

SKILLS FRAMEWORK FOR AEROSPACE			
SKILLS MAP - Senior Technician (Component Repair & Overhaul – Mechanical)			
Sector	Aerospace		
Track	Aircraft Engine / Component Maintenance		
Occupation	Engineering Technician		
Job Role	Senior Technician (Component Repair & Overhaul – Mechanical)		
Job Role Description	<p>The Senior Technician (Component Repair &amp; Overhaul – Mechanical) supervises a team of technicians to perform maintenance, repair and overhaul (MRO) tasks for aircraft components in accordance with technical manuals and standard operating procedures (SOPs). He/She investigates component faults and failures and proposes remedial actions to restore them to working order. He also supervises special processes and the maintenance of composite structures.</p> <p>He may be authorised by the organisation to perform quality control functions including calibration of measuring tools and equipment, supervision of quality checks and inspections for compliance with repair requirements, first article inspections (FAI) on components and tracking of non-conformances. He may also be authorised to perform level 2 non-destructive testing (NDT) processes and evaluate results according to applicable codes, standards and specifications. He monitors compliance with airworthiness and legislative requirements, and the organisation's safety, health and quality systems. He implements continuous improvement initiatives and lean practices in the workplace.</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 coordinate with engineering, quality and planning teams to assist in technical problem solving and meet maintenance targets as per schedule.</p>		
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)*
	Conduct engine and component maintenance, repair and overhaul (MRO)	Supervise MRO tasks for aircraft components in accordance with technical specifications	<ul style="list-style-type: none"> <li>International Civil Aviation Organisation (ICAO) legislation</li> <li>Air Navigation Order (ANO)</li> <li>Singapore Airworthiness Requirements (SAR)</li> <li>Workplace Safety and Health (WSH) Act</li> <li>Environmental standards</li> <li>Aerospace quality management system standards</li> <li>NDT standards</li> <li>Special process standards</li> </ul>
		Monitor usage of tools and measuring devices based on work requirements	
		Investigate faults and failures of aircraft components	
		Implement engineering solutions to resolve technical issues	
		Supervise maintenance of composite structures using appropriate resources	
		Supervise special processes as per organisational procedures	
	Administer quality control	Process documentation in accordance with regulatory and organisational requirements	*Performance Expectations are non-exhaustive and subject to prevailing regulations
		Comply with stipulated inspection procedures	
		Perform calibration and testing of measuring tools, gauges and equipment	
		Perform visual inspection of incoming material, parts and components to ensure conformity to purchase and repair requirements	
		Supervise geometric tolerance and inspection on parts and components	
		Perform first article inspection (FAI)	
	Perform non-destructive testing (NDT)	Support audits to ensure that all work done is in compliance with original equipment manufacturer (OEM) and organisation procedures	
		Monitor reporting, tracking and rectification of all non-conformances	
		Supervise NDT processes and inspections for compliance with required standards and regulations	
Conform to management system requirements	Evaluate results with respect to applicable codes, standards and specifications		
	Report NDT results for aircraft components		
	Identify relevant standard operating procedures (SOPs) for component maintenance activities		
	Monitor compliance with legislative requirements and airworthiness standards		
Contribute to continuous improvement	Oversee conformance to environment, safety and health systems, policies and procedures		
	Supervise activities to ensure implementation of organisational quality and risk management systems		
	Implement continuous improvement initiatives and activities		
	Adopt lean practices for assigned tasks		
	Interpret data for operational analytics		
Technical Skills and Competencies		Generic Skills and Competencies	
Aerospace Maintenance Practices Application	Level 2	Problem Solving	Basic
Aircraft Hydraulic Components Maintenance	Level 2	Service Orientation	Basic
Aircraft Landing Gears Maintenance	Level 2	Decision Making	Basic
Aircraft Pneumatic Components Maintenance	Level 2	Communication	Basic
Aircraft Wheels and Brakes Maintenance	Level 2	Computational Thinking	Basic
Augmented Reality Application	Level 1		
Automated System Design	Level 2		
Aviation Legislation Compliance	Level 2		

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

The information contained in this document serves as a guide.