p> <p>3.3. Refinishing materials are dried using approved methods and equipment.</p> <p>3.4. Refinishing materials are applied without causing damage to any component or system.</p> <p>3.5. The finish produced meets specifications for colour, texture, depth and gloss and is contaminant-free.</p> <p>3.6. Surface refinishing is completed within approved timeframes.</p> <p>3.7. Application activities are carried out according to industry regulations/guidelines, OHS legislation, and enterprise procedures/ policies.</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste material is removed and disposed of or stored according to statutory and workplace procedure.</p> <p>4.3. Spray equipment is cleaned as specified by manufacturer/component supplier and/or workplace policy and procedures.</p> <p>4.4. Work area is cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>4.6. Operator maintenance is completed in accordance with manufacturer/ component supplier specifications and worksite procedures.</p> <p>4.7. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range
Methods	<p>May include :</p> <ul style="list-style-type: none"> • spray gun selection • various spraying techniques • drying procedures • paint mixing • Polishing and detailing of surfaces.
Paint types	<ul style="list-style-type: none"> • air dry synthetic enamels • enamel • additives • two pack polyurethane acrylic enamels • urethane additives and paint reducers
Tools and Equipment	<p>May include:</p> <ul style="list-style-type: none"> • various spray guns

	<ul style="list-style-type: none"> • air pressure regulators • air compressors • spray booths • baking ovens • heating and lighting systems • Strainers • masking equipment • safety equipment
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Evidence Guide	
Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • Prepared for work • identify paint faults, causes and rectification procedures • apply air dry and polyurethane enamel refinishing materials by spray gun • cleaned up work area and maintain equipment
Underpinning knowledge	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • Environmental protection requirements/substance disposal and storage requirements • Material safety data sheets • Types of air dry and polyurethane enamel refinishing materials • Drying methods for air dry and polyurethane enamel refinishing material • Types of spray guns • Environmental protection.
Underpinning skill	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • Use application methods • Apply paint surface fault identification and rectification procedures • Use spray gun operation and spraying techniques • Use spray gun cleaning methods • Follow work organisation and planning processes • Follow enterprise quality processes
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level II	
Unit Title	Participate in Workplace Communication
Unit Code	IND TRP2 11 0117
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

Elements	Performance Criteria
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from appropriate sources 1.2 Effective questioning , active listening and speaking skills are used to gather and convey information 1.3 Appropriate medium is used to transfer information and ideas 1.4 Appropriate non- verbal communication is used 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed 1.6 Defined workplace procedures for the location and storage of information are used 1.7 Personal interaction is carried out clearly and concisely
2. Participate in workplace meetings and discussions	2.1 Team meetings are attended on time 2.2 Own opinions are clearly expressed and those of others are listened to without interruption 2.3 Meeting inputs are consistent with the meeting purpose and established protocols 2.4 Workplace interactions are conducted in a courteous manner 2.5 Questions about simple routine workplace procedures and matters concerning working conditions of employment are asked and responded to 2.6 Meetings outcomes are interpreted and implemented
3. Complete relevant work related documents	3.1 Range of forms relating to conditions of employment are completed accurately and legibly 3.2 Workplace data is recorded on standard workplace forms and documents 3.3 Basic mathematical processes are used for routine calculations 3.4 Errors in recording information on forms/ documents are identified and properly acted upon 3.5 Reporting requirements to supervisor are completed according to organizational guidelines

Variable	Range
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Appropriate sources	May include but not limited to: <ul style="list-style-type: none"> • Team members • Suppliers • Trade personnel • Local government • Industry bodies
Medium	May include but not limited to: <ul style="list-style-type: none"> • Memorandum • Circular • Notice • Information discussion • Follow-up or verbal instructions • Face to face communication
Storage	May include but not limited to: <ul style="list-style-type: none"> • Manual filing system • Computer-based filing system
Protocols	May include but not limited to: <ul style="list-style-type: none"> • Observing meeting • Compliance with meeting decisions • Obeying meeting instructions
Workplace interactions	May include but not limited to: <ul style="list-style-type: none"> • Face to face • Telephone • Electronic and two way radio • Written including electronic, memos, instruction and forms, non-verbal including gestures, signals, signs and diagrams
Forms	May include but not limited to: <ul style="list-style-type: none"> • Personnel forms, telephone message forms, safety reports

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge in: <ul style="list-style-type: none"> • Prepared written communication following standard format of the organization • Accessed information using communication equipment • Made use of relevant terms as an aid to transfer information effectively • Conveyed information effectively adopting the formal or informal communication
Underpinning	Demonstrate knowledge of:

Knowledge and Attitudes	<ul style="list-style-type: none"> • Effective communication • Different modes of communication • Written communication • Organizational policies • Communication procedures and systems • Technology relevant to the enterprise and the individual's work responsibilities
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • Follow simple spoken language • Perform routine workplace duties following simple written notices • Participate in workplace meetings and discussions • Complete work related documents • Estimate, calculate and record routine workplace measures • Do basic mathematical processes of addition, subtraction, division and multiplication • relate to people of social range in the workplace • Gather and provide information in response to workplace Requirements
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Work in Team Environment
Unit Code	IND TRP2 12 0117
Unit Descriptor	This unit covers the skills, knowledge and attitudes to identify role and responsibility as a member of a team.

Elements	Performance Criteria
1. Describe team role and scope	<p>1.1 The role and objective of the team are identified from available sources of information</p> <p>1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources</p>
2. Identify own role and responsibility within team	<p>2.1 Individual role and responsibilities within the team environment are identified</p> <p>2.2 Roles and responsibility of other team members are identified and recognized</p> <p>2.3 Reporting relationships within team and external to team are identified</p>
3. Work as a team member	<p>3.1 Effective and appropriate forms of communications used and interactions undertaken with team members who contribute to known team activities and objectives</p> <p>3.2 Effective and appropriate contributions are made to complement team activities and objectives, based on individual skills and competencies and workplace context</p> <p>3.3 Protocols are observed in reporting using standard operating procedures</p> <p>3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives and individual competencies of the members.</p>

Variable	Range
Role and objective of team	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Work activities in a team environment with enterprise or specific sector • Limited discretion, initiative and judgment maybe demonstrated on the job, either individually or in a team environment
Sources of information	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Standard operating and/or other workplace procedures • Job procedures • Machine/equipment manufacturer's specifications and

	<p>instructions</p> <ul style="list-style-type: none"> • Organizational or external personnel • Client/supplier instructions • Quality standards • OHS and environmental standards
Workplace context	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Work procedures and practices • Conditions of work environments • Legislation and industrial agreements • Standard work practice including the storage, safe handling and disposal of chemicals • Safety, environmental, housekeeping and quality guidelines

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • Operated in a team to complete workplace activity • Worked effectively with others • Conveyed information in written or oral form • Selected and used appropriate workplace language • Followed designated work plan for the job • Reported outcomes
Underpinning Knowledge and Attitude	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Communication process • Team structure • Team roles • Group planning and decision making
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • Communicate appropriately, consistent with the culture of the workplace
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level II	
Unit Title	Develop Business Practice
Unit Code	IND TRP2 13 0117
Unit Descriptor	This unit covers knowledge, skills and attitude required to establish a business operation from a planned concept. It includes researching the feasibility of establishing a business operation, planning the setting up of the business, implementing the plan and reviewing operations once commenced, customer handling, developing and maintaining business relationships.

Elements	Performance Criteria
1. Identify business opportunities and business skills	<p>1.1 The concept of paradigm shift and means of divergent thinking are elaborated and strategies to look beyond the boundaries are discussed.</p> <p>1.2 Unusual business opportunities are identified.</p> <p>1.3 Feasibility on business skills and personal attributes is assessed and matched against those perceived as necessary for a particular business opportunity.</p> <p>1.4 New behavior on how problems can be the pivotal source of business opportunity is elaborated and experience taken.</p> <p>1.5 Assistance sought with feasibility study of specialist and relevant parties is discussed, as required.</p> <p>1.6 Impact of emerging or changing technology, including e-commerce, on business operations is evaluated.</p> <p>1.7 Practicability of business opportunity is assessed in line with perceived business risks, returns sought, personal preferences and resources available.</p> <p>1.8 Business plan is revised in accordance with the identified opportunities.</p>
2. Plan for the establishment of business operation	<p>2.1 Organizational structure and operations are determined and documented.</p> <p>2.2 Procedures are developed and documented to guide operations.</p> <p>2.3 Financial backing is secured for business operation.</p> <p>2.4 Business legal and regulatory requirements are identified and compiled.</p> <p>2.5 Human and physical resources required to commence business operation are determined.</p> <p>2.6 Recruitment and procurement strategies are developed.</p>
3. Implement Business Development	<p>3.1 Physical and human resources are obtained to implement business operation.</p>

Plan	<p>3.2 Operational unit is established to support and coordinate business operation.</p> <p>3.3 Simulations on the development plan are well discussed and understood.</p> <p>3.4 Implementation manual is discussed and understood.</p> <p>3.5 Marketing the business operation is undertaken.</p> <p>3.6 Monitoring process is developed and implemented for managing operation.</p> <p>3.7 Legal documents are carefully maintained and relevant records kept and updated to ensure validity and accessibility.</p> <p>3.8 Contractual procurement rights for goods and services including contracts with relevant people are negotiated and secured as required in accordance with the business plan.</p> <p>3.9 Options for leasing/ownership of business premises are identified and contractual arrangements completed in accordance with the business plan.</p>
4. Review implementation process and take corrective measures	<p>4.1 Review process is developed and implemented for implementation of business operation.</p> <p>4.2 Improvements in business operation and associated management process are identified.</p> <p>4.3 Identified improvements are implemented and monitored for effectiveness.</p>
5. Establish contact with customers and clarify needs of customer	<p>5.1 Persuasion strategies are developed and discussed.</p> <p>5.2 Welcoming customer environment is maintained and Customer is greeted warmly according to enterprise policies and procedures.</p> <p>5.3 Information is provided to satisfy customer needs.</p> <p>5.4 Information on customers and service history is gathered for analysis.</p> <p>5.5 Customer data is maintained to ensure database relevance and currency.</p> <p>5.6 Customer needs are accurately assessed against the products/services of the enterprise.</p> <p>5.7 Customer details are documented clearly and accurately in required format.</p> <p>5.8 Negotiations are conducted in a business-like and professional manner.</p> <p>5.9 Benefits for all parties are maximized in the negotiation through use of established techniques and in the context of establishing long term relationships.</p>

	<p>5.10 The results of negotiations are communicated to appropriate colleagues and stakeholders within appropriate timeframes.</p> <p>5.11 Opportunities to maintain regular contact with customers are identified and taken-up.</p>
6. Develop and Maintain Business Relationship	<p>6.1 Features and benefits of products/services provided by the enterprise are described/ recommended to meet customer needs.</p> <p>6.2 Alternative sources of information/advice are discussed with the customer.</p> <p>6.3 Information needed is pro-actively sought, reviewed and acted upon to maintain sound business relationships.</p> <p>6.4 Agreements are honored within the scope of individual responsibility.</p> <p>6.5 Adjustments to agreements are made in consultation with the customer and information shared with appropriate colleagues.</p> <p>6.6 Relationships are nurtured through regular contact and use of effective interpersonal and communication styles.</p>

Variable	Range
Unusual Business opportunities	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Public holidays • Ceremonies • Natural disaster • Campaigns
Business opportunities	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Expected financial viability • Skills of operator • Amount and types of finance available • Returns expected or required by owners • Likely return on investment • finance required • Lifestyle issues
Business skills and personal attributes	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Technical and/ or specialist skills • Managerial skills • Entrepreneurial skills • Taking calculated risk skills • Willingness to take calculated risks • Willingness to work under pressure
Specialist and relevant parties	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Chamber of commerce • Financial planners and financial institution representatives, business planning specialists and marketing specialists

	<ul style="list-style-type: none"> • Accountants • Lawyers and providers of legal advice • Government agencies • Industry/trade associations • Online gateways • Business brokers/business consultants
Business risks	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Occupational health and safety • Environmental risks • Relevant legislative requirements • Security of investment • Market competition • Security of premises/location • Supply and demand • Resources available
Human and physical resources	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Software and hardware • Office premises and equipment • Communications equipment • Specialist services through outsourcing, contracting and consultancy • Staff • Vehicles
Operational unit	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • different departments, sections, teams, divisions, etc. staffed with required personnel and equipped to service and support business
Legal documents	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Partnership agreements, constitution documents, statutory books for companies (register of members, register of directors and minute books), certificate of Incorporation, franchise agreements and financial documentation, appropriate software for financial records • Occupational Health Safety (OHS) • Recordkeeping including personnel, financial, taxation, and environmental
Contracts with relevant people	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • business owners, suppliers, employees, agents, land owners, distributors, customers or any person with whom the business has, or seeks to have, a performance-based relationship
Negotiation techniques	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Identification of goals, limits • Clarification of needs of all parties • Listening and questioning • Non-verbal communication techniques • Appropriate language and situation • Bargaining

	<ul style="list-style-type: none"> • Developing options • Appropriate cultural behavior • Confirming agreements
Opportunities to maintain regular contact	<p>to maintain regular contact with customers may include:</p> <ul style="list-style-type: none"> • Informal social occasions • Ceremonies • Exhibitions • Industry functions • Association membership • Co-operative promotions • Program of regular telephone contact

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates knowledge and skills in:</p> <ul style="list-style-type: none"> • that a business operation has been planned and implemented from initial research of feasibility of the business and completion of the plan, through implementing the plan and commencing operations • the ability to evaluate the results of research and assess the likely viability and practicability of a business opportunity, taking into account the current business/market climate and resources available • treating customers in a courteous and professional manner • building and maintaining relationships to achieve successful business outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Paradigm shift • Unusual business opportunities • Feasibility study • Business structure • Federal and regional government legislative requirements affecting business operations, especially in regard to Occupational Health and Safety (OHS), Equal Employment Opportunity (EEO), industrial relations and anti-discrimination • Procurement and recruitment strategy • Operational unit • Monitoring process • Business systems and operations • Relevant marketing, management, sales and financial concepts • Options for financing • Business premises and ownership • Lease • Methods for researching business opportunities • Methods of identifying relevant specialist services to complement the business • Advertising and promotion

	<ul style="list-style-type: none"> • Distribution and logistics • Terms and conditions in contractual agreement • Record keeping duties • Operational factors relating to the business (provision of professional services, products) • Customer need assessment • Source of information • Operational knowledge of enterprise policies and procedures in regard to: <ul style="list-style-type: none"> ➢ customer service ➢ dealing with difficult customers ➢ maintenance of customer databases ➢ allocated duties/responsibilities ➢ General knowledge of the range of enterprise merchandise and services, location of telephone extensions and departments/sections • Basic operational knowledge of industry/workplace codes of practice in relation to customer service • negotiation and communication techniques appropriate to negotiations that may be of significant commercial value 		
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • Hunting and exploiting unusual business opportunities • Interpreting legal requirements, company policies and procedures and immediate, day-to-day demands • Conducting feasibility study • Developing new behavior • Using technology • Marketing skills • Business planning skills • Entrepreneurial skills • Time management skills • Customer handling skills • Communication skills including questioning, clarifying, reporting, and giving and receiving constructive feedback • Technical and analytical skills to interpret business documents, reports and financial statements and projections • Ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities • Problem solving skills to develop contingency plans • Using computers and software packages to record and manage data and to produce reports • Interpreting business information, numeracy skills for data analysis to aid research • Negotiation to conduct business activities • Research to identify a business opportunity and to conduct a feasibility study • Analytical skills to assess personal attributes and to identify business risks 		
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	<ul style="list-style-type: none"> • Observation skills for identifying appropriate people, resources and to monitor work • Persuasion and networking skills • Welcoming customers • Information seeking skills to collect, organize and understand information related to collating and analyzing customer information to identify needs • Establish diagnostic processes which identify and recommend improvements to customer service
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level II	
Unit Title	Standardize and Sustain 3S
Unit Code	IND TRP2 14 0117
Unit Descriptor	This unit of competence covers the knowledge, skills and attitudes required by worker to standardize and sustain 3S to his/her workplace. It covers responsibility for the day- to-day operations of the workplace and ensuring that continuous improvements of Kaizen elements are initiated and institutionalized.

Elements	Performance Criteria
1. Prepare for work.	<p>1.1 Work instructions are used to determine job requirements, including method, material and equipment.</p> <p>1.2 Job specifications are read and interpreted following working manual.</p> <p>1.3 OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.</p> <p>1.4 Safety equipment and tools are identified and checked for safe and effective operation.</p> <p>1.5 Tools and equipment are prepared and used to implement 3S.</p>
2. Standardize 3S.	<p>2.1 Plan is prepared and used to standardize 3S activities.</p> <p>2.2 Tools and techniques to standardize 3S are prepared and implemented based on relevant procedures.</p> <p>2.3 Checklists are followed for standardize activities and reported to relevant personnel.</p> <p>2.4 The workplace is kept to the specified standard.</p> <p>2.5 Problems are avoided by standardizing activities.</p>
3. Sustain 3S.	<p>3.1 Plan is prepared and followed to standardize 3S activities.</p> <p>3.2 Tools and techniques to sustain 3S are discussed, prepared and implemented based on relevant procedures.</p> <p>3.3 Workplace is inspected regularly for compliance to specified standard and sustainability of 3S techniques.</p> <p>3.4 Workplace is cleaned up after completion of job and before commencing next job or end of shift.</p> <p>3.5 Situations are identified where compliance to standards is unlikely and actions specified in procedures are taken.</p> <p>3.6 Improvements are recommended to lift the level of compliance in the workplace.</p>

	<p>3.7 Checklists are followed to sustain activities and reported to relevant personnel.</p> <p>3.8 Problems are avoided by sustaining activities.</p>
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Variable	Range
OHS requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances. • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • dust masks / goggles • glove • working cloth • first aid • safety shoes
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • paint • hook • sticker • signboard • nails • shelves • chip wood • sponge • broom • pencil • shadow board/ tools board
Tools and techniques	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • 5S Job Cycle Charts • Visual 5S • The Five Minute 5S • Standardization level checklist • 5S checklist • The five Whys and one How approach(5W1H)

	<ul style="list-style-type: none"> • Suspension • Incorporation • Use Elimination
Relevant procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Assign 3S responsibilities • Integrate 3S duties into regular work duties • Check on 3S maintenance level • OHS measures such as signage, symbols / coding and labeling of workplace and equipment • Creating conditions to sustain your plans • Roles in implementation
Reporting	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal responses • data entry into enterprise database • brief written reports using enterprise report formats
Relevant personnel	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • supervisors, managers and quality managers • administrative, laboratory and production personnel • internal/external contractors, customers and suppliers
Tools and techniques	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • 5S slogans • 5S posters • 5S photo exhibits and storyboards • 5S newsletter • 5S maps • 5S pocket manuals • 5S department/benchmarking tours • 5S months • 5S audit • Awarding system • Big cleaning day • Patrolling system may include: <ul style="list-style-type: none"> ➢ Top management Patrol ➢ 5S Committee members and Promotion office Patrol ➢ Mutual patrol ➢ Self-patrol ➢ Checklist patrol ➢ Camera patrol

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Discuss the relationship between Kaizen elements. • Standardize and sustain 3S activities by applying appropriate tools and techniques.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Elements of Kaizen • Ways to improve Kaizen elements

	<ul style="list-style-type: none"> • Benefits of improving kaizen elements • Relationship between Kaizen elements • The fourth pillar of 5S • Benefits of standardizing and sustaining 3S • Procedures for standardizing and sustaining 3S activities • Tools and techniques to sustain 3S • Relevant Occupational Health and Safety (OHS) and environment requirements • Plan and report • Method of communication
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> • improving Kaizen elements by applying 5S • standardizing and sustaining procedures and techniques to avoid problems • technical drawing • procedures to standardizing 3S activities • analyzing and preparing shop layout of the workplace • standardizing and sustaining checklists • preparing and implementing tools and techniques to sustain 3S • working with others • reading and interpreting documents • observing situations • solving problems by applying 5S • communication skills • preparing labels, slogans, etc. • gathering evidence by using different means • using Kaizen board properly in accordance the procedure • reporting activities and results using report formats
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

NTQF Level III

Occupational Standard: Train Painting Level III	
Unit Title	Control Train Paint Line Production
Unit Code	IND TRP3 01 0117
Unit Descriptor	This unit describes the performance outcomes required to control a paint line in a vehicle production process and avoid vehicle painting inconsistencies. It applies to those in an automotive manufacturing environment and involves the application of skills and knowledge at a specialist level.

Elements	Performance Criteria
1. Plan and prepare	1.1. Workplace procedures are identified and followed 1.2. Work instructions, production reports and quality standards are confirmed with appropriate personnel 1.3. Tools and equipment are selected, checked for serviceability, and faults are rectified or reported 1.4. Appropriate materials are identified, obtained and prepared
2. Assess paint line flow	2.1. Paint is regularly checked for batch accuracy, consistency and viscosity prior to adding it to the paint production line 2.2. Paint lines are checked for faults and inconsistencies 2.3. Paint supply and production requirements are monitored to ensure required color transition 2.4. Paint line is monitored for faults and maintained as required according to workplace procedures
3. Rectify problems	3.1. Production line problems are assessed and cause of any problems is identified 3.2. Cause of problems is analyzed and rectified 3.3. Paint line problems are addressed to ensure correct operation
4. Complete work processes	4.1. Work area is cleaned, and materials disposed of or recycled according to workplace requirements 4.2. Paint line tools and equipment are cleaned, maintained and stored according to workplace procedures 4.3. Workplace documentation outlining nature of problem, work conducted and outcome is completed according to workplace procedures

Variable	Range
Workplace procedures	May Include:
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	<ul style="list-style-type: none"> • quality and continuous improvement processes and standards • recording and reporting of paint line outcome • use of equipment • WHS requirements relating to paint line production process.
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Evidence Guide	
Critical Aspects of Competence	Demonstrate knowledge and skills to: <ul style="list-style-type: none"> • vehicle painting techniques • paint line systems and control techniques • paint codes and vehicle specifications • use paint production line tools and equipment safely
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • WHS requirements to operate a production paint line • production line quality standards • automotive refinishing terminology • paint line tools and equipment • paint viscosity • processes for calculating paint material • location of paint SDS • Procedures for material handling, storage and waste management.
Underpinning Skills	Demonstrate skills of: <ul style="list-style-type: none"> • locate, interpret and apply paint line information, quality standards and paint specifications • comply with Work Health and Safety (WHS) requirements relating to controlling vehicle paint line production • follow workplace procedures relating to controlling vehicle paint line production • communicate paint line requirements to co-workers • complete a paint line assessment, including entry of a new batch of same colour paint and changeover to a new colour • rectify paint line faults • Complete paint line job sheets and reports relating to vehicle paint line production.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Apply Clear over Base Multi Layer/Pearl Refinishing
Unit Code	IND TRP3 02 0117
Unit Descriptor	This unit covers the competence required to apply clear over base multi layer/pearl refinishing materials to a variety of vehicle substrates by spray gun application and determine causes and apply rectification procedures for paint finish faults. The unit includes preparation for work, application of materials, the rectification of faults and completion of work finalisation processes, including clean-up and documentation

Element	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including job sheets, material type, colour, quality and quantity.</p> <p>1.2. Job specifications are interpreted correctly and confirmed.</p> <p>1.3. OHS requirements, including personal protection needs, breathing apparatus and full body protection, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimise waste material.</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Apply clear over base multi layer/ pearl refinishing materials by spray gun	<p>2.1. The environment for application of refinishing materials conforms to requirements for temperature, extraction of fumes and cleanliness.</p> <p>2.2. Refinishing materials are applied at manufacturer/component supplier recommended intervals using approved methods.</p> <p>2.3. Refinishing materials are dried using approved methods and equipment.</p> <p>2.4. Paint film surface faults are removed using compounds, polishes and glazes.</p> <p>2.5. Refinishing materials are applied without causing damage to any component or system.</p> <p>2.6. The finish produced meets specifications for colour, texture, depth and gloss and is contaminant-free, blending into the surrounding surfaces.</p>

	<p>2.7. Surface refinishing is completed within approved timeframes.</p> <p>2.8. Application activities are carried out according to industry regulations/ guidelines, OHS legislation, and enterprise procedures.</p>
3. Identify paint faults, causes and rectification procedures	<p>3.1. Paint faults are identified according to industry and workplace procedures.</p> <p>3.2. Paint fault causes are determined according to industry and workplace procedures.</p> <p>3.3. Rectification procedures are determined according to fault and type of finish material according to industry standard practices and workplace requirements.</p> <p>3.4. Identification and determination activities are carried out according to industry regulations/guidelines, OHS legislation and enterprise procedures/policies.</p>
4. Rectify and touch up paint faults of clear over base multi layer/ pearl refinishing materials	<p>4.1. Materials to restore paintwork to as new condition are determined from industry and manufacturer/component supplier standards.</p> <p>4.2. Damaged paintwork is rectified to blend with existing paintwork on vehicle.</p> <p>4.3. All rectification operations are carried out according to industry regulations/guidelines, OHS legislation, and enterprise procedures/ policies.</p> <p>4.4. Paint faults are rectified without causing damage to any component or system.</p>
5. Clean up work area and maintain equipment	<p>5.1. Material that can be reused is collected and stored.</p> <p>5.2. Waste material is removed and disposed of or stored according to statutory and workplace procedures.</p> <p>5.3. Spray equipment is cleaned as specified by manufacturer/ component supplier and/or workplace policy and procedures.</p> <p>5.4. Work area is cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>5.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>5.6. Operator maintenance is completed in accordance with manufacturer/ component supplier specifications and worksite procedures.</p> <p>5.7. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range
Refinishing materials	May include: <ul style="list-style-type: none"> • acrylic enamel • multi layer/pearl paints • two-pack base coats • acrylic enamel clear • acrylic enamel hardeners and reducers • paint reducers.
Refinishing methods	May include: <ul style="list-style-type: none"> • spray gun selection equipment protection methods • various spraying techniques • drying procedures • paint mixing • compound polishing • detailing of surfaces.
Tools and Equipment	May include: <ul style="list-style-type: none"> • various spray guns • air pressure regulators • air compressors • spray booths • baking ovens • heating and lighting systems • strainers • measuring sticks • safety equipment.

Evidence Guide	
Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> • Prepared for work • Apply clear over base multi layer • Identify paint faults, causes and rectification procedures • Rectify and touch up paint faults of clear over base multi layer • Cleaned up work area and maintain equipment
Underpinning knowledge	Demonstrate knowledge of: <ul style="list-style-type: none"> • OHS regulations/requirements, equipment, material and personal safety requirements • Environmental protection requirements/substance disposal and storage requirements • Material safety data sheets • Types of clear over base multi layer/pearl refinishing materials • Environmental protection.
Underpinning skill	Demonstrate skills of: <ul style="list-style-type: none"> • Use application methods • Identify paint surface fault identification and rectification procedures

	<ul style="list-style-type: none"> • Perform spray gun operation (spraying techniques) • Use spray gun cleaning method • Follow work organisation and planning processes • Follow enterprise quality processes.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Change Extrusion Die and Set up
Unit Code	IND TRP3 03 0117
Unit Descriptor	<p>This competency covers the removal and refitting of dies, pins, sizing dies (calibrator), vacuum blocks and seals in preparation for production. This competency applies to extrusion, and similar, dies.</p> <p>This competency is typically performed by advanced operators demonstrating some relevant theoretical knowledge and using a range of well-developed skills requiring some discretion and judgement.</p>

Elements	Performance Criteria		
1. Prepare to change dies or cores.	<p>1.1. Process is planned for closing down machinery and inform relevant personnel.</p> <p>1.2. Last-off samples are taken as required for die reports.</p> <p>1.3. Dies or cores are selected to match product/process specification.</p> <p>1.4. Measures are implemented to control identified hazards in line with procedures and duty of care.</p>		
2. Shut down extruder.	<p>2.1. Downstream equipment are stopped.</p> <p>2.2. Feed, drop temperatures, stop vacuum pump and purge are stopped the extruder.</p> <p>2.3. Isolating locks are activated, power is disconnected to heaters.</p>		
3. Change setup.	<p>3.1. Die is removed, cleaned and stored according to workplace procedures.</p> <p>3.2. Fit replacement die ensuring that locating devices and marks are matched and securing devices are installed and tightened to specification.</p> <p>3.3. Calibrator sleeve and seals are removed and re-fitted as required.</p> <p>3.4. Heats are set according to pre-start procedures.</p>		
4. Restart and test-run the new setup.	<p>4.1. Operation of die is checked against product quality</p> <p>4.2. Machine setting ranges are compared against documented requirements.</p> <p>4.3. The first-off sample is checked for required standards</p> <p>4.4. Settings and other production variables are fine-tuned as required.</p> <p>4.5. Variances between standard operating procedures and actual production run are noted.</p>		
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	4.6. Workplace documentation is completed and reported to appropriate personnel.
5. Anticipate and solve problems	<p>5.1. A problem or a potential problem is recognised.</p> <p>5.2. Problems needing priority action are determined.</p> <p>5.3. Problems outside area of responsibility are referred to appropriate person, with possible causes.</p> <p>5.4. Information and assistance are sought as required to solve problems.</p> <p>5.5. Problems are solved within area of responsibility</p> <p>5.6. Follow through items initiated until final resolution has occurred.</p>

Variable	Range
Hazards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action
Procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action
Variables	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • fitting and adjustments to die • adjustments to extruder settings • quality of the product against product specifications
Problems	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action
Context	May include but not limited to:

	<ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • select, install and check the performance of die and cores • locate, interpret and apply relevant information • maintain workplace records • identify and safely handle products and materials • apply safety precautions appropriate to the task • recognise potential situations requiring action and then implement appropriate action

Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Carry out Custom Painting Technique
Unit Code	IND TRP3 04 0117
Unit Descriptor	<p>This unit covers the competence required to carry out custom painting techniques on a variety of substrates and apply relevant clear or tinted top coat refinishing materials by spray gun application.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, application of materials, the rectification of faults and completion of work finalisation processes, including clean-up and documentation. Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including job sheets, material type, color, quality and quantity.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including personal protection needs, breathing apparatus and full body protection, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Prepare substrate for the application of custom finishes.</p> <p>1.8. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Apply mediums to paint surfaces to create a variety of different visual effects	<p>2.1. Substrates, backgrounds, materials and equipment used for creation of a range of visual effects are identified.</p> <p>2.2. Appropriate color combinations and effects for pictorial reproduction mediums and equipment to produce various painting techniques are selected.</p> <p>2.3. Accurate visual texture, light and shade on given subject matter is achieved.</p> <p>2.4. Appropriate colors to replicate the given subject, achieving correct tones and tonal order are selected and applied.</p> <p>2.5. Lines, shapes, patterns and illustrations are produced using freehand techniques with the assistance of shields, templates or stencils.</p>

	<p>2.6. Appropriate backgrounds, color combinations and the effectiveness of colors are identified and produced.</p> <p>2.7. Application of special effects to given illustrations/graphics are performed, including: highlighting, reflection, and transparency techniques</p> <p>2.8. Application of paint mediums to surfaces is carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>
3. Prepare a substrate ready to accept a clear top coat	<p>3.1. Correct abrasives are identified and selected to carry out substrate preparation for clear top coat finishes.</p> <p>3.2. Correct cleaning and drying procedures are carried out in relation to sludge removal.</p> <p>3.3. Preparation of the surface to accept clear top coats is carried out using solvent cleaners and tack rags.</p> <p>3.4. Surface preparation activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>
4. Apply clear top coat refinishing materials by spray gun	<p>4.1. Refinishing materials are applied without causing damage to any component or system.</p> <p>4.2. The finish produced is made to meet specifications for; texture, depth and gloss and is contaminant-free.</p> <p>4.3. Application activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>
5. Rectify and touch up paint faults of clear over base multi-layer refinishing materials	<p>5.1. Materials to restore paintwork to as new condition are determined from industry and manufacturer/component supplier standards.</p> <p>5.2. Damaged paintwork is rectified to blend with existing paintwork.</p> <p>5.3. Paint film surface faults are removed using compounds, polishes and glazes.</p> <p>5.4. Paint faults are rectified without causing damage to any component or system.</p> <p>5.5. All rectification operations are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>
6. Clean up work area and maintain equipment	<p>6.1. Material that can be reused is collected and stored.</p> <p>6.2. Waste material is removed and disposed of or stored according to statutory and workplace procedure.</p> <p>6.3. Spray equipment is cleaned as specified by manufacturer/ component supplier and/or workplace</p>

	<p>policy and procedures.</p> <p>6.4. Work area is cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>6.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>6.6. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>6.7. Tooling is maintained in accordance with workplace procedures.</p>
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Variable	Range
WHS requirements	<p>This may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Materials	<p>may include :</p> <ul style="list-style-type: none"> • Templates • Stencils • masking medium • tac rags • water-based and solvent-based paints • polishing buffs and pads • cleaning solvents • compounds • glazes • cleaning materials
Refinishing materials	<p>May include:</p> <ul style="list-style-type: none"> • Acrylic enamel • acrylic lacquer • waterborne paints • acrylic enamel hardeners • reducers.
Refinishing methods	<p>May include</p> <ul style="list-style-type: none"> • Spray gun selection equipment protection methods • various spraying techniques • drying procedures • paint mixing • compound polishing • detailing of surfaces.

Personal protective equipment	is to include that prescribed under legislation/regulation/codes of practice and practices.
Safe operating procedures	May include, but are not limited to: <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	May include, but are not limited to: <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	to include but are not limited to <ul style="list-style-type: none"> • Waste management • Noise • dust • clean-up management
Quality requirements	May include, but are not limited to: <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	may include <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Tooling and equipment	May include, but are not limited to: <ul style="list-style-type: none"> • various air brushes • spray guns • air pressure regulators • air compressors • spray booths • baking ovens • heating and lighting systems • Strainers • measuring sticks • specialised custom painting tools/equipment • safety equipment
Communications	May include, but are not limited to: <ul style="list-style-type: none"> • worksite specific instructions • written instructions

	<ul style="list-style-type: none"> • plans or instructions related to job/task • telephones • pagers
Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons
Fundamental custom graphic techniques	<p>May include:</p> <ul style="list-style-type: none"> • pictorial reproduction • highlighting • Reflective • and transparency techniques • texture simulation • metal • Stone • liquid simulations • highlighting techniques • leather simulation • chrome simulation • marbling and the use of tinted clears

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • preparing a surface ready to accept colour coats • demonstrating custom painting techniques including, pictorial reproduction, highlighting, special effects • preparing surfaces in readiness for clear top coat paint refinishing materials • applying clear and coloured top coat refinishing materials • rectifying paint faults • applying environmental procedures
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Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements/substance disposal and storage requirements • material safety data sheets • types of paints used for custom painting • types of clear coat refinishing materials • application methods • pictorial reproduction • special effects tools and techniques • types of spray guns • spray gun operation (spraying techniques)
Underpinning Skills	<p>Demonstrate skills of:</p> <ul style="list-style-type: none"> • collecting, organising and understanding information related to work orders, plans and safety procedures for vehicle paint restoration • identifying safety precautions • identifying recommended applications and procedures • communicating ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • reading and interpreting product labels/directions • listening and following verbal instructions • planning and organising activities, including preparation and layout of worksite and obtaining of equipment and materials to avoid backtracking, workflow interruptions or wastage • working with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • establishing safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • using mathematical ideas and techniques to complete measurements and estimate material requirements required for measuring and mixing restoration materials • using workplace technology related to custom painting, including the use of painting equipment, measuring equipment and communication devices and the reporting/recording of results
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>

Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Prepare and Paint Plastic Components
Unit Code	IND TRP3 05 0117
Unit Descriptor	<p>This unit covers the competence required to prepare and apply refinishing materials to plastic surfaces.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, preparation of plastic surfaces, selection, application and drying of finishing material and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including method and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Prepare plastic surfaces for refinishing	<p>2.1. Environment is made ready for preparation of plastic surfaces conforms to requirements for temperature, extraction of fumes and cleanliness.</p> <p>2.2. Preparation activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>2.3. Preparation is completed without causing damage to any component or system.</p> <p>2.4. Waste materials are disposed of and/or stored in accordance with statutory and enterprise requirements.</p>
3. Apply refinishing materials to plastic surfaces	<p>3.1. Environment for application of refinishing materials conforms to requirements for temperature, extraction of fumes and cleanliness.</p> <p>3.2. Surfaces are prepared and refinishing materials are applied at manufacturer/component supplier recommended intervals using approved methods.</p>

	<p>3.3. Refinishing materials are dried using approved methods and equipment.</p> <p>3.4. Finish produced meets application specifications for color, texture, depth and gloss and is contaminant-free blending into surrounding surfaces.</p> <p>3.5. Refinishing material application is completed without causing damage to any component or system.</p> <p>3.6. Application activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>3.7. Waste materials are disposed of and/or stored in accordance with statutory and enterprise requirements.</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste and scrap are removed following workplace procedure.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
WHS requirements	<p>his may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Materials	<p>may include</p> <ul style="list-style-type: none"> • acrylic enamel • multi layer/pearls • two pack base coats • acrylic enamel clear • hardeners and reducers • tac rags

	<ul style="list-style-type: none"> • polishing buffs and pads • cleaning solvents • compounds and glazes • cleaning material
Preparation	application of anti-static cleaning agents.
Application methods	<p>May Includes:</p> <ul style="list-style-type: none"> • spray gun techniques • various spraying techniques • drying procedures • paint mixing and polishing • detailing of brushed surfaces
Personal protective equipment	is to include that prescribed under legislation/regulation/codes of practice and practices.
Safe operating procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	<p>to include but are not limited to</p> <ul style="list-style-type: none"> • Waste management • Noise • dust • clean-up management
Quality requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	<p>may include</p> <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Tooling and equipment	<p>May include:</p> <ul style="list-style-type: none"> • various spray guns • air pressure regulators • air compressors

	<ul style="list-style-type: none"> • spray booths • baking ovens • heating and lighting systems • Strainers • measuring sticks and ford cup.
Communications	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers.
Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • applying environmental procedures for preparing paint • Preparing and painting plastic components.
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements/storage and disposal requirements • material safety data sheets • surface preparation methods • types of paints • application methods, including spray and roller methods • types of spray guns and maintenance requirements • spray gun/roller techniques • paint drying methods and procedures

	<ul style="list-style-type: none"> • work organisation and planning processes • enterprise quality processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for preparation and painting of plastic components • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and materials to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to calculate time, apply accurate measurements, calculate material requirements and establish quality checks • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • use workplace technology related to preparation and painting of plastic components, including the use of specialist tooling and equipment, measuring equipment and communication devices and the reporting/recording of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Cary out Paint-Less Dent Repairs
Unit Code	IND TRP3 06 0117
Unit Descriptor	<p>This unit covers the competence required to carry out paint-less dent repairs.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, repair and checking of components and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including quality, tooling and equipment.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Hand/power tooling are identified and checked for safe use.</p> <p>1.5. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Carry out paint-less dent repair	<p>2.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>2.2. Components are repaired using approved methods and equipment in accordance with industry recognized practices.</p> <p>2.3. Where repair of components includes disturbance to electrical, mechanical, air conditioning systems or trim, authorized assistance is sought.</p> <p>2.4. Repair activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>2.5. Repairs are checked to specification and workplace/ equipment records are completed to worksite requirements.</p>
3. Clean up work area and maintain equipment	<p>3.1. Equipment and work area are cleaned and inspected for serviceable conditions in accordance with workplace procedures.</p> <p>3.2. Unserviceable equipment is tagged and faults identified in accordance with workplace.</p>

	<p>3.3. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>3.4. Tooling is maintained in accordance with workplace procedures.</p>
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Variable	Range
WHS requirements	<p>May include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Paint-less dent repairs	are those not requiring refinishing.
Paint-less dent repair methods	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Pressing • Beating • Reforming • levering • pulling.
Personal protective equipment	That prescribed under legislation/regulation/codes of practice and workplace policies and practices.
Safe operating procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	<p>to include but are not limited to</p> <ul style="list-style-type: none"> • Waste management • Noise • dust and clean-up management.
Quality requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Standards

	<ul style="list-style-type: none"> • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	<p>may include</p> <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations and codes of practice
Tooling and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • hand tooling • power tooling • Equipment • Templates • panel reforming tooling and equipment • personal and vehicle protection • bonding systems • Lighting • specialist tooling and lifting equipment.
Materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • surface preparation • cleaning materials
Communications	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones and pagers
Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • observe safety procedures and requirements • communicate effectively with others involved in or affected by the work • select methods and techniques appropriate to the circumstances
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	<ul style="list-style-type: none"> • complete preparatory activity in a systematic manner • apply vehicle protection methods • complete paint-less dent repairs for a minimum of two upstretched shallow dents (minimum dimensions of 30mm x 5mm) • Complete workplace/equipment records.
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • types of dents and materials appropriate to paint-less dent repair • paint-less dent repair methods and techniques • work organisation and planning processes • enterprise quality processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures • apply analytical skills required for identification and analysis of technical information • apply plain English literacy and communication skills in relation to dealing with customers and team members • apply questioning and active listening skills for example when obtaining information from customers • apply oral communication skills sufficient to convey information and concepts to customers • apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance • interact effectively with other persons both on a one-to-one basis and in groups, including understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • use mathematical ideas and techniques to calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks • use workplace technology related to paint-less dent repair, including the use of specialist tooling, measuring equipment and communication devices and the reporting/recording of results

Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Service Air Compressor and Air Line
Unit Code	IND TRP3 07 0117
Unit Descriptor	<p>This unit covers competence to carry out air compressor, pressure regulator and airline servicing appropriate to operation of air equipment and spray guns within the body repair sector.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, servicing of air compressors, servicing of air lines and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work involves air compressor regulator, water trap and lines for use of spray painting equipment associated with the vehicle body repair industry.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including method and material type</p> <p>1.2. Job specifications are read and interpreted</p> <p>1.3. WHS requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Materials are selected and inspected for quality</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for safe use</p> <p>1.6. Procedures are determined to minimize waste material</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing job</p>
2. Service air compressor	<p>2.1. Information is accessed and interpreted from manufacturer/component supplier specifications</p> <p>2.2. Service is carried out using approved methods and equipment, according to specifications relative to the plant/system</p> <p>2.3. Service operations are completed within established industry guidelines</p> <p>2.4. Air compressor is serviced without causing damage to component or system</p> <p>2.5. Workplace documentation is completed and dealt with relevant to service outcomes</p>

	2.6. Servicing activities are carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies
3. Service pressure regulators and air lines	<p>3.1. Information is accessed and interpreted from manufacturer/component supplier specifications</p> <p>3.2. Service is carried out using approved methods and equipment, according to specifications relative to the plant/system</p> <p>3.3. Service operations are completed within established industry guidelines</p> <p>3.4. Pressure regulators and air lines are serviced without causing damage to component or system</p> <p>3.5. Servicing activities are carried out according to industry regulations/guidelines, WHS requirements, legislation and enterprise procedures/policies</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored</p> <p>4.2. Waste and scrap are removed following workplace procedure</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures</p> <p>4.6. Tooling is maintained in accordance with workplace procedures</p>

Variable	Range
WHS requirements	<p>This may include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Materials	<p>May include:</p> <ul style="list-style-type: none"> • engine oils • gear oils

	<ul style="list-style-type: none"> • moving parts lubricants • cleaning materials
Servicing	<p>Includes:</p> <ul style="list-style-type: none"> • fluids • filters • adjustments • operational testing • visual inspections • records
Personal protective equipment	That prescribed under legislation/regulation/codes of practice and workplace policies and practices.
Safe operating procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	<p>to include but are not limited to</p> <ul style="list-style-type: none"> • Waste management • Noise • dust • clean-up management.
Quality requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	<p>may include</p> <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Tooling and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • hand tooling • power tooling • specialist tooling for removal/adjustment • testing equipment • greasing equipment

	<ul style="list-style-type: none"> • air operated equipment • measuring equipment
Communications	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers
Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons

Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • selecting and using relevant tooling and equipment • identification of application, purpose and operating principles • conducting inspection, servicing and operational testing in accordance with workplace and manufacturer/component supplier specifications • servicing pressure regulators and air lines to workplace and manufacturer/component supplier requirements • completing workplace/equipment documentation 		
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • types of air compressors and principles of operation • construction and operation of air compressors, air lines and regulators • plant safety requirements and inspection procedures • service procedures/filters/DE moisturising air • lubricants and/or fluids 		
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	<ul style="list-style-type: none"> • work organisation and planning processes • enterprise quality processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for servicing air compressors, pressure regulators and air lines • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and material to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and wastage • use mathematical ideas and techniques to calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks • use workplace technology related to servicing of air compressors and air lines, including use of specialist tooling, measuring equipment, use of communication devices and reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Repair Corroded Panels and Component
Unit Code	<u>IND TRP3 08 0117</u>
Unit Descriptor	<p>This unit covers the competence required to carry out the repair of vehicle body panels and components damaged by corrosion.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, removal of corroded panels, the repair, reforming and replacement of body panels/ components and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including method, materials and equipment.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including dust and fume collection, breathing apparatus, eye and ear personal protection needs are observed throughout the work.</p> <p>1.4. Materials for repair are selected.</p> <p>1.5. Tooling and equipment are identified and checked for safe and effective operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Remove corroded body panels and/or structural components or sections	<p>2.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>2.2. Panels and/or structural components or sections are removed without causing damage to vehicle.</p> <p>2.3. Repairable/reusable body sections are determined according to general industry repair methods.</p> <p>2.4. Where removal of components includes disturbance to electrical, mechanical, air conditioning systems or trim, authorized assistance is sought.</p> <p>2.5. Repair activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>

<p>3. Carry out body component/panel repairing and reforming procedures</p>	<p>3.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>3.2. Repair material is selected in accordance with the industries general repair requirements and vehicle manufacturer/component supplier specifications.</p> <p>3.3. Components are measured using approved methods and equipment in accordance with manufacturer/component supplier specification.</p> <p>3.4. Components, panels and/or sections are repaired using approved methods and equipment in accordance with manufacturer/component supplier specification.</p> <p>3.5. Components, panels and/or sections are manufactured and reformed to suit vehicle contour and measurement requirements.</p> <p>3.6. Where repair of components includes disturbance to electrical, mechanical, air conditioning systems or trim, authorized assistance is sought.</p> <p>3.7. Repair activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>
<p>4. Replace body panels and structural components or sections</p>	<p>4.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>4.2. Components are replaced using approved methods and equipment in accordance with manufacturer/component supplier specification.</p> <p>4.3. Replaced panels/components are checked for compliance with specification.</p> <p>4.4. Where replacement of components includes disturbance to electrical, mechanical, air conditioning systems or trim, authorized assistance is sought.</p> <p>4.5. Replacement activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>4.6. Workplace/equipment documentation is completed and processed to enterprise/manufacturer/component supplier requirements.</p>
<p>5. Clean up work area and maintain equipment</p>	<p>5.1. Material that can be reused is collected and stored.</p> <p>5.2. Waste and scrap is removed following workplace and environmental procedure.</p> <p>5.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p>

	<p>5.4. Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>5.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>5.6. Tooling is maintained in accordance with workplace procedures.</p>
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Variable	Range
WHS requirements	<p>May include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Materials	<p>May include:</p> <ul style="list-style-type: none"> • welding consumables • adhesives • cleaning materials
Tooling and equipment	<p>May include:</p> <ul style="list-style-type: none"> • hand tooling • power tooling and equipment • Templates • welding equipment <ul style="list-style-type: none"> ➤ Arc ➤ oxy acetylene ➤ MIG ➤ TIG and spot • measuring equipment/ devices • vehicle protection • specialist tooling and equipment
Corrosion repairs	<p>May include:</p> <ul style="list-style-type: none"> • radiator support panels and sections • front skirt section • door skins • sill panels and section • Beaver panel replacement.
Panel repair methods	<p>May include:</p> <ul style="list-style-type: none"> • grinding • thermal heating and cutting • welding: <ul style="list-style-type: none"> ➤ oxy acetylene

	<ul style="list-style-type: none"> ➤ MIG ➤ TIG ➤ Spot • heat shrinking • metal finishing • body filling • forming • panel replacement • precision measurement
Personal protective equipment	That prescribed under legislation/regulation/codes of practice and workplace policies and practices.
Safe operating procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	<p>may include but are not limited to:</p> <ul style="list-style-type: none"> • Waste management • Noise • dust • clean-up management.
Quality requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	<p>may include</p> <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Communications	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers

Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons
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Evidence Guide

Critical Aspects of Competence	<p>Demonstrate knowledge and skills to:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • applying vehicle protection procedures • completing body corrosion repair, including panel and section replacement and panel/component repairing and forming • completing body panel/component manual measuring • Completing workplace/equipment documentation.
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • technical information • body panel/component measuring procedures • corrosion repair methods and procedures, including panel/panel section replacement and panel/component manufacture and forming • welding techniques • manual handling procedures • work organisation and planning processes • enterprise quality processes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for repairing body corrosion damage • communicate information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems

	<ul style="list-style-type: none"> • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and materials to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • use mathematical ideas and techniques to calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks • use workplace technology related to repair of corroded panels and components, including the use of specialist tooling, measuring equipment, computerised technology and communication devices and the reporting/recording of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Repairs Body Component Using Lead Wiping
Unit Code	IND TRP3 09 0117
Unit Descriptor	<p>This unit covers the competence required to carry out lead wiping/lead filling repair methods for damaged vehicle panels.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, and reinstatement of body components by lead wiping and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the job requirements, including method, materials and equipment.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including dust and fume collection, breathing apparatus, eye and ear personal protection needs are observed throughout the work.</p> <p>1.4. Material for repair is selected.</p> <p>1.5. Equipment and tooling are identified and checked for safe and effective operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Reinstatement of body components by lead wiping	<p>2.1. Information is accessed and interpreted from manufacturer/ component supplier specifications.</p> <p>2.2. Lead filling materials are prepared and applied to pre-cleaned and prepared area according to industry standards.</p> <p>2.3. Repair operations are completed within established industry guidelines.</p> <p>2.4. Repairs are carried out to pre-paint condition to acceptable industry standards using physical, visual and mechanical checks.</p> <p>2.5. Reinstatement of body components by lead wiping without causing damage to any component or system.</p> <p>2.6. Repair activities are carried out according to industry regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p>

	2.7. Workplace/equipment documentation is completed and dealt with relevant to work outcome.
3. Clean up work area and maintain equipment	<p>3.1 Waste and scrap are removed following workplace and environmental procedure.</p> <p>3.2 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>3.3 Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>3.4 Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>3.5 Tooling is maintained in accordance with workplace procedures.</p>

Variable	Range
WHS requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Personal protective equipment	That prescribed under legislation/regulation/codes of practice and workplace policies and practices.
Safe operating procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Waste management • Noise

	<ul style="list-style-type: none"> • dust • clean-up management.
Quality requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Tooling and equipment	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • hand tooling • power • air tooling • heating equipment • templates

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Critical Aspects of Competence	<p>Demonstrate knowledge and skills in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • applying vehicle protection methods • applying environmental procedures • completing lead wiping operations which are, at a minimum to include repairing small dents vertically and repairing a joint with vertical and horizontal planes to manufacturer/component supplier and workplace requirements • completing workplace/equipment documentation
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • environmental protection requirements • Material types (metals, plastics, fibreglass, etc.) • technical information • filling materials, procedures and techniques • waste product disposal procedures • work organisation and planning processes • enterprise quality processes

Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for body repair using lead wiping • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and materials to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • use mathematical ideas and techniques to calculate time, apply accurate measurements, calculate material requirements and establish quality checks • use workplace technology related to lead wiping repair of body components, including the use of specialist tooling, measuring equipment and communication devices and the reporting/ recording of results
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level III	
Unit Title	Carry out Paint Rectification and Touch-up Work for Solids
Unit Code	IND TRP3 10 0117
Unit Descriptor	<p>This unit covers the competence required to rectify and touch up solid (two component system) paint material faults.</p> <p>Users are advised to check with there The unit includes identification and confirmation of work requirement, preparation for work, identification of rectification/touch up requirements, rectification and touch up of paint faults and completion of work finalization processes including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem solving skills in managing own work activities and contributing to a productive team environment. Levant regulatory authority.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements including method and material type.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4. Materials are selected and inspected for quality.</p> <p>1.5. Hand, power tooling and safety equipment are identified and checked for correct operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the job.</p>
2. Determine paint fault cause and rectification requirements for solid (two component system) paint materials	<p>2.1. Cause of paint fault is determined from available information to provide background for report/repair.</p> <p>2.2. Visual inspection of vehicle is undertaken to determine the extent of damage and areas requiring repair/rework.</p> <p>2.3. Damage to paintwork is assessed from visual comparison with undamaged paintwork.</p> <p>2.4. Determinations are carried out according to industry regulations/guidelines, WHS legislation, statutory legislation and enterprise procedures/policies.</p> <p>2.5. Paint faults cause and rectification requirements are determined without causing undue damage to any component or system.</p>

<p>3. Rectify and touch up paint faults of solid (two component system) paint materials</p>	<p>3.1. Materials required to restore paintwork to "as new" condition are determined from industry and manufacturer/ component supplier.</p> <p>3.2. Damaged paintwork is rectified to blend with existing paintwork on vehicle.</p> <p>3.3. Rectification operations are carried out according to industry regulations/guidelines, WHS legislation, statutory legislation and enterprise procedures/policies.</p> <p>3.4. Paint faults are rectified without causing damage to any component or system.</p>
<p>4. Clean up work area and maintain equipment</p>	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste and scrap are removed following workplace procedure.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and site procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range
WHS requirements	<p>May include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances
Materials	<p>May Include:</p> <ul style="list-style-type: none"> • solid acrylic enamel paint • hardeners and reduces • polishing buffs and pads • rags • tac rags cleaning solvents • compounds and glazes • cleaning materials

Personal protective equipment	That prescribed under legislation/regulation/codes of practice and workplace policies and practices.
Safe operating procedures	May include, but are not limited to: <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	May include, but are not limited to: <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	to include but are not limited to <ul style="list-style-type: none"> • Waste management • Noise • dust • clean-up management.
Quality requirements	May include, but are not limited to: <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	may include <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Tooling and equipment	May Include: <ul style="list-style-type: none"> • various spray guns • air pressure regulators • air compressors • spray booths • baking ovens • heating and lighting systems • strainers, measuring sticks • ford cup and safety equipment
Communications	May include, but are not limited to: <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers

Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons
Variables	compound polishing and detailing of repaired surfaces.

Evidence Guide

Critical Aspects of Assessment	<p>Demonstrates skills and knowledge competencies in:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others in associated areas • selecting methods and techniques which are appropriate to the circumstances • completing preparatory activity in a systematic manner • applying environmental procedures • preparing paint • determining and rectifying paint fault for solid (two component system) paint materials
Under pinning Knowledge & Attitude	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • relevant WHS regulations/requirements, equipment, material and personal safety requirements • relevant environmental protection requirements/substance disposal and storage • material safety data sheets • paint surface fault identification and rectification procedures for solid (two component system) paint materials • touch up techniques • work organisation and planning processes • enterprise quality processes
Under pinning Skills	<p>Demonstrate skill of:</p> <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for solid (two component system) paint rectification and touch up work • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the documenting of work outcomes

	<p>and problems</p> <ul style="list-style-type: none"> • plan and organise activities including preparation and layout of worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to calculate time, apply measurements, calculate material requirements and establish quality checks • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage • use workplace technology related to the rectification and touch up of solid (two component system) including, the use of specialist tooling and equipment, measuring equipment, and communication devices, and the reporting/documenting of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Restore Vehicle Exterior Paint
Unit Code	IND TRP3 11 0117
Unit Descriptor	<p>This unit covers the competence required to carry out vehicle body exterior paint restoration activities.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, inspection and identification of faults, selection of restoration method, restoration of paint work and completion of work finalisation processes, including clean-up and documentation.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>

Elements	Performance Criteria
1. Prepare for work	<p>1.1. Work instructions are used to determine the work requirements, including methods, materials and equipment.</p> <p>1.2. Job specifications are read and interpreted.</p> <p>1.3. WHS requirements, including personal protection needs are observed throughout the work.</p> <p>1.4. Materials for work is selected.</p> <p>1.5. Equipment and tooling are identified and checked for safe and effective operation.</p> <p>1.6. Procedures are determined to minimize waste material.</p> <p>1.7. Procedures are identified for maximizing energy efficiency while completing the work.</p>
2. Inspect and identify paint faults and determine restoration procedure	<p>2.1. Inspection, identification and determination of procedures are completed without causing further damage to paint or components.</p> <p>2.2. Inspection and identification procedures are carried out according to workplace methods and procedures.</p> <p>2.3. Restoration process is determined according to type of damage, paint type and finish, workplace and industry/product manufacturer/component supplier prescribed methods and procedures.</p>
3. Restore vehicle body exterior finishing material	<p>3.1. Equipment is selected and used according to workplace methods and customer requirements.</p> <p>3.2. Restoration materials are selected according to type of damage and type of finishing material, workplace methods and paint manufacturer/component supplier recommendations.</p>

	<p>3.3. Vehicle body exterior finish is restored according to industry standards/regulations/guidelines, WHS legislation, and enterprise procedures/policies.</p> <p>3.4. Restoration is completed without causing damage to any component or system.</p> <p>3.5. Materials are used and stored according to manufacturer/ component supplier recommendations and regulatory requirement.</p>
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored.</p> <p>4.2. Waste material is removed following workplace and environmental procedure.</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace requirements.</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and worksite procedures.</p> <p>4.6. Tooling is maintained in accordance with workplace procedures.</p>

Variables	Range		
Methods	manual or machine assisted restoration methods.		
WHS requirements	<p>May include:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tooling and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • enterprise first aid • hazard control • hazardous materials a • substances 		
Materials	may include restoration agents, vehicle/paint manufacturer/component supplier specifications and cleaning materials.		
Tooling and equipment	may include tooling and equipment to restore vehicle body external finish.		
Personal protective equipment	That prescribed under legislation/regulation/codes of practice and workplace policies and practices.		
Safe operating procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • operational risk assessment and treatments associated with vehicular movement • toxic substances 		
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	<ul style="list-style-type: none"> • electrical safety • machinery movement and operation • manual and mechanical lifting and shifting • working in proximity to others • worksite visitors
Emergency procedures	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Emergency shutdown and stopping of equipment • extinguishing fires • enterprise first aid requirements • worksite evacuation
Environmental requirements	<p>to include but are not limited to</p> <ul style="list-style-type: none"> • Waste management • Noise • dust • clean-up management.
Quality requirements	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • Standards • internal company quality policy • standards • enterprise operations • procedures
Statutory/regulatory authorities	<p>may include</p> <ul style="list-style-type: none"> • Federal • local authorities administering acts • regulations • codes of practice
Communications	<p>May include, but are not limited to:</p> <ul style="list-style-type: none"> • worksite specific instructions • written instructions • plans or instructions related to job/task • telephones • pagers
Information/documents	<p>may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to application of colour and clear coat refinishing materials • regulatory/legislative requirements pertaining to automotive painting and finishing • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons

Evidence Guide			
Critical Aspects of Assessment	Demonstrates skills and knowledge competencies in: <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • selecting and using materials and equipment • restoring of vehicle body exterior finish to specification • Completing workplace records. 		
Under pinning Knowledge & Attitude	Demonstrates knowledge of: <ul style="list-style-type: none"> • WHS regulations/requirements, equipment, material and personal safety requirements • restoration agents and their recommended applications • types of body paint surfaces and finishing materials • types of vehicle body exterior finishing material faults, including colour change, surface variations, rework, pitting • finishing material restoration procedures • environmental requirements for storage, handling and disposal of substances • material safety data sheets • work organisation and planning processes • enterprise quality processes 		
Under pinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures for vehicle paint restoration • identifying safety precautions • identifying recommended applications and procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with worksite supervisor, other workers and customers, and the reporting of work outcomes and problems • reading and interpreting product labels/directions • listening and following verbal instructions • plan and organise activities, including preparation and layout of worksite and obtaining of equipment and materials to avoid backtracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise 		
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	<p>reworking and avoid wastage</p> <ul style="list-style-type: none"> • use mathematical ideas and techniques to complete measurements and estimate material requirements required for measuring and mixing restoration materials • use workplace technology related to restoration of vehicle external paintwork, including the use of painting equipment, measuring equipment and communication devices and the reporting/recording of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Monitor Implementation of Work Plan/Activities
Unit Code	IND TRP3 12 0117
Unit Descriptor	This unit covers competence required to oversee and monitor the quality of work operations within an enterprise. This unit may be carried out by team leaders or supervisors.

Elements	Performance Criteria
1. Monitor and improve workplace operations	<p>1.1 Efficiency and service levels are monitored on an ongoing basis.</p> <p>1.2 Operations in the workplace have been supported overall enterprise goals and quality assurance initiatives.</p> <p>1.3 Quality problems and issues are promptly identified and adjustments made accordingly.</p> <p>1.4 Procedures and systems are changed in consultation with colleagues to improve efficiency and effectiveness.</p> <p>1.5 Colleagues are consulted about ways to improve efficiency and service levels.</p>
2. Plan and organise workflow	<p>2.1 Current workload of colleagues is accurately assessed.</p> <p>2.2 Work is scheduled in a manner which enhances efficiency and customer service quality.</p> <p>2.3 Work is delegated to appropriate people in accordance with principles of delegation.</p> <p>2.4 Workflow is assessed against agreed objectives and timelines and colleagues are assisted in prioritisation of workload.</p> <p>2.5 Input regarding staffing needs is provided to appropriate management.</p>
3. Maintain workplace records	<p>3.1 Workplace records are accurately completed and submitted within required timeframes.</p> <p>3.2 Where appropriate, completion of records is delegated and monitored prior to submission.</p>
4. Solve problems and make decisions	<p>4.1 Workplace problems are promptly identified and considered from an operational and customer service perspective.</p> <p>4.2 Short term action is initiated to resolve the immediate problem where appropriate.</p> <p>4.3 Problems are analysed for any long term impact and potential solutions assessed and actioned in consultation with relevant colleagues.</p> <p>4.4 Where problem is raised by a team member, they are encouraged to participate in solving the problem.</p> <p>4.5 Follow up action is taken to monitor the effectiveness of solutions in the workplace.</p>

Variables	Range
Problems	May include but not limited to: <ul style="list-style-type: none"> • difficult customer service situations • equipment breakdown/technical failure • delays and time difficulties • competence
Workplace records	May include but is not limited to: <ul style="list-style-type: none"> • staff records and regular performance reports

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Critical Aspects of Competence	Demonstrates skills and knowledge in: <ul style="list-style-type: none"> • ability to effectively monitor and respond to a range of common operational and service issues in the workplace • the role of staff involved in workplace monitoring • quality assurance, principles of workflow planning, delegation and problem solving
Underpinning Knowledge and Attitude	Demonstrate knowledge of: <ul style="list-style-type: none"> • roles and responsibilities in monitoring work operations • overview of leadership and management responsibilities • principles of work planning and principles of delegation • typical work organization methods appropriate to the sector • quality assurance principles and time management • problem solving and decision making processes • industrial and/or legislative issues which affect short term work organization as appropriate to industry sector
Underpinning Skills	Demonstrate skills to: <ul style="list-style-type: none"> • monitor and improve workplace operations • plan and organize workflow • maintain workplace records
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Apply Quality Control
Unit Code	IND TRP3 13 0117
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in applying quality control in the workplace.

Elements	Performance Criteria
1. Implement quality standards	<p>1.1 Agreed quality standard and procedures are acquired and confirmed.</p> <p>1.2 Standard procedures are introduced to organizational staff/personnel.</p> <p>1.3 Quality standard and procedures documents are provided to employees in accordance with the organization policy.</p> <p>1.4 Standard procedures are revised / updated when necessary.</p>
2. Assess quality of service delivered	<p>2.4 Services delivered are quality checked against organization quality standards and specifications.</p> <p>2.5 Service delivered are evaluated using the appropriate evaluation quality parameters and in accordance with organization standards.</p> <p>2.6 Causes of any identified faults are identified and corrective actions taken in accordance with organization policies and procedures.</p>
3. Record information	<p>3.3 Basic information on the quality performance is recorded in accordance with organization procedures.</p> <p>3.4 Records of work quality are maintained according to the requirements of the organization.</p>
4. Study causes of quality deviations	<p>4.3 Causes of deviations from final outputs or services are investigated and reported in accordance with organization procedures.</p> <p>4.4 Suitable preventive action is recommended based on organization quality standards and identified causes of deviation from specified quality standards of final service or output.</p>
5. Complete documentation	<p>5.3 Information on quality and other indicators of service performance is recorded.</p> <p>5.4 All service processes and outcomes are recorded.</p>

Variable	Range
Quality check	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Check against design / specifications • Visual and Physical inspection

Quality standards	May include but not limited to: <ul style="list-style-type: none"> • Materials • Components • Process • Procedures
Quality parameters	May include but not limited to: <ul style="list-style-type: none"> • Standard Design / Specifications • Material Specification

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Critical Aspects of Competence	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> • Check completed work continuously against organization standard • Identify and isolate faulty or poor service • Check service delivered against organization standards • Identify and apply corrective actions on the causes of identified faults or error • Record basic information regarding quality performance • Investigate causes of deviations of services against standard • Recommend suitable preventive actions
Underpinning Knowledge and Attitude	Demonstrates knowledge of: <ul style="list-style-type: none"> • Relevant quality standards, policies and procedures • Characteristics of services • Safety environment aspects of service processes • Evaluation techniques and quality checking procedures • Workplace procedures and reporting procedures
Underpinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> • interpret work instructions, specifications and standards appropriate to the required work or service • carry out relevant performance evaluation • maintain accurate work records • meet work specifications and requirements • communicate effectively within defined workplace procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Lead Workplace Communication
Unit Code	IND TRP3 14 0117
Unit Descriptor	This unit covers the knowledge, attitudes and skills needed to lead in the dissemination and discussion of information and issues in the workplace.

Elements	Performance Criteria
1. Communicate information about workplace processes	1.1 Appropriate communication method is selected. 1.2 Multiple operations involving several topics areas are communicated accordingly. 1.3 Questions are used to gain extra information. 1.4 Correct sources of information are identified. 1.5 Information is selected and organized correctly. 1.6 Verbal and written reporting is undertaken when required. 1.7 Communication skills are maintained in all situations.
2. Lead workplace discussion	2.1 Response to workplace issues is sought. 2.2 Response to workplace issues are provided immediately. 2.3 Constructive contributions are made to workplace discussions on such issues as production, quality and safety. 2.4 Goals/objectives and action plan undertaken in the workplace are communicated.
3. Identify and communicate issues arising in the workplace	3.1 Issues and problems are identified as they arise. 3.2 Information regarding problems and issues are organized coherently to ensure clear and effective communication. 3.3 Dialogue is initiated with appropriate staff/personnel. 3.4 Communication problems and issues are raised as they arise.

Variable	Range
Methods of communication	May include but not limited to: <ul style="list-style-type: none"> • Non-verbal gestures • Verbal • Face to face • Two-way radio • Speaking to groups • Using telephone • Written

	<ul style="list-style-type: none"> • Using Internet • Cell phone
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Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Deal with a range of communication/information at one time • Make constructive contributions in workplace issues • Seek workplace issues effectively • Respond to workplace issues promptly • Present information clearly and effectively written form • Use appropriate sources of information • Ask appropriate questions • Provide accurate information
Underpinning Knowledge and Attitude	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Organization requirements for written and electronic communication methods • Effective verbal communication methods
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • Organize information • Understand and convey intended meaning • Participate in variety of workplace discussions • Comply with organization requirements for the use of written and electronic communication methods
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Train Painting Level III	
Unit Title	Lead Small Teams
Unit Code	IND TRP3 15 0117
Unit Descriptor	This unit covers the skills, knowledge and attitudes required to determine individual and team development needs and facilitate the development of the work group.

Elements	Performance Criteria
1. Provide team leadership	<p>1.1 Learning and development needs are systematically identified and implemented in line with organizational requirements.</p> <p>1.2 Learning plan is collaboratively developed and implemented to meet individual and group training and developmental needs.</p> <p>1.3 Individuals are encouraged to self-evaluate performance and areas identified for improvement.</p> <p>1.4 Feedback on performance of team members is collected from relevant sources and compared with established team learning process.</p>
2. Foster individual and organizational growth	<p>2.1 Learning and development program goals and objectives are identified to match the specific knowledge and skills requirements of competence standards.</p> <p>2.2 Learning delivery methods are made appropriate to the learning goals, the learning style of participants and availability of equipment and resources.</p> <p>2.3 Workplace learning opportunities and coaching/mentoring assistance are provided to facilitate individual and team achievement of competencies.</p> <p>2.4 Resources and timelines required for learning activities are identified and approved in accordance with organizational requirements.</p>
3. Monitor and evaluate workplace learning	<p>3.1 Feedback from individuals or teams is used to identify and implement improvements in future learning arrangements.</p> <p>3.2 Outcomes and performance of individuals/teams are assessed and recorded to determine the effectiveness of development programs and the extent of additional support.</p> <p>3.3 Modifications to learning plans are negotiated to improve the efficiency and effectiveness of learning.</p> <p>3.4 Records and reports of competence are maintained within organizational requirement.</p>

4. Develop team commitment and cooperation	<p>4.1 Open communication processes are used by team to obtain and share information.</p> <p>4.2 Decisions are reached by the team in accordance with its agreed roles and responsibilities.</p> <p>4.3 Mutual concern and camaraderie are developed in the team.</p>
5. Facilitate accomplishment of organizational goals	<p>5.1 Team members are made actively participatory in team activities and communication processes.</p> <p>5.2 Individual and joint responsibility has been developed teams members for their actions.</p> <p>5.3 Collaborative efforts are sustained to attain organizational goals.</p>

Variable	Range
Learning and development needs	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Coaching, mentoring and/or supervision • Formal/informal learning program • Internal/external training provision • Work experience/exchange/opportunities • Personal study • Career planning/development • Performance appraisals • Workplace skills assessment & Recognition of prior learning
Organizational requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Quality assurance and/or procedures manuals • Goals, objectives, plans, systems and processes • Legal and organizational policy/guidelines and requirements • Safety policies, procedures and programs • Confidentiality and security requirements • Business and performance plans • Ethical standards • Quality and continuous improvement processes and standards
Feedback on performance	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Formal/informal performance appraisals • Obtaining feedback from supervisors and colleagues • Obtaining feedback from clients • Personal and reflective behavior strategies • Routine and organizational methods for monitoring service delivery
Learning delivery methods may include but not limited to:	<ul style="list-style-type: none"> • On the job coaching or mentoring • Problem solving • Presentation/demonstration

	<ul style="list-style-type: none"> • Formal course participation • Work experience and Involvement in professional networks • Conference/seminar attendance and induction
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Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> • identify and implement learning opportunities for others • give and receive feedback constructively • facilitate participation of individuals in the work of the team • negotiate learning plans to improve the effectiveness of learning • prepare learning plans to match skill needs • access and designate learning opportunities
Underpinning Knowledge and Attitude and Attitude	Demonstrates knowledge of: <ul style="list-style-type: none"> • coaching and mentoring principles • how to work effectively with team members who have diverse work styles, aspirations, cultures and perspective • how to facilitate team development and improvement • methods and techniques for eliciting and interpreting feedback • methods for identifying and prioritizing personal development opportunities and options • career paths and competence standards in the industry
Underpinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> • read and understand a variety of texts, prepare general information and documents according to target audience; spell with accuracy; use grammar and punctuation effective relationships and conflict management • receive feedback and report, maintain effective relationships and conflict management • organize required resources and equipment to meet learning needs • provide support to colleagues • organize information; assess information for relevance and accuracy; identify and elaborate on learning outcomes • facilitation skills to conduct small group training sessions • relate to people from a range of social, cultural, physical and mental backgrounds
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written exam • Observation / Demonstration with Oral Questioning

Context of Assessment	Competence may be assessed in the workplace or in a simulated workplace setting
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Occupational Standard: Train Painting Level III	
Unit Title	Improve Business Practice
Unit Code	IND TRP3 16 0117
Unit Descriptor	This unit covers the knowledge, skills and attitudes required in promoting, improving and growing business operations.

Elements	Performance Criteria
1. Diagnose the business	<p>1.1 Sources data is identified; data required for diagnosis is determined and acquired based on the business diagnosis toolkit.</p> <p>1.2 Value chain analysis is conducted.</p> <p>1.3 SWOT analysis of the data is undertaken.</p> <p>1.4 Competitive advantage of the business is determined from the data.</p>
2. Benchmark the business	<p>2.1 Product or service to be benchmarked is identified and selected.</p> <p>2.2 Sources of relevant benchmarking data are identified.</p> <p>2.3 Key indicators are selected for benchmarking in consultation with key stakeholders.</p> <p>2.4 Key indicators of own practice are compared with benchmark indicators.</p> <p>2.5 Areas of improvements are identified.</p>
3. Develop plans to improve business performance	<p>3.1 A consolidated list of required improvements is developed.</p> <p>3.2 Cost-benefit analysis is determined for required improvements.</p> <p>3.3 Work flow changes resulting from proposed improvements are determined.</p> <p>3.4 Proposed improvements are ranked according to agreed criteria.</p> <p>3.5 An action plan is developed and agreed to implement the top ranked improvements.</p> <p>3.6 Organizational structures are checked to ensure they are suitable.</p>
4. Develop marketing plans	<p>4.1 The practice vision statement is reviewed.</p> <p>4.2 Practice objectives are developed/ reviewed.</p> <p>4.3 Market research is conducted and result is obtained.</p> <p>4.4 Target markets are identified/ refined.</p> <p>4.5 Market position is developed/ reviewed.</p> <p>4.6 Practice brand is developed.</p>

	<p>4.7 Benefits of products or services are identified.</p> <p>4.8 Promotion tools are selected and developed.</p>
5. Develop business growth plans	<p>5.1 Plans are developed to increase profitability</p> <p>5.2 Proposed plans are ranked according to agreed criteria.</p> <p>5.3 An action plan is developed and agreed to implement the top ranked plans.</p> <p>5.4 Business work practices are reviewed to ensure they support growth plans.</p>
6. Implement and monitor plans	<p>6.1 Implementation plan is developed in consultation with all relevant stakeholders.</p> <p>6.2 Success indicators of the plan are agreed.</p> <p>6.3 Implementation is monitored against agreed indicators.</p> <p>6.4 Implementation is adjusted as required.</p>

Variable	Range
Data sources	May include primary data and secondary sources
Data required	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Organization capability • Appropriate business structure • Level of client service which can be provided • Internal policies, procedures and practices • Staff levels, capabilities and structure • Market and market definition • Market changes/market segmentation • Market consolidation/fragmentation • Revenue • Level of commercial activity • Expected revenue levels, short and long term • Revenue growth rate • Break even data • Pricing policy • Revenue assumptions • Business environment • Economic conditions • Social factors • Demographic factors • Technological impacts • Political/legislative/regulative impacts • Competitors, competitor pricing and response to pricing • Competitor marketing/branding • Competitor products
SWOT analysis	May include but not limited to:

	<ul style="list-style-type: none"> • Internal strengths such as staff capability, recognized quality • Internal weaknesses such as poor morale, under-capitalization, poor technology • External opportunities such as changing market and economic conditions • External threats such as industry fee structures, strategic alliances, competitor marketing
Competitive advantage	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Quality • Pricing • Cost • Location • Technology • Delivery • Timeframe • Promotion • Niche marketing • Support from government
Key indicators	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Staffing • Cost and expenses • Personnel productivity (particularly of principals) • Goodwill • Profitability • Price structure • Customers base • Productivity • Quality • System
Organizational structures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Lines of authority and reporting relationship
Objectives	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Market share growth • Revenue growth • Profitability • Productivity • Innovation
Market position	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • The goods or service provided • Product mix • The core product - what is bought • The tangible product - what is perceived • The augmented product - total package of consumer • Features/benefits • Product differentiation from competitive products • New/changed products

	<ul style="list-style-type: none"> • Price and pricing strategies (cost plus, supply/demand, ability to pay, etc.) • Pricing objectives (profit, market penetration, etc.) • Cost components • Market position • Distribution strategies • Marketing channels • Promotion • Target audience • Communication
Practice brand	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Practice image • Practice logo/letterhead/signage • Phone answering protocol • Facility decor • Slogans • Templates for communication/invoicing • Style guide • Writing style • AIDA (Attention, Interest, Desire and Action)
Benefits	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Features as perceived by the client • Benefits as perceived by the client
Promotion tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Networking and referrals • Seminars • Sales promotion • Advertising • Personal selling • Press releases • Publicity and sponsorship • Brochures • Newsletters (print and/or electronic) • Websites • Direct mail • Telemarketing/cold calling
Ranking	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Importance • Urgency • Technology • Resource availability
Relevant stockholders	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Micro and Small Enterprises development • Non-Government Organizations (NGOs) • Finance institutions • Capital goods leasing enterprise

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<p>Critical Aspects of Competence</p>	<p>Demonstrates skills and knowledge of:</p> <ul style="list-style-type: none"> • Identifying the key indicators of business performance • Identifying the key market data for the business • A wide range of available information sources • Acquiring information not readily available within a business • Analyzing data and determine areas of improvement • Negotiating required improvements to ensure implementation • Evaluating systems against practice requirements • Forming recommendations and/or make recommendations • Assessing the accuracy and relevance of information
<p>Underpinning Knowledge and Attitude</p>	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Data gathering and analysis • Value chain analysis • SWOT analysis • Competitive advantage • Cost benefit analysis • Target market • Marketing principles • Organizational structure • Marketing mix • Promotion mix • Market position • Branding <p>Profitability demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Data gathering and analysis • Value chain analysis • SWOT analysis • Competitive advantage • Cost benefit analysis • Target market • Marketing principles • Organizational structure • Marketing mix • Promotion mix • Market position • Branding • Profitability
<p>Underpinning Skills</p>	<p>Demonstrates skill in:</p> <ul style="list-style-type: none"> • Benchmarking skills • Communication skills • Computers skills to manipulate data and present information • Negotiation skills

	<ul style="list-style-type: none"> • Preparing action plan • Conducting market research • Identifying target market • Identifying suitable marketing mix • Preparing promotional tools • Problem solving • Planning skills • Monitoring and evaluation • Ability to acquire and interpret relevant data • Use of market intelligence • Development and implementation strategies of promotion and growth plans • Ability to acquire and interpret required data, current practice systems and structures and sources of relevant benchmarking data • Applying methods of selecting relevant key benchmarking indicators • Communication skills • Working and consulting with others when developing plans for the business • Negotiation skills • Using computers to manipulate, present and distribute information
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Train Painting Level III	
Unit Title	Prevent and Eliminate MUDA
Unit Code	IND TRP3 17 0117
Unit Descriptor	This unit of competence covers the knowledge, skills and attitude required by a worker to prevent and eliminate MUDA/wastes in his/her their workplace. It covers responsibility for the day-to-day operation of the work and ensures Kaizen elements are continuously improved and institutionalized.

Elements	Performance Criteria
1. Prepare for work.	<p>1.1. Work instructions are used to determine job requirements, including method, material and equipment.</p> <p>1.2. Job specifications are read and interpreted following working manual.</p> <p>1.3. OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.</p> <p>1.4. Appropriate material is selected for work.</p> <p>1.5. Safety equipment and tools are identified and checked for safe and effective operation.</p>
2. Identify MUDA.	<p>2.1. Plan of MUDA identification is prepared and implemented.</p> <p>2.2. Causes and effects of MUDA are discussed.</p> <p>2.3. Tools and techniques are used to draw and analyze current situation of the work place.</p> <p>2.4. Wastes/MUDA are identified and measured based on relevant procedures.</p> <p>2.5. Identified and measured wastes are reported to relevant personnel.</p>
3. Eliminate wastes/MUDA.	<p>3. 1. Plan of MUDA elimination is prepared and implemented.</p> <p>3. 2. Necessary attitude and the ten basic principles for improvement are adopted to eliminate waste/MUDA.</p> <p>3. 3. Tools and techniques are used to eliminate wastes/MUDA based on the procedures and OHS.</p> <p>3. 4. Wastes/MUDA are reduced and eliminated in accordance with OHS and organizational requirements.</p> <p>3. 5. Improvements gained by elimination of waste/MUDA are reported to relevant bodies.</p>
4. Prevent occurrence of wastes/MUDA.	<p>4.1. Plan of MUDA prevention is prepared and implemented.</p> <p>4.2. Standards required for machines, operations, defining normal and abnormal conditions, clerical procedures and procurement are discussed and prepared.</p>

	<p>4.3. Occurrences of wastes/MUDA are prevented by using visual and auditory control methods.</p> <p>4.4. Waste-free workplace is created using 5W and 1H sheet.</p> <p>4.5. The completion of required operation is done in accordance with standard procedures and practices.</p> <p>4.6. The updating of standard procedures and practices is facilitated.</p> <p>4.7. The capability of the work team that aligns with the requirements of the procedure is ensured.</p>
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Variable	Range
OHS requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Are to be in accordance with legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of firefighting equipment, enterprise first aid, hazard control and hazardous materials and substances. • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • dust masks / goggles • glove • working cloth • first aid and safety shoes
Tools and techniques	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Plant Layout • Process flow • Other Analysis tools • Do time study by work element • Measure Travel distance • Take a photo of workplace • Measure Total steps • Make list of items/products, who produces them and who uses them & those in warehouses, storages etc. • Focal points to Check and find out existing problems • 5S

	<ul style="list-style-type: none"> • Layout improvement • Brainstorming • Andon • U-line • In-lining • Unification • Multi-process handling & Multi-skilled operators • A.B. control (Two point control) • Cell production line • TPM (Total Productive Maintenance)
Relevant procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Make waste visible • Be conscious of the waste • Be accountable for the waste. • Measure the waste.
The ten basic principles for improvement	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Throw out all of your fixed ideas about how to do things. • Think of how the new method will work- not how it won. • Don't accept excuses. Totally deny the status quo. • Don't seek perfection. A 50 percent implementation rate is fine as long as it's done on the spot. • Correct mistakes the moment they are found. • Don't spend a lot of money on improvements. • Problems give you a chance to use your brain. • Ask "why?" At least five times until you find the ultimate cause. • Ten people's ideas are better than one person's. • Improvement knows no limits.
Visual and auditory control methods	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Red Tagging • Sign boards • Outlining • Andons • Kanban, etc.
5W and 1H	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Who • What • Where • When • Why • How

Evidence Guide

Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • discuss why wastes occur in the workplace • discuss causes and effects of wastes/MUDA in the workplace
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	<ul style="list-style-type: none"> • analyze the current situation of the workplace by using appropriate tools and techniques • identify, measure, eliminate and prevent occurrence of wastes by using appropriate tools and techniques • use 5W and 1H sheet to prevent
Underpinning Knowledge and Attitude	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Targets of customers and manufacturer/service provider • Traditional and kaizen thinking of price setting • Kaizen thinking in relation to targets of manufacturer/service provider and customer • value • The three categories of operations • the 3“MU” • waste/MUDA • wastes occur in the workplace • The 7 types of MUDA • The Benefits of identifying and eliminating waste • Causes and effects of 7 MUDA • Procedures to identify MUDA • Necessary attitude and the ten basic principles for improvement • Procedures to eliminate MUDA • Prevention of wastes • Methods of waste prevention • Definition and purpose of standardization • Standards required for machines, operations, defining normal and abnormal conditions, clerical procedures and procurement • Methods of visual and auditory control • TPM concept and its pillars. • Relevant OHS and environment requirements • Plan and report • Method of communication
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • draw & analyze current situation of the work place • use measurement apparatus (stop watch, tape, etc.) • calculate volume and area • use and follow checklists to identify, measure and eliminate wastes/MUDA • identify and measure wastes/MUDA in accordance with OHS and procedures • use tools and techniques to eliminate wastes/MUDA in accordance with OHS procedure • apply 5W and 1H sheet • update and use standard procedures for completion of required operation • work with others

	<ul style="list-style-type: none"> • read and interpret documents • observe situations • solve problems • communicate • gather evidence by using different means • report activities and results using report formats
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

TRAIN PAINTING



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We wish to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development of this occupational standard.

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