

SKILLS FRAMEWORK FOR AEROSPACE			
SKILLS MAP - Senior Engineering Service Engineer/Senior Technical Service Engineer (Aircraft Engine / Component Maintenance)			
Sector	Aerospace		
Track	Aircraft Engine / Component Maintenance		
Occupation	Engineer		
Job Role	Senior Engineering Service Engineer/Senior Technical Service Engineer (Aircraft Engine / Component Maintenance)		
Job Role Description	<p>The Senior Engineering Service Engineer/Senior Technical Service Engineer (Aircraft Engine / Component Maintenance) is responsible for provision of technical expertise to optimise engineering solutions for aircraft engine and component 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 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 engine and component maintenance programmes	Refine scope of maintenance works based on customer requirements	In accordance with: • 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 engine and component maintenance	
		Lead technical and programme reviews with customers and suppliers	
		Recommend improvements to engine and component maintenance and repair capabilities	
	Conduct engine and component 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 engine and component maintenance operations	
		Review compliance with corporate governance policies and legislative requirements	
		Recommend improvements to environment, safety and health systems, policies and procedures	
		Contribute to the development of organisational quality and risk management systems	
Contribute to continuous improvement	Contribute to the development of sustainability practices for engine and component maintenance		
	Evaluate opportunities for continuous improvement projects		
	Contribute to the development of lean practices for engine and component maintenance		
	Conduct research on market trends and technology applications to drive innovation		
Manage people and organisational development	Leverage data analytics to enhance operational and business decision-making		
	Liaise with other teams and customers to ensure smooth operations		
	Appraise staff performance by utilising organisational performance management systems		
	Conduct coaching and mentoring for junior team members		
Technical Skills and Competencies		Generic Skills and Competencies	
Aerodynamics Principles Application	Level 4	Problem Solving	Intermediate
Aerospace Heat Treatment Process	Level 4	Sense-Making	Advanced
Aerospace Maintenance Practices Application	Level 3	Service Orientation	Intermediate
Aerospace Materials and Hardware Selection	Level 4	Decision Making	Intermediate
Artificial Intelligence Application	Level 3	Communication	Intermediate
Augmented Reality Application	Level 3		
Automated System Design	Level 4		
Aviation Legislation Compliance	Level 3		
Big Data Analytics	Level 3		

<b>Skills &amp; Competencies</b>	Business Continuity Planning	Level 3		
	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		
	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 Manufacturing	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		

<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> >
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