

SKILLS FRAMEWORK FOR AEROSPACE				
SKILLS MAP - Technician (Mechanical)				
Sector	Aerospace			
Track	Aircraft Maintenance			
Occupation	Engineering Technician			
Job Role	Technician (Mechanical)			
Job Role Description	<p>The Technician (Mechanical) performs maintenance, repair and overhaul (MRO) tasks for aircraft equipment, components and structures in accordance with technical manuals and standard operating procedures (SOPs). He/She troubleshoots aircraft defects and takes corrective actions to restore aircraft parts and components to the desired performance requirements. He also performs special processes and repair of composite structures and documents all completed tasks.</p> <p>He may be authorised by the organisation to perform quality control functions, including inspection of incoming materials and outgoing serviced items, and registration of non-conformances. He may also be authorised to perform level 1 non-destructive testing (NDT) functions under supervision, perform evaluations for acceptance or rejection of aircraft structures, and record results as specified in the work instructions. He complies with airworthiness and legislative requirements, and the organisation's safety, health and quality systems. He supports in implementation of continuous improvement initiatives and lean practices.</p> <p>He works in a hangar or workshop and may be required to work in shifts. He should be systematic and detail-oriented, and able to work independently and in a team to accomplish assigned tasks.</p>			
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)*	
	Conduct aircraft maintenance, repair and overhaul (MRO)	Perform MRO tasks for aircraft equipment, components and structures in accordance with technical specifications	<ul style="list-style-type: none"> International Civil Aviation Organisation (ICAO) legislation Air Navigation Order (ANO) Singapore Airworthiness Requirements (SAR) Workplace Safety and Health (WSH) Act Environmental standards Aerospace quality management system standards Non-destructive Testing (NDT) standards Special process standards 	
		Use hand tools based on work requirements		
		Examine parts for maintenance, repair or replacement		
		Perform troubleshooting of aircraft equipment, structures and systems		
		Repair defects in composite structures		
		Perform special processes as per organisational procedures		
		Document completed aircraft MRO tasks		
	Administer quality control	Operate precision measuring tools, gauges and equipment for inspection checks	*Performance Expectations are non-exhaustive and subject to prevailing regulations	
		Inspect incoming materials, parts and components		
		Perform geometric tolerance and inspection on parts and components		
		Perform despatch inspection for serviced items		
		Register any non-conformances in non-conformance log		
	Perform non-destructive testing (NDT)	Perform NDT processes and inspections as per instructions		
		Perform evaluations for acceptance or rejection of aircraft structures		
		Record test results in approved documents		
	Conform to management system requirements	Follow standard operating procedures (SOPs) in performing aircraft maintenance tasks		
		Comply with legislative requirements and airworthiness standards		
		Conform to environment, safety and health systems, policies and procedures		
		Apply organisational quality and risk management systems		
Contribute to continuous improvement	Support implementation of continuous improvement initiatives			
	Adopt lean practices for assigned tasks			
	Collect data for operational analytics			
Technical Skills and Competencies		Generic Skills and Competencies		
Aerospace Maintenance Practices Application	Level 2	Problem Solving		Basic
Aircraft Cabin Equipment and Furnishing Maintenance	Level 1	Service Orientation		Basic
Aircraft Fuel and Engine Systems Maintenance	Level 1	Decision Making		Basic
Airframe Systems Maintenance	Level 1	Sense-Making	Intermediate	
Augmented Reality Application	Level 1	Teamwork	Intermediate	
Aviation Legislation Compliance	Level 1			
Chemical Processing	Level 1			
Coating	Level 1			
Composite Structures Design and Maintenance	Level 1			
Condition-based Assets Monitoring Management	Level 1			

Skills & Competencies	Continuous Process Improvement	Level 2		
	Elastomer Seals Application	Level 1		
	Electrical Termination, Connection and Measurement	Level 1		
	Electrical Wiring Interconnection Systems Maintenance	Level 1		
	Engineering Drawing Interpretation and Management	Level 1		
	Human Factors Application and Error Management	Level 2		
	Internet of Things Implementation	Level 2		
	Knowledge Management	Level 1		
	Lean Manufacturing	Level 2		
	Mathematical Concepts Application	Level 2		
	Non-destructive Testing (Eddy Current Inspection)	Level 1		
	Non-destructive Testing (Infrared Inspection)	Level 1		
	Non-destructive Testing (Liquid Penetrant Inspection)	Level 1		
	Non-destructive Testing (Magnetic Particle Inspection)	Level 1		
	Non-destructive Testing (Radiographic Inspection)	Level 1		
	Non-destructive Testing (Ultrasonic Inspection)	Level 1		
	Non-destructive Testing (Vibration Analysis)	Level 1		
	Non-metallic Materials Testing	Level 1		
	Physics Concepts Application	Level 2		
	Precision Measurement	Level 1		
	Quality System Management	Level 2		
	Robotics and Automation Application	Level 2		
	Sealants Process	Level 1		
	Sheet Metal Structures Maintenance	Level 1		
	Surface Enhancement	Level 1		
	Surface Preparation and Protection for Aerospace Manufacturing	Level 1		
	Visual Testing	Level 1		
	Welding Process	Level 1		
Workplace Safety and Health Framework Development and Implementation	Level 1			
Workshop Practices Application	Level 1			
Programme Listing	For a list of training programmes available for the Aerospace sector, please visit < https://www.skillsfuture.sg/skills-framework/aero >			

The information contained in this document serves as a guide.