

# Model Answers

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**Domain** Apparel Cutting and Sewing

**Unit** 20342 v2 Thread and operate an industrial lockstitch sewing machine in a learning environment Level 2 Credits 7

## Assessment Information

### Entry Information

There are no pre-requisite requirements for this unit.

### Required Evidence

The Assessment Guide, including the following completed assessment tasks:

- » Observation Checklist

### Appeals

The candidate must understand the appeals process before carrying out this assessment.

Information about Competenz's assessment appeals process can be found on the Assessors and Moderators page of Competenz's website [www.competenz.org.nz](http://www.competenz.org.nz).

## Change control

The following changes have been made to 20342 v2 assessment materials.

Edition of this document	Changes made
Edition 2 February 2019	<ul style="list-style-type: none"><li>» Updated to Competenz 2018 assessment templates, including the addition of a 'Candidate evidence check', legislative updates in 'Assessment requirements', and the addition of an 'Assessor final judgement' section.</li><li>» Updated formatting.</li><li>» Footer has been updated to reflect new Edition.</li><li>» This edition was pre-moderated February 2019.</li></ul>
Edition 1	No changes. Original PaMPITO document.

## Assessment Requirements

This Assessment Guide is designed to help you provide evidence of your skills and knowledge required by this unit standard.

### Before you begin

Read through the assessment requirements yourself. Talk with your assessor or training advisor if there is anything you don't understand.

Meet with your assessor to plan your assessment. Your assessor will:

- » Talk you through this Guide, and discuss when and how you will be assessed.
- » Check you are ready to begin this assessment.

### What you need to do

1. Complete the following assessment tasks:

<b>Observation Checklist</b>	<p>Be observed threading and operating an industrial lockstitch sewing machine. This will involve:</p> <ul style="list-style-type: none"><li>» Threading an industrial lockstitch sewing machine.</li><li>» Setting and adjusting an industrial lockstitch sewing machine for stitch formation and fabric thickness.</li><li>» Controlling and operating an industrial lockstitch sewing machine.</li><li>» Joining material using straight and curved seams.</li><li>» Lubricating and cleaning an industrial lockstitch sewing machine using supplied tools and equipment.</li><li>» Attaching a copy of documents as listed in the Observation Checklist.</li></ul>
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**Note:** Your assessor may choose a verifier to observe you and/or verify your work. This person must have expertise in threading and operating an industrial lockstitch sewing machine in a learning environment, and could be someone you report to, your trainer, or a supervisor or manager who works with you regularly.

2. You may wish to provide additional supporting evidence that proves you have the knowledge and skills required by the unit. Additional evidence may include, for example, workplace documentation you have used and/or completed, work samples, training records, photos, screenshots, printouts, videos, voice recordings.
3. When you have completed all assessment tasks, attach your evidence and complete the 'Candidate evidence check' at the end of this Guide.
4. When you are sure you have completed and/or attached everything, contact your assessor or training advisor to arrange next steps.

## Conditions

- » Your evidence must clearly show you can thread and operate an industrial lockstitch sewing machine in a learning environment.
- » Complete all assessment tasks yourself.
  - Answer questions yourself, using your own words.
  - Any evidence you attach must be your own work. This includes any work samples, photos and/or completed documents.
- » Performance of the elements must comply with the Health and Safety at Work Act 2015.
- » The written or oral training instructions specified by your tutor or trainer relating to the product or garment being sewn must be provided to you before this assessment begins.
- » It is expected that you will have had experience of threading and operating an industrial lockstitch sewing machine in a learning environment before being formally assessed.
- » All tasks you carry out for this assessment must be completed in accordance with training instructions, manufacturer's specifications and workroom safety requirements.

## Definitions

- » *Training instructions* refer to the guidelines and procedures, either written or oral, specified by the candidate's tutor/trainer in relation to the product or garment being sewn. These instructions must be made known to the candidate prior to assessment against this unit standard.
- » *Workroom safety requirements* refer to the safety procedures that apply in the candidate's school or early tertiary learning environment.
- » *Lockstitch* is sometimes known as plainsew or single needle and refers to the traditional or standard type of stitch produced by a domestic or industrial sewing machine.

## Further information

The following legislation (law) applies to this unit standard:

- » Health and Safety at Work Act 2015 (which replaced the Health and Safety in Employment Act 1992 on 4th April 2016).

**Note:** This unit standard includes references to laws that are now out-of-date (see above). Assessment tasks must be completed in accordance with the latest laws. There may be a transition period where answers relating to the earlier law may be acceptable. This decision is at the discretion of the Assessor.

Visit [www.legislation.govt.nz](http://www.legislation.govt.nz) for the latest NZ laws.

## Unit Standard Evidence Map

Unit 20342 v2	Thread and operate an industrial lockstitch sewing machine in a learning environment	Level 2	Credits 7
Elements and Performance Criteria		Evidence	No.
<b>Element 1:</b> Thread an industrial lockstitch sewing machine.			
1.1	Worn and damaged needles are replaced according to manufacturer's specifications.	Observation Checklist	B2, 25
1.2	Industrial bobbins or spools are removed, rewound, and replaced to manufacturer's specifications.	Observation Checklist	B3, 25
1.3	The industrial machine is threaded up to manufacturer's specifications, and tensions are set according to the material to be sewn.	Observation Checklist	B4, 5, 25
<b>Element 2:</b> Control an industrial lockstitch sewing machine.			
2.1	Industrial hand and foot controls are used to sew backward and forward according to training instructions.	Observation Checklist	B12, 25
2.2	Functional stitching elements are named and described for an industrial lockstitch machine.	Observation Checklist	B1
<b>Element 3:</b> Lubricate and clean an industrial lockstitch sewing machine.			
3.1	Parts are lubricated according to manufacturer's specifications using the recommended lubricants.	Observation Checklist	B23, 25
3.2	All lint is removed from working parts, using supplied tools and equipment, to manufacturer's specifications.	Observation Checklist	B24, 25
3.3	All maintenance procedures comply with workroom safety requirements.	Observation Checklist	B22, 25
<b>Element 4:</b> Set and adjust an industrial lockstitch sewing machine for desired stitch formation and fabric thickness.			
4.1	Stitch formation is drawn or explained, and the industrial lockstitch machine is adjusted for different fabric thickness.	Observation Checklist	B6, 7
4.2	Top and bottom threads are compatible, and their relationship is explained in terms of product or garment quality requirements.	Observation Checklist	B8
4.3	Machine is threaded, tested and adjusted in accordance with training instructions.	Observation Checklist	B4, 9, 25

<b>Element 5:</b> Operate an industrial lockstitch sewing machine.			
5.1	Machine foot is correct for fabric and seam used, and changed where necessary.	Observation Checklist	B11
5.2	Sewing practice meets workroom safety requirements.	Observation Checklist	B10, 25
5.3	Sewing is removed from machine according to training instructions.	Observation Checklist	B13, 25
5.4	Thread is cut flush using the snips or auto cutter in accordance with training instructions.	Observation Checklist	B14, 25
5.5	Sewn line is straight. Range: minimum 30 cm.	Observation Checklist	B15
<b>Element 6:</b> Join material using straight and curved seams.			
6.1	Materials are stitched in accordance with training instructions. Range: stitching parallel, edge and seams straight, seams flat, ends meet, stitch tension even.	Observation Checklist	B16, 25
6.2	Corners are sewn to in accordance with training instructions. Range: edges, both sides.	Observation Checklist	B17, 25
6.3	Topstitch and edgestitch sewing is performed in accordance with training instructions. Range: parallel to seam edge, seams flat.	Observation Checklist	B18, 19, 25
6.4	Shapes are clipped and bagged out after joining in accordance with training instructions. Range: excess material removed, corners sharp and clean, material undamaged.	Observation Checklist	B20, 21, 25

Any queries, contact: Competenz, PO Box 9005, Newmarket, Auckland 1149. Ph. 0800 526 1800

# Observation Checklist

Carefully read through this Observation Checklist so you know exactly what is expected.

You must be observed threading and operating an industrial lockstitch sewing machine in a learning environment.

You will need to:

- » Complete Part A of the checklist.
- » Thread an industrial lockstitch sewing machine.
- » Set and adjust an industrial lockstitch sewing machine for stitch formation and fabric thickness.
- » Control and operate an industrial lockstitch sewing machine.
- » Join material using straight and curved seams.
- » Lubricate and clean an industrial lockstitch sewing machine using supplied tools and equipment.
- » Attach a copy of documents as listed in the Observation Checklist.

You may be asked additional questions to check your knowledge and understanding, and may need to demonstrate your skills and/or carry out tasks more than once.

## Note to the Assessor or Verifier

- » Complete Part B of the checklist. By completing this checklist you are confirming that you have seen the candidate complete the tasks and/or demonstrate the skills.
- » All tasks must be carried out in accordance with training instructions provided by the tutor or trainer, manufacturer's specifications and workroom safety requirements.
- » Where prompted, please record details of what you observed, e.g. comments about the candidate's performance, what the candidate did or said, and specific questions and responses.
- » Check the candidate has completed Part A and has attached any required evidence.

## Assessor

This Observation Checklist supports Outcomes 1, 2, 3, 4, 5 and 6.

## Judgement statement

- The completed Observation Checklist support the candidate's ability to:
  - Thread an industrial lockstitch sewing machine.
  - Control a domestic lockstitch sewing machine.
  - Lubricate and clean an industrial lockstitch sewing machine.
  - Set and adjust an industrial lockstitch sewing machine for desired stitch formation and fabric thickness.
  - Operate an industrial lockstitch sewing machine.
  - Join material using straight and curved seams.
- The candidate correctly names and explains the function of the stitching elements of an industrial lockstitch sewing machine.
- The candidate correctly draws or explains lockstitch formation.
- The candidate's explanation of lockstitch formation shows an understanding of the importance of the relationship between top and bottom threads in lockstitch formation in terms of product or garment quality requirements.
- All tasks have been carried out in accordance with training instructions, manufacturer's specifications and workroom safety requirements.

**Part A: Candidate to complete this section**

<b>Your name</b>		
<b>Workroom location</b>		
<b>Sewing machine make and model</b>		
<b>Instructions from your tutor or trainer</b>	<p>Attach a copy of the <b>written</b> training / sewing instructions that were given to you.</p> <p><b>or</b></p> <p>Briefly outline the <b>verbal</b> sewing / training instructions that were given to you.</p>	
<b>Type of material(s) you will sew</b>		
<b>Thickness of material(s) you will sew</b>		
<b>Description of needle(s) you will use</b>	System	
	Point	
	Size	
<b>Attach copies of these documents</b>  Clearly label all attachments	<input type="checkbox"/> Copy of training instructions from your tutor or trainer (if given in writing)  <input type="checkbox"/> Copy of drawing showing lockstitch formation (if not explained verbally)	

## Part B: Assessor or Verifier to complete this section

For each statement below, tick if you agree.

**When threading the industrial lockstitch sewing machine, the candidate:**



1. Names and describes the functional stitching elements of the machine.

Record key points from the candidate's response.

Element	Description

2. Replaces worn and/or damaged needle(s) in accordance with manufacturer's specifications.

Tick which applies:

Candidate replaced needle(s) on machine make and model described in Part A.

**or**

Candidate replaced needle(s) on a different machine. Record details below.

Make		Model	
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3. Prepares the industrial bobbins and/or spools in accordance with the manufacturer's specifications.

The candidate **must** carry out the following actions:

**Remove** the bobbins / spools.

**Rewind** the bobbins / spools.

**Replace** the bobbins / spools.

**Assessor All boxes must be ticked.**

4. Threads up the machine in accordance with the manufacturer's specifications and training instructions.



**When setting and adjusting the industrial lockstitch sewing machine, the candidate:**

5. Sets the tensions according to the material being sewn.

6. Adjusts the machine for at least **two** different fabric thicknesses.   
Record the fabric thicknesses the candidate adjusted the machine for.

Fabric 1		Fabric 2	
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7. Draws or explains lockstitch stitch formation.

Tick which applies:

A copy of the candidates drawing is attached to this Observation Checklist.

**or**

Candidate verbally explains lockstitch stitch formation.

Record key points from the candidate's response.

8. Checks the relationship between top and bottom threads is compatible.

**and**

Explains the importance of having the correct relationship between top and bottom threads in terms of the sewn product or garment quality requirements.

Record key points from the candidate's response.

9. Tests the machine for stitch formation and, if necessary, adjusts the machine in accordance with training instructions.

Tick which applies:

Adjustments the candidate made are listed below.

**or**

No further adjustments needed to be made however the candidate explains how they would make machine adjustments for stitch formation.

Record key points from the candidate's response.

When controlling and operating the industrial lockstitch sewing machine, the candidate:		<input checked="" type="checkbox"/>
10.	Meets all workroom safety requirements when operating the machine. Record the actions the candidate took to meet the safety requirements. <input type="text"/>	<input checked="" type="checkbox"/>
11.	Ensures the machine foot is correct for the fabric being sewn and changes it where necessary. Tick which applies: <input type="checkbox"/> The candidate made the required foot changes. <b>or</b> <input type="checkbox"/> No foot changes needed to be made however the candidate explains why the foot is suitable and how they would change it if necessary. Record key points from the candidate's response. <input type="text"/>	<input checked="" type="checkbox"/>
12.	Sews backward <b>and</b> forward in accordance with training instructions. The candidate <b>must</b> carry out the following actions: <input checked="" type="checkbox"/> Using <b>hand</b> controls. <input checked="" type="checkbox"/> Using <b>foot</b> controls. <b>Assessor Both</b> boxes must be ticked.	<input checked="" type="checkbox"/>
13.	Removes the sewing from the machine in accordance with the training instructions.	<input checked="" type="checkbox"/>
14.	Cuts the thread flush using the snips or auto cutter in accordance with the training instructions.	<input checked="" type="checkbox"/>
15.	Produces a straight sewn line at least 30cm in length. Record the length of the straight sewn line the candidate produced. <input type="text"/>	<input checked="" type="checkbox"/>

**When joining material using straight and curved seams, the candidate:**



16. Stitches the material(s) in accordance with the training instructions:



The sewing **must** meet the following requirements:

Straight seam	Curved seam
<input checked="" type="checkbox"/> Stitching is parallel.	<input checked="" type="checkbox"/> Stitching is parallel.
<input checked="" type="checkbox"/> Edge and seams are straight.	<input checked="" type="checkbox"/> Edge and seams are straight.
<input checked="" type="checkbox"/> Seams are flat.	<input checked="" type="checkbox"/> Seams are flat.
<input checked="" type="checkbox"/> Ends meet.	<input checked="" type="checkbox"/> Ends meet.
<input checked="" type="checkbox"/> Stitch tension is even.	<input checked="" type="checkbox"/> Stitch tension is even.

**Assessor All** boxes must be ticked.

17. Sews to the corners in accordance with the training instructions.



The sewing **must** meet the following requirements:

Straight seam	Curved seam
<input checked="" type="checkbox"/> Sewing is to the edges of the corners.	<input checked="" type="checkbox"/> Sewing is to the edges of the corners.
<input checked="" type="checkbox"/> Sewing is to both sides of the corners.	<input checked="" type="checkbox"/> Sewing is to both sides of the corners.

**Assessor All** boxes must be ticked.

18. Carries out **topstitch** sewing in accordance with the training instructions.



The sewing **must** meet the following requirements:

Straight seam	Curved seam
<input checked="" type="checkbox"/> Sewing is parallel to the seam edge.	<input checked="" type="checkbox"/> Sewing is parallel to the seam edge.
<input checked="" type="checkbox"/> Seams are flat.	<input checked="" type="checkbox"/> Seams are flat.

**Assessor All** boxes must be ticked.

19.	Carries out <b>edgestitch</b> sewing in accordance with the training instructions. <span style="float: right;"><input checked="" type="checkbox"/></span> The sewing <b>must</b> meet the following requirements: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Straight seam</th> <th style="width: 50%;">Curved seam</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Sewing is parallel to the seam edge.</td> <td><input checked="" type="checkbox"/> Sewing is parallel to the seam edge.</td> </tr> <tr> <td><input checked="" type="checkbox"/> Seams are flat.</td> <td><input checked="" type="checkbox"/> Seams are flat.</td> </tr> </tbody> </table> <p><b>Assessor All boxes must be ticked.</b></p>	Straight seam	Curved seam	<input checked="" type="checkbox"/> Sewing is parallel to the seam edge.	<input checked="" type="checkbox"/> Sewing is parallel to the seam edge.	<input checked="" type="checkbox"/> Seams are flat.	<input checked="" type="checkbox"/> Seams are flat.	
Straight seam	Curved seam							
<input checked="" type="checkbox"/> Sewing is parallel to the seam edge.	<input checked="" type="checkbox"/> Sewing is parallel to the seam edge.							
<input checked="" type="checkbox"/> Seams are flat.	<input checked="" type="checkbox"/> Seams are flat.							
20.	Clips the sewn shapes in accordance with the training instructions. <span style="float: right;"><input checked="" type="checkbox"/></span> The sewing <b>must</b> meet the following requirements: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Straight seam</th> <th style="width: 50%;">Curved seam</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Excess material is removed.</td> <td><input checked="" type="checkbox"/> Excess material is removed.</td> </tr> <tr> <td><input checked="" type="checkbox"/> Material is undamaged.</td> <td><input checked="" type="checkbox"/> Material is undamaged.</td> </tr> </tbody> </table> <p><b>Assessor All boxes must be ticked.</b></p>	Straight seam	Curved seam	<input checked="" type="checkbox"/> Excess material is removed.	<input checked="" type="checkbox"/> Excess material is removed.	<input checked="" type="checkbox"/> Material is undamaged.	<input checked="" type="checkbox"/> Material is undamaged.	
Straight seam	Curved seam							
<input checked="" type="checkbox"/> Excess material is removed.	<input checked="" type="checkbox"/> Excess material is removed.							
<input checked="" type="checkbox"/> Material is undamaged.	<input checked="" type="checkbox"/> Material is undamaged.							
21.	Bags out the sewn shapes in accordance with the training instructions. <span style="float: right;"><input checked="" type="checkbox"/></span> The sewing <b>must</b> meet the following requirements: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Straight seam</th> <th style="width: 50%;">Curved seam</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Corners are sharp and clean.</td> <td><input checked="" type="checkbox"/> Corners are sharp and clean.</td> </tr> <tr> <td><input checked="" type="checkbox"/> Material is undamaged.</td> <td><input checked="" type="checkbox"/> Material is undamaged.</td> </tr> </tbody> </table> <p><b>Assessor All boxes must be ticked.</b></p>	Straight seam	Curved seam	<input checked="" type="checkbox"/> Corners are sharp and clean.	<input checked="" type="checkbox"/> Corners are sharp and clean.	<input checked="" type="checkbox"/> Material is undamaged.	<input checked="" type="checkbox"/> Material is undamaged.	
Straight seam	Curved seam							
<input checked="" type="checkbox"/> Corners are sharp and clean.	<input checked="" type="checkbox"/> Corners are sharp and clean.							
<input checked="" type="checkbox"/> Material is undamaged.	<input checked="" type="checkbox"/> Material is undamaged.							
<b>When lubricating and cleaning the industrial lockstitch sewing machine, the candidate:</b>		<input checked="" type="checkbox"/>						
22.	Meets all workroom safety requirements when carrying out the maintenance. <span style="float: right;"><input checked="" type="checkbox"/></span> Record the actions the candidate took to meet the safety requirements. <div style="border: 1px solid black; height: 30px; width: 100%; margin-top: 5px;"></div>							
23.	Lubricates the machine parts according to the manufacturer's specifications. <span style="float: right;"><input checked="" type="checkbox"/></span> Record the type(s) of lubricant the candidate used. <div style="border: 1px solid black; height: 30px; width: 100%; margin-top: 5px;"></div>							
24.	Removes all lint from working parts of the machine using the supplied tools and equipment in accordance with the manufacturer's specifications. <span style="float: right;"><input checked="" type="checkbox"/></span>							

25. Carries out all of the above tasks in accordance with:

Training instructions provided by the tutor or trainer.

Manufacturer's specifications.

Workroom safety requirements.

**Assessor All** boxes must be ticked.

Please provide specific comments on the candidate's ability to thread and operate an industrial lockstitch sewing machine in a learning environment.

Comments support the candidate's competency.

I confirm that I have directly observed the candidate carry out all the above tasks to the standard required.

Yes

No

<b>Date (or time period) of observation</b>	Date (and/or time period over which the candidate was observed) recorded
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<b>Name and title</b>	Assessor or approved verifier clearly identified	<b>Signature</b>	Signed by assessor or verifier
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<b>Phone / email</b>	Contact details recorded
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## Candidate evidence check

### Required evidence

Use this checklist to make sure you have finished the assessment tasks in full.

You must have completed all assessment tasks yourself, used your own words, and completed work you attach is your own.

Clearly name and label all attachments.

**I have completed and/or attached the following required evidence:**

- One** Observation Checklist completed and signed by an assessor or verifier.
- Copy of training instructions from your tutor or trainer (if given in writing).
- Copy of drawing showing lockstitch formation (if not explained verbally).

#### Assessor

The required evidence for each assessment task has been completed and/or attached.

### Additional supporting evidence

You may also attach any other additional supporting evidence that helps prove your skills and knowledge in this unit (such as completed documents, photos, videos or voice recordings).

Clearly name and label all attachments.

**I have attached the following as additional supporting evidence:**

#### Assessor

There is no requirement to attach additional supporting evidence.

Any additional supporting evidence is relevant and further supports the candidate's competency in this unit.

## Assessor judgement

I have reviewed the candidate's evidence for Unit Standard 20342 v2 and judge that it is sufficient and authentic. I confirm the candidate can competently:

- Thread an industrial lockstitch sewing machine.
- Control an industrial lockstitch sewing machine.
- Lubricate and clean an industrial lockstitch sewing machine.

### Assessor feedback to candidate

Specific feedback to the candidate about their performance in meeting the requirements of this unit standard has been provided.

**Assessor**

Assessor name recorded

**Date**

Date recorded