

**GLOBAL**

**303 D**

**HIGH-SPEED LOCKSTITCH SEWING MACHINE**

**CSMP**

**OPERATION MANUAL**

# IMPORTANT SAFETY INSTRUCTIONS

To get the most out of the many functions of this machine and operate it in safety, it is necessary to use this machine correctly.

Please read this Instruction Manual carefully before use. We hope you will enjoy the use of your machine for a long time.

Please remember to keep this manual in a safe place.

1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
2. Read all the instructions, including, but not limited to this Instruction Manual before before you use the machine, In addition, keep this Instruction Manual so that you may read it at anytime when necessary.
3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.
4. All safety devices must be in position when the machine is ready for work or in operation. The operation without the specified safety devices is not allowed.
5. This machine shall be operated by appropriately-trained operators.
6. For your personal protection, we recommend that you wear safety glasses.
7. For the following, turn off the power switch of disconnect the power plug of the machine from the receptacle.
  - 7-1 For threading needle(s) and replacing bobbin.
  - 7-2 For replacing part(s) of needle, presser foot, throat plate, feed dog, cloth guide etc.
  - 7-3 For repair work,
  - 7-4 When leaving the working place of when the working place is unattended.
8. If you should allow oil, grease, etc. used with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.

9. Tampering with the live parts and devices. regardless of whether the machine is powered, is prohibited.
10. Repair, remodeling and adjustment works must only be done by appropriately trained technicians or specially skilled personnel.
11. General maintenance and inspection works have to be done by appropriately trained personnel.
12. Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel.  
Whenever you find a failure of any of electrical components, immediately stop the machine.
13. Periodically clean the machine throughout the period of use.

14. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an environment that is free from strong noise sources such as high-frequency welder.
15. An appropriate power plug has to be attached to the machine by electric technicians. Power plug has to be connected to a grounded receptacle.

16. The machine is only allowed to be used for the purpose intended. Other uses are not allowed.
17. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. We assume no responsibility for damage caused by remodeling or modification of the machine.

18. Warning hints are marked with the two shown symbols.





Danger of injury to operator or service staff



Items requiring special attention

# FOR SAFE OPERATION

	<p>1. To avoid electrical shock hazards, neither open the cover of the electrical box for the motor nor touch the components mounted inside the electrical box.</p>
	<ol style="list-style-type: none"> <li>1. To avoid personal injury, never operate the machine with any of the belt cover, finger guard or safety devices removed.</li> <li>2. To prevent possible personal injuries caused by being caught in the machine, keep your fingers, head and clothes away from the handwheel, V belt and the motor while the machine is operation. In addition, place nothing around them.</li> <li>3. To avoid personal injury, never put your hand under the needle when you turn "ON" the power switch or operate the machine.</li> <li>4. To avoid personal injury, never put your fingers into the thread take-up cover while the machine is in operation.</li> <li>5. The hook rotates at a high speed while the machine is in operation, To prevent possible injury to hands, be sure to keep your hands away from the vicinity of the hook during operation. In addition, be sure to turn OFF the power to the machine when replacing the bobbin.</li> <li>6. To avoid possible personal injuries, be careful not to allow your fingers in the machine when tilting/raising the machine head.</li> <li>7. To avoid possible accidents because of abrupt start of the machine, turn OFF the power to the machine when tilting the machine head or removing the belt cover and the V belt.</li> <li>8. If your machine is equipped with a servo-motor, the motor does not produce noise while the machine is at rest. To avoid possible accidents due to abrupt start of the machine, be sure to turn OFF the power to the machine.</li> <li>9. To avoid electrical shock hazards, never operate the sewing machine with the ground wire for the power supply removed.</li> <li>10. To prevent possible accidents because of electric shock or damaged electrical component(s), turn OFF the power switch in prior to the connection/disconnection of the power plug.</li> </ol>

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## BEFORE OPERATION

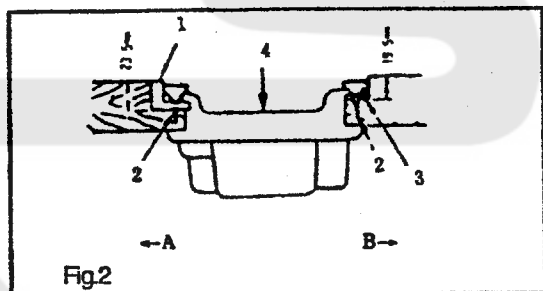
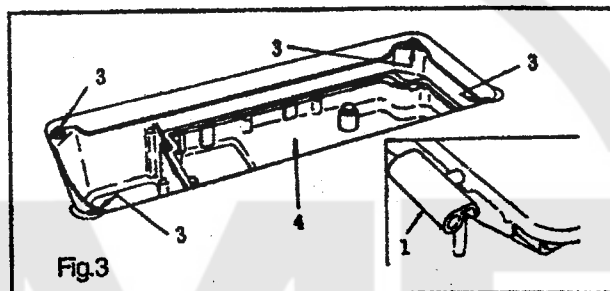
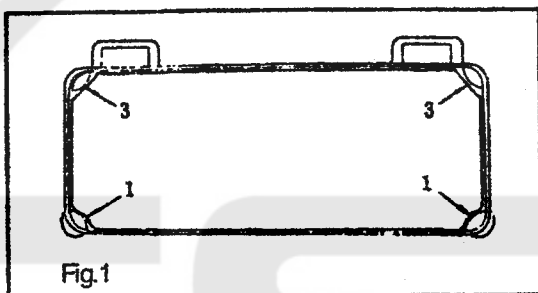


### CAUTION:

To avoid malfunction and damage of the machine, confirm the following.

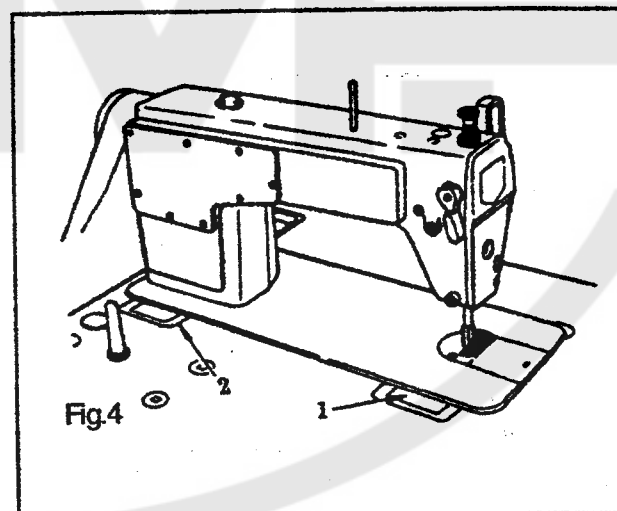
- Before you put the machine into operation for the first time after the set-up, clean it thoroughly. Remove all dust gathering during transportation and oil it well.
- Confirm that the voltage has been correctly set.  
Confirm that the power plug has been properly connected to the power supply.
- Never use the machine in the state where the voltage type is different from the designated one.
- Confirm that the direction of rotation of the motor pulley is correct.
- Operate your machine at the normal sewing speed or less for the first month after the set-up.

## 1. INSTALLATION



### 1.Installing the oil pan

- 1) The oil pan should rest on the four corners of the machine table groove.
- 2) Two rubber seats ① for supporting the head portion on the operator side A are fixed on the extended portion of the table by hitting the nail ②, and the other two rubber cushion seats ③ on the hinge side B are fixed by using a rubber-based adhesive. Then, oil pan ④ is placed.(Fig.1,2)



- 3) Fit hinge ① into the opening in the machine bed, and fit the machine head to table rubber hinge ② before placing the machine head on cushions ③ on the four corners.(Fig.3,4)

## 2.LUBRICATION (Fig,5,6)

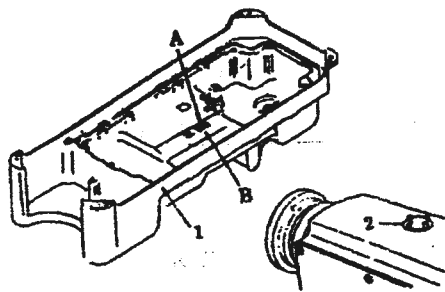


Fig.5



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start to the sewing machine.

#### 1. Information on lubrication

- 1) Fill oil pan ① with sewing-machine oil (No.10 white oil) up to HIGH mark A.
  - 2) When the oil level lowers below LOW mark B, refill the oil pan with the specified oil.
  - 3) When you operate the machine after lubrication, you will see splashing oil through oil singht window ② if the lubrication is adequate.
  - 4) Note that the amount of the splashing oil is unrelated to the amount of the lubricating oil.
- (Precaution) When you first operate your machine after setup or after an extended period of disuse, run your machine at 2,000s.p.m. to 2,500 s.p.m for about 10 minutes for the purpose of break-in.

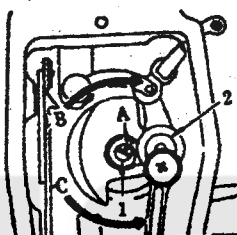


Fig.6



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start to the sewing machine.

#### 2.Adjusting the amount of oil supplied to the face plate parts.

- 1) Adjust the amount of oil supplied to the thread take-up and needle bar crank ② by turning adjust pin ① .
- 2) The minimum amount of oil is reached when marker dot A is brought close to needle bar crank ② by turning the adjust pin in drection B.
- 3) The maximum amount of oil is reached when marker dot A is brought to the position just opposite from the needle bar crank by turning the adjust pin in direction C.

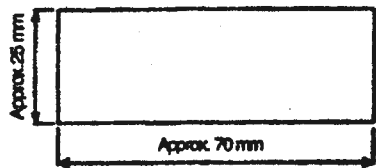
## 3.ADJUSTING THE AMOUNT OF OIL (OIL SPLASHES IN THE HOOK(Fig,7.8.9)



### WARNING:

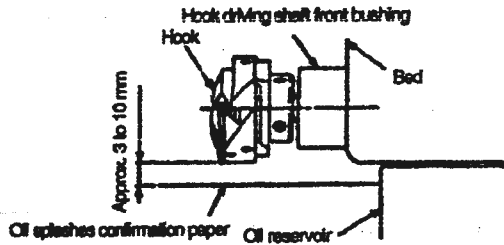
Be extremely careful about the operation of the machine since the amount of oil has to be checked by turning the hook at a high speed.

① Amount of oil (oil splashes) confirmation paper    ② Position to confirm the amount of oil (oil splashes)



\* Use any paper available regardless of the material.

Fig.7



Closely fit the paper against the wall surface of the oil reservoir.

\* Place the amount of oil (oil splashes) confirmation paper under the hook.

\*When carrying out the procedure described below in 2), remove the slide plate and take extreme caution not to allow your fingers to come in contact with the hook.

(Cautions 1) If the machine has not been sufficiently warmed up for operation, make the machine run idle for approximately three minutes. (Moderate intermittent operation)

- 2) Place the amount of oil (oil splashes) confirmation paper under the hook while the sewing machine is in operation
- 3) Confirm that the height of the oil surface in the oil reservoir is within the range between "HIGH" and "LOW".
- 4) Confirmation of the amount of oil should be completed in five seconds. (Check the period of time with a watch)

● Sample showing the appropriate amount of oil

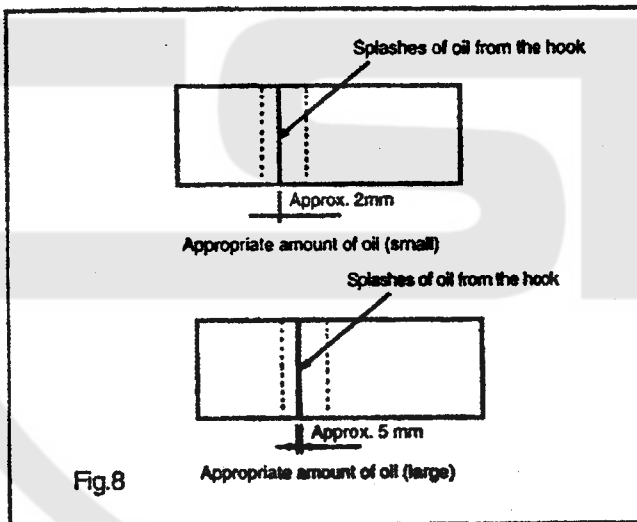


Fig.8

- 1) The amount of oil shown is the samples on the left should be finely adjusted in accordance with sewing processes. Be careful not to excessively increase/decrease the amount of oil in the hook. (If the amount of oil is too small, the hook will be seized (the hook will be hot). If the amount of oil is too much, the sewing product may be stained with oil.)
- 2) Adjust the amount of oil in the hook so that the oil amount (oil splashes) should not change while checking the oil amount three times (on the three sheets of paper).

● Adjusting the amount of oil (oil splashes) in the hook

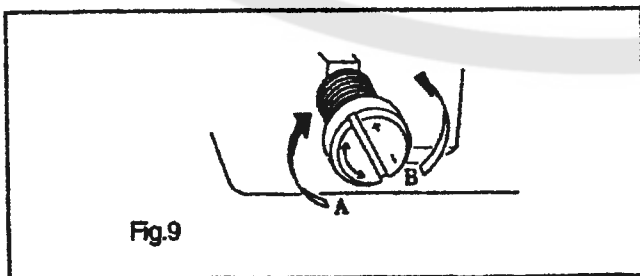


Fig.9

- 1) Turning the oil amount adjustment screw mounted on the hook driving shaft front bushing in the "+" direction (in direction A) will increase the amount of oil (oil splashes) in the hook, or in the "-" direction (in direction B) will decrease it.
- 2) After the amount of oil in the hook has been properly adjusted with the oil amount adjustment screw, make the sewing machine run idle for approximately 30 seconds to check the amount of oil (oil splashes) in the hook.



#### 4. ATTACHING THE NEEDLE (Fig.10)

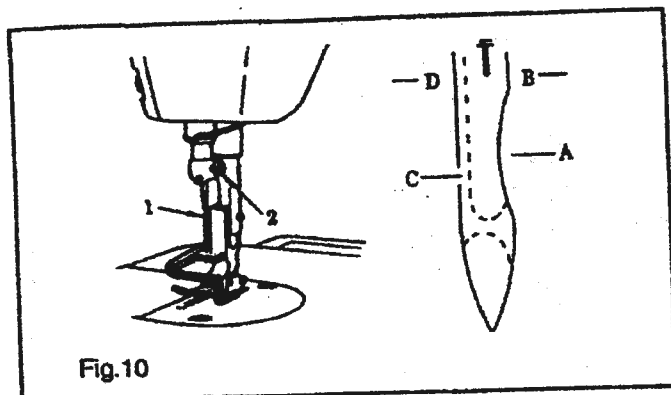


Fig.10



#### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start to the sewing machine.

Follow the procedure described below to attach the needle, after confirming that the motor has come to a complete stop.

A needle of DP x 5 should be used. Select a proper needle size according to the count of thread and the type of material used.

- 1) Turn the handwheel until the needle bar reaches the highest point of its stroke.
- 2) Loosen screw ②, and hold needle ① with its indented part A facing exactly to the right in direction B.
- 3) Insert the needle fully into the hole in the needle bar in the direction of the arrow until the end of hole is reached.
- 4) Securely tighten screw ②.
- 5) Check that long groove C of the needle is facing exactly to the left in direction D.

#### 5. SETTING THE BOBBIN INTO THE BOBBIN CASE (Fig.11)

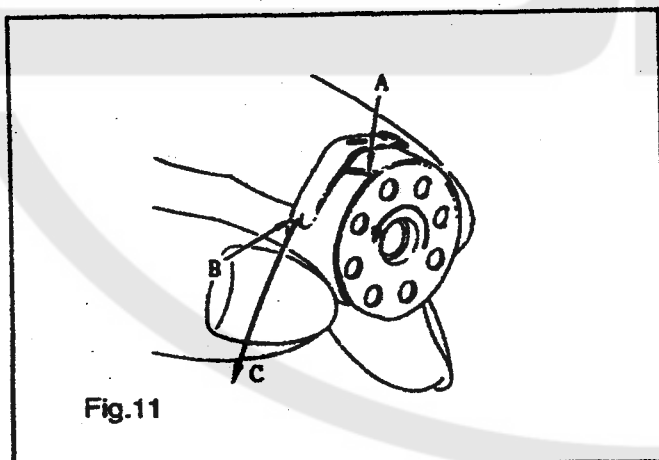


Fig.11

- 1) Install the bobbin in the bobbin case so that the thread wound direction is counterclockwise.
- 2) Pass the thread through thread slit A, and pull the thread in direction B. By so doing, the thread will pass under the tension spring and come out from notch B.
- 3) Check that the bobbin rotates in the direction of the arrow when thread C is pulled.

## 6. THREADING THE MACHINE HEAD (Fig.12)

The needle bar should be the highest, Then draw a thread end from the thread holder and thread it as follows:

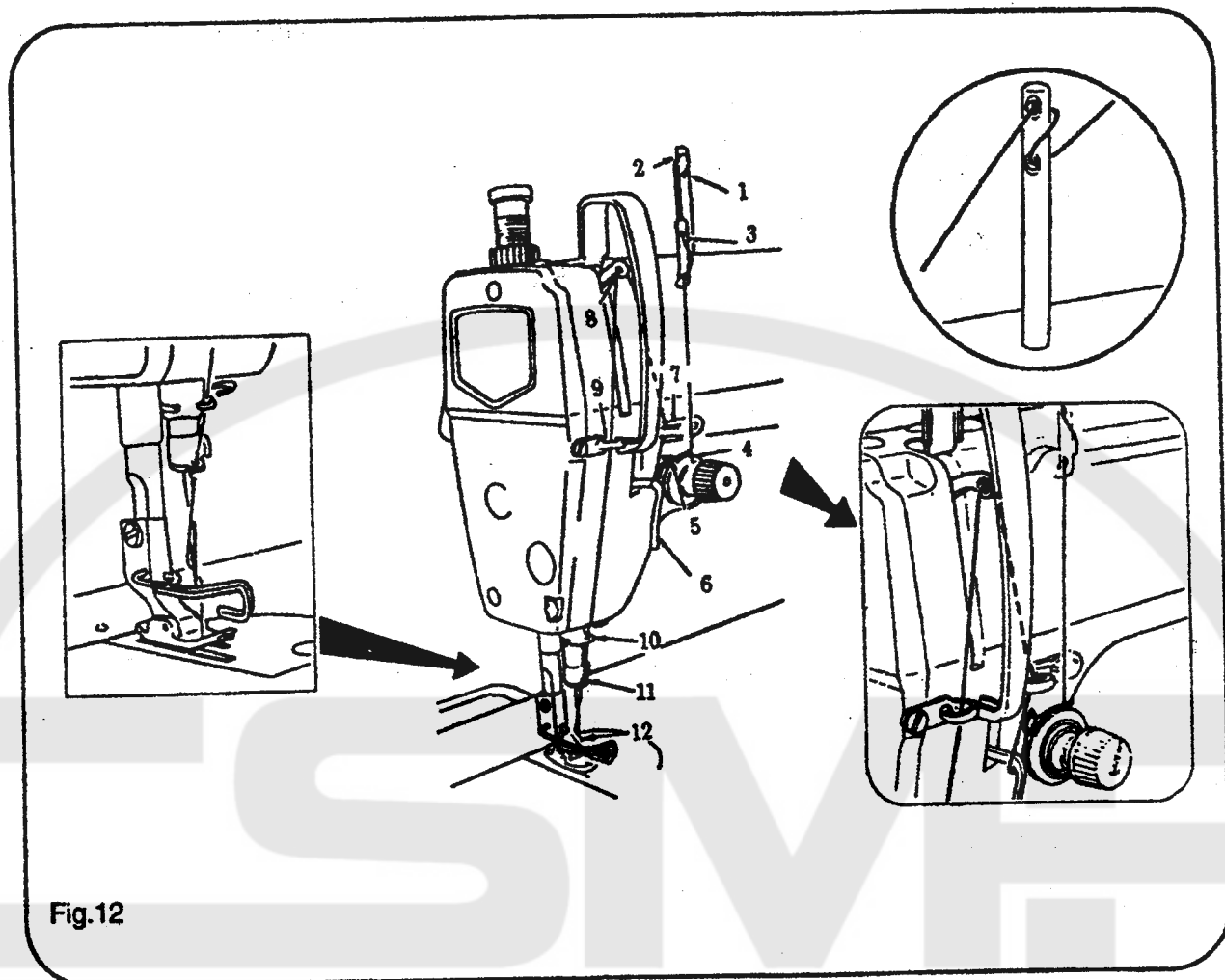


Fig.12

## 7. ADJUSTING THE STITCH LENGTH (Fig.13)

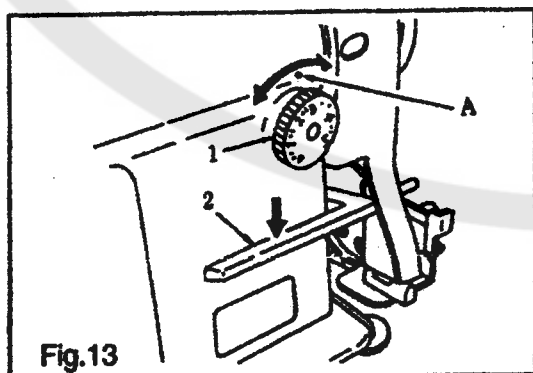


Fig.13

- 1) Turn stitch length dial ① in the direction of the arrow, and align the desired number to marker dot A on the machine arm.
- 2) The dial calibration is in millimeters.
- 3) When you want to decrease the stitch length, turn stitch length dial ① while pressing feed lever ② in the direction of the arrow.

## 8. THREAD TENSION (Fig. 14)

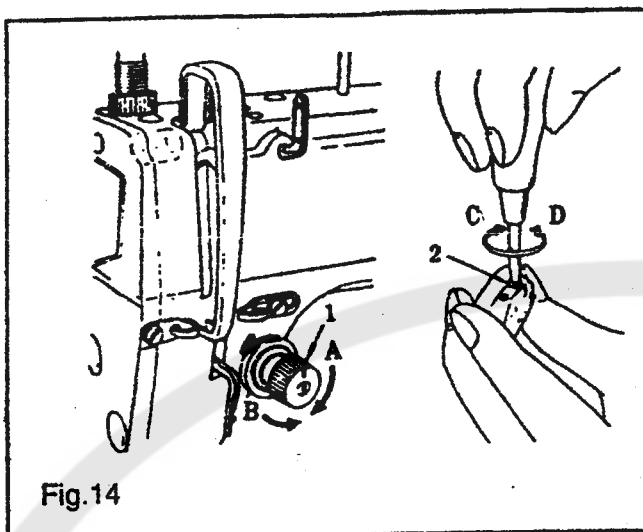


Fig.14

### 1. Adjusting the needle thread tension

- 1) Adjust the needle thread tension using tension adjust nut ① according to the sewing specifications.
- 2) As you turn nut ① clockwise (in direction A), the needle thread tension will increase.
- 3) As you turn nut ① counterclockwise (in direction B), the tension will decrease.

### 2. Adjusting the bobbin thread tension

- 1) As you turn tension adjust screw ② clockwise (in direction C), the bobbin thread tension will increase,
- 2) As you turn screw ② counterclockwise (in direction D), the bobbin thread tension will decrease.

## 9. THREAD TAKE-UP SPRING (Fig.15)

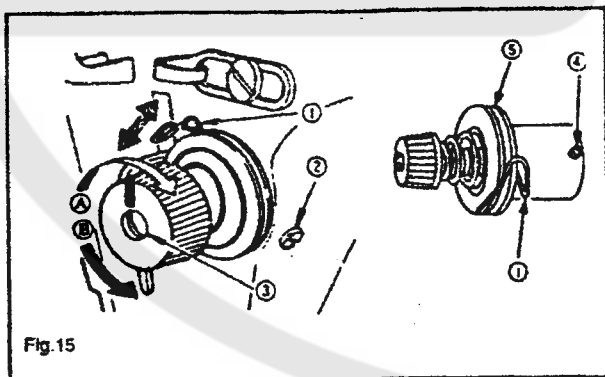


Fig.15

1. The width of take-up spring is 8-10mm. If the sewing material is thin material (short needle width), pls lighten the take-up spring tension and wide the sway of it. Otherwise, pls do to opposition.

### 2. Changing the stroke of thread take-up spring

①.

- 1) Loosen setscrew ②.
- 2) As you turn tension post ③ clockwise (in direction A), the stroke of the thread take-up

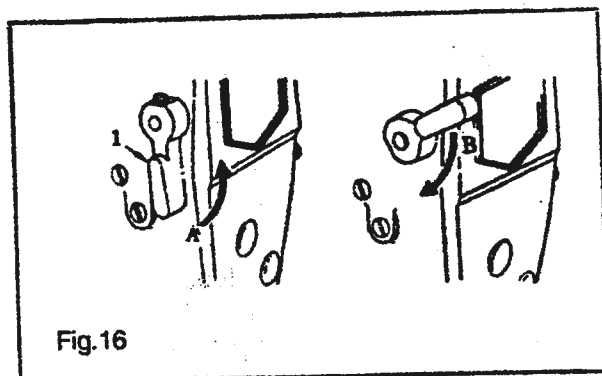
spring will be increased.

- 3) As you turn the knob counterclockwise (in direction B), the stroke will be decreased.

### 3. Changing the pressure of thread take-up spring ①.

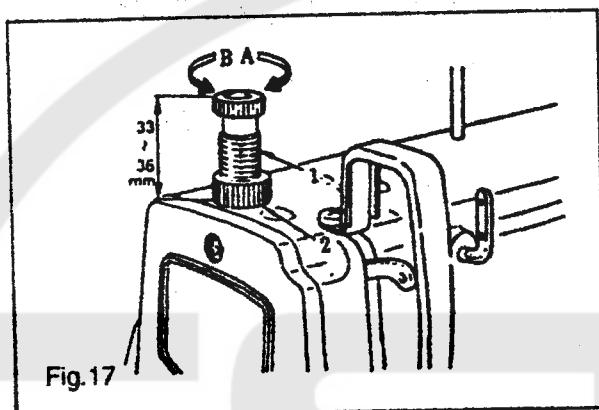
- 1) Loosen setscrew ②, and remove thread tension ①.
- 2) Loosen setscrew ④.
- 3) As you turn tension post ③ clockwise (in direction A), the pressure will be increased.
- 4) As you turn the post counterclockwise (in direction B), the pressure will be decreased.
4. Usually, upon the machine coming out, all the take-up spring has been adjusted well. Only while sew special material or special thread, it need to be adjusted again.

## 10. HAND LIFTER (Fig.16)



- 1) To stop the machine with its presser foot up, turn hand lifter lever ① in direction A.
- 2) The presser foot will go up about 5.5mm and stop.  
The presser foot will go back to its original position when hand lifter lever is turned down in direction B.
- 3) Using the knee lifter, you can get the standard presser foot lift of about 10mm and a maximum lift of about 13mm.

## 11. PRESSER FOOT PRESSURE (Fig.17)



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

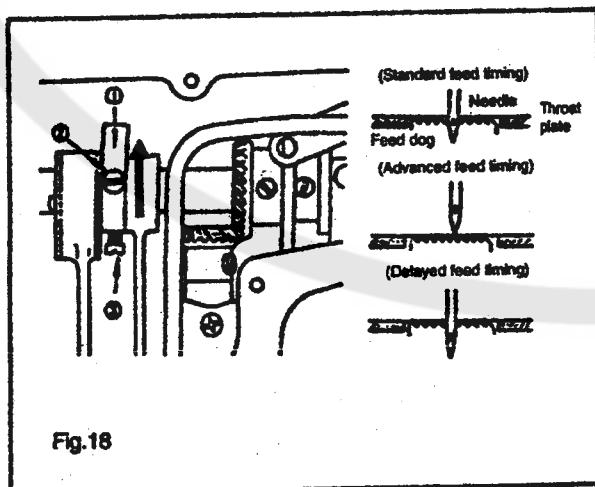
- 1) Loosen nut ②. As you turn presser spring regulator ① clockwise (in direction A), the presser foot pressure will be increased.
- 2) As you turn the presser spring regulator counterclock-wise (in direction B), the pressure will be decreased.
- 3) After adjustment, tighten nut ②.
- 4) For general fabrics, the standard height of the presser spring regulator is 33 to 36mm (5 kg).



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start to the sewing machine.

## 12. ADJUSTING THE FEED TIMING (Fig.18)



- 1) Loosen screws ② and ③ in feed eccentric cam ①. move the feed eccentric cam in the direction of the arrow or opposite direction of the arrow, and firmly tighten the screws.
- 2) For the standard adjustment, adjust so that the top surface of feed dog and the top end of needle eyelet are flush with the top surface of throat plate when the feed dog descends below the throat plate.
- 3) To advance the feed timing in order to prevent uneven material feed, move the feed eccentric cam in the direction of the arrow.
- 4) To delay the feed timing in order to increase stitch tightness, move the feed eccentric cam in the opposite direction from the arrow.
- 5) if feed eccentric cam adjust too much, it will cause the broken of needle.

### 13. HEIGHT OF THE FEED DOG(Fig.19)

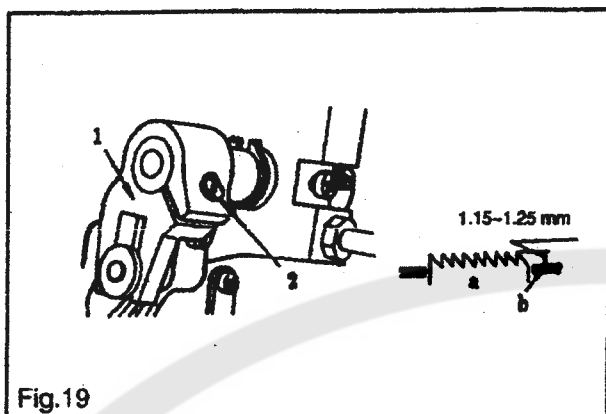


Fig.19



**CAUTION:**  
Be careful not to move the feed eccentric cam too far, or else needle breakage may result.



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

1) The feed dog is factory-adjusted so that it just out from the throat plate surface 1.15mm to 1.25 mm.

2) To adjust the height of the feed dog:

- ① Loosen screw ② of crank ① .
- ② Move the feed bar up or down to make adjustment.
- ③ Securely tighten screw ② .

(Caution) If the clamping pressure is insufficient, the forked portion will wear out.

a, Feed dog b. Throat plate

3). The feed dog must be 0.8-0.9mm higher than needle plate, while sew thin material, the suitable height is 0.7-0.8mm.

### 14.NEEDLE-TO-HOOK RELATIONSHIP (Fig.20)

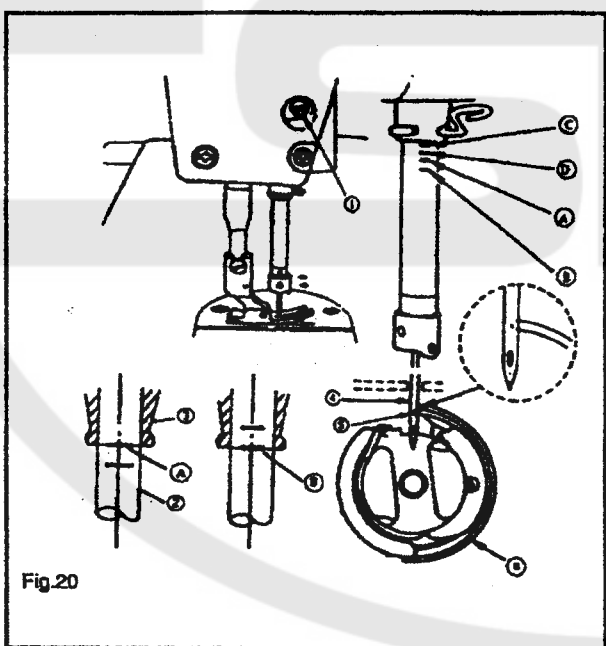


Fig.20



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

1. Adjust the timing between the needle and the hook as follows.

1) Turn the handwheel to bring the needle bar down to the lowest point of its stroke, and loosen setscrew ① .

(Adjusting the needle bar height)

2) locate the needle height

a. while using DB needle, align marker line A with

the bottom end of needle bar lower bushing 3, then tighten set screw 1.

b. While using DA needle, align mark line C with the bottom end of needle bar lower bushing 3, then tighten set screw 1.

3) locate the hook position.

a. while using DB needle, loosen the two hook set screw, turn the hand wheel, and align marker line B on ascending needle bar 2 with the bottom end of needle bar lower bushing 3.

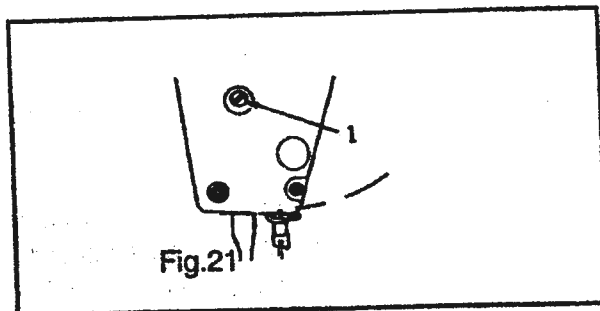
b. While using DA needle, loosen the two hook set screw, turn the hand wheel, and align marker line D on ascending needle bar 2 with the bottom end of needle bar lower bushing 3.

4) After making the adjustments mentioned in the above steps, align hook blade point ⑤ with the center of needle ④ . Provide a clearance of 0.06mm to 0.15mm (reference value) between the needle and the hook, then securely tighten setscrews in the hook.

(Caution) 1. If the clearance between the blade point of hook and the needle is smaller than the specified value, the blade point of hook will be damaged. If the clearance is larger, stitch skip-ping will result.

2. Use a hook of the same part No. when replacing your hook with a new one.

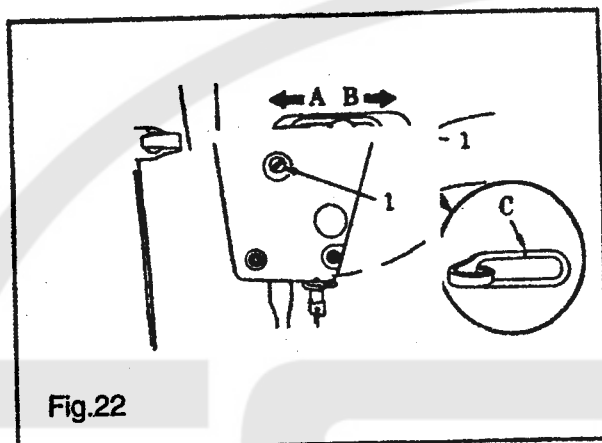
## 15. ADJUSTING THE HEIGHT OF THE PRESSER FOOT (Fig.21)



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

- 1) Loosen setscrew ① and adjust the presser foot height and the angle of the presser foot.
- 2) After adjustment, securely tighten the setscrew ①

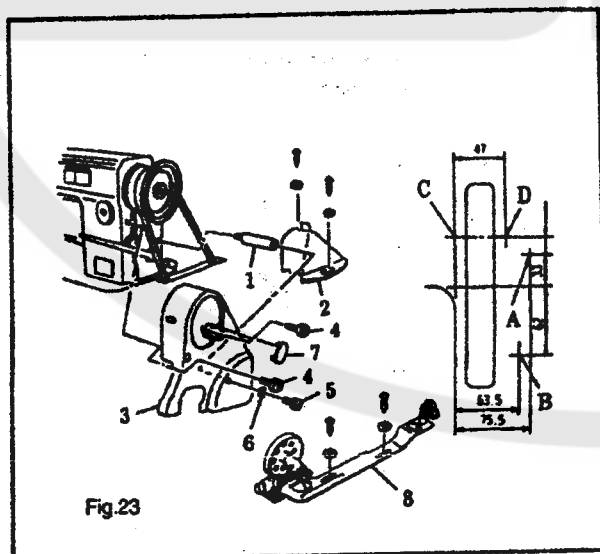
## 16. ADJUSTING THE THREAD TAKE-UP STROKE (Fig.22)



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

- 1) When sewing heavy-weight materials, move thread guide ① to the left in direction A to increase the length of thread pulled out by the thread take-up.
- 2) When sewing light-weight materials, move thread guide ① to the right in direction B to decrease the length of thread pulled out by the thread take-up.
- 3) Normally, thread guide ① is positioned in a way that marker line C is aligned with the center of the screw.

## 17. INSTALLING THE BELT COVER AND THE BOBBIN WINDER (Fig.23,24,25)



### 1. Installation procedure

- 1) Drill four guiding holes A, B, C and D for wooden screws in the table.
- 2) Install belt cover support ① in the tapped hole in arm.
- 3) Pass the handwheel through the hole in belt cover A ③, then set the handwheel on the arm. At this time, you can smoothly install the handwheel diagonally from the rear of the handwheel by tilting belt cover A ③ as illustrated in the figure.
- 4) Place belt cover B ② on guiding holes C and D.
- 5) Fix belt cover A ③ on the arm using screws ④, ⑤ and washer ⑥. At this time, tighten screw ④ with a tightening torque of

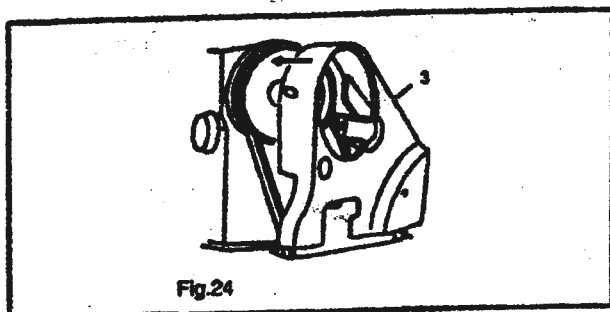


Fig.24

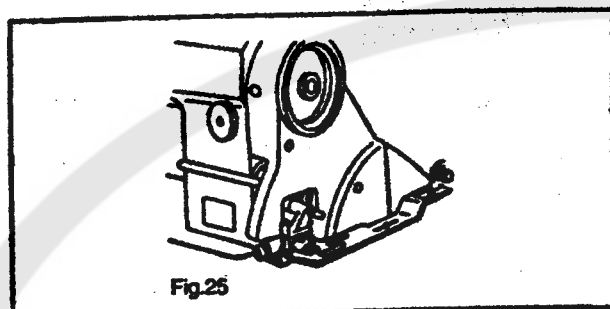


Fig.25

of 30 kgf/cm and screw ⑤ with a tightening torque of 25 kgf/cm. If you tighten further these screws, the securing state of the belt cover will not change.

6) Fit cat ⑦ to the belt cover A.

7) Move belt cover B ② backward E until the rubber section of belt cover B ② comes in contact with belt cover A ③. Then, further move the belt cover B in the same direction by 0.5 to 1 mm. Now, fix the belt cover B in position using wooden screw and washer.

8) Fix bobbin winder ⑧ in guiding holes A and B using wooden screws and washers.

**Warnings:** 1) For safety's needs, belt cover should be installed.

2) The left and right parts of the bobbin winder should be parallel to the plate belt holes.

## 18. ADJUSTING THE HEIGHT OF THE KNEE LIFTER (Fig.26,27)

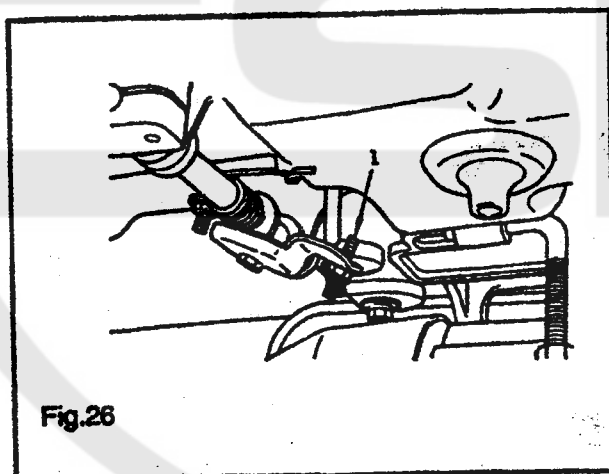


Fig.26



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

1) The standard height of the presser foot lifted using the knee lifter is 10mm.

2) You can adjust the presser foot lift up to 13mm using knee lifter adjust screw ①.

3) When you have adjusted the presser foot lift to over 10mm, be sure that the bottom end of needle bar ② in its lowest position does not hit presser foot ③.

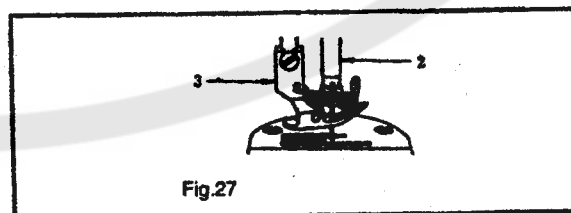


Fig.27

## 19, SPECIFICATIONS

Mode		303D
Material		Light material Medium and heavy
The max. of speed		5500RPM
The max. of needle distance		5mm
The max height of presser foot lift	Hand lift	6mm
	Knee lift	13mm
Needle		DPX5
Lubrication oil		White oil no.10
The power of motor		380V/370W

1. while sew light material, the machine need to change the presser foot, needle bar and material feed and do some adjustment.
2. the presser foot with the "R" add to the number is presser roller.

To order or for further information, please contact:

Please do not hesitate to contact our distributors or agents in your area for further information when necessary.

\*The description covered in this instruction manual is subject to change for improvement of the commodity without notice.



**GLOBAL**

**303 D**

**HIGH-SPEED LOCKSTITCH SEWING MACHINE**

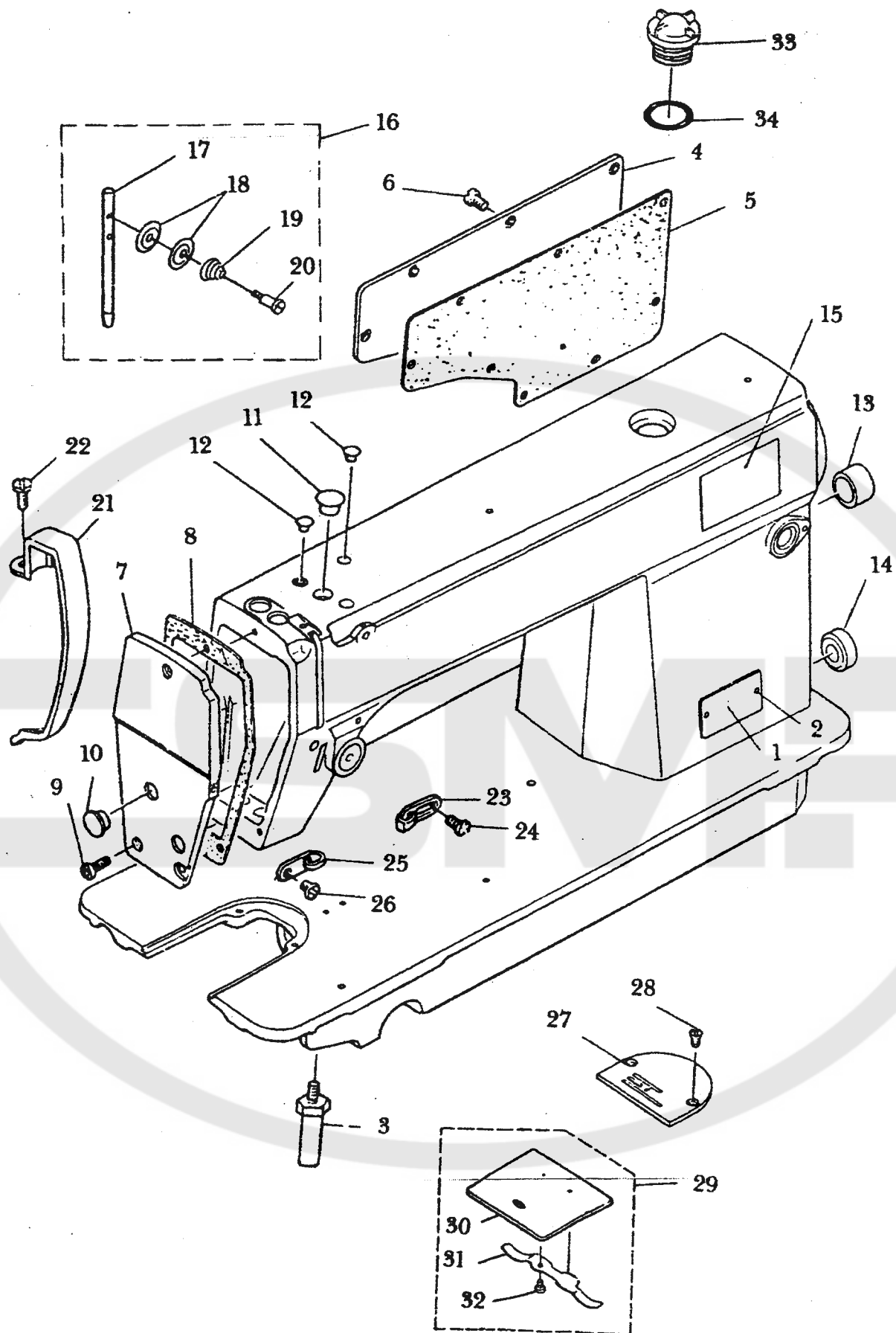
**CSMP**

**PARTS BOOK**

## MACHINE HEAD COMPONENTS

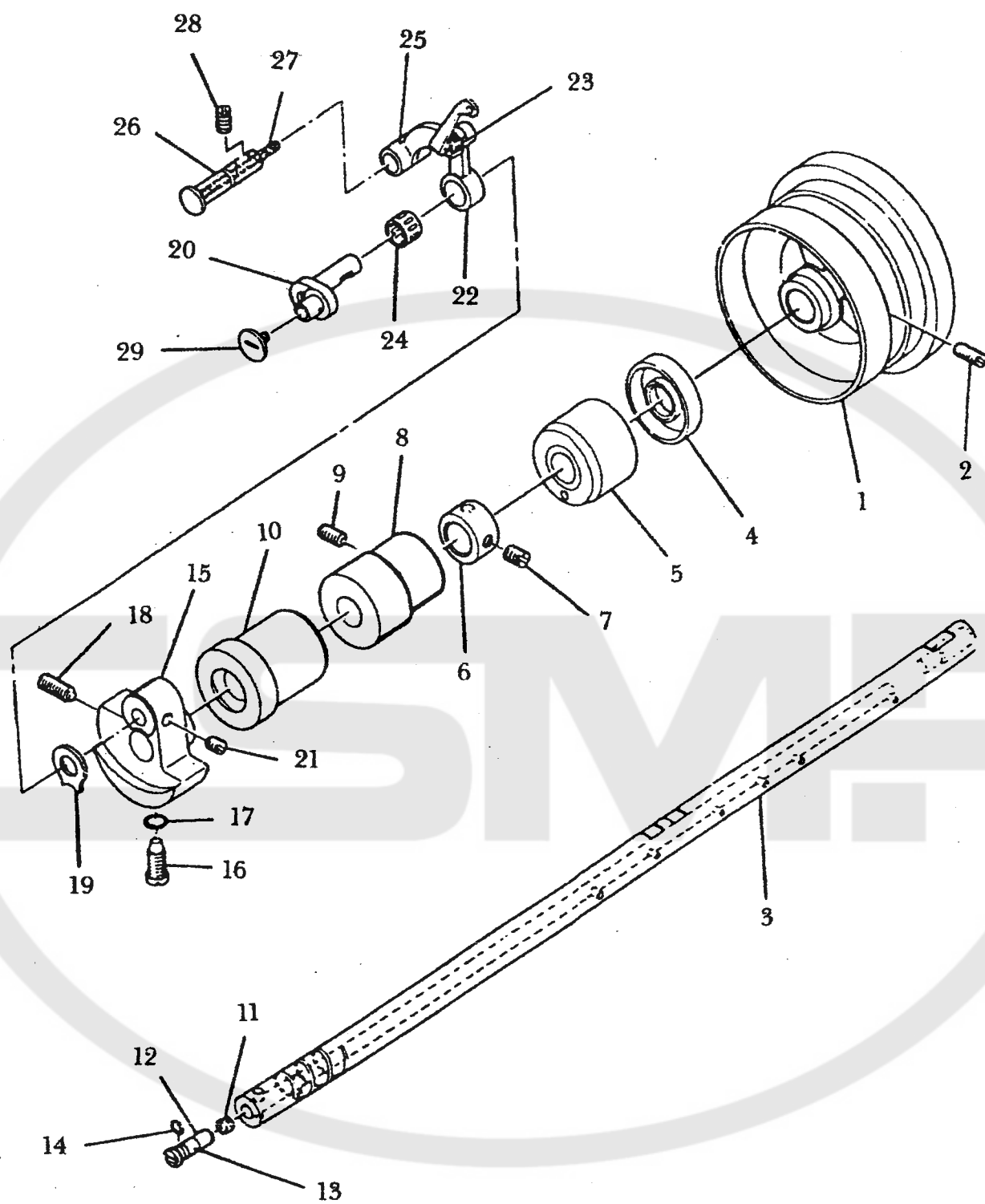
### I . Components of Housing

Seri No.	Code No.	Description	Qty
1	GQ195-8	Model plate	1
2	GX196-8	Model plate pole	2
3	GS299-8	Baseboard pole	4
4	GR578-8	Back window plate	1
5	GR579-8	Back window bed	1
6	GS300-8	Back window plate screw $12/64 \times 28L=9$	8
7	GR581-8	Face plate	1
8	GR582-8	Face plate bed	1
9	GS300-8	Face pate screw	3
10	GR583-8	Face plate-adjusting screw stopple	2
11	GR584-8	Needle staff crank screw stopple	1
12	GR585-8	Screw stopple of thread stitch bar pin	2
13	GR586-8	Stopples for feeding-adjusting device	1
14	GR587-8	Bottom shaft blind stopple	1
15	GQ196-8	Safety-indicating plate	1
16	GR610/5-8	Thread-running components	1
17	GR611-8	Thread-running pole	(1)
18	GR612-8	Thread-running & holding plate	(2)
19	GW186-8	Thread-running & holding spring	(1)
20	GS317-8	Thread-running & holding screw	(1)
21	GK153-8	Cover of thread stitch bar	1
22	GS310-8	Cover screw of thread stitch bar $3/16 \times 28L=6$	1
23	GR603-8	Right thread hook	1
24	GS313-8	Right thread hook screw $11/64 \times 40L=6$	1
25	GM604-8	Left thread hook	1
26	GS313-8	Left thread hook screw $11/64 \times 40L=6$	1
27	GM166-8	Needle plate	1
28	GS338-8	Needle plate screw $11/64 \times 40L=8.5$	2
29	GM167/4-8	Push plate components	1
30	GM168-8	Push plate	(1)
31	GW190-8	Push plate spring	(1)
32	GS339-8	Push plate spring screw $3/32 \times 56L=1.9$	(2)
33	GR672-8	Oil window	1
34	GR673-8	"O" oil window	1



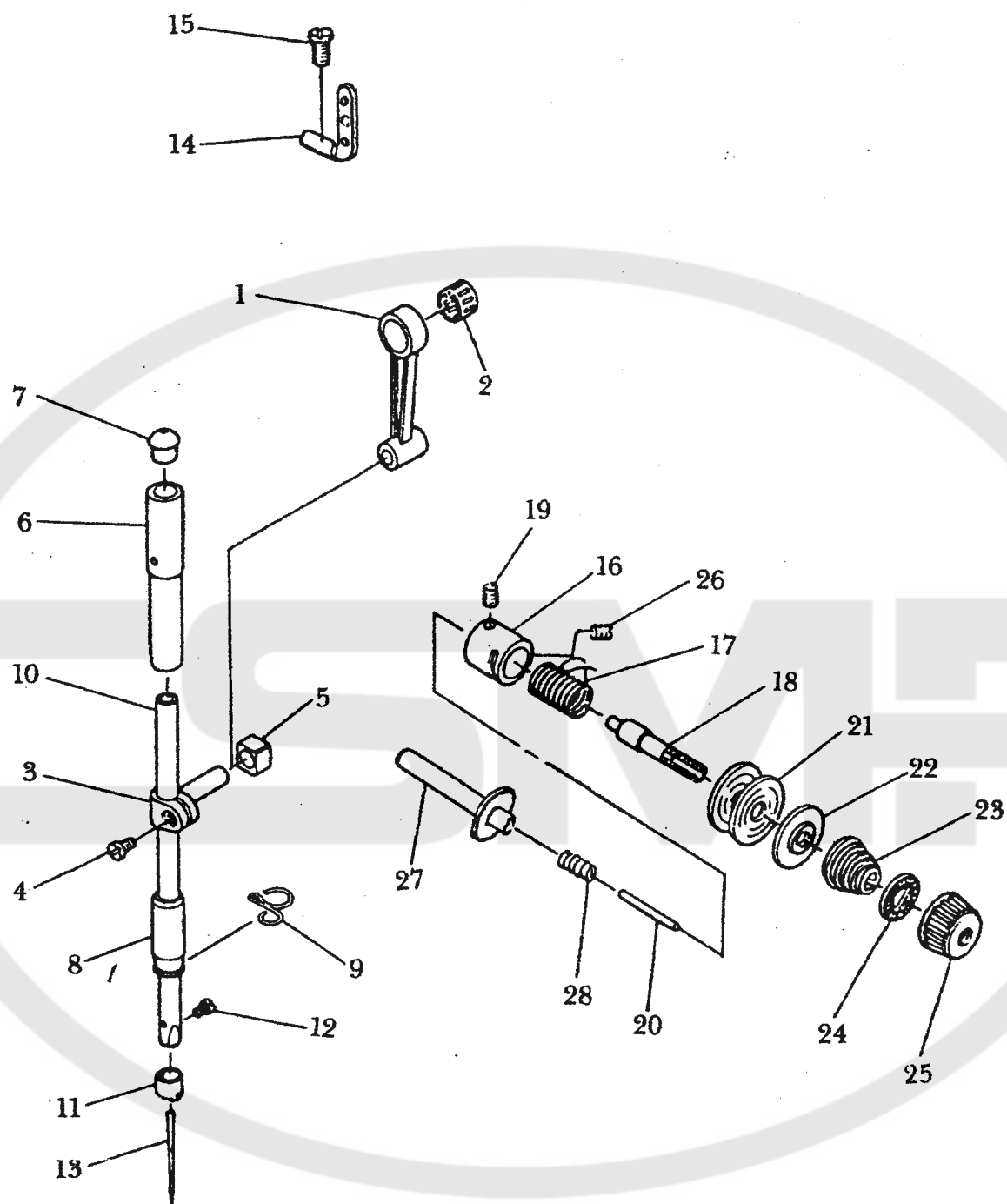
## II . COMPONENTS FOR UPPER SHAFT AND THREAD STITCH

Seri No.	Code No.	Description	Qty
1.	GP147-8	Upper wheel	1
2.	GS304-8	Upper wheel screw	2
3.	GZ229-8	Upper shaft	1
4.	GR588-8	Upper shaft oil seal	1
5.	GO256-8	Back sleeve of upper wheel	1
6.	GR589-8	Shield ring of upper sleeve	1
7.	GS305-8	Shield ring screw of upper sleeve $1/4 \times 40L=6$	2
8.	GO258-8	Mid-sleeve for upper shaft	1
9.	GS306-8	Mid-sleeve screw for upper shaft	1
10.	GO259-8	Front sleeve for upper sleeve	1
11.	GR590-8	Crank oil-control felt	1
12.	GX198-8	Crank oil-adjusting pin	1
13.	GO261-8	Crank oil-adjusting pin sleeve	1
14.	GR591-8	"O" ring of crank oil-adjusting pin	1
15.	GH207-8	Needle bar crank	1
16.	GS306-8	Setting screw for needle bar crank $1/4 \times 40L=6$	1
17.	GR592-8	"O" ring of setting screw	1
18.	GS307-8	Fastening screw of needle bar crank $9/32 \times 28L=16$	1
19.	GR593-8	Protective plate of needle bar crank	1
20.	GH208/2-8	Components of thread stitch crank	1
21.	GS305-8	Setting screw of thread stitch $1/4 \times 40L=6$	2
22.	GH210/4-8	Partial components of thread stitch	1
23.	GR595-8	Oil-resistant cover of thread stitch	1
24.	GO265-8	Needle bearing of thread sticth	1
25.	GH212-8	Thread stitch bar	1
26.	GX199-8	Pin of thread stitch bar	1
27.	GR597-8	Oil thread of thread stitch bar pin	1
28.	GS308-8	Pin screw of thread stitch bar $15/64 \times 28L=10.5$	1
29.	GS309-8	Left screw of thread stitch bar $9/64 \times 40L=4.8$	1



### III. COMPONENTS FOR NEEDLE BAR AND THREAD-HOLDING

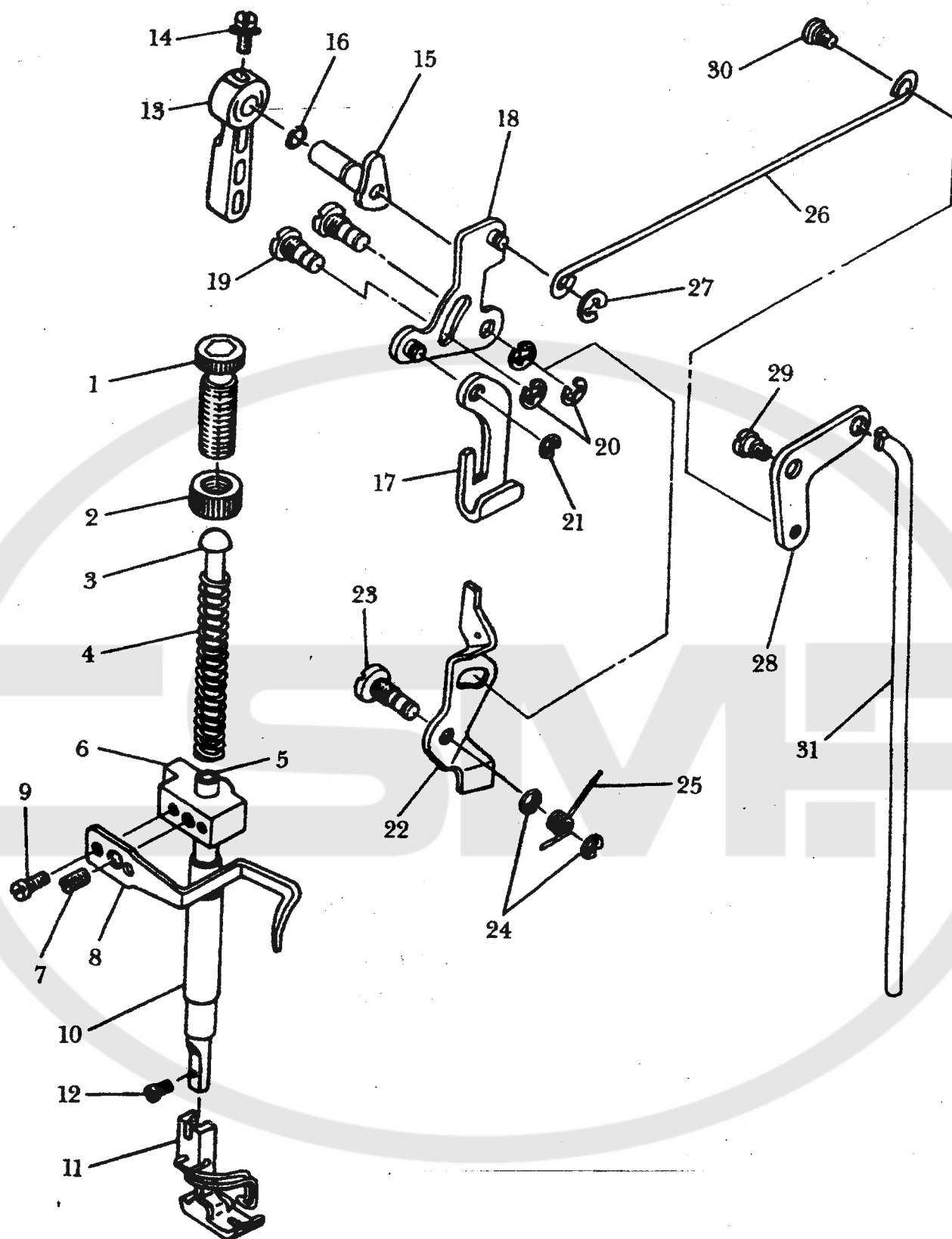
Seri No.	Code No.	Description	Qty
1.	GH213-8	Needle bar link	1
2.	GO265-8	Needle bearing of needle bar link	1
3.	GP598-8	Needle bar connecting-rod	1
4.	GS311-8	Connecting-rod screw of needle bar $9/64 \times 40L=6$	1
5.	GU152-8	Slipper of needle bar connecting-rod	1
6.	GO266-8	Upper sleeve of needle bar	1
7.	GR599-8	Upper sleeve of stopple of needle bar	1
8.	GO267-8	Bottom sleeve of needle bar	1
9.	GR600-8	Bottom sleeve thread hook of needle bar	1
10.	GZ230-8	Needle bar	1
11.	GR601-8	Thread hook of needle bar	1
12.	GS312-8	By-needle screw $1/8 \times 44L=4.5$	1
13.	GV132-8	Needle ( DB $\times$ 1#14 )	1
14.	GR602-8	Three-eye thread hook	1
15.	GS310-8	Screw of three-eye thread hook $3/16 \times 28L=6$	1
16.	GR606-8	Adjusting seat of thread stitch spring	1
17.	GW183-8	Thread stitch spring	1
18.	GS314-8	Thread-holding screw	1
19.	GS315-8	Fastening screw of thread-holding screw $9/64 \times 40L=5.5$	1
20.	GX200-8	Thread releasing nail	1
21.	GR607-8	Thread-holding plate	2
22.	GR608-8	Thread releasing plate	1
23.	GW184-8	Thread-holding spring	1
24.	GR609-8	Detent plate of thread-holding	1
25.	GL167-8	Thread-holding nut	1
26.	GS316-8	Screw of thread-holding device $15/64 \times 28L=7$	1
27.	GX201-8	Auxiliary nail of thread releasing	1
28.	GW185-8	Auxiliary nail spring of thread releasing	1



#### IV. COMPONENTS FOR PRESSOR

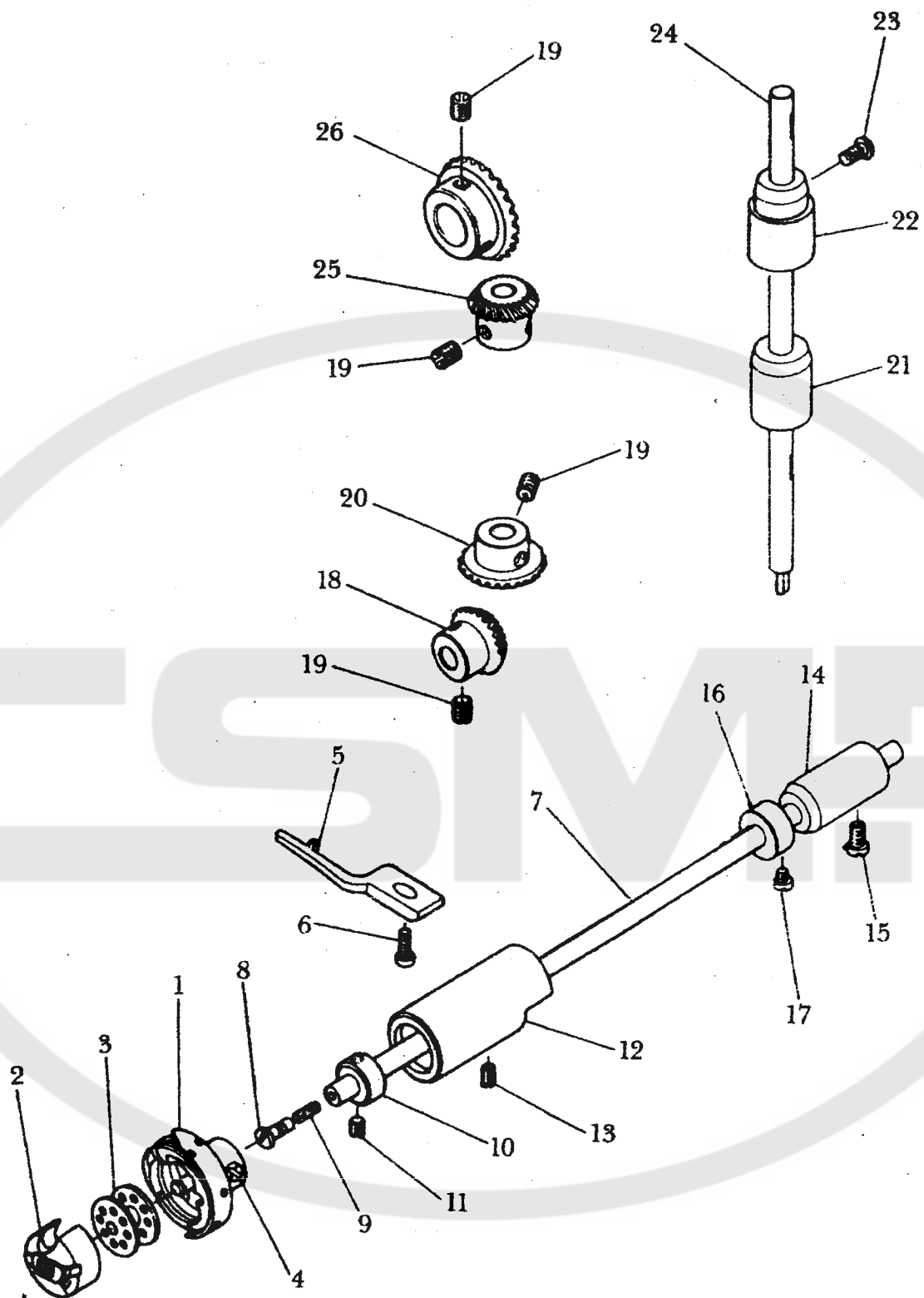
Seri No.	Code No.	Description	Qty
1.	GS318-8	Pressure-adjusting screw	1
2.	GL168-8	Pressure-adjusting nut	1
3.	GR613-8	Pressure-adjusting bar	1
4.	GW187-8	Pressure-adjusting spring	1
5.	GZ231-8	Pressing staff	1
6.	GR614-8	Plate of pressing staff	1
7.	GS319-8	Plate screw of pressing staff $1/4 \times 40L=8$	1
8.	GR615-8	Slow thread-adjusting hook	1
9.	GS320-8	Screw of slow thread-adjusting hook $9/64 \times 40L=8.5$	2
10.	GO268-8	Pressing staff sleeve	1
11.	GM164/5-8	Flexible presser foot components	1
12.	GS321-8	Flexible pressor foot screw $9/64 \times 40L=10.5$	1
13.	GR619-8	Spanner of presser foot	1
14.	GS322-8	Spanner foot of pressor foot	1
15.	GR620/2-8	Components of cam pressor foot spanner	1
16.	GR621-8	"O" ring of pressor foot spanner	1
17.	GR622-8	Up and down plate of pressor foot	1
18.	GR623/3-8	Front bar components of lifting pressor foot	1
19.	GS323-8	Screw pin of front bar	2
20.	GR625-8	Open shield ring of screw pin	3
21.	GR626-8	Special open shield ring of up and down plate connecting	1
22.	GR627-8	Top plate of thread releasing	1
23.	GR324-8	Screw pin of thread releasing top plate	1
24.	GR625-8	Open shield ring of screw pin	2
25.	GW189-8	Reset spring of thread releasing top plate	1
26.	GR628-8	Lifting pressor foot bar	1
27.	GR625-8	Open shield ring of pulling bar	1
28.	GR629-8	Back bar of lifting pressor foot	1
29.	GS325-8	Shaft screw of back bar	1
30.	GS326-8	Pulling bar screw of lifting pressor foot	1
31.	GR630-8	Top bar of lifting pressor foot	1





## V. COMPONENTS FOR HOOKING THREAD

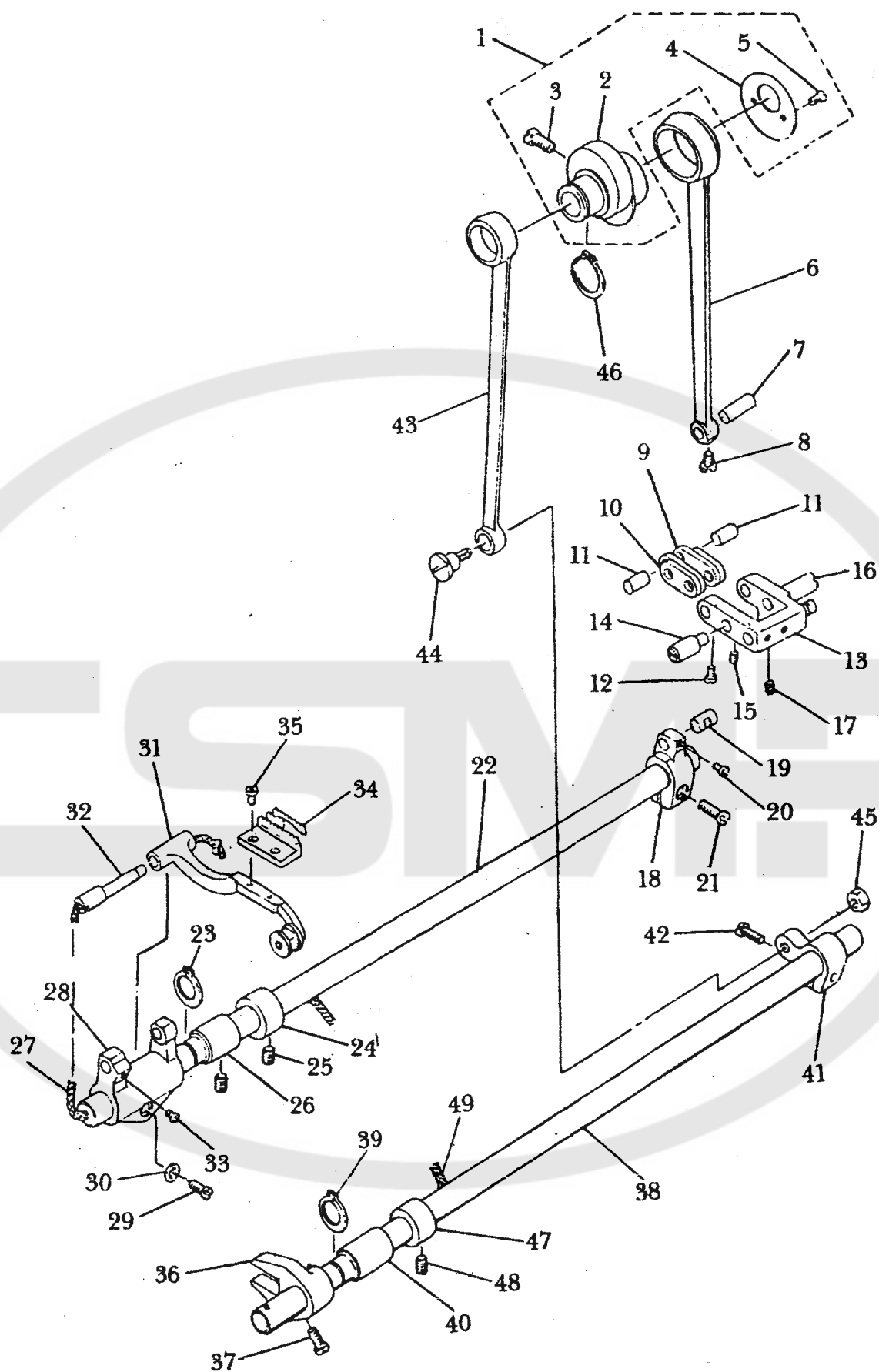
Qty	Seri No.	Code No.	Description	Qty
	1.	GN137-8	Spinning shuttle	1
	2.	GN138-8	Shuttle	1
	3.	GN139-8	Shuttle heart	1
	4.	GS327-8	Fastening screw of spinning shuttle	2
	5.	GR631-8	Setting hook of spinning shuttle	1
	6.	GS328-8	Setting hook screw of spinning shuttle $11/64 \times 40L=9.5$	1
	7.	GZ233-8	Bottom shaft	1
	8.	GS329-8	Oil-control screw of bottom shaft	1
	9.	GR633-8	Oil-control core of bottom shaft	1
	10.	GR634-8	Oil-blocking ring of bottom shaft	1
	11.	GS330-8	Oil-blocking ring screw of bottom shaft $11/64 \times 40L=3.5$	2
	12.	GO269-8	Front sleeve of bottom shaft	1
	13.	GS301-8	Front sleeve screw of bottom shaft	1
	14.	GO270-8	Back sleeve of bottom shaft $3/6 \times 28L=9$	1
	15.	GS402-8	Back sleeve screw of bottom shaft	1
	16.	GR636-8	Shield ring of bottom shaft	1
	17.	GS331-8	Shield ring screw of bottom shaft $11/64 \times 40L=4.8$	2
	18.	GC154-8	Bevel gear of bottom shaft ( small )	1
	19.	GS319-8	Bevel gear screw of bottom shaft ( big ) $1/4 \times 40L=8$	8
	20.	GC155-8	Bottom bevel gear of vertical shaft	1
	21.	GO271-8	Bottom sleeve of vertical shaft	1
	22.	GO272-8	Upper sleeve of vertical shaft	1
	23.	GS403-8	Upper sleeve screw of vertical shaft $3/16 \times 28L=9$	1
	24.	GZ234-8	Vertical shaft	1
	25.	GC156-8	Upper bevel gear of vertical shaft ( small )	1
	26.	GC157-8	Bevel gear of upper shaft ( big )	1



## VI. COMPONENTS FOR FEEDING

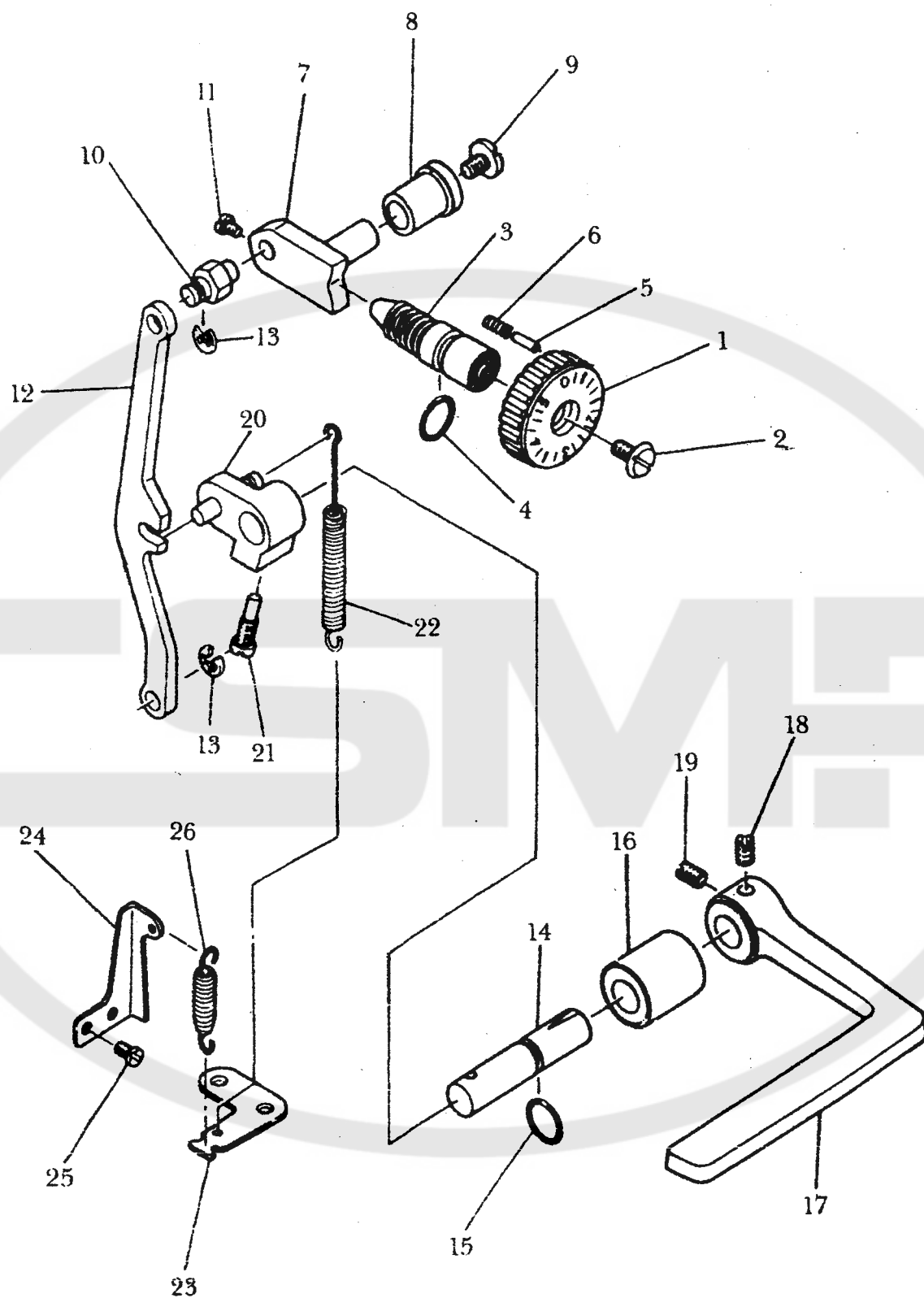
Seri No.	Code No.	Description	Qty
1.		Components of feeding eccentric wheel	1
2.	GT156-8	Feeding eccentric wheel	(1)
3.	GS332-8	Screw of feeding eccentric wheel $1/4 \times 40L=11$	(2)
4.	GR638-8	Cover plate of feeding eccentric wheel	(1)
5.	GS311-8	Cover plate screw of feeding eccentric wheel $9/64 \times 40L=6$	(2)
6.	GH214-8	Feeding bar	1
7.	GX204-8	Pin of feeding bar	1
8.	GS333-8	Screw of feeding bar pin $9/64 \times 40L=6$	1
9.	GR639-8	Long swaying plate of feeding	2
10.	GR640-8	Short swaying plate of feeding	2
11.	GX205-8	Connecting pin of short swaying plate	2
12.	GS333-8	Screw of connecting pin $9/64 \times 40L=6$	2
13.	GR641/2-8	Seat components of feed swaying plate	1
14.	GX207-8	Left pin of feed swaying plate	1
15.	GS316-8	Screw of the left pin $5/64 \times 28L=7$	1
16.	GX206-3	Right pin of feed swaying plate	1
17.	GS316-8	Right pin screw $15/64 \times 28L=7$	1
18.	GH215-8	Feeding crank	1
19.	GX208-8	Feeding crank pin	1
20.	GS333-8	Screw of crank pin $9/64 \times 40L=6$	1
21.	GS334-8	Feeding crank screw $3/16 \times 28L=14$	1
22.	GZ235-8	Feeding shaft	1
23.	GR643-8	Shaft shield ring of feeding shaft	1
24.	GR589-8	Shield ring of feeding shaft	1
25.	GS305-8	Shield ring screw of feeding shaft $1/4 \times 40L=6$	2
26.	GO273-8	Front sleeve of feeding shaft	1
27.	GR644-8	Oil thread of feeding shaft	1
28.	GR645-8	Retainer base	1
29.	GS335-8	Retainer base screw $3/16 \times 28L=14$	1
30.	GR646-8	Screw washer of retainer base	1
31.	GR647/4-8	Components of retainer	1
32.	GX210-8	Retainer pin	1
33.	GS336-8	Screw of retainer pin $11/64 \times 40L=7$	1
34.	GM165-8	Feed dog	1
35.	GS337-8	Feed dog screw $1/8 \times 44L=6$	1

Seri No .	Code No.	Description	Qty
36.	GH216-8	Dog-lifting fork crank	1
37.	GS340-8	Screw of dog-lifting fork crank $11/64 \times 10L=10.5$	1
38.	GZ236-8	Dog-lifting shaft	1
39.	GR634-8	Shaft shield ring of dog-lifting shaft	1
40.	GO273-8	Front sleeve of dog-lifting shaft	1
41.	GH217-8	Back crank of dog-lifting	1
42.	GS334-8	Screw of dog-lifting back crank $3/16 \times 28L=12$	1
43.	GH218-8	Dog-lifting bar	1
44.	GS341-8	Shaft screw of dog-lifting bar	1
45.	GL169-8	Shaft nut of dog-lifting bar $9/32 \times 28$	1
46.	GR650-8	Shaft shield ring of dog-lifting bar	1
47.	GR589-8	Shield ring of dog-lifting shaft	1
48.	GS305-8	Shielding ring screw of dog-lifting shaft $1/4 \times 40L=6$	2
49.	GR651-8	Shaft thread of dog-lifting shaft	1



## VII. COMPONENTS FOR FEEDING ADJUSTMENT

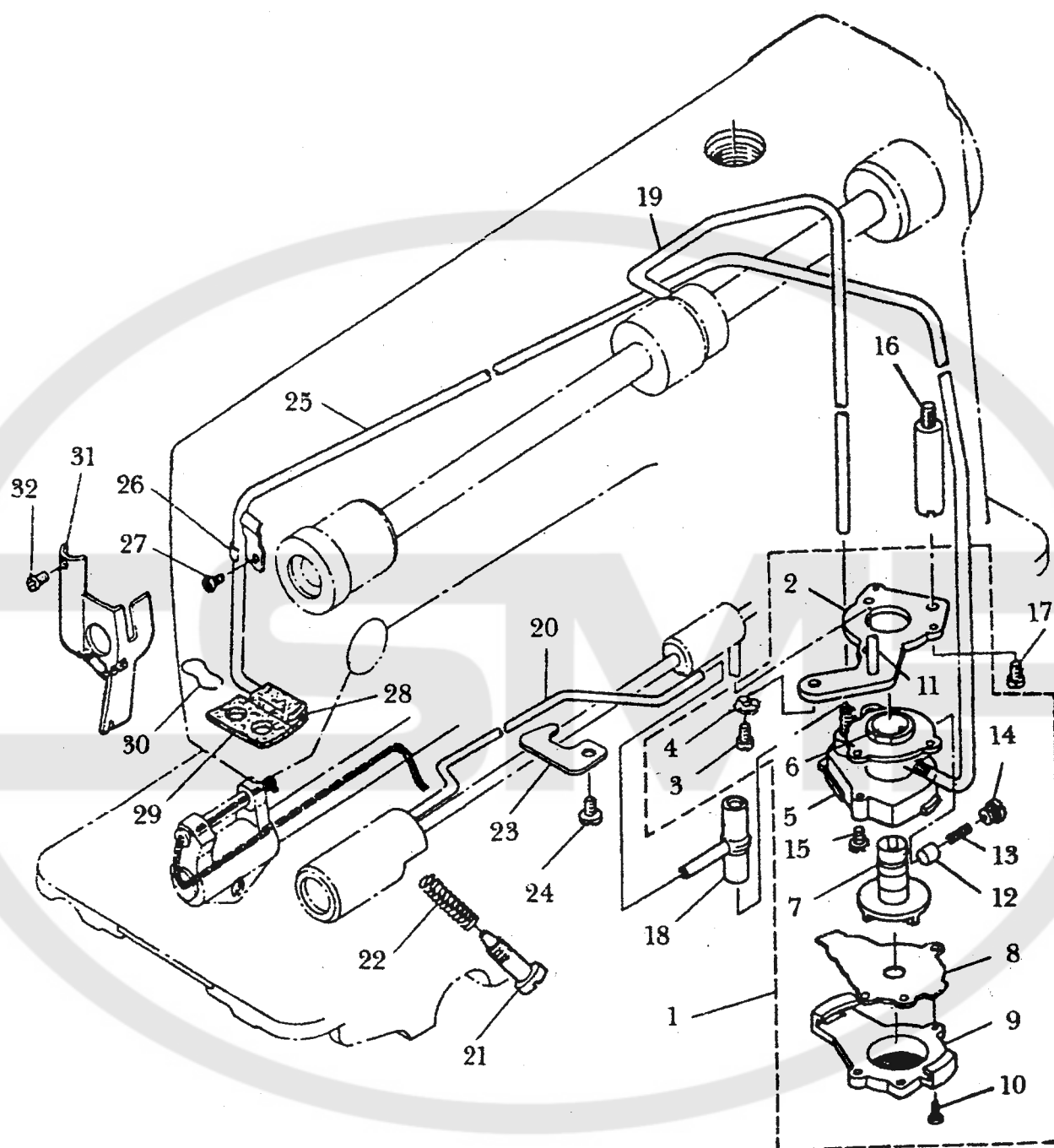
Seri No.	Code No.	Description	Qty
1.	GR652-8	Feeding distance knob	1
2.	GS342-8	Feeding distance knob screw	1
3.	GS343-8	Feeding-adjusting screw pole	1
4.	GR653-8	"O" ring of feed-adjusting pole	1
5.	GX211-8	Locking pin of feeding distance	1
6.	GW191-8	Locking spring of feeding distance	1
7.	GR654-8	Feed-adjusting device	1
8.	GO274-8	Feed-adjusting sleeve	1
9.	GS344-8	Shaft-tip screw of feed-adjusting device	1
10.	GX212-8	Bar pin of reverse feeding	1
11.	GX311-8	Bar pin screw	2
12.	GH342-8	Reverse feeding bar	1
13.	GR625-8	Shield ring of reverse feeding bar	2
14.	GZ237-8	Reverse feeding shaft	1
15.	GR655-8	"O" ring of reverse feeding shaft	1
16.	GO275-8	Reverse feeding shaft sleeve	1
17.	GR656-8	Reverse feeding spanner	1
18.	GS345-8	Setting screw of reverse feeding spanner $1/4 \times 40L=10$	1
19.	GS319-8	Reverse feeding spanner screw $1/4 \times 40L=8$	1
20.	GH343/2-8	Reverse feeding crank components	1
21.	GS346-8	Reverse feeding crank screw	1
22.	GW192-8	Reverse feeding pulling spring	1
23.	GR657-8	Fastening plate of pulling spring	1
24.	GR658-8	Bed-recovering plate of swaying plate	1
25.	GS347-8	Recovering plate screw $11/64 \times 40L=5$	2
26.	GW193-8	Recovering spring of swaying plate	1





# VIII. COMPONENTS FOR LUBE

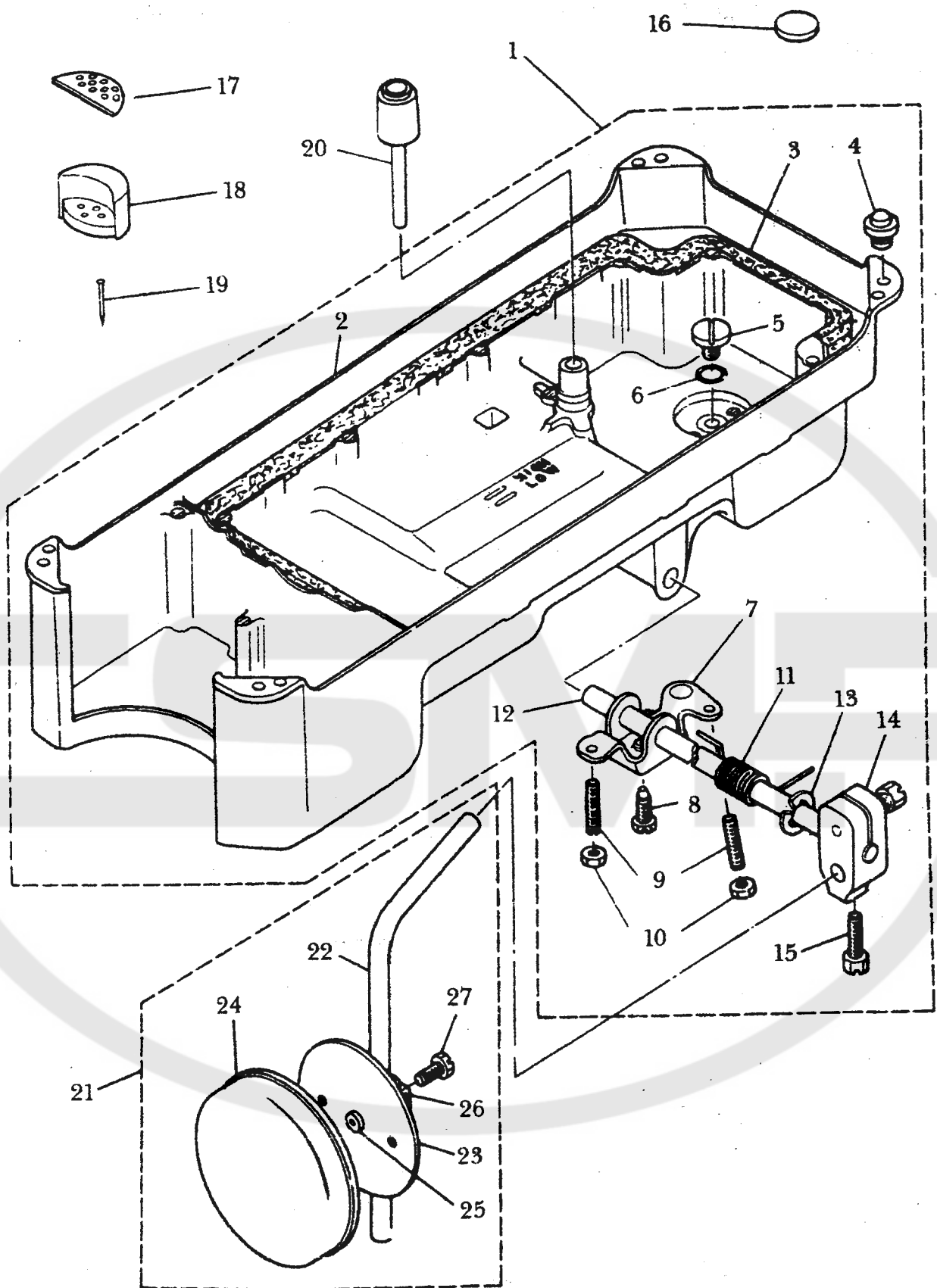
Seri No.	Code No.	Description	
1.	GR659/19-8	Components of oil pump	1
2.	GR660-8	Oil pump fixing plate	(1)
3.	GS348-8	Oil pump fixing screw	(3)
4.	GR661-8	Stop-retreating washer for oil pump fixing	(3)
5.	GR662-8	Oil pump body	(1)
6.	GO276-8	Sleeve of oil pump body	(1)
7.	GR663-8	Oil pump vane	(1)
8.	GR664-8	Vane plate of oil pump	(1)
9.	GR665-8	Oil pump cover	(1)
10.	GS349-8	Oil pump cover screw	(3)
11.	GR667-8	Oil supply drain of bottom shaft	(1)
12.	GR666-8	Back oil ram	(1)
13.	GW194-8	Ram pin	(1)
14.	GS350-8	Ram screw	(1)
15.	GS353-8	Oil pump screw	1
16.	GS351-8	Screw pole of oil pump connecting	1
17.	GS328-8	Screw of double-screw bolt connecting 11/64× 40L=9.5	1
18.	GR668-8	Joint of oil supply drain	1
19.	GR669-8	Upper shaft oil supply drain	1
20.	GR670-8	Spinning shuttle oil supply drain	1
21.	GS352-8	Oil-adjusting screw of spinning shuttle	1
22.	GW195-8	Oil-adjusting pin of spinning shuttle	1
23.	GR671-8	Pressing plate screw shuttle oil supply drain	1
24.	GS353-8	Pressing plate screw 15/64× 28L=9	1
25.	GR674-8	Back oil drain	1
26.	GR675-8	Back oil drain clip	1
27.	GS306-8	Clip-cleaning felt of back oil 3/16× 28L=6	1
28.	GR676-8	Dust-cleaning felt of back oil	1
29.	GR677-8	Back oil felt	1
30.	GR678-8	Back oil felt clip	1
31.	GR679/2-8	Oil-blocking plate components of face plate	1
32.	GS354-8	Screw of oil-blocking plate 1/8× 44L=4	1



## MACHINE HEAD AUXILIARIES

### IX. PRESSOR FOOT COMPONENTS OF OIL PLATE KNEE LIFT

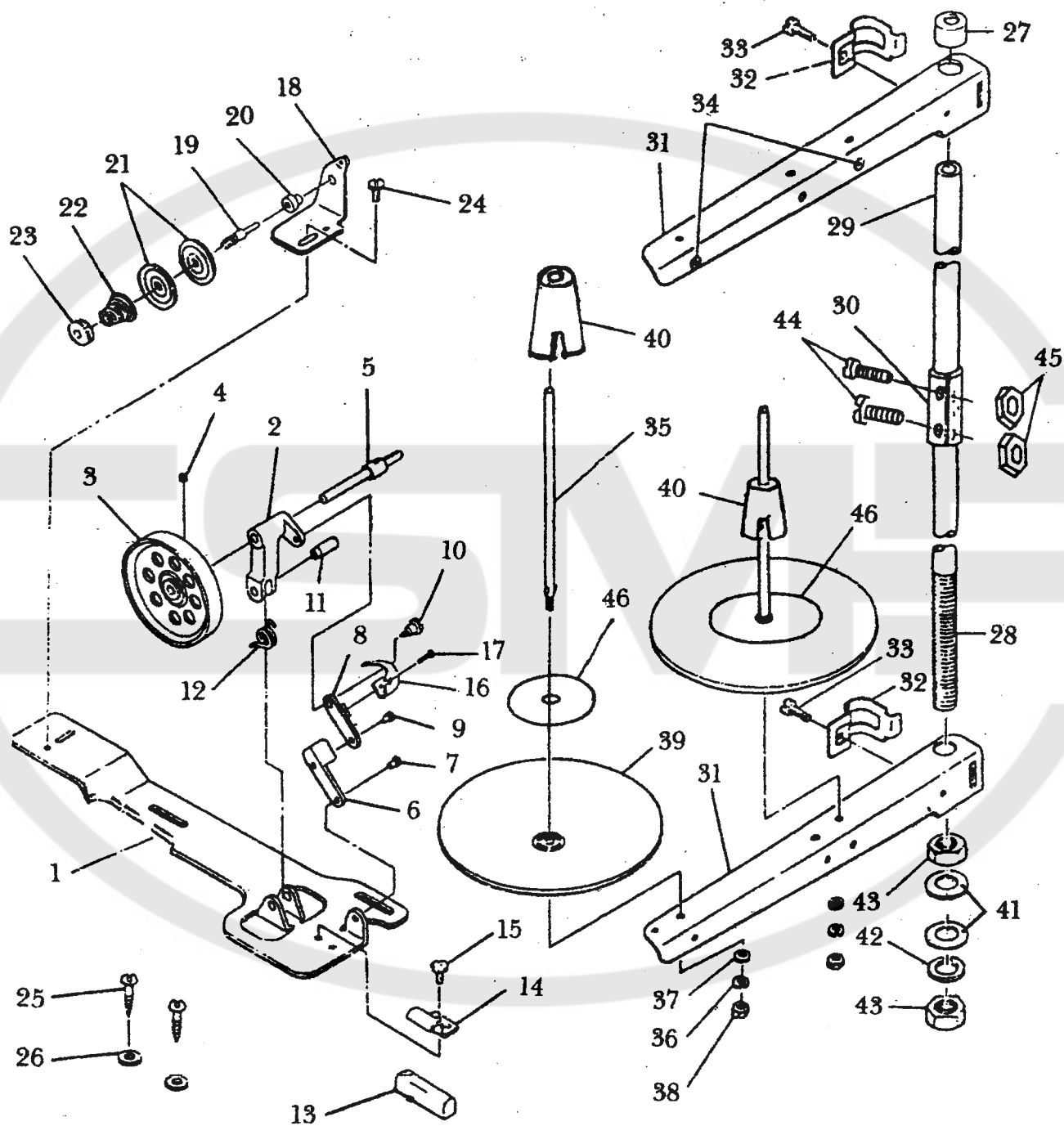
Seri No.	Code No.	Description	Qty
1.	GR680/25-8	Oil plate components	1
2.	GR681-8	Oil plate	(1)
3.	GR682-8	Oil plate bed	(1)
4.	GR683-8	Machine head bed	(4)
5.	GS355-8	Oil extraction hole screw	(2)
6.	GR684-8	"O" ring of oil extracting hole screw	(2)
7.	GH345-8	Two-way crank of lifting pressor foot	(1)
8.	GS356-8	Screw of two-way crank	(1)
9.	GS357-8	Banking screw of two-way crank 15/64×28:L=30	(2)
10.	GL170-8	Banking nut of two-way crank 15/64×28	(2)
11.	GW196-8	Twisting spring of two-way	(1)
12.	GZ238-8	Lifting pressor foot shaft	(1)
13.	GR688-8	Open shield ring of lifting pressor foot shaft	(1)
14.	GR689-8	Operating bar head of lifting pressor foot	(1)
15.	GS358-8	Operating bar head screw 9/32×20L=20	(2)
16.	GR685-8	Oil plate magnet	1
17.	GR686-8	Oil plate bed	2
18.	GR687-8	Oil plate seat	2
19.	GBX141-8	Oil plate seat nail	4
20.	GH344-8	Top pin of lifting pressor foot	1
21.	GR690/6-8	Components of operating bar	1
22.	GR691-8	Operating bar	(1)
23.	GR692-8	Operaring plate	(1)
24.	GR693-8	Soft cushion of operating bar	(1)
25.	GR694-8	Operating bar bed	(1)
26.	GR695-8	Operating bar tip	(1)
27.	GS359-8	Tip screw 15/64×28L=15	(1)



## X. COMPONENTS OF BOBBIN WINDER AND THREAD-RUNNING STAND

Seri No.	Code No.	Description	Qty
1.	GR704-8	Bobbin winder seat	1
2.	GR705-8	Bobbin stand	1
3.	GP148-8	Bobbin wheel	1
4.	GS363-8	Bobbin wheel screw	1
5.	GZ239-8	Bobbin shaft	1
6.	GR706-8	Bobbin seat bar	1
7.	GX213-8	Pin of bobbin seat bar	1
8.	GR707-8	Bobbin stand bar	1
9.	GX213-8	Pin of bobbin stand bar	1
10.	GS364-8	Shaft screw of bobbin stand bar $1/8 \times 44L=125$	1
11.	GX214-8	Pin of bobbin stand	1
12.	GW197-8	Bobbin stand spring	1
13.	GR708-8	Brake bed of bobbin wheel	1
14.	GR709-8	Brake bed clip	1
15.	GS365-8	Locking screw of brake bed $11/64 \times 40L=3$	1
16.	GW198-8	Jumping plate spring of full thread	1
17.	GS366-8	Jumping plate spring screw of full thread	1
18.	GR710-8	Thread-running seat	1
19.	GS367-8	Thread-running screw	1
20.	GR711-8	Shield ring of thread-running and holding	1
21.	GR712-8	Thread-running and holding plate	2
22.	GW199-8	Thread-running and holding spring	1
23.	GL171-8	Thread-running and holding nut	1
24.	GS368-8	Fastening screw of thread running and holding $11/64 \times 40L=78$	1
25.	GBS204-8	Wood bobbin screw	2
26.	GBR210-8	Bobbin wood screw washer	2
27.	GR713-8	Protective rubber of thread bar top	1
28.	GZ240-8	Down half of thread bar	1
29.	GZ241-8	Upper half of thread bar	1
30.	GR714-8	Connecting head of connecting bar	1
31.	GR715-8	Thread-running bar of thread stand	2
32.	GR716-8	Thread-running clip of thread stand	2
33.	GS369-8	Thread-running clip screw of thread stand	2
34.	GR717-8	Thread-running ring	2
35.	GS370-8	Thread plate nail	2

Seri No.	Code No.	Description	Qty
36.	GR718-8	Spring washer of thread plate nail	2
37.	GR719-8	Washer of thread plate nail	2
38.	GL172-8	Nut of thread plate nail	2
39.	GR720-8	Thread plate	2
40.	GR721-8	Thread reel lock bed	2
41.	GR722-8	Fastening nut washer of thread bar	2
42.	GR723-8	Spring washer of fastening nut	1
43.	GL173-8	Fastening nut of thread bar	2
44.	GS401-8	Connecting head screw of connecting bar	2
45.	GL174-8	Connecting nut of connecting bar	2
46.	GR750-8	Soft cushion of thread plate	2



## X I . AUXILIARIES

Seri No.	Code No.	Description	Qty
1.	GR696/2-8	Components of machine head connecting hook	2
2.	GR697-8	Machine head connecting hook seat	2
3.	GBX142-8	Seat nail of machine head connecting hook	4
4.	GK154-8	Front cover of upper wheel	1
5.	GR698-8	Fixing bracket of front cover	1
6.	GK155/3-8	Back cover components of upper wheel	1
7.	GK156-8	Back cover of upper wheel	1
8.	GK157/2-8	Components of back cover	1
9.	GBS204-8	Wood screw of back cover fixing	2
10.	GBR210-8	Wood screw washer	2
11.	GS360-8	Fastening screw of upper cover	2
12.	GS361-8	Back cover pole	1
13.	GS362-8	Pole screw	1
14.	GR699-8	Screw washer	1
15.	GV132-8	Machine needle	1
16.	GR700-8	Screw driver ( L )	1
17.	GR701-8	Screw driver ( M )	1
18.	GR702-8	Screw driver ( S )	1
19.	GN139-8	Shuttle	3
20.	GF101-8	Machine head cover	1
21.	GBR211-8	Machine head pole	1
22.	GR703/3-8	Oil case components	1
23.	GR741-8	Fastening screw washer of front cover	2



