

SSNST09 Textile Machinery and Process Technician

1. Job role

TCF sub-sector	Natural and Synthetic Textile Manufacturing
Functional area	Maintenance and Process Support
Job role	SSNST09 Textile Machinery and Process Technician
Job role description	Provides specialised technical support for textile manufacturing machinery, automated production systems and process optimisation activities within the natural and synthetic textiles sector of the Textile, Clothing and Footwear (TCF) industry. This role is identified within the Maintenance and Process Support function of the Natural and Synthetic Textile Manufacturing Occupational Framework as a scale-dependent occupation. The Textile Machinery and Process Technician is responsible for maintaining, troubleshooting, calibrating and optimising textile production machinery and associated manufacturing systems to ensure efficient, safe and reliable textile production operations. The role supports machinery and process operations across fibre preparation, spinning, weaving, knitting, nonwoven production, textile finishing, coating and lamination systems and technical textile manufacturing environments. Technicians work with natural fibre processing systems and synthetic textile manufacturing technologies across a broad range of industrial and technical applications. The position requires advanced understanding of textile machinery operation, process engineering, automation systems, pneumatic and hydraulic systems, electronic controls, sensors, drives, production software and machine diagnostics. The role involves analysing machine performance, identifying process inefficiencies, supporting preventative maintenance programs and implementing continuous improvement initiatives. The Textile Machinery and Process Technician works closely with production supervisors, operators, textile technologists, maintenance teams, automation specialists and quality personnel to minimise downtime, improve machine efficiency, support product quality and maintain production continuity. The role also contributes to installation and commissioning of new equipment, production trials, sustainability initiatives, digital manufacturing integration and advanced process optimisation activities supporting Australia's textile manufacturing capability.
Performance expectations	Maintaining efficient and reliable operation of textile manufacturing machinery and systems

	• Minimising equipment downtime, process interruptions and production losses • Supporting safe operation and compliance of textile production equipment • Monitoring and improving machine performance, calibration and process efficiency • Troubleshooting machinery faults, process deviations and operational issues • Supporting preventative maintenance and continuous improvement activities • Maintaining accurate maintenance records, traceability and technical documentation • Supporting integration of automation, digital manufacturing and Industry 4.0 systems • Contributing to operational productivity, sustainability and advanced manufacturing capability
Specialisation	Textile machinery maintenance, process optimisation, textile automation systems, production diagnostics, textile engineering support and industrial process control
Application in other TCF sectors	Technical textiles, industrial textiles, apparel textiles, furnishing textiles, medical textiles, automotive textiles, composites manufacturing and advanced manufacturing

2. Key tasks and critical work functions

Key tasks	• Inspecting, maintaining and troubleshooting textile production machinery • Conducting preventative maintenance and calibration activities • Monitoring machine efficiency, process parameters and equipment performance • Diagnosing mechanical, electrical, pneumatic and process faults • Supporting setup and optimisation of spinning, weaving, knitting and finishing systems • Assisting with installation and commissioning of new textile machinery • Maintaining maintenance schedules, spare parts and technical records • Supporting automation systems, sensors and production software integration • Liaising with operators, production supervisors and technical specialists • Following workplace safety, operational and maintenance procedures
Critical work functions	• Ensuring reliable and efficient operation of textile production systems • Maintaining machinery performance, calibration and process consistency • Preventing production downtime, equipment failures and process inefficiencies • Supporting compliance with safety, operational and quality requirements

	• Maintaining integrity of automation and digital manufacturing systems • Supporting efficient workflow between production and maintenance operations • Maintaining traceability and technical documentation integrity • Contributing to productivity, sustainability and manufacturing capability development
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3. Technical skills

Textile machinery maintenance	Maintaining and repairing textile production equipment
Process optimisation	Monitoring and improving textile manufacturing processes
Automation systems	Supporting sensors, controls and digital manufacturing systems
Mechanical and electrical diagnostics	Identifying and resolving equipment faults
Machine calibration and setup	Adjusting machinery for production accuracy and efficiency
Production monitoring	Analysing machine performance and process data
Preventative maintenance	Implementing scheduled servicing and inspection programs
Documentation and traceability	Maintaining maintenance and technical records

4. Generic Skills

Problem solving	Resolving machinery, automation and process issues
Communication	Working with operators, supervisors and technical teams
Analytical thinking	Evaluating machine performance and production efficiency
Teamwork	Supporting integrated textile manufacturing operations
Time management	Managing maintenance schedules and operational priorities
Attention to detail	Maintaining machine accuracy and technical compliance
Adaptability	Responding to evolving technologies and production systems
Professionalism	Following operational, safety and maintenance standards

5. Emerging skills

Emerging skills	• Industry 4.0 integration in textile manufacturing systems • Smart textile machinery diagnostics and predictive maintenance systems • Robotics and automated textile production technologies • Sustainable and energy-efficient textile machinery systems • Digital twin technologies and advanced process simulation • Advanced sensor integration and AI-assisted production monitoring
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6. VET Qualifications and Skill Sets

Entry-level preparation	MEM31822 Certificate III in Engineering - Textile Mechanic or equivalent
Advanced development	MEM40119 Certificate IV in Engineering or equivalent

7. Job progression

Possible job progression	Maintenance Assistant → Textile Machinery and Process Technician → Senior Process Technician → Maintenance Supervisor → Engineering or Technical Manager
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8. Classification

Australian Qualifications Framework	Level 4-6
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2-3
Open Source Classification of Occupations for Australia (OSCA)	Textile Machinery and Process Technician - Natural and Synthetic Textile Manufacturing



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