

LANMAX

9950

HIGH-SPEED LOCKSTITCH SEWING MACHINE

OPERATION MANUAL

PARTS SAMPLE BOOK

NOTES ON SAFETY

1. Before operation, please read the instruction manual carefully.
2. Oil the machine well before you put it into operation.
3. Make sure that the motor are same as the power supply, read the manual of motor thoroughly then operate as requirement.
4. When the machine runs, the balance wheel must rotate with the direction of the arrow head on the wheel.
5. When operating the machine, do not touch the needle or put your hand under the needle.
6. Do not put your hand into the cover of thread take-up bar when operating the machine.
7. Must cut off the power supply when you turn the head and dismantle the belt.
8. When you leave the machine, please cut off the power.
9. When the machine runs leave everything away from the wheel, belt, bobbin winder and motor.
10. Just when stop the motor, you can assemble and disassemble the belt cover, Protecting cover finger protector and other protecting installation parts.
11. The surface of the machine head can't be cleaned with paint dilution such as banana oil.
12. When the operator feed the material by hand, do not put the finger to the finger guard.
13. Date of product and mfg. of machine, please refer to inspection.

MFG.

The diagram illustrates the hierarchy of data storage. It consists of three levels of boxes, each level representing a different time scale. The top level has three boxes, the middle level has four boxes, and the bottom level has five boxes. Lines connect the boxes between levels, showing how data is aggregated from a more granular level to a less granular one. The labels 'producing order', 'month', and 'year' are placed to the right of the diagram, corresponding to the three levels respectively.

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graph TD
    subgraph Producing_Order [producing order]
        direction LR
        PO1[ ]
        PO2[ ]
        PO3[ ]
        PO4[ ]
        PO5[ ]
    end
    subgraph Month [month]
        direction LR
        M1[ ]
        M2[ ]
        M3[ ]
        M4[ ]
    end
    subgraph Year [year]
        direction LR
        Y1[ ]
        Y2[ ]
    end
    PO1 --- M1
    PO2 --- M1
    PO3 --- M2
    PO4 --- M2
    PO5 --- M3
    M1 --- Y1
    M2 --- Y1
    M3 --- Y2
    M4 --- Y2
  
```

For example: mfg. — 980800088 that is said the product was made in AUG.1998 and the 88th set.

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1. INTRODUCTION

This single needle machine is manufactured for artisan lockstitch sewing machine and is suited for sewing light weight and medium weight material, which equipped with automatic oil system, including the automatic oil of the rotating hook and also equipped with control valve. For adopting rolling needle bearing in thread take-up structure, lifting shaft and feeding shaft of feeding structure is the same shaft of high-speed, machine. The durability is greatly increase and the stitch is exquisite. It is the ideal sewing equipment used in the trade of garment, shoes and hats, which is suitable for knitting, cotton, wool, fabric and light leather.

2. MAIN TECHICAL SPECIFICATIONS

MAIN TECHNICAL SPECIFICATIONS

1	Max.sew speed	4200 spm
2	Max.stitch length	4.0mm
3	Presetr foot lifting highth	6.0mm (knee lifter be to 10.0mm)
4	Ability of max.sewing thickness	5.0mm (free state)
5	Needle size	GV3 (16×231) #65 ~ #110
6	Lubricating oil	10#White oil
7*	Motor power	370W
8	Head dimension (L×W×H)	515×180×340mm
9	Net weight	26kg
10	Gross weight	32kg
11**	Noise	Normal condition with speed of 3780spm, <=85db

*Motor should be conform to QB1179-91, please to the operate instruction.

**Test of noise should be carried on as QB1177-91.

3. INSTALLATION OF MACHINE AND OPERATION PREPARATION

1、Installation of machine:

(1) Place of installation:

The machine should be installed on a strong base to ensure the machine to have a

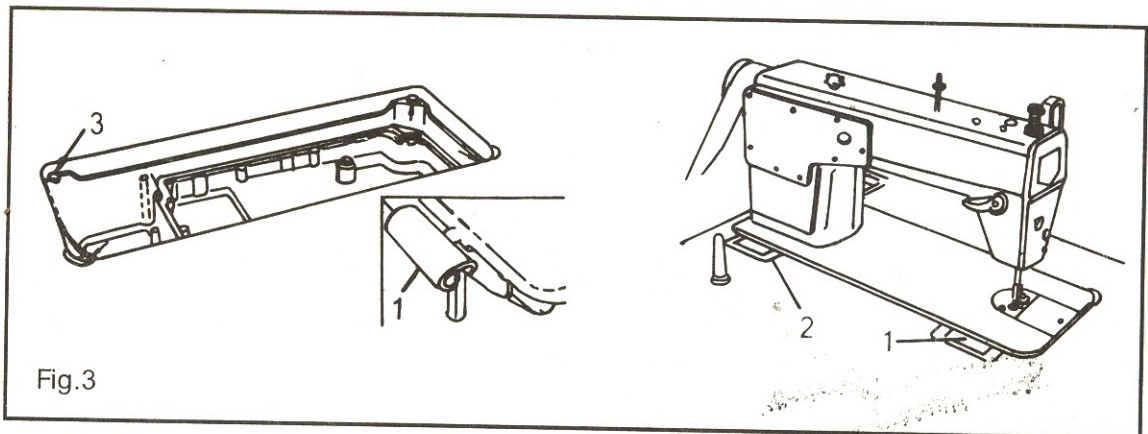
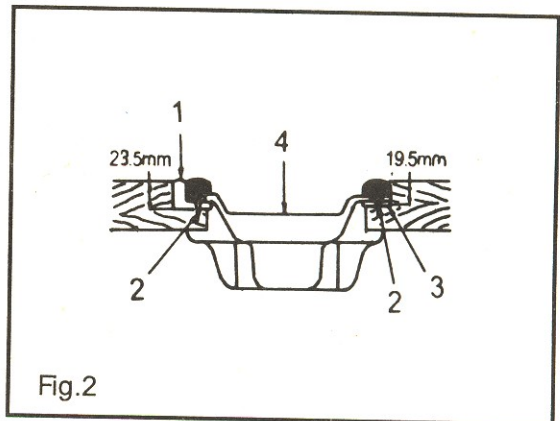
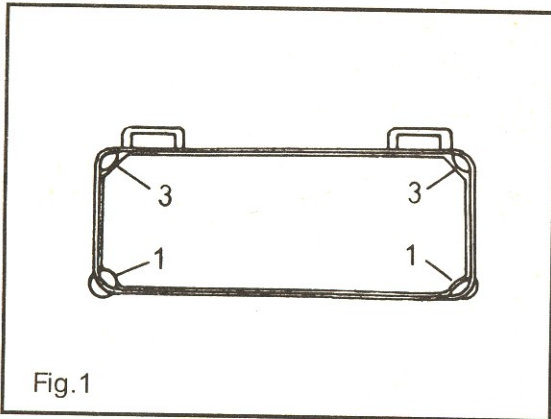
steady running and minimum vibration at high speed, If the four rubber mats on the feet of the sewing machine stand have a good connection with ground, it results in lower noise in operation.

(2) Fitting oil pan:

Put the oil rubber cushions(1) and oil pan felt cushions (3) separately on four corners of notch of the table, fix them with the screw of oil pan(2), then install the oil pan(4). (Fig.1,2)

(3) Fitting machine head:

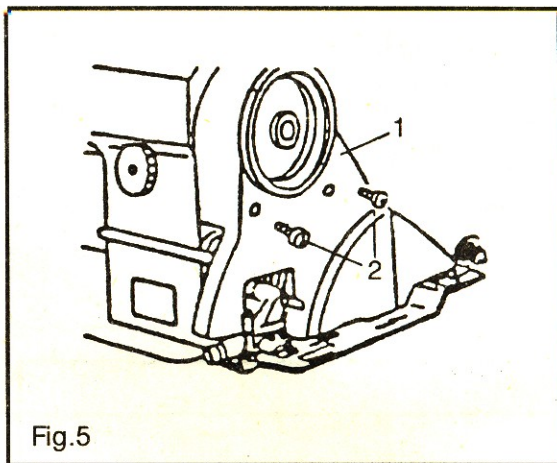
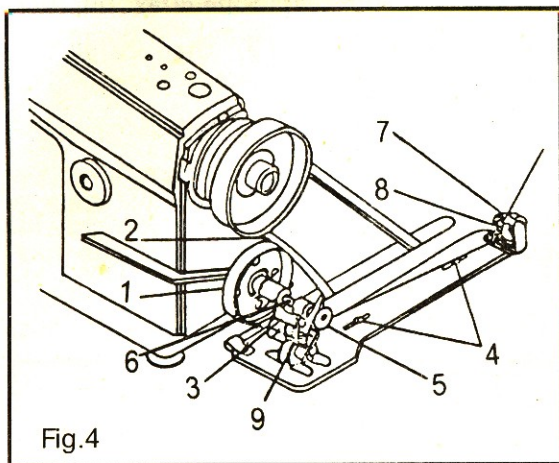
Put the machine head connecting hooks (1) into the bed holes to engage respectively two hinges (2) stated in the table, then place the machine on the four cushions (3). (Fig.3)



(4) Fitting thread winder:

After fitting machine head and the belt, the thread winder can be fitted. In Fig.4 when fitting winder, the winder wheel 1 should face the outside of belt 2. Between

winder wheel and belt should have a certain clearance. If push down winder wheel stand 3, the winder wheel should touch the belt. And when balance wheel running, the belt can make the winder wheel run together, then tighten screw 4 to set the thread winder on the talbe.

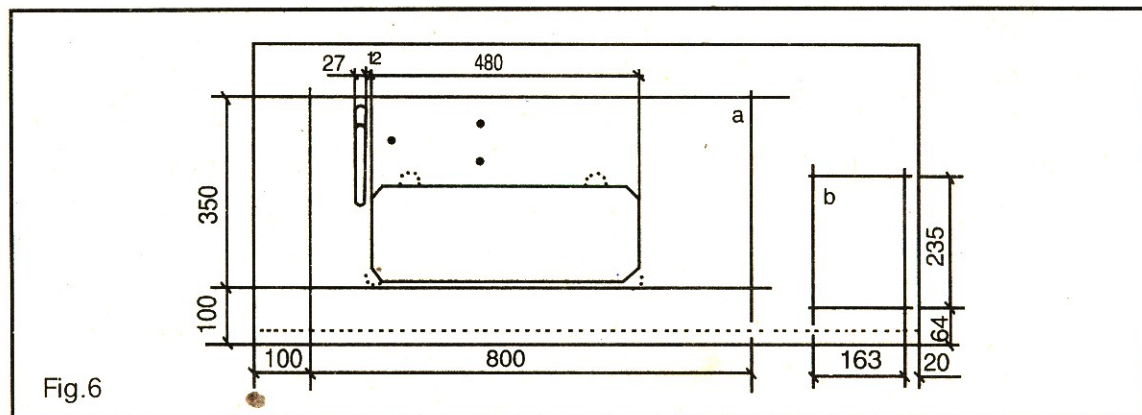


(5) Installing the belt cover (Fig.5)

After fitting the winder, you can install the belt cover. Fit the part (1) of belt cover on bed shaft, then install the cover on the head with screw (2). Note: The belt cover cannot hit the bobbin winder part (3) and table.

(6) Sketch of stand installation and requirement of table dimensions (Fig.6)

- Position of machine stand.
- Posititon of drawer.
- The dimensions and position of the machine head driving belt groove and oil reservoir groove. (Fig.6)



2. Operation preparation:

(1) Cleaning:

Before packing each part of the machine, should be covered with antirust grease, And before operation new machine, antirust grease on each part of machine should be cleaned out with gasoline and clean with soft cloth.

(2) Inspection:

Some parts of machine head may get loose due to vibration incurred in transit of rough handling, so after cleaning, the machine should be thoroughly inspected. To check the machine head by means of turning balance wheel. The machine head must be regulated in the case of conditions such as abnormal noise from the compact of moving parts, the difficulty of the machine head to run. running into each other of moving parts.

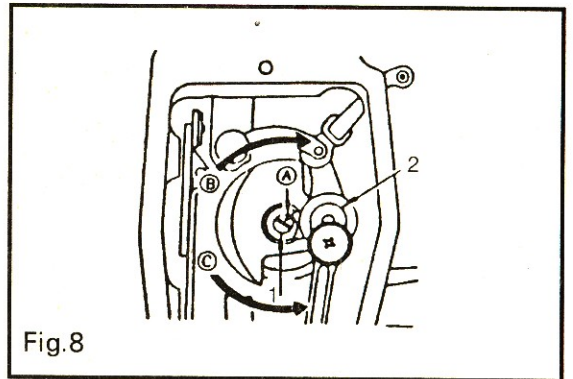
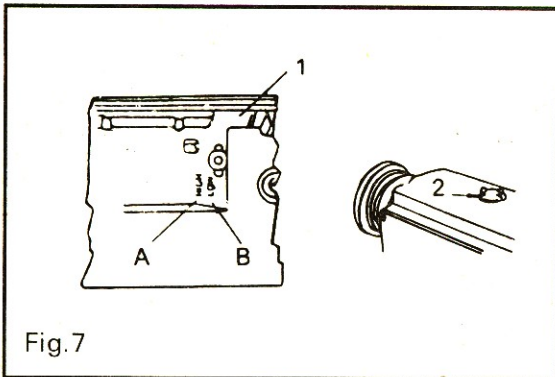
(3) Lubrications.

a. Information for lubrication:(Fig.7)

Before starting the machine, fill oil pan with sewing machine(10# white oil) up to HIGH mark A. When you operate the machine after lubrication, you will see splashing oil through oil sight window, Note that the amount the splashing oil is unrelated to the amount of the lubrication oil, But if the oil level is lower that LOW mark B, always refill the oil.

* Note: New machine (or those who have not been used for a long time) must be operated at a speed of 1500 s.p.m off and on for 10 minutes at first.

b. Adjusting the amount of oil supplied in the front of head (Fig.8):



a) Turn oil follow regulating pin 1 to adjust the of thread take-up crank.

b) Turn the pin to the direction B, when the point A close to the crank, the amount of oil is minimum.

c) Turn the pin to the direction C, when the point A deviate from the crank, the amount of oil is maximum.

c. Adjusting the oil of rotary hook (Fig.9)

While turning the adjusting screw on the lower shaft bush to "+", the amount of oil will increase; while turning the adjusting screw to "—" the amount of oil will decrease.

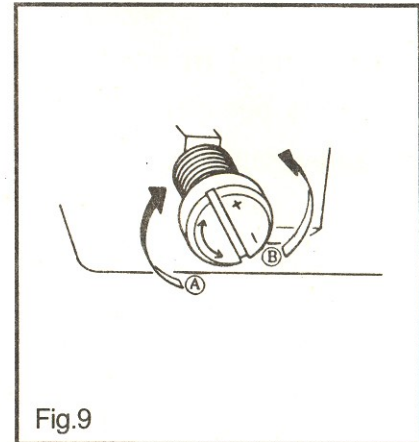


Fig.9

(4) Testing:

a. When machine running, the balance wheel should be counter clockwise,

b. The machine can not run without materials after threading,

c. At the beginning of operating, the speed of machine can be over 2500spm. Only after one or two months of running, the speed of the machine can be increased as per nature of fabrics.

4. OPERATION

1. Selection of sewing thread:

Needle thread should be left twisting. (Fig.10)

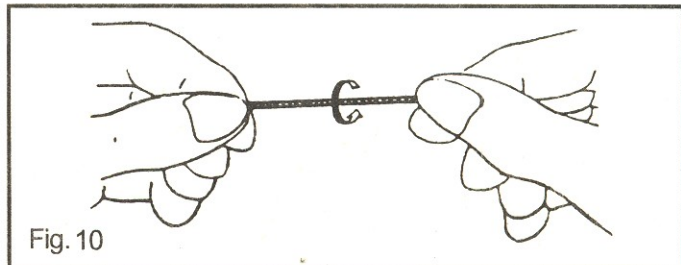


Fig.10

2. Coordination of needle thread and material:

DP × 5 needles chosen in preference, The number of needle can be selected in line with the material and thread used (See the following table)

Needle No.	No. and kind of thread			For sewing
	Cotton	silk	Nylon	
#9	100-120	30		Gauze, light silk and thin haircords
#11	80-100	24-30	3-56	Gunny, thin cotton, silk and poplin
#14	60-80	20		Coarse cloth, khakt, light woolen cloth
#16	40-60	16-18		Coarse and heavy cotton coth, thin flannelette and corduroy
#18	30-40	10-12		Heavy flannelette, thin canvas and heavy woolen cloth

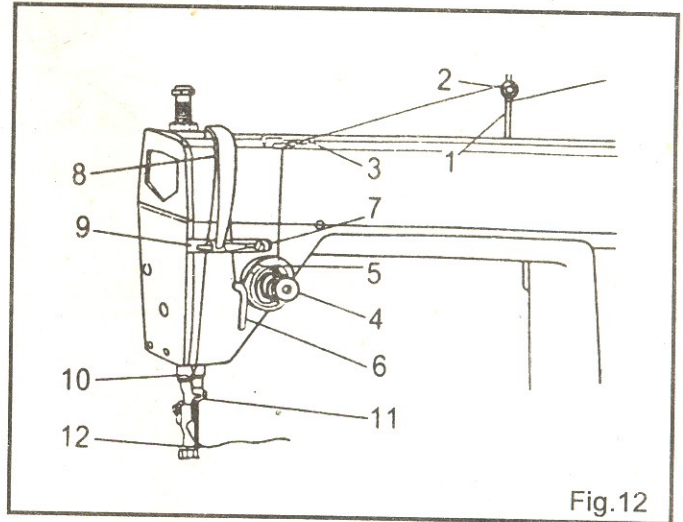
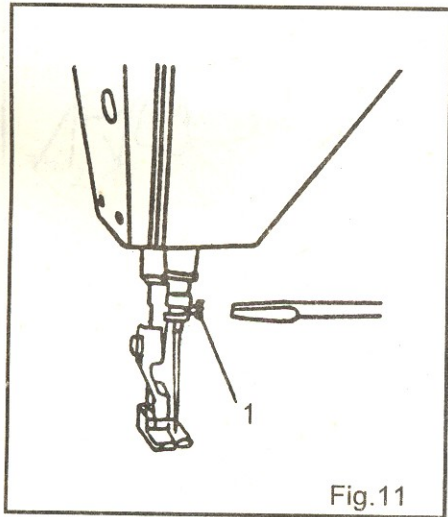
3. Fitting needle:

Turning balance wheel to make the needle bar in the highest position and loosen the screw 1 (Fig.11). Long groove of needle should face the left of the operator, then insert the needle into the hole of the needle bar, Tighten the screw.

4. Threading:

As per (Fig.12,) when threading needle thread, first put the thread through thread guide 1 and tension plate 2 and thread retainer 3, down through tensioner 4 and thread take up spring 5 and thread releasing hook 6, then up through right thread hook 7 and thread taking up level 8. Again down through left thread hook 9 and needle hole 12 from left to right with thread tail 100mm.

When threading bobbin thread, hold the needle thread while turning balance wheel to make the needle bar move down and then to make it rise in the highest position, Then the bobbin thread is pulled out with the needle thread. finally put the two threads under the presser foot.



5. Winding bobbin:

Insert bobbin 5 (Fig.4) into the winder shaft 6. Put the needle thread through hole of thread guide bracket 7 and insert it between two plates 8. Then the needle thread is wound several rings on the bobbin, pull down the full-thread plate 9, thus the winding wheel can press the belt, in the process of sewing, the winder can work automatically, When the bobbin is full, the winder will stop automatically.

Thread on bobbin should be arranged in good order and tight. Increasing pressure

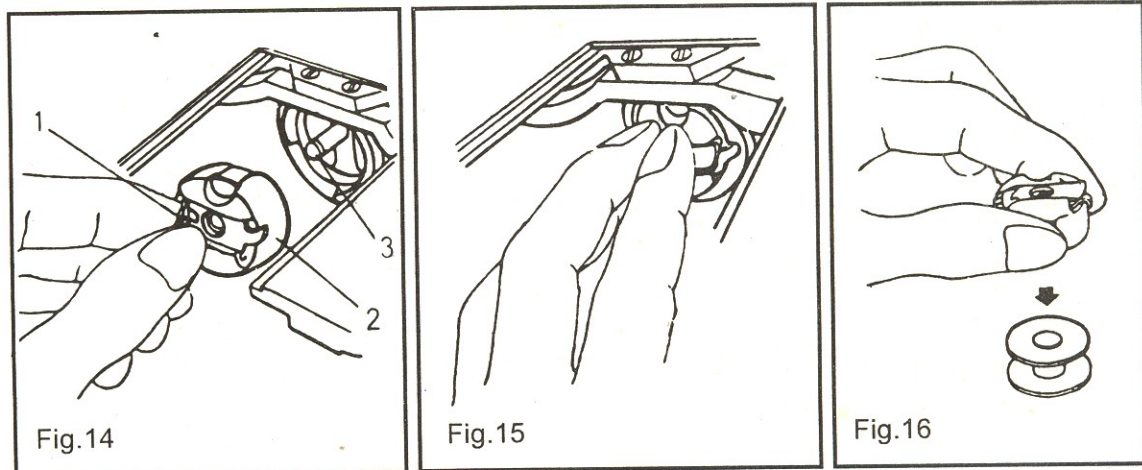
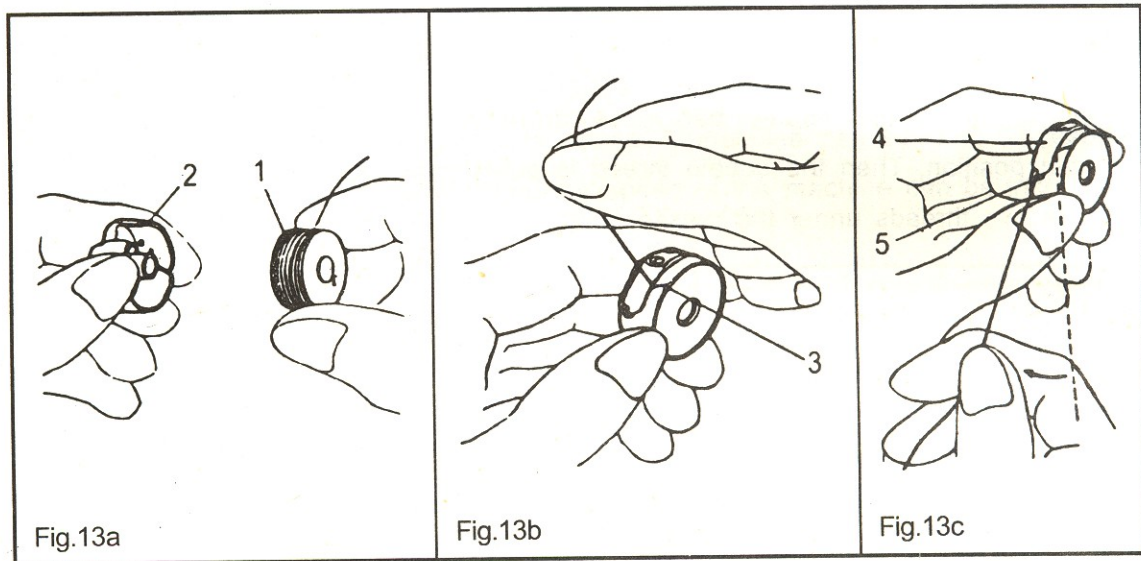
on the tension plate 8 can regulate thread tension, moving thread guide bracket 7 can regulate thread arrangement. When adjusting, first loose the fixed screw, then move thread stand in the left and right, make it to arrange in good order automatically, then fix it. Generally, bobbin can not be winded overfull. It should be lower 0.5-1mm than outer diameter of the bobbin. Amount of winding can be controlled by full-thread plate.

6. Threading bobbin case:

Put the full bobbin 1 (Fig.13a) into the case 2;

Insert thread into slot 3 (Fig.13b);

Through the spring 4, the thread is pulled out of the hole 5 about 100mm.(Fig.13c)



7. Loading and unloading bobbin:

Hold bobbin case lid 1 and insert bobbin case 2 into the shaft 3 of rotary hook (Fig.14). turn the balance wheel and check whether the bobbin is set or not.(Fig.15).

When unloading bobbin case, turn balance wheel to raise the needle bar in the highest position. Then open the bobbin case lid and take out the bobbin case (Fig.16)

8. Regulating needle guage and feeding:

Turning the rotary button can regulate the width of needle guage (Fig,17). If turning counter clockwise, the needle gauge is wide. If turning clockwise, the needle gauge is narrow. If it's necessary to back tack, just put down the lever under the rotary button.

9. Tension of thread:

Tension of thread is changed as per sewing materials thread size. In (Fig.18), there are various stitches which often appear.

- a. Normal. Two threads lock in the middle of the material.
- b. Needle thread tension is too high. Two threads lock on the surface of the material.
- c. Needle tread tension is too low. Two threads lock under the material.
- d. The two threads tension are doth low. They are floating on the surface of the material.
- e. The two threads tension are both high. They are locking tightly in the material.

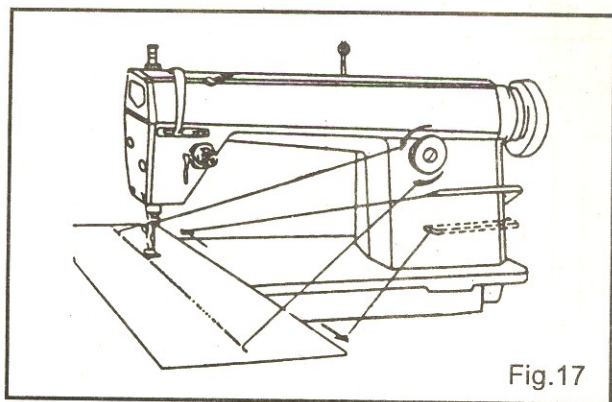


Fig.17

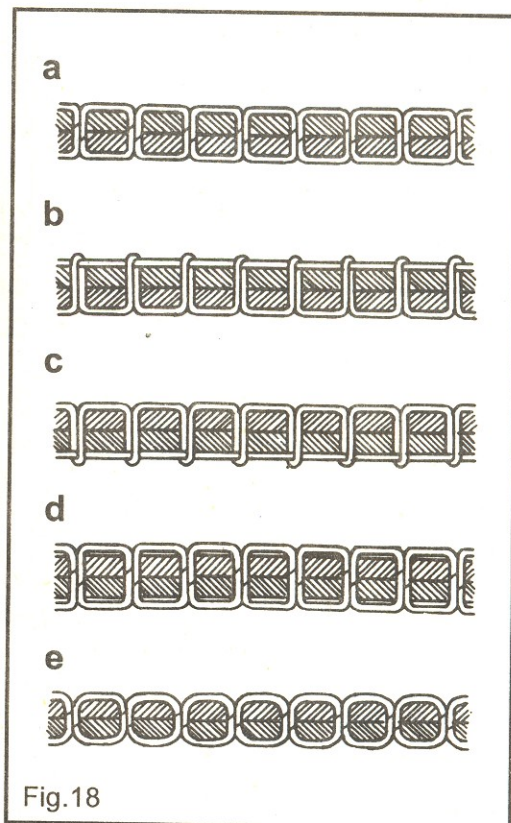


Fig.18

(1) Regulating take-up spring:

In general, the tension of take-up spring is about 20g and the range of swinging is 7-10mm. When sewing special light material (narrow needle gauge), the tension should be reduced and the range should be broadened. Adversely for special heavy material.

When regulating the range of swinging, first loose the fixed screw (Fig.19), then turn the tensioner to regulate the range of swinging. If turn the tensioner clockwise, the range is broadened. If turn it anticlockwise, the range is narrowed. Then tighten the screw. when adjusting the tension of take-up spring, first loosen set screw 1, and take out the tensioner. then loosen set screw 2, so the tension screw can be turned. Turning clockwise can increase tension. turning anticlockwise can reduce tension.

Generally, the take-up spring has been adjusted before ex-factory.

(2) Regulating thread tension:

The stitch on sewing material should be shown be Fig. 18a. If needle thread is too tight while bobbin thread is loose, the tension nut should be turned anticlockwise to loosen the needle thread pressure and tighten the screw of bobbin spring to increase the bobbin thread pressure (Fig.20). Adversely in previous case (Fig.21).

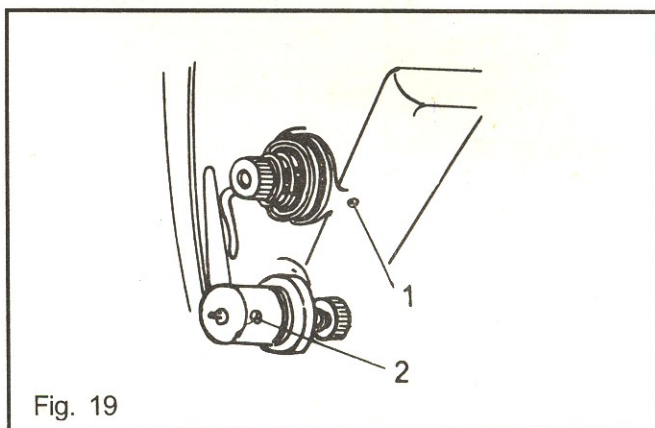


Fig. 19

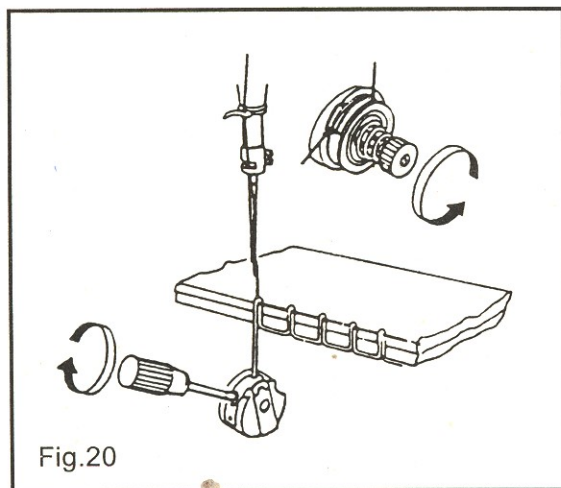


Fig.20

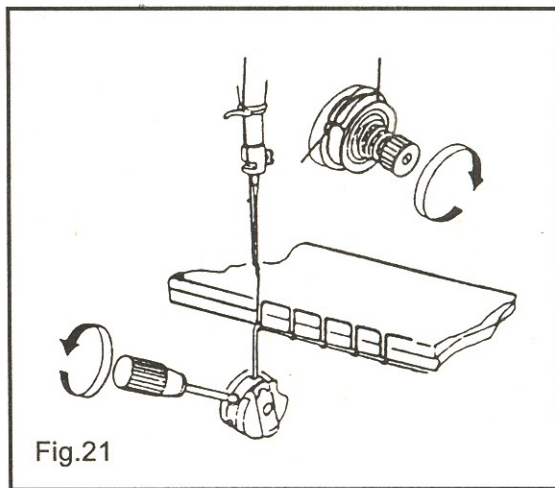


Fig.21

10. Regulating pressure of prsser:

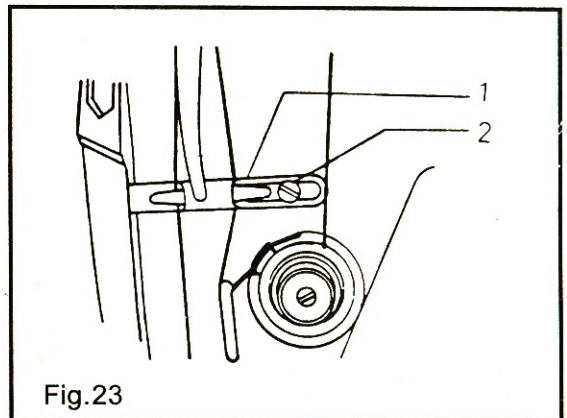
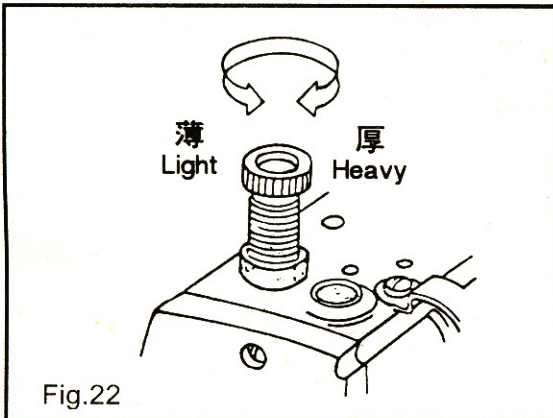
Pressure of presser should be regulated as per sewing materials. When sewing heavy materials, the pressure should be increased. Just turn the screw on top of the machine head (Fig.22)(Heavy). Adversely when sewing light materials (Fig.22) (Light).

Pressure of presser should be properly regulated so that it can feed material whthout a hitch.

11. Regulated thread hook:

In order to make the stitches moving beautifully, the position of thread hook should be regulated as per materials and the gauge of the needles.

When sewing heavy materials, first loosen the screw 2 (Fig.23) and move the thread hook 1 to left to increase the thread amount, Adversely when sewing light materials,



5. REGULATION OF MACHINE:

1. Adjustment of looping time of rotary hook:

The moving relationship between rotary hook and needle will affect the functions of sewing greatly. The standard rotary hook looping time of is:

After the needle moves down in the lowest position, it will rise to 2.2mm, at this time:

- (1) Looping point of rotary hook should be in with the midline of needle;
- (2) Looping point should be 2mm higher than the hole of needle (Fig.24)

Method of regulation:

- (1) Loosen the three set screw of rotary hook,
- (2) Turn balance wheel to lower than the needle in the lowest position and then raise it 2.2mm.

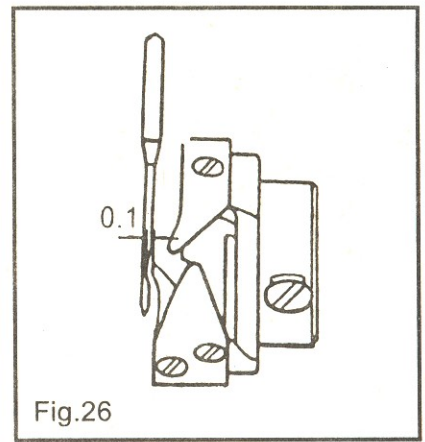
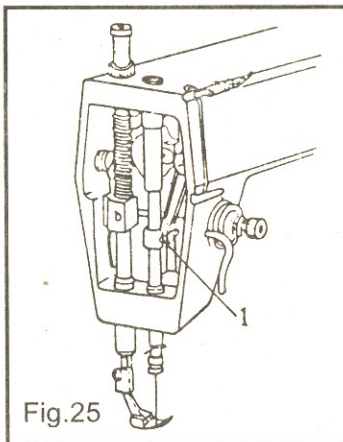
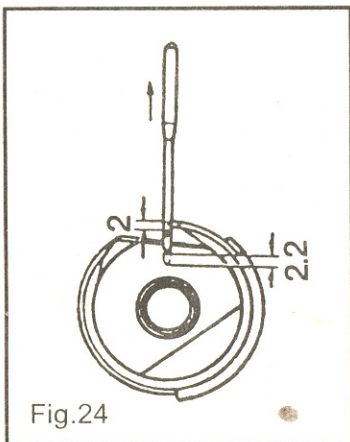
(3) Turn the rotary hook to make the looping point on the position of the midline of needle.

- (4) Loosen the set screw of needle bar link shaft (Fig.25)

(5) Regulate the height of needle bar to make the looping point 2mm higher than the hole of needle.

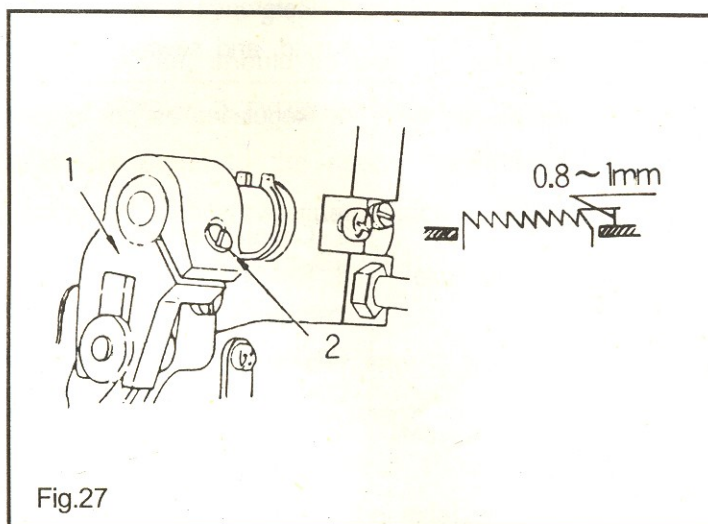
When regulating looping time of rotary hook, always be careful of the side clearance between looping time and needle.

The gap between the level of looping point and the bottom of needle should be regulated in 0.1 mm (Fig.26)



2. Regulating the length of feed dogs.

The top of feed dogs should be 0.8 ~ 1mm higher than the level of needle plate when the feed dogs rise in the highest position. If sewing special heavy or light materials, the gauge of feed dogs should be regulated. When adjusting, first loosen the fixed screw 4 (Fig. 27) of lifting belt crank.



6. COMMON TROUBLES AND METHODS OF TREATMENT

Fault	Probable cause	Solving method
Needle breaking	1. Needle too thin or Needle bent. 2. Fix the needle wrong. 3. Strongly pull the sewing materials when sewing. 4. Sewing materials too heavy.	1. Change the bent needle. 2. Reference to the page 7 Fig.11 3. Properly sewing 4. Reference to the part of needle, thread, and sewing materials,
Skipped stitches	1. The side clearance and position between needle and rotary hook badly adjusted. 2. Looper bent 3. Needles and materials, unfit. Hole on the needle plate too large, 4. Bobbin thread tension and presser pressure is too weak.	1. Regulating as per instruction book. 2. Change the bent looper. 3. Reference to the part of needle and to increase return amount of rotary sewing material. Lower the needle a little hook (for light materials). 4. Increase them.
Thread breaking	1. Thread quality. 2. Needle and thread unfit. 3. Rough surface of thread guide. 4. Tension is too tight. 5. Needle position badly fitted. 6. High temperature of needle fuses artificial fibre thread. 7. Weak bobbin thread tension.	1. Use high quality thread. 2. Reference to the part needle and thread. 3. Polishing, or change a new one. 4. Loosen the tension nut, 5. Regulating it. 6. Cooling needle. 7. Regulating it.
Thread floating	1. Rotary hook is bad quality and badly fitted. 2. Needle too thin. 3. Feed dogs too low. 4. Weak needle thread tension. 5. Problem of presser foot. 6. Weak take up spring	1. Change a new one and increase return amount of rotary hook. 2. Change a thick one. 3. Raise them. 4. Increase it. 5. Narrow the distance between bottom of the presser slot and needle. change a new presser foot. 6. Increase it.

7. THE WAY OF NOISE TEST

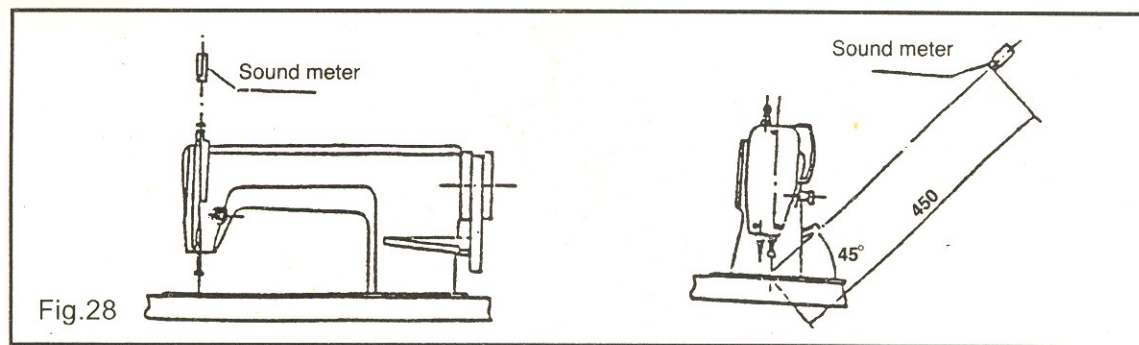
a. The balance of the sewing machine noise sound pressure level and the background noise sound pressure level should be more than 10 db.

b. The tested industrial sewing machine (including head, table, stand and motor) should be placed on the level of hard ground steady.

c. The sound meter, should be used to test the sewing machine noise, which is complied with I-TYPE or O-TYPE stipulated in GB3785, or other acoustics instrument which accuracy is equal to the sound meter at the same time, the sound meter should be equipped with wave fitter, which should be 1/1 frequency doubling or 1/3 frequency doubling stipulated in GB3241.

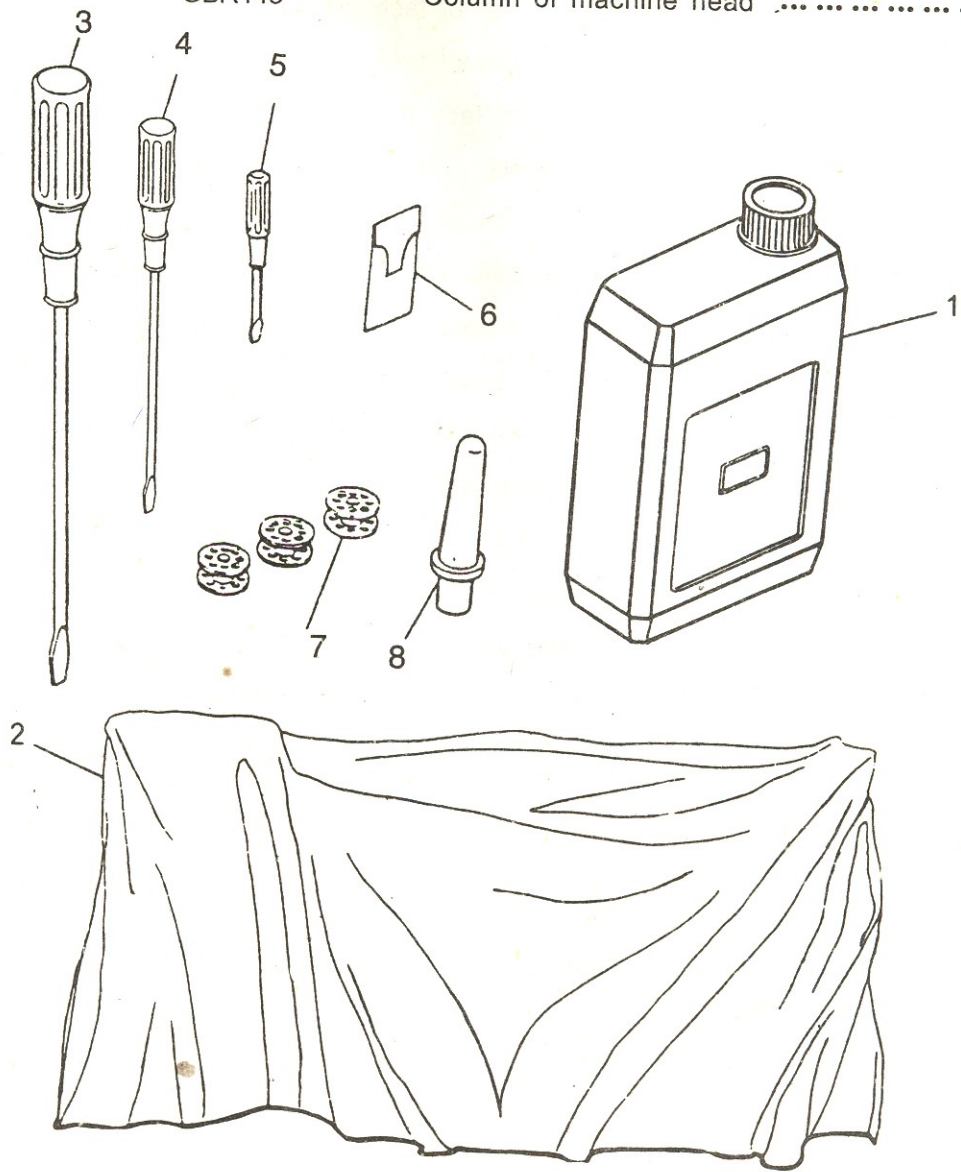
d. The position of test point.

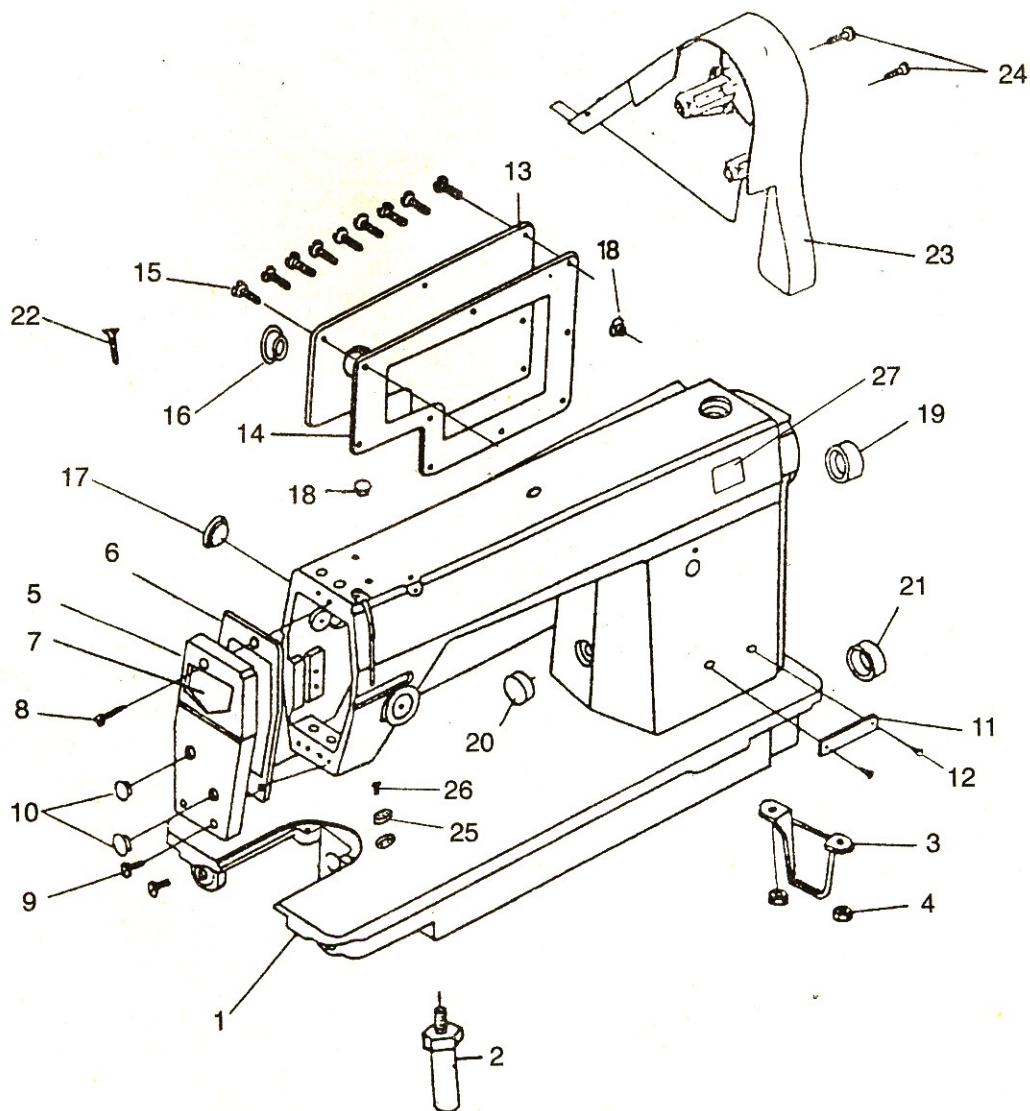
The axial trace of sound meter should aim at the hole of needle plate and the angle between the axial trace of sound meter top and the surface of needle plate is 45 degree. what's more, the axial trace should be through the surface of the center of needle pole, which is vertical to the axial trace of main axial.



1. Machine head accessories

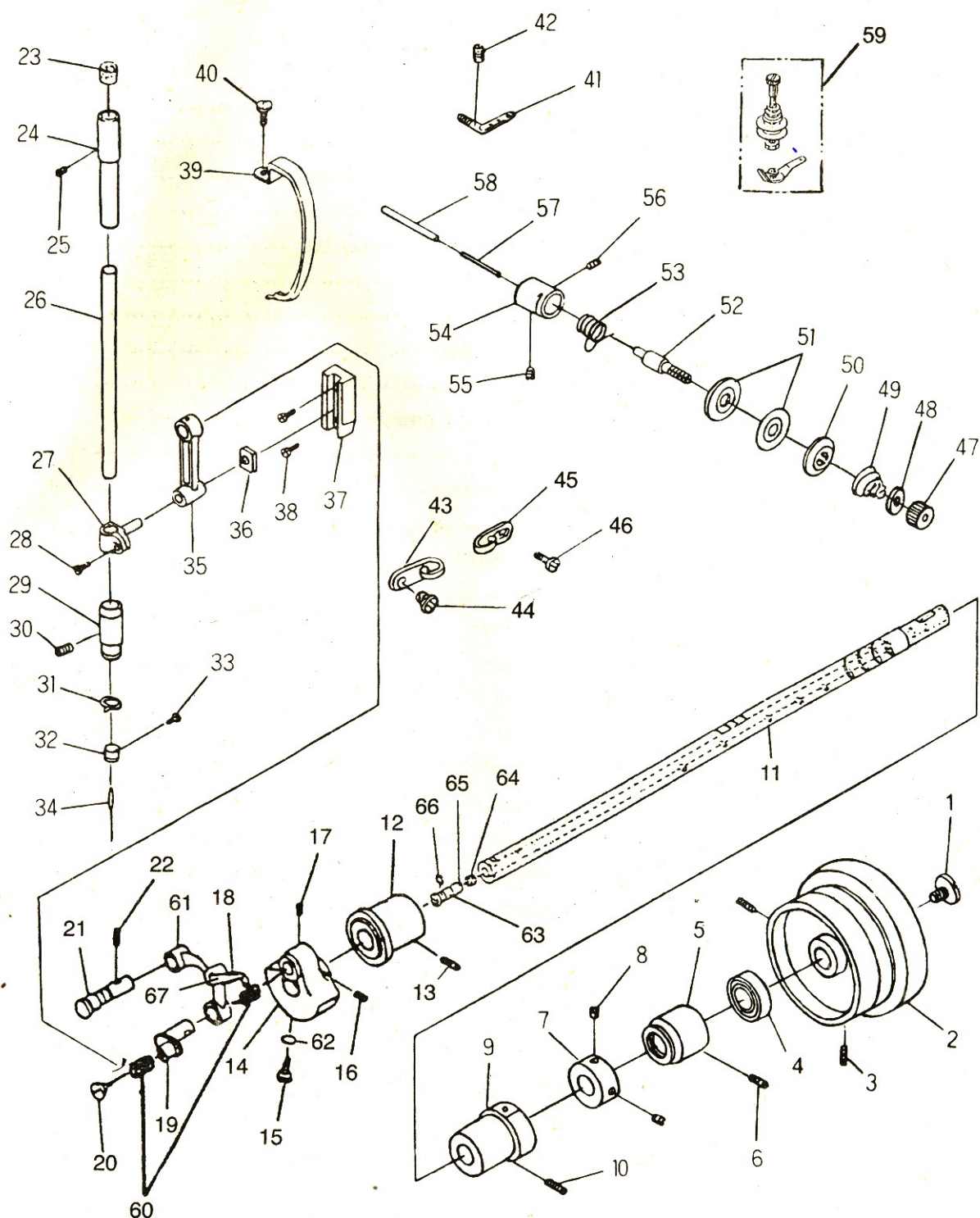
Ref.No.	Part No.	Description	Quantity
1	GR1604/3	Oil reservoir asm.	1
2	GF141-8	Cover of machine head	1
3	GF111-8	Screw driver (L).....	1
4	GF115-8	Screw driver (M).....	1
5	GF116-8	Screw driver (S).....	1
6	GV3	Needle	1 bag
7	GR120	Bobbin	1
8	GBR148	Column of machine head	1





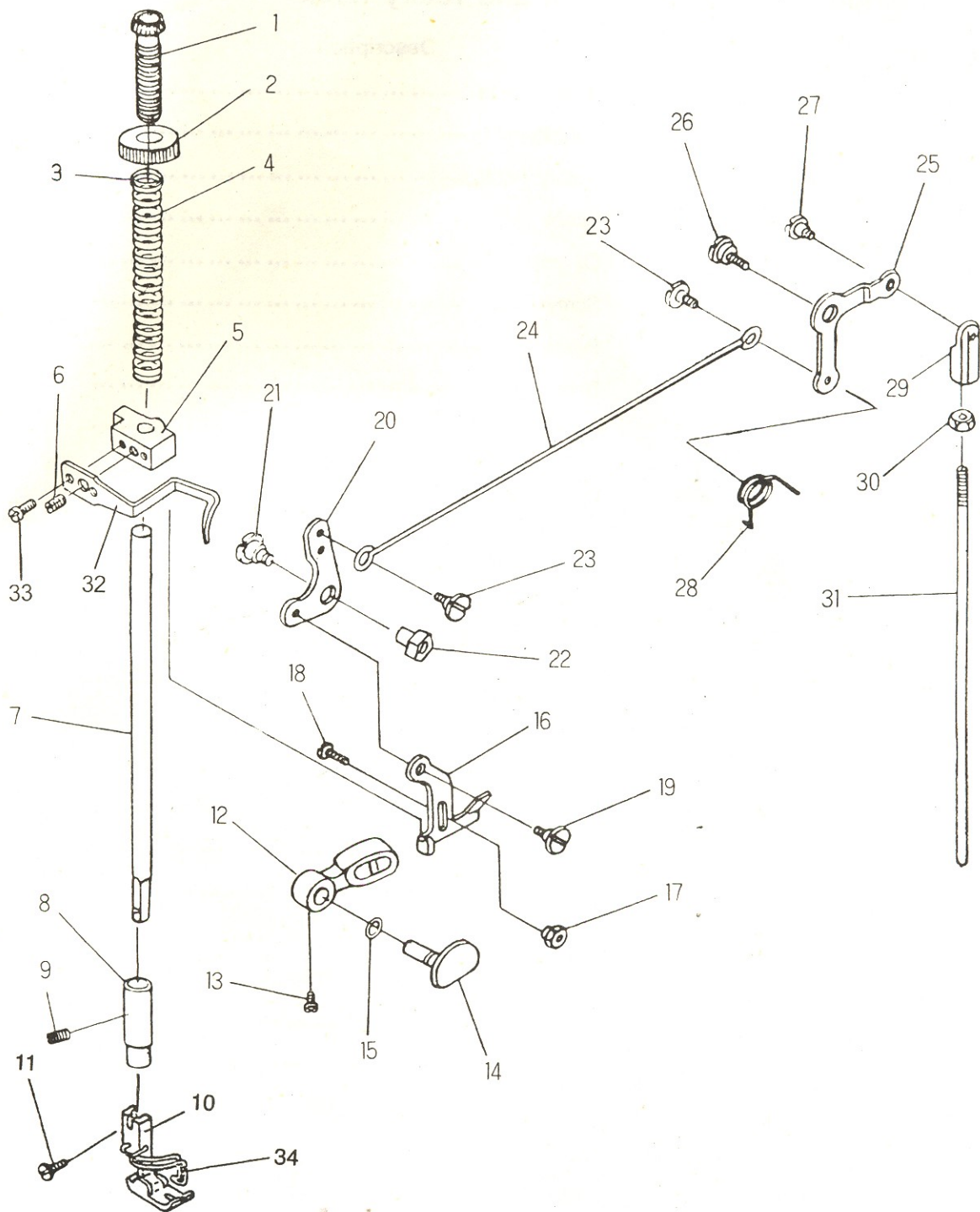
3. Components of upper shaft and needle bar

Ref.No.	Part No.	Description	Quantity
1	GS24	Set screw for balance wheel	1
2	GP5	Balance wheel	1
3	GS37	Screw of balance wheel	2
4	GR421-8	Oil seal of upper axle	1
5	GO357-8	Main shaft bush rear	1
6	GS37	Screw for rear bush of main shaft	1
7	GR589-8	Retaining ring of middle bush of main shaft	1
8	GS305-8	Screw	2
9	GO298-8	Middle bush of main shaft	1
10	GS50	Set screw	1
11	GZ258-8	Main Shaft	1
12	GO297-8	Front bush of main shaft	1
13	S2	Screw	1
14	GR793-8	Crank of needle bar	1
15	GS371-8	Fixed screw	1
16	GS58	Position screw of crank of thread take-up	1
17	GS39	Screw	1
18	GH210/4-8	Part of thread take-up bar	1
19	GH222-8	Crank of thread take-up	1
20	GS309-8	Screw	1
21	GX221-8	Link pin of thread take-up	1
22	GS37	Screw	1
23	GR599-8	Oil seal of needle bar	1
24	GO266-8	Upper bush of needle bar	1
25	GS43	Screw	1
26	GZ230-8	Needle bar	1
27	GR97	Connecting post of needle bar	1
28	GS41	Screw	1
29	GO296-8	Lower bush of needle bar	1
30	GS43	Screw	1
31	GR100	Upper thread guide of needle bar	1
32	GR601-8	Lower thread guide of needle bar	1
33	GS44	Screw of needle	1
34	GV3	Needle	1
35	GH221-8	Rod of needle bar	1
36	GU1	Sliding block of connecting post of needle bar	1
37	GR020	Slide guide	1
38	GS42	Screw	2
39	GR021	Cover of thread take-up bar	1
40	GS010	Screw	1
41	GR101	Three-hole thread eyelet	1
42	GS45	Screw	1
43	GR2023	Left thread hook	1
44	GS0158	Screw	1
45	GR471	Right thread hook	1
46	GS33	Screw	1
47	GL10	Nut	1
48	GR1490	Stop plate	1
49	GW19	Thread tension spring	1
50	GR1489	Tension release disc	1
51	GR1488	Thread tension plate	2
52	GS85	Screw of thread tension	1
53	GW18	Spring of thread take-up	1
54	GR103	Regulator of thread take-up spring	1
55	GS83	Screw	1
56	GS316-8	Screw of thread tensioner	1
57	GX14	Tension release pin	1
58	GX25	Supporting pin of thread tension	1
59	GR775/7-8	Components of thread guide	1
60	GO265-8	Dearing of rolling needle	2
61	GH223-8	Connecting bar of thread take-up	1
62	GR592-8	Position screw o-ring	1
63	GO261-8	Crank oil follow regulating pin bushing	1
64	GR590-8	Crank oil follow regulating felt	1
65	GX198-8	Crank oil follow regulating pin	1
66	GR591-8	Crank oil follow regulating pin O-ring	1
67	GR595-8	Rubber	1



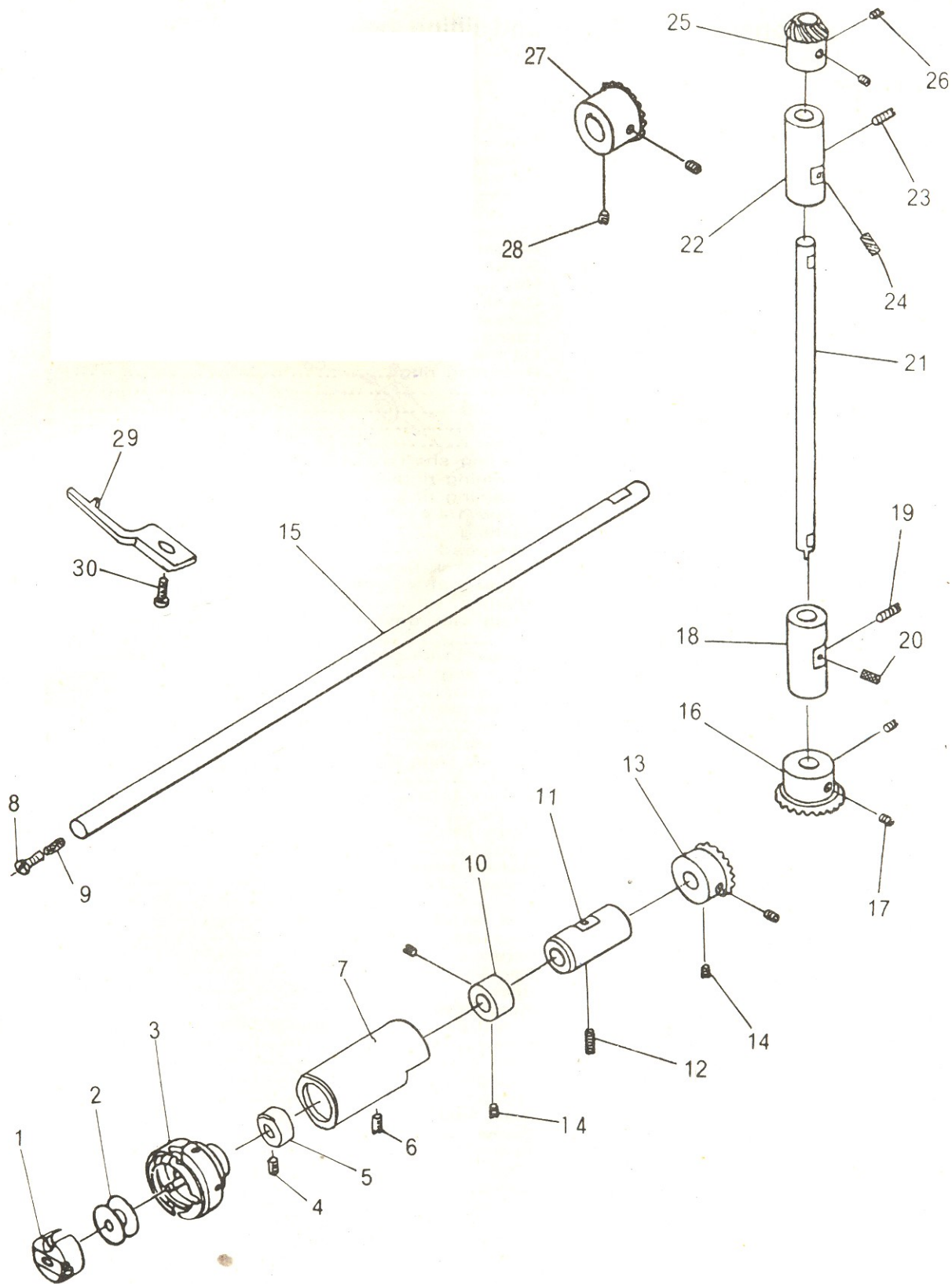
4. Component of presser bar

Ref. No.	Part No.	Description	Quantity
1	GS318-8	Regulator of presser spring	1
2	GL168-8	Nut	1
3	GR1494	Guide bar of regulator of presser	1
4	GW253	Spring of presser bar	1
5	GR777-8	Guide bracket of presser bar	1
6	GS319-8	Screw	1
7	GZ348	Presser bar	1
8	GO8	Bush of presser bar	1
9	GS43	Screw	1
10	GM200/5	Part of hinged presser foot	1
11	GS0100	Screw	1
12	GR2823	Hand lifter lever	1
13	GS030	Screw	1
14	GR462-8	Convex block	1
15	GR422-8	O-ring	1
16	GR776-8	Lifting lever	1
17	GL11	Screw post	1
18	GS69	Screw of lifting plate	1
19	GS88	Upper screw of lifting plate	1
20	GR027	Hing of lifting foot	1
21	GS69	Screw	1
22	GL11	Screw post	1
23	GS87	Screw	2
24	GR026	Connecting rod	1
25	GR761-8	Rear lever	1
26	GS86	Screw of rear lever	1
27	GS53	Connecting screw of top lever	1
28	GW33	Spring of real lever	1
29	GR791-8	Junction of top lever	1
30	GL6	Nut	1
31	GX217-8	Top lever of lifting presser foot	1
32	GR615-8	Thread guide of presser bar	1
33	GS320-8	Screw	2
34	GR1095-8	Finger guard frame	(1)



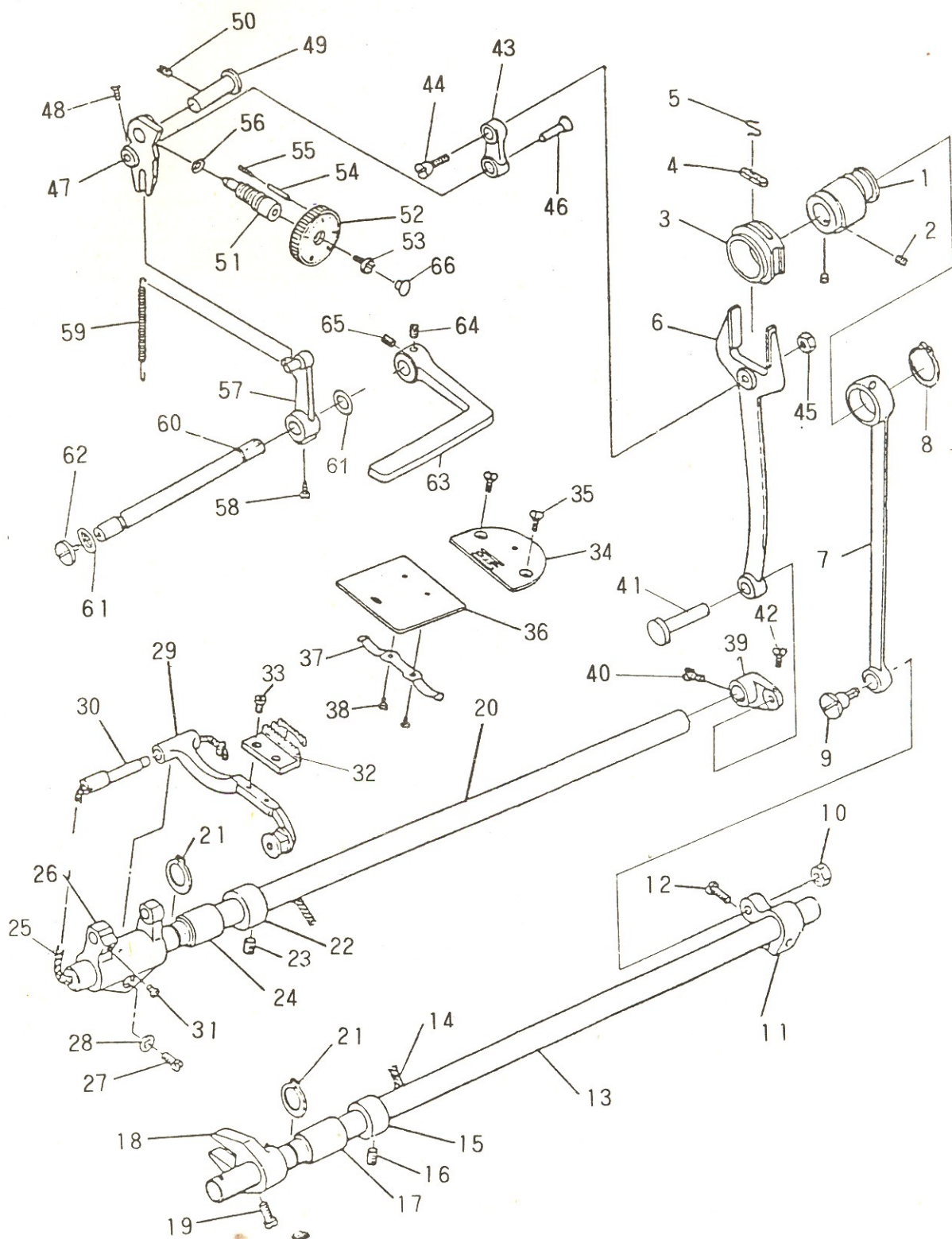
5. Components of lower shaft and rotary hook

Ref.No.	Part No.	Description	Quantity
1	GN138-8	Bobbin case	1
2	GN139-8	Bobbin	1
3	GN137-8	Rotary hook	1
4	GR330-8	Screw	2
5	GR634-8	Oil ring	1
6	GS316-8	Screw	1
7	GO387-8	Bushing	1
8	GS329-8	Screw	1
9	GR633-8	Oil wick	1
10	GR158-8	Retaining ring	1
11	GO244-8	Rear bush	1
12	S2	Screw	1
13	GC154-8	Pinion	1
14	GS319-8	Screw	4
15	GZ245-8	Hook driving shaft	1
16	GC155-8	Lower pinion	1
17	GS319-8	Screw	2
18	GO294-8	Lower bush of upring shaft	1
19	GS37	Screw	1
20	GR123	Oil felt	1
21	GZ246-8	Upright shaft	1
22	GO279-8	Upper bush of upring shaft	1
23	GS37	Screw	1
24	GR123	Oil felt	1
25	GC156-8	Upper pinion of upring shaft	1
26	GS319-8	Screw	2
27	GC157-8	Pinion of upper shaft	1
28	GS319-8	Screw	2
29	GR631-8	Retaining hook	1
30	GS328-8	Screw	1



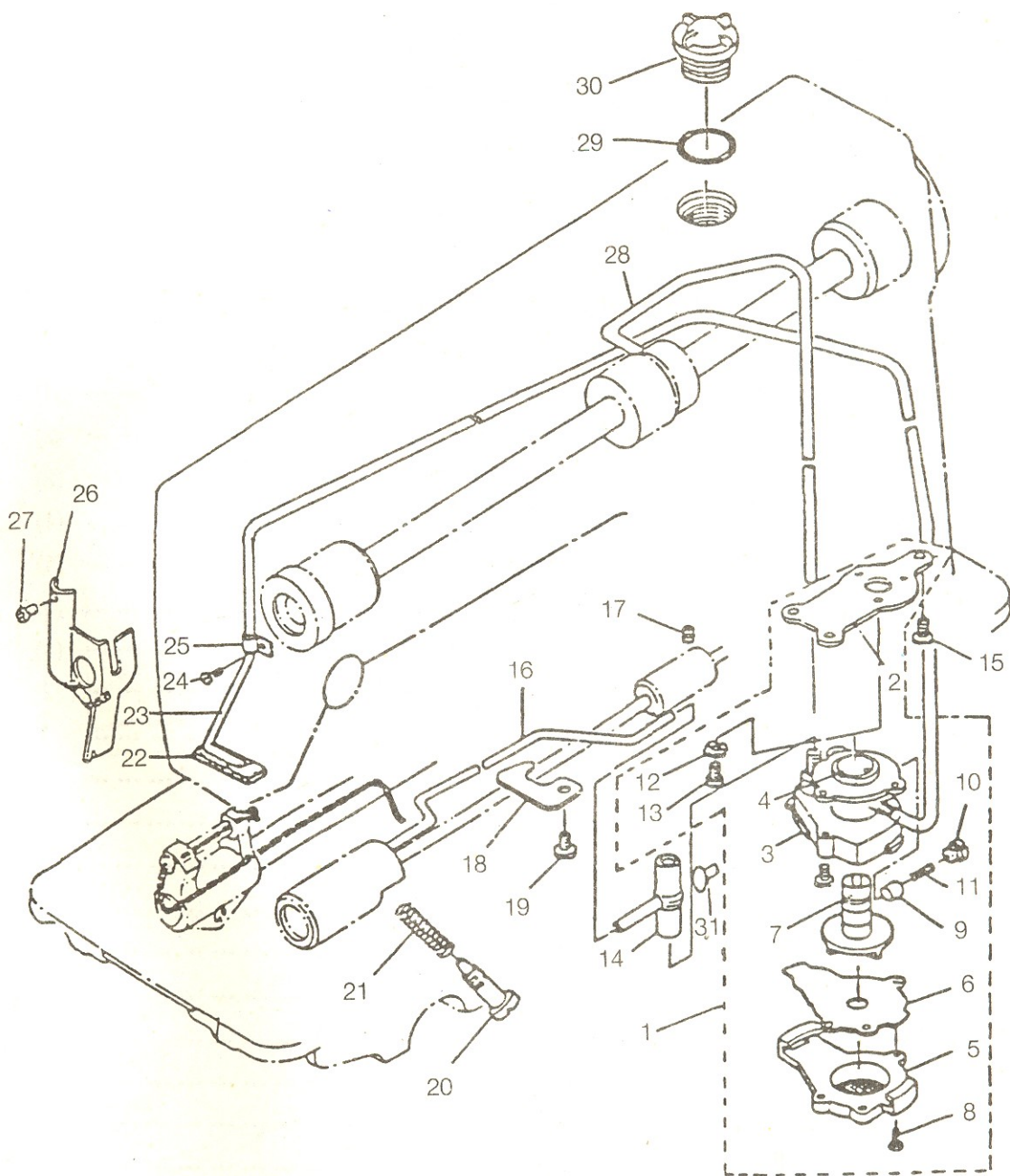
6. Components of feeding and lifting belt

Ref.No.	Part No.	Description	Quantity
1	GT168-8	Eccentric wheel of feeding	1
2	S19	Screw	2
3	GR1085-8	Eccentric ring	1
4	GR134	Oil wick	1
5	GW24	Spring of oil wick	1
6	GR576-8	Forked feeding bar	1
7	GH218-8	Connecting bar	1
8	GR650-8	Retaining ring	1
9	GS341-8	Screw	1
10	GL169-8	Nut	1
11	GH217-8	Crank	1
12	GS334-8	Screw	1
13	GZ236-8	Lifting shaft	1
14	GR651-8	Oil thread	1
15	GR589-8	Retaining ring	1
16	GS305-8	Screw	2
17	GO273-8	Bushing	1
18	GH216-8	Crank	1
19	GS340-8	Screw	1
20	GZ235-8	Feeding shaft	1
21	GR643-8	Retaining ring	2
22	GR589-8	Retaining ring	1
23	GS305-8	Screw 1/4 x 40L=6	2
24	GO273-9	Bushing	1
25	GR644-8	Oil thread	1
26	GR645-8	Tooth rack base	1
27	GS335-8	Screw 3/16 x 28L=14	1
28	GR646-8	Washer	1
29	GR647/4-8	Tooth rack device	1
30	GX210-8	Pin	1
31	GS336-8	Screw 11/64 x 40 L=7	1
32	GM201	Feed dog	1
33	GS337-8	Screw	2
34	GM166-8	Needle plate	1
35	GS338-8	Screw	1
36	GR147	Pushing plate	1
37	GW256	Pushing plate Spriyng	1
38	GS68	Screw	2
39	GR783-8	Crank	1
40	GS298-8	Screw	1
41	GX195-8	Crank pin	1
42	GS45	Screw	1
43	GH393-8	Needle gauge link	1
44	GS534-8	Screw	1
45	GL7	Nut	1
46	GX259-8	Link pin of needle gauge	1
47	GR037	Regulator of needle gauge	1
48	GS61	Screw	1
49	GX27	Regulating bolt	1
50	S2	Screw	1
51	GS295-8	Regulating bolt	1
52	GR771-8	Botton part of needle gauge plate	1
53	GS046	Screw	1
54	GX216-8	Pin	1
55	GW22	Spring	1
56	GR424-8	O-ring	1
57	GR786/3-8	Back feed bar	1
58	GS0103	Screw	1
59	GW26	Spring	1
60	GZ221-8	Shaft	1
61	GR423-8	O-ring	2
62	GS051	Screw	1
63	GR041	Reverse feed control lever	1
64	GS319-8	Screw	1
65	GS319-8	Screw	1
66	GR770-8	Wick head	1



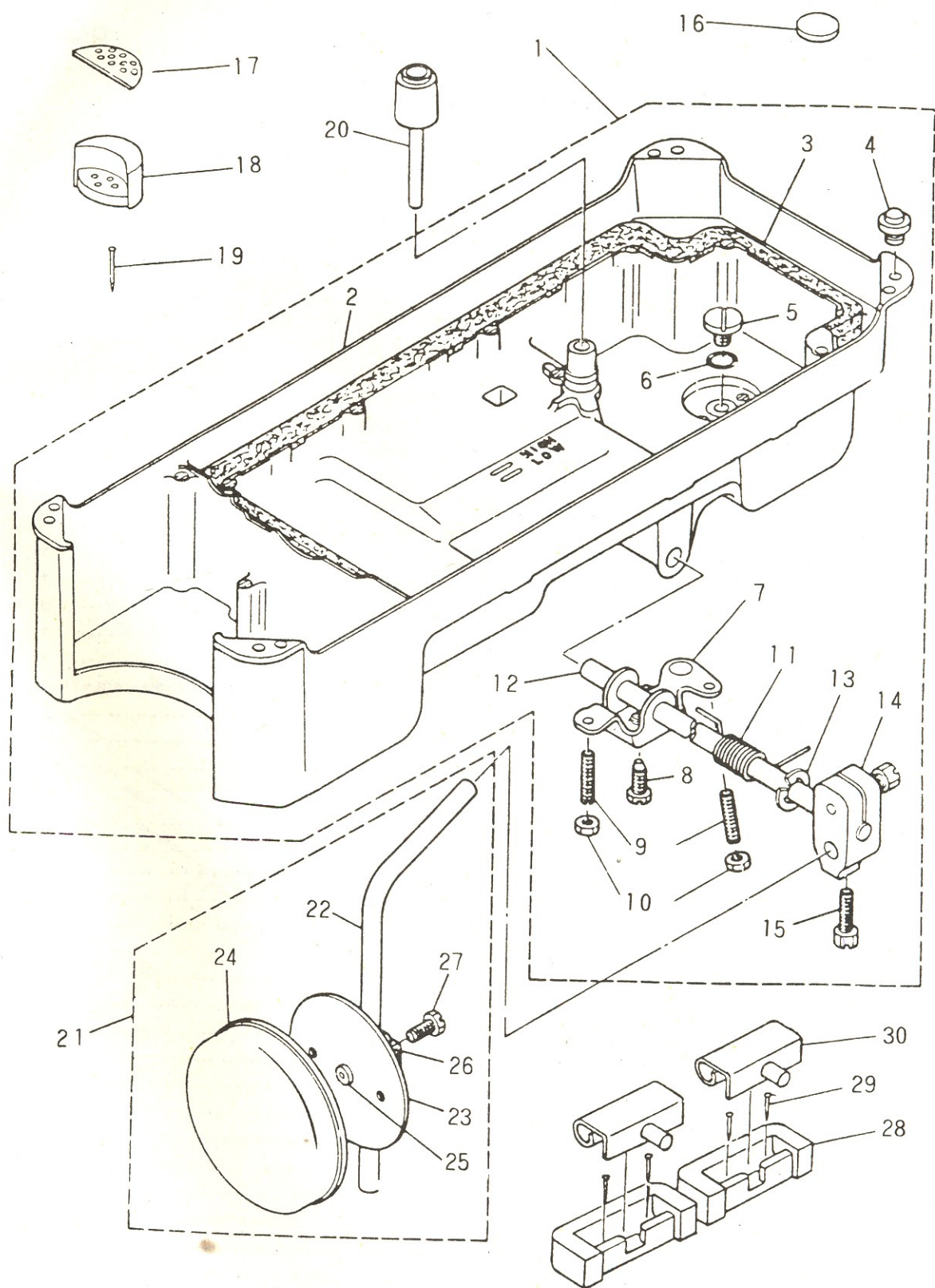
7. Components of Lubrication

Ref.No.	Part No.	Description	Quantity
1	GR2058/21	Part of oil pump	1
2	GR425-8	Installation plate of oil pump	1
3	GR2060	Lubricating oil pump	1
4	GO339	Bush	1
5	GR2063/2	Cover of oil pump	1
6	GR2062	Supporting plate of impeller	1
7	GR2061	Impeller of oil pump	1
8	GS554	Screw	3
9	GR2067	Plunger of oil return	1
10	GS564	Screw	1
11	GW308	Spring	1
12	GR1550	Washer	3
13	GS196	Screw	3
14	GR668-8	Junction of oil supplying of upper shaft	1
15	GS053	Screw	3
16	GR766-8	Oil supplying of lower shaft	1
17	GR434-8	Oil wick	1
18	GR671-8	Pressing plate	1
19	GS353-8	Screw	1
20	GS352-8	Screw	1
21	GW195-8	Adjusting spring	1
22	GR456-8	Oil returning oil filter felt	1
23	GR447-8	Oil return tube	1
24	GS33	Oil return tube carrier screw	1
25	GR1566	Oil return tube carrier	1
26	GR679/2-8	Faceplate oil guard plate part	1
27	GS354-8	Oil guard plate screw	1
28	GR1042-8	Bed shaft oil supply tuck	1
29	GR1562-8	Oil sight O-ring	1
30	GR1561	Oil sight	1
31	GR769-8	Oil plug	1



8. Components of oil reservoir knee lifting presser foot

Ref. No.	Part No.	Description	Quantity
1	GR680/23-8	Oil reservoir components	1
2	GR681-8	Oil reservoir	(1)
3	GR682-8	Cushion	(1)
4	GR683-8	Head Cushion	(4)
5	GS355-8	Screw	(1)
6	GR684-8	"O" ring	(1)
7	GH345-8	Crank	(1)
8	GS356-8	Screw	(1)
9	GS357-8	Screw 15/64 × 28L=30	(2)
10	GL170-8	Screw 15/64 × 28	(2)
11	GW196-8	Twisting spring	(1)
12	G238-8	Shaft	(1)
13	GR688-8	Split ring	(1)
14	GR689-8	Adjusting bar joint	(1)
15	GS358-8	Screw 9/32 × 20L=20	(2)
16	GR685-8	Magnet	1
17	GR686-8	Cushion	2
18	GR687-8	Bracket	2
19	GBX141-8	Bracket pin	4
20	GH346-8	Top pin	1
21	GR690/6	Adjusting Components	1
22	GR691-8	Adjusting bar	(1)
23	GR692-8	Control plate	(1)
24	GR693-8	Cushion	(1)
25	GR694-8	Cushion	(1)
26	GR695-8	Joint	(1)
27	GS359-8	Screw 15/64 × 28L=15	(1)
28	GR1593	Hook teracket	2
29	GBX105	Hook bracket pin	4
30	GR1590/2	Hook components	2



9. Components of thread winder, double thread bobbin

Ref No.	Part No.	Description	Quantity
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
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

