

SKILLS FRAMEWORK FOR AEROSPACE				
SKILLS MAP - NDT Level 3 Engineer (Aircraft Engine / Component Maintenance)				
Sector	Aerospace			
Track	Aircraft Engine / Component Maintenance			
Occupation	Quality Control/Assurance Engineer			
Job Role	NDT Level 3 Engineer (Aircraft Engine / Component Maintenance)			
Job Role Description	<p>The NDT Level 3 Engineer (Aircraft Engine / Component Maintenance) oversees non-destructive testing (NDT) of aircraft engines and components to test their durability and performance. He/She prescribes NDT methods, techniques and procedures to be used in accordance with applicable codes, standards and specifications. He ensures that all NDT inspections comply with the requirements of customers, original equipment manufacturers (OEM) and EN 4179, NAS 410, National Aerospace and Defense Contractors Accreditation Program (NADCAP) as appropriate. He liaises with workshops and engineering teams for failure investigations and proposes engineering solutions for structural flaws and defects. He also conducts technical audits to ensure compliance with engineering standards manual and NDT requirements, and ensures proper documentation.</p> <p>He ensures compliance with airworthiness and legislative requirements and organisation's safety, health and quality systems. He identifies opportunities for continuous improvement through data analytics, research and innovation, and implements lean and sustainability practices in NDT activities. He monitors staff performance and is expected to provide technical guidance to level 1 and level 2 NDT personnel.</p> <p>He is required to support the NDT team remotely or at site. He should be meticulous and systematic in carrying out his tasks, and should deploy critical and analytical thinking to identify discrepancies, resolve problems and mitigate potential risks in maintenance activities.</p>			
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)*	
	Perform non-destructive testing (NDT)	Designate appropriate NDT methods, techniques and procedures to be used for testing of aircraft engine and components	In accordance with: <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> *Performance Expectations are non-exhaustive and subject to prevailing regulations	
		Establish parameters for acceptance and rejection of aircraft engine and components		
		Conduct technical audits to ensure compliance with relevant standards and NDT requirements		
		Ensure NDT documentation in accordance with regulatory and organisational requirements		
	Contribute to engine and component maintenance, repair and overhaul (MRO)	Liaise with maintenance and engineering teams to detect and evaluate flaws in engine parts and components		
		Propose engineering solutions for structural flaws, defects and damages in engine and components		
	Conform to management system requirements	Ensure adherence of NDT operations to standard operating procedures (SOPs)		
		Ensure compliance with legislative requirements and airworthiness standards		
		Enforce conformance to environment, safety and health systems, policies and procedures		
Implement organisational quality and risk management systems				
Contribute to continuous improvement	Implement sustainability practices for engine and component maintenance			
	Identify opportunities for continuous improvement projects			
	Implement lean practices for engine and component maintenance			
	Contribute to research on market trends and technology applications to drive innovation			
Manage people and organisational development	Analyse data for identification of operational and business insights			
	Communicate with team members and customers to ensure smooth day-to-day operations			
	Monitor staff performance			
		Provide technical guidance to peers and junior team members		
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies	
	Aviation Legislation Compliance	Level 3	Problem Solving	Intermediate
	Business Negotiation	Level 3	Sense-Making	Advanced
	Continuous Process Improvement	Level 3	Decision Making	Basic
	Engineering Drawing Interpretation and Management	Level 3	Service Orientation	Intermediate
	Engineering Problem Solving	Level 4	Computational Thinking	Intermediate
	Human Factors Application and Error Management	Level 3		
	Internet of Things Implementation	Level 3		
	Knowledge Management	Level 3		
	Lean Manufacturing	Level 2		
	Mathematical Concepts Application	Level 3		
	Non-destructive Testing Management	Level 3		
	Physics Concepts Application	Level 3		
Quality System Management	Level 3			

	Robotics and Automation Application	Level 3		
	Workplace Safety and Health Framework Development and Implementation	Level 3		
	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.