

## CHAPTER 3

### *Maintenance of Sewing Machine*

#### **Objectives:**

*At the end of the chapter, the students shall be able to:*

- \* *How to maintain the sewing machine*
- \* *Know the materials for maintenance and repair*
- \* *Take precautions during repair and maintenance*

In the apparel industry, a clean, well - oiled machine is essential for safety and good performance; the same is true in the class room. Machine maintenance is also important in preventing stitching faults. In most planes, a quick cleaning is done by the operators once a day, but the responsibility for the more through cleaning varies from plant to plant. In some factories, it is done by the operators on Saturday after noon. In others, it is done by a mechanic.

#### **3.1 Cleaning the Machine**

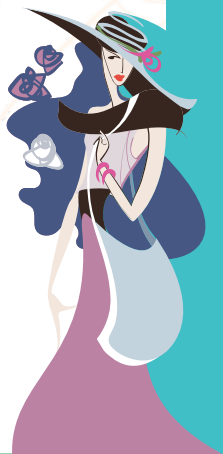
When cleaning the machine, clean everything--the machine mechanism, machine table and stand, your stools, work station area, and even your hands--to avoid soiling the materials being sewn, prevent accidents, and avoid wear and damage to the machine. These directions focus on the lockstitch machine, but they can easily be adapted for other machine types.

#### **Materials required:**

1. Paintbrush (1/2" wide).
2. Clear sewing machine oil.
3. Soft disposable cloth or clean rag.
4. Screwdriver.
5. Sewing machine manual.
6. Air hose or industrial vacuum cleaner

**Caution:** Before cleaning any machine, turn off the machine and run it out.

1. Open the slide and remove the bobbin case, then remove the throat plate. Occasionally remove the face plate from the left end of the head.
2. Brush or blow away any lint, dust, or loose threads in the area around the feed dogs and rotary hooker shuttle. Do not use anything hard, such as a screwdriver or scissor points, to remove the lint. When cleaning the overlock machine, open the cloth plate and looper cover to blow out any lint in those areas. On the blind stitch machine, open the plate to expose and clean the area around the spreader.
3. Turn the handwheel manually to expose any areas that might have been hidden initially, brush again.
4. Carefully tilt the machine head back until the head rests on the post on the back of the table.
5. Brush out any lint, dust, or threads in the lower part of the machine. Use a rag to remove any lint on the machine's mechanism, excess oil in the pan, and if appropriate, the oil pump screen.
6. If the machine is not self-oiling, consult the manual for oiling directions. If the manual is not available, place one drop of oil on each moving part on the lower mechanism.
7. Press the knee lift to the right and lower the machine head into position.
8. Replace all plates and screws
9. Oil the upper mechanism by placing a drop of oil in each oil hole.
10. Replace the bobbin case.
11. Check the needle to be sure it is clean and the eye is not clogged.
12. Replace the needle if necessary.
13. Wipe away any excess oil or dust on the head, machine bed, thread stand, motor, table, and stand.
14. If there is lint between the tension discs and in the thread guides, use thread to floss the tension discs and remove any lint.
15. If you have oiled the machine, sew on few scraps to remove any excess oil.
16. Wash your hands after cleaning and oiling the machine.





17. At the end of the day, put a piece of stitching patch under the foot, lower the foot, cover the machine, and pick up any trash.

### 3.2 Oiling the Machine

Oiling the machine and how frequently it is done varies from plant to plant. These factors vary and frequently depend on machine requires manual oiling can be accomplished, and the material being sewn. Generally, the machine should be oiled at least once a day, preferably at the end of the day to avoid soiling the material. Oil more frequently if needed.

#### Materials required:

1. Machine manual
2. Clear sewing machine oil
3. Soft disposable cloth or clean rag

**Caution:** Before oiling any machine is turned off and has been run out.

1. Read the directions for oiling in the machine manual.
2. Oil the machine using the directions as a guide. Inspect the condition of all visible parts of the machine every time you oil it.
3. If a manual is not available, use these directions and oil after every eight hours of operation. If the machine is self-oiling, change the pan oil when it looks cloudy or once a year
4. Locate any oil holes. They are frequently identified by arrows or red or yellow paint. Put one drop of oil into each hole. Too much oil will clog the machine. Turn the hand wheel manually so that the oil will work its way between the parts.
5. If the machine has no oil holes, carefully tilt the machine head back.
6. Add oil if oil is on "Low--Add Oil" line.
7. Set the machine head back into the work table and return all tools to the drawer.
8. Wipe off all dust and excess oil from the machine or table; clean up any spilled oil immediately.
9. Sew on a few fabric scraps to remove any excess oil.

10. Wash your hands after oiling the machine.
11. Excess oil is a serious problem that can reduce profits.

### 3.3 Understanding the simple problems of sewing machine and the solutions

Faults	Causes	Remedies
The upper thread breaks (needle thread)	<ol style="list-style-type: none"> <li>a) The machine is not threaded in the right way</li> <li>b) The tension of the upper thread is too tight</li> <li>c) The needle is bent or dull</li> <li>d) The cotton is too thick for the size of the needle</li> <li>e) The upper thread is not the same size as the lower thread</li> <li>f) The thread take-up spring is broken</li> </ol>	<p>Thread the machine in the right way</p> <p>Loosen the tension of the Upper thread</p> <p>Put in a new needle</p> <p>Use thinner cotton</p> <p>Use the same size of sewing cotton for both the upper and the lower thread</p> <p>Put in a new thread take-up Spring</p>
The lower thread breaks (bobbin thread)	<ol style="list-style-type: none"> <li>a) The tension of the lower thread is too tight</li> <li>b) Dirt, dust or small threads are in the bobbin case</li> <li>c) Needle is bent or blunt</li> </ol>	<p>Loosen the tension of the lower thread.</p> <p>Clean the bobbin case.</p> <p>Replace needle.</p>
Skipped stitches	<ol style="list-style-type: none"> <li>a) Needle and thread not matching</li> <li>b) Thread take-up lever not threaded</li> <li>c) Light pressure on presser foot</li> <li>d) Incorrect setting of needle</li> </ol>	<p>Use proper thread or needle.</p> <p>Check threading order</p> <p>Increase pressure on presser foot</p> <p>Reset needle</p> <p>Decrease stitch length</p> <p>Replace needle</p>



	<ul style="list-style-type: none"> <li>e) Stitch length is too long for material</li> <li>f) Needle point is blunt</li> <li>g) Incorrect thread tension</li> <li>h) Light pressure on pressure foot</li> <li>i) Fabric is too sheer or soft</li> </ul>	<p>Reset thread tension</p> <p>Increase pressure on pressure foot</p> <p>Use underlay of tissue paper</p>
Bunching of thread	<ul style="list-style-type: none"> <li>a) Upper and lower threads not drawn back under presser foot</li> <li>b) Feed dog down</li> <li>c) Needle not fully inserted into needle bar</li> </ul>	<p>Draw both threads back under presser foot</p> <p>Raise feed dog</p> <p>Properly insert needle</p>
Needle breaks	<ul style="list-style-type: none"> <li>a) Needle clamp screw is loose</li> <li>b) pressure foot is loose</li> <li>c) Pulling on fabric as you sew</li> </ul>	<p>Tighten needle clamp screw securely</p> <p>Reset pressure foot</p> <p>Do not pull fabric, guide it gently</p>

### Questions

1. How much oil would you apply to each oiling point?
2. What are the common machine trouble and their causes?

### SUMMARY

This chapter dealt with maintenance of sewing machine, materials required for maintenance and repair and precautions to be taken during repair and maintenance. A clean & well-oiled machine is essential for safety and good performance.

