LUBRICATION (without LUBRICATION SYSTEM MACHINES)
Use white spindle oil. When starting the machine initially and after kept away for a long time without using at all, oil sufficiently to respective necessary parts before staring operation and pre-running. (↓ ... oiling point)

Fig. 1

Fig. 2

Fig. 3

WITH TRIMMER MACHINES

Fig. 4

Fig. 5
LUBRICATION (with LUBRICATION SYSTEM MACHINES)

Fig. 6

To fill oil reservoir on top of machine until oil level reaches to upper reference line A. Always keep oil level is above lower reference line B.

OILING ADJUSTMENT FOR UPPER PART (with LUBRICATION SYSTEM MACHINES)

Fig. 7

While operating machine, lubrication to each spots of upper part of machine are made automatically. When the machine is in continuous operation, stop oiling for a while at your option. In that case, turn dial until two points fit together, then the dial comes down and lubrication is stopped.

NEEDLE

Fig. 8

1-needle

Needle bar

Set screw

Needle

Long groove

2-needle

Needle bar

Set screw

Needle

Long groove

Fig. 9

STANDARD NEEDLE

DP-F22, #14 .... Lower feed with roller presser foot machines

DP x 7,  #18 ... Lower feed with flat presser foot machines

DP x 7,  #24 ... Lower feed with large hook machines

DP x 17,  #18 ... Needle feed, walking foot (except single needle, without reverse) machines

DP x 17,  #19 ... With trimmer machines

DP x 17,  #22 ... Needle feed, walking foot, single needle, without reverse machines

DP x 17,  #24 ... Large hook machines (except lower feed machines)

1. Move needle bar to highest point.
2. Insert needle up as far as possible.
3. Long groove faces left. (In case 2-needle, the groove faces inside.)
4. Tighten needle set screw.

ROLLER PRESSER FOOT

Fig. 10

Inserting and removing bobbin

Lift up presser bar lifter, then press down saddle of presser foot and turn it to left as far as it will go.

1. Pull up latch and remove bobbin from bobbin case.
2. To insert a full bobbin, hold it pulling out the end of thread by 5 cm, and place the bobbin into the bobbin case, and press down the latch.
3. Lead the end of thread pulled out through slot of the bobbin case, and under tension spring through between the bobbin case and opener.
4. Close cap, but leave a space for passage of the end of thread pulled out.
WINDING BOBBIN
1. Place a bobbin on the bobbin winder spindle as far as possible.
2. Lead thread as shown by Fig. 12 and wind several times on bobbin.
3. Press down lever for drive then start machine. Pulley will be disengaged from V-belt automatically after bobbin fills up with thread.

- Winding strength: Adjustable by serrated nut.
- UnEven winding: Adjustable by loosen screw (1) and move winder to right or to left.
- Winding amount: Adjustable by screw (2).

THREADING NEEDLE

1-NEEDLE

(with LUBRICATION)

(without LUBRICATION)

1. Raise needle bar to highest point and lead thread from thread stand the following numerical order 1(A) ~ 11(K).
2. THREAD NEEDLE
   1—needle.....from left to right
   2—needle.....from inside to outside

THREAD TENSION

Perfect stitching

Tight tension of needle thread

Loose tension of needle thread

NEEDLE THREAD

To adjust, turn serrated nut

BOBBIN THREAD

To adjust, turn adjusting screw
ADJUSTING LIFT OF ALTERNATING PRESSER FEET
(Compound feed with walking foot machine only)

Fig. 19
To adjust, loosen wing nut and move link and stud assembly along slot.

TO REGULATE PRESSER FOOT PRESSURE
(without LUBRICATION)

Fig. 20
The pressure on the material should be as light as possible, while still sufficient to insure correct feeding.

ADJUSTING STITCH LENGTH

Number (stitches/inch)

Fig. 22
Pressing down button A, turn pulley slowly toward you. Then plunger will enter into notch in feeding mechanism. Hold the plunger down and turn pulley either forward or rearward so that desired number on pulley may come at mark on arm. Then, release the plunger.

REVERSE STITCHING
(only with reverse stitch mechanism.)

Fig. 23
To reverse stitching, press down the lever as far as it will go.

RE-ENGAGE SAFETY CLUTCH MECHANISM
(except MACHINES WITH ONLY LOWER FEED)

Fig. 24
1. Remove any foreign matter which may have lodged in hook. Do not use any sharp-edged tools.
2. Pressing button B and turn pulley rearward slowly to re-engage safety clutch.

TRIMMER (with TRIMMER MACHINES only)

Fig. 25
When replacement of knife, loosen two screws.

Fig. 26