

JOB ROLE – SEWING MACHINE OPERATOR

Sector – Apparel, Made-Ups and Home Furnishing
(Qualification Pack Code: AMH/Q 0301)



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UNIT 4: CARE AND MAINTENANCE OF SEWING MACHINE

Session 2: Machine and Sewing Defects and its Solution

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Session Objectives

The students will be able to:

- Describe sewing machine and sewing defects
- Explain possible causes
- Demonstrate corrective action to remove the sewing machine and sewing defects.

Introduction

Some common defects raised when working on sewing machine. These defects are related to sewing machine and sewing. Some possible causes are their and the corrective action have been taken to rectify these defects.

Machine and Sewing Defects and Their Solutions

Some of the common defects related to sewing and the sewing machine, the possible causes, and the best possible corrective actions associated with these are given below.

➤ **Defect:** The machine does not feed the material.

- **Possible causes:**

- (i) The stitch length has been set to zero
- (ii) The presser foot pressure is too low.
- (iii) Feed dog is lowered.
- (iv) Threads are knotted under the fabric.

- **Corrective action:**

- (i) Set the proper stitch length.

- (ii) Set pressure of presser foot.
- (iii) Raise feed dog.
- (iv) Remove fabric and knotted threads. Then again place the fabric properly.
- (vi) Place both threads back under the presser foot before starting to sew.

➤ **Defect:** Machine running heavily

• **Possible causes:**

- (i) Dust or lint clogging under the feed dog
- (ii) Insufficient oiling
- (iii) Thread caught in the shuttle
- (iv) Machine not used for some time with the result that the parts have jammed.

- **Corrective action:**

- (i) Clean the feed dog.

- (ii) Oil the machine properly.

- (iii) Remove the thread from the shuttle.

- (iv) Disassemble the removable parts, clean and oil them.

- **Defect:** The sewing machine does not run

- **Possible causes:**

- (i) The presser foot is not properly placed and the needle hits the presser foot.

- (ii) The needle has come out and is in the shuttle area of the machine.

- **Corrective action:**

- (i) Place and tighten the presser foot properly.
- (ii) Remove the needle and insert a new one again (if required), or place it at the right position.

➤ **Defect:** The upper thread breaks

- **Possible causes:**

- (i) Threading is not correct or has a knot in it.
- (ii) Upper thread tension is too tight/high.
- (iii) Needle is bent or blunt.
- (iv) Wrong size of needle.
- (v) Needle has been inserted wrongly.
- (vi) Needle and thread do not match, and not suitable for the fabric to be sewn.

(vii) Started stitching too fast.

(ix) Thread take-up lever has not been threaded.

• **Corrective action:**

(i) Thread the machine correctly and remove knots from the thread.

(ii) Correct the thread tension.

(iii) Replace with a new needle, of good condition.

(iv) Replace with a needle of the correct size.

(v) Insert the needle properly.

(vi) Always use suitable thread and needle.

(vii) Maintain the speed of the machine.

(viii) Check the threading order.

➤ **Defect:** The bobbin thread breaks

• **Possible causes:**

- (i) The bobbin has not been fully inserted/pushed in the bobbin case
- (ii) The bobbin has not been threaded correctly.
- (iii) The bobbin does not turn smoothly in the bobbin case.
- (iv) A lint in the bobbin case or shuttle.

• **Corrective action:**

- (i) Securely install the bobbin in the bobbin case.
- (ii) Thread the bobbin correctly.
- (iii) The bobbin should not be over-wound.
- (iv) Clean the bobbin case and shuttle, and remove the lint.

➤ **Defect:** Skipped stitches

• **Possible causes:**

(i) The thread tension is too tight/high.

(ii) The needle is bent or blunt.

(iii) Wrong size of the needle

(iv) The needle and thread do not match.

(v) The thread take-up lever has not been threaded.

(vi) Light pressure on the presser foot

(vii) Incorrect setting of the needle

• **Corrective action:**

(i) Correct the thread tension.

(ii) Replace with a new needle of good condition.

- (iii) Replace needle of correct size.
- (iv) Use a suitable thread and needle.
- (v) Check the threading order.
- (vi) Increase pressure on the presser foot.
- (vii) Reset the needle properly.

➤ **Defect:** The stitches are not formed properly

• **Possible causes:**

- (i) The thread has not been pulled into the thread guide
- (ii) Threading is not correct.
- (iii) The bobbin case has been threaded wrongly.

• **Corrective action:**

- (i) Fully pull the thread into the thread guide

- (ii) Correct the threading.
- (iii) Correctly thread the bobbin case.

➤ **Defect:** Irregular stitches

• **Possible causes:**

- (i) Incorrect size of the needle
- (ii) Improper threading
- (iii) Loose upper thread tension
- (iv) Pulling of the fabric
- (v) Light pressure on the presser foot
- (vi) Loose presser foot
- (vii) Uneven or over-wound bobbin

- **Corrective action:**

- (i) Choose the correct size of the needle for the thread and fabrics.
- (ii) Rethread the machine properly.
- (iii) Tighten the upper thread tension.
- (iv) Do not pull the fabric; guide it gently.
- (v) Increase pressure on the presser foot.
- (vi) Reset the presser foot.
- (vii) Rewind the bobbin properly.
- (viii) Remove over-winding of the bobbin.

- **Defect:** Fabric pucker

- **Possible causes:**

- (i) The stitch length is too long for the material.

- (ii) The needle point is blunt.
- (iii) Incorrect thread tension
- (iv) Light pressure on the presser foot
- (v) The fabric is too sheer or soft.
- (vi) Using two different sizes or kinds of upper and lower threads

• **Corrective action:**

- (i) Decrease the stitch length.
- (ii) Replace with a needle of good condition.
- (iii) Reset the thread tension.
- (iv) Increase pressure on the presser foot.
- (v) Use an underlay of tissue paper/backing.
- (vi) The upper thread and bobbin thread should be of the same size and kind.

➤ **Defect:** Bunching of thread

• **Possible causes:**

- (i) The upper and lower threads are not drawn back under the presser foot.
- (ii) The placement of the feed dog is down.

• **Corrective action:**

- (i) Draw both threads back under the presser foot.
- (ii) Fit the feed dog properly.

➤ **Defect:** Needle breaks

• **Possible causes:**

- (i) A thin needle was used for sewing a heavy weight material.

- (ii) The needle has not been fully inserted/pushed into the needle bar.
- (iii) The screw of the needle clamp is loose.
- (iv) The presser foot is not the correct one.
- (v) The presser foot is loose.
- (vi) Pulling of fabric

- **Corrective action:**

- (i) Use the correct size of the needle.
- (ii) Properly insert/push the needle in the needle bar.
- (iii) Securely tighten the needle clamp screw.
- (iv) Use correct presser foot.
- (v) Reset the presser foot
- (vi) Do not pull fabric; guide it gently

➤ **Defect** Loud noise is heard and/or knocking noise; machine jammed

- **Possible causes:**

- (i) Dust has accumulated in the feed dog.
- (ii) Lint is in the hook and shuttle area.
- (iii) The thread is caught in the shuttle.

- **Corrective action:**

- (i) Clean the machine and remove the lint.
- (ii) Disassemble the shuttle case and clean it.
- (iii) Oil the machine.

Machine and Sewing Defects and Its Solutions

➤ **Defect:** Threading cannot be done

- **Possible causes:**

- (i) The needle is not at the highest position.

- **Corrective action:**

- (i) Turn the hand wheel until the needle reaches its highest position.

➤ **Defect:** The thread does not enter the eye of the needle.

- **Possible causes:**

- (i) The eye of the needle is clogged.

(ii) The thread is thick in comparison to the eye of the needle.

- **Corrective action:**

(i) Clogging should be removed by using a fine wire.

(ii) Change the needle.

(iii) Select the thread according to the needle.

Note: While there are various defects of the sewing machine, the causes of these may be overlapping that is, the same cause can lead to multiple defects.

Summary

In this session, you have learnt about the sewing and machine defects , its possible causes and corrective actions to rectify these defects.

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