

SSAPP31 Knitting Machine Mechanic

1. Job role

TCF sub-sector	Apparel
Functional area	Knitwear Production
Job role	SSAPP31 Knitting Machine Mechanic
Job role description	Maintains, repairs and optimises industrial knitting machinery used in the production of knitted textiles and garments. The role ensures reliable operation of flatbed, circular, fully fashioned and whole-garment knitting machines used in Australian knitwear manufacturing. The Knitting Machine Mechanic diagnoses mechanical, electronic and programming issues, performs preventative maintenance and works closely with production teams to maintain fabric quality and production efficiency. The role requires specialised knowledge of yarn handling, machine settings, stitch structures and digital knitting technology used in modern knitwear production.
Performance expectations	• Maintain reliable operation of knitting machinery across production lines • Minimise machine downtime through preventative maintenance and rapid fault diagnosis • Ensure machines produce fabric and garments within required quality specifications • Support production efficiency and consistent machine performance • Maintain safe and compliant machine operation in accordance with WHS standards • Document maintenance activities and machine performance data • Support installation, calibration and commissioning of knitting machinery • Contribute to continuous improvement of knitting operations
Specialisation	Flatbed knitting machine maintenance, circular knitting machine maintenance, fully fashioned knitwear machinery, whole-garment knitting technology, electronic patterning systems and automated yarn feeding systems.

2. Key tasks and critical work functions

Key tasks	• Perform preventative maintenance on industrial knitting machinery • Diagnose and repair mechanical, electronic and programming faults
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	• Adjust machine settings to optimise stitch formation and yarn tension • Support machine setup for different knit structures and yarn types • Inspect machine components including needles, cams, feeders and yarn carriers • Coordinate machine servicing and spare parts replacement • Assist with machine installation and calibration • Maintain maintenance records and equipment documentation
Critical work functions	• Maintaining reliable operation of knitting machines in production • Ensuring fabric quality through accurate machine calibration • Preventing machine breakdowns through effective maintenance systems • Supporting efficient knitwear production workflows • Ensuring safe operation of complex mechanical and electronic machinery • Maintaining specialist knowledge of knitting technologies • Supporting production teams to resolve machine-related quality issues

3. Technical skills

Knitting machine mechanics	Maintain mechanical systems of flatbed, circular and fully fashioned knitting machines.
Electronic knitting systems	Diagnose electronic control and sensor systems used in modern knitting machinery.
Machine programming and pattern systems	Support digital patterning and programming systems used in knitting machines.
Machine calibration	Adjust machine settings including yarn tension, gauge and stitch formation.
Needle and component replacement	Replace and maintain needles, cams, feeders and yarn handling components.
Preventative maintenance systems	Implement scheduled servicing of knitting machinery.
Maintenance management software	Record maintenance activities using digital asset management systems.
WHS compliance	Apply safe maintenance procedures for industrial textile machinery.

4. Generic Skills

Problem solving	Diagnose complex mechanical and electronic machine faults.
Attention to detail	Ensure accurate machine calibration and fabric quality.
Communication	Coordinate with production technicians and supervisors.
Planning and organisation	Schedule maintenance activities efficiently.
Technical learning	Maintain knowledge of evolving knitting technologies.
Teamwork	Work collaboratively with production and technical teams.

5. Emerging skills

Emerging skills	• Digital programming of advanced knitting machines • Whole-garment knitting technology maintenance • Automation and robotics integration in knitting production • Machine data monitoring and predictive maintenance systems • Energy-efficient machine operation and optimisation • Integration of digital product development systems with knitting machinery
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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	Knitting Machine Operator → Knitting Technician → Knitting Machine Mechanic → Maintenance Supervisor → Engineering Manager
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8. Classification

Australian Qualifications Framework	AQF Level 3-4
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 3 (Technicians / Trades)
Open Source Classification of Occupations for Australia (OSCA)	Textile Machinery Mechanic / Knitting Machine Technician



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