

GLOBAL

303 AUT

HIGH-SPEED LOCKSTITCH SEWING MACHINE

OPERATION MANUAL

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1. BEFORE OPERATION

1. In order to resist rust before machine head packing, all parts are smeared with thick rust-resistant oil. After packing, perhaps in a relatively long storage and transportation period, the oil will harden and absorb dusts. Therefore, it's necessary to clean the oil and dusts with neat soft cloth and gasoline.
2. The machine are examined and checked thoroughly before leaving the factory. But in a long journey, the machine may be shaken intensely and some parts become loose. it's advisable to test again and turn the driving gears with hands so as to make sure if turning is difficult, runs foul of each other or if there is non-uniform block or irregular voice. If so, the machine should be adjusted until every part is normal before driving.
3. Operation are forbidden before pouring oil in the oil plate.
4. When the machine is in operation, the direction of the upper wheel are anti-clockwise (viewing from the outer part of the upper wheel).
5. In the first month's operation, jumbo-sized electric belt wheel shouldn't be used.
6. Confirm the given electric voltage and phase on motor nameplate.
7. The date of manufacture is shown on the inspection certification.

2. OPERATION PRECAUTIONS

1. When the power supply is open or the machine is operating, don't touch the machine needle with your hands.
2. When the machine is running, don't stretch your hands in the mat of the thread stitch bar.
3. When the machine head is turning and the "V" belt is being disassembled, the electric supply should be cut off.
4. When the operator is leaving the machine, cut out the power supply.
5. when the machine is running, no heads, hands or any other things are allowed to get close to the upper wheels, "V" belts bobbin winder and motor.
6. Not until the machine stops running can you disassemble the belt cover, protection cover or other protecting devices?
7. The machine head's surface can't be cleaned with dilutes such as banana oil.
8. Don't put your finger into the finger guard when you feed material by hand.

3. CHIEF TECHNICAL SPECIFICATIONS

	Standard typical	Small rotary hook thick materials	Big rotary hook thick materials
Sewing material	Light-middle thick materials	middle thick ~ thick materials	mid thick ~ thick materials
Sewing speed (Max)	5000S.P.M	3000S.P.M	3000S.P.M
Maximum stitch length	4mm	8mm	8mm
Pressure foot lifting high	10mm(standard) 13mm(max)		
Needle	DB × 1#9 ~ #18	DP × 5#16 ~ #18	DP × 5#20 ~ #23
Lukr Cant oil	10# White oil		
Motor Power	380V/560W		220V/560W

4. INSTALLATION (Fig.1, Fig.2, Fig.3, Fig.4)

Installing the oil pan

- 1) The oil pan should rest on the four corners of the machine table groove.
- 2) Fix two rubber seats ① on side A (operator's side) using nails ② as illustrated above. Fix two cushion seats ③ on side B (hinged side) using nails ④. Then place oil pan ⑤ on the fixed seats. (Fig.1, Fig.2)
- 3) Fit hinge ⑥ into the opening in the machine bed, and fit the machine head to table rubber hinge ⑦ before placing the machine head on cushions ③ on the four corners. (Fig.3, Fig.4)

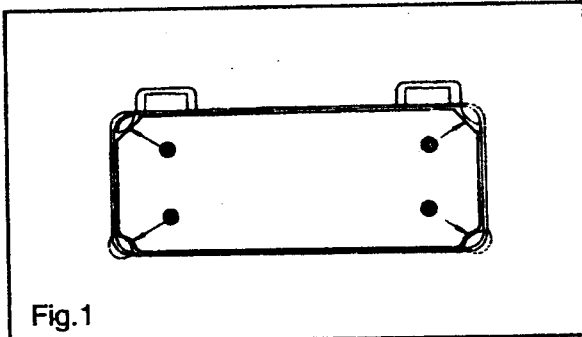


Fig.1

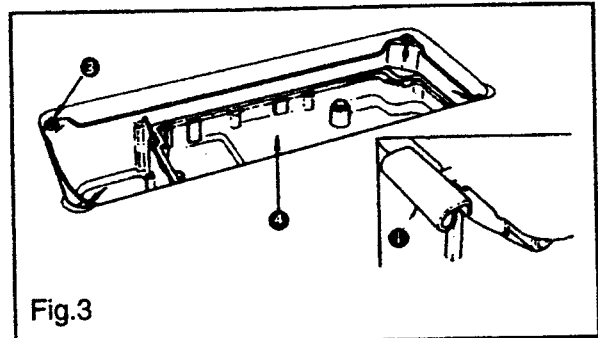


Fig.3

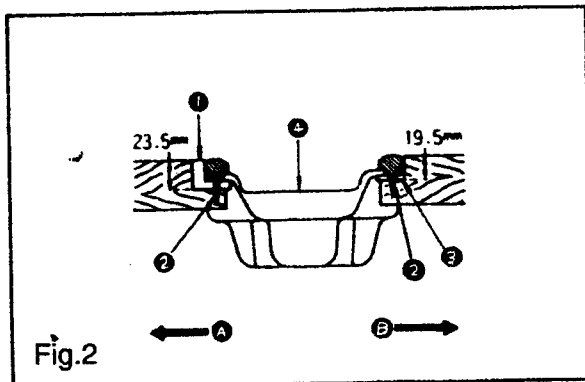


Fig.2

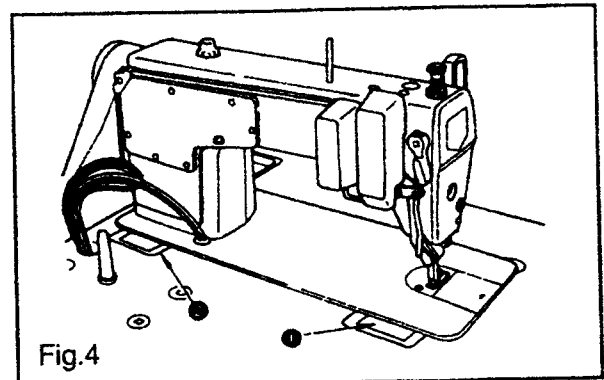


Fig.4

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

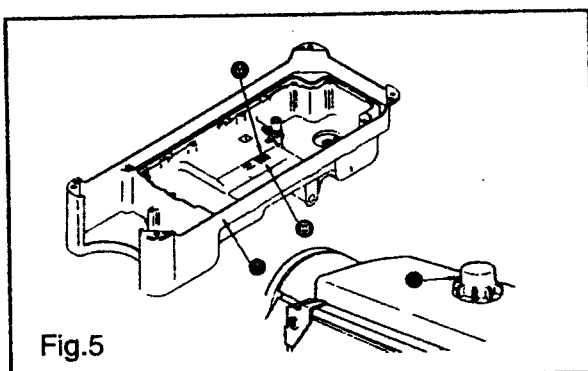


Fig.5

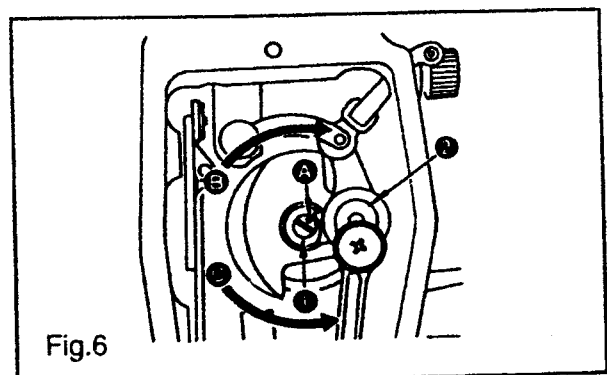


Fig.6

1.Information on lubrication(Fig.5)

- 1)Fill oil pan ① with sewing machine oil (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 sight 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.

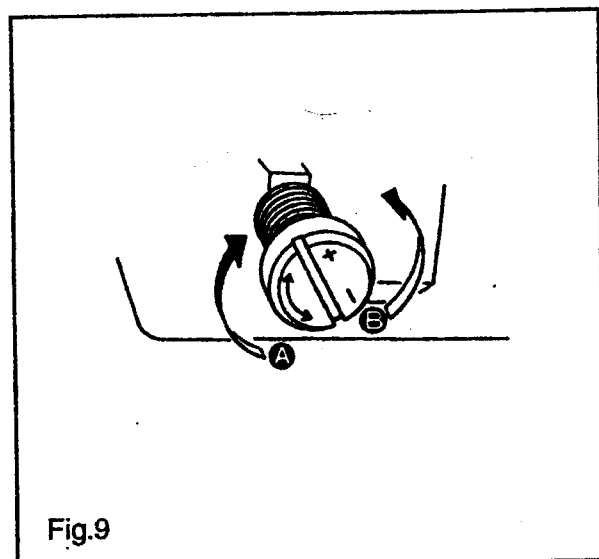
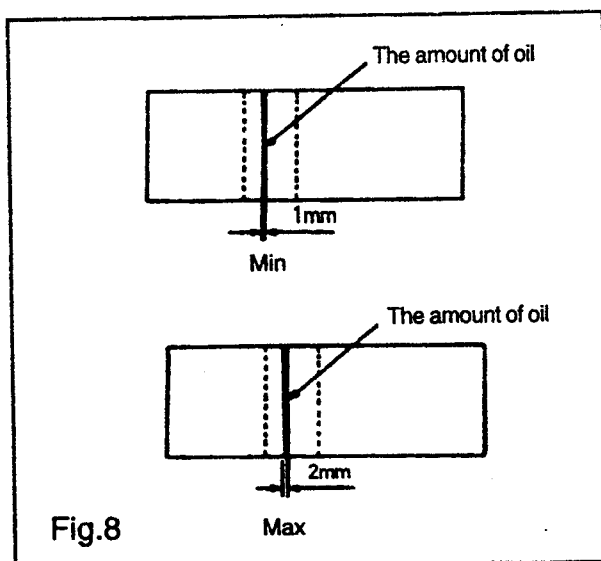
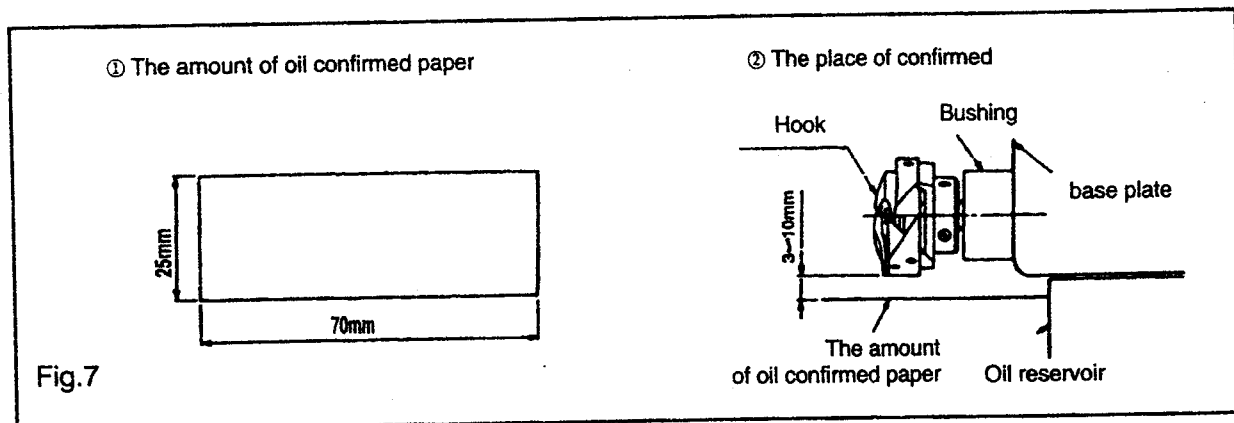
*Precaution

When you first operate your machine after set up or after an extended period of disuse, run your machine at 2,000 s.p.m to 2,500 s.p.m for about 10 minutes for the purpose of break-in.

2.Adjusting the amount of oil supplied to the face plate parts (Fig.6)

- 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 maker dot A is brought close to needle bar crank ② by turning the adjust pin in direction B.
- 3)The maximum amount of oil is reached when maker dot A is brought to the position just opposite from the needle bar crank by turning the adjust pin in direction C.

6.ADJUSTING THE AMOUNT OF OIL(OIL SPLASHES)IN THE HOOK(Fig.7.8.9)



1. Notice before adjustment:

1) The unexpended machine should run without material for around 3 minutes. (or suitable running now and then).

2) Plug in the oil amount paper only when the machine is running.

3) Make sure the oil height in the oil plate ranges between HIGH and LOW.

4) The confirming time of the oil amount is 5 seconds (by manual time-keeping).

2. Appropriate oil amount sample:

1) In the following sample figures, tiny adjustments may be considered according to different sewing process but not too much. Too much oil may cause the warming of spinning shuttle and contaminate the material.

2) Try the oil amount paper three times and adjust the oil amount of the spinning shuttle until the oil trail on the paper is stable.

3. Adjust the oil amount of the spinning shuttle:

1) Turning the oil adjusting screw of the front shaft sleeve on bottom shaft towards + direction A, the oil amount will increase, and towards - direction B, the oil amount will decrease.

2) After adjustment without material for 30 seconds to confirm the condition of the oil amount.

7. ATTACHING THE NEEDLE (Fig. 10)

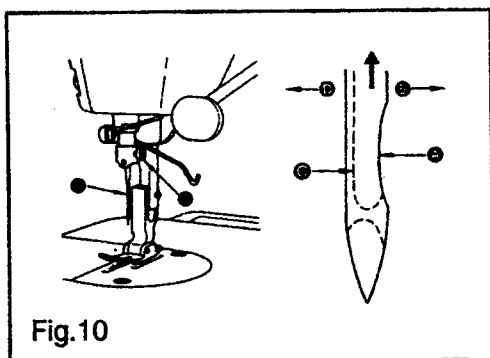


Fig. 10

★ Turn the motor power OFF before starting to attach the needle.

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 in the direction of the arrow until it will go no further.

4) Securely tighten screw ②.

5) Check that long groove C of the needle is facing exactly to the left in direction D.

8. SETTING THE BOBBIN INTO THE BOBBIN CASE (Fig. 11)

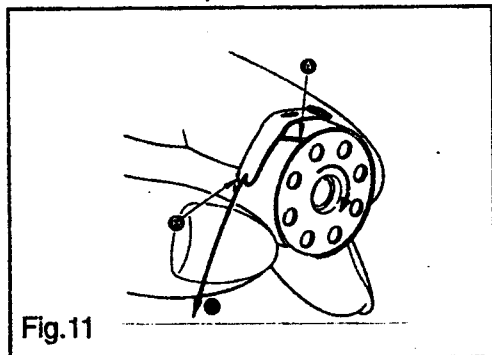


Fig. 11

1) Hold the bobbin in a way that the thread open end is directed to the right as observed from you, and set the bobbin into the bobbin case.

2) Pass the thread through thread slit, and pull the thread in direction. By so doing, the thread will pass under the tension spring and come out from notch.

3) Check that the bobbin rotates in the direction of the arrow when thread is pulled.

9.THREADING THE MACHINE HEAD(Fig.12)

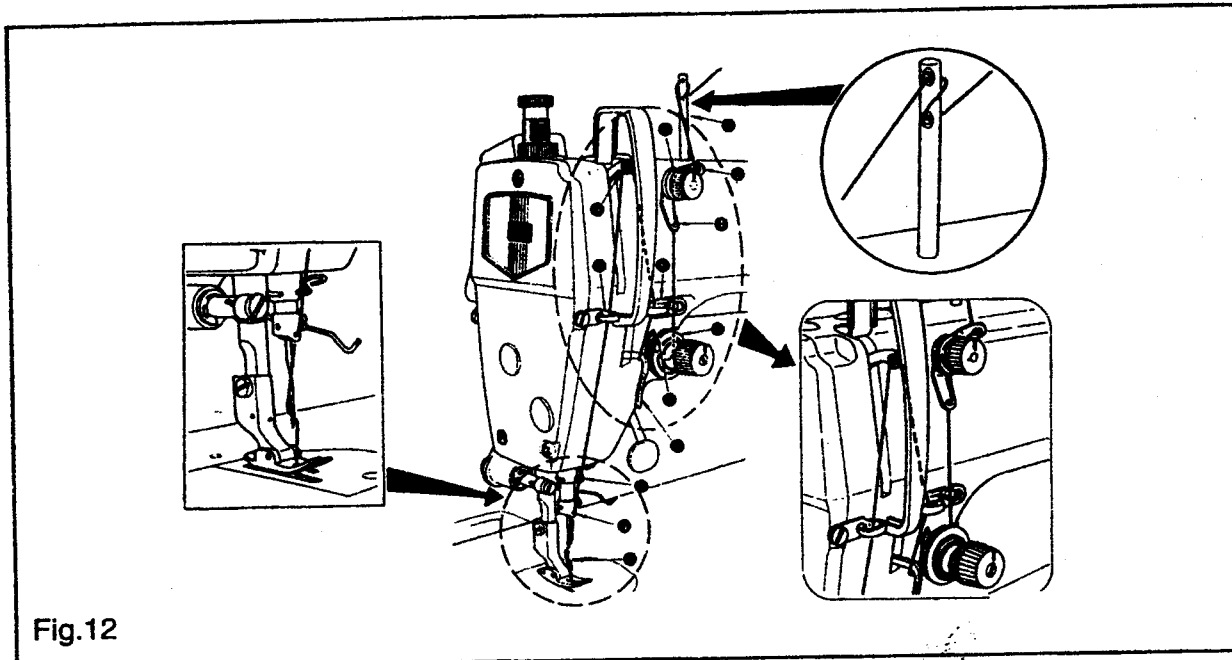


Fig.12

10.ADJUSTING THE STITCH LENGTH (Fig.13)

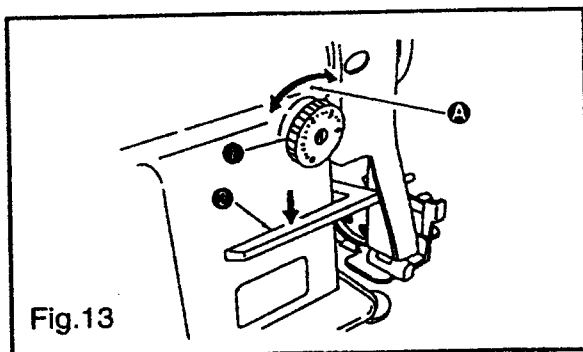


Fig.13

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

11.INSTALLING THE THREAD STAND(Fig.14)

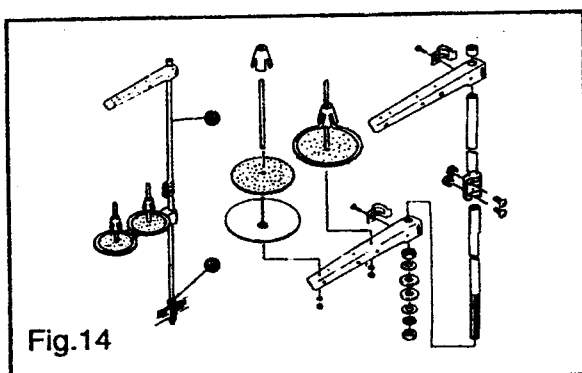


Fig.14

- 1) Assemble the thread stand unit, and insert it in the hole in the machine table.
- 2) Tighten locknut ● to fix the thread stand.
- 3) For ceiling wiring, pass the power cord through spool rest rod ● .

12. INSTALLING THE BELT COVER AND THE BOBBIN WINDER (Fig.15)

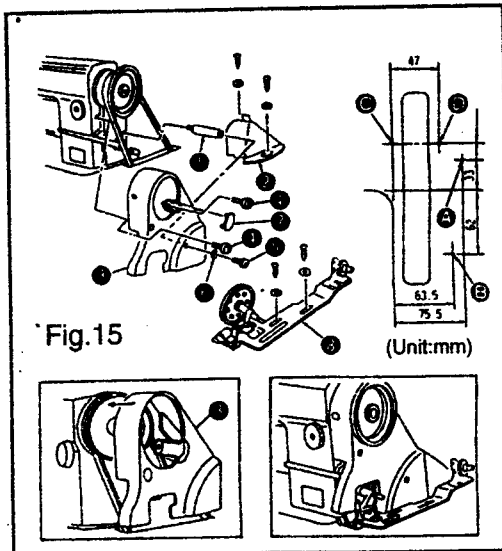


Fig.15

(Unit:mm)

How to install the belt cover and the bobbin winder 1. Installation procedure

- 1) Drill four guiding holes ①, ②, ③ and ④ for wooden screws in the table.
- 2) Install belt cover support ⑤ in the tapped hole in the arm.
- 3) Pass the handwheel through the hole in belt cover A ⑥, 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 ⑥ as illustrated in the figure.
- 4) Place belt cover B ⑦ on guiding holes ③ and ④.
- 5) Fix belt cover A ⑥ on the arm using screws ⑧, ⑨ and washer ⑩. At this time, tighten screw ⑧ with a tightening torque of 30 kgf/cm and screw ⑨ 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 ⑪ to the belt cover A.
- 7) Move belt cover B ⑦ backward until the rubber section of belt cover B ⑦ comes in contact with belt cover A ⑥. Then, further move the belt cover B in the same direction by 0.5 to 1mm. Now, fix the belt cover B in position using wooden screw and washer.
- 8) Fix bobbin winder ⑫ in guiding holes ① and ② using wooden screws and washers.

13. ADJUSTING THE HEIGHT OF THE KNEE LIFTER (Fig.16,17)

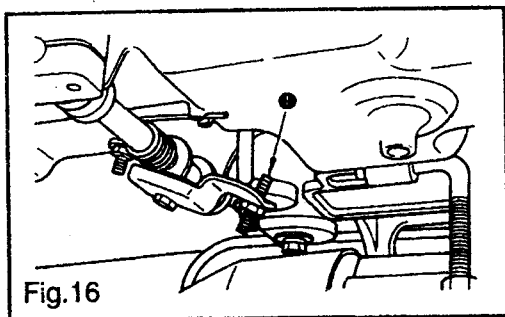


Fig.16

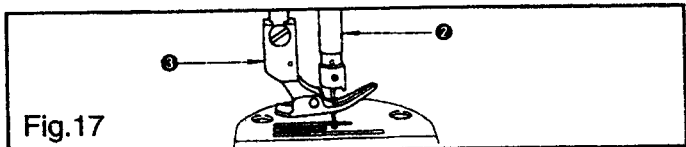


Fig.17

- 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 13 mm using knee lifter adjust screw ①. (The max. lift should be 9 mm for the A type.)
- 3) When you have adjusted the presser foot lift to over 10 mm, be sure that the bottom end of needle bar ② in its lowest position does not hit presser foot ③.

14. PEDAL OPERATION (Fig.18)

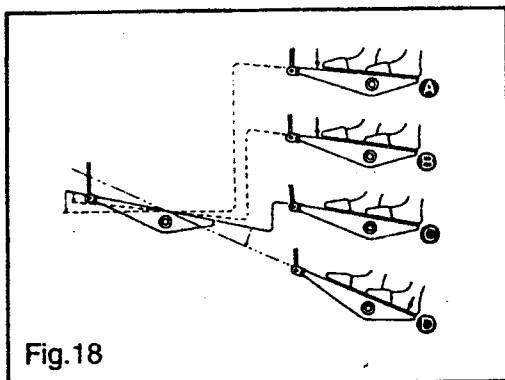


Fig.18

1. The pedal is operated in the following four steps:
 - 1) The machine runs at low sewing speed when you lightly depress the front part of the pedal. ①
 - 2) The machine runs at high sewing speed when you further depress the front part of the pedal. ②
 - 3) The machine stops (with its needle up or down) when you reset the pedal to its original position. ③
 - 4) The machine trims threads when you fully depress the back part of the pedal. ④

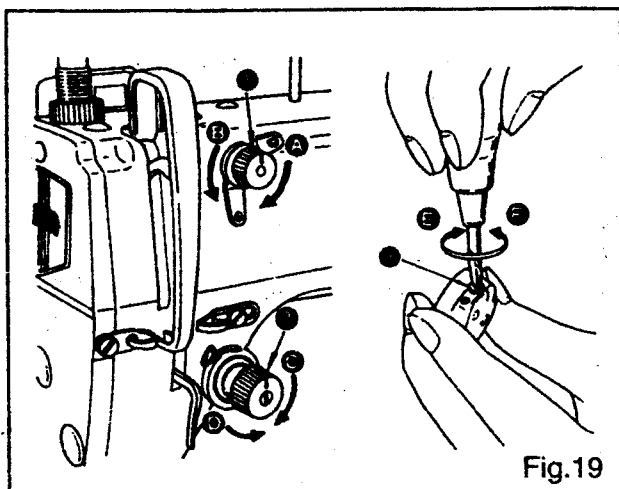
*The machine will perform normal thread trimming even if you depress the back part of the pedal immediately following high or low speed sewing.

*The machine will completely perform thread trimming even if you reset the pedal to its neutral position immediately after the machine started thread trimming action.

*When the machine stops with its needle down, and if you want to bring the needle up, depress the back part of the pedal once.

*If the machine is fixed with the automatic lifting pressure foot structure, after stopped the machine and delayed two or three seconds, then thrample the threadle backward once, so the pressure foot will lift automatically when the threadle reback, the pressure foot will be down automatically.

15. THREAD TENSION (Fig.19)



1. Adjusting the needle thread tension

1)As you turn thread tension No.1 nut ① clockwise (in direction ➊), the thread remaining on the needle after thread trimming will be shorter.

2)As you turn nut ① counterclockwise (in direction ➋), the thread length will be longer.

3)As you turn thread tension No.2 nut ② clockwise (in direction ➌), the needle thread tension will be increased.

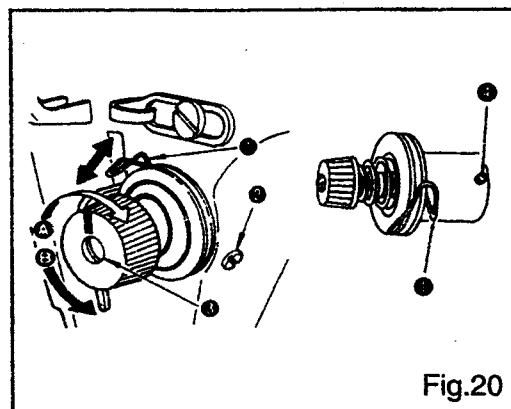
4)As you turn nut ② counterclockwise (in direction ➍), the needle thread tension will be decreased.

2. Adjusting the bobbin thread tension

1)As you turn tension adjust screw ③ clockwise (in direction ➎), the bobbin thread tension will be increased.

2)As you turn screw ③ counterclockwise (in direction ➏), the bobbin thread tension will be decreased.

16. THREAD TAKE-UP SPRING (Fig.20)



1. Changing the stroke of thread take-up spring ①

1)Loosen setscrew ⑤ .

2)As you turn tension post ⑥ clockwise (in direction ➐), the stroke of the thread take-up spring will be increased.

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

2. Changing the pressure of thread take-up spring ②

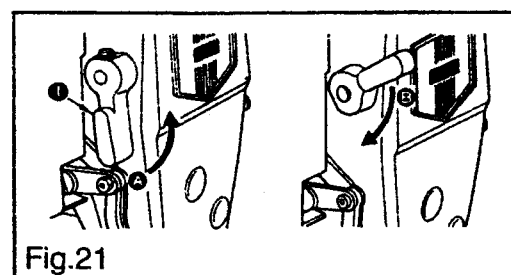
1)Loosen setscrew ⑦, and remove tension post ⑥ .

2)Loosen setscrew ⑧ .

3)As you turn tension post ⑥ clockwise (in direction ➒), the pressure will be increased.

4)As you turn the post counterclockwise (in direction ➓), the pressure will be decreased.

17. HAND LIFTER (Fig.21)



1)To stop the machine with its presser foot up, turn hand lifter ① in direction ➔ .

2)The presser foot will go up about 5.5 mm and stop.

3)The presser foot will go back to its original position when hand lifter is turned down in direction ➕ .

4)Using the knee lifter, you can get the standard presser foot lift of about 10 mm and the maximum lift of about 13 mm.

18. PRESSER FOOT PRESSURE (Fig.22)

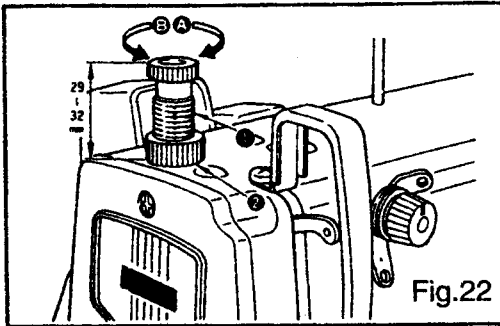


Fig.22

- 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 counterclockwise (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 29 to 32mm (5kg).

19. ADJUSTING THE FEED TIMING (Fig.23)

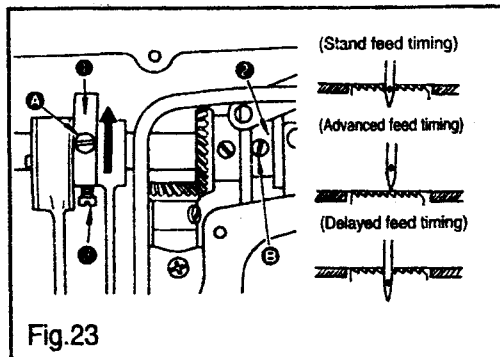


Fig.23

- 1) To obtain the standard feed timing, align setscrew A on feed eccentric cam ① with setscrew B on main shaft thrust collar ② .
- 2) To make adjustment, loosen two setscrews ③ to release the feed eccentric cam, properly position the eccentric cam. Then retighten the setscrews.
- 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) Be careful not to move the feed eccentric cam too far, or else needle breakage may result.

20. TILT OF THE FEED DOG (Fig.24)

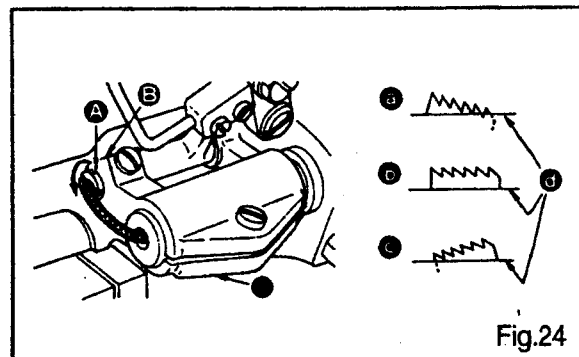
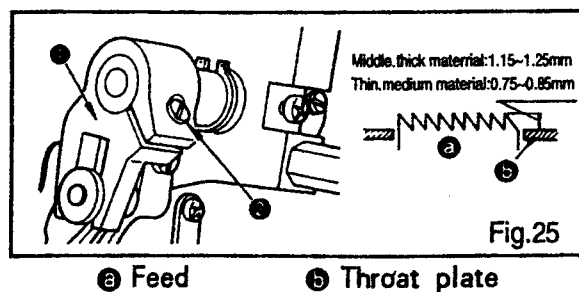


Fig.24

● Front up ● Standard ● Front down ● Throat plate

- 1) The standard tilt (horizontal) of the feed dog is obtained when marker dot A on the feed bar shaft is aligned with marker dot B on feed rocker ①
- 2) To tilt the feed dog with its front up in order to prevent puckering, loosen the setscrew, and turn the feed bar shaft 90 degrees in the direction of the arrow, using a screwdriver.
- 3) To tilt the feed dog with its front down in order to prevent uneven material feed, turn the feed bar shaft 90 degrees in the opposite direction from the arrow.
(Precaution) Whenever the feed dog tilt is adjusted, the feed dog height will be changed. So, it is necessary to check the feed dog height after tilt adjustment.

21. HEIGHT OF THE FEED DOG (Fig.25)



● Feed ● Throat plate

- 1) The feed dog is factory -adjusted so that it just out from the throat plate surface 0.75 to 0.85 mm. For the heavy weight material, it just out 1.15 to 1.25mm
- 2) To adjust the height of the feed dog :
 - ① Loosen screw ② of crank ③
 - ② Move the feed bar up or down to make adjustment.
 - ③ Securely tighten screw ② .

22.NEEDLE-TO -HOOK RELATIONSHIP(Fig. 26)

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)Align marker line A on needle bar ② with the bottom end of needle bar lower bushing ③, then tighten setscrew ① .

*Adjusting position of the hook

3)Loosen the two hook setscrews, turn the handwheel, and align marker line B 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 0.04 mm to 0.1mm between the needle and the hook, then securely tighten the hook setscrews.

*Note that the type of hook to be substituted for ,when replacing the hook, shall be in conformity with the very type of the hook installed in the sewing machine of original assemblage.

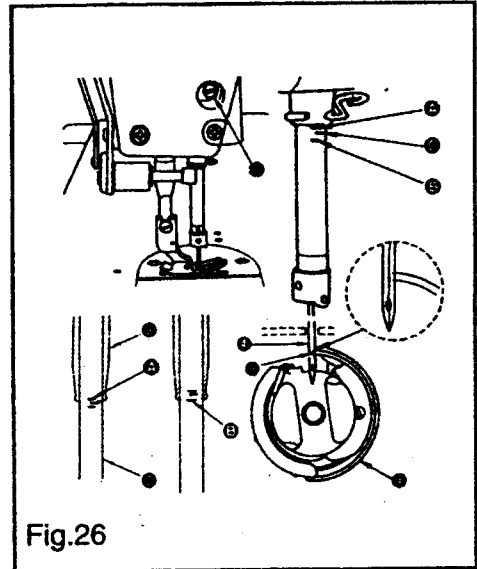


Fig.26

23.ADJUSTING THE HEIGHT OF THE PRESSER BAR (Fig.27)

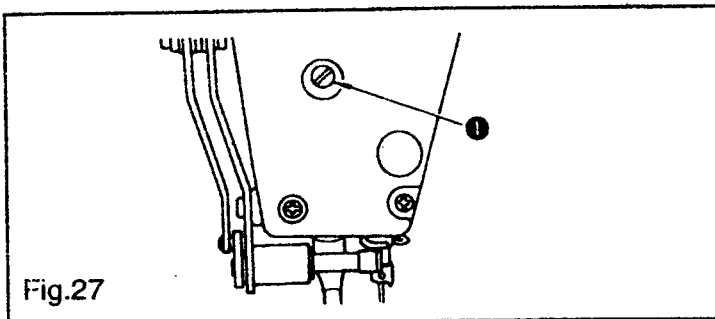


Fig.27

1)Loosen setscrew ① , and adjust the presser bar height or the angle of the presser foot .

2)After adjustment, securely tighten the setscrew,

24.COUNTER KNIFE (Fig.28)

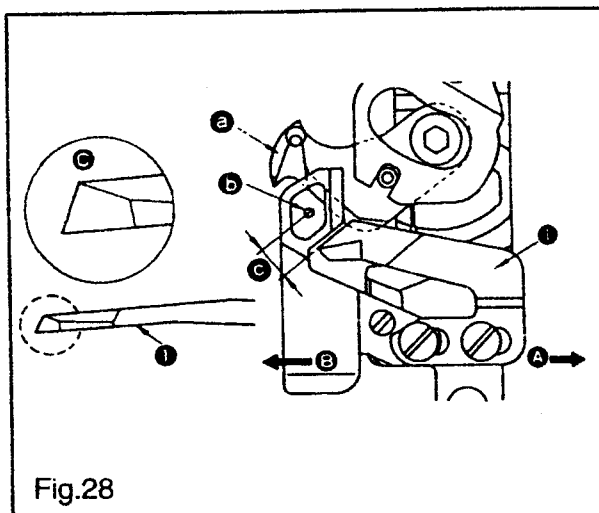


Fig.28

1. When the knife sharpness has deteriorated, resharpen counter knife ① as illustrated in ②, and properly reinstall it.

1)If the mounting position of the counter knife is moved in direction ④ from the standard mounting position , the thread length after thread trimming will be increased accordingly.

2)If the mounting position is moved in direction ⑤ , the thread length will be decreased accordingly.

- ① Moving knife
- ② Center of needle
- ③ Standard:3 to 3.5 mm

25. ADJUSTING THE THREAD TAKE-UP STROKE (Fig.29)

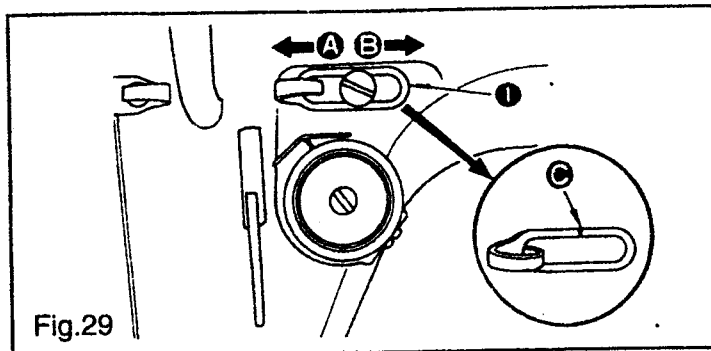


Fig.29

- 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.

26. ADJUSTING THE NEEDLE STOP POSITION (Fig.30.Fig.31)

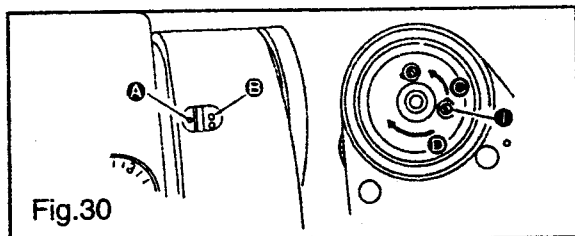


Fig.30

1. Stop position after thread trimming
 - 1) The standard needle stop position is obtained by aligning red marker dot A on the machine arm with white marker dot B on the handwheel.
 - 2) Stop the needle in its highest position, loosen screw ① to perform adjustment within the slot of the screw.
 - ① The needle stop timing is advanced if you move the screw in direction C.
 - ② The needle stop timing is delayed if you move the screw in direction D.
- (Precaution) Do not operate the machine with screw ① loosened. Just loosen the screw, and do not remove it.

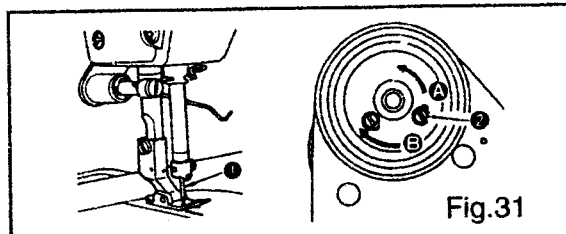


Fig.31

1. Lower stop position
 - 1) The lower needle stop position when the pedal is returned to the neutral position after the front part of the pedal is depressed can be adjusted as follows: Stop needle ① in its lowest position, loosen screw ②, and make adjustment within the slot of the screw. Moving the screw in direction A advances the needle stop timing. Moving the screw in direction B delays the timing.
- (Precaution) Do not operate the machine with screw ② loosened. Just loosen the screw, and do not remove it.

27. PEDAL PRESSURE AND PEDAL STROKE (Fig.32)

1. Adjusting the pressure required to depress the front part of the pedal
 - 1) This pressure can be changed by altering the mounting position of pedaling pressure adjust spring ①.
 - 2) The pressure decreases when you hook the spring on the left side.
 - 3) The pressure increases when you hook the spring on the right side.
2. Adjusting the pressure required to depress the back part of the pedal
 - 1) This pressure can be adjusted using regulator screw ②.
 - 2) The pressure increases as you turn the regulator screw in.
 - 3) The pressure decreases as you turn the screw out.
- 3) Adjusting the pedal stroke
 - 1) The pedal stroke decreases when you insert connecting rod ③ into the left hole.

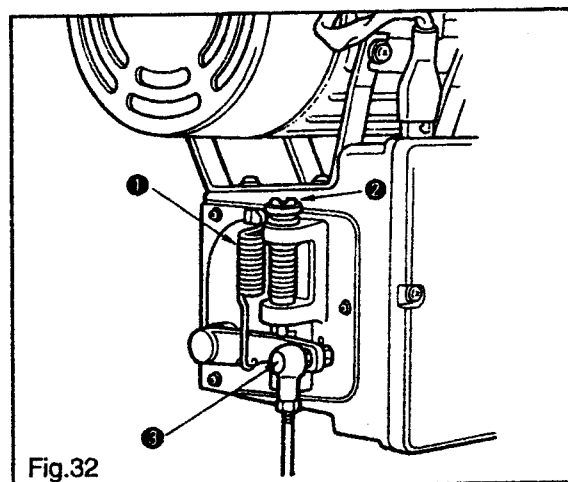


Fig.32

28.ADJUSTMENT OF THE PEDAL(Fig.33)

1.Installing the connecting rod

1)Move pedal to the right or left as illustrated by the arrows so that motor control lever and connecting rod are straightened.

2.Adjusting the pedal angle

1)The pedal tilt can be freely adjusted by changing the length of the connecting rod .

2)Loosen adjust screw , and adjust the length of connecting rod .

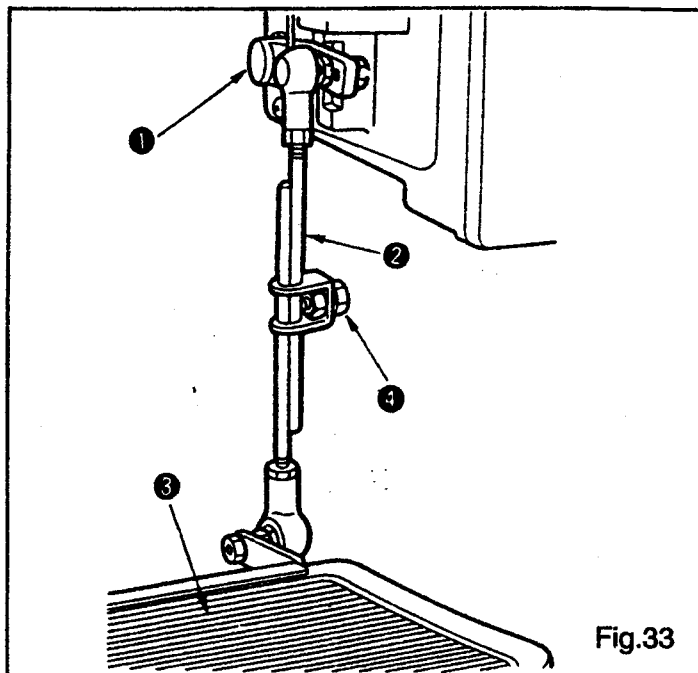


Fig.33

29.ONE-TOUCH TYPE REVERSE FEED STITCHING MECHANISM(Fig.34)

1.How to operate

1)The moment switch lever ❶ is pressed, the machine performs reverse feed stitching.

2)The machine performs reverse feed stitching as long as the switch lever is held depressed.

3)The machine resumes normal feed stitching the moment the switch lever is released.

2.Height of the switch lever

1)Adjust the height of switch lever ❶ so that it can be easily operated.

2)Loosen screw ❷ , and move the switch lever up or down to adjust its height.

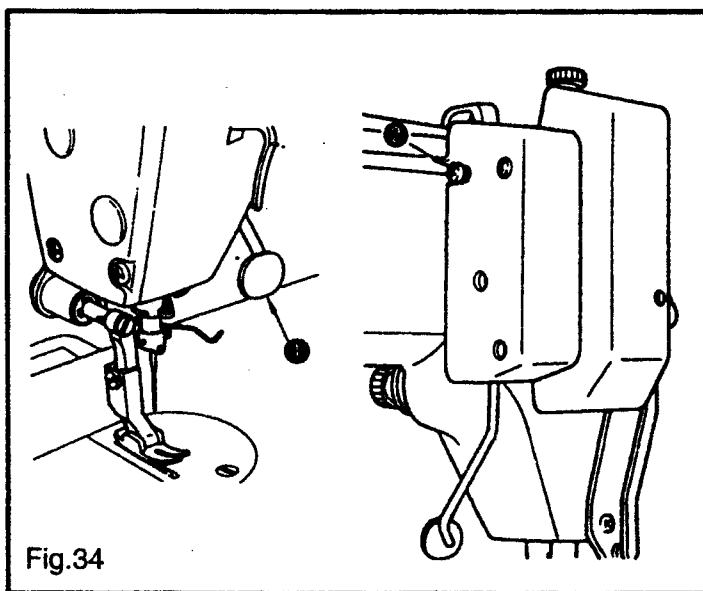
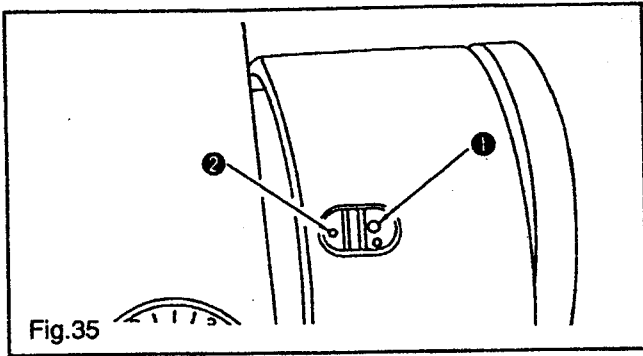


Fig.34

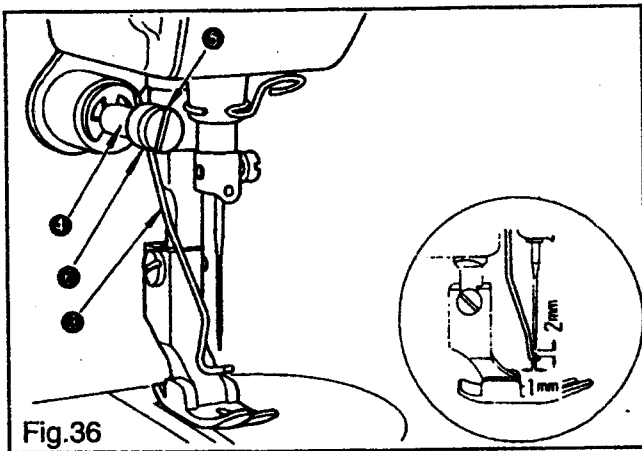
30.WIPER(Fig.35, Fig.36, Fig.37)



1.Positioning the wiper

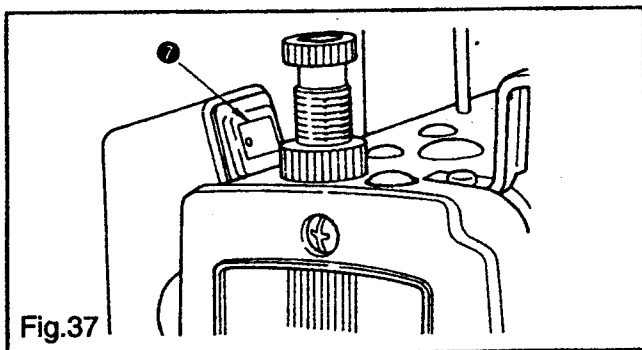
Adjust the position of the wiper according to the thickness of the material sewn. The adjustment procedure is as follows:

1) Turn the handwheel in the normal direction of rotation to align white marker dot ① on the handwheel with red marker dot ② on the machine arm.



2) Adjust the distance between the flat part of the wiper and the center of the needle to 1mm .

Tighten wiper adjust screw ⑤ so that the wiper is pressed and fixed by wiper collar ⑥ .



3) When the wiper is unnecessary, turn wiper switch ⑦ OFF.

GLOBAL

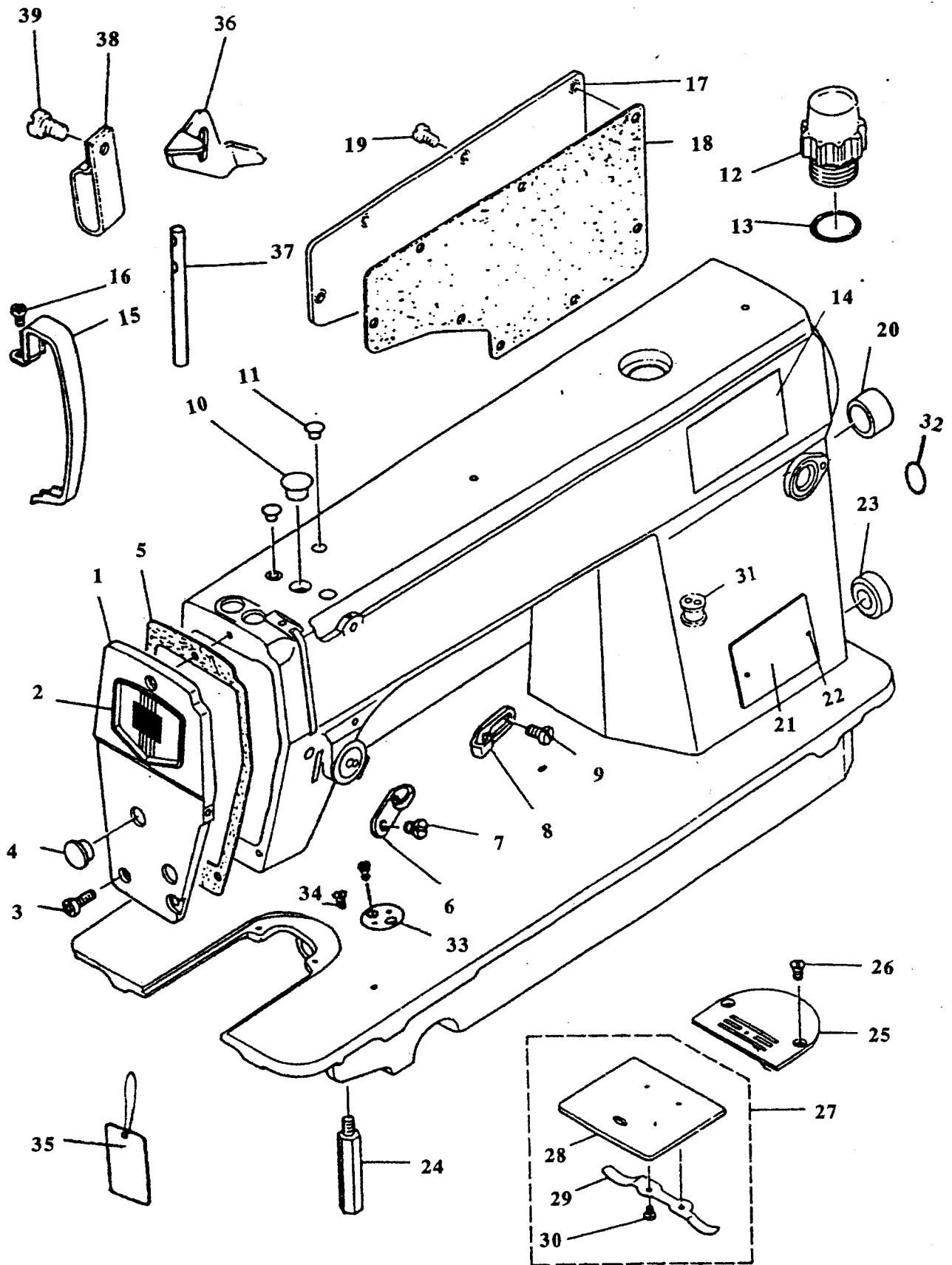
303 AUT

HIGH-SPEED LOCKSTITCH SEWING MACHINE

PARTS BOOK

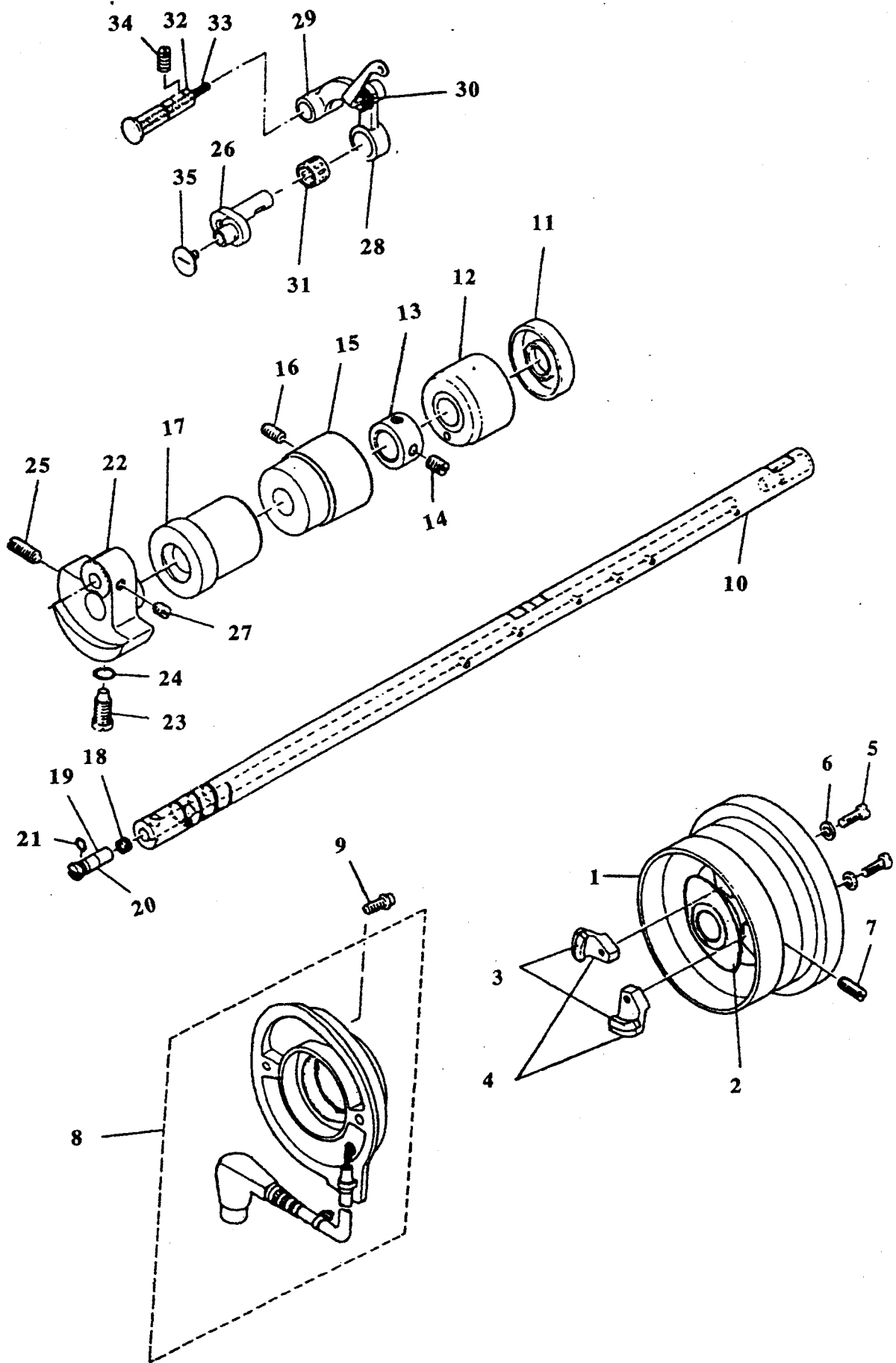
1. Arm bed components

Ref.No.	Part No.	Description	Amt.
1	GR581-8	Face plate arm	1
2	GR420-8	Decorative plate	1
3	GX300-8	Screw 3/16-28 L=9	3
4	GR583-8	Rubber plug	2
5	GR582-8	Gasket	1
6	GR604-8	Frame thread guide, left	1
7	GS313-8	Screw 11/64-40 L=6	1
8	GR603-8	Frame thread guide, right	1
9	GS313-8	Screw 11/64-40 L=6	1
10	GR584-8	Rubber plug	1
11	GR585-8	Rubber plug	2
12	GR1004-8	Oil sight window	1
13	GR673-8	Rubber ring	1
14	GQ196-8	Safety-indicating plate	1
16	GS310-8	Screw 3/16-28 L=6	1
17	GR578-8	Side plate	1
18	GR579-8	Gasket	1
19	GS300-8	Screw 3/16-28 L=9	8
20	GR586-8	Rubber plug	1
21		Model plate	1
22	GX190-8	Model plate rivet	2
23	GR587-8	Rubber plug	1
24	GS299-8	Bed screw stud	4
26	GS338-8	Screw 11/64-40 L=8.5	2
27	GM167/4-8	Bed slide asm	1
28	GM168-8	Slide plate	(1)
29	GW190-8	Bred slide spring	(1)
30	GS339-8	Screw 3/32-56 L=1.9	(2)
31	GR1005-8	Rubber bushing	1
32	GQ200-8	Ground wire indicating plate	1
33	GR724-8	Position stopring	1
34	GS373-8	Screw 11/64-40 L=4.8	2
35	GR753/2-8	Quality certifcate	1
36	GR1006-8	Cord holder	1
37	GR800-8	Needle thread guide pin	1
38	GR1083-8	Cord holder	1
39	GS300-8	Screw 3/16-28 L=9	1
Typical model			
15	GK153-8	Thread take-up lover cover	1
25	GM190-8	Throat plate	1
Heavy weight material (big or small rotating hook)			
15	GK162-8	Thread take-up lover cover	1
25	GM173-8	Throat plate	1



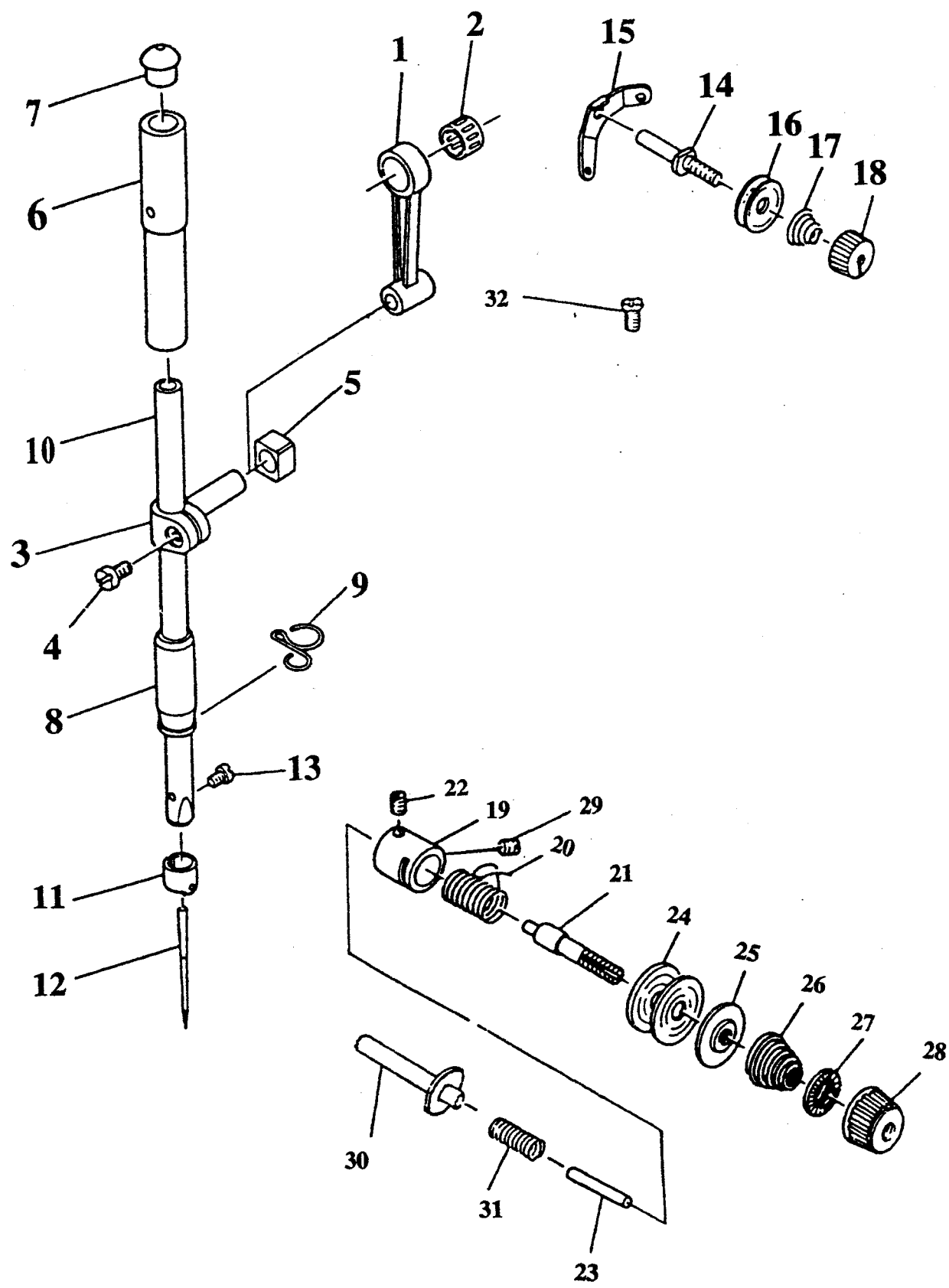
2. Main shaft & thread take-up components

Ref.No.	Part No.	Description	Amt.
1	GP162-8	Hand wheel	1
2	GR1007-8	Reflector plate	1
3	GR1010-8	Magnet	2
4	GR1009-8	Magnet Support	2
5	GS518-8	Screw 11/64-40 L=12	2
6	GO359-8	Washer	2
7	GS304-8	Screw 15/64-28 L=15	2
8	GR1011/3-8	Dynamo Stator	1
9	GS517-8	Screw	2
10	GZ229-8	Main shaft	1
11	GR588-8	Oil seal	1
12	GO256-8	Main shaft bushing, rear asm.	1
13	GR589-8	Thrust collar asm.	1
14	GS305-8	Screw 1/4-40 L=6	2
15	GO258-8	Bushing, intermediate	1
16	GS306-8	Screw 15/64-28 L=9	1
17	GO259-8	Main shaft bushing, front asm.	1
18	GR590-8	Roller felt	1
19	GX198-8	Oil amount adjusting pin asm.	1
20	GO261-8	Rubber pushing	1
21	GR591-8	Rubber ring	1
23	GS371-8	Screw 1/4-40 L=6	1
24	GR592-8	Rubber ring	1
25	GS307-8	Screw 9/32-28 L=16	1
27	GS305-8	Screw 1/4-40 L=6	2
30	GR595-8	Rubber	1
31	GO265-8	Needle bearing	1
32	GX199-8	Thread take-up crank shaft	1
33	GR597-8	Oiling wick	1
34	GS308-8	Screw 15/64-28 L=10.5	1
35	GS309-8	Screw(left twist) 9/64-40 L=4.8	1
Typical model			
22	GH207-8	Counterweight	1
26	GH209-8	Needle bar crank asm.	1
28	GH210/4-8	Thread take-up lever asm.	1
29	GH212-8	Sitich-swaying staff	1
Heavy weight material (small rotating hook)			
22	GH207-8	Counterweight	1
26	GH352-8	Needle bar crank asm.	1
28	GH350/4-8	Thread take-up lever asm.	1
29	GH358-8	Sitich-swaying staff	1
Heavy weight material (big rotating hook)			
22	GH349-8	Counterweight	1
26	GH352-8	Needle bar crank asm.	1
28	GH350/4-8	Thread take-up lever asm.	1
29	GH358-8	Sitich-swaying lover asm.	1



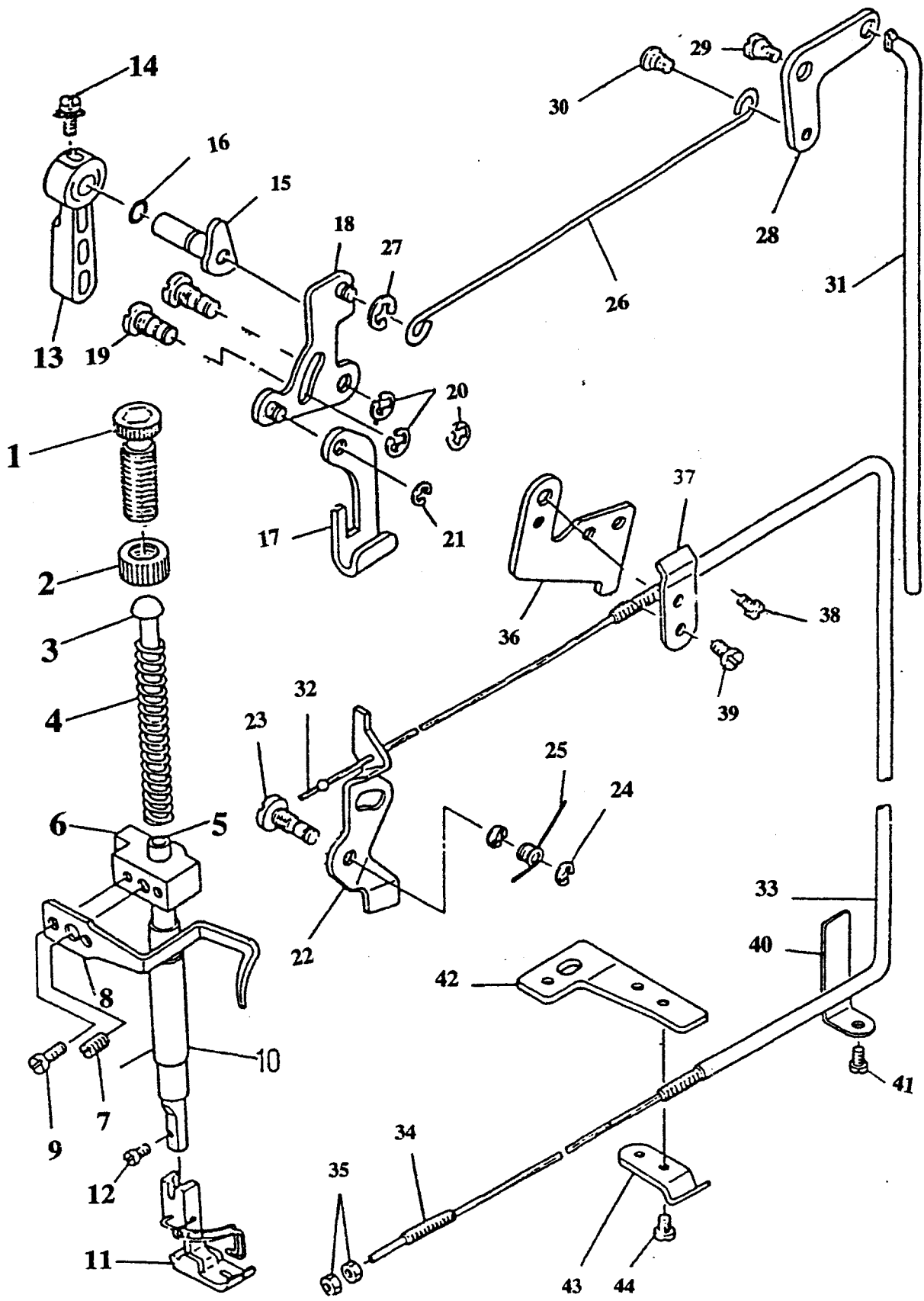
3. Needle bar & thread tension components

Ref.No.	Part No.	Description	Amt.
1	GH213-8	Needle bar crank rod	1
2	GO265-8	Needle bearing	1
3	GR598-8	Needle bar connection asm.	1
4	GS311-8	Screw 9/64-40 L=6	1
5	GU152-8	Slide block	1
6	GO266-8	Needle bar bushing, upper	1
7	GR599-8	Cap	1
13	GS312-8	Screw 1/8-44 L=4.5	1
14	GS310-8	First tension post	1
15	GR1014-8	Thread tension guide	2
16	GR1015-8	Bobbin winder tension disc	1
17	GW233-8	Thread tension spring	1
18	GL181-8	Thread tension unt	1
19	GR606-8	Tension post socket	1
20	GW183-8	Take-up spring	1
21	GS314-8	Screw	1
22	GS315-8	Set screw 9/64-40 L=5.5	1
23	GX200-8	Thread release pin	2
24	GR607-8	Tension disc	1
25	GR608-8	Tension disc holder	1
26	GW184-8	Tension spring	1
27	GR609-8	Tension disc stopper	1
28	GL167-8	Tension nut	1
29	GS316-8	Screw 15/64-28 L=7	1
30	GX201-8	Tension release supporting pin	1
31	GW185-8	Tension release pin spring	1
32	GS310-8	Screw 3/16-28 L=6	1
Typical model			
8	GO267-8	Needle bar bushing, lover	1
9	GR600-8	Needle bar thread guide	1
10	GZ230-8	Needle bar asm.	1
11	GR601-8	Needle bar thread guide	1
12	GV132-8	Needle (DB×1#14)	1
Heavy weight material (small rotating hook)			
8	GO289-8	Needle bar bushing lower	1
9	GR801-8	Needle bar thread guide	1
10	GZ251-8	Needle bar asm.	1
11	GR802-8	Needle bar thread guide	1
12	GV138-8	Needle	1
Heavy weight material (big rotating hook)			
8	GO289-8	Needle bar bushing lower	1
9	GR801-8	Needle bar thread guide	1
10	GZ251-8	Needle bar asm.	1
11	GR802-8	Needle bar thread guide	1
12	GV134-8	Needle	1



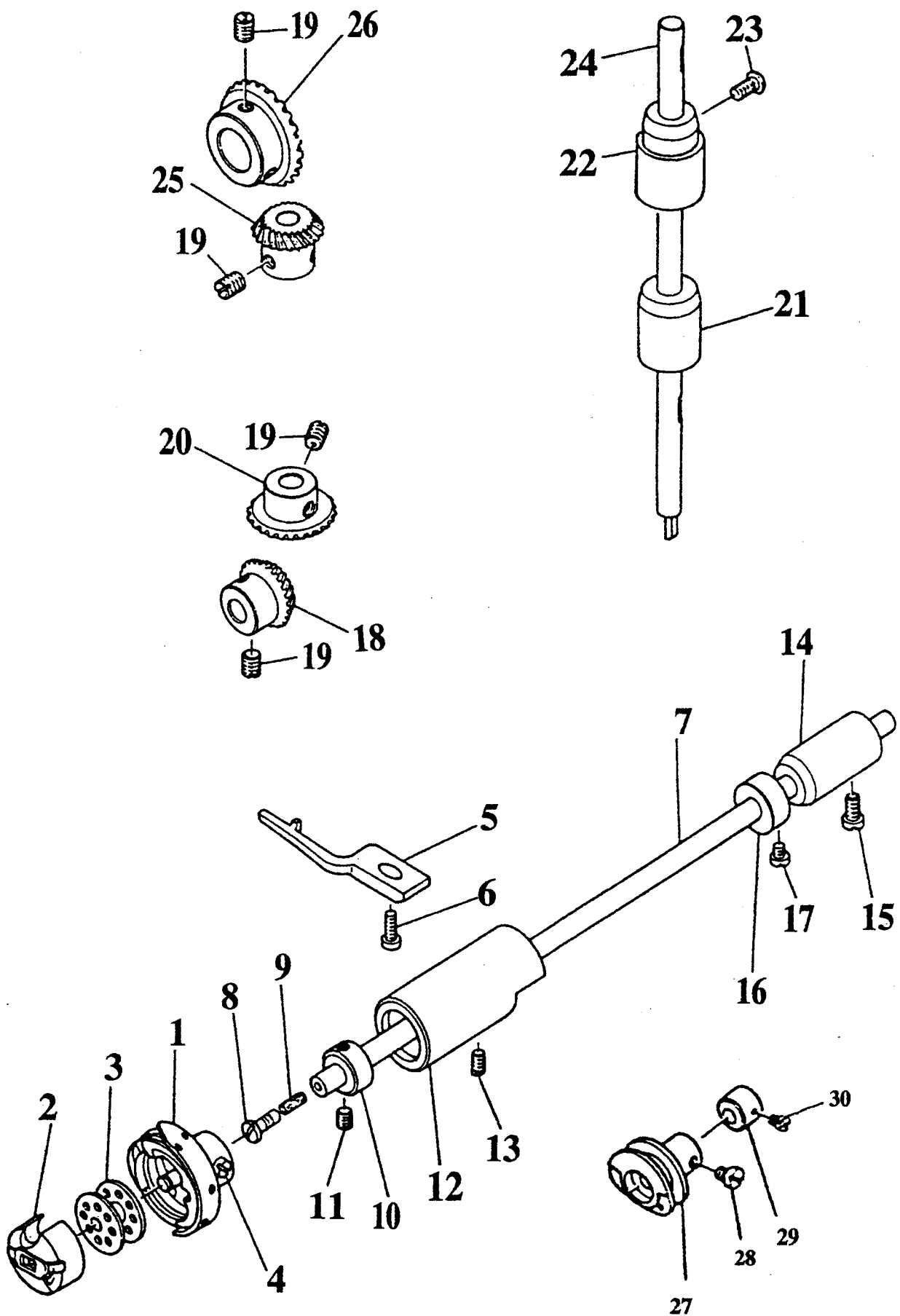
4. Presser bar & tension release components

Ref.No.	Part No.	Description	Amt.
1	GS318-8	Presser spring regulator	1
2	GL168-8	Nut 1/2-28	1
3	GR163-8	Presser guide bar	1
5	GZ231-8	Presser bar	1
6	GR614-8	Needle bar guide bracket	1
7	GS319-8	Screw 1/4-40 L=8	1
8	GR615-8	Presser bar thread guide	1
9	GS320-8	Screw 9/64-40 L=8.5	2
12	GS320-8	Screw 9/64-40 L=8.5	1
13	GR619-8	Hand lifter	1
14	GS322-8	Screw 9/64-40 L=9.5	1
15	GR620/2-8	Hand lifter cam asm.	1
16	GR621-8	Rubber ring	1
17	GR622-8	Lifting lever	1
18	GR623/3-8	Hand lifter link asm.	1
19	GS323-8	Link shaft	2
20	GR625-8	Snap ring	3
21	GR626-8	Lifting lever ring	1
22	GR627-8	Tension release plate	1
23	GS324-8	Tension release shaft	1
24	GR625-8	Snap ring	2
25	GW189-8	Tension release return spring	1
26	GR628-8	Lifting lever connecting rod	1
27	GR625-8	Snap ring	1
28	GR629-8	Lifting lever link	1
29	GS325-8	Hinge screw	1
30	GS326-8	Hinge screw	1
31	GR630-8	Connecting rod vertical	1
32	GR1023-8	Wire cable	1
33	GR1022-8	Wire tube	1
34	GS520-8	Set screw	1
35	GL6	Nut	2
36	GR1016-8	Wire holder bracket (upper)	1
37	GR1017-8	Wire holder	1
38	GS310-8	Screw 3/16-28 L=6	1
39	GS336-8	Screw 11/64-40 L=7	1
40	GR1019-8	Wire holder bracket (lower)	1
41	GS310-8	Screw	1
42	GR1018-8	Wire holder bracket (lower)	1
43	GR1017-8	Wire holder	1
44	GS010	Screw 11/64-40 L=5	1
Typical model			
4	GW187-8	Presser spring	1
10	GO268-8	Presser bar bushing lower	1
11	GM191/5-8	Presser foot asm.	1
Heavy weight material (big or small rotating hook)			
4	GW203-8	Presser spring	1
10	GO290-8	Presser bar bushing lower	1
11	GR803/5-8	Presser foot asm.	1



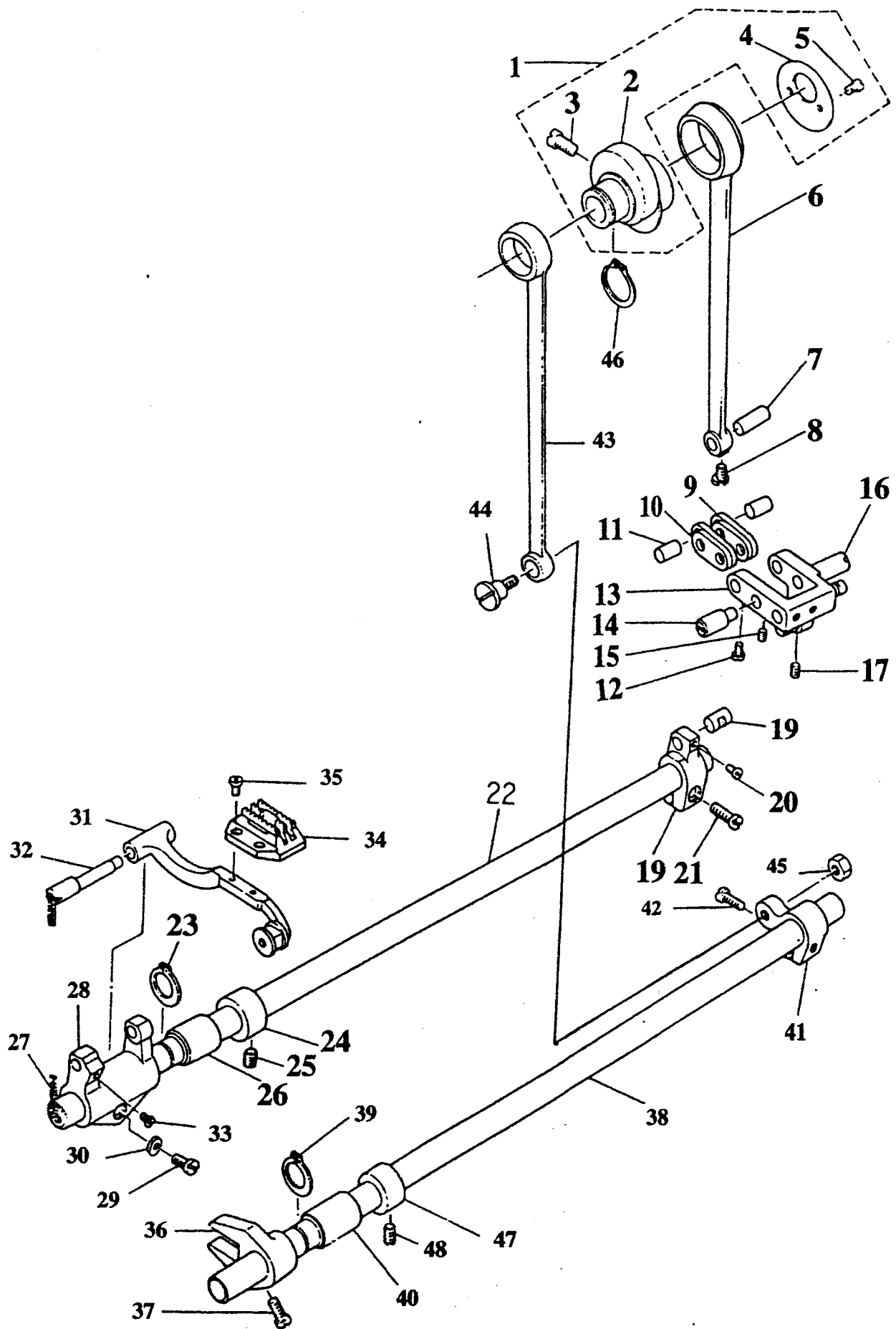
5. Hook driving shaft components

Ref.No.	Part No.	Description	Amt.
6	GS328-8	Screw 11/64-40 L=9.5	1
7	GZ233-8	Hook driving shaft	1
8	GS329-8	Oil seal screw asm	1
9	GR633-8	Oil wick	1
10	GR634-8	Thrust collar	1
11	GS330-8	Screw 11/64-40 L=3.5	2
13	GS316-8	Screw 15/64-28 L=4.7	1
14	GO270-8	Bushing rear	1
16	GR636-8	Thrust collar asm.	1
17	GS331-8	Screw 11/64-40 L=4.8	2
18	GC154-8	Pinion asm.	1
19	GS319-8	Screw 1/4-40 L=8	8
20	GC155-8	Gear asm. large	1
21	GO271-8	Upright shaft bushing, lower	1
22	GO272-8	Bushing, upper	1
23	GS403-8	Screw 12/64-28 L=9	1
25	GC156-8	Pinion asm.	1
26	GC157-8	Gear asm.	1
27	GT165-8	Thread trimmer cam asm	1
28	GS305-8	Screw 1/4-40 L=6	2
29	GO360-8	Can collar asm	1
30	GS330-8	Screw 11/64-40 L=4.5	1
Typical model			
1	GN137-8	Hook asm.	1
2	GN138-8	Bobbin case asm.	1
3	GN139-8	Bobbin	1
4	GS327-8	Screw	2
5	GR631-8	Positioning finger	1
12	GO269-8	Bushing asm. front	1
15	GS335-8	Screw 3/16-28 L=15	1
24	GZ234-8	Upright shaf	1
Heavy weight material (small rotating hook)			
1		Hook asm.	1
2	GN138-8	Bobbin case asm.	1
3	GN139-8	Bobbin	1
4	GS327-8	Screw	2
5	GR631-8	Positioning finger	1
12	GO269-8	Bushing asm front	1
15	GS335-8	Screw 3/16-28 L=15	1
24	GZ234-8	Upright shaf	1
Heavy weight material (big rotating hook)			
1		Hook asm.	1
2		Bobbin case asm.	1
3	GR655-8	Bobbin	1
4	GS327-8	Screw	2
5	GR818-8	Positioning finger	1
12	GO291-8	Bushing asm front	1
15	GS402-8	Screw	1
24	GZ252-8	Upright shaf	1



6. Feed mechanism components

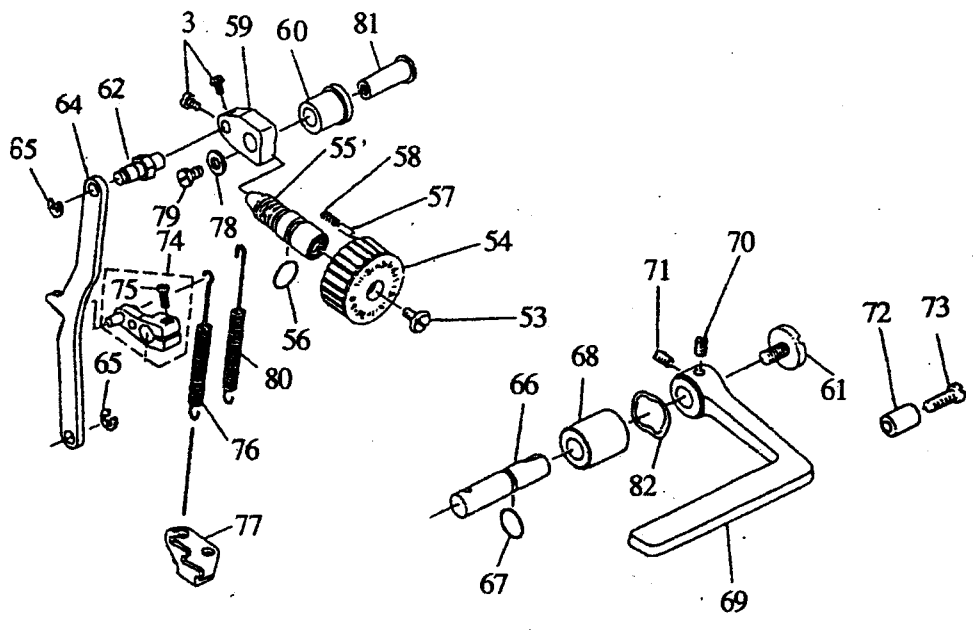
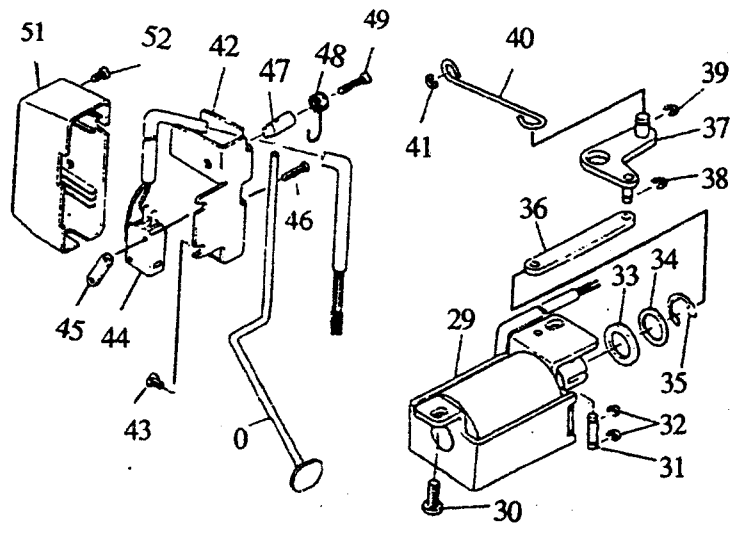
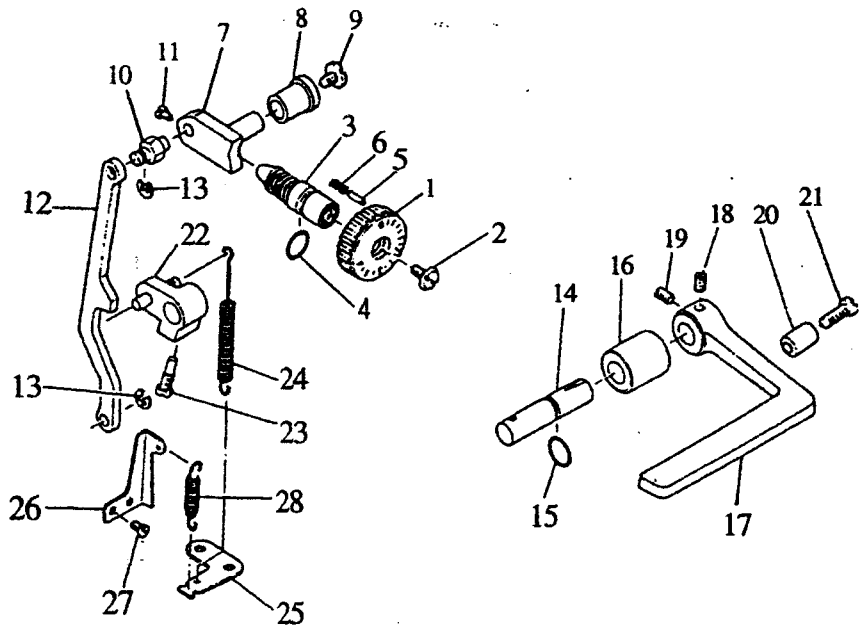
Ref.No.	Pant No	Description	Amt.
7	GX204-8	Walking foot pin	1
8	GS333-8	Screw 9/64-40 L=6	1
9	GR639-8	Walking foot link	2
10	GR640-8	Connecting link	2
11	GX205-8	Walking foot pin	2
12	GS333-8	Screw 9/64-40 L=6	2
14	GX207-8	Adgusting link fulcrum shaft	1
15	GS316-8	Screw 15/64-28 L=7	1
16	GX207-8	Adgusting link fulcrum shaft	1
17	GS316-8	Screw 15/64-28 L=7	1
19	GX208-8	Walking foot pin	1
20	GS333-8	Screw 9/64-40 L=6	1
21	GS334-8	Screw 3/16-28 L=14	1
22	GZ235-8	Feed rocker shaft	1
23	GR643-8	Retaining ring	1
24	GR589-8	Thrust collar asm.	2
25	GS305-8	Screw 1/4-40 L=6	1
26	GO273-8	Feed rocker shaft bushing	1
27	GR644-8	Oil wick	1
28	GR807-8	Feed rocker asm.	1
29	GS335-8	Screw 3/16-28 L=14	1
30	GR646-8	Washer	1
31	GR809/4-8	Feed bar asm.	1
32	GX222-8	Feed bar shaft	1
33	GS336-8	Screw 11/64-40 L=7	1
35	GS337-8	screw 1/8-44 L=6	2
36	GH216-8	Driving shaft crank asm.front	1
37	GS340-8	Screw 11/64-40 L=10.5	1
38	GZ236-8	Feed driving shaft	1
39	GR643-8	Retaining ring	1
40	GO273-8	Feed rocker shaft bushing	1
41	GH217-8	Rear crank asm.	1
42	GS334-8	Screw 3/16-28 L=12	1
43	GH218-8	Connecting rod	1
44	GS341-8	Hinge screw	1
45	GL169-8	Nut 9/32-28	1
46	GR650-8	Snap ring	1
47	GR589-8	Thrust collar asm.	1
48	GS305-8	Screw 1/4-40 L=6	2
Typical model			
1		Feed drive eccentric cam asm.	1
2	GT156-8	Feed drive eccentric cam	(1)
3	GS332-8	Screw 1/4-40 L=11	(2)
4	GR638-8	Thrust collar	(1)
5	GS311-8	Screw 9/64-40 L=5	(2)
6	GH214-8	Rocker shaft connecting rod	1
13	GR1024/3-8	Walking foot adjust link	1
18	GH215-8	Feed rocker shaft crank asm	1
34	GM192-8	Feed dog	1
Heavy weight material (big or small rotating hook)			
1		Feed drive eccentric cam asm.	1
2	GT159-8	Feed drive eccentric cam	(1)
3	GS332-8	Screw 1/4-40 L=11	(2)
4	GR808-8	Thrust collar	(1)
5	GS311-8	Screw 9/64-40 L=6	(2)
6	GH353-8	Rocker shaft connecting rod	1
13	GR1086/3-8	Walking foot adjust link	1
18	GH354-8	Feed rocker shaft crank asm	1
34	GM174-8	Feed dog	1



7. Feed regulating components

Ref.No.	Part No.	Description	Amt.
29	GR1030-8	Reverse feed magnet asm.	1
30	GS525-8	Screw 15/64-28 L=12	2
31	GX248-8	Plunger arm pin	1
32	GR1028-8	Snap ring	2
33	GO362-8	Rubber plunger	1
34	GO363-8	Washer	1
35	GR1027-8	Snap ring	1
36	GH387-8	Reverse feed connecting link	1
37	GR1031/3-8	Connecting arm asm.	1
38	GR1028-8	snap ring	1
39	GR625-8	Snap ring	1
40	GR1029-8	Reverse feed connecting shaft	1
41	GR625-8	Snap ring	1
42	GR1034-8	Reverse feed switch base	1
43	GS300-8	Screw 3/16-28 L=9	2
44	GD135-8	Reverse feed switch	1
45	GR1035-/8	Reverse feed switch plate	1
46	GBS205-8	Screw M3×16	2
47	GX251-8	Reverse feed switch shaft	1
48	GW235-8	Reverse feed switch spring	1
49	GS079	Screw	1
50	GR1036/2-8	reverse feed switch lever	1
51	GR1033-8	reverse feed switch lever	1
52	GS336-8	Screw 11/64-40 L=6	1
Typical model			
1	GR1026-8	Fdde dial	1
2	GS342-8	Screw 3/16-28 L=9.0	1
3	GS343-8	Feed regulator screw	1
4	GR653-8	Rubber ring	1
5	GX211-8	Pin	1
6	GR191-8	Spring	1
7	GR654-8	Feed regulator	1
8	GO274-8	Feed regulator bushing	1
9	GS344-8	Screw	1
10	GX212-8	Feed regulator pin	1
11	GS311-8	Screw 9/64-40 L=6	2
12	GH386-8	Feed regulator connecting rod	1
13	GR625-8	Snap ring	2
14	GZ237-8	Feed reverse shaft	1
15	GR655-8	Rubber ring	1
16	GO275-8	Feed lever metal	1

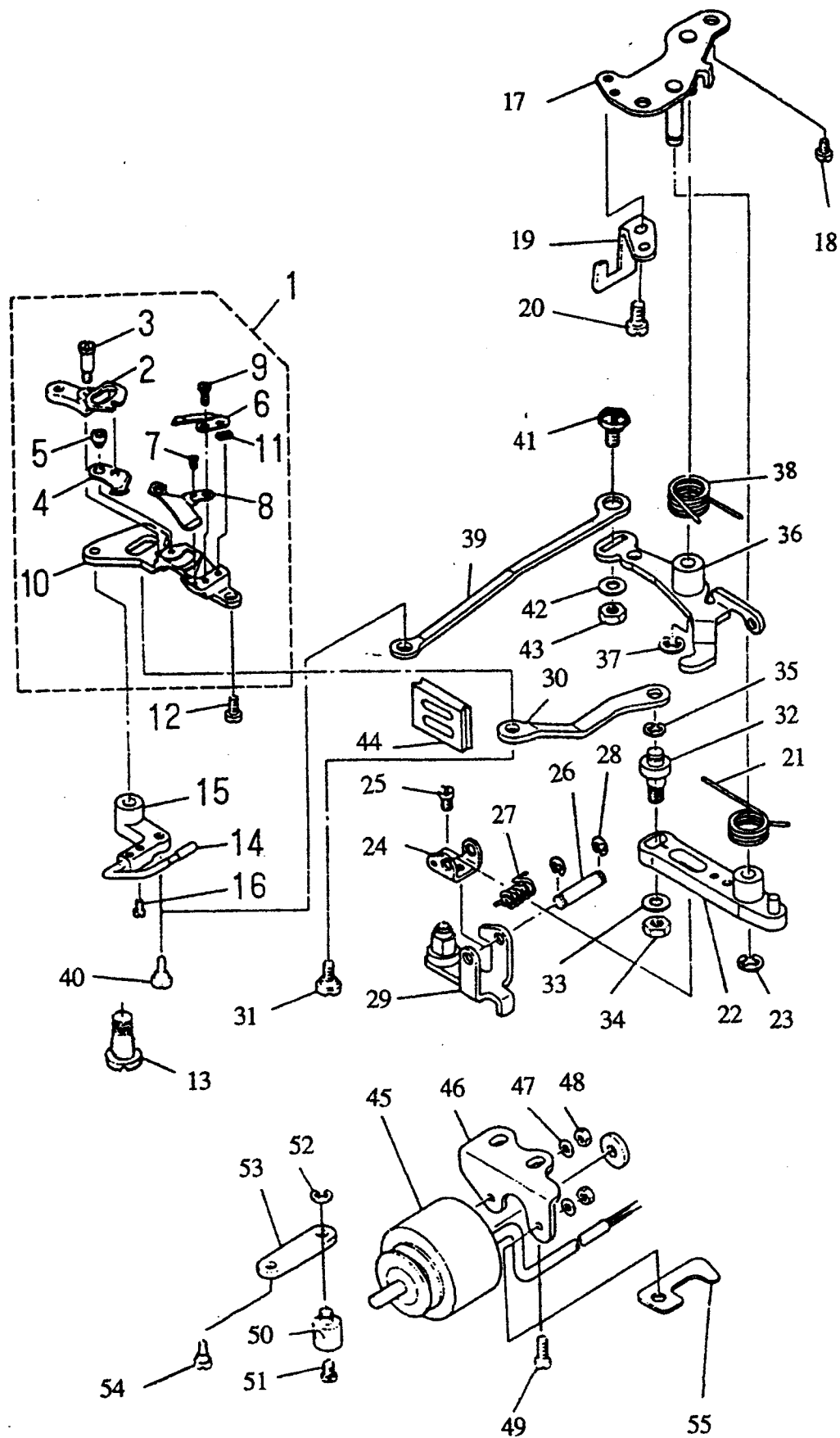
Ref.No.	Part No.	Description	Amt.
17	GR656-8	Reverse feed control lever	1
18	GS319-8	Screw 1/4-40 L=8	1
19	GS319-8	Screw 1/40-10 L=8	1
20	GO361-8	Reverse feed lever stopper	1
21	GS521-8	Screw 3/16-28 L=18	1
22	GH343/2-8	Feed reverse arm asm.	1
23	GS346-8	Feed reverse arm screw	1
24	GW204-8	Feed reverse spring	1
25	GR657-8	Feed spring hook	1
26	GR658-8	Addgusting link spring guide	1
27	GS347-8	Screw 11/64-40 L=5	2
28	GW241-8	Adgusting link spring	1
Heavy weight material (big or small rotating hook)			
53	GS342-8	Screw	1
54	GR813-8	Feed dial	1
55	GS343-8	Feed regulator screw	1
56	GR653-8	Rubber ring	1
57	GX211-8	Pin	1
58	GW191-8	Spring	1
59	GR814-8	Feed regulator	1
60	GO274-8	Feed regulator bushing	1
61	GS051	Screw	1
62	GX223-8	Feed regulator pin	1
63	GS311-8	Screw 9/64-40 L=6	2
64	GH355-8	Feed regulator connecting rod	1
65	GR625-8	Snap ring	2
66	GZ253-8	Feed reverse shaft	1
67	GR655-8	Rubber ring	1
68	GO275-8	Feed lever metal	1
69	GR656-8	Reverse feed control lever	1
70	GS319-8	Screw 1/4-40 L=8	1
71	GS319-8	Screw 1/4-40 L=8	1
72	GO361-8	Reverse feed lever stopper	1
73	GS521-8	Screw 3/16-28 L=18	1
74	GH356/3-8	Feed reverse arm asm	1
75	GS407-8	Screw	1
76	GW204-8	Adgusting link spring	1
77	GR816-8	Feed spring hook	1
78	GR817-8	Reverse feed lever stopper	1
79	GS408-8	Screw	1
80	GW205-8	Feed reverse spring	1
81	GZ254-8	Feed regulator shaft	1
82	GR815-8	Feed lever spring ring	1



8. Thread trimmer componens

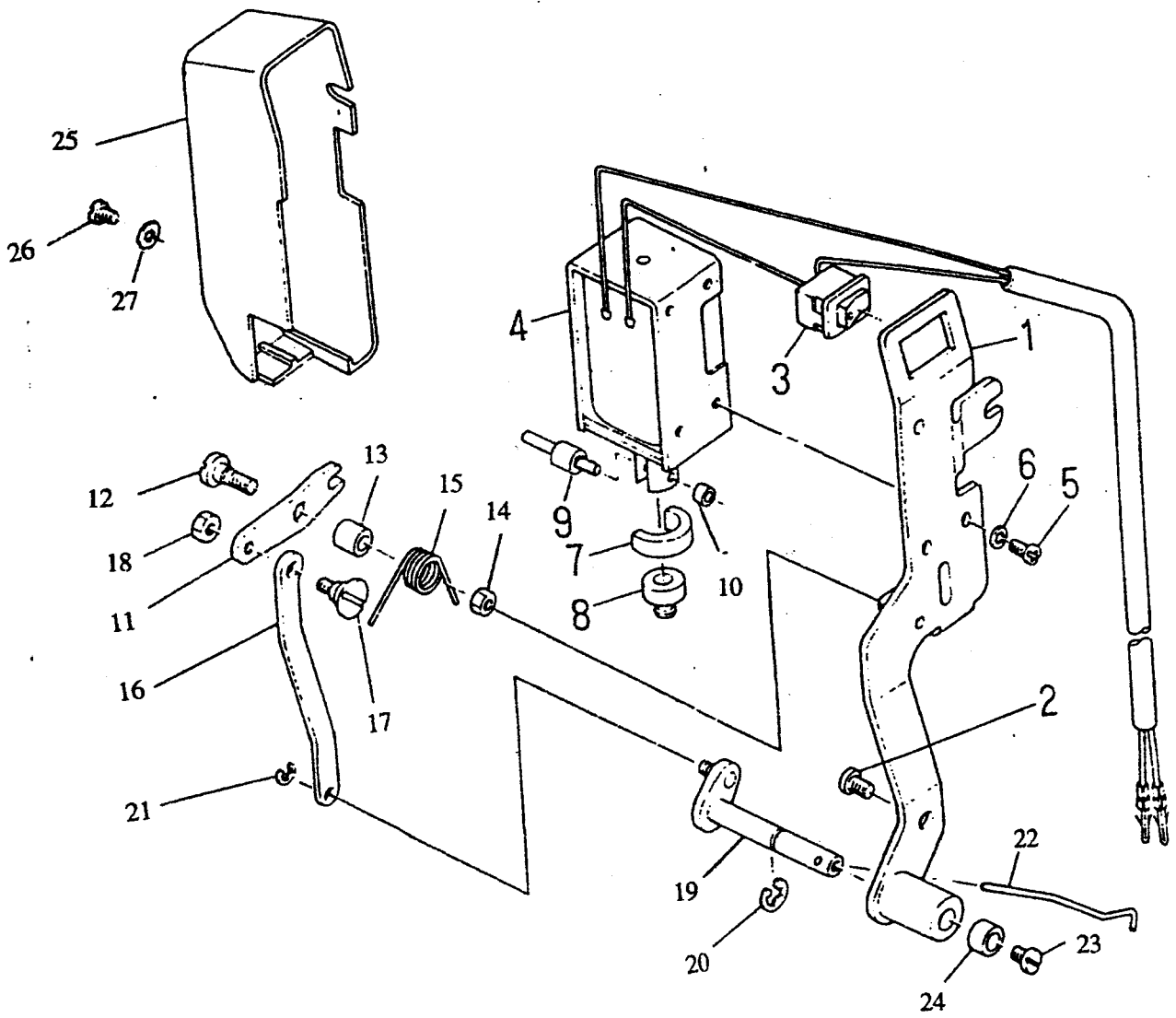
Ref.No.	Part No.	Description	Amt.
12	GS340-8	Screw 11/64-40 L=7	1
13	GS522-8	Thread take-up screw	1
14	GR1051/4-8	Thread take-up picker asm.	1
16	GS333-8	Screw 9/64-40 L=5	2
17	GR1056/2-8	Base plate asm.	1
18	GS525-8	Screw 15/64-28 L=9	2
19	GR1054-8	Driving arm stopper asm.	1
20	GS336-8	Screw 11/64-40 L=7	1
21	GW237-8	Clutch spring	1
22	GR1059/2-8	Clutch plate asm.	1
23	GR1053-8	Snap ring	1
24	GR1058-8	Roller arm bracket	1
25	GS33	Screw 9/64-40 L=6	1
26	GX256-8	Roller fulcrum shaft	1
27	GW239-8	Roller return spring	1
28	GR1028-8	Snap ring	2
29	GR1061/4-8	Roller arm asm.	1
31	GS524-8	Screw	1
32	GX253-8	Moving knife link pin	1
33	GR366-8	Washer	1
34	GL182-8	Nut	1
35	GR625-8	Snap ring	1
36	GR10632-8	Clutch plate asm.	1
37	GR1053-8	Snap ring	1
38	GW238-8	Clutch spring	1
40	GS523-8	Hinge screw	1
41	GX254-8	Picker link pin	1
42	GO366-8	Washer	1
43	GL182-8	Nut	1
44	GR1055-8	Oil shield plate	1
45	GR1067/5-8	Thread trimmer solenoid	1
46	GR1066-8	Solenoid base	1
47	GKR202-8	Washer	2
48	GKL201-8	Nut	2
49	GS525-8	Screw 15/64-28 L=12	2
50	GR1065-8	Solenoid pin	1
51	GS336-8	Screw 11/64-40 L=7	1
52	GR625-8	Snap ring	1
53	GH390-8	Clutch link	1
54	GS526-8	Hinge screw	1
55	GR671-8	Tube holder	1

Typical model Heavy weight material (small rotating hook)			
1	GR1040/10-8	Knife unit	1
2	GR1045-8	Forked base for knife	(1)
3	GS529-8	Hinge screw	(1)
4	GR1049/2-8	Moving knife asm.	(1)
5	GS528-8	Moving knife hinge screw	(1)
6	GR1046-8	Counter knife	(1)
7	GS66	Screw 1/8-44 L=6	(2)
8	GR1047-8	Thread guide for knife	(1)
9	GS527-8	Screw 3/32-56 L=2.3	(1)
10	GR1041-8	Knife mounting base	(1)
11	GR1048-8	Counter knife spacer	(1)
15	GR1039-8	Picker arm	1
30	GH388-8	Moving knife link	1
39	GH389-8	Picker link	1
Heavy weight material (big rotating hook)			
1	GR1089/10-8	Knife unit	1
2	GR1045-8	Forked base for knife	(1)
3	GS529-8	Hinge screw	(1)
4	GR1049/2-8	Moving knife asm.	(1)
5	GS528-8	Moving knife hinge screw	(1)
6	GR1046-8	Counter knife	(1)
7	GS66	Screw 1/8-44 L=6	(2)
8	GR1047-8	Thread guide for knife	(1)
9	GS527-8	Srew 3/32-56 L=2.3	(1)
10	GR1090-8	Knife mounting base	(1)
11	GR1048-8	Counter knife spacer	1
15	GR1088-8	Picker arm	1
30	GH395-8	Moving knife link	1
39	GH396	Picker link	



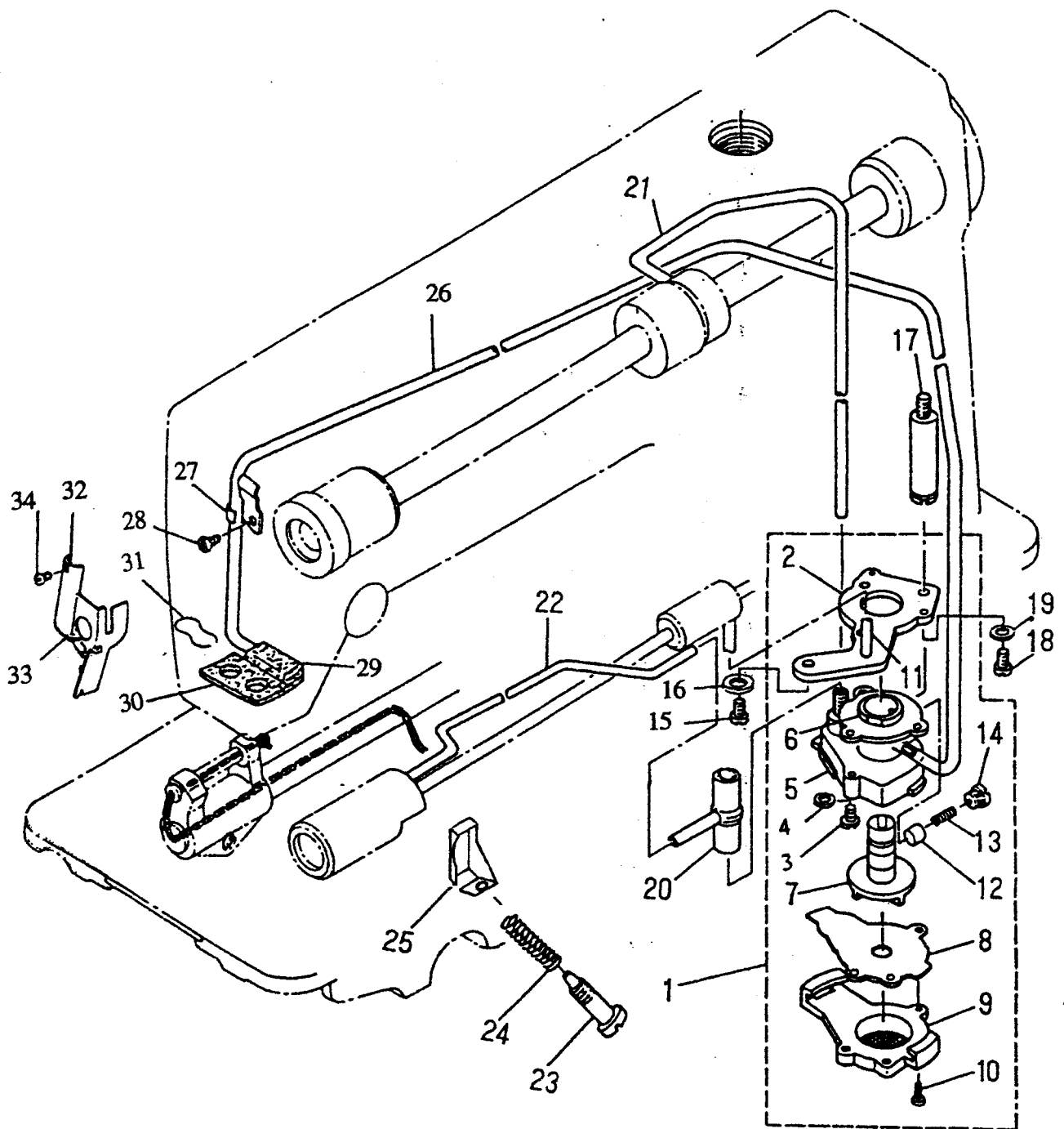
9. Wiper components

Ref.No.	Part No.	Description	Amt.
1	GR1075/2-8	Wiper base asm.	1
2	GS300-8	Screw 3/16-28 L=9	1
3	GD136-8	Power source switch asm.	1
4	GR1078-8	Wiper solenoid	1
5	GBS206-8	Screw M3×0.5 L=6	3
6	GBR215-8	Spring washer	3
7	GR1074-8	Wiper rubber	1
8	GR1073-8	Wiper rubber	1
9	GX258-8	Wiper solenoid pin	1
10	GO376-8	Wiper link collar	1
11	GR1081-8	Wiper link	1
12	GS532-8	Hinge screw	1
13	GO375-8	Wiper hinge screw collar	1
14	GL185-8	Nut	1
15	GW240-8	Wiper Spring	1
16	GH391-8	Connecting Link	1
17	GS531-8	Wiper link hinge screw	1
18	GL186-8	Nut	1
19	GR1077/3-8	Wiper driving shaft asm.	1
20	GR625-8	Snap ring	1
21	GR1072-8	Snap ring	1
22	GR1071-8	Wiper	1
23	GS530-8	Screw 9/64-40 L=5	1
24	GO374-8	Bracket installing collar	1
25	GR1070-8	Wiper cover	1
26	GBS206-8	Screw M3×0.5 L=6	1
27	GBR216-8	Wiper cover spring washer	1



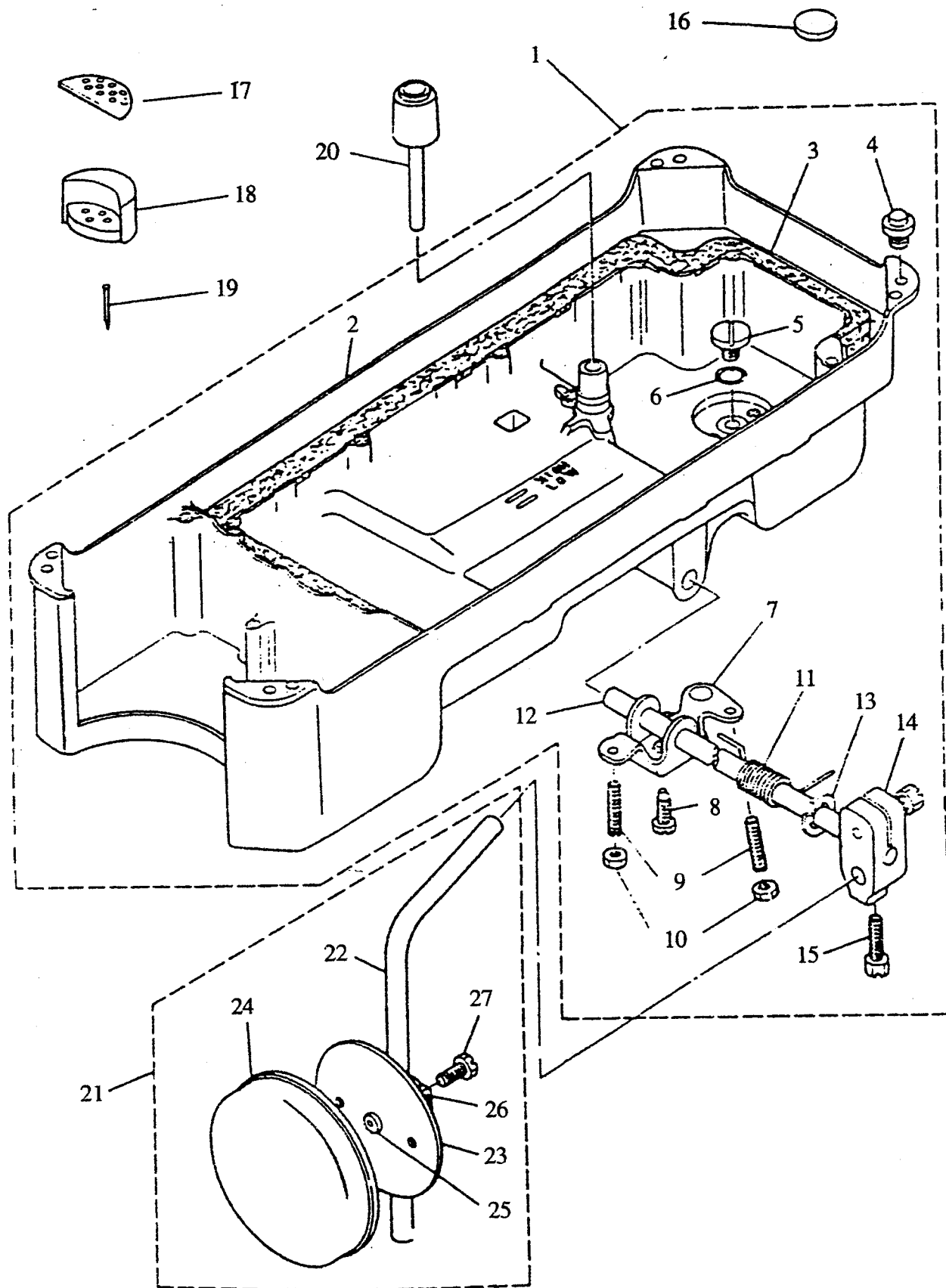
10. Lubrication components

Ref.No.	Part No.	Description	Amt.
1	GR659/20-8	Lubricating oil pump asm.	1
2	GR660-8	Oil pump installing base	(1)
3	GS348-8	Screw 15/64-28 L=9	(3)
4	GR661-8	Washer	(3)
5	GR662-8	Oil pump	(1)
6	GO276-8	Oil pump bushing	(1)
7	GR663-8	Oil pump impeller	(1)
8	GR664-8	Oil pump impeller cover	(1)
9	GR665/2-8	Lubricating oil pump cover	(1)
10	GS349-8	Screw	(3)
11	GR667-8	Hook driving shaft oil tube	(1)
12	GR666-8	Plunger	(1)
13	GW194-8	Plunger spring	(1)
14	GS350-8	Plunger screw	(1)
15	GS353-8	Screw	1
17	GS533-8	Oil pump support	1
18	GS328-8	Screw 11/64-40 L=9.5	1
19	GR1079-8	Washer	1
20	GR668-8	Rubber joint	1
21	GR669-8	Main shaft oil tube	1
22	GR670-8	Oil tube	1
23	GS352-8	Oil adjusting screw	1
24	GW195-8	Spring	1
25	GR1080-8	Oil shield guard	1
26	GR674-8	Oil return tube	1
27	GR675-8	Oil return tube holder	1
28	GS310-8	Screw 3/16-28 L=6	1
29	GR676-8	Anti-dust oil felt	1
30	GR677-8	Oil felt	1
31	GR678-8	Oil felt presser	1
32	GR680-8	Arm oil shield	1
33	GR756-8	Oil wick	1
Typical model			
34	GS354-8	Screw 1/8-44 L=4	1
Heavy weight material (big or small rotating hook)			
34	GS415-8	Screw 1/8-44 L=2.5	1



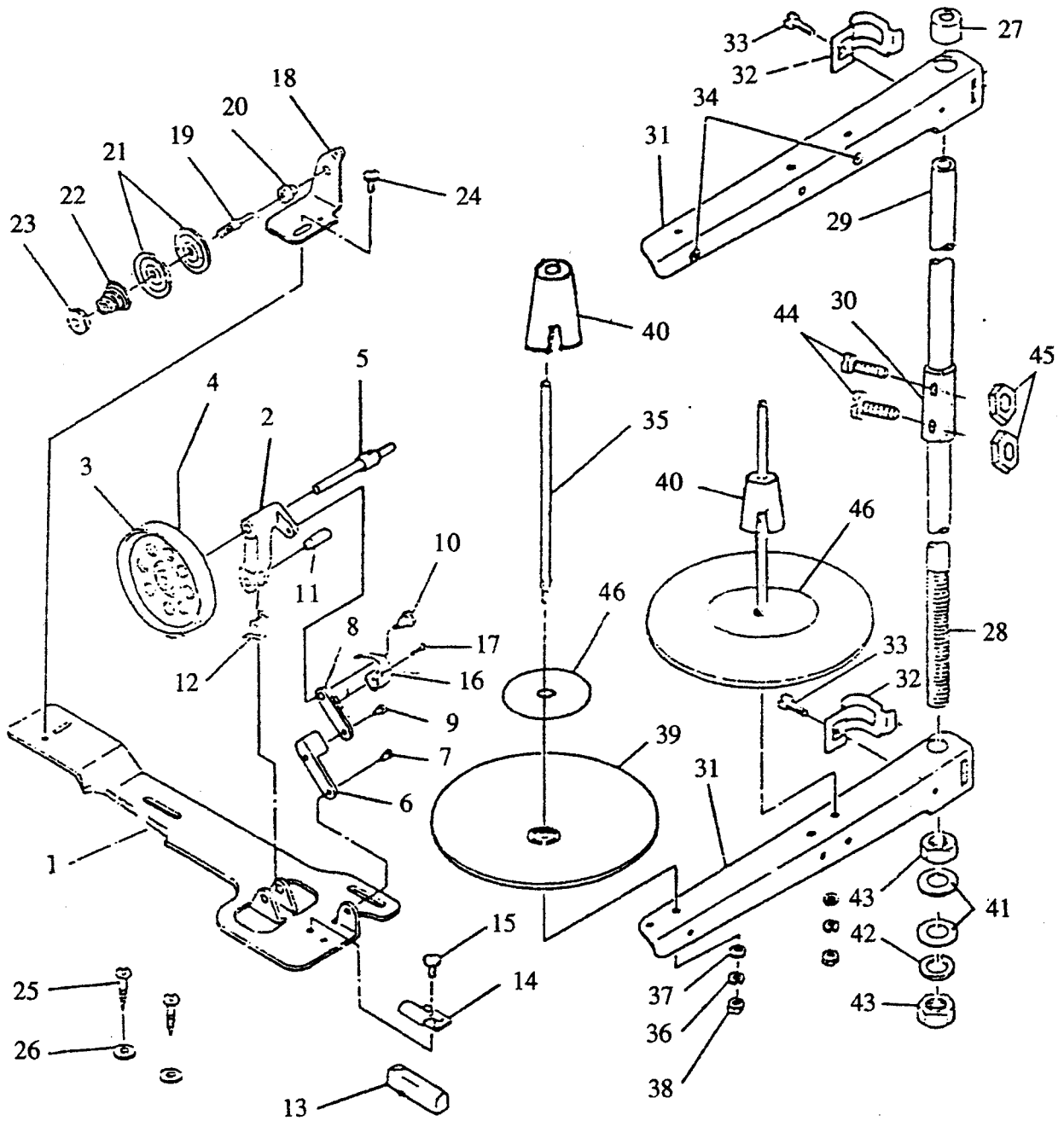
11. Pressor foot components of oil plate knee lift

Ref.No.	Part No.	Description	Amt
1	GR680/20-8	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	(2)
10	GL170-8	Banking nut of two-way crank	(2)
11	GW196-8	Twisting spring of two-way	(1)
12	GX238-8	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	(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	(1)



12. Components of bobbin winder and thread-running stand

Ref.No.	Part No.	Description	Amt
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
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	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 unit	1
24	GS368-8	Fastening screw of thread running and holding	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
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



13. Auxiliaries

Ref.No.	Part No.	Description	Amt
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
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
Typical model			
15	GV132-8	Machine needle	1
Heavy weight material (small rotating hook)			
15	GV138-8	Machine needle	1
Heavy weight material (big' rotating hook)			
15	GV134-8	Machine needle	1

