

SKILLS FRAMEWORK FOR AEROSPACE				
SKILLS MAP - Senior Engineering Service Engineer/Senior Technical Service Engineer (Aircraft Maintenance)				
Sector	Aerospace			
Track	Aircraft Maintenance			
Occupation	Engineer			
Job Role	Senior Engineering Service Engineer/Senior Technical Service Engineer (Aircraft Maintenance)			
Job Role Description	<p>The Senior Engineering Service Engineer/Senior Technical Service Engineer (Aircraft Maintenance) is responsible for provision of technical expertise to optimise engineering solutions for aircraft maintenance works using advanced engineering problem-solving techniques. He/She refines scope of maintenance based on customer requirements, and leads technical and programme reviews with customers and suppliers. He reviews special process control plans, leads inspections and functional checks for conformance of maintenance works to technical specifications and verifies technical reports and documentation.</p> <p>He reviews compliance of aircraft maintenance works with airworthiness and legislative requirements, while proposing enhancements to the organisation's standard operating procedures (SOPs), and safety, health and quality systems. He proactively contributes to the development of lean and sustainability practices, and conducts research and digital innovation in targeted areas for continuous process improvements. As a team leader, he appraises staff performance and conducts coaching and mentoring for technical personnel.</p> <p>He works in an office environment and provide troubleshooting assistance on site when necessary. He should possess an enquiring and analytical mind and have a knack for investigating issues, analysing multifaceted engineering problems and developing optimal solutions.</p>			
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)*	
	Manage aircraft maintenance programmes	Refine scope of maintenance works based on customer requirements	In accordance with: <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 ISO, AN, MS, NAS and MIL standards Air Transport Association of America (ATA) standards Special process standards *Performance Expectations are non-exhaustive and subject to prevailing regulations	
		Review bill of materials (BOM) to accomplish maintenance functions		
		Manage technical services support for aircraft maintenance		
		Lead technical and programme reviews with customers and suppliers		
	Conduct aircraft maintenance, repair and overhaul (MRO)	Verify results of post-maintenance inspections and functional checks for conformance to technical specifications and airworthiness directives		
		Manage collaboration with original equipment manufacturers (OEM) and customers for failure investigations		
		Optimise engineering solutions using advanced problem solving techniques		
		Review special process control plans		
	Conform to management system requirements	Review documentation for compliance with regulatory and organisational requirements		
		Propose enhancements to standard operating procedures (SOPs) for aircraft maintenance operations		
		Review compliance with legislative requirements and airworthiness standards		
		Recommend improvements to environment, safety and health systems, policies and procedures		
	Contribute to continuous improvement	Contribute to the development of organisational quality and risk management systems		
		Contribute to the development of sustainability practices for aircraft maintenance		
		Evaluate opportunities for continuous improvement projects		
		Contribute to the development of lean practices for aircraft maintenance		
	Manage people and organisational development	Conduct research on market trends and technology applications to drive innovation		
		Liaise with other teams and customers to ensure smooth operations		
		Leverage data analytics to enhance operational and business decision-making		
Appraise staff performance by utilising organisational performance management systems				
Technical Skills and Competencies	Generic Skills and Competencies			
	Aerodynamics Principles Application	Level 4	Problem Solving	Intermediate
	Aerospace Maintenance Practices Application	Level 3	Sense-Making	Advanced
	Aerospace Materials and Hardware Selection	Level 4	Service Orientation	Intermediate
	Artificial Intelligence Application	Level 3	Decision Making	Intermediate
	Augmented Reality Application	Level 3	Communication	Intermediate
	Automated System Design	Level 4		
	Aviation Legislation Compliance	Level 3		
	Big Data Analytics	Level 3		
	Business Continuity Planning	Level 3		

Skills & Competencies	Business Negotiation	Level 4		
	Business Opportunities Development	Level 3		
	Business Performance Management	Level 3		
	Carbon Footprint Management	Level 4		
	Change Management	Level 3		
	Chemical Processing	Level 3		
	Coating	Level 3		
	Composite Structures Design and Maintenance	Level 4		
	Condition-based Assets Monitoring Management	Level 4		
	Continuous Process Improvement	Level 3		
	Digital Techniques Application	Level 4		
	Elastomer Seals Application	Level 3		
	Electrical Fundamentals Application	Level 4		
	Electronic Fundamentals Application	Level 4		
	Engineering Drawing Interpretation and Management	Level 4		
	Engineering Problem Solving	Level 4		
	Gas Turbine Engine Principles Application	Level 4		
	Green Manufacturing Design and Implementation	Level 3		
	Helicopter Aerodynamics, Structures and Systems Principles Application	Level 4		
	Human Factors Application and Error Management	Level 3		
	Innovation Management	Level 3		
	Internet of Things Implementation	Level 3		
	Knowledge Management	Level 3		
	Lean Practices Application	Level 3		
	Maintenance Coordination	Level 4		
	Mathematical Concepts Application	Level 3		
	Physics Concepts Application	Level 3		
	Piston Aeroplane Aerodynamics, Structures and Systems Principles Application	Level 4		
	Piston Engine Principles Application	Level 4		
	Predictive Maintenance	Level 4		
	Project Management	Level 3		
	Propeller Principles Application	Level 4		
	Propulsion Principles Application	Level 4		
	Quality System Management	Level 3		
	Robotics and Automation Application	Level 3		
	Sealants Process	Level 3		
	Stakeholder Management	Level 3		
	Surface Enhancement	Level 3		
	Surface Preparation and Protection for Aerospace Manufacturing	Level 3		
	Turbine Aeroplane Aerodynamics, Structures and Systems Principles Application	Level 4		
Welding Process	Level 3			
Workplace Safety and Health Framework Development and Implementation	Level 3			

Programme Listing	<i>For a list of training programmes available for the Aerospace sector, please visit <https://www.skillsfuture.sg/skills-framework/aero></i>
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The information contained in this document serves as a guide.