

5.1 Sewing Machine Head

- This forms the main mechanical element of the Integral Sewing Unit (ISU).
- The horizontal component of the casting (horizontal arm) houses the top shaft



Maintenance of Sewing machines

General principles

- A) cleaning
- B) lubricating
- C) inspecting
- D) adjusting or replacing

A) cleaning

a) with cloth

b) small brush (from bristles or fine wire of steel or brass)

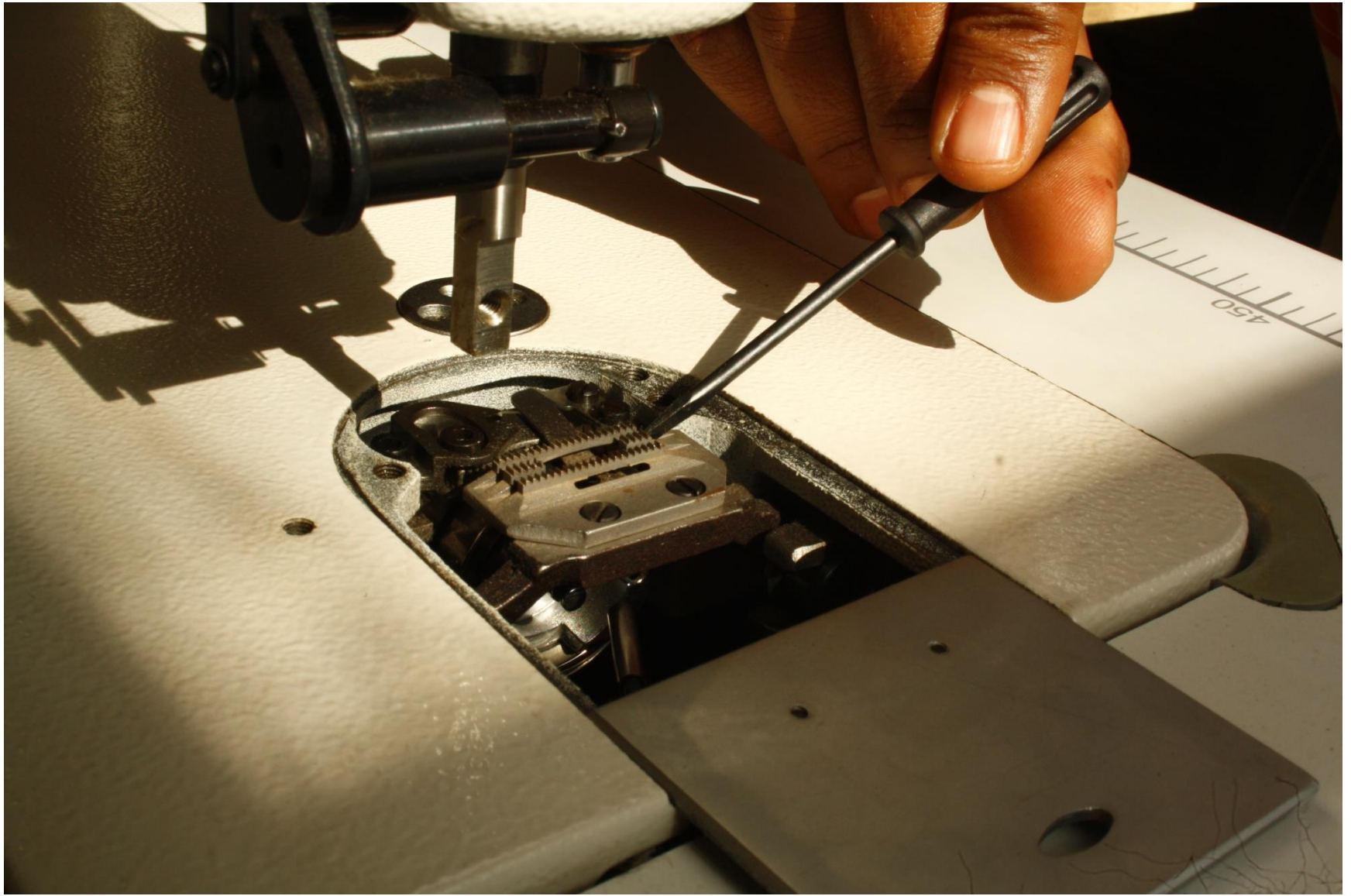
Between the feed dog and the needle plate fibers will deposit after some time. These have to be removed.

c) air power

Use with discretion, as dirt may get blown into places unwanted.

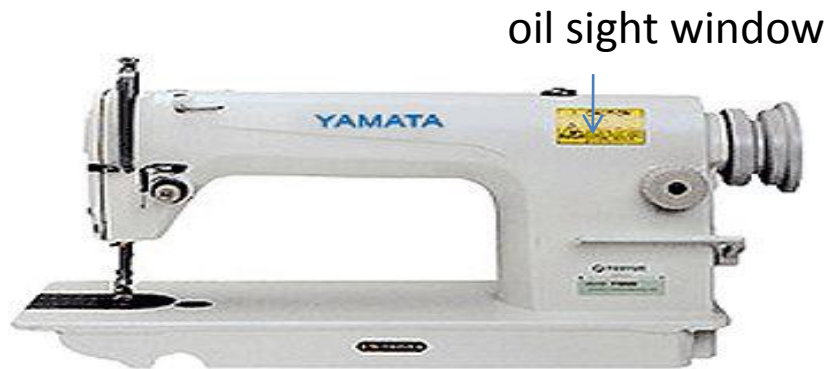
d) solvent

In case there is old, hard lubricant deposited. It may affect parts coated with paint.



Cleaning the gap between the teeth of the feed-dog

B) lubrication



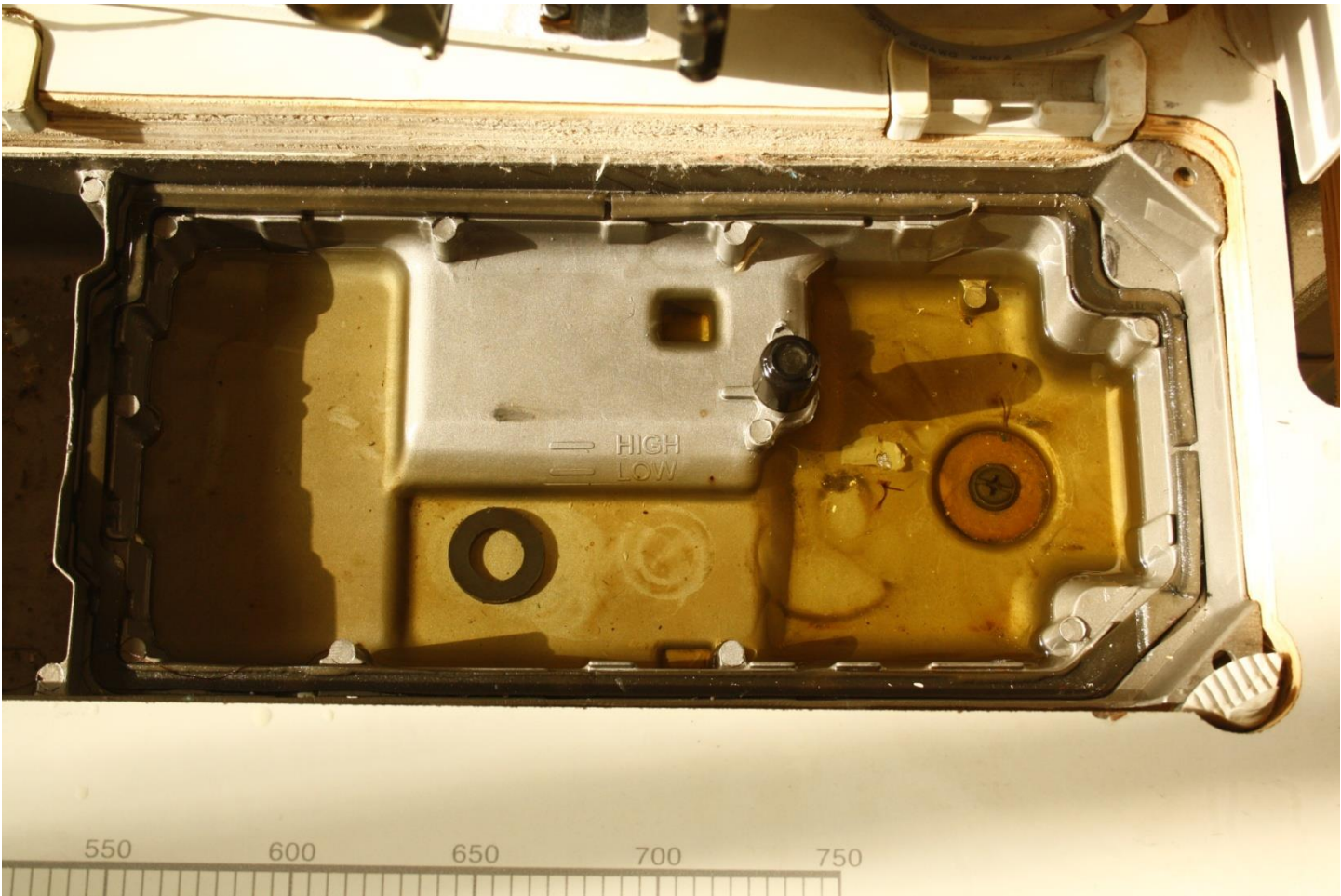
a) machines with an oil pan:

Fill oil, observing the marks HIGH and LOW.

Specification: VG 10 Mobile Velocite oil

When running the oil sight window shows that the oil is reaching the top parts.

There are adjustment screws for the parts under the face plate and another one for lubrication of the hook.



High and Low mark in the oil pan -- magnet to collect metal chips

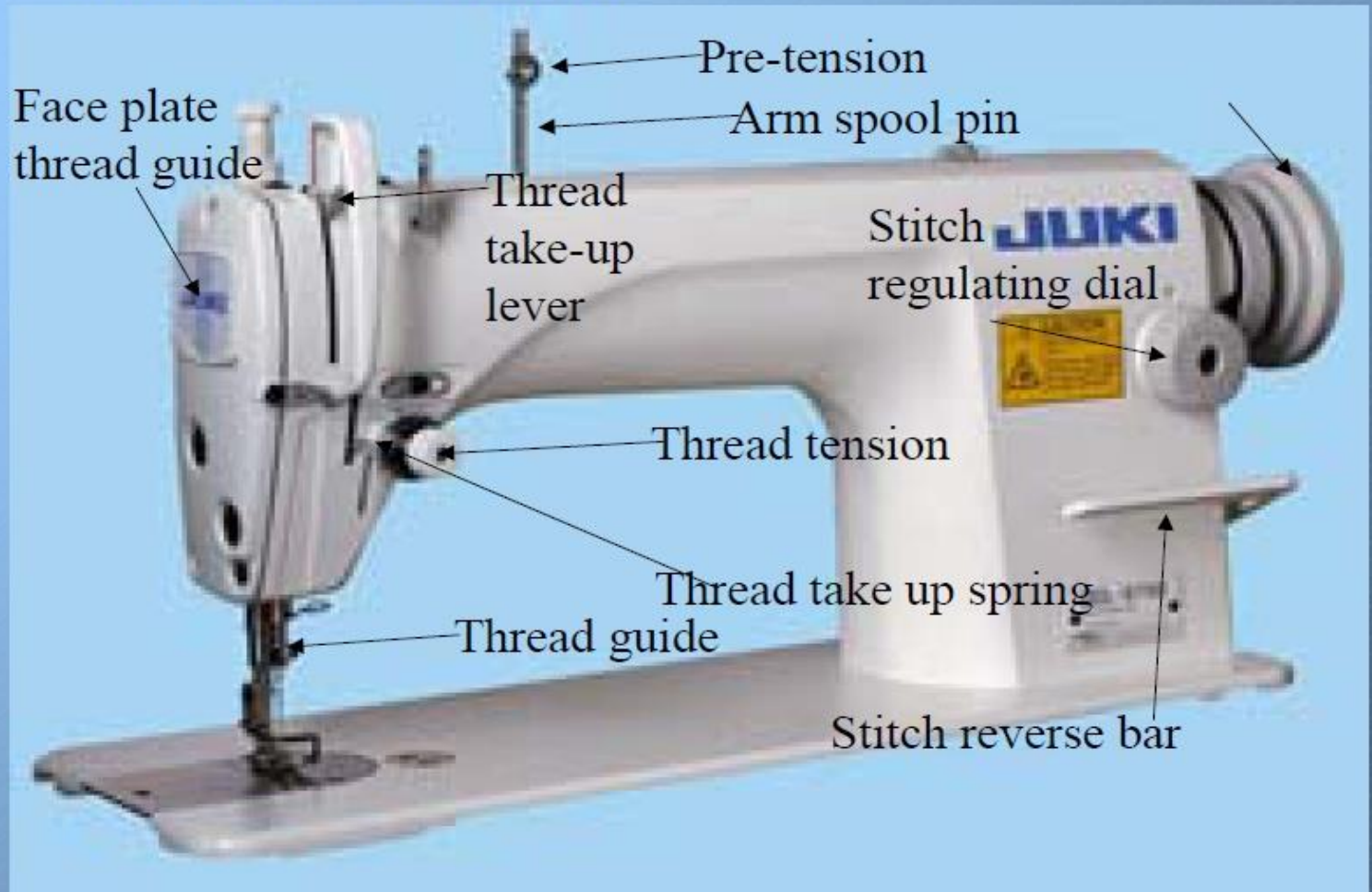
C) inspection

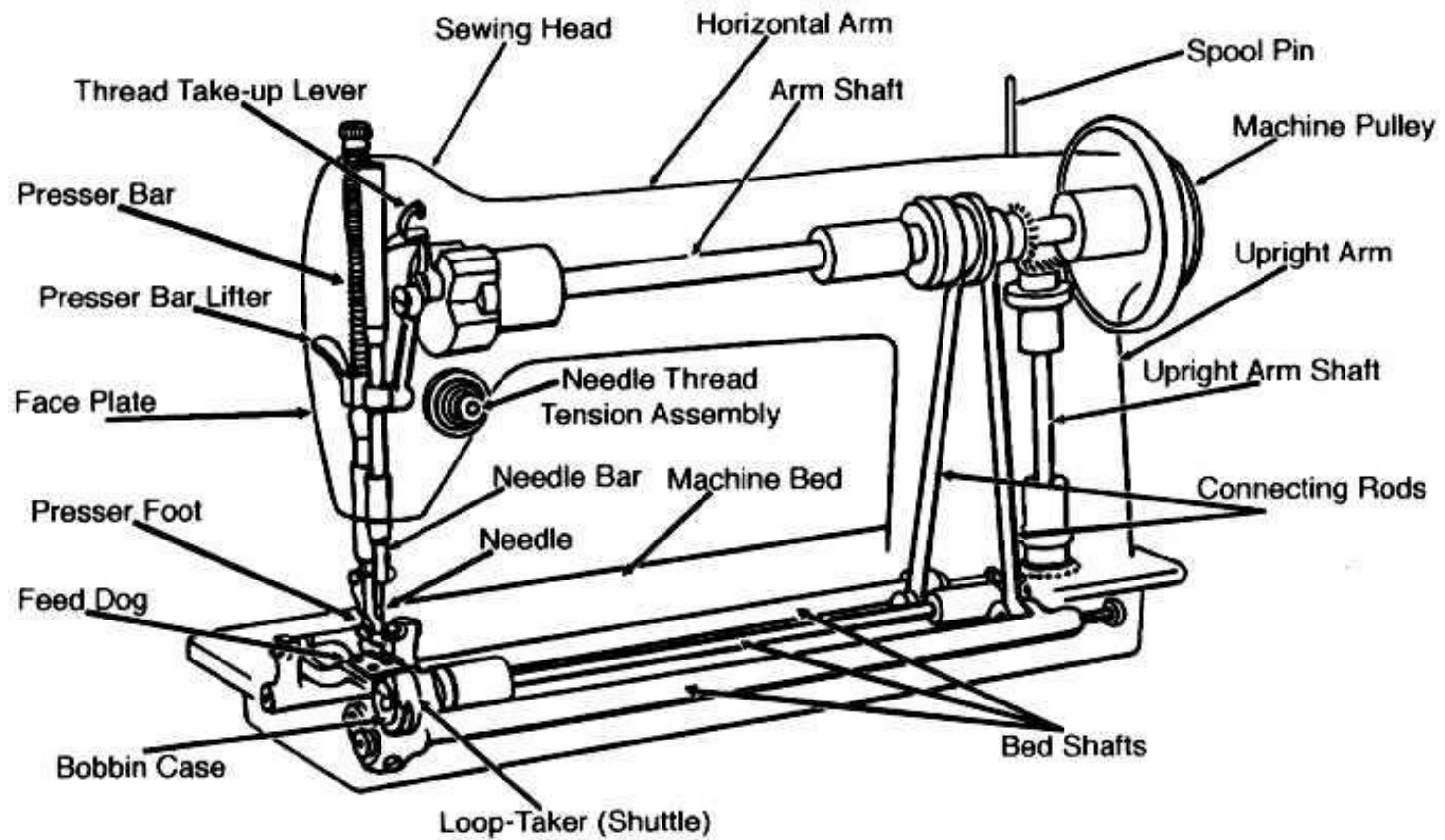
Make sure the power for the machine is off before detailed inspection

- a) Listen to the complains of the operator
- b) Check whether parts are broken or missing
- c) Test moving parts whether undue slack movement is possible

Detail Parts Of SNL

Lockstitch machine





5.2. Sewing Machine Bed

- In fashion manufacture the machines are still predominantly used in their basic forms, but for more specialized garments and those made in higher volume, variations in machine shape are available that enable easier movement of the materials around the machine.
- These variation primarily affect the shape of the bed of the machine, i.e. the part on which the materials rest.
- Bed is the part of a sewing machine on which the fabric rests while it is being sewed.

3.3. ELECTRIC SEWING MACHINE

- This is the **fastest sewing machine**.
- One needs practice to handle it.
- In an electric machine the balance wheel comes to motion by a belt, which is attached to an electric motor



5. Main Parts Of Sewing Machine

In general, a sewing machine consists of:

- ✓ sewing head
- ✓ machine bed
- ✓ work-top;
- ✓ drive motor;
- ✓ machine stand;
- ✓ treadle.



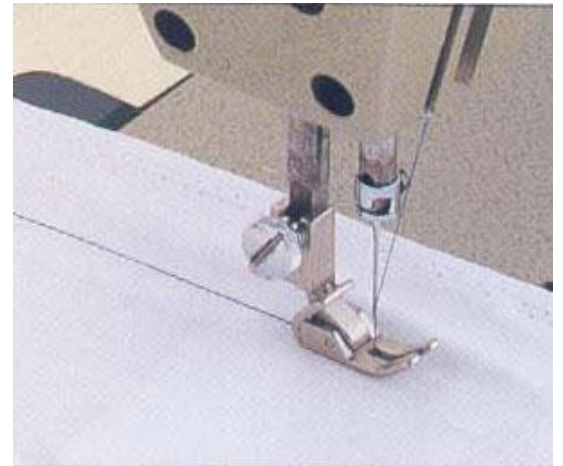
Presser Foot

➤ The presser foot holds the fabric against the feed dogs; so the feed dogs can pull the fabric through the machine



Presser Foot

- UPPER part of the feeding combination.
- HOLDS the fabric in place for the feeding action and stitch formation.
- Controls the amount of pressure on the fabric.
- ATTACHED to a pressure bar which in turn is contacted by spring action link.



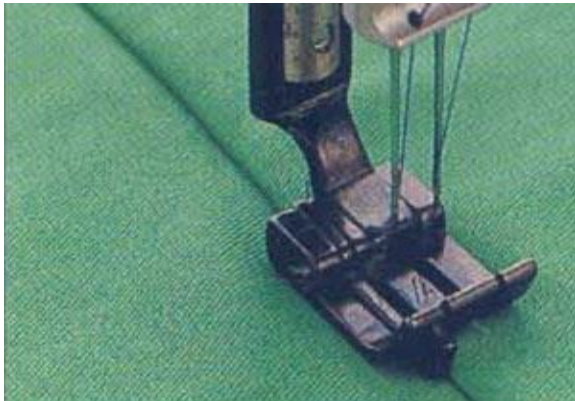
Presser Foot

PARTS OF PRESSER FOOT





Types of presser feet



Some Common Presser Feet

➤ Compensating Feet

- Applications –
 - (i) Topstitching
 - (ii) Closing down a shirt collar
 - (iii) Sink stitching to close a waistband.



(Right and left compensating feet)



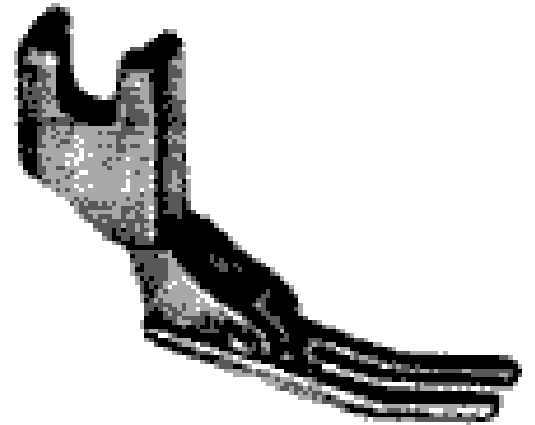
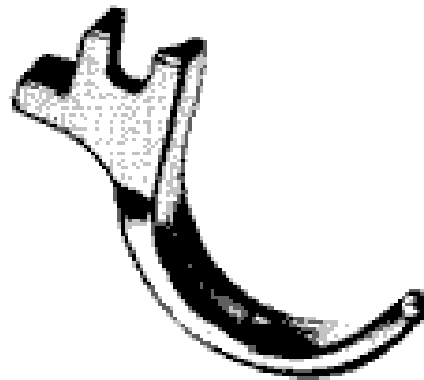
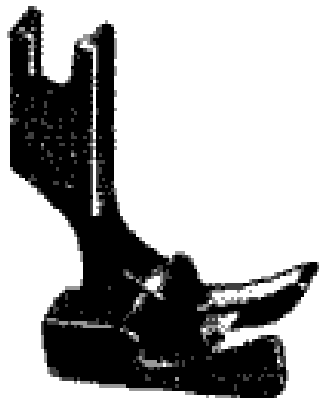
(1/4" compensating foot)



(Dual compensating foot)

➤ Gauge Feet

- Sole is thicker on one side.
- Helps to guide the fabric.
- Variety of forms- based on the width of topstitching and fabric thickness.



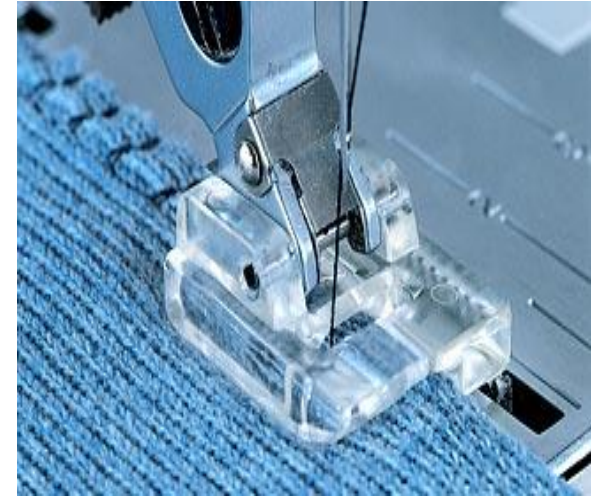
➤ Zipper Foot

- Is a half foot or has two very narrow toes.
- Stitches run an even $\frac{1}{8}$ " from the zipper teeth.
- Specially shaped for setting an invisible zip.
- Can be snapped onto the left or the right of the sewing foot ankle, as needed



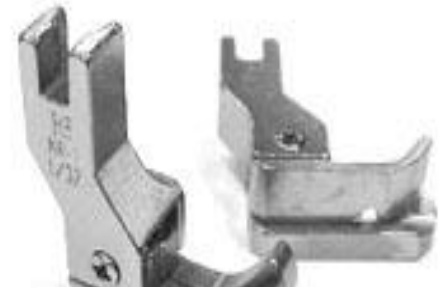
➤ Cording/ Piping Feet

- Only one toe on right or left.
- Stitches run close to the bulk of piping or zipper.
- Right cording foot is set to the left of the needle.
- Can simultaneously stitch and finish heavy knit fabrics or imitation furs.
- Used for attaching strings of pearls or piping.



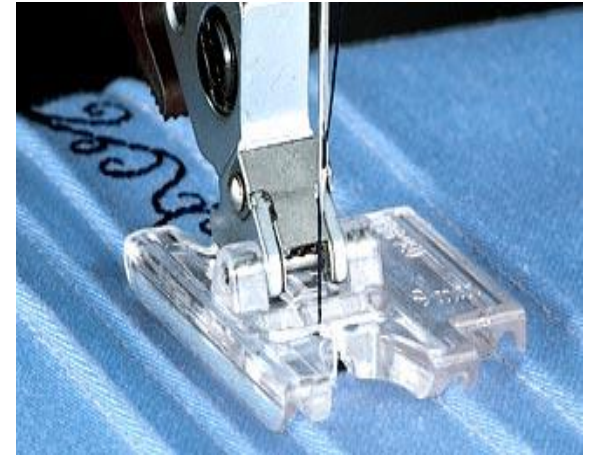
- **Hemming Feet**

- Folds the fabric edge into position.
- Variety of forms- based on width of the hem and thickness of the material.



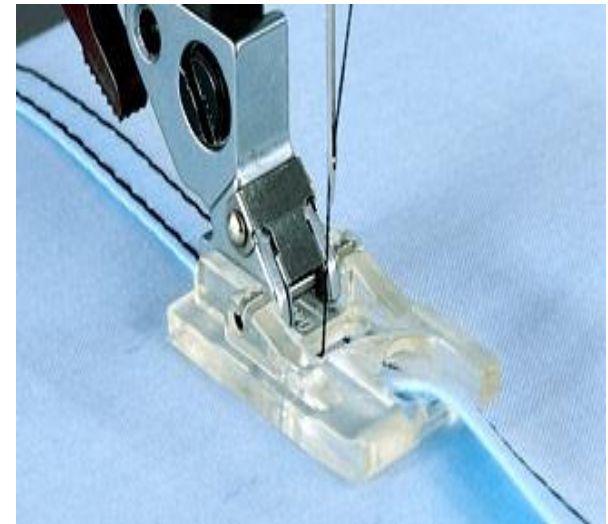
➤ Pin Tucks

- can sew tucks spaced from 5 mm (3/16") to 11 mm (3/8") apart.
- Create fantastic effects by sewing decorative stitches in the spaces between the tucks.
- The clever guide groove on the bottom of this foot helps to sew perfectly parallel to the tucks and to position the decorative stitching exactly.



➤ Felling Feet

- The Felling Foot is available in two different widths –
 - to sew either lightweight blouse
 - shirt fabrics or heavier denim and sportswear fabrics.



OTHERS



Button Hole Foot

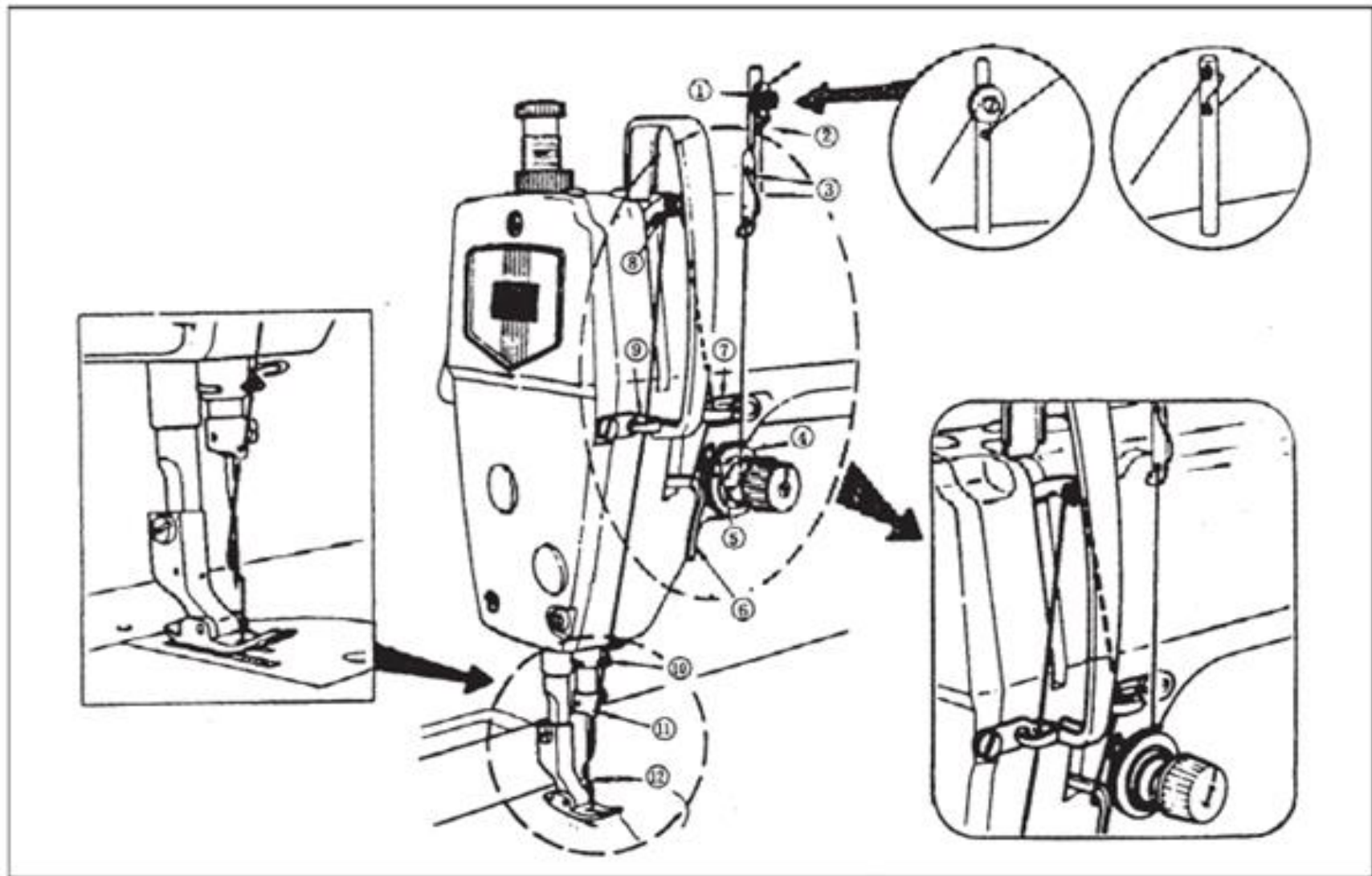


Gathering Foot



Quilting Foot





5.4.2. Throat Plates

- Throat plate is removable metal plate attached to an adapter plate or throat plate support, directly under the needle.
- It protects the bobbin unit and usually has guides for seam allowances.
- It support the fabric as the needle penetrates to form the stitch.
- Has openings for needles and lower feed devices



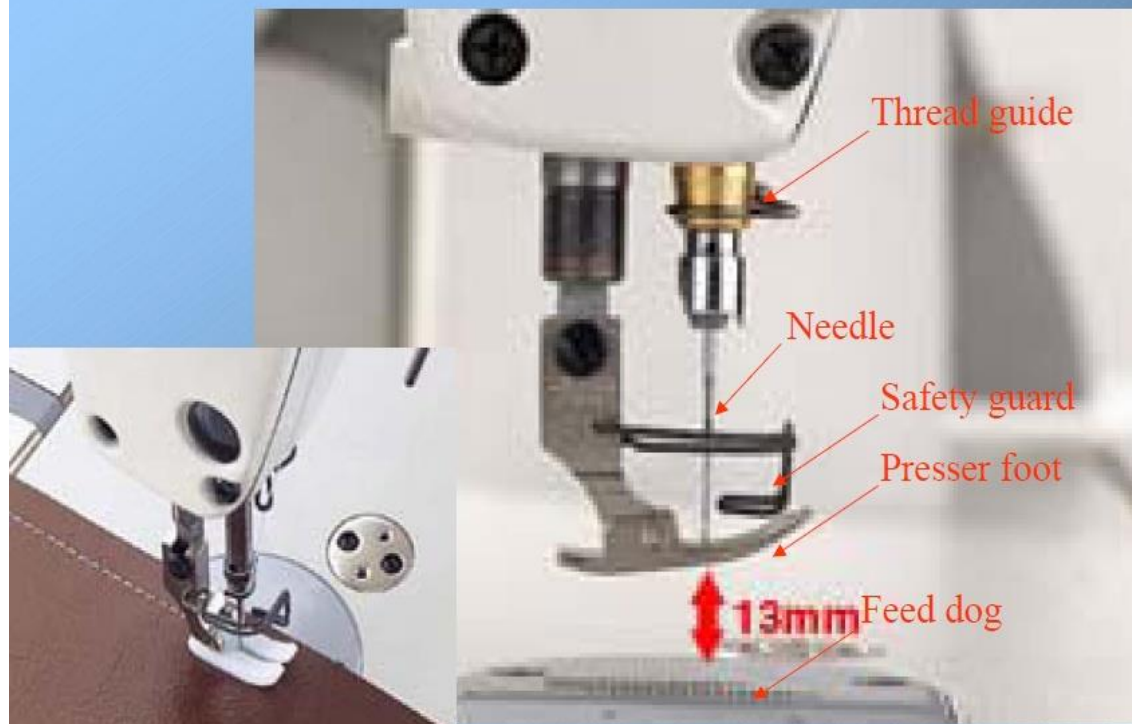
5.4.3. Feed Dogs

- The feed dog feeds the fabric under the presser foot while we guide the fabric.
- These move the material forward a predetermined distance to allow successive penetrations of the needle
- It regulates the stitch length by how much fabric passes under the presser foot as the machine stitches.



Feed dog

Lockstitch machine



Hook

- 1 -To hold bobbin case
- 2 -to adjust timing
- 3 - relation ship of bobbin & needle



Adjusting the Thread Tension

Adjusting the Needle thread tension

- As you turn the lower thread tension nut clock wise, the needle thread tension will be increased.
- As you turn the lower thread tension nut counter clock wise, the needle thread tension will be increased.
- Testing is done by holding the ends of the thread in the fingers of the left and right hand and pull gently.



Testing the Tension of the bobbin thread

Bobbin and Bobbin case

Under the needle plate you find the hook and the basket which holds the bobbin case and bobbin.



Adjusting the bobbin thread tension

- As you turn tension adjust screw clockwise, the bobbin thread tension will be increased.
- As you turn tension adjust screw counter clockwise, the bobbin thread tension will be decreased.



The tension is correct when the bobbin case will not glide by its own weight, but after a slight jerk.



Winding the Bobbin

It is useful to have a number of bobbins with the most common colours of thread at hand.



Features of needle for sewing machines

Sewing machines have different types of needles.

- All needles require a short and long groove. Some have a shank. In one type the shank has a flat. This is to help the house-wife to know the correct direction while inserting the needle. This type of needle is 130I705. More variations are in length, in thickness, in the shape of the point of the needle.

- For the blind stitch machines a bent needle is required.

The common type of needle for Lock stitch is normally DPX1.

