# BASIC APPAREL PRODUCTION

## Level-I

# Learning Guide-52

**Unit of Competence:** Operate Specialized Industrial Machines

**Module Title:** Operating Specialized Industrial Machines

**LG Code:** IND BAP1 M01LO1-LG-52

**TTLM Code:** IND BAP1 M01TTLM 0219v1

## LO 1: Prepare work pieces

| Instruction Sheet | Learning Guide #1 |
|---|---|

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics:

- Laying out work pieces or Materials
- Setting up and adjusting equipment
- Reporting and recording problems

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, **upon completion of this Learning Guide, you will be able to**:

- Lay out work pieces
- Set up and adjust equipment
- Report and record problems

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the information “Sheet 1, Sheet 2 and Sheet 3”.
4. Accomplish the “Self-check 1, Self-check t 2 and Self-check 3”respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 ”.
6. Do the “LAP test” (if you are ready).

| Information Sheet-1 | ○ Laying out work pieces or materials |
|---|---|

## 1.1 Laying out work pieces or materials

Operate Special industrial machine needs to be set properly and adjust its part too before start sewing operation. Fixing needle, threading, winding & inserting bobbin, tension adjusting are including there

### 1.1.1 Fixing needle

The needle was one of humankind's first tools. Over the centuries it developed from a simple craft item to the precision tool for sewing machines.

### 1.1.2 Threading

Proper threading of your special industrial machine is essential for attractive, secure stitches.

### 1.1.3 Winding and inserting bobbin in to shuttle

Winding a sewing and special industrial machine bobbin one of the main parts of sewing and special industrial machine is Bobbin with its winder. Its thread has great role to make sewing formation with upper thread while it wind properly Balance looping system cannot be done without bobbin thread

## 1.2 Types of lay out

1. Product or machine Line Layout
2. Process or Functional Layout.
3. Fixed Position Layout.
4. Combination type of Layout.

1. **Product or machine Line Layout**

If all the processing equipment and machines are arranged according to the sequence of operations of the product, the layout is called product type of layout. In this type of layout, only one product of one type of products is produced in an operating area.

This product must be standardized and produced in large quantities in order to justify the product layout.

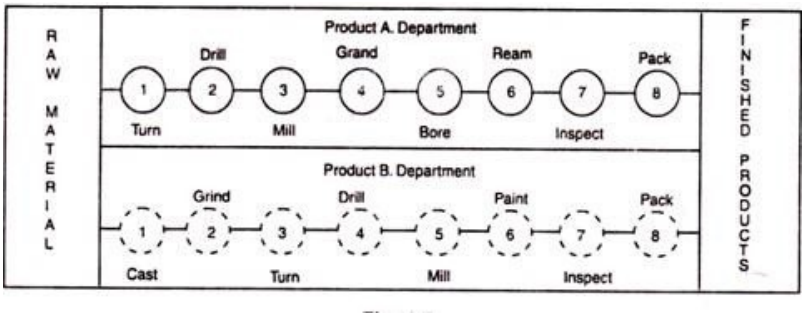


Fig. 1.1 shows product layout for two types of products A and B.

**2. Process or Functional Layout.**

The process layout is particularly useful where low volume of production is needed.

In this type of layout, the machines and not arranged according to the sequence of operations but are arranged according to the nature or type of the operations.

This layout is commonly suitable for non repetitive jobs.

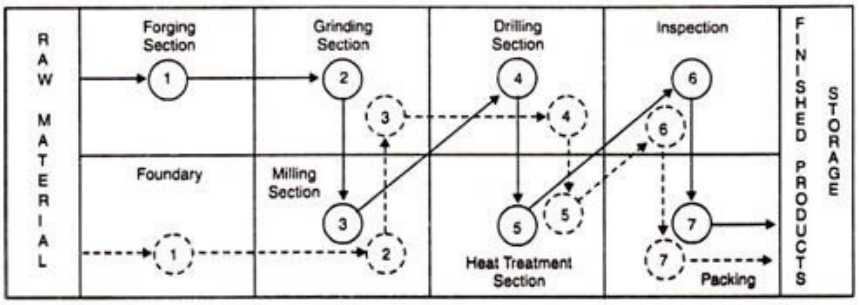


Fig1. for process layout.

3. Fixed Position Layout.

This type of layout is the least important for today's manufacturing industries. In this type of layout the major component remain in a fixed location, other materials, parts, tools, machinery, man power and other supporting equipment's are brought to this location.

4. Combination type of Layout.

Now days in pure state any one form of layouts discussed above is rarely found. Therefore, generally the layouts used in industries are the compromise of the above mentioned layouts.

| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**Chose**

1. **One of the following answer is Before starting operate set and adjust special industrial machine (2points)**
   - **A. Winding**
   - **B. Fixing needle**
   - **C. Threading**
   - **D. All**

**Short answer**

2. **List type of lay out(5points)**
3. _____The processing equipment and machines are arranged according to the sequence of operations of the product(3points)

***Note:*** **Satisfactory rating – above 5points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-2 | ○ Adjust and set up equipment |
|---|---|

## 2.1 Equipment

Introduction

**Special industrial machine** is a mechanical (or electromechanical) device that to give a value fabric using thread. Special industrial machines make a stitch, machines exist that stitch using one, three, four or more threads.

### 2.1.1 Fusing machine

This machine is used to fuse fabric and interlining and also make a form of pocket, waist band etc. using appropriate dice.


### 2.1.2 Buttonholing machine

- ✓ Buttonholer machine can be classified as
  - ☞ ordinary button holing machine and
  - ☞ Eyelet type button holing machine. Both can work the stitch and a hole.


Fig. 1 Ordinary button holing machine

Fig. 2 Ordinary button holing machine

### 2.1.3 Button attaching machine

Button with two holes, four holes or shanks canal be sewn on the same machine bysimple ad justments to the button clamp and the spacing mechanism.


### 2.1.4 Bar tacking machine

The bar tacking machine is an industrial sewing machine which produces a specified length of zigzag like stitching called bar tack.

These machines are sewing a number of stitches across the point to be reinforced and then

Some of the bar tacking are fitted with the following special attachments

- Signals are available and it controlled by special mechanism, when the bobbin t hread isbelow a certain level.
  - Automatic thread cutters are available.
  - A pedal which opens and close the work clam.

This machine is used for the following application in garment industry.

- Closing the end of the button hole.
- Reinforcing the ends of pocket opening.
- To finish the bottom of files.
- Sewing on belt loops.

### 2.1.5 Cover stitch machine

A cover stitch sewing machine is used with active wear and stretchy fabrics for longest seam life and to prevent thread breakage.

### 2.1.6 Blind Stitch Sewing Machine

- In blind stitch, the thumb rule is to run the sewing thread at the near surface of the fabric, but not actually through the cloth fabric.
- In short, the **needle catches a thread** or two **from the surface**, without passing the other visible side of the fabric.
- Blind stitch machine is used to stitch hem in a knitted fabric.

| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

Chose

1. _____ is the process of joining interlining with the fabric.(3points)

A. Bar taking
B. Cover stitch
C. Fusing
D. All

2. One of the following the use of Bar taking machine using (3points)

A. Sewing on belt loops.
B. Closing the end of the button hole.
C. Reinforcing the ends of pocket opening
D. To finish the bottom of files.

Short answer

3. What is the use of fusing machine?(5points)
4. What are the three parameters involved in the fusing process(5points)
5. What is the name of this machine?(4points)


_____

***Note:*** **Satisfactory rating - 10points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

| |
|---|
| Score = _____ |
| Rating: _____ |

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-3 | ○ Reporting and recording problems |
|---|---|

Final work should be recorded as required by the instructor and should be submitted

Reporting **problems, damages and abnormal** conditions requiring **maintenance or repair** is different for different companies. In most of the cases operators who are working on the machines identify problems and report to the supervisors (in some cases production managers). Then, the supervisor (production manager), recognizing the problems, will report to the maintenance department for immediate action (maintenance operation). The following checklist is a sample maintenance checklist.

**Maintenance Checklist**

Department/Location: Date:

| Tool or Equipment Description | Serial No. | Recommended maintenance period | Previous dateserviced | Scheduled service date | Date serviced | Previous date inspected | Scheduled inspection date | Date inspected |
|---|---|---|---|---|---|---|---|---|
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| Self-Check -1 | Write Test & true or false |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**True or False**

Select which one is true

1. The supervisor recognize the problem, will report to the maintenance department.(2points)
   Fill the blank space
2. Reporting _____, _____, _____ conditions requiring **maintenance or repair** is different for different companies.**? (6pts)**

***Note:*** **Satisfactory rating - 4points** **Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Operation Sheet-1 | Fixing needle |
|---|---|

**The techniques for Fixing needle**

**Step1. Move the power foot control away to prevent accidently pressing.**

**Step2. Remove bobbin case from hook assembly**

**Step3. While standing in front of training sewing head, rotate gangs hat until take-up Levers are in up position.**

**Step4. Using needle screwdriver, loosen needle set screw.**

**Step5. Insert new needle correctly. (Groove facing front and scarf**

**Remove and discard old needle.**

| LAP Test | Practical Demonstration |
|---|---|

Name: _____ Date: _____

Time started: _____ Time finished: _____

**Instructions:** Given necessary templates, tools and materials you are required to perform the following tasks within 1 hours.

**Task 1: fixing needle**

# List of Reference Materials


1) Complete Guide to Sewing; THE READER'S DIGEST ASSOCIATION LIMITED; 1987.

2) Sturm, Grieser, Lyle and Roberts. Guide to modern clothing, pp 221-222

3) Jones, Frances M. Modern Sewing, c 1972, pp 32-38

4) EOS, 2011 Version

5) Untitled handouts

# BASIC APPAREL PRODUCTION

## Level-I

# Learning Guide-53

**Unit of Competence:** Operate Specialized Industrial Machines

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## LO 2: Perform production assembly tasks

| Instruction Sheet1 | Learning Guide #1 |
|---|---|

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics:

- OHS practices
- Performing production tasks
- Assessing work
- Checking and adjusting specialized machine
- Using specialized machine

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, **upon completion of this Learning Guide, you will be able to**:

- Production tasks are performed in accordance to requirements and OHS practices
- Work is assessed for compliance with quality standards and production specifications
- Where specialized machine is used, machine is checked and adjusted to ensure optimum performance

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet, Sheet 4 and Sheet 5”.
4. Accomplish the “Self-check 1,Self-check t 2, Self-check 3, Self-check 4 and Self-check 5”.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 ”.
6. Do the “LAP test” (if you are ready).

| Information Sheet-1 | ○ OHS practices |
|---|---|

1.1. OHS practices

### 1.1.1 What is occupational health and safety? (OHS)

Occupational health and safety is a discipline with a broad scope involving many specialized fields. In its broadest sense, it should aim at:

 The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations;

 the prevention among workers of adverse effects on health caused by their working conditions;

 the protection of workers in their employment from risks resulting from factors adverse to health;

 the placing and maintenance of workers in an occupational environment adapted to physical and mental needs;

 The adaptation of work to humans.

In other words, occupational health and safety encompasses the social, mental and physical well-being of workers that is the “whole person”.

- You should apply safety and health regulations in the shop.

**OHS practices may include:-**

- hazard analysis and control,
- risk assessment and implementation of risk reduction

### 1.1.2 Work place hazard analysis and control

Controlling hazards requires employers to do a job or task hazard analysis. Many workplaces involve the employees who are in contact with the hazards of a particular task or job, in the analysis.

Hazard analysis can look at a thing, a work process, or even a whole job description. Task or job hazard analysis ends with a safe work procedure designed to meet health and safety needs, and to control or eliminate the potential for injury.

### 1.1.3 risk assessment and implementation of risk reduction

Risk analysis is the first stage of risk assessment that identifying hazards that may occur due to characteristics or properties of the device during normal use or foreseeable misuse.

- measures specific to the tasks described by this unit, and may relate to:

  - *manual handling techniques*
  - *standard operating procedures*

  *The following can be an example for standard operating procedure in using specialized industrial sewing machine:*

| Standard operating procedure in using specialized industrial sewing machine |
|---|
| A. *before and after operation*<br>- Never operate the machine with bare of lubricating oil. If needed fill the specified oil recommended by the manufacturer<br>- Add specified amount of silicon oil for those machine in which the manufacturer is recommended<br>- Clean the machine bed and basic parts which will have direct contact with the garment<br>- Check the direction of rotation of each machine<br>- When you finish your job, clean the machine and make sure that you cover the machine head |

| Standard operating procedure in using specialized industrial sewing machine |
|---|
| B. *during operation*<br>- Never operate the machine with bare of safety guards like: thread take-up lever guard, finger guard, eye guard, belt cover, needle bar guard, hook/ shuttle area guard, face and side cover etc.<br>- When you leave away from the machine, remember that the machine is switch OFF.<br>- Never allow your hand or other bodies behind the safety guard. Trying it may result injury. |

- ☞ Automatically stop the machine and switch OFF whenever you sense abnormal condition.
- ☞ Use machines only for those materials (fabric), threads and needle type and size recommended by the manufacturer.

### *1.1.4* personal protective equipment

Most specialized sewing machines are equipped with safety devices like:-

- ☞ belt cover
- ☞ eye guard
- ☞ needle bar guard
- ☞ finger guard
- ☞ Thread take-up lever guard etc.

### 1.1.5 safe materials handling

- ☞ When using a screw driver, make sure your hands are not in danger in case the screw driver slips.
- ☞ When using a screwdriver, never apply excessive for when twisting. This could break the tip or shear off the screw.
- ☞ Before using Allen wrench, check for the correct size for the loosening and tightening of the screw. A too big Allen wrench fitted to the screw will wear out and round-off the ends.
- ☞ Lubricants should always be kept in a sealed container and only a sufficient amount for the job must be taken out.
- ☞ When not in use, check and see to it that needles are kept in a needle box with a caution.
- ☞ Keep your eyes on the point of the pinhole and not on the hand.
- ☞ Needle nose pliers should only be used for holding and gripping small parts

### 1.1.6 taking of rest breaks

### 1.1.7 ergonomic arrangement of workplaces

There are main constituent areas of study of ergonomics, which guide us towards best ergonomically practices:-

1) Stand or sit with the work in front of you – avoid twisted postures.

2) Employ smooth, rhythmical movement – avoid sudden changes of direction

3) Keep things on the level to avoid vertical movements

4) Avoid sudden changes of direction

5) Avoid continuous repetition of movement

6) Avoid stretching where possible – keep items used frequently within arm's reach

7) Chairs should provide support for the lower part of the back, and the worker should sit housekeeping

### 1.1.8 reporting accidents and incident

**An accident** - Refers to an event or sequences of events which is/are unplanned, undesired that causes an unintended injury, death or property damage.

**An incident** is an undesired event that may cause personal harm or other damage**.**

**Dangerous incident** means an incident in relation to a workplace that exposes a worker or any other person to a serious risk to their health or safety emanating from an immediate or imminent exposure to:

- An uncontrolled escape, spillage or leakage of a substance; or
- An uncontrolled implosion, explosion or fire; or
- An uncontrolled escape of gas or steam; or
- An uncontrolled escape of a pressurized substance; or
- Electric shock; or

| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**Short answer**

1. What is OHS? (5)
2. List personal protective equipment safety device. (5points)

**Chose**

3. Which one is specialize industrial sewing machine are equipped with personal safety devices except one.(2.5points)
   A. belt cover
   B. eye guard
   C. needle bar guard
   D. finger guard
   E. All
   F. None
4. Which one is the best ergonomically practices(2.5points)
   A. Avoid twisted postures.
   B. Avoid sudden changes of direction
   C. Stand or sit with the work in front of you
   D. Avoid continuous repetition of movement
   E. All

***Note:*** **Satisfactory rating – 7.5points** **Unsatisfactory - below 7.5 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-2 | ○ Performing production tasks |
|---|---|

**2.1** Performing production tasks

### 2.1.1 Fusing

**Fusing material:**

Fusing is the process of joining interlining with the fabric. The interlining contains adhesive, which melts at a specific temperature (Glue Line Temperature) and Pressure to make bond with the Fabric.

Fusing means attaching interlining with fabric using fusing machine. Sometimes, when there is no fusing machine, this task can be done by dry iron.

Example: - you can fuse interlining on collar, cuff etc.

**Importance of Fusing:**

Fusing is one of the most important processes involved in apparel manufacturing which affects the appearance of the garment. It also provides support and strength to the specific parts of the garment.

**Parameters for Fusing:** There are three parameters involved in the fusing process:

1. Fusing Temperature
2. Fusing Pressure
3. Fusing Time

Example: - you can fuse interlining on collar, cuff etc.

- **Garment Fusing Process:**

Part of the garment to be fused is spread on a table

↓

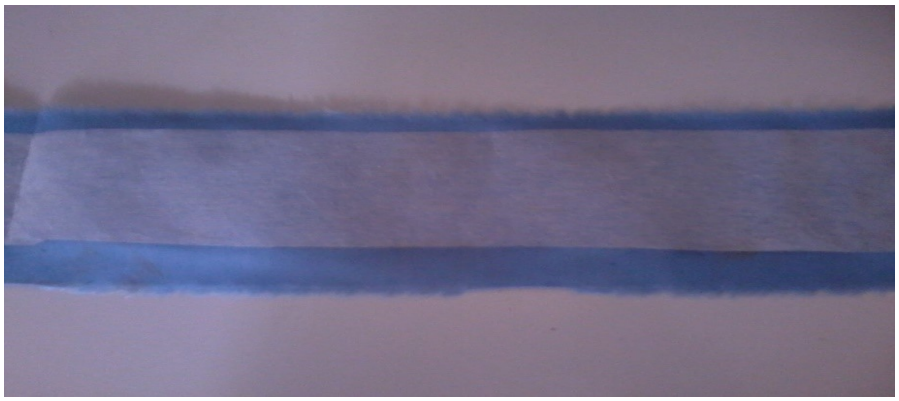
Resonated interlining surface is placed and applied required pressure and temperature

↓

Resin coating of interlining is melted by heat into the fabric under pressure

↓

It becomes cool and hard both the fabric and interlining is attached



In accordance to requirements and OHS practices

- ✓ To take care the temperature, pressure and speed of convert belt
- ✓ To be check interning adhesive

### 2.1.2 Binding

Binding is a strip of material that you put around the edge of a piece of cloth or other object in order to protect or decorate it.

It can be expressed as also, binding is a piece of rope, cloth, tape, or other material that you wrap around something so that it can be gripped firmly or held in place.

Example: - you can make binding in manufacturing sing late, using an interlock machine and a special attachment called binder.

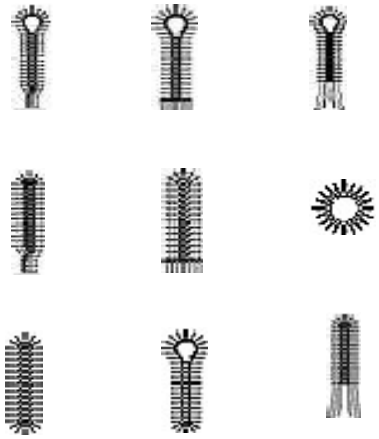
### 2.1.3 Button holing

Button holing means making a button hole stitch and then a hole on the specified position as per specification. This task can be done by hand though it takes time.

- ✓ The button holing machine is an industrial sewing machine which cuts and sews button hole.

- ✓ It produces zigzag stitches for finishing the cut edges and

- ✓ Uses a razor sharp steel knife to cut the finished hole. It is a special machine used for a wide variety of fabric.



**Various holing**

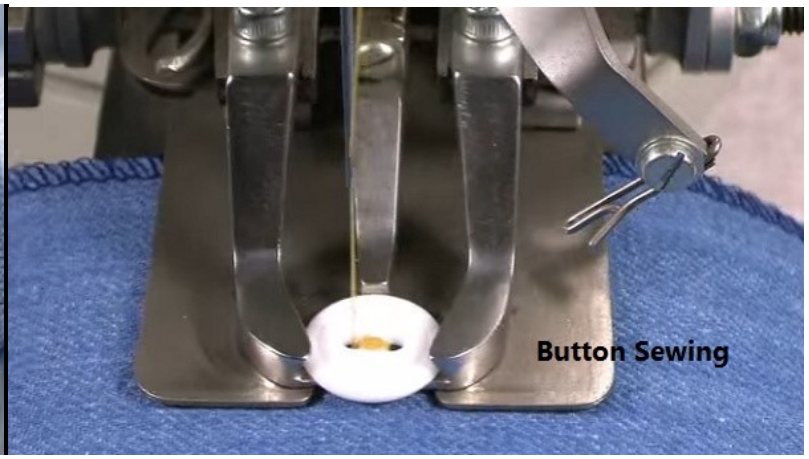
**Tacking**

- ✓ To care the finger during the needle and bleed

### 2.1.4 Button sewing

**Button sewing** it means attaching the specified button using button attaching machine. This task can be done by manually.

This machine attaches basically an ordinary buttons which has a two or four button holes. Using a special attachment, it can work other buttons like shank type, eye and hook, etc.




### 2.1.5 Bar tacking

It is used for specialized stitching of stressed areas in garments such as

- ✓ parts pocket,
- ✓ fly's,
- ✓ raincoat,
- ✓ attaching belt loops to trousers,
- ✓ pockets of denim jeans,
- ✓ attaching cords to ladies undergarments,
- ✓ pleating of curtains,
- ✓ Sewing of tongue of men's trousers and others.

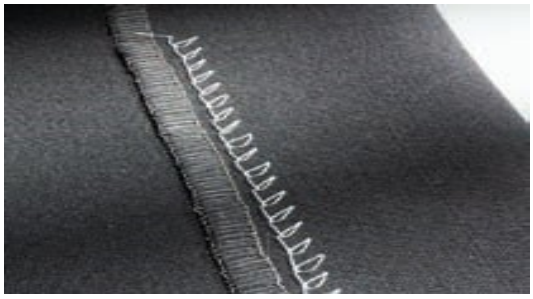
**Tacking**

- ✓ To be control speed of needle

### 2.1.6 **Blind Stitch**

The objective is to hem a fabric or stitch one fabric with another in such a way that the stitches are nearly invisible on both sides of the fabric.

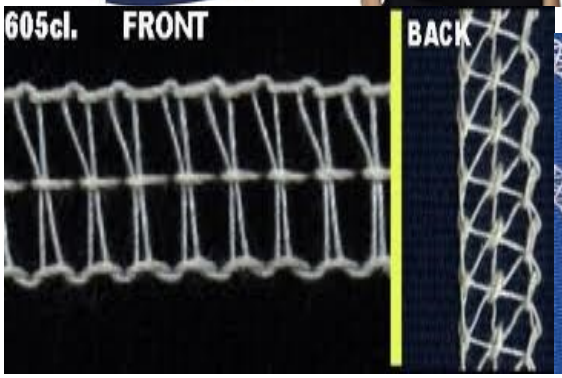
- Blind stitch for hemming **pants and skirts, and putting labels** on clothing.




### 2.1.7 **Cover stitch**

- Cover stitch is so-called because the grid of crossing needle and loopier threads covers raw seam edges, much as the over lock stitch does.
- It is widely used in garment construction, particularly for attaching trims and flat seaming where the raw edges can be finished in the same operation as forming the seam.
  Use: Ideal for hemming and for decorative stitching.



| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**Chose**

1. _____ **Is** a strip of material that you put around the edge of a piece of cloth or other object in order to protect or decorate it.(2points)
   A. Fusing
   B. Binding
   C. Bar taking
   D. None
2. **Fusing machine can work the following except_____?** (2points)
   A. **Fusing of fabric & interlining**
   B. **Cuff preparation**
   C. **Sleeve hemming**
   D. **None of the above**
3. **Which one of the following is NOT categorized under special sewing machine?** (2points)
   A. **Feed-off the arm machine**
   B. **Bar tacking machine**
   C. **Fusing machine**
   D. **SNLS machine**
4. **Button attaching machine can attach the following type of button except.....**(2points)
   A. **Shank type button**
   B. **2-hole button**
   C. **4- hole button**
   D. **None of the above**
5. Which one of the following are not Parameters for Fusing.(2points)
   A. Fusing Temperature
   B. Fusing Pressure
   C. Fusing Time
   D. Fusing stitch

**Short answer**

6. Define fusing(5points)
7. What are stress area in garment bar taking(5points)

***Note:*** **Satisfactory rating - 10points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-3 | **Assessing work for compliance with quality standards**. |
|---|---|

The following quality points should be checked:-

1. ***Blind stitch(Hems)***

   - ☞ Hems should be even throughout,
   - ☞ Starting and ending of hems should be securely tacked,
   - ☞ It should be done as per specification (type and width of hem),
   - ☞ No puckering and twisting,
   - ☞ No contrast thread available inside hem.

2. ***Button holes sewing***

   - ☞ Should be as per specification (direction and size),
   - ☞ The hole should allow the button to pass freely,
   - ☞ Hole should be neat and no fraying of yarn,
   - ☞ Should be evenly spaced.

3. ***Attached buttons***

   - ☞ Buttons should be firmly attached,
   - ☞ Threads should pass through all holes,
   - ☞ They should be evenly spaced,
   - ☞ No missed and damaged buttons,
   - ☞ All buttons should have same shade,

Finally, once you finish tasks done by special sewing machines, the next step is directing the garment in to the next step called inspection, trimming, ironing/ and pressing, folding and packing.

During inspection, garments or articles are checked against quality standards;

- ✓ any faults identified are reported and recorded
- ✓ amendments are taken before go to the next step
- ✓ Work documentation is completed as required.

| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**Short answer**

1. List at list three button hole quality points should be checked. (5points)

**Chose**

2. **One of the following is Blind stitch should not be check the quality**(3points)
   - **A.** Threads should pass through all holes
   - **B.** Hems should be even throughout
   - **C.** Starting and ending of hems should be securely tacked
   - **D.** No puckering and twisting
3. **One of the following is Button attach should be check the quality**(2points)
   - A. Buttons should be firmly attached,
   - B. Threads should pass through all holes,
   - **C.** They should be evenly spaced
   - **D.** All

***Note:*** **Satisfactory rating - 5points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-3 | ○ Checking and adjusting specialized machine |
|---|---|

**Checking and adjusting machine**

Your sewing machine's timing is essential to achieving even stitches in your fabric and ensuring that the machine's parts are working in sync. Although the general process for adjusting timing is the same for most sewing machines,

The method of removing, modifying and installing parts is different for each machine

We should

- **Identifying the Problem**
  - ✓ **Check for other potential problems**
  - ✓ **Check for a timing issue by performing a timing test**.

- **Adjusting the Timing**
  - ✓ **Set the needle bar height**
  - ✓ **Set the hook timing**
  - ✓ **Re-Check for timing accuracy**

- **Reassembling and Testing the Machine**
  - ✓ **Re-assemble your machine**
  - ✓ **Clean and oil any exposed gears while your covers are still off**
  - ✓ **Test your adjustment**s

| Self-Check -1 | Write Test & chose & true or false |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

**True or False**

1. The method of removing, modifying and installing parts is different for each machine(2points)

**Chose**

2. **Which one is adjusting the timing** (3points)
   - **A. potential problems**
   - **B. Hook**
   - **C. Machine**
   - **D. All**
   - **E. A and B**

**Short answer**

3. **What are check adjusting the time** (5points)

***Note:*** **Satisfactory rating - 5points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Operation Sheet-1 | Operate Button hole |
|---|---|

**The techniques for Button hole**

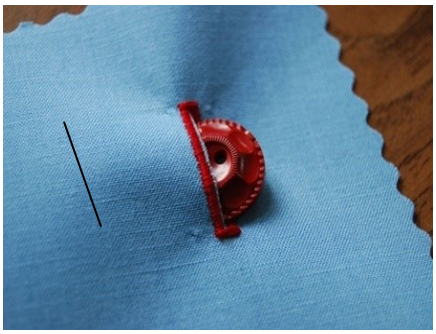
Stape1 First clean the machine thoroughly

Stape2 Prepare the machine.

Stape3 Set the button hole length on the machine.

Stape4 Position mark on the fabric for button hole.

Stape5 Put the fabric/ garment properly (face up), and make the requested button hole.



**PRECAUTIONS:**

- Button holes should be done on the marked position.
- Knife should match with button hole length.

**QUALITY CRITERIA:**

1) All steps were completed in the correct sequence,

2) Holes should be neat & no broken stitch,

3) It should be placed on the marked place.

4) It should be as per specification.

| Operation Sheet-2 | Threading and testing of interlock machine. |
|---|---|

**The techniques for** Threading and testing of interlock machine

Step1. First clean the machine thoroughly.
Step2. Thread the loopier thread first and then the needle thread respectively.
Step3. Check whether the needles are fixed properly or not. If not, adjust it properly.
Step4. Test the machine.
Step5. Set other parameters like tension, presser foot pressure etc for the given fabric and thread.
Step6. By adjusting the width in different position, perform interlock stitch

**PRECAUTIONS:**

- Please follow the steps as given above.
- Care must be taken when you make testing.

**QUALITY CRITERIA:**

1) All steps were completed in the correct sequence,
2) The stitch must be flat and perfect on both face and under side,

| Operation Sheet-3 | Operate  bar taking machine |
|---|---|

**The techniques for** bar taking machine

Stape1 First clean the machine thoroughly

Stape2 Prepare the machine.

Stape3. Put the fabric/ garment properly (face up).

Stape4. A pedal which opens and close

Stape5

| LAP Test | Practical Demonstration |
|---|---|

Name: _____ Date: _____

Time started: _____ Time finished: _____

**Instructions:** Given necessary templates, tools and materials you are required to perform the following tasks within 1 hours.

**Task1** operate button hole machine

Task2 operate inter lock machine


M O L S A


Federal TVET Agency

## *List of Reference Materials*


1) Complete Guide to Sewing; THE READER'S DIGEST ASSOCIATION LIMITED; 1987.

2) Sturm, Grieser, Lyle and Roberts. Guide to modern clothing, pp 221-222

3) Jones, Frances M. Modern Sewing, c 1972, pp 32-38

4) EOS, 2011 Version

5) Untitled handouts

# BASIC APPAREL PRODUCTION

## Level-I

# Learning Guide-54

**Unit of Competence:** Operate Specialized Industrial Machines

**Module Title:** Operating Specialized Industrial Machines

**LG Code:** IND BAP1 M01LO1-LG-01

**Code:** IND BAP1 M01TTLM 0219v1

## LO 3: Dispatch completed work

| Instruction Sheet | Learning Guide #1 |
|---|---|

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics:

- Checking garments or articles
- Recording and reporting any faults identify
- Directing completed garments or articles
- Completing work documentation

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, **upon completion of this Learning Guide, you will be able to**:

- Garments or articles are checked against quality standards
- Any faults identified are reported and recorded
- Completed garments or articles are directed to next operation
- Work documentation is completed as required

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4”.
4. Accomplish the “Self-check 1,Self-check t 2, Self-check 3 and Self-check 4”.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to next.

| Information Sheet-1 | ○ Checking garments or articles |
|---|---|

1.1 Check garments or articles against quality standards.

### 1.1.1 BELT

- Flat, smooth, free from bulkiness
- Straight belt is uniform in width
- Contour belt has smooth, gradual curves
- Interfacing, if used, is appropriate to maintain belt shape
- Even, uniform shape at end of belt
- Closure is appropriate, attractive, durable, secure, and functional
- Appropriate size and length for garment and individual
- If used, belt carriers are secure and even Reinforced with interfacing or reinforcement

### 1.1.2 Button

- Have a purpose, either functional or decorative
- Securely and neatly fastened
- Have a shank (to allow room for the buttonhole fabric under the button)
- Properly aligned with buttonholes; when buttoned, fabric is completely flat and smooth
- Appropriate spacing for size of button and garment type

Suitable type for fabric and garment (e.g., dress or sporty; light or heavy weight)

### 1.1.3 BUTTONHOLES

- Reinforced with interfacing
- Flat
- Secure with all stitching intact
- Even in length, width, and equally spaced
- Uniform in appearance
- Placed with the grain or yarn direction of the fabric
- Appropriate length (large enough to allow button to pass through easily, yet small enough to hold garment closed)
- Correct placement
- On right front of women's garments

- On left front of men's garments
- Overlap wide enough to cover button without gapping
- Overlay occurs where it was intended (center front, center back, side seam, cuff)
- Hold garment securely closed
- Placed in the direction of strain from the button (eliminates gapping)
- Placed at the area of most strain

### 1.1.4 COLLAR

- Top stitching is even and secure, if used
- Free from bulkiness
- Curved seams are clipped or notched
- Seams are trimmed and/or graded
- Only the top collar is visible
- Seam line is just under the edge of the collar
- Under stitching or topstitching holds under collar
- in place
- Interfacing is appropriate for design and fabric
- Reinforces fabric
- Provides stability
- Enclosed seam allowance is invisible on outside
- Appropriate use of interfacing to prevent
- imprints from seam allowances
- Collar is smoothly pressed
- Left and right sides are uniform in shape, unless
- asymmetrically designed
- Curve of collar
- Angle of collar points
- Position in relation to center front or center back

| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. One of the following is Check Button hole against quality standards. (3points)
   A. Reinforces with interfacing
   B. Correct placement
   C. Flat
   D. Uniform in appearance
   E. All
2. List four point Checking Button against quality standards. (5points)

***Note:*** **Satisfactory rating - 4points** **Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-2 | ○ Recording and reporting any faults identify |
|---|---|

2.1 Recording and reporting faults

### 2.1.1 Machine Not Sewing

If the machine is simply not sewing or has other related errors, the easiest thing to check is whether the thread and needle are set up properly.

❖ Threading the Machine negotiating

When threading the machine, remember to always do so with the presser foot up, which releases the tension? Once threaded, putting the presser foot down will apply tension to the thread.

### 2.1.2 Sewing Machine Needle

Be sure that the needle is locked and facing the correct direction for the machine. If it's not, the thread will not be picked up by the hook when sewing.

### 2.1.3 Fabric Not Feeding or Is Jamming

Check that the feed dog is in its raised position when sewing. If the feed dog seems to be jammed, it may be due to lint and debris.

### 2.1.4 Break Needles

Needles may break due to simple reasons like prolonged use or hitting a straight pin; these breaks can be difficult to predict. However, needles also break from very controllable factors such as forcing the fabric through the feed or by using the wrong needle.

### 2.1.5 Skipping Stitches

Skipped stitches are usually due to a bad needle. The needle may have become damaged or bent by sewing material too thick for the needle, forcing material through the feed dog, or hitting a straight pin.

### 2.1.6 Thread Breaking

Thread that continually breaks may be an issue with the quality of the thread or obstructions within the machine.

### 2.1.7 Tension Adjustments

Most sewing machines require very little altering of the tension settings or disks.

Upper tension is user adjustable, but the setting should be in a medium range for most sewing projects. Tension problems with the bobbin threading are particularly intricate and should be repaired professionally. Using different color threads in the upper threading and bobbin is a good way to determine which area is having tension problems.

| Self-Check -1 | Write Test & chose |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. **List machine faults**
2. _____are usually due to a bad needle.
   - **A. Needle**
   - **B. Skipping Stitches**
   - **C. Old needle**
   - **D. Break Needles**

***Note:*** **Satisfactory rating - 4points** **Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| | |
|---|---|
| **Information Sheet-3** | ○ Direct completed garments or articles to next operation |

The unit of competency applies to selecting and applying special industrial machine on garments, either at the completion of production, or during the production stage. The special industrial machine may be added the quality of garment, as determined by **machine quality**.

| Self-Check -1 | Write Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

Fill the blank space

1. The special industrial machine may be added _____.

***Note:*** **Satisfactory rating - 4points** **Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____ Date: _____

**Short Answer Questions**

| Information Sheet-4 | ○ Complete work documentation |
|---|---|

## 4.1. Complete work documentation

Whether using a computerized and manual system it is best to keep documents simple, and where possible, designed so that the important information on each topic is visible on one screen or one side of the card/file sheet.

After completed work it may be focus on documentation

- checking and replacement of needles, attachments or parts used for embellishment
- maintaining equipment to supplier requirements

| Self-Check -1 | Write Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the two best systems to keep documents?

# List of Reference Materials


1) Complete Guide to Sewing; THE READER'S DIGEST ASSOCIATION LIMITED; 1987.

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