Carry out remedial adjustments and quality checks on industrial knitting machines

Level	**3**
Credits	**10**

Purpose This unit standard is for operators and mechanics of all types of industrial knitting machines.

People credited with this unit standard are able to: repair faults in the knitting head; monitor production for conformity to workplace technical specifications; demonstrate knowledge of yarn-related faults in knitted fabrics; and demonstrate knowledge of machine-related faults in knitted fabrics.

Subfield	Industrial Machine Knitting
Domain	Knitting Machine Operation
Status	Registered
Status date	19 March 2010
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Entry information	Recommended: Unit 16122, *Operate industrial knitting machines*, or demonstrate equivalent knowledge and skills.
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 all sectors of the knitting industry.

2 This unit standard relates to the operation of a single category of knitting machines, such as flat bed machines, or pantyhose machines, or circular piecegoods machines, or tricot machines, and so on, and to any ancillary machines associated with the production from that category of machines.

3 This unit standard relates to the operation of one or more machines that constitutes an operator-load, as determined by trade and workplace procedures.

4 This unit standard applies to the predominant category of machines the person is operating at the time of assessment.

5 Performance of the elements must comply with the requirements of the Health and Safety in Employment Act 1992.

6 Technical aspects that are required to be covered in demonstrating competence in this unit standard may include any or all of the following, depending on the machines used in the workplace:
- a application of occupational safety and health procedures, including first aid equipment and safe lifting practices;
- b production examination for faults, defects, and the maintenance of knitting quality;
- c recognition of all needles and elements used in each machine being operated by distinctions such as:
  - i needle and element identification numbers;
  - ii gauge;
  - iii butt lengths or heights;
  - iv butt positions on the needle and/or element stems;
  - v latch length;
  - vi hook or beard size.

7 Competence in fault identification should be shown in a minimum of two yarn-related faults (different from the two yarn-related faults used in assessment against Unit 16122, *Operate industrial knitting machines*).

8 Fabric fault should be described fully under a range of headings covering all aspects of the fault and its correction, of which the following is an example:
- a fault – its technical name, or similar short description;
- b appearance – the distinguishing features of the fault in the fabric that enable it to be recognised;
- c cause – the likely causes of the fault;
- d effect – the impact the fault has on the properties or usability of the fabric;
- e responsibility – the role holder responsible for the correction of the fault;
- f action – measures to be taken to correct the fault, by the operator or through the company fault-reporting procedures;
- g prevention – measures to be taken to prevent or minimise recurrence of the fault.

9 Recognition and knowledge of faults may be assisted by compiling a record of faults which includes a description of the fault under suitable headings. See special note 8 for an example of suitable headings to use to describe a fault.

10 Definitions

Technical specifications refer to material such as set-out diagrams or product specifications from either manufacturers or the workplace. This material may be in hard copy or supplied in electronic form.

Workplace procedures refer to the verbal or documented procedures for performing activities including health and safety, operational, environmental and quality management requirements. They refer to manuals, manufacturers' specifications, codes of practice, or policy statements.

Elements and performance criteria

Element 1

Repair faults in the knitting head.

Performance criteria

1.1 Broken or damaged needles and elements are removed from the knitting head and replaced in accordance with the machine-builder's instructions and workplace procedures.

1.2 Machine faults are corrected as instructed in accordance with workplace procedures.

Range above, at, or below the knitting head.

1.3 Machines are, as necessary, reset to start in accordance with workplace procedures, restarted, monitored and further corrections made as required for correct knitting performance in accordance with workplace procedures.

Element 2

Monitor production for conformity to workplace technical specifications.

Performance criteria

2.1 Fabric quality is measured and checked for conformity with technical specifications in accordance with workplace procedures

2.2 Production not conforming to technical specifications is reported in accordance with workplace procedures.

Element 3

Demonstrate knowledge of yarn-related faults in knitted fabrics.

Range yarns used in the workplace, use of one or more ends of incorrect yarn in the complement of yarns on a knitting machine, two examples of personally-experienced and collected yarn-related faults.

Performance criteria

3.1 Yarn-related faults in knitted fabric are described, shown by sample, and their correction and the effects of the faults on the knitted production are explained.

Range faults arising from the use of yarns of incorrect batch or merge and/or yarn count and/or, in textured continuous-filament yarns, if applicable, the use of yarns of incorrect direction of twist, with the use of dyestuffs, if necessary, to highlight the faults.

Element 4

Demonstrate knowledge of machine-related faults in knitted fabrics.

Range faults arising from mechanical damage, defects, wear, or operator error on knitting machines in the workplace, six examples of personally-experienced and collected machine-related faults.

Performance criteria

4.1 Machine-related faults in knitted fabric are described in terms of those arising out of mechanical damage, defects, wear, and/or operator error, shown by sample, and their correction and the effects of the faults on the knitted production are explained.

Range incorrect quality, barriness (alternatively known as barré or repeat-feeder striping or slurgalling), tuck and/or miss-knit stitches as faults, dropped stitches, burst walewise stitches, wale lines, ladders and/or dropped stitches, other faults according to frequent work-related experience.

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.nz if you wish to suggest changes to the content of this unit standard.