

HIGHLEAD

GC24688Series

**1-/2-Needle Post-Bed Compound-feed Lockstitch Industrial
Sewing Machine**

**Instruction Manual
Parts Catalog**

SHANGHAI HUIGONG NO.3 SEWING MACHINE FACTORY

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-----Abstract-----

1. PRECAUTION BEFORE STARTING OPERATION	1
1) Safety precaution	1
2) Precaution before starting operation	1
3) Precaution for operating conditions	1
2. SPECIFICATIONS	1
3. PREPARATION BEFORE STARTING TO OPERATE	2
1) Connection of control box	2
2) Connection of pneumatic parts	2
3) Oil pan	3
4) Operation panel	4
5) Adjusting the needle stop position	4
4. HOW TO USE THE MACHINE	5
1) Threading	5
2) Adjusting of the thread regulator	5
3) Adjusting of upper thread tension	5
4) Winding the lower thread	6
5) Threading the lower thread	6
6) Adjusting the lower thread tension	6
7) Installing the needle	7
8) Alternating presser foot movement amount	7
9) Adjusting the presser foot pressure	7
10) Adjusting the stitch length	8
11) Using the manual switches	8
12) Cleaning	9
13) Lubrication	9
14) Adjusting the trailing length after thread trimming	10
15) Back tacking	10
16) Adjusting the feed dog	10
17) Adjusting the needle bar height	11
18) Adjusting the gap between the needle and the rotary hook tip	12
19) Adjusting of the needle and the hook timing	12
20) Hook protection	13
21) Adjusting the needle and feed mechanism timing	13
22) Bobbin case lifter	14
23) Adjusting the presser foot height	15
24) Adjusting the alternating presser foot movement amount	15
25) Adjusting the presser foot timing	16
26) Driving knife adjustment	17
27) Adjusting the thread trimming timing	17
28) Adjusting the fixed knife position and bobbin thread clamping	18
29) Safety clutch	19
PARTS CATALOG	20

1. PRECAUTIONS BEFORE STARTING OPERATION

1) Safety precautions

- (1) When turning the power on, keep your hands and fingers away from the area around/under the needle and the area around the pulley.
- (2) Power must be turned off when the machine is not used, or when the operator leaves his/her seat.
- (3) The power must be turned off before tilting the machine head, installing or adjusting the machine, or when replacing.
- (4) Avoid placing fingers, hairs, bars etc. nears the pulley, bobbin winder pulley, when the machine is operation. Injury could result.
- (5) Do not insert fingers into the thread take-up cover, under/round the needle, or pulley when the machine is in operation.
- (6) If mini motor cover, finger guard, and/or eye guard are installed, do not operate the machine without these safety devices.

2) Precaution before starting operation

- (1) If the machine's oil pan has an oil sump, never operate the machine before filling it.
- (2) If the machine is lubricated by a drop oiler, never operate the machine before lubricating.
- (3) When a new sewing machine is first turned on, verify the rotational direction of the pulley with the power on. (The pulley should rotate counterclockwise when viewed from the pulley.)
- (4) Verify the voltage and (single or three) phase with those given on the machine nameplate.

3) Precaution for Operating Conditions

- (1) Avoid using the machine at abnormally high temperature (35°C or higher) or low temperatures (5°C or lower). Otherwise, machine failure may result.
- (2) Avoid using the machine in dusty conditions. Avoid using the machine in areas where too much electrical noise, resulted from the high-frequency welder and others is generated

2. SPECIFICATIONS

Item	GC24688-2-D	GC24688-1LD	GC24688-1RD
Max. Speed	2400rpm		
Stitch length	0 to 9mm		
Needle bar stroke	34mm		
Presser foot clearance	By hand	9 mm	
	By knee	16 mm	
Rotating hook	Large vertical hook (1.6 times)		
Needle	DP×17 #18-#25		
Presser foot alternation	1-7mm		
Needle gauge (mm)	8(Standard),10,12	———	
Auto presser foot lifter	Pneumatic		
Oil lubrication method	Automatic lubrication		
Motor	750W sevor motor		

3. PREPARATION BEFORE STARTING TO OPERATE

1) Connection of control box

If the machine which customer bought is not wholly assembled, the customer should connection the electrical wires and the air pipes by themselves. Shows as the Fig.1 and Fig.2

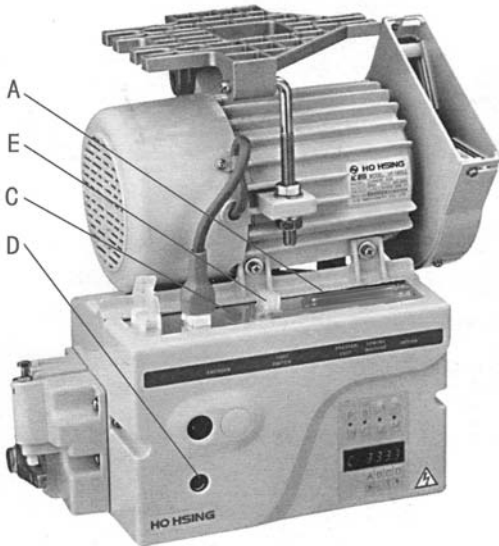


Fig. 1

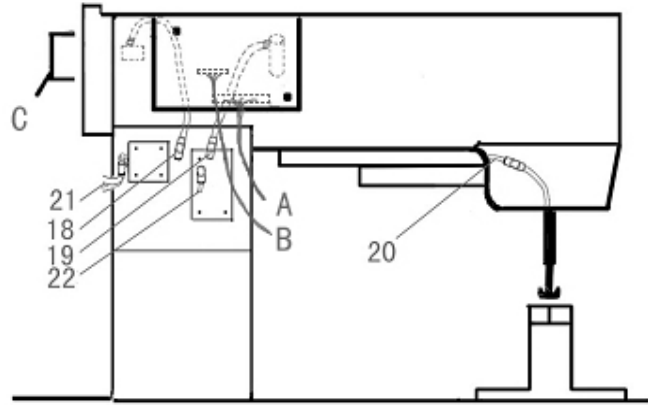


Fig. 2

There are same connectors which need to connect to the machine from the control box:

A: machine function input , connect to the PCB board on the machine arm.

B: pass the valve signal from the PCB board to the magnet valve board.

C: needle position monitor input ,connect to the monitor on the machine arm.

D: operation panel input ,connect to the panel.

E: operation pedal input, connect to the pedal.

If there is any problems during connecting wires, please check the instruction book of HO HSING control box.

NOTICE: all the connects is unique with each other ,and if they can't match it ,please check whether you get the right one.

2)Connection of pneumatic parts

The pneumatic parts of the machine are controlled by the magenet valves which assembled on the setting board, and the position where the setting board be assembled under the machine table should be decided by the length of the wires and the air pipes.

The pneumatic parts are composed by the filter **g** ,the solenoid valves **a~f** and the cylinders they control

The method of pneumatic parts connecting have been showed by Fig.3:

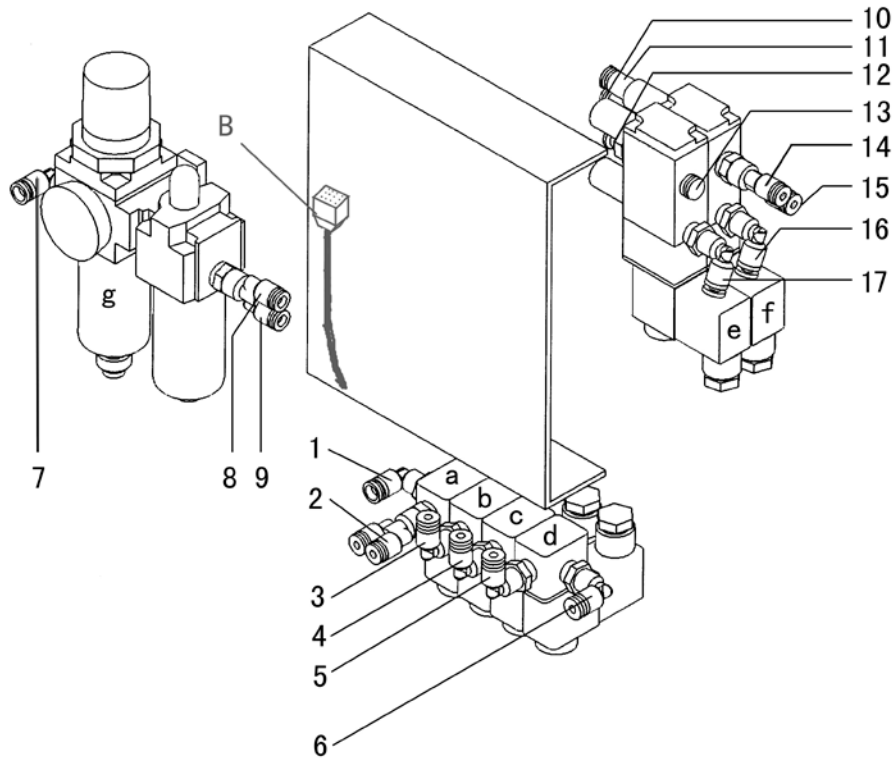


Fig.3

Here are the functions of the solenoid valves:

- a:** thread cutting **b:** thread tension **c:** press foot alternation **d:** material guider(just for double needle)
e: back tacking **f:** press foot lift

The pressed air come from air compressor go to the input join **7**,after be filtered,the output **8** and **9** link to the inputs of the solenoid valves as follow:

- 1:**connect to **8**,pressed air input **2:**link to the cylinder of thread cutting (bidirectional)
3:link to the cylinder of thread tension **4:**link to the cylinder of press foot alternation
5:link to the cylinder of material guider **6:**connect to the joint **14** as the input of material guider
10:connect to **9** as input for press foot lift **11:**connect to **12** as the input of back tacking.
13:plug **15&16:**link to the cylinder of press foot lift (bidirectional)

17:link to the cylinder of back tacking

When connecting the air pipes, please check the instruction mark of the solenoid joints at the setting board.

3) Oil pan

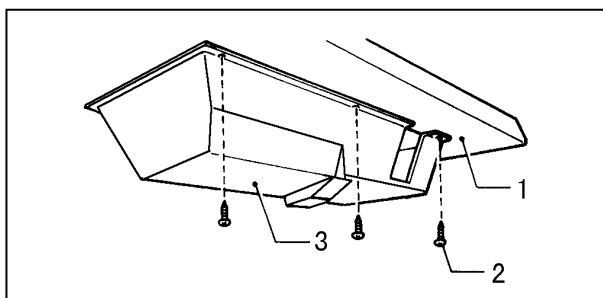


Fig.4

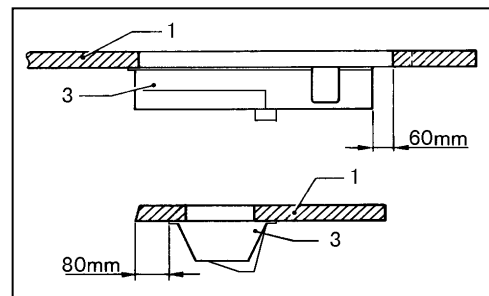


Fig.5

The installation of the oil pan is showed as the fig.4 and fig.5:

(1) Install the oil pan 3 to the underside of the worktable 1 in the place shown in the illustration using the nails 2.

(2) From front view, the oil pan 3 to the side is 60mm; from right view, the oil pan 3 to the side is 80mm.



Fig.6

4) Operation panel

Installe the operation panel As Fig.6 shows :

(1) Install the operation panel 1 to the set plate 2 with the three screws 3.

(2) Install the set plate 2 to the back of the machine arm with the two screws 4.

5) Adjusting the needle stop position

(1) Adjusting the needle up stop position

When the sewing machine stops in the needle up stop position (the stop position of trimming) and the treadle is pressed back, the red mark on the pulley should be consistent with the mark on the belt cover A. Adjust as follows by Fig.7:

- a. Turn off the power switch.
- b. Loosen the screw 4, and then remove the cover 3.
- c. When the red mark stops in a position over the mark on the belt cover, the needle up stop position disc 1

should be turned in the opposite direction as the direction of machine pulley rotation. When the red mark stops in a position under the mark on the belt cover, Turn the disc 1 in the same direction as the pulley rotation direction.

(2) Adjusting the needle down stop position

When the sewing machine stops in the needle down stop position, the black mark on the pulley should be consistent with the mark on the belt cover A. Adjust as follows:

- a. Turn off the power switch.
- b. When the black mark stops in a position over the mark on the belt cover, the needle down stop position disc 2 should be turned in the opposite direction as the direction of machine pulley rotation. When the black

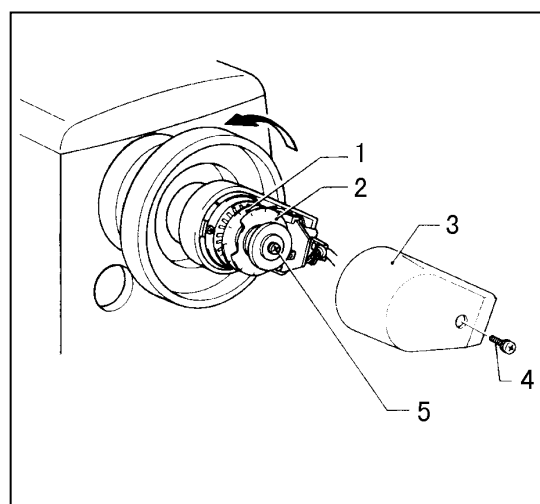


Fig.7

mark stops in a position under the mark on the belt cover, Turn the disc 2 in the same direction as the pulley rotation direction.

c. After adjusting, install the cover 3, with screw 4.

Note: There is no need to loose the screw 5, when turning the discs.

4. HOW TO USE THE MACHINE

1) Threading

Raise the thread take-up lever to its highest position and pass the upper thread in the following order.

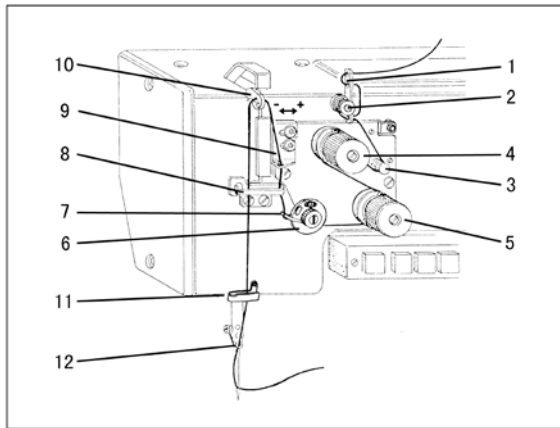


Fig.8

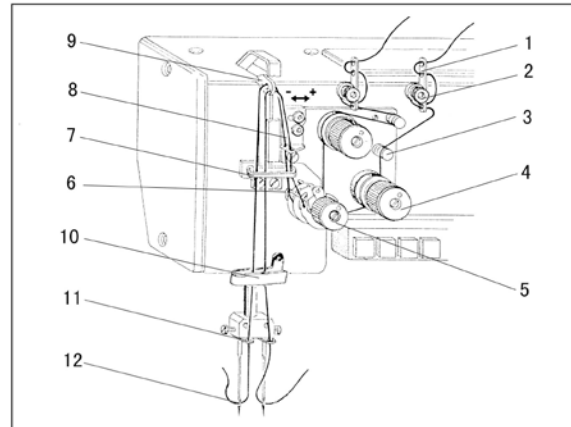


Fig.9

2) Adjusting of the thread regulator

The thread regulator 9 of Fig.8 (8 of Fig 9)regulates the amount of needle thread necessary for stitch formation. The setting depends on the following factors: material thickness, yarn characterisation and stitch length.

The thread regulator is fitted with slots for this purpose. Moving in the “+”direction increases the quantity of needle thread; Moving in the “-”direction reduces the quantity of needle thread.

3) Adjusting of upper thread tension

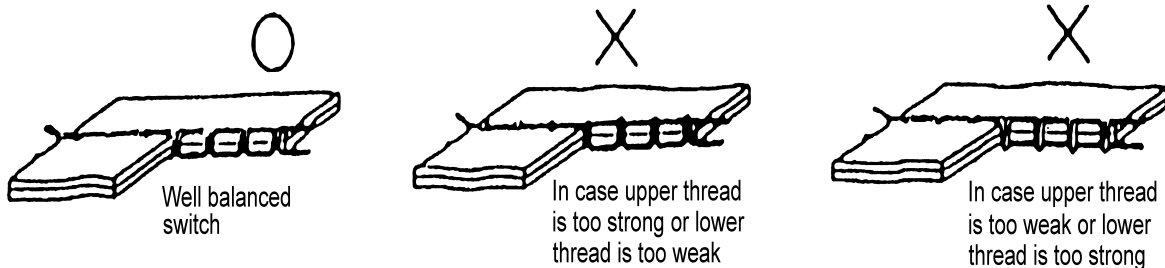


Fig.10

The thread tension should be as low as possible. The crossover point should be in the center of the material. Upper thread tension can be adjusted by thread tension nut 4 and 5 (see Fig.8 and Fig.9). Turn the thread tension nut clockwise to increase the needle thread tension. Turn the thread tension nut counter-clockwise to decrease the needle thread tension.

4) Winding the lower thread

Winding the lower thread as Fig.11 shows :

(1) Place the bobbin on the bobbin winder shaft.

(2) Pass the thread for winding thread as shown, and wind the end of the thread clockwise around the bobbin several times.

(3) Push the bobbin presser 1 toward the bobbin.

(4) The operation will automatically stop when winding is completed. The amount of thread wound onto the bobbin should be at 80% of the maximum bobbin capacity.

(5) After the thread has been wound on, remove the bobbin and cut the thread with the thread-trimming knife

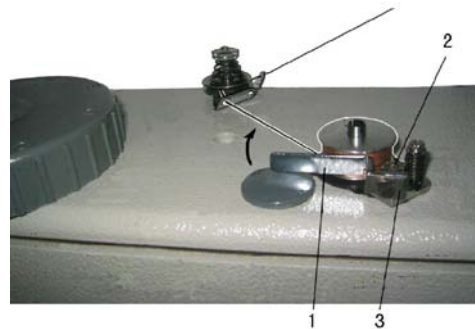


Fig.11

5) Threading the lower thread

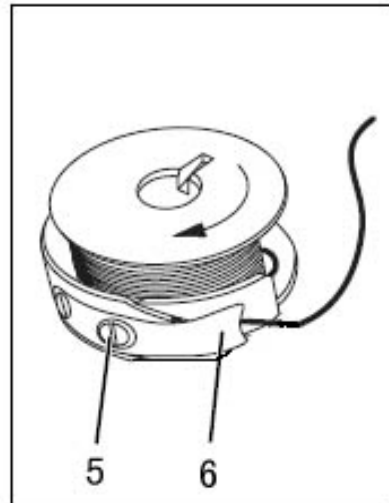
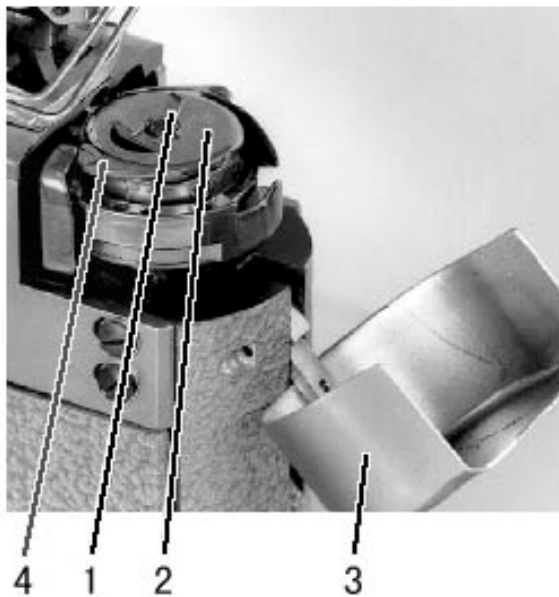


Fig.12

(1) Removing the empty looper-thread bobbin, be showed on Fig.12

Raise the setting foot, open shuttle cover 3 ,then ,raise bobbin-housing flap 1 and remove upper part of bobbin-housing 2. So, you can remove empty looper-thread bobbin.

(2) Threading looper thread

Full bobbin 4 in the upper part of bobbin-housing 2 (When the thread is unwound the bobbin must rotate in the opposite direction (see arrow), then ,drew looper thread through slit 5 beneath tensioning spring 6.

6) Adjusting the lower-thread tension

Open the shuttle cover first and adjust the tensioning spring 6 with regulating screw 5. If want to increase looper-thread tension, turn screw 5 clockwise and if want to decrease looper-thread tension, please turn screw 5 counter clockwise. After the adjustment ,close the shuttle cover.

Caution: The looper-thread tension may only be adjusted with the sewing machine switched off.

7) Installing the needle

Note: Before attach needle, be sure to turn off the power.

As showed on Fig.13

- 1) Turn the balance wheel by hand to raise the needle bar 1 to its highest position;
- 2) Loosen the needle clamping screw 3;
- 3) Hold the needles with the long groove face to the bobbin case of the same side , and insert it as deeply as it will go into the needle clamping holes.
- 4) Tighten the needle clamping screw3.

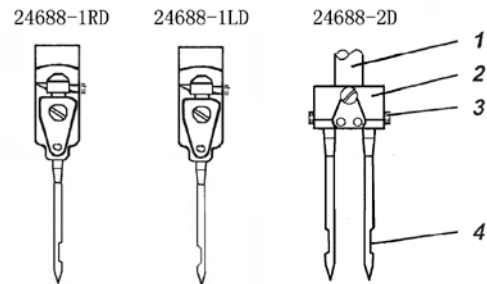


Fig.13

8) Alternating presser foot movement amount

The alternating movement amount for the inner presser foot and the outer presser foot can be adjusted within the range of 1-7 mm using the alternating presser foot movement dial 1. Turn the alternating presser foot movement dial 1 clockwise or counterclockwise to align the mark. (MIN. A, B, C, D, E, F MAX.) When the alternating movement change from MIN to MAX, the sewing speed will turn form 2000 rpm to 1700 rpm synchronously.

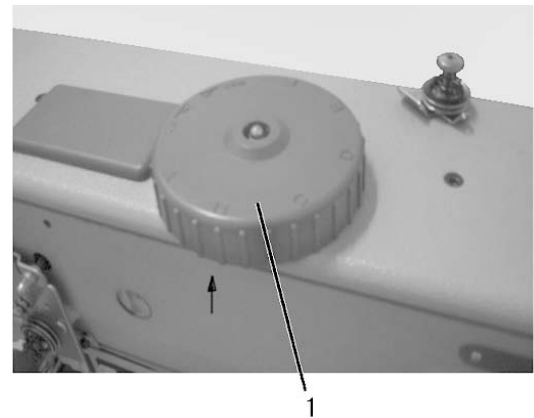


Fig.14

9) Adjusting the presser foot pressure

Look at Fig.15,

The presser foot pressure should be set as weak as possible, but strong enough so that the material can't slip out. If the presser-adjusting dial 1 is turned clockwise, the presser foot pressure will become stronger, and if it is turned counterclockwise, the pressure will become weaker.

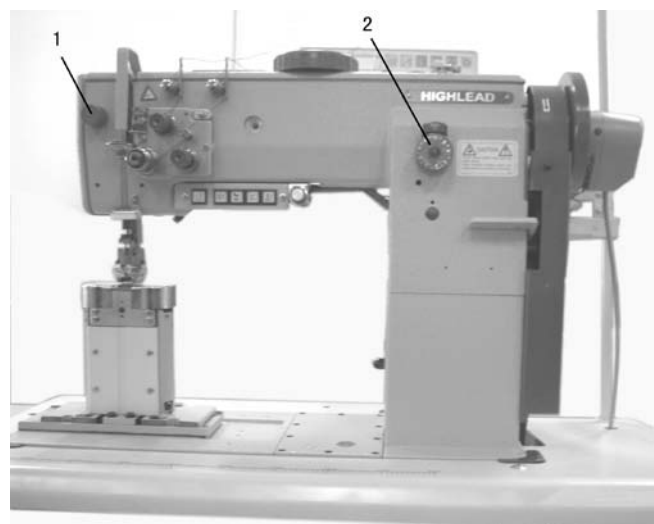


Fig.15

10) Adjusting the stitch length

The feed adjustment dials 2 can be used to set stitch length. (See Fig.15) The sewing machine will switch between the two stitch lengths each time the stitch length change switch is pressed.

11) Using the manual switches

Be showed by Fig.16:

(1) Quick reverse switch

Back tacking is carried out during sewing only while the switch 1 is being pressed.

(2) Needle up or down switch

If the switch 2 is pressed, The needle will move up to the needle up stop position from down stop position or move down to the needle down stop position from up stop position.

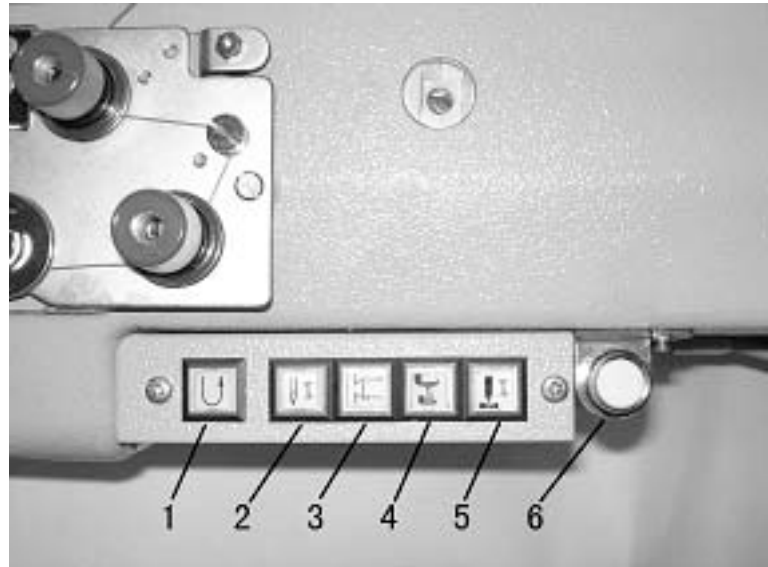


Fig.16

(3) Auto back tacking select switch

If the switch 3 is pressed when either start back tacking or end back tacking has been set to ON at the operation panel, back tacking is canceled for the first time only. Furthermore, if the switch 3 is pressed when neither starting nor end back tacking has been set, back tacking is carried out for the first time only.

(4) Alternating presser foot movement change switch

The sewing machine can be switched between two different alternating presser foot movement amounts each time when the switch 4 is pressed.

(5) Presser foot guider

The switch controls the cylinder of the presser foot guider and the status changed by each press of the button. OFF: Presser foot guider turn off; ON: Presser foot guider on.

(6) Stitch counter switch

The orange light on the switch will flash and the machine will stop when the bobbin thread is used up. Push the switch one more time after change the bobbin. The sewing machine cannot run before the switch be pushed one more time. The stitch count should be set according to the stitch length and the count of the bobbin thread. (it is special order parts)

Notice: the switch is not work until the correlative functions of the control box are set. The functions please read the parameter 42, 43, 44 in the servo motor user manual.

12) Cleaning

- (1) The area around the feed dog and the hook should be cleaned every day.
- (2) Remove any thread scraps from inside the rotary hook.
- (3) Keep the control box clean.

13) Lubrication

- (1) Check the oil level at the sight glass 2 of Fig.17 every week. If the oil is not enough, remove oil-filling screw 1 and pour in oil. Check oil level at sight glass 2. The oil level must be between “EMPTY” and “FULL”. Replace oil-filling screw 1. After running for 500 hours since buying the new sewing machine, the oil must be changed. Then change the oil every two years.

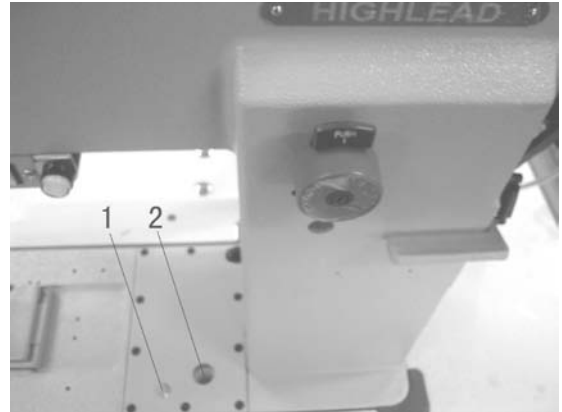


Fig.17

- (2) Lubricating wicks and felt (see the Fig.19)

- a. The wick 1 leading from the oil sump to the oscillating crank 4 must be fixed between the groove 2 in the arm and the spring 3 of the recirculation wick.
- b. When the oil satchel is changed, the flock side should be faced to connecting plate 10. The oil wick 7 and 8 should be set between the oil satchel 9 and plate 8.

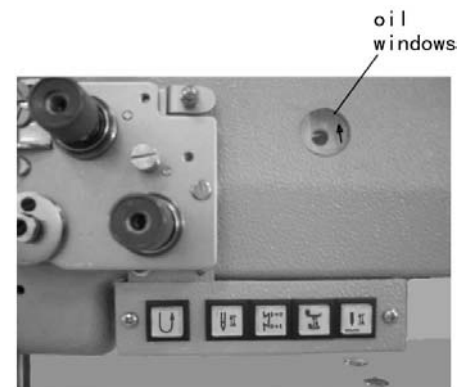


Fig.18

- (3) Checking the lubrication oil

Turn on the power switch. Depress the treadle gently and check that the oil level rises in the oil sight glass.

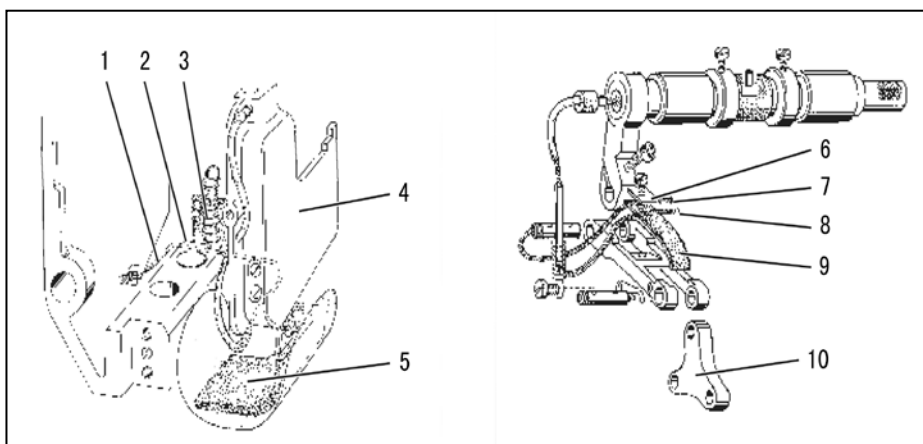


Fig.19

14) Adjusting the trailing length after thread trimming

Look at Fig.20: adjust by turning the pre-tensioner . If the tension of the pre-tension is increased, the lengths of the threads trailing from the needle tips will be reduced; if the tension is reduced, the lengths will be increased.

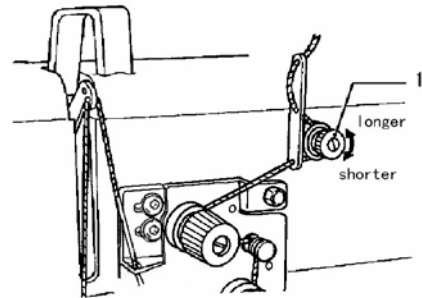


Fig.20

15) Back tacking

When the reverse lever 1 or the quick reverse switch is pressed during sewing, the feed direction will be reversed. When it is released, the feed direction will return to normal.(Fig.21)

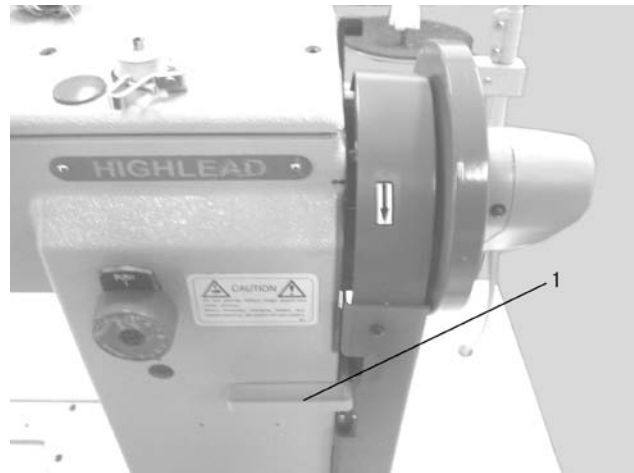


Fig.21

16) Adjusting the feed dog

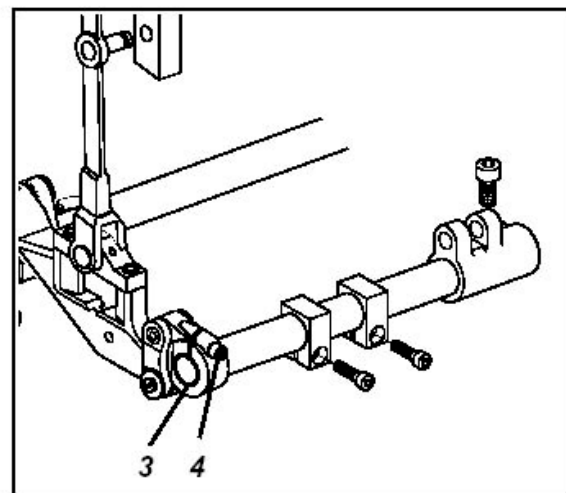
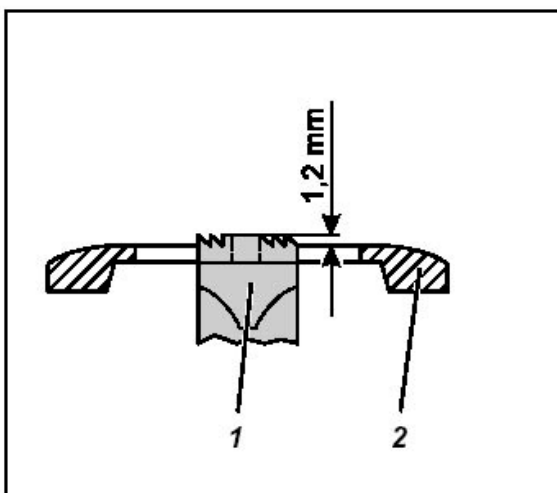


Fig.22

Caution: Check and adjust height of the feed-dog only when sewing machine is switched off.

The checking and correction are showed by Fig.22

(1)Standard checking

The highest position of feed-dog 1 must be 1.2mm(approx. one tooth depth) above the throat plate level.

Set stitch length"0"(Turn button counter-clockwise as far as it will go).Then, turn handwheel until feed-dog 1 has reached its highest position, check the height of feed-dog 1 above throat plate level 2

(2)Correction

Set stitch length "0",loosen clamping screw 4 at crank 3, and twist crank 3 in such a way that the highest position of feed-dog 1 is 1.2mm above throat plate 2,then tighten clamping screw 4 at last.

Attention: crank 3 must not be shifted axially when being turned.

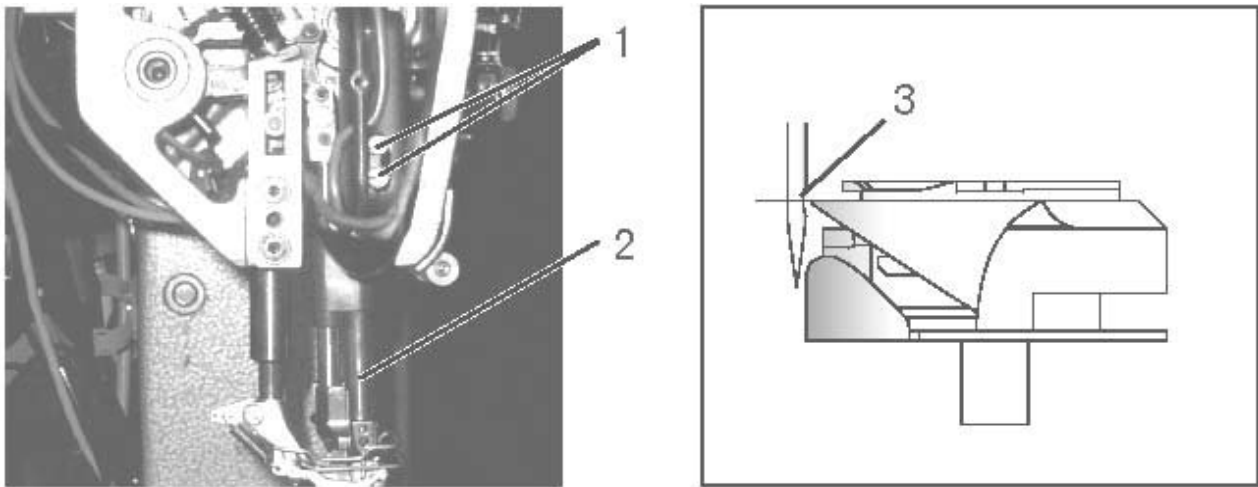


Fig.23

17) Adjusting the needle bar height

Be showed by Fig.23:

In looping stroke position the hook tip must be at the level of the middle of the needle hollow groove 3 .

When the position is not correct ,follow the step below :

- (1) Remove the face plate.
- (2) Set the feed adjustment dials to "0".
- (3) Turn the pulley to set the needle bar 2 to its lowest position.
- (4) Loosen the screw 1 and then move the needle bar 2 up and down to adjust so that the hook tip is at the level of the middle of the needle.
- (5) Tighten the screw 1, install the face plate.

18) Adjusting the gap between the needle and the rotary hook tip

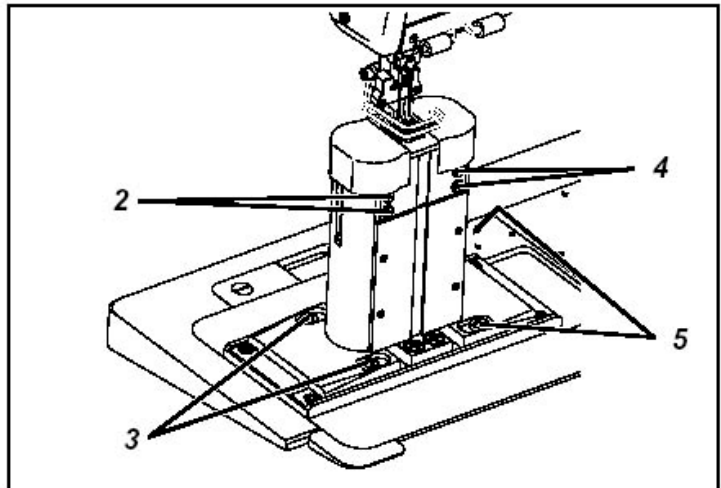
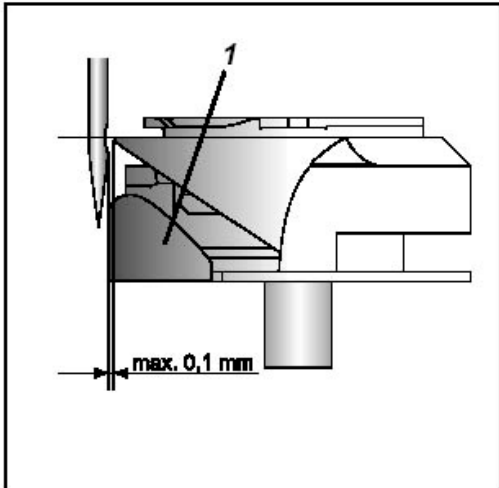


Fig.24

Look at Fig.24 and Fig.25:

The gap between the needle and the rotary hook tip 6 is 0.1 mm. check the position of the hook tip and the needle hollow groove ,if the position is not correct with the requirement ,adjust it as follow:

- (1) Loosen the screws 2 (for left hook) screw 4(for right hook) of the throat plate.
- (2) Loosen fastening screw 3(for left hook), fastening screw 5(for right hook) of the hook support.
- (3) Shift hook support correspondingly.
- (4) Tighten the screws 3,5 and 2,4.

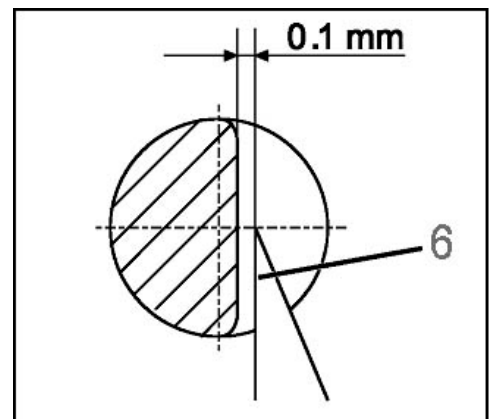


Fig.25

19) Adjusting of the needle and the hook timing

Look at Fig.26

- (1) Set the stitch length to "0".
- (2) Open the shuttle cover.
- (3) Overturn the arm.
- (4) Loosen the screw 1
- (5) Turn the machine pulley to raise the needle bar from its low position to the point that the needle rises 2.4 mm.
- (6) Turn the rotary hook to align the rotary hook tip with the center of the needle.
- (7) Tighten the screw 1.

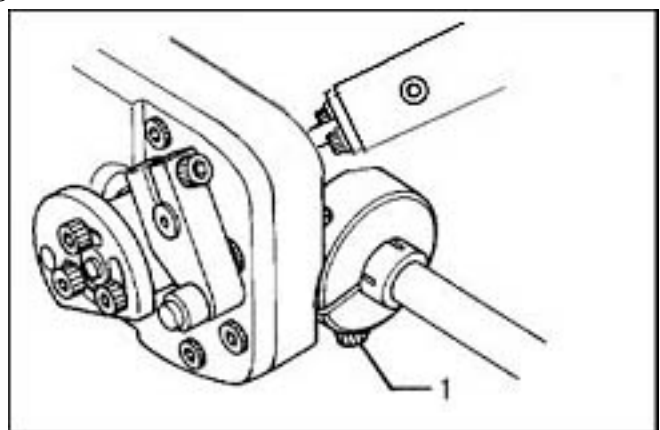


Fig.26

20) Hook protection

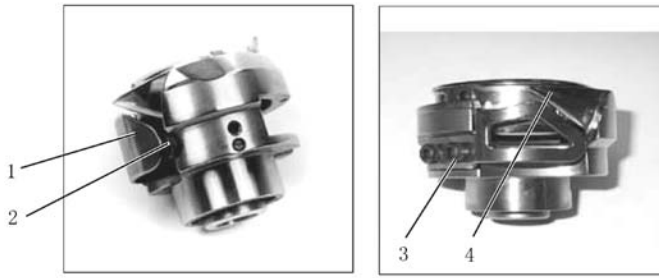


Fig.27

As shown by Fig.27, in looping stroke position the needle must abut on the hook protection 1 without being displaced. Move needle in looping stroke position by pulley. In looping stroke position the hook tip 4 is at the level of the middle of the needle. Press needle against hook protection 1 manually. The needle should not touch the hook tip. The hook protection 1 should be adjusted by screw 3.

21) Adjusting the needle and feed mechanism timing

(1) Horizontal feed direction (shown by Fig.28)

Set the feed adjustment dials to the maximum settings. Then turn the machine pulley until the bobbin tip catches the thread (when the needle is 2.4mm above the lowest position) The needle and the feed dog do not move even when the reverse lever is moved up and down at this time.

a. Remove the bed upper cover 1.

b. Set the feed adjustment dial to the maximum settings.

c. Loosen the two screws 2.

d. Turn the machine pulley until the needle is at its thread catching position.

e. Turn the lower feed cam 3 gradually until it is at the position where the needle and the feed dog do not move even when the reverse lever is moved up and down.

f. Tighten the two screws 2.

(2) Vertical feed direction (shown by Fig.29)

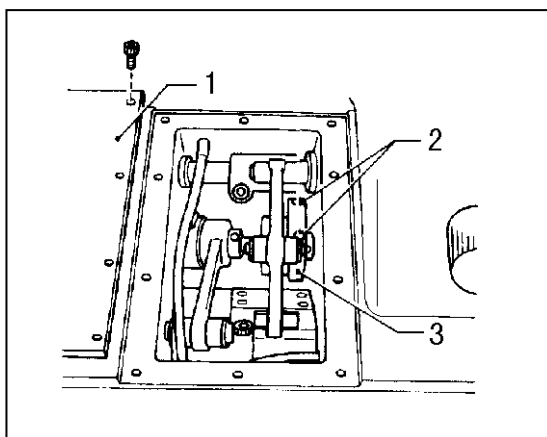


Fig.28

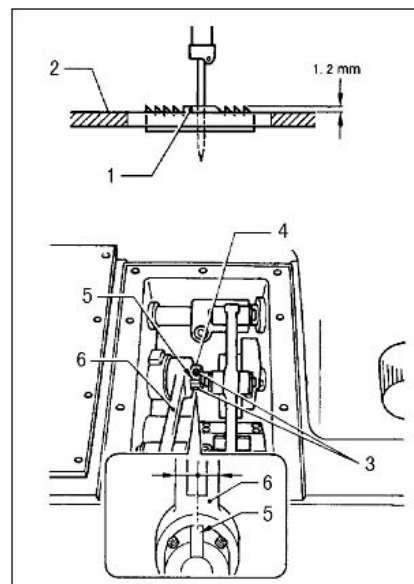


Fig.29

Set the feed adjustment dials to the minimum settings. Then adjust as follows so that the feed dog 1 is at its highest position (1.2mm above the top of the needle plate 2) when the needle bar is at its lowest position.

- a. Loosen the two screws 3
- b. Turn the machine pulley to set the needle bar to its lowest position.
- c. Turn feed cam 4 to align the point 5 of feed cam 4 with the centerline of feed rod 6
- d. Tighten the screws 3

22) Bobbin case lifter

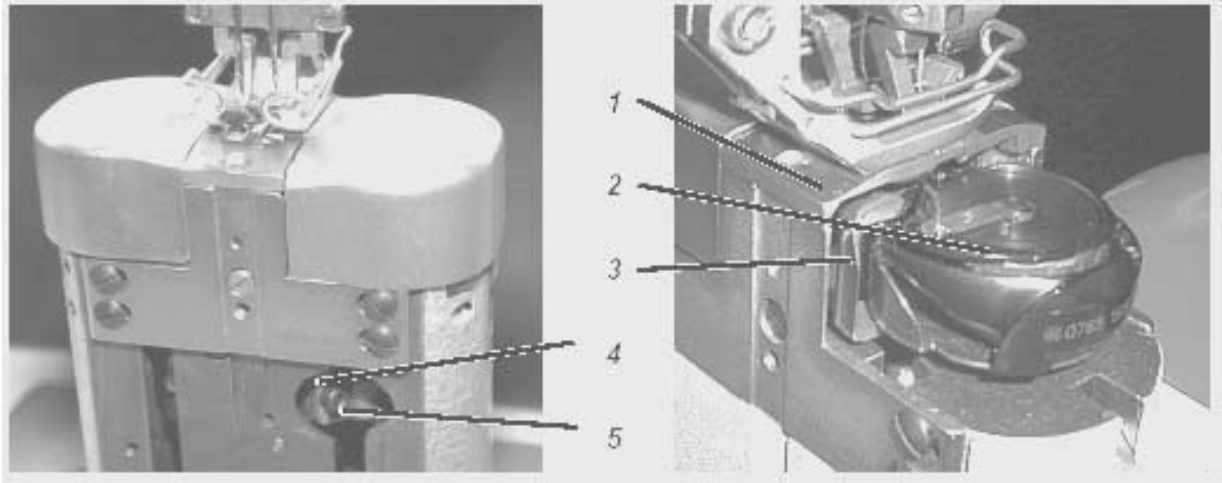


Fig.30

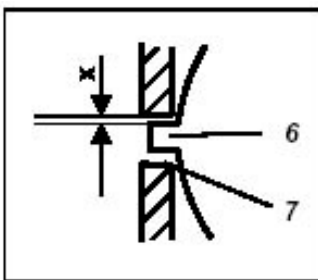


Fig.31

Look at Fig.30 and Fig.31, the thread lever must pull the needle thread over the bobbin case through gap 7 of the throat plate 1.

At the moment of the thread slipping through lifting finger 3 lifts bobbin case 2. Due to the unhindered thread passage the desired seam pattern is achieved with the lowest possible thread tension.

The lifting finger 3 is controlled via the eccentric in the hook shaft and the control block 4.

Wrong adjustments may cause thread breakage, loops at the bottom side of the material and loud noise.

Checking: Lifting finger 3 must lift bobbin case 2 in such a way that the thread can slip laterally between bobbin case lug 6 and the gap of the throat plate without being hindered.

When bobbin case 2 is lifted, the distance X between holding lug 6 and the gap of the throat plate must correspond to the thickness of the sewing thread. Sew some stitches manually, then check the distance x at the moment of the bobbin case lifting.

Adjustment: Screw off cover of the hook support, loosen clamping screw 5 at the control block 4, then, twist lifting finger 3 in such a way that the clearance in the lifting finger remains small. At last, tighten clamping screw 5 and screw on cover of the hook support.

If the lifting course is too small, it will no unhindered thread passage, if the lifting course is too small, it will cause loud noise and the bobbin case 5 will flung against the other side of the throat plate gap 7.

23) Adjusting the presser foot height(Fig.32)

The standard height of the outer presser foot 7 is 9 mm when it is raised by the presser lifter bar 1.

- (1) Remove the belt cover.
- (2) Loosen the presser adjusting screw, to release the presser foot pressure.
- (3) Raise the presser lifters bar 1 and then loosen the screw 3.
- (4) Move the outer presser bar up or down to adjust so that the height of the outer presser foot 7 is 9 mm.
- (5) While the stopper pin 6 is touching against the notch B in the presser foot lifter connection 5 and while pushing the presser lifter shaft so that there is no play in the thrust direction, tighten the screw 2.
- (6) Turn the presser adjusting screw to adjust the presser foot pressure.
- (7) Install the belt guards.

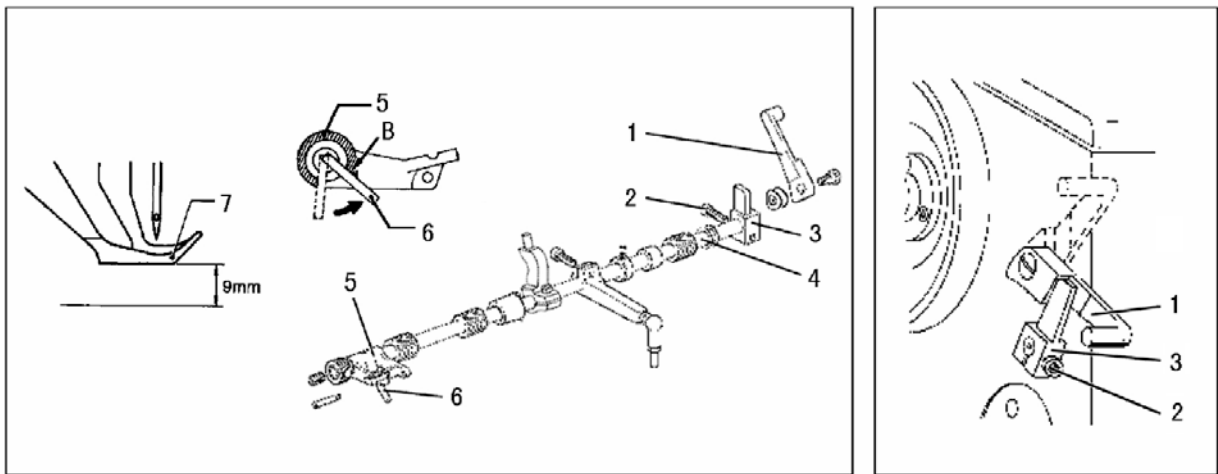


Fig.32

24) Adjusting the alternating presser foot movement amount(Fig.33&Fig.34)

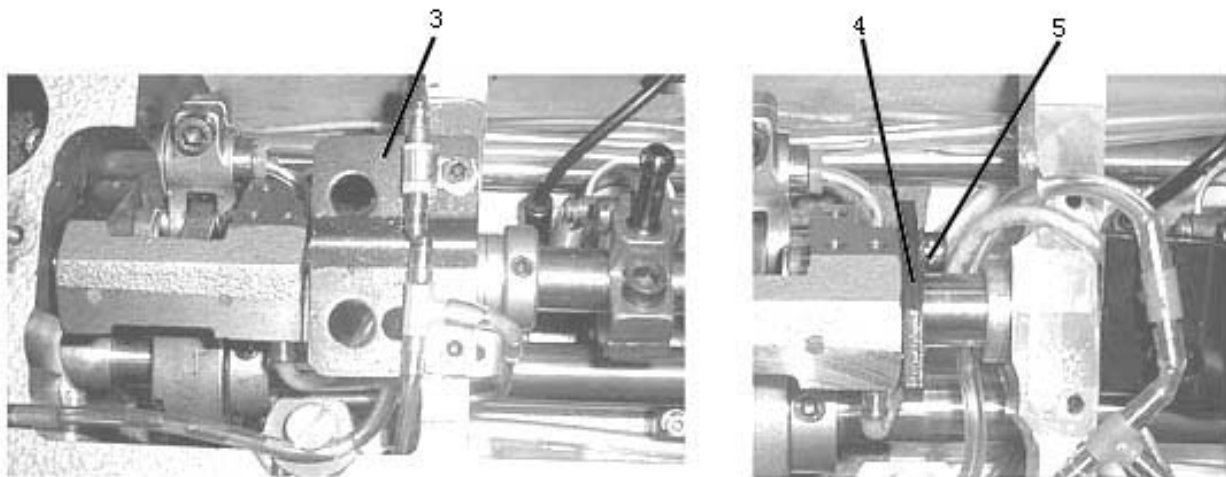


Fig.33

Maximum alternating presser foot movement amount. Carry out the following adjustment to set the maximum alternating movement amounts for the inner presser foot 1 and outer presser foot 2 to the maximum of 7 mm.

- a. Remove the upper plate.
- b. Remove the adjusting bracket 3.
- c. Loosen screw 5 of adjusting bracket collar 4.

d. Adjust the adjusting bracket collar 4. If the adjusting bracket collar 4 is be installed at the highest position, the alternating presser foot movement amount is 1-6mm. If it is at the lowest position, the alternating presser foot movement amount is 1-7mm.

- e. Tighten the screw 5.
- f. Install the adjusting bracket 3.

g. Loosen the bolt 6 and turn connecting lever 7 to adjust so that the distance from the outer edge of the arm to the outer edge of the pin 7 is 78 mm at this time. Then tighten the bolt 6.(When installing the upper plate, set the alternating presser foot movements dial to the “min.” position.)

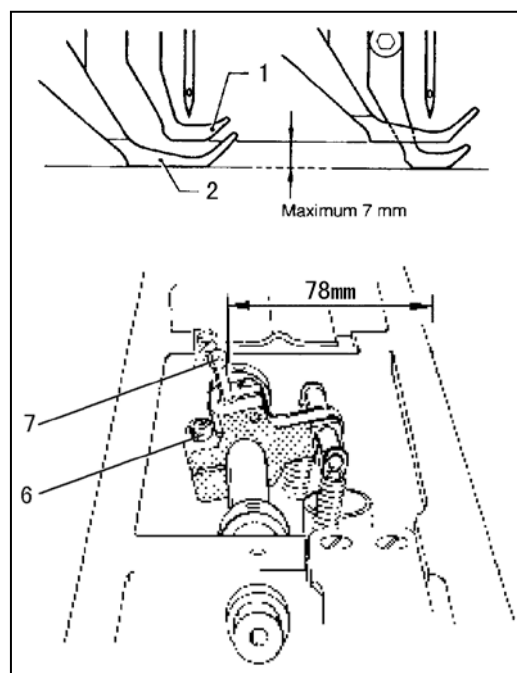


Fig.34

25) Adjusting the presser foot timing(Fig.35)

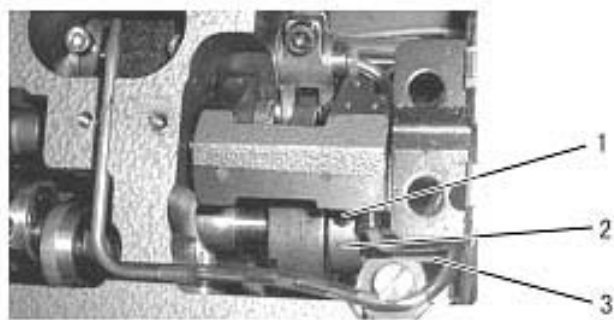
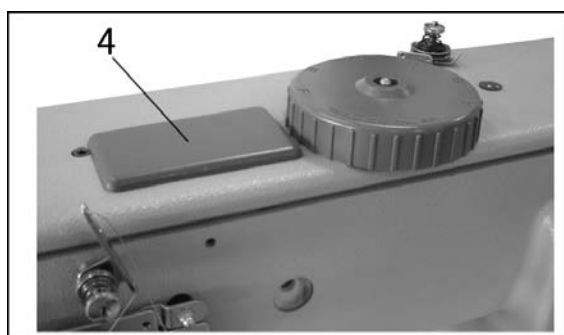


Fig.35

When the presser feet are lowered and the machine pulley is turned toward the user. The inner presser foot should touch the feed dog before the needle arrives at the feed dog. Then when the needle lifts up, the tip of the needle should move away from the feed dog before the inner presser foot moves away.

- (1) Remove the upper cover 4.
- (2) Loosen the two screws 1.
- (3) Turn the machine pulley until the needle tip and the feed dog's up face is the same plane.
- (4) Turn inner presser cam 2 to adjust so that the point of inner presser cam is facing straight up.
- (5) Tight the screws 1.
- (6) When installing the upper plate 4, set the alternating presser foot movement dial to the “MIN.” position.

26) Driving knife adjustment

In resting position the rear edge of the driving knife should be flush with the front edge of the counter-knife, which have been showed by Fig.36.

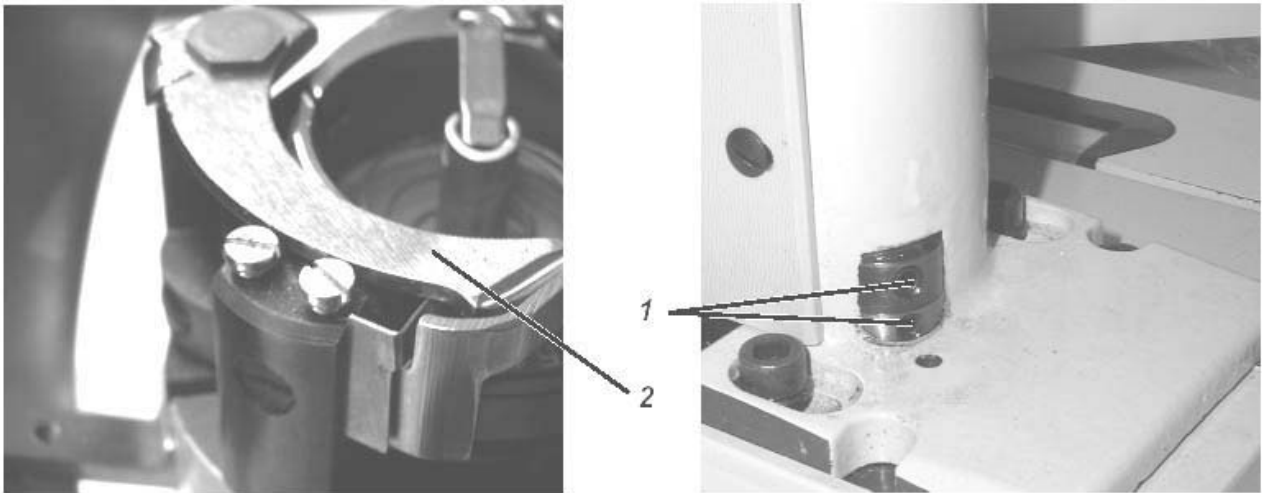


Fig.36

The fixed knife should abut on the thread pulling knife along its total width.

The pivoting driving knife should abut on the fixed knife after approx.1/3 of its width.

The driving knife must not collide with the bobbin case.(Fig.37)

The clearance between the lower blade edge of the driving knife **a** and the lower surface of the inner rotary hook **b** should be 0.3-0.4mm..

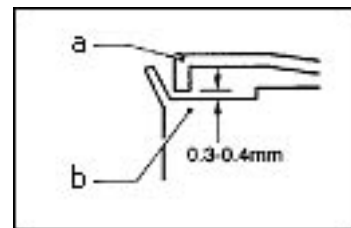


Fig.37

Checking :

In Fig.36,loosen two screws 1 for adjusting the resting position of the driving knife and adjust the knife according to the standard, then tighten screws 1.

ATTENTION:

Check the axial clearance of the knife shaft when tightening the screws 1.The driving knife must be easily movable and the axial clearance as low as possible .

27) Adjusting the thread trimming timing(Fig.38)

Checking: The moment of knife swiveling is fixed by the position of the cam 2, When the thread lever is in position “up”, the roller 7 should abut on the highest point of the cam 2

The roller should not touch the cam while sewing. The distance between roller and cam should amount to 0.1mm.

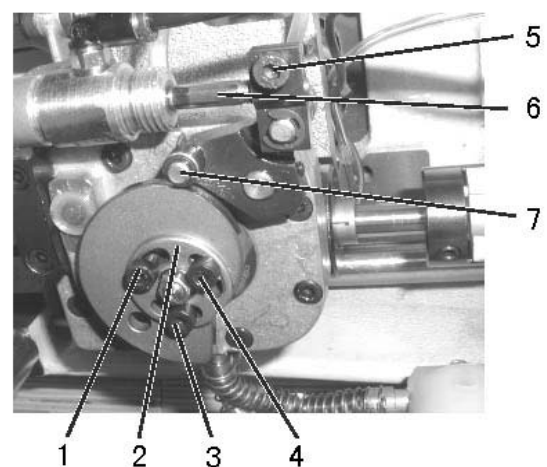


Fig.38

Adjustment: When adjust roller to cam, first, loosen screw 5 for adjusting the distance between roller and cam ,then twist piston rod 6 in order to adjust the distance, at last ,tighten screw 5.

Turn cam adjustment: Loosen screw 1,3 and 4 at the cam, then, twist cam 2 in such a way that the roller abut on the highest point of the cam when the thread lever is in position “up”, at last ,tighten screws 1,3 and 4 again.

28) Adjusting the fixed knife position and bobbin thread clamping(Fig.39)

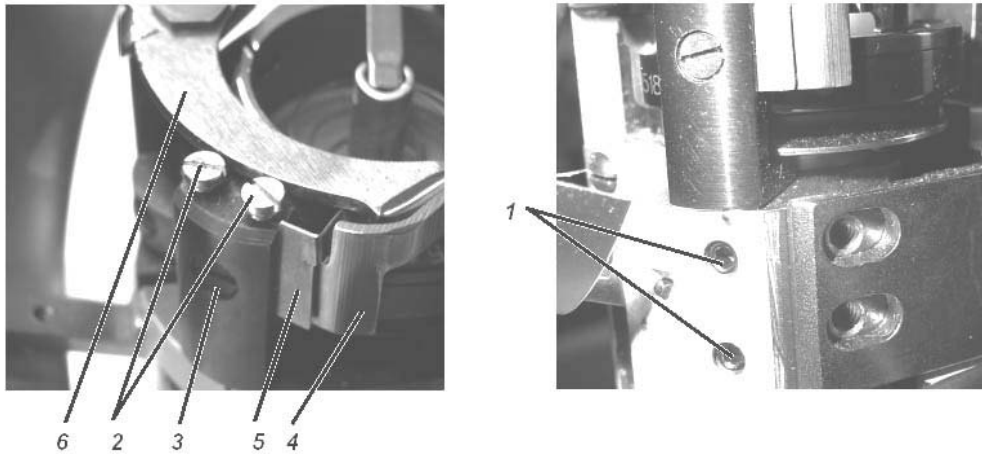


Fig.39

Checking:

The clamping spring 5 has the function to hold the cut bobbin thread in order to avoid skipped stitches at the seam beginning.

Fixed knife 4 and driving knife 6 must be in parallel position standing under a slight cutting pressure.

Parallel position correction

Loosen screw 3 slightly for adjusting the parallel position of thread pulling knife 6 and counter-knife 4,then change counter-knife 4 by setting the screws 2 in such a way that the edges of thread pulling knife and counter-knife are in parallel position. Tighten screw 3 at last.

Cutting pressure adjustment

The knives should guarantee a safe cut at the lowest possible pressure of the counter-knife against the thread pulling knife. This is normally the case when the edge of the counter-knife just touches the thread pulling knife with a knife overlapping of 1/3.

Loosen screws1,then turn counter-knife support in such a way that the condition is fulfilled, at last ,tighten screw 1.

Clamping adjustment

Slightly bend the bobbin thread clamp for correcting the clamping and make a test cut by hand and check the thread clamping.

29) Safety clutch(Fig.40)

The standard safety clutch 2 in the lower toothed belt wheel protects the hook from being displaced or damaged in case of thread jamming in the hook path. When the hook is blocked, the safety clutch 2 must come out.

- (1) Set free blocked hook.
- (2) Stick a pin in drill-hole 1 of the outer clutch disc.
- (3) Turn the pulley until the pin can be stuck in the drill-holes of both clutch parts.
- (4) Turn the pulley forwards and backwards until the hook is freely movable again.
- (5) Pull out pin.
- (6) Hold down hook and turn the pulley until safety clutch 2 engages.

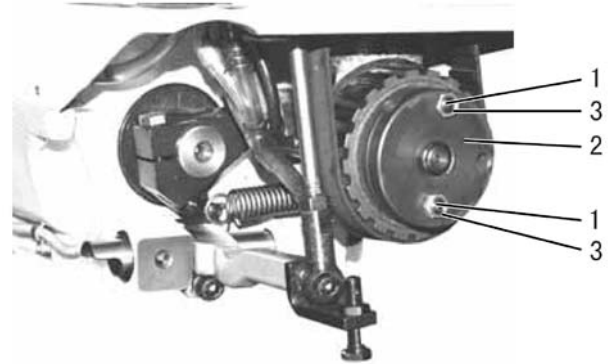


Fig.40

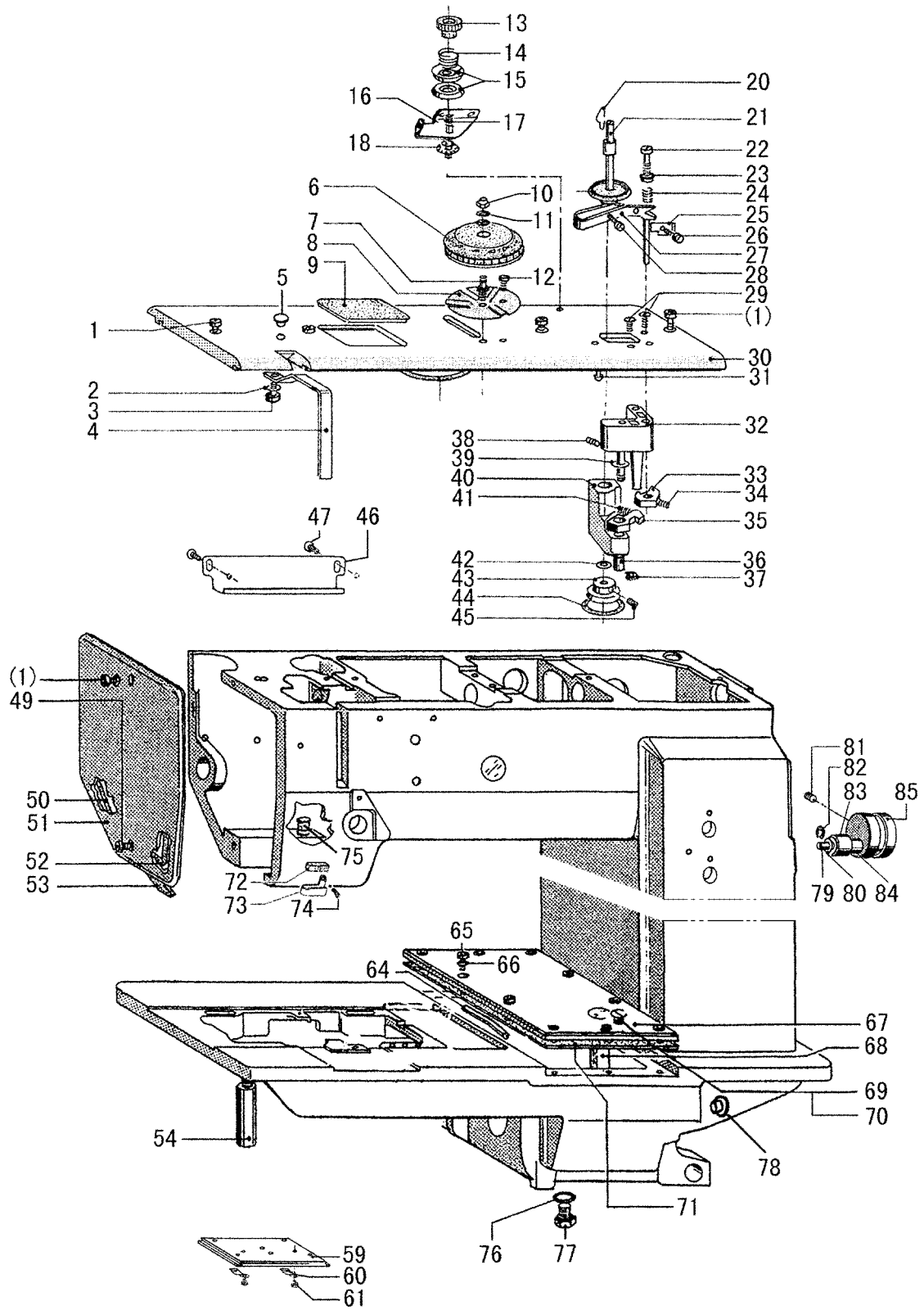
Adjust transmittable torque

Standard checking

The supplier by means of a torque spanner should adjust the torque transmittable from safety clutch.

- (1) Loosen counter-nuts 3.
- (2) Adjust torque
- (3) Tighten counter-nuts 3 again.

A.ARM AND ITS ACCESSORIES



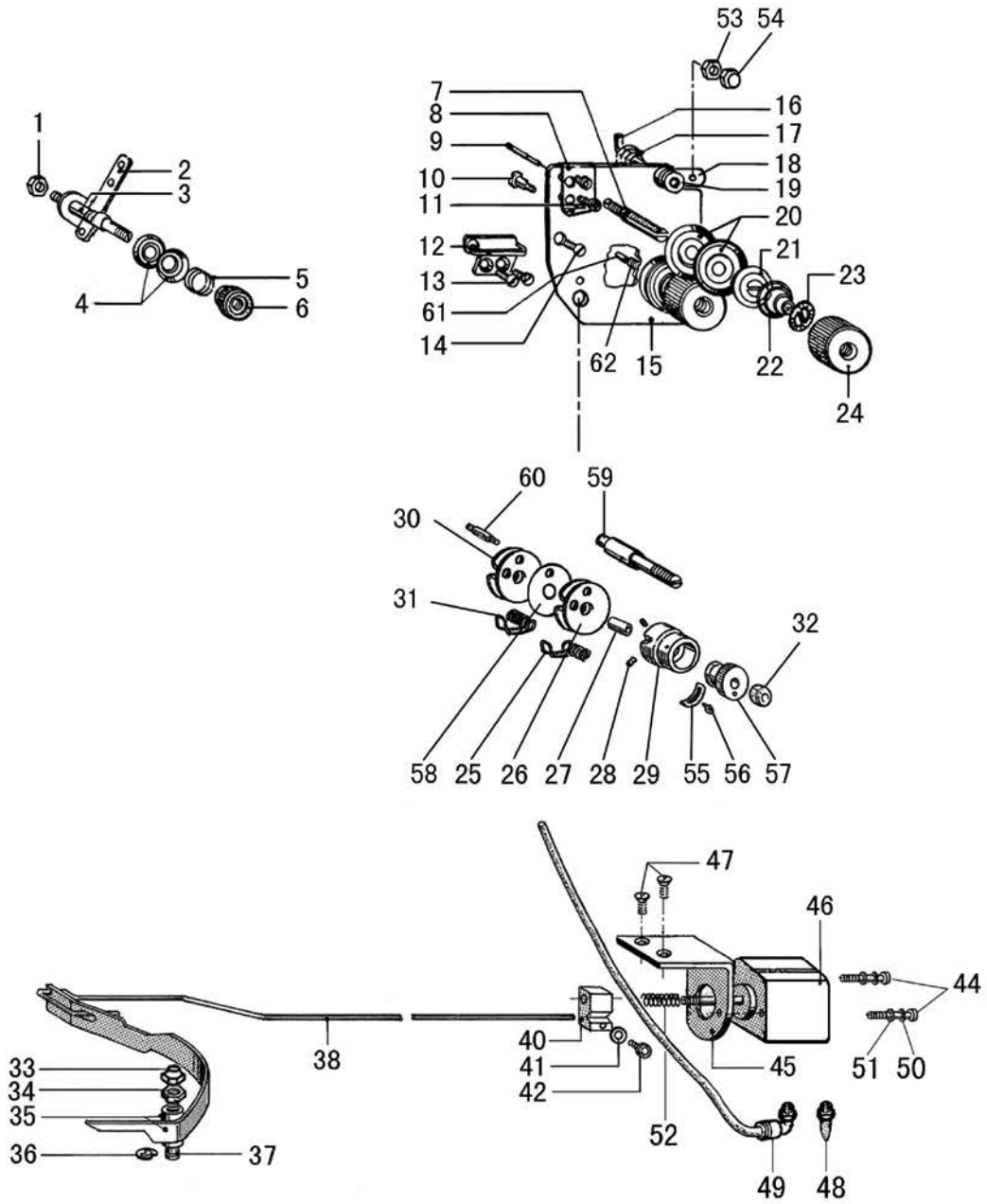
A.ARM BED AND ITS ACCESSORIES

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
A01	HF914B8001	Screw M5×12	5	5	5	
A02	H005001040	Washer	1	1	1	
A03	H415040080	Screw	1	1	1	M4×8
A04	HF927B8001	Thread take-up cover	1	1	1	
A05	HF930B8001	Plug	1	1	1	
A06	HF933B8001	Dial	1	1	1	
A07	HF935B8001	Dial shaft	1	1	1	
A08	HF936B8001	Guard plate	1	1	1	
A09	HF931B8001	Cover	1	1	1	
A10	H003045040	Hexagonal nut	1	1	1	M4
A11	H005001040	Washer	1	1	1	
A12	H401040060	Screw	1	1	1	M4×6
A13	HA710B0671	Pre-tension adjusting nut	1	1	1	
A14	H6739B8001	Thread tension spring	1	1	1	
A15	HA310B0705	Thread tension discs	2	2	2	
A16	H6736B8001	Thread guide	1	1	1	
A17	HF974B8001	Thread tension stud	1	1	1	
A18	H4728H8001	Washer	1	1	1	
A20	HF965B8001	Fixing clamp	1	1	1	
A21	HF964B8001	Winder shaft	1	1	1	
A22	H401030120	Screw	1	1	1	M3×12
A23	HF952B8001	Disc	1	1	1	
A24	H5731F8001	Presser spring	1	1	1	
A25	HF954B8001	Knife	1	1	1	
A26	H401030040	Screw	1	1	1	M3×4
A27	HF947B7101	Release lever	1	1	1	
A28	H401030120	Screw	1	1	1	M3×12
A29	H403040080	Screw	2	2	2	M4×8
A30	HF921B7101	Arm cover	1	1	1	
A31	H901030080	Pin	1	1	1	
A32	HF942B7101	Winder block	1	1	1	
A33	HF944B8001	Release cam	1	1	1	
A34	H431050060	Screw	1	1	1	M5×6
A35	HF958B8001	Block	1	1	1	
A36	HF955B8001	Bushing	1	1	1	
A37	H007013035	E-type stop ring 3.5	1	1	1	
A38	HA300E2110	Presser spring	1	1	1	
A39	HF957B8001	Washer	1	1	1	
A40	HF960B8001	Arm	1	1	1	
A41	HF959B8001	Presser spring	1	1	1	
A42	HF966B8001	Washer	2	2	2	
A43	HF967B8001	Winder wheel	1	1	1	

A.ARM BED AND ITS ACCESSORIES

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
A44	HF969B8001	Rubber ring	1	1	1	M5×5
A45	H431050050	Screw	1	1	1	
A46	HF999B8001	Cord cover	1	1	1	
A47	H7331G8001	Screw	1	1	1	
A49	HF915B8001	Screw M5×12	1	1	1	
A50	HF918B8001	Bar	1	1	1	
A51	HF913B8001	Face plate	1	1	1	
A52	HF919B8001	Bar	1	1	1	
A53	HF920B8001	Oil pillow	1	1	1	
A54	HF998B8001	Leg	1	1	1	
A59	HF985B8001	Slide Plate	1	1	1	M2×2.5
A60	HF986B8001	Spring for slide plate	2	2	2	
A61	H401020025	Screw	2	2	2	
A64	HF938K8001	Pipe	1	1	1	
A65	HF914B8001	Screw M5×12	10	10	10	
A66	HF997B8001	Gasket	10	10	10	
A67	HF991B8001	Cover	1	1	1	
A68	HF992B8001	Oil indicator	1	1	1	
A69	HF993B8001	Screw	1	1	1	
A70	HF994B8001	Gasket	1	1	1	
A71	HF995B8001	Gasket	1	1	1	M10×1
A72	H3108B0692	Felt	1	1	1	
A73	H3108B0691	Thread guide	1	1	1	
A74	HF938C8001	Screw	1	1	1	
A75	HA307B0674	Rubber plug	1	1	1	
A76	HF90AB8001	Gasket	2	2	2	
A77	100010	Screw	1	1	1	
A78	HG605H8001	Rubber plug	1	1	1	
A79	HF981I8001	Pin	1	1	1	
A80	H7335C8001	Washer	2	2	2	
A81	H428080120	Screw	1	1	1	M8×12
A82	H007013060	E-type stop ring 6	1	1	1	
A83	628ZZ	Bearing	2	2	2	
A84	HF980I8001	Spacer	1	1	1	
A85	HF979I8001	Belt tensioner	1	1	1	

B.THREAD TENSION REGULATOR MECHANISM



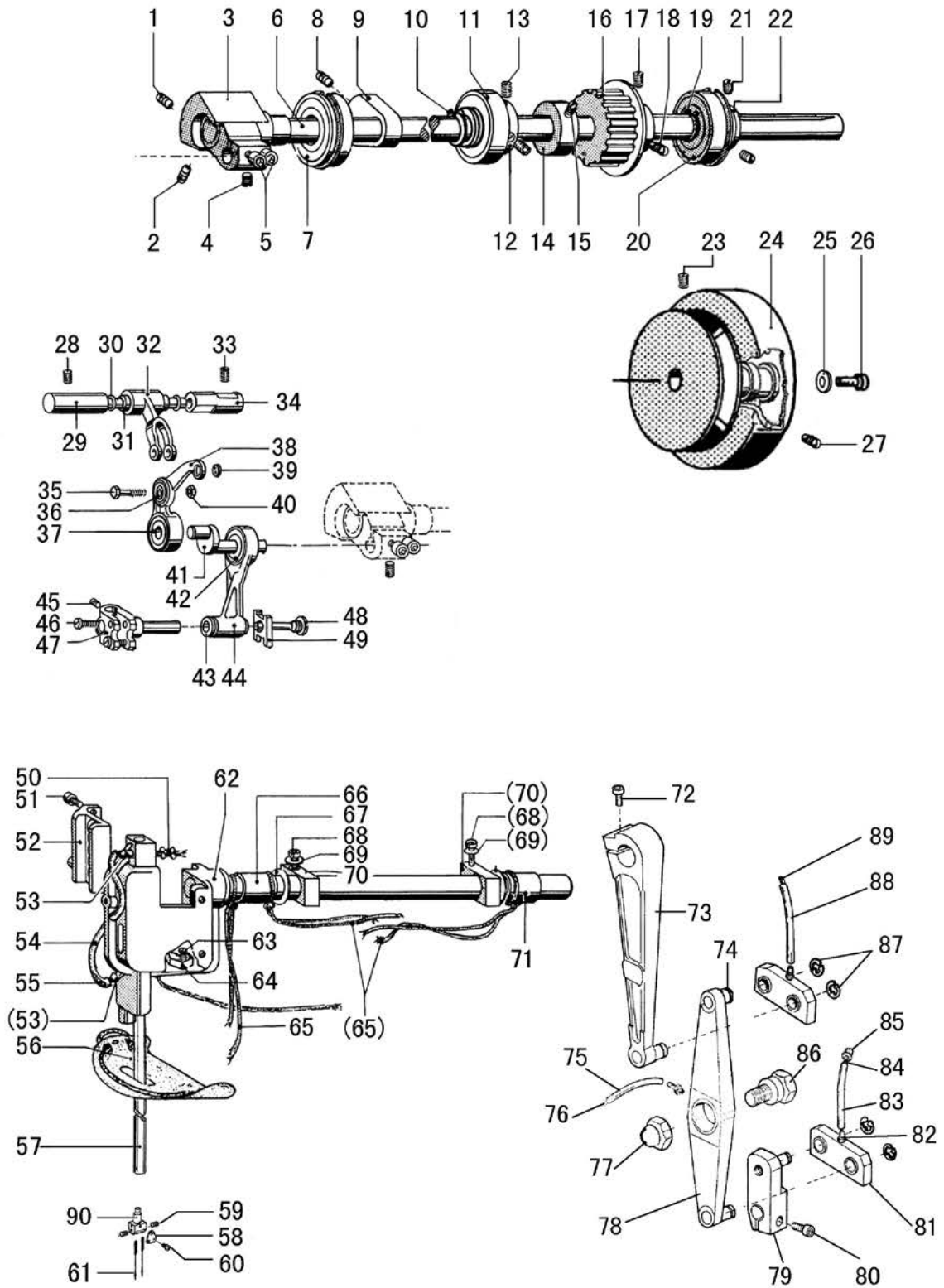
B.THREAD TENSION REGULATOR MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
B01	H003002050	Nut	2	1	1	M5
B02	HF930C8001	Thead hook	2	1	1	
B03	HF929C8001	Thread tension stud	2	1	1	
B04	HA112B0693	Thread tension discs	2	1	1	
B05	HA710B0672	Tension spring	2	1	1	
B06	HA710B0671	Tension adjusting nut	2	1	1	
B07	H3221B0686	Thread tension stud	1	1	1	
B08	HF917C8001	Thread guide	1	1	1	
B09	H3221B6817	Thread tension releasing pin	1	2	2	
B10	H3221B6811	Shoulder screw	2	2	2	
B11	H7316B8001	Screw	2	2	2	
B12	HG005C8001	Thread guide	1			
B12	HF925C8001	Thread guide		1	1	
B13	H7322B8001	Screw	2	2	2	
B14	H7316B8001	Screw	2	2	2	
B15	HF905C8001	Tension plate	1	1	1	
B16	HF923C8001	Rod	1	1	1	
B17	HF924C8001	Sping	1	1	1	
B18	HF915C8001	Tension release plate	1	1	1	
B19	HF916C8001	Thread guide	1	1	1	
B20	HA310B0705	Tension discs	4	4	4	
B21	HA310B0702	Tension release discs	2	2	2	
B22	HA115B0703	Tension spring	1	1	1	
B23	HA115B7010	Stopper	2	2	2	
B24	HA310B0701	Tension nut	2	2	2	
B25	H4712C8001	Thread take-up spring	1			
B26	H32481BF21	Plate complete	1	1	1	
B27	H32481B821	Bushing	1			
B28	H32481B521	Screw	2			
B28	H431050050	Screw		1	1	
B29	H32481B621	Take-up spring guide	1			
B30	H32481BD21	Plate complete	1	1	1	
B31	H4713C8001	Thread take-up spring	1	1	1	
B32	H32481B721	Thumb nut	1	1	1	
B33	H003045050	Nut	1	1	1	M5
B34	H003002050	Nut	1	1	1	M5
B35	HF918C8001	Release lever	1	1	1	
B36	H007013050	E-type stop ring 5	1	1	1	
B37	HF919C8001	Bolt	1	1	1	
B38	HF921C8001	Hook	1	1	1	
B39	H4710C8001	Tension spring	1	1	1	
B40	HG110C8001	Block	1	1	1	
B41	H005001040	Washer	1	1	1	

B.THREAD TENSION REGULATOR MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
B42	H415040080	Screw	1	1	1	M4×8
B43	HF92718001	Washer	1	1	1	
B44	H415040350	Screw	2	2	2	M4×35
B45	HF906C8001	Magnet support	1	1	1	
B46	HG107C8001	Pump	1	1	1	
B47	H403050120	Screw	2	2	2	M5×12
B48	HG108C8001	Silencer	1	1	1	
B49	HF937E8001	Coupling	1	1	1	EPL-04 M5
B50	H005009040	Spring Washer	2	2	2	
B51	H005001040	Washer	2	2	2	
B52	H3100G2050	Spring	1	1	1	
B53	H003002040	Nut	1	1	1	
B54	H003045040	Nut	1	1	1	
B55	H32481BB21	Stopper	1			
B56	H32481BC21	Screw	1			
B57	H32481B921	Thread tension post	1			
B58	H32481BE21	Plate complete	1			
B59	HG008C8001	Thread tension stud	1			
B59	H4805C8001	Thread tension stud		1	1	
B60	HG007C8001	Screw	1			
B60	H4804C8001	Screw		1	1	
B61	HG009C8001	Tension release discs	1			
B62	H3221B0689	Thread tension stud	1			

C.ARM SHAFT MECHANISM



C.ARM SHAFT MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
C01	H6715C8001	Screw	1	1	1	
C02	H431060080	Screw	1	1	1	M6×8
C03	HF907D8001	Crank	1	1	1	
C04	H431060060	Screw	1	1	1	M6×6
C05	HF914B8001	Screw	2	2	2	
C06	HF905D8001	Upper shaft	1	1	1	
C07	H3205J0662	Ball bearing(L)	1	1	1	
C08	H431080100	Screw	1	1	1	M8×10
C09	HF913D8001	Counterweight	1	1	1	
C10	H007009200	Retainer ring	1	1	1	
C11	HF921D8001	Ball bearing(M)	1	1	1	
C12	HF918D8001	Bushing	1	1	1	
C13	H431060060	Screw	2	2	2	M6×6
C14	HF943D8001	Bobbin winder driving wheel	1	1	1	
C15	H431060100	Screw	2	2	2	M6×10
C16	HG107D8001	Belt pulley(U)	1	1	1	
C17	H431060080	Screw	1	1	1	M6×8
C18	H429060100	Screw	1	1	1	M6×10
C19	H007009200	Retainer ring	1	1	1	
C20	HF932D8001	Ball bearing(R)	1	1	1	
C21	H431060080	Screw	2	2	2	M6×8
C22	HF929D8001	Bushing	1	1	1	
C23	H431060100	Screw	1	1	1	M6×10
C24	HG109D8001	Pulley	1	1	1	
C25	H005008080	Washer	1	1	1	
C26	H415080250	Screw	1	1	1	M8×25
C27	H429060100	Screw	1	1	1	M6×10
C28	H428050060	Screw	1	1	1	M5×6
C29	HF913G8001	Thread take-up pin	1	1	1	
C30	HF918G8001	Gasket	2	2	2	
C31	H7221G8001	Needle bearing	2	2	2	
C32	HF916G8001	Thread take-up support	1	1	1	
C33	H428050060	Screw	1	1	1	M5×6
C34	HF911G8001	Thread take-up pin bushing	1	1	1	
C35	HF919G8001	Support screw	1	1	1	
C36	HF909G8001	Bearing	1	1	1	
C37	HF910G8001	Bearing	1	1	1	
C38	HG107G8001	Thread take-up lever	1	1	1	
C39	HF908G8001	Bushing	1	1	1	
C40	H003008040	Nut	1	1	1	M4
C41	HF920G8001	Thread take-up crank	1	1	1	
C42	HF923G8001	Bearing	2	2	2	
C43	HF926G8001	Bushing	1	1	1	

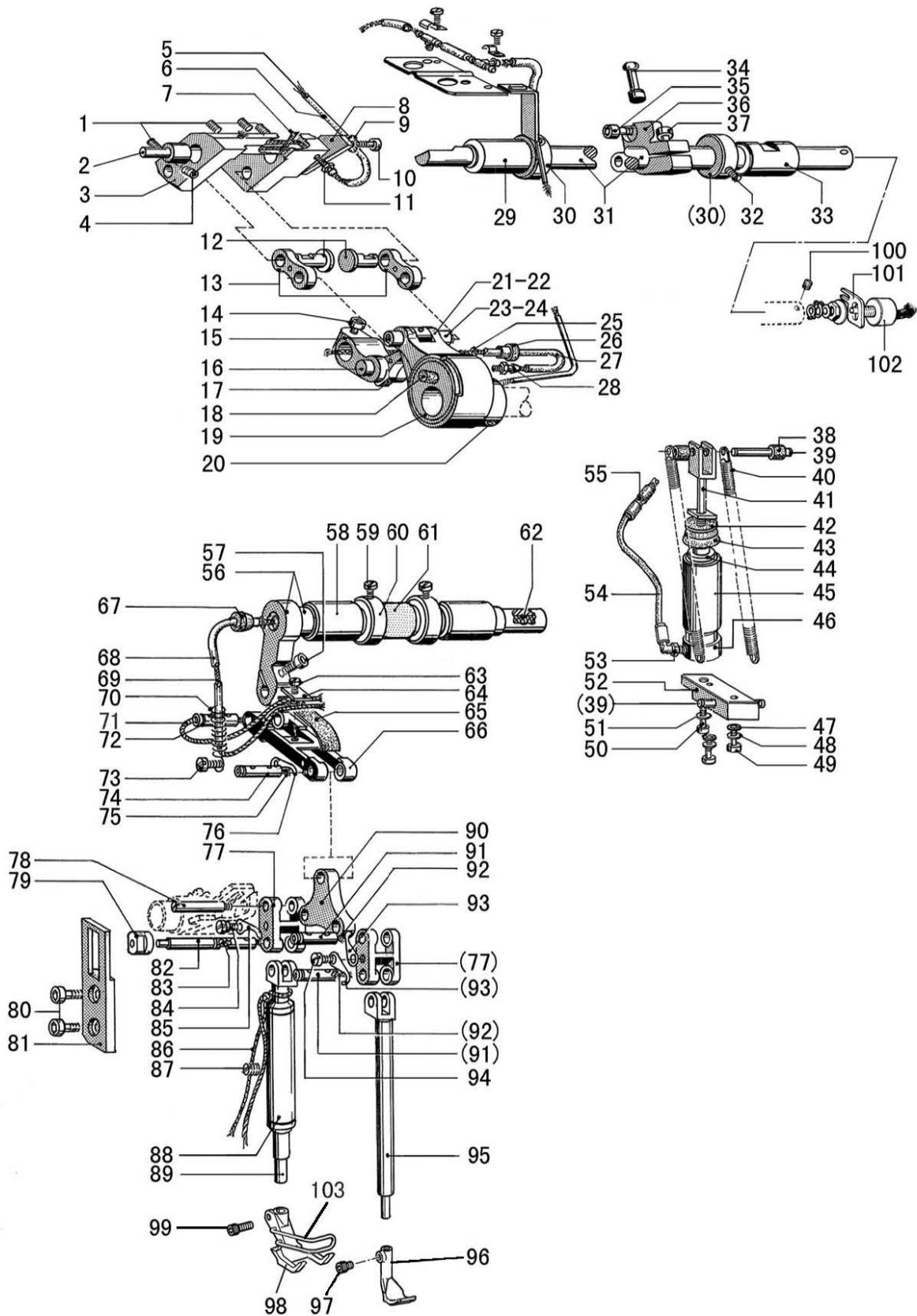
C.ARM SHAFT MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
C44	HF922G8001	Needle bar link	1	1	1	
C45	H431030050	Screw	1	1	1	M3×5
C46	H401040100	Screw	2	2	2	M4×10
C47	HF924G8001	Needle bar holder	1	1	1	
C48	HF928G8001	Threaded bolt	1	1	1	
C49	HF927G8001	Slide block	1	1	1	
C50	HF938G8001	Oil wick(Short)	1	1	1	
C51	H415040100	Screw	2	2	2	M4×10
C52	HF933G8001	Slide guide	1	1	1	
C53	HF939G8001	Oil feeding pipe	2	2	2	
C54	HF936G8001	Oil pipe	1	1	1	
C55	HF937G8001	Oil wick(Long)	1	1	1	
C56	HF940G7101	Rubber	1	1	1	
C57	HG005G8001	Needle bar	1			
C57	HF970G8001	Needle bar		1	1	
C58	HG007G8001	Thread guide	1			
C58	HF971G8001	Thread guide		1	1	
C59	H428030030	Screw	2	1	1	M3×3
C60	HG008G8001	Screw	1			
C60	HF972G8001	Screw		1	1	
C61	JZDP1700P23	DP×17 #23	2	1	1	
C62	HF931G7101	Needle bar bracket	1	1	1	
C63	H403040100	Screw	1	1	1	M4×10
C64	HF943G8001	Oil satchel	1	1	1	
C65	HF947G8001	Oil wick	3	3	3	
C66	HF927E8001	Bushing(L)	1	1	1	
C67	HF968G8001	Support disc	2	2	2	
C68	H415040120	Screw	2	2	2	M4×12
C69	H005001040	Washer	2	2	2	
C70	HF965G8001	Collar	2	2	2	
C71	HF924E8001	Bushing(R)	1	1	1	
C72	H415060200	Screw	1	1	1	M6×20
C73	HG133G8001	Upper feed connecting rod	1	1	1	
C74	HF951G8001	Shoulder screw	4	4	4	
C75	HG130G8001	Oil pipe	1	1	1	
C76	HG131G8001	Oil wick	1	1	1	
C77	H003045080	Nut	1	1	1	
C78	HG125G7101	Pull rod assy	1	1	1	
C79	HF949G8001	Connecting lever	1	1	1	
C80	H415060160	Screw	1	1	1	M6×16
C81	HF952G7101	Pull rod	2	2	2	
C82	HF956G8001	Oil joint	3	3	3	
C83	HF957G8001	Oil pipe	1	1	1	

C.ARM SHAFT MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
C84	HF958G8001	Oil wick	1	1	1	
C85	HF959G8001	Plug	1	1	1	
C86	HG127G8001	Screw	1	1	1	
C87	H007013080	E-type stop ring 8	4	4	4	
C88	HG130G8002	Oil pipe	1	1	1	
C89	HG131G8002	Oil wick	1	1	1	
C90	HG006G8001	Collet	1			

D.UPPER FEED LIFTING ROCK SHAFT MECHANISM



D.UPPER FEED LIFTING ROCK SHAFT MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
D01	H428050080	Screw	4	4	4	M5×8
D02	HF919E8001	Support pin	1	1	1	
D03	HF906E8001	Adjusting bracket(L)	1	1	1	
D04	H428050080	Screw	1	1	1	M5×8
D05	HF912E8001	Oil wick	1	1	1	
D06	HF911E8001	Oil pipe	1	1	1	
D07	HF908E8001	Oil wick	2	2	2	
D08	HF913E8001	Plate	1	1	1	
D09	H005018050	Washer	1	1	1	
D10	H415050100	Screw	1	1	1	M5×10
D100	H431040040	Screw	1	1	1	M4×4
D101	HF987E8001	Holder	1	1	1	
D102	HF922E8001	Potentiometer control	1	1	1	
D11	HF956G8001	Oil joint	1	1	1	
D12	HF917E8001	Link pin	2	2	2	
D13	HF916E8001	Link	2	2	2	
D14	H415060200	Screw	1	1	1	M6×20
D15	HF951E8001	Connecting lever(R)	1	1	1	
D16	HF956E8001	Pin	1	1	1	
D17	HF953E7101	Link(R)	1	1	1	
D18	HA104D0652	Plug	1	1	1	
D19	HF942E8001	Inner presser cam	1	1	1	
D20	H428060060	Screw	2	2	2	M6×6
D21	HF946E8001	Inner presser rod	1	1	1	
D22	HF947E8001	Bearing	1	1	1	
D23	HF948E8001	Rod pin	1	1	1	
D24	HF949E8001	Oil wick	1	1	1	
D25	HF960E8001	Oil wick	1	1	1	
D26	HF961E8001	Plug	1	1	1	
D27	HF959E8001	Oil pipe	1	1	1	
D28	HF956G8001	Oil joint	1	1	1	
D29	HF924E8001	Bushing(L)	1	1	1	
D30	HF923E8001	Collar	2	2	2	
D31	HF921E8001	Adjusting shaft	1	1	1	
D32	H431050050	Screw	2	2	2	M5×5
D33	HF927E8001	Bushing(R)	1	1	1	
D34	HF928E8001	Ball pin	1	1	1	
D35	H415050120	Screw	1	1	1	M5×12
D36	HF926E8001	Lever(R)	1	1	1	
D37	H415060200	Screw	1	1	1	M6×20
D38	HF940E8001	Pipe	2	2	2	
D39	HF914E8001	Pin	2	2	2	
D40	HF918E8001	Spring	2	2	2	

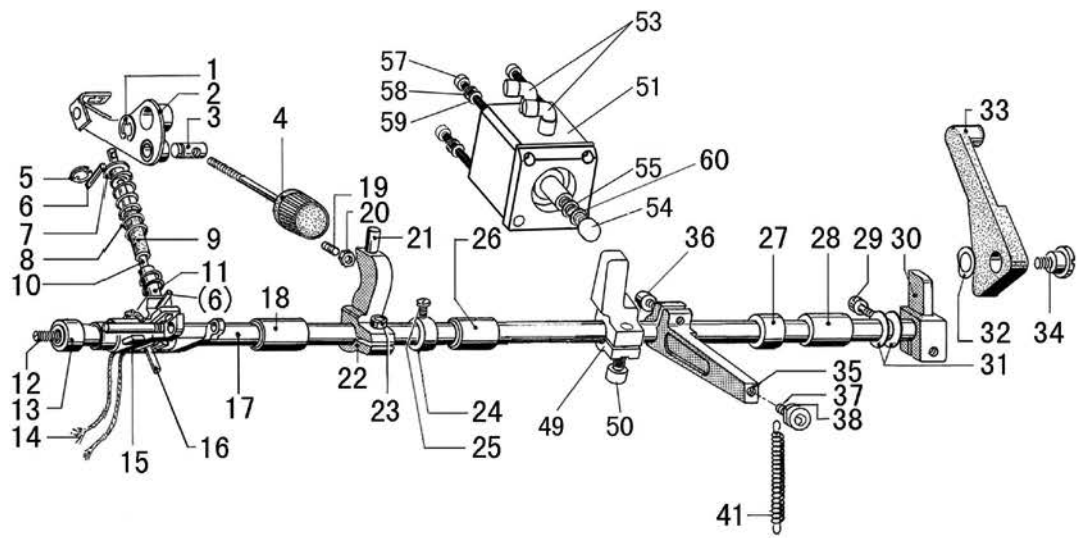
D.UPPER FEED LIFTING ROCK SHAFT MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
D41	HF933E8001	Draught rod	1	1	1	
D42	HF936E8001	Disc	1	1	1	
D43	HF935E8001	Gasket	1	1	1	
D44	HF934E8001	Piston	1	1	1	
D45	HF931E8001	Pipe	1	1	1	
D46	HF932E8001	Cylinder base	1	1	1	
D47	HF997B8001	Gasket	2	2	2	
D48	H005001050	Washer	2	2	2	
D49	H415050180	Screw	2	2	2	M5×18
D50	H415040160	Screw	1	1	1	M4×16
D51	H005001040	Washer	1	1	1	
D52	HF943E8001	Spacer	1	1	1	
D53	HF937E8001	Coupling(S)	1	1	1	
D54	HF938E8001	Hose	1	1	1	
D55	HF939E8001	Coupling(L)	1	1	1	
D56	HF962E7101	Shaft	1	1	1	
D57	H415040120	Screw	1	1	1	M4×12
D58	HF924E8001	Bushing	2	2	2	
D59	H402050080	Screw	2	2	2	M5×8
D60	HF923E8001	Collar	2	2	2	
D61	HF970E8001	Sponge	1	1	1	
D62	HF964E8001	Oil wick	1	1	1	
D63	H415030060	Screw	1	1	1	M3×6
D64	HF974E8001	Plate	1	1	1	
D65	HF973E8001	Oil satchel	1	1	1	
D66	HF972E8001	Draught rod	1	1	1	
D67	HF961E8001	Plug	1	1	1	
D68	HF983E8001	Oil pipe	1	1	1	
D69	HF984E8001	Oil wick	1	1	1	
D70	HF982E8001	Spring	1	1	1	
D71	HF986E8001	Oil wick	1	1	1	
D72	HF977E8001	Pin	1	1	1	
D73	H401040040	Screw	1	1	1	M4×4
D74	HF977E8001	Pin	1	1	1	
D75	HF978E8001	Oil wick	1	1	1	
D76	HF979E8001	Stopper claw	1	1	1	
D77	HF925F8001	Joint	1	1	1	
D78	HF926F8001	Pin	1	1	1	
D79	HF933F8001	Slide block	1	1	1	
D80	HF914B8001	Screw	2	2	2	
D81	HF934F8001	Guide	1	1	1	
D82	HF928F8001	Pin	1	1	1	
D83	HF930F8001	Oil wick	1	1	1	

D.UPPER FEED LIFTING ROCK SHAFT MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
D84	HF932F8001	Screw	1	1	1	
D85	HF979E8001	Stopper claw	1	1	1	
D86	HF939F8001	Oil wick	1	1	1	
D87	H431050100	Screw	1	1	1	M5×10
D88	HF940F8001	Bushing	1	1	1	
D89	HF938F8001	Outer presser bar	1	1	1	
D90	HF946F8001	Presser connecting plate	1	1	1	
D91	HF977E8001	Connecting pin	2	2	2	
D92	HF978E8001	Oil wick	2	2	2	
D93	HF979E8001	Stopper claw	2	2	2	
D94	H401040040	Screw	1	1	1	M4×4
D95	HF956F8001	Inner presser bar	1	1	1	
D96	HG008F8001	Inner presser foot assy	1			
D96	HF959F8001	Inner presser foot assy		1	1	
D97	H428040080	Screw	1			
D97	HF960F8001	Screw		1	1	
D98	HG105F7101	Outer presser foot assy	1			
D98	HF943F8001	Outer presser foot assy		1	1	
D99	H415040100	Screw	1			
D99	HF944F8001	Screw		1	1	

E.PRESSER FOOT ADVANCE MECHANISM



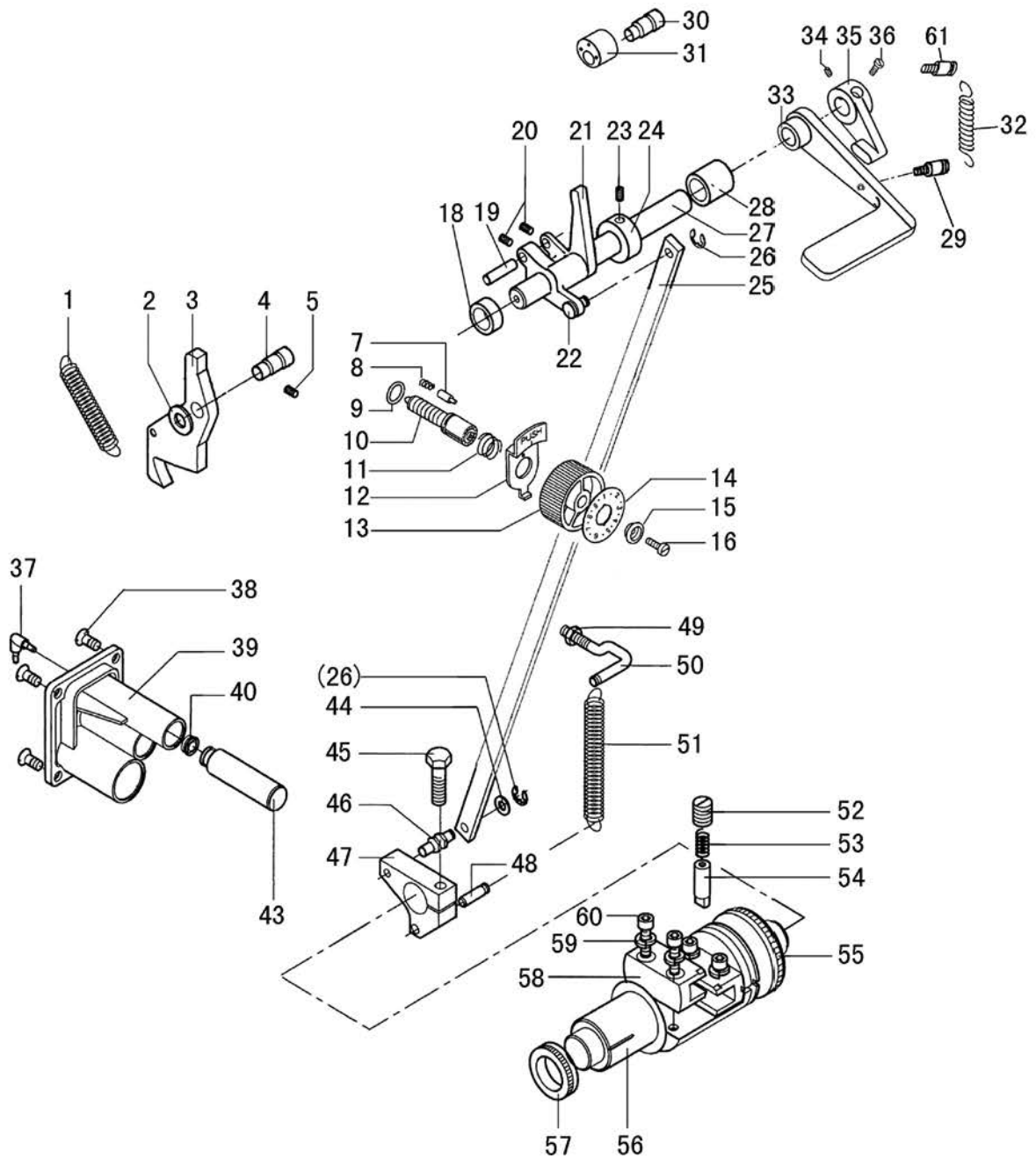
E.PRESSER FOOT ADVANCE MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
E01	H007013080	E-type retaining ring 8	1	1	1	
E02	HF965F7101	Press adjusting plate assy	1	1	1	
E03	HF963F8001	Pin	1	1	1	
E04	HF961F7101	Press adjusting dial	1	1	1	
E05	H007013050	E-type retaining ring 5	1	1	1	
E06	H612030080	Spring pin	2	2	2	
E07	HF976F8001	Spring support (U)	1	1	1	
E08	HF972F8001	Spring	1	1	1	
E09	HF975F8001	Hose	1	1	1	
E10	HF973F8001	Shaft	1	1	1	
E11	HF974F8001	Spring support (D)	1	1	1	
E12	H428080120	Bolt	1	1	1	M8×12
E13	HF905F8001	Press-foot lifter shaft bush(L)	1	1	1	
E14	HF922F8001	Oil wick	1	1	1	
E15	HF919F7101	Press-foot lifter connection assy	1	1	1	
E16	H605050320	Pin	1	1	1	
E17	HF904F8001	Press bar lifter shaft	1	1	1	
E18	HF906F8001	Spreader shaft bush(L2)	1	1	1	
E19	H424050160	Set screw	1	1	1	
E20	H003002050	Nut	1	1	1	
E21	HF997F8001	Stopper	1	1	1	
E22	HF996F8001	Crack	1	1	1	
E23	H415060160	Screw	1	1	1	M6×16
E24	HF910F8001	Set screw collar	1	1	1	
E25	H401050060	Screw	1	1	1	
E26	HF907F8001	Bushing(R)	1	1	1	
E27	HF909F8001	Bushing	1	1	1	
E28	HF908F8001	Bushing(R2)	1	1	1	
E29	H415060200	Screw	1	1	1	M6×20
E30	HF913F8001	Crack	1	1	1	
E31	HF915F8001	Washer	2	2	2	
E32	H005014080	Wave washer	1	1	1	
E33	HF916F8001	Lifter lever	1	1	1	
E34	HF917F8001	Screw	1	1	1	
E35	HF980F8001	Lever(U)	1	1	1	
E36	H415060160	Screw	1	1	1	M6×16
E37	H415050250	Screw	1	1	1	M5×25
E38	H003002050	Nut	2	2	2	M5
E41	HG119F8001	Main spring	1	1	1	
E46	H104060250	Screw	1	1	1	M6×25
E47	HF990F8001	Knee lifter plate	1	1	1	
E48	H7316E8001	Nut	1	1	1	
E49	HF90IF8001	Crack	1	1	1	

E.PRESSER FOOT ADVANCE MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
E50	H415060160	Screw	1	1	1	
E51	HF911F8001	Pump	1	1	1	SDA32×20
E53	HF912M8001	Windpipe jiont	2	2	2	EPL4-01 φ4-1/8"
E54	HF91BF8001	Coupling	1	1	1	
E55	H005008060	Spring Washer	1	1	1	
E57	H415040550	Screw	4	4	4	
E58	H005008040	Spring Washer	4	4	4	
E59	H005004040	Washer	4	4	4	
E60	HF91DF8001	Washer	1	1	1	

F.STITCH REGULATOR MECHANISM



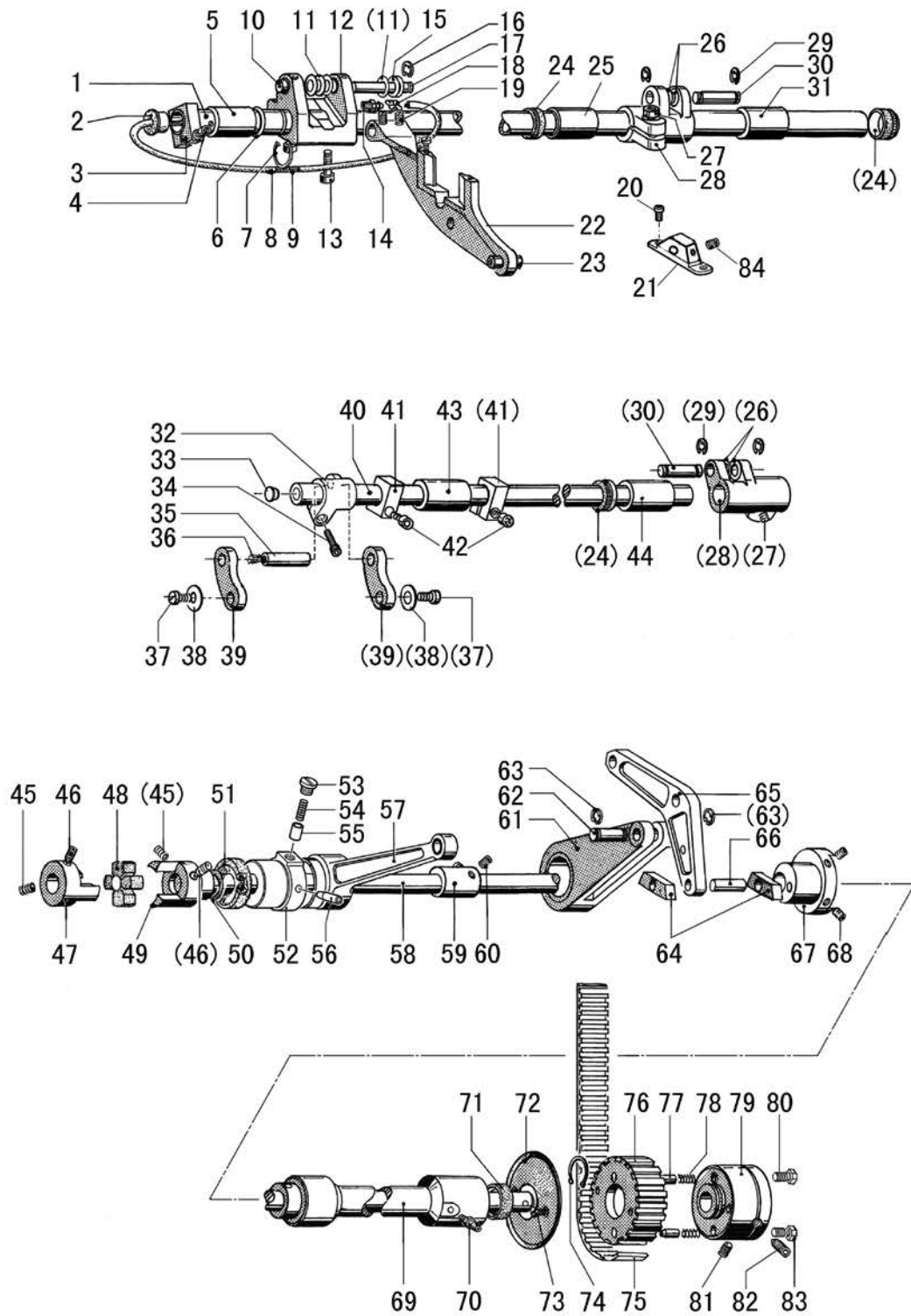
F.STITCH REGULATOR MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
F01	HF925H8001	Spring	1	1	1	
F02	HF924H8001	Washer	1	1	1	
F03	HG108H8001	Feed adjusting arm	1	1	1	
F04	HF923H8001	Pin	1	1	1	
F05	H431050080	Bolt	1	1	1	M5×8
F07	HA700F2030	Positioning pin	1	1	1	
F08	H3200F2110	Spring	1	1	1	
F09	HA109F0674	O ring	1	1	1	
F10	HF914H8001	Feed adjusting screw (short)	1	1	1	
F11	HA720F0687	Spring	1	1	1	
F12	HA720F0683	Support plate	1	1	1	
F13	HA7421F120	Feed adjusting dial	1	1	1	
F14	HF909H8001	Feed adjusting dial plate(L)	1	1	1	
F15	HA720F0685	Bushing	1	1	1	
F16	HA720F0686	Screw	1	1	1	
F18	HF928H8001	Reverse shaft bushing(L)	1	1	1	
F19	HF932H8001	Pin	1	1	1	
F20	H428060080	Bolt	2	2	2	M6×8
F21	HF930H8001	Reverse stitching arm(U)	1	1	1	
F22	HF934H8001	Pin	1	1	1	
F23	H428060060	Bolt	1	1	1	M6×6
F24	HF927H8001	Collor	1	1	1	
F25	HG110H8001	Rod	1	1	1	
F26	H007013050	E-tpye retaining ring 5	2	2	2	
F27	HG112H8001	Reverse stitching shaft	1	1	1	
F28	HF931H8001	Reverse shaft bushing(R)	1	1	1	
F29	HK332F8001	Pin	1	1	1	
F30	H4937L8001	Bolt	1	1	1	
F31	H4938L8001	Rubber ring	1	1	1	
F32	H4943K8001	Spring	1	1	1	
F33	HG113H8001	Reverse stitching lever	1	1	1	
F34	H428050060	Bolt	1	1	1	
F35	HG114H8001	Reverse stitching lever block	1	1	1	
F36	H428050060	Bolt	1	1	1	
F37	HF937E8001	Coupling	1	1	1	
F38	H403060100	Screw	4	4	4	M6×10
F39	HF947H8001	Pump	1	1	1	
F40	HF954H8001	Ring	1	1	1	
F43	HF953H8001	Piston	1	1	1	
F44	H005001060	Washer	1	1	1	
F45	H104060250	Screw(D)	1	1	1	M6×25
F46	HF939H8001	Bolt	1	1	1	
F47	HF937H8001	Reverse stitching arm(D)	1	1	1	

F.STITCH REGULATOR MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
F48	HF941H8001	Spring pin	1	1	1	
F49	H003001060	Nut	1	1	1	
F50	HF943H8001	Rod	1	1	1	
F51	HF942H8001	Pull spring	1	1	1	
F52	H424100100	Thread pin	1	1	1	M10×10
F53	H3100D2090	Presser spring	1	1	1	
F54	HF963H8001	Key	1	1	1	
F55	HF966H8001	Oil seal	1	1	1	
F56	HF958H8001	Shaft	1	1	1	
F57	HF967H8001	Oil seal	1	1	1	
F58	HF961H8001	Guide	2	2	2	
F59	H005009050	Elastic washer	4	4	4	
F60	H415050160	Screw	4	4	4	M5×16
F61	HK334F8001	Pin	1	1	1	

G.FEEDING AND FEED LIFTING MECHANISM



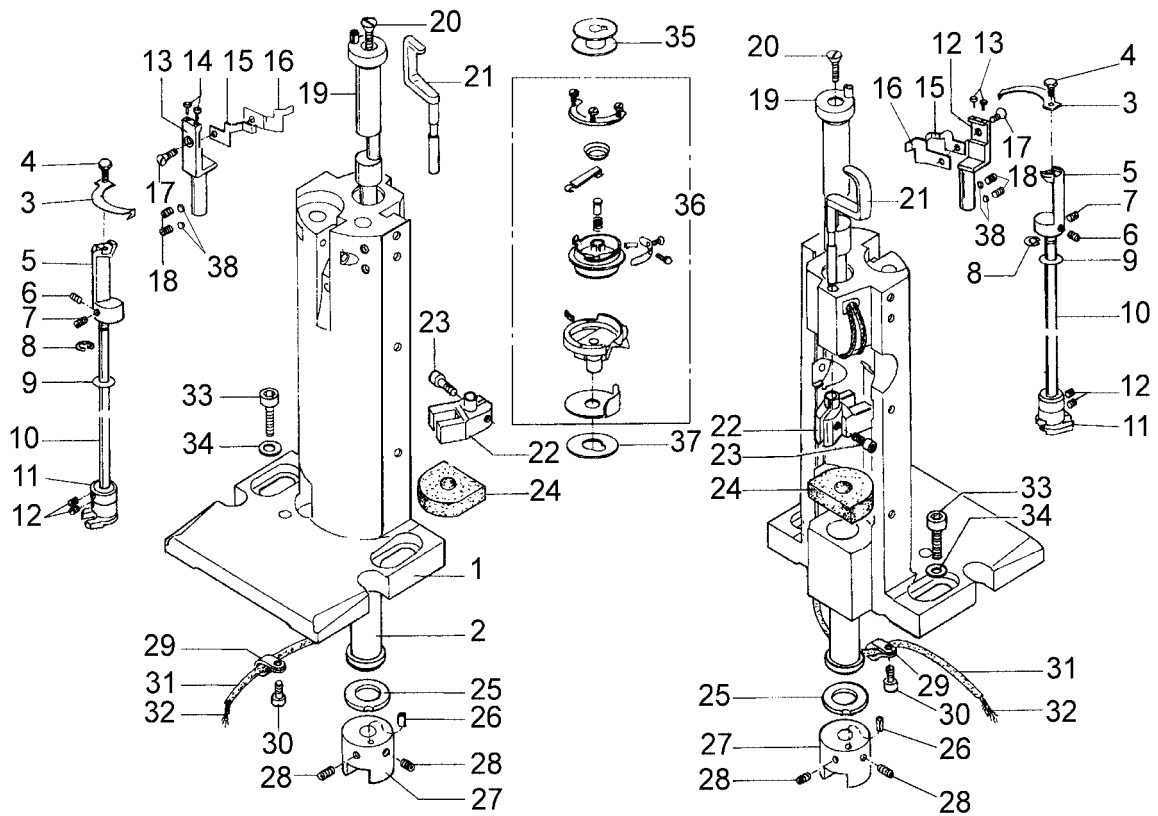
G.FEEDING AND FEED LIFTING MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
G01	HF928I8001	Feed shaft	1	1	1	
G02	HF959G8001	Rubber cap	1	1	1	
G03	HF965G8001	Adjusting shaft collar	1	1	1	
G04	H415040120	Bolt	1	1	1	M4×12
G05	HF927E8001	Bushing(L)	1	1	1	
G06	HF931I8001	Thurst ring	1	1	1	
G07	H007009150	E-type retaining ring	1	1	1	
G08	HF941I8001	Tube	1	1	1	
G09	HF942I8001	Oil wick	1	1	1	
G10	HF937I8001	Bushing	4	4	4	
G11	HF945I8001	Washer	3	3	3	
G12	HF935I8001	Feed arm(L)	1	1	1	
G13	HF936I8001	Bolt(L)	2	2	2	
G14	HF956G8001	Oil joint	1	1	1	
G15	HF946I8001	Spring	2	2	2	
G16	H007013050	E-type retaining ring 5	1	1	1	
G17	HF944I8001	Pin	1	1	1	
G18	HF939I8001	Tube support	1	1	1	
G19	HF948I8001	Bolt	2	2	2	
G20	H415040120	Screw	2	2	2	
G21	HG107I8001	Seat	1	1	1	
G22	HF949I8001	Feed bracket	1	1	1	
G23	HF953I8001	Pin	1	1	1	
G24	HF929I8001	Oil seal	3	3	3	
G25	HF927E8001	Feed shaft bushing(L)	1	1	1	
G26	HF927I8001	Washer	4	4	4	
G27	H415060120	Bolt(R)	2	2	2	M6×12
G28	HF923I8001	Feed shaft arm(R)	2	2	2	
G29	H007013050	E-type retaining ring 5	4	4	4	
G30	HF926I8001	Pin	2	2	2	
G31	HF924E8001	Feed shaft bushing(R)	2	2	2	
G32	HF957I8001	Feed connecting arm(L)	1	1	1	
G33	HA719B0707	Rubber cap	1	1	1	
G34	H415050160	Bolt	1	1	1	M5×16
G35	HF958I8001	Pin(L)	1	1	1	
G36	HF961I8001	Oil wick	1	1	1	
G37	H401030080	Bolt	2	2	2	
G38	HF954I8001	Washer	2	2	2	
G39	HF952I8001	Feed link	2	2	2	
G40	HF959I8001	Shaft	1	1	1	
G41	HF965G8001	Adjusting shaft collar	2	2	2	
G42	H415040120	Bolt	2	2	2	M4×12
G43	HF927E8001	Bushing(L)	1	1	1	

G.FEEDING AND FEED LIFTING MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
G44	HF924E8001	Bushing(R)	1	1	1	
G45	H428060100	Bolt	2	2	2	M6×10
G46	H429060100	Bolt	2	2	2	M6×10
G47	HF975J8001	Coupling claw(L)	1	1	1	
G48	HF978J8001	Toothed wreath	1	1	1	
G49	HF977J8001	Coupling craw(R)	1	1	1	
G50	118026	O ring	1	1	1	
G51	HF988I8001	Oil seal	1	1	1	
G52	HF987I8001	Bushing(L)	1	1	1	
G53	HF992I8001	Bolt	1	1	1	
G54	H34412C110	Plunger spring	1	1	1	
G55	HF966I8001	Plunger	1	1	1	
G56	HA110E0672	Oil feeding pipe	1	1	1	
G57	HF971I7101	Feed rod	1	1	1	
G58	HF905I8001	Lower shaft	1	1	1	
G59	HG113I8001	Feed cam	1	1	1	
G60	H428060050	Bolt	2	2	2	M6×5
G61	HF919I7101	Low feed connecting rod assy	1	1	1	
G62	HF926I8001	Pin	1	1	1	
G63	H007013050	E-tpye retaining ring 5	2	2	2	
G64	HF961H8001	Slide block	2	2	2	
G65	HF925I8001	Back sylinder connection	1	1	1	
G66	HF960H8001	Pin	1	1	1	
G67	HF917I8001	Lower feed cam	1	1	1	
G68	H428060080	Bolt	2	2	2	M6×8
G69	HF990I8001	Bushing(R)	1	1	1	
G70	HF956G8001	Oil joint	1	1	1	
G71	HF991I8001	Sealing ring	1	1	1	
G72	HF915I8001	Disk	1	1	1	
G73	HF916I8001	Stunk screw	2	2	2	
G74	H007009220	Retainer ring	1	1	1	
G75	HG111I8001	Toothed belt	1	1	1	
G76	HG109I8001	Belt pulley(D)	1	1	1	
G77	HF911I8001	Piston	2	2	2	
G78	HF912I8001	Presser spring	2	2	2	
G79	HF910I8001	Body	1	1	1	
G80	H431060120	Adjusting screw	2	2	2	M6×12
G81	H431080120	Bolt	1	1	1	M8×12
G82	H430080120	Bolt	1	1	1	M8×12
G83	H003002060	Nut	2	2	2	M6
G84	H428040060	Bolt	1	1	1	

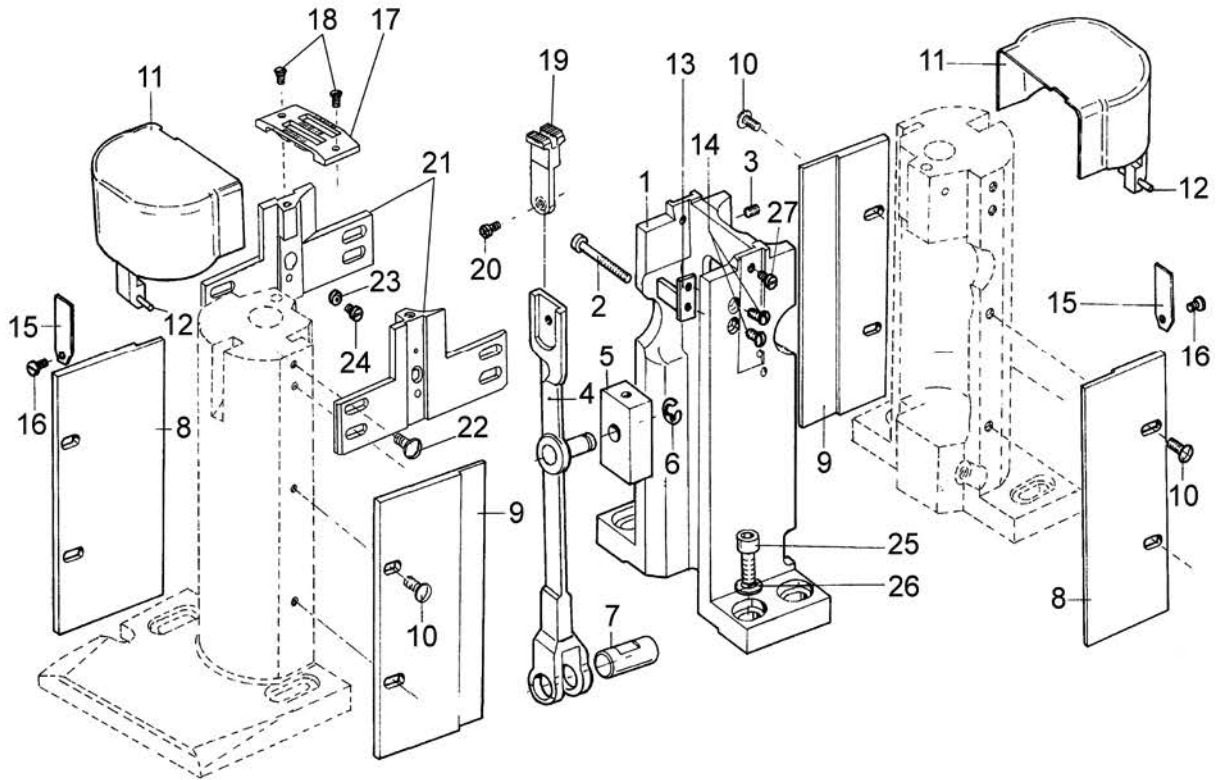
H.HOOK SADDLE MECHANISM (1)



H.HOOK SADDLE MECHANISM (1)

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
H01	HG106J8001	Hook column	2	1	1	
H02	HG107J8001	Bushing	2	1	1	
H03	HG108J8001	Knife	2	1	1	
H04	HG109J8001	Hexagonal Screw	2	1	1	
H05	HG110J8001	Knife bearer cpl.	2	1	1	
H06	HG111J8001	Screw	2	1	1	
H07	HG112J8001	Screw	2	1	1	
H08	H007013060	Lock washer	2	1	1	
H09	HF945I8001	Washer	2	1	1	
H10	HG115J8001	Knife shaft	2	1	1	
H11	HG117J8001	Knife crank	2	1	1	
H12	H431050050	Screw	4	2	2	
H13	HG119J8001	Knife bearer	2	1	1	
H14	H401020050	Screw	4	2	2	
H15	HG121J8001	Spring	2	1	1	
H16	HG122J8001	Couter knife	2	1	1	
H17	H403025040	Screw	2	1	1	M2.5×4
H18	H431040050	Screw	4	2	2	M4(0.5)×5
H19	HG125J7101	Hook shaft	2	1	1	
H20	HG127J8001	Screw	2	1	1	
H21	HG128J8001	Lever	2	1	1	
H22	HG131J8001	Lifter fork	2	1	1	
H23	H415040080	Screw	2	1	1	
H24	HG133J8001	Oil cushion	2	1	1	
H25	HG134J8001	Washer	2	1	1	
H26	H609030060	Pin	2	1	1	
H27	HG136J8001	Clutch	2	1	1	
H28	H428050080	Screw	4	2	2	
H29	H6732K8001	Clip	2	1	1	
H30	H402040060	Screw	2	1	1	
H31	HG140J8001	Oil pipe	2	1	1	φ4×340
H32	HG141J8001	Oil wick	2	1	1	500
H33	H415060160	Screw	4	2	2	
H34	H005001060	Washer	4	2	2	
H35	HF971B8001	Bobbin	2	1	1	
H36	HG145J7101	Hook Asm.	2	1	1	
H37	HG146J8001	Washer	2	1	1	
H38	HG123J8001	Pressure pin	4	2	2	

I.HOOK SADDLE MECHANISM (2)

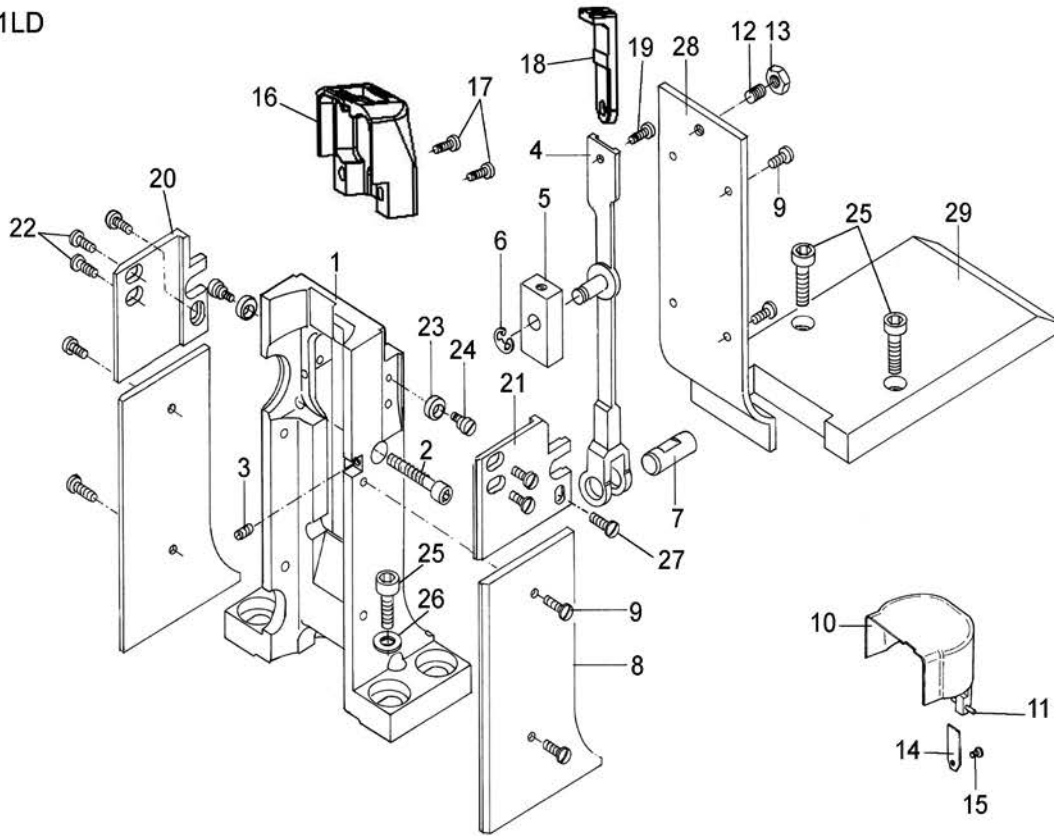


I.HOOK SADDLE MECHANISM (2)

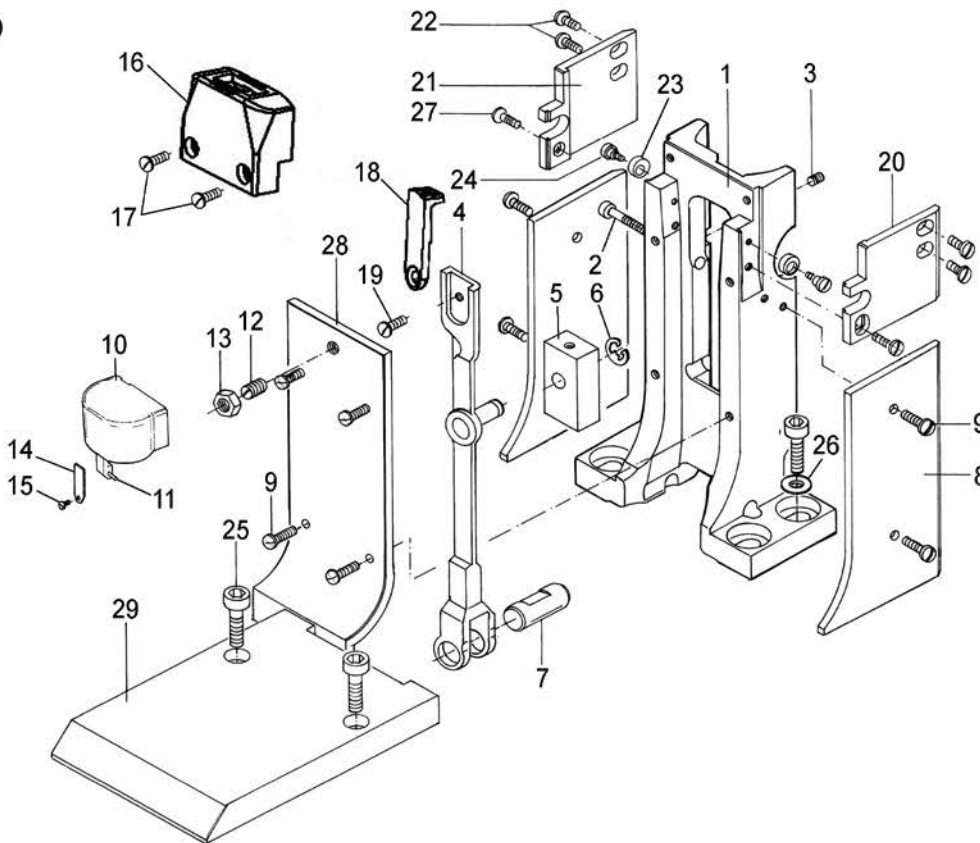
Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
I01	HG150J8001	Transp.column	1			
I02	H415040370	Screw	1			
I03	H427040060	Screw	1			
I04	HG153J7101	Transp.lever	1			
I05	HG156J8001	Slide block	1			
I06	H007013060	Lock washer	1			
I07	HG158J8001	Pin	1			
I08	HG161J8001	Cover plate(right)	2			
I09	HG162J8001	Cover plate(left)	2			
I10	HG163J8001	Screw	8			
I11	HG164J7101	Cover	2			
I12	H604020180	Pin	2			
I13	HG169J8001	Guide angle	1			
I14	H401035080	Screw	2			
I15	HG171J8001	Spring	2			
I16	H401030060	Screw	2			
I17	HG120J8001	Needle plate	1			
I18	HG175J8001	Screw	2			
I19	HG176J8001	Food dog	1			
I20	HG177J8001	Screw	1			
I21	HG179J8001	Plate holder	2			
I22	HG163J8001	Screw	8			
I23	HG181J8001	Adjust cover	2			
I24	HG182J8001	Screw	2			
I25	H415060160	Screw	4			
I26	H005001060	Washer	4			
I27	HN190J8001	Screw	2			

J.HOOK SADDLE MECHANISM(3)

1LD



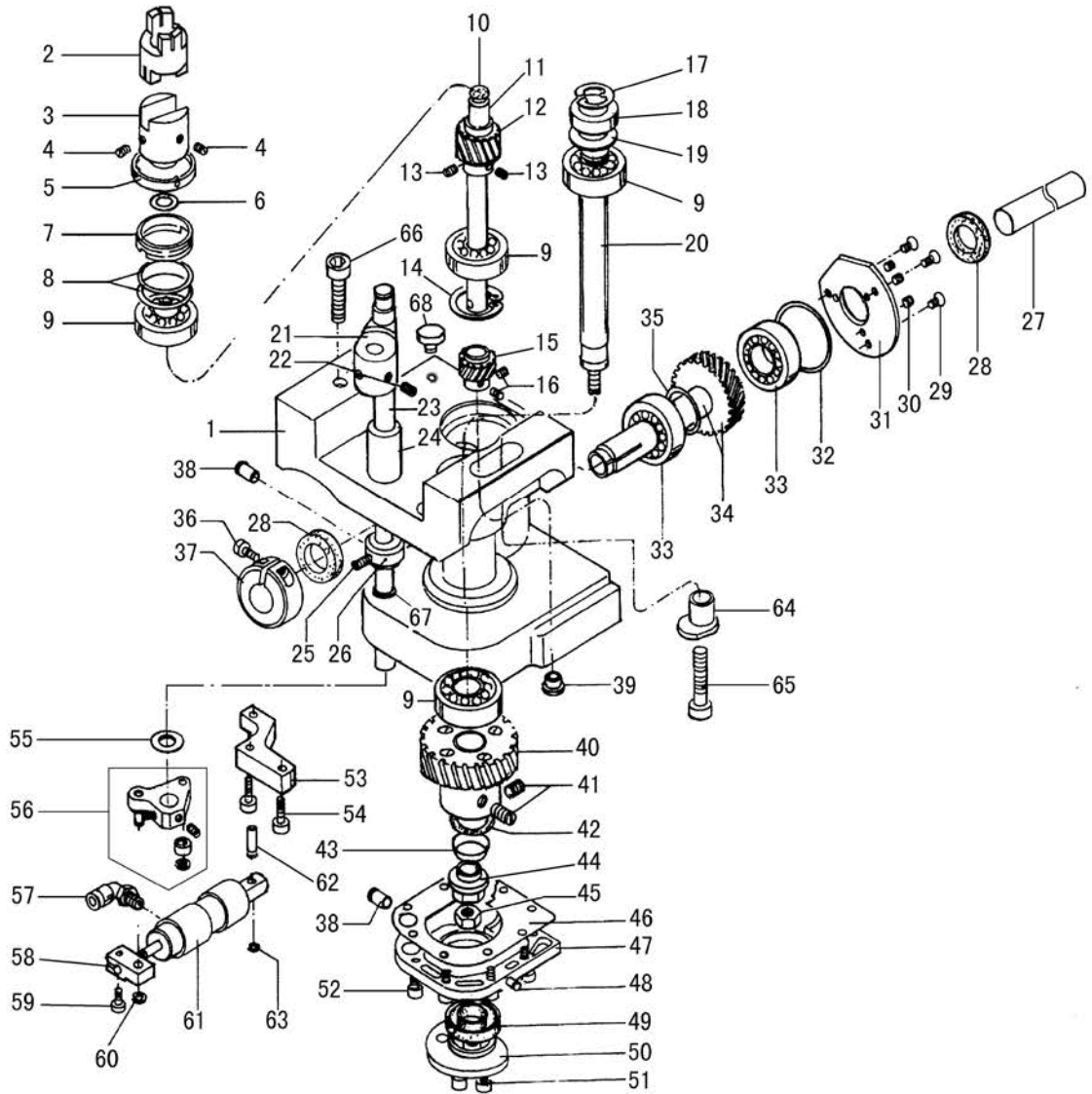
1RD



J.HOOK SADDLE MECHANISM(3)

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
J01	HG90J78001	Transp.column		1	1	
J02	H415040370	Screw		1	1	
J03	H427040060	Screw		1	1	
J04	HG153J7101	Transp.lever		1	1	
J05	HG156J8001	Slide block		1	1	
J06	H007013060	Lock washer		1	1	
J07	HG158J8001	Pin		1	1	
J08	HG90J88001	Cover plate		2	2	
J09	HG163J8001	Screw		8	8	
J10	HG164J7101	Cover		1	1	
J11	H605020180	Pin		1	1	
J12	H428050080	Screw		1	1	
J13	H003008050	Nut		1	1	
J14	HG171J8001	Spring		1	1	
J15	H401030060	Screw		1	1	
J16	HG91J18001	Needle plate		1		
J16	HH00J68001	Needle plate			1	
J17	HD726G8001	Screw		2	2	
J18	HG91J38001	Food dog		1		
J18	HH00J78001	Food dog			1	
J19	HG177J8001	Screw		1	1	
J20	HG91J48001	Adjust cover1		1	1	
J21	HG91J58001	Adjust cover2		1	1	
J22	HG163J8001	Screw		4	4	
J23	HG181J8001	Plate holder		2	2	
J24	HG182J8001	Screw		2	2	
J25	H415060160	Screw		8	8	
J26	H005001060	Washer		4	4	
J27	HN191J8001	Screw		2	2	
J28	HG91J88001	Cover plate		1	1	
J29	HG91J98001	Cover plate		1	1	

K.GEAR SADDLE MECHANISM (LEFT)



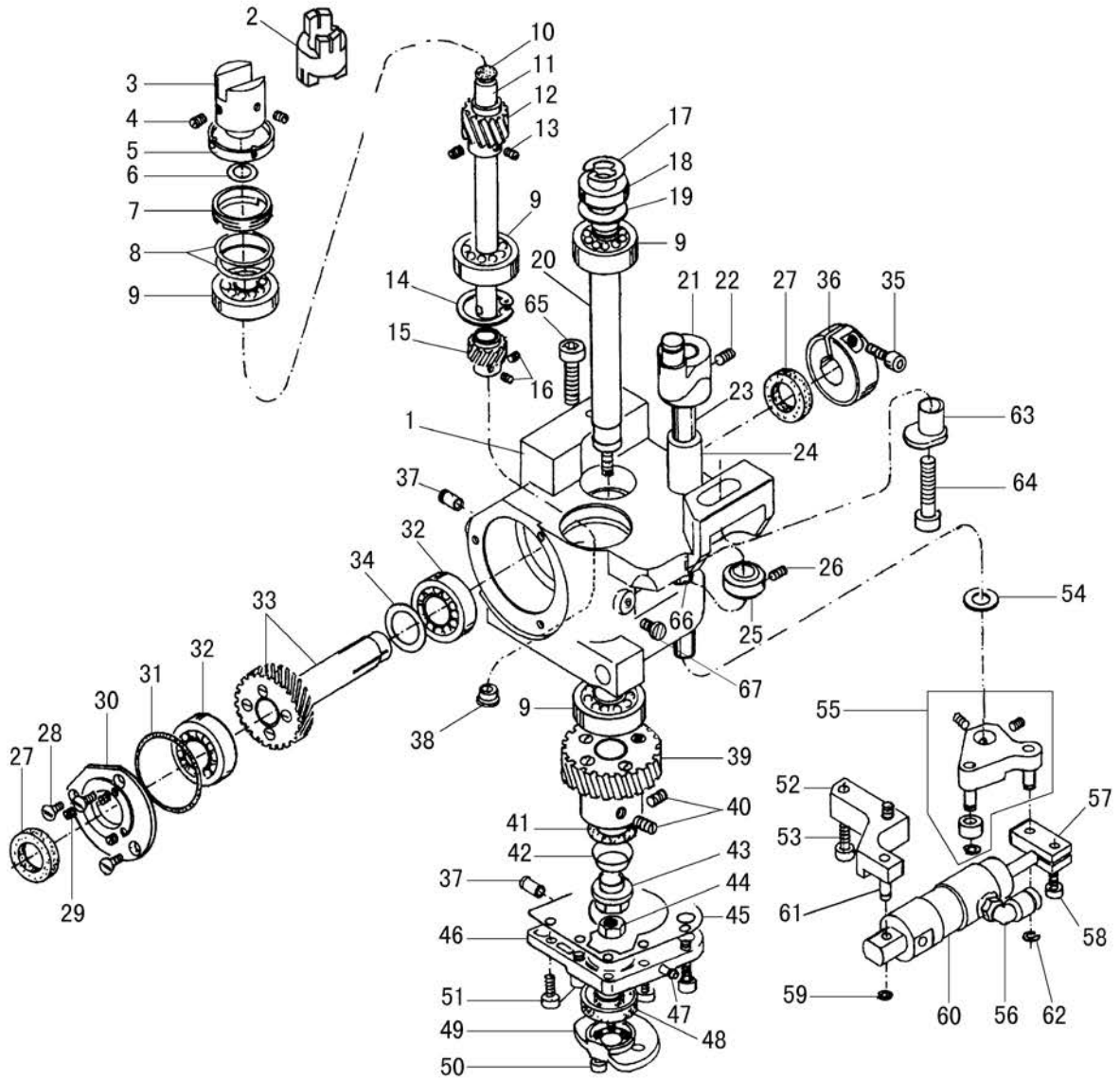
K.GEAR SADDLE MECHANISM (LEFT)

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
K01	HG006J8001	Hook bearing ckl.left	1	1		
K02	HG106K8001	Cross slide	1	1		
K03	HG105K8001	Coupling	1	1		
K04	H428050060	Screw	2	2		
K05	HG107K8001	Dust cover	1	1		
K06	HF989J8001	Washer	1	1		
K07	HF991J8001	Oil drip ring	1	1		
K08	HF992J8001	Washer	2	2		
K09	HF984J8001	Ball bearing	3	3		
K10	HG112K8001	Plug	1	1		
K11	HF981J8001	Hook shaft	1	1		
K12	HF983J8001	Gear	1	1		
K13	H431050050	Screw	2	2		
K14	H007007260	Retainer ring	1	1		
K15	HF91AJ8001	Gear	1	1		
K16	H431050050	Screw	1	1		
K17	H007013080	Lock washer	1	1		
K18	H005005100	Washer	1	1		
K19	HG123K8001	Washer	1	1		
K20	HG125K8001	Shaft	1	1		
K21	HG126K7101	Lever assy.	1	1		
K22	H431040060	Screw	2	2		
K23	HG130K8001	Shaft	1	1		
K24	HF917J8001	Bushing	1	1		
K25	HF920J8001	Collor	1	1		
K26	H428050050	Screw	2	2		
K27	HG021J8001	Shaft	1	1		
K27	HF971J8001	Shaft			1	
K28	HF964J8001	Oil seal	2	2		
K29	HF965J8001	Screw	3	3		
K30	HF966J8001	Screw	3	3		
K31	HF962J8001	Lower shaft holder	1	1		
K32	387018	O ring	1	1		
K33	HF963J8001	Ball bearing	1	1		
K34	HF968J7101	Gear base assy	1	1		
K35	HF970J8001	Washer	1	1		
K36	HF973J8001	Collor	1	1		
K37	H415060200	Screw	1	1		
K38	HF947J8001	Oil joint	2	2		
K39	HG144K8001	Plug	1	1		
K40	HF91CJ7101	Gear base assy	1	1		
K41	H431050060	Screw	1	1		
K42	95018	O ring	1	1		

K.GEAR SADDLE MECHANISM (LEFT)

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
K43	H005013050	Belleville spring washer	1	1		
K44	HF91IJ8001	Nut	1	1		
K45	HF91JJ8001	Hexagonal nut	1	1		
K46	HF954J8001	Sheet packing	1	1		
K47	HG154K8001	Cover	1	1		
K48	HG157K8001	Oil feeding pipe	1	1		
K49	HF958J8001	Oil seal	1	1		
K50	HG159K8001	Disk cam	1	1		
K51	H415040100	Screw	3	3		
K52	H415040080	Screw	6	6		
K53	HG164K8001	Bearer	1	1		
K54	H415040120	Screw	2	2		
K55	HG161K8001	Washer	1	1		
K56	HG166K7101	Drive winch	1	1		
K57	HG109C8001	Coupling	1	1		KQL04-M5
K58	HG172K8001	Block	1	1		
K59	H415040080	Screw	1	1		
K60	H007013040	Lock washer	1	1		
K61	HG174K8001	Pump	1	1		TGM-CA1215
K62	HG175K8001	Pin	1	1		
K63	H007013035	Lock washer	1	1		
K64	HF92CJ8001	Bushing	1	1		
K65	H415060220	Screw	1	1		
K66	H415060400	Screw	1	1		
K67	HF919J8001	Bushing	1	1		
K68	HG181K8001	Screw	1	1		

L.GEAR SADDLE MECHANISM (RIGHT)



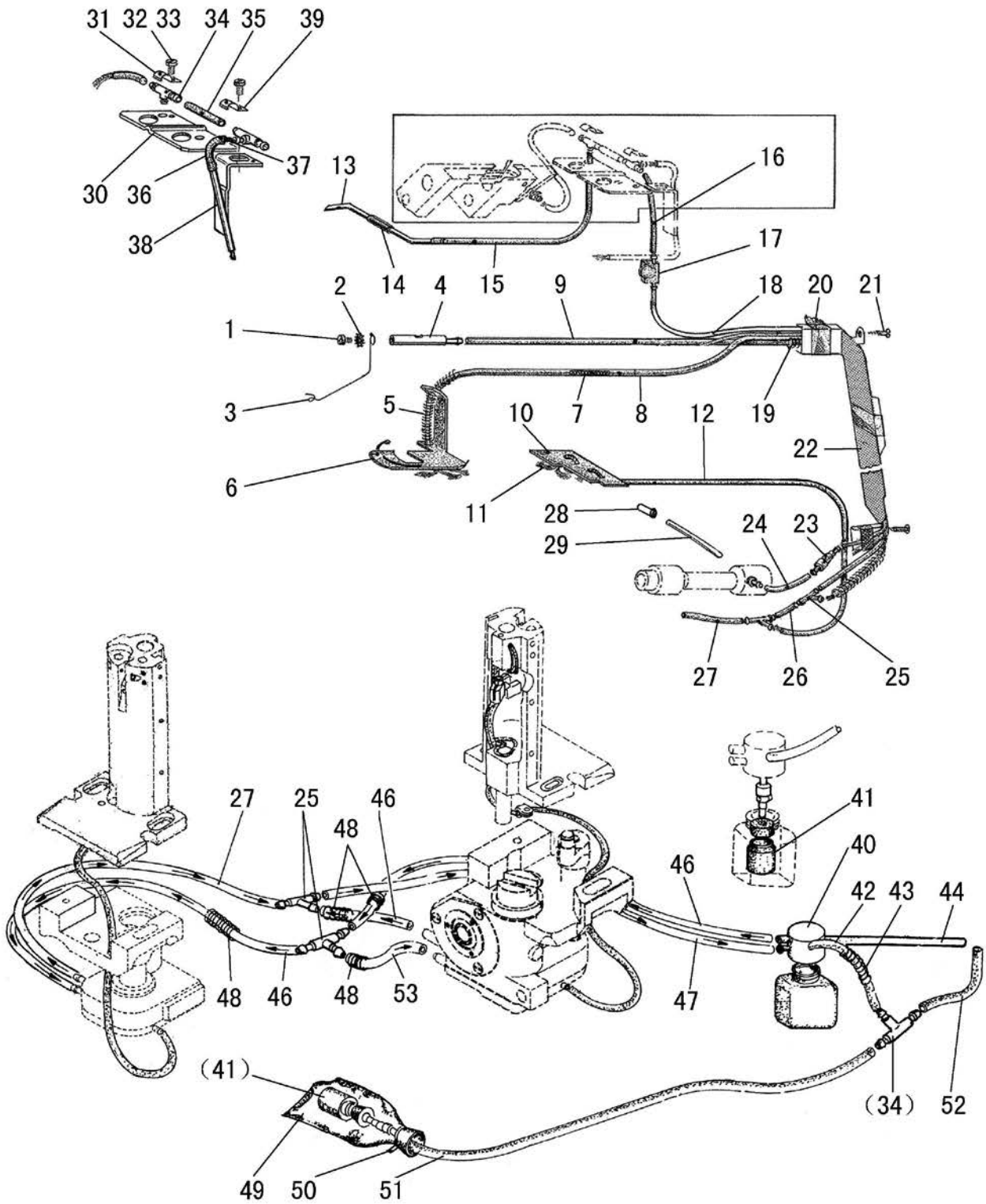
L.GEAR SADDLE MECHANISM (RIGHT)

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
L01	HF945J8001	Hook bearing ckl.left	1		1	
L02	HG106K8001	Cross slide	1		1	
L03	HG105K8001	Coupling	1		1	
L04	H428050060	Screw	2		2	
L05	HG107K8001	Dust cover	1		1	
L06	HF989J8001	Washer	1		1	
L07	HF991J8001	Oil drip ring	1		1	
L08	HF992J8001	Washer	2		2	
L09	HF984J8001	Ball bearing	3		3	
L10	HG112K8001	Plug	1		1	
L11	HF981J8001	Hook shaft	1		1	
L12	HF983J8001	Gear	1		1	
L13	H431050050	Screw	2		2	
L14	H007007260	Retainer ring	1		1	
L15	HF91AJ8001	Gear	1		1	
L16	H431050050	Screw	1		1	
L17	H007013080	Lock washer	1		1	
L18	H005005100	Washer	1		1	
L19	HG123K8001	Washer	1		1	
L20	HG125K8001	Shaft	1		1	
L21	HG126K7101	Lever assy.	1		1	
L22	H431040060	Screw	2		2	
L23	HG130K8001	Shaft	1		1	
L24	HF917J8001	Bushing	1		1	
L25	HF920J8001	Collor	1		1	
L26	H428050050	Screw	2		2	
L27	HF964J8001	Oil seal	2		2	
L28	HF965J8001	Screw	3		3	
L29	HF966J8001	Screw	3		3	
L30	HF962J8001	Lower shaft holder	1		1	
L31	387018	O ring	1		1	
L32	HF963J8001	Ball bearing	1		1	
L33	HF968J7101	Gear base assy	1		1	
L34	HF970J8001	Washer	1		1	
L35	HF973J8001	Collor	1		1	
L36	H415060200	Screw	1		1	
L37	HF947J8001	Oil joint	2		2	
L38	HG144K8001	Plug	1		1	
L39	HF91CJ7101	Gear base assy	1		1	
L40	H431050060	Screw	1		1	
L41	95018	O ring	1		1	
L42	H005013050	Belleville spring washer	1		1	
L43	HF91IJ8001	Nut	1		1	

L.GEAR SADDLE MECHANISM (RIGHT)

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
L44	HF91JJ8001	Hexagonal nut	1		1	
L45	HF954J8001	Sheet packing	1		1	
L46	HG180K8001	Cover	1		1	
L47	HG157K8001	Oil feeding pipe	1		1	
L48	HF958J8001	Oil seal	1		1	
L49	HG159K8001	Disk cam	1		1	
L50	H415040100	Screw	3		3	
L51	H415040080	Screw	6		6	
L52	HG164K8001	Bearer	1		1	
L53	H415040120	Screw	2		2	
L54	HG161K8001	Washer	1		1	
L55	HG166K7101	Drive winch	1		1	
L56	HG109C8001	Coupling	1		1	KQL04-M5
L57	HG172K8001	Block	1		1	
L58	H415040080	Screw	1		1	
L59	H007013040	Lock washer	1		1	
L60	HG174K8001	Pump	1		1	TGM-CA1215
L61	HG175K8001	Pin	1		1	
L62	H007013035	Lock washer	1		1	
L63	HF92CJ8001	Bushing	1		1	
L64	H415060220	Screw	1		1	
L65	H415060400	Screw	1		1	
L66	HF919J8001	Bushing	1		1	
L67	H401050040	Screw	1		1	

M.OIL LUBRICATION MECHANISM



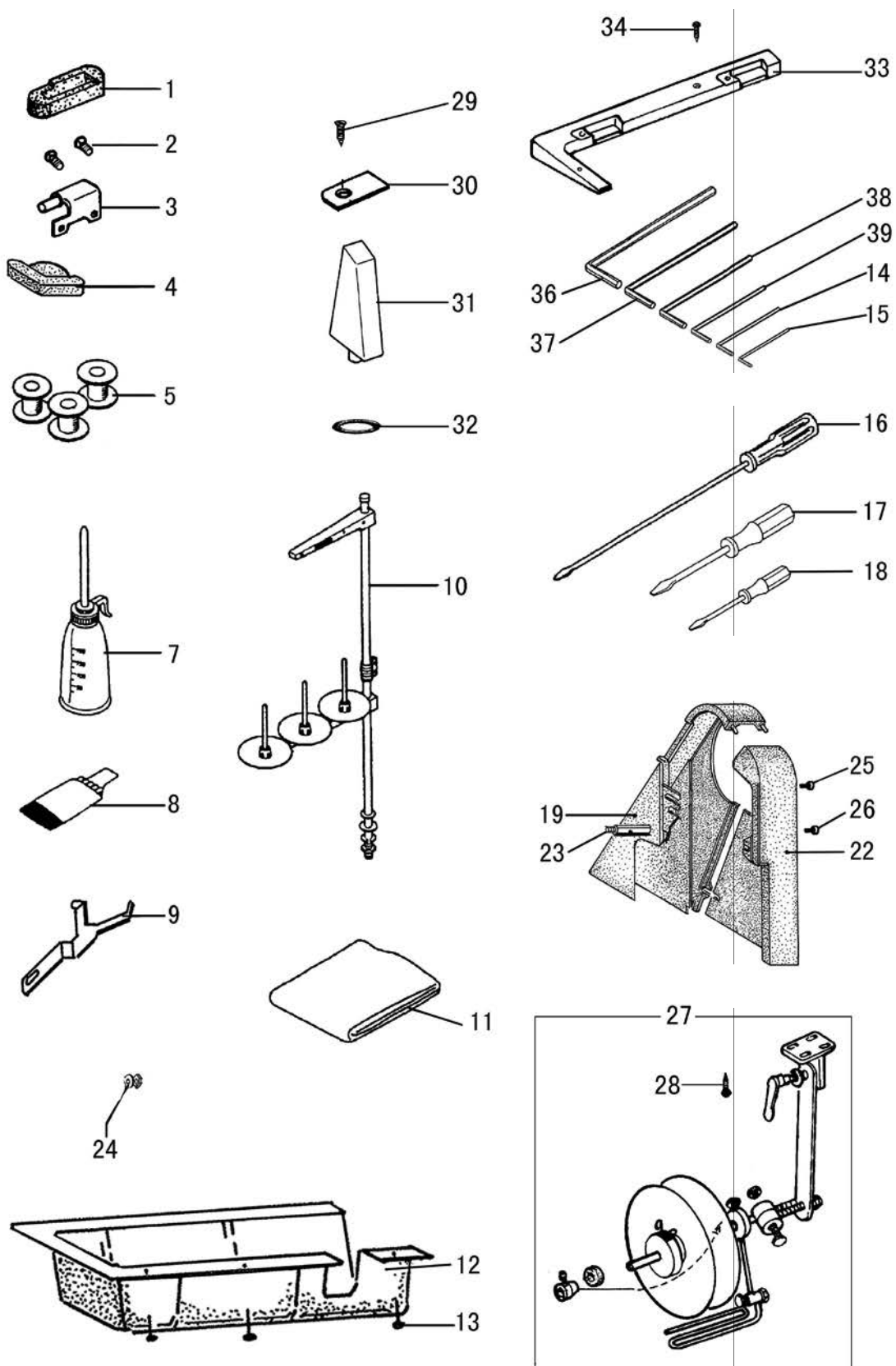
M.OIL LUBRICATION MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
M01	H401050080	Bolt	1	1	1	M5×8
M02	H005018050	Spacer	1	1	1	
M03	HF909K8001	Oil wick support	1	1	1	
M04	HF917K8001	Oil joint	1	1	1	
M05	HF908K8001	Tube guide	1	1	1	
M06	HF906K8001	Felt	1	1	1	
M07	HG111L8001	Oil wick	1	1	1	
M08	HG112L8001	Oil tube	1	1	1	
M09	HG118L8001	Oil tube	1	1	1	
M10	HF914K8001	Felt	1	1	1	
M11	HG116L8001	Oil wick	1	1	1	
M12	HG115L8001	Oil tube	1	1	1	
M13	HF948K8001	Pipe	1	1	1	
M14	HF950K8001	Oil tube	1	1	1	
M15	HF949K8001	Hose	1	1	1	
M16	HF936K8001	Oil pipe	1	1	1	
M17	HF959K8001	Oil window	1	1	1	
M18	HG119L8001	Oil pipe	1	1	1	
M19	HF919K8001	Spring	1	1	1	
M20	HF962K8001	Tape	1	1	1	
M21	HA04042160	Screw	2	2	2	4.2×16
M22	HF960K8001	Guard plate	1	1	1	
M23	HF956K7101	Valve	1	1	1	
M24	HF955K8001	Main oil pipe	1	1	1	
M25	HF920K8001	Oil joint	4	2	2	
M26	HF921K8001	Oil pipe	1	1	1	
M27	HF922K8001	Oil pipe	3	1	1	
M27	HF922K8001	Oil pipe		2		
M28	HF938K8001	Oil joint	1	1	1	
M29	HF939K8001	Oil pipe	1	1	1	
M30	HF951K8001	Oil pipe setting plate	1	1	1	
M31	H32311D606	Oil wick setting plate	1	1	1	
M32	H415040100	Screw	2	2	2	M4×10
M33	H005001040	Washer	2	2	2	
M34	H3210K0671	T-joint	3	3	3	
M35	HF942K8001	Hose	1	1	1	
M36	HF947K8001	Hose	1	1	1	
M37	HF946K8001	Oil wick	1	1	1	
M38	HF943K8001	Oil pipe plate assy	1	1	1	
M39	H3200K0170	Wire assy	1	1	1	
M40	HF927K7101	Oil hose assy	1	1	1	
M41	HF963K7101	Filter pot assy	1	1	1	
M42	HF929K8001	Oil pipe	1	1	1	

M.OIL LUBRICATION MECHANISM

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
M43	HF930K8001	Support spring	1	1	1	
M44	HF923K8001	Oil pipe	1	1	1	
M45	HF935K8001	Oil joint	1	1	1	
M46	HF924K8001	Oil pipe	4		1	
M47	HF925K8001	Oil pipe	1		1	
M48	HF926K8001	Support spring	4	2	2	
M49	HF932K8001	Felt part	1	1	1	
M50	HA300I2040	Cable tie	1	1	1	
M51	HF934K8001	Oil pipe	1	1	1	
M52	HF937K8001	Oil pipe	1	1	1	
M53	HG005K8001	Oil pipe	1			

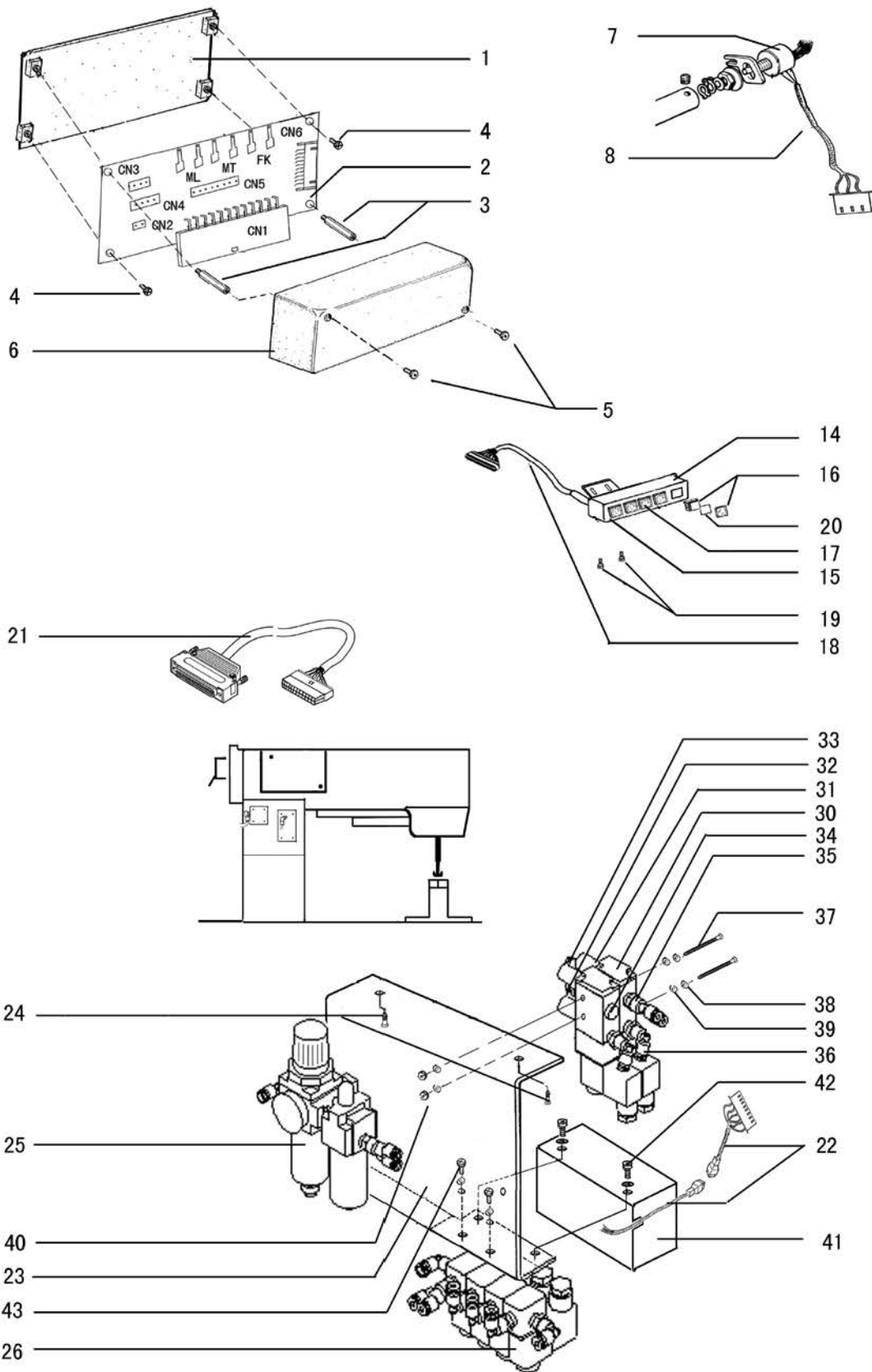
N.ACCESSORIES



N.ACCESSORIES

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
N01	HG112N8001	Hinge support	2	2	2	
N02	H411060100	Screw	4	4	4	
N03	HG107N7101	Hinge	2	2	2	
N04	HF905L8001	Head cushion	2	2	2	
N05	HF971B8001	Bobbin	4	3	3	
N06	HA100J2170	Oil tank	1	1	1	
N07	HF912L7101	Oiler	1	1	1	
N08	JZDP1700G23	Needle	6	4	4	
N09	HF913L8001	Detector setting plate	1	1	1	
N10	H3200L0120	Cotton stand assy	1			
N10	HA200J2030	Cotton stand assy		1	1	
N11	HA100J2180	Cover	1	1	1	
N12	HF904L8001	Oil plate	1	1	1	
N13	16250	Nail	8	8	8	
N14	HB00001025	Hexagonal wrench (2.5)	1	1	1	
N15	HB00001015	Hexagonal wrench (1.5)	1	1	1	
N16	HA300J2070	Screw driver(L)	1	1	1	
N17	HA300J2200	Screw driver(M)	1	1	1	
N18	HA300J2210	Screw driver(S)	1	1	1	
N19	HG108L8001	Belt guard(R)	1	1	1	
N20	HF915L8001	Rubber washer	1	1	1	
N21	H401060120	Bolt	1	1	1	
N22	HG107L8001	Belt guard(L)	1	1	1	
N23	HG158N8001	Bolt	2	2	2	
N24	H005001060	Washer	3	3	3	
N25	H102060100	Bolt	1	1	1	
N26	H409060080	Screw	1	1	1	
N27	HG120N7101	Roller holder	1	1	1	Special order
N28	H804050250	Screw	4	4	4	Special order
N29	H802060250	Screw	2	2	2	
N30	HG111N8001	Holding plate	2	2	2	
N31	HG119N8001	Stay bar	1	1	1	
N32	H7331D8001	Rubber ring	1	1	1	
N33	HG110N8001	Support	1	1	1	
N34	H804050300	Screw	2	2	2	

P.PNEUMATIC CONTROL UNIT



O.PNEUMATIC CONTROL UNIT

Fig. No.	Part No.	Description	2-D	1LD	1RD	Remarks
P01	HF930M8001	Connecting box base	1	1	1	
P02	HF924M8001	PCB board	1	1	1	
P03	HF932M8001	Connecting box screw	3	3	3	
P04	H409040160	Screw	3	3	3	
P05	H415030120	Screw	3	3	3	
P06	HF931M8001	Connecting box cover	2	2	2	
P07	HF922E8001	Rheostat	1	1	1	
P08	HF989E7101	Rheostat wire assy	1	1	1	
P14	HF934M8001	Button set frame	1	1	1	
P14	HG90M98001	Button set frame	1	1	1	
P15	HF933M8001	Button set board	1	1	1	
P15	HG90M88001	Button set board	1	1	1	
P16	HF937M8001	Button with light	3	2	2	
P17	HF937M8002	Button without light	2	2	2	
P18	HF928M7101	Button wire assy	1	1	1	
P19	H415040060	Screw	4	4	4	
P20	HG113M7101	Plotting	1	1	1	
P21	HG91M17101	Control box wire assy	1	1	1	
P22	HG125M7101	Solenoid valve wire assy	1	1	1	
P23	HG127M7101	Solenoid valve set board	1	1	1	
P24	HF917M8001	Screw	2	2	2	
P25	HF916M7101	Air source units	1	1	1	
P26	HG105M7101	Solenoid valve assy	1			
P26	HG90M57101	Solenoid valve assy		1	1	
P30	H4918N8001	Solenoid valve	2	2	2	
P31	H4924N8001	Exhaust muffler	4	4	4	
P32	H4917N8001	Wire joint	1	1	1	
P33	H4916N8001	Wire joint	1	1	1	
P34	HF960M8001	Screw plug	1	1	1	
P35	HG119M8001	Wire joint	1	1	1	
P36	HF959M8001	Wire joint	2	2	2	
P37	H409040500	Screw	2	2	2	
P38	H005008040	Spring washer	2	2	2	
P39	H005001040	Washer	6	6	6	
P40	H003002040	Nut	2	2	2	
P41	HF941M8001	Solenoid valve cover	1	1	1	
P42	H409040100	Screw	2	2	2	
P43	HZ11040120	Screw	4	4	4	

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