

**SKILLS FRAMEWORK FOR AEROSPACE
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Aerospace and Engineering Fundamentals					
TSC	Turbine Aeroplane Aerodynamics, Structures and Systems Principles Application					
TSC Description	Apply and use principles of turbine aeroplane aerodynamics, structures and systems for maintenance, repair, overhaul or manufacturing in accordance with the original equipment manufacturer (OEM) manuals and organisational procedures					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			AER-ACO-3024-1.1	AER-ACO-4024-1.1		
			Apply principles of theory of flight, airframe structures and systems towards maintenance, repair, overhaul or manufacturing of turbine aeroplane structures and systems	Provide guidance and optimisation on the design, operation and construction of airframe structures and systems based on the concepts of aeroplane aerodynamics and high-speed flight		
Knowledge			<ul style="list-style-type: none"> Principles of theory of flight General concepts of airframe structures and aeroplanes (ATA 52 – 57) Principles of air conditioning and cabin pressurisation (ATA 21) Functions of avionic, instrument, landing gear and lighting systems (ATA 22 - 23, 31 - 34) Aircraft electrical power systems, equipment and cabin furnishings and fire detection methods (ATA 24 - 26) Types of flight control, fuel, hydraulic power and ice and rain protection systems (ATA 27 - 30) Types of oxygen and pneumatic/vacuum systems (ATA 35 - 36) Specification of water and waste systems (ATA 38) Concepts of integrated modular avionics (ATA 42) Cabin, on-board maintenance and information systems (ATA 44 - 46) 	<ul style="list-style-type: none"> Concepts of aeroplane aerodynamics and high-speed flight Installation, construction and assembly methods for airframe structures and aeroplanes Principles of air conditioning and cabin pressurisation Construction and application of avionic, instrument, landing gear and lighting systems Installation and handling requirements of power systems, equipment and furnishings and fire protection systems Operation of flight control, fuel, hydraulic power and ice and rain protection systems Layout and operation of oxygen and pneumatic/vacuum system Layout and operation of water and waste systems Functions of Integrated Modular Avionics (IMA) system Functions of cabin, on-board maintenance and information systems 		

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Abilities			<ul style="list-style-type: none"> • Apply theory of flight to evaluate characteristics of primary and secondary flight control surfaces, including high speed flight • Explain characteristics of airframe structures and aeroplanes • Explain characteristics of air conditioning and cabin pressurisation systems • Describe the operating characteristics of electro-avionic systems • Describe the operating characteristics of electro-mechanical systems • Explain the operation of flight control systems • Describe the functions of water and waste systems • Identify functions that may be integrated in the Integrated Modular Avionic (IMA) modules • Describe the functions of cabin, on-board maintenance and information systems 	<ul style="list-style-type: none"> • Guide the design, operation and construction of flight control surfaces and high-speed flight • Define work instructions for installation and construction of airframe structures and aeroplanes • Evaluate the operation of air conditioning and cabin pressurisation systems • Discuss the lay-out and operation of electro-avionic systems • Discuss the lay-out and operation of electro-mechanical airframe and powerplant systems • Optimise the operation of flight control systems • Optimise the layout, operation and servicing of water and waste systems • Define the function of various Integrated Modular Avionic (IMA) modules • Guide the configuration of cabin, on-board maintenance and information systems 		
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