

Demonstrate knowledge of the movements and timings of tricot element bars to the needle action

Level 3

Credits 7

Purpose This unit standard is for mechanics of tricot warp-knitting machines.

People credited with this unit standard are able to: identify and describe the relationships of element bars and needle bar at the critical positions of the knitting cycle; relate the pattern-chain links to the overlap and underlap movements of the guide bars; and relate the control of knitting quality of tricot fabrics to take-up roller speed.

Subfield Industrial Machine Knitting

Domain Knitting Machine Servicing and Maintenance

Status Registered

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Entry information Open.

Accreditation Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB) Competenz

Accreditation and Moderation Action Plan (AMAP) reference 0030

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Special notes

- 1 This unit standard applies to the tricot sector of the knitting industry.
- 2 This unit standard can apply to one or more of the following types of machine, according to the mix of machines that the mechanic services:
 - a bearded needle, single needle bar machine;
 - b compound needle, single needle bar machine;
 - c bearded or compounded needle, double needle bar machine (Simplex machine).

- 3 Technical aspects that are required to be covered in demonstrating competence in this unit standard include:
- a the needle bar movement;
 - b the critical stages of the knitting cycle;
 - c the cycle of movements of the guide bars and other element bars relative to the needle bar or bars;
 - d the control of the guide bars during their lapping movements;
 - e the distinction between underlaps and overlaps;
 - f the chain-link numbering system;
 - g the control of the quality of any fabric by means of the take-up rollers;
 - h run-ins and beam let-offs;
 - i the rack (480 courses) as the standard unit in warp-knitting.

Elements and performance criteria

Element 1

Identify and describe the relationships of element bars and needle bar at the critical positions of the knitting cycle.

Performance criteria

- 1.1 Individual element and needle bars are identified and described in terms of their functions in the knitting cycle.
- 1.2 The different bars relative to the needle bar are identified and described in terms of their relationships at each critical position in the knitting cycle.
 - Range clearing, overlap, pressing or tongue closing, knockover, underlap, guide-bar heights, sinker timing.

Element 2

Relate the pattern-chain links to the overlap and underlap movements of the guide bars.

Performance criteria

- 2.1 The distinctions between overlaps and underlaps are identified and described.
- 2.2 The relationship between the guide bars and the chain-links is identified and described in terms of the guide bar lapping movements.
- 2.3 Guide bar lapping movements are identified and described in terms of the chain-link numbering system.
 - Range standard laps used in the workplace.
- 2.4 Guide bar lapping movements are identified by their chain-link numbers.
 - Range standard laps used in the workplace.

Element 3

Relate the control of knitting quality of tricot fabrics to take-up roller speed.

Performance criteria

- 3.1 The mechanism controlling the fabric take-up roller speed is identified and described in terms of its function.
- 3.2 The relationship of fabric take-up roller speed to the quality of the fabric is identified and described in terms of courses per centimetre.
- 3.3 The let-off motions controlling the rate of run-in of each of the warps are identified, and their adjustment is described in terms of their effects on fabric quality.
- 3.4 The relationship between the lapping movement of a guide bar and its run-in rate is described in terms of its effect on the rate of yarn usage.

Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz info@competenz.org.nzi if you wish to suggest changes to the content of this unit standard.