LUBRICATION

1. To fill the oil reservoir on top of the machine, pour oil through the oil filler hole, until oil level reaches the upper reference line. The oil is automatically dispensed by the vibration of the machine while sewing, through the oiling wicks in the machine. The oil flow stops automatically when the machine stops running.

2. When first starting the machine and if it has been out of use for an extended period of time, lubricate the designated parts before running the machine.

ADJUSTING THE LUBRICATION

While the machine is running, lubrication is automatic to specific points on the machine. When the machine is in continuous operation, it might be a good idea to stop the oil flow for a while. In that case, turn the dial until the two points in the above picture align perfectly, at which point the dial comes down and lubrications is stopped.
NEEDLES

Move needle bar to highest point

Loosen screw Loosen screw

Insert needle up as far as possible

Scarf Scarf

Needle size should be determined by the type of thread used and the type of fabric being sewn.

REMOVING THE BOBBIN
Lift up the cap with a screw driver as shown in the illustration below and the bobbin case is easily removed.

BOBBIN CASE REPLACEMENT
Insert threaded bobbin into bobbin case, and set the bobbin case into the hook and latch down.
WINDING THE BOBBIN

Place bobbin on spindle as far as it will go.

THREADING THE BOBBIN CASE

Press down to engage then start the machine

Regular bobbin
Threading process is in numerical order. Start by pulling thread through slot (1).

Large bobbin

THREADING THE NEEDLE
Move the thread take-up lever to its highest point and guide the thread from the thread stand in numerical order as shown in the illustration above.

**ADJUSTING THE THREAD TAKE-UP SPRING**

![Diagram of thread take-up spring]

**ADJUSTING THE TAKE-UP SPRING TENSION**
1. Slightly loosen nut (4) and screw (5). Adjust the tension on the rear thread take-up spring (1) first. Turn take-up spring shaft (6) with a screwdriver to the left to increase the tension and to the right to decrease it. After the desired tension has been set, tighten set screw (5). Now adjust the tension of the front spring (7). First loosen the two screws (9) in the collar (8), turn the collar to the left to increase and to the right to decrease the tension. Upon setting the desired tension of this spring, tighten the set screws (9) and also the nut (6).

**ADJUSTING THE THREAD CONTROLLER SPRING**
1. **FRONT THREAD CONTROLLER SPRING (7)**
   - Loosen set screw (11) and turn spring stop (10) to the left to increase the action of thread take-up spring (7) and to the right to reduce the action of this spring. After the desired setting of the spring has been set, tighten set screw (11).
2. **REAR THREAD CONTROLLER SPRING (1)**
   - Loosen set screw (2), turn thread controller spring stop (3) to the right for more action, for less action, turn the stop to the left. Upon completion of adjustment, tighten the screw (2).

**REGULATING THREAD TENSION**

<table>
<thead>
<tr>
<th>Thread Tension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfect stitching</td>
<td>Tight tension of needle thread</td>
</tr>
<tr>
<td>Loose tension of needle thread</td>
<td></td>
</tr>
</tbody>
</table>

**BOBBIN THREAD**

- More-turn counter clockwise: less-turn clockwise

![Diagram of bobbin thread tension]
ADJUSTING THE PRESSURE ON THE PRESSER FEET
CHANGE OVER LEVER FOR NEEDLE BAR

MOVE THE LEVER TO POSITION “L” - the left needle bar stops
MOVE THE LEVER TO POSITION “R” - the right needle bar stops
PUSH RELEASE LEVER & BOTH NEEDLE BARS ARE SET IN MOTION

ADJUSTING THE STITCH LENGTH

Simultaneously press the button (the arrow in the illustration above) and turn the hand wheel slowly toward you. The plunger will enter into a notch in the feeding mechanism. Hold the plunger down and continue to turn the hand wheel, either forward or backward until the desired number of stitches is set on the hand wheel. Release the plunger. The number on the pulley marks the number of stitches per inch.
REVERSE STITCHING
Press down the reverse lever as far as it will go for reverse stitching. When the lever is released normal stitching resumes.

RESETTING THE SAFETY CLUTCH MECHANISM
The sewing hooks and mechanism are protected by a safety clutch.

Open the slide plate above the hook and remove any foreign matter which may have lodged there. Depress the button and turn the hand wheel away from you until the locking mechanism re-engages the drive shaft underneath the machine bed. The safety clutch is now engaged. When removing foreign matter from the hook do not use any sharp edged tools lest you damage the hook.