
GLOBAL

**INDUSTRIAL
SEWING
MACHINE
Model**

DN - 2242 / AUT

DN - 2242-LH / AUT

Classes

Double-Needle

Needle feed

Lockstitch, Automatic

Undertrimmer

Variable speed

Thank you for choosing **GLOBAL** Industrial Sewing Machine
Please read this instruction carefully before operating the machine.

**CATALOG
INSTRUCTION MANUAL**

PRECAUTIONS BEFORE STARTING TO OPERATE

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 removing the "V" belt, adjusting the machine, or when replacing.
- 4) Avoid placing fingers, hairs bars etc. near the pulley, "V" belt, bobbin winder pulley, or motor 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 a belt 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 motor nameplate.

3. Precaution for Operating Conditions

- 1) Avoid using the machine at abnormally high temperature (35°C or higher) or low temperature (5°C or lower). Otherwise, machine failure may result.
- 2) Avoid using the machine in dusty conditions.

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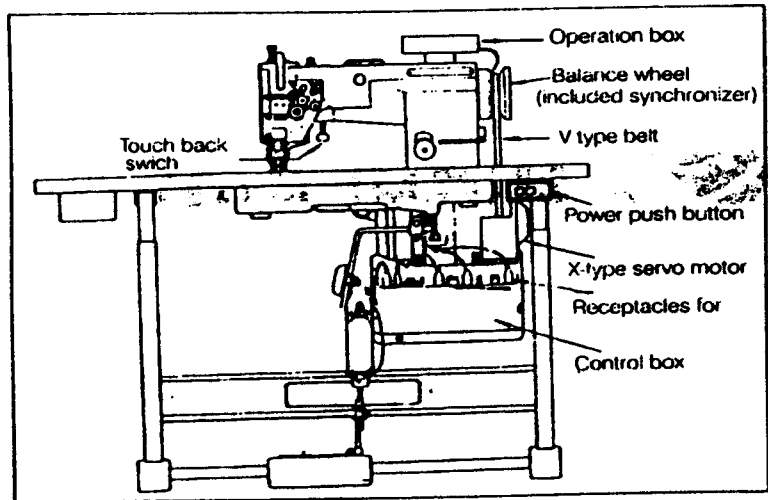
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PREPARATION FOR OPERATION

- Overall view of assembled sewing machine



1. Power cable connection

(1) Connection to Power Supply

When connecting the power supply connector to the control box, the connector should be completely plugged in the proper receptacle after confirming the connector type and matching direction.

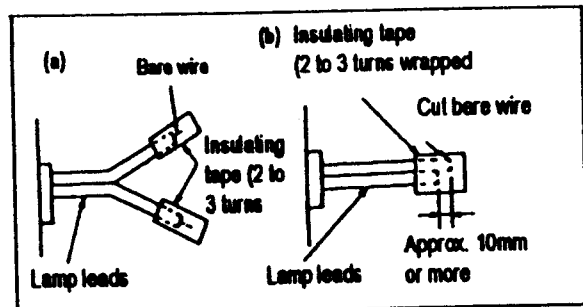
- A. In case of three-phase electrical power system, the "U" phase should be connected to the red lead, the "V" phase to the white lead, and the "W" phase to the black lead. The motor rotary direction depends, however, upon the setting of the internal switch in the control box as described in Paragraph 1-(3)

CAUTION: The green wire must be connected to the ground terminal in order to ground the motor properly.

- B. The appropriate power fuse capacity is as follows.
- | | | |
|--------------|------------|-----|
| Power supply | 200V-240V: | 10A |
| | 100V-120V: | 15A |

(2) Lamp Leads

- A. When installing the illuminating lamp(6V,15-20W),The connecting wire is attached on the back of the Control box. It should be removed and connected by removing the insulating tube from the wire and stripping properly. The wire connections should be, then, insulated by wrapping insulating tape on the wires.



CAUTION: The power switch must be turned off before connecting the lamp.

- B. When the illuminating lamp is not used, the end of the lamp leads must be insulated as (a) or (b) as shown in the figure on right side. If a short circuit occurs failing to insulate, the transformer in the control box will be possibly burned out.

CAUTION: The illuminating lamp must not be connected with any heater, such as a foot warmer and others, in parallel. Otherwise, the load capacity will be exceeded. It may cause transformer winding burned out..

(3) Rotary direction

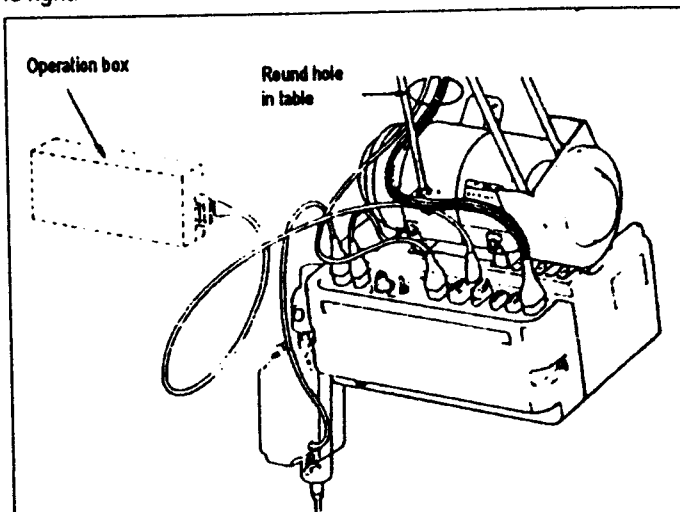
It is possible to change the rotary direction of the motor by removing the rubber cap from the bottom left side of the front cover on the control box, and push the internal direction selector switch. The built-in lamp in the internal switch is off when the motor is rotating counterclockwise as facing to the motor pulley, and on when rotating clockwise. The rotary direction has been set to counterclockwise as facing to the motor pulley, matching with the machine prior to shipping

2. Connection of control box

The control box should be connected as shown to the right.

Note: (1) Be sure to turn the power switch off for safety before connecting or disconnecting the connectors.

(2) The combination of the machine heads with the motor control panels are specified below. Use special care for the correct combination when replacing the machine head or motor control panel.

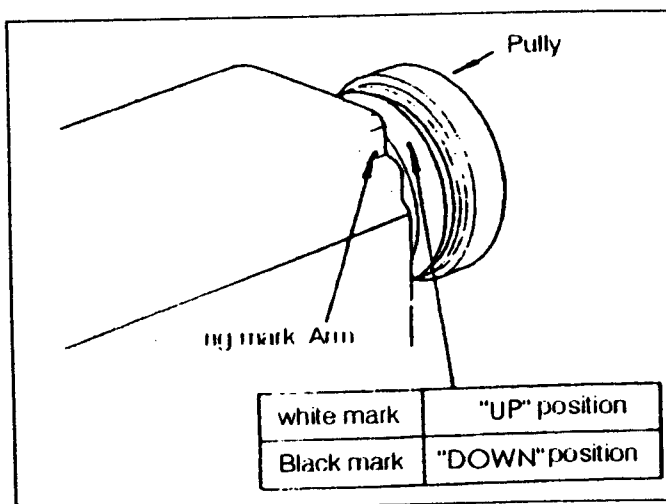


3 Adjustment of needle bar stop position

I Adjust of "UP" position

When the pedal is kicked down by heel, the machine stops at "UP" position. If the marks deviate larger than 3 mm, adjust as follows.

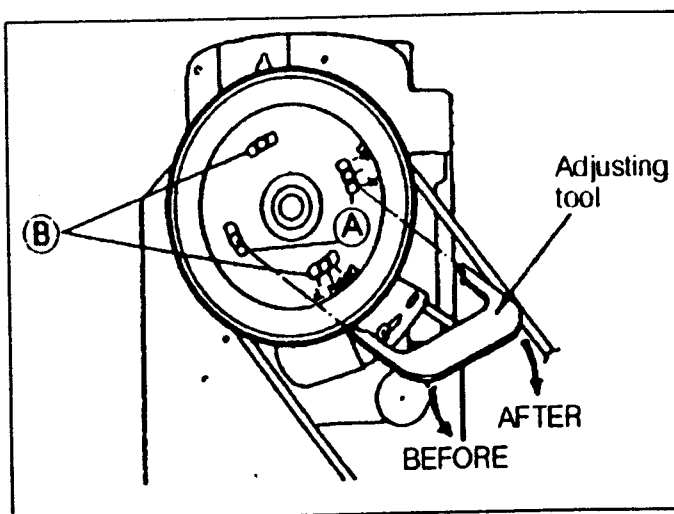
- 1) Disconnect the plug (12 pins) of cable from the machine head.
- 2) Run the machine and stop at "UP" position.
- 3) While holding the pulley, insert the "adjusting tool" in the hole "A", then remove the tool.



II Adjust of "Down" position

When the pedal is "Neutral" the machine stops at "Down" position. If the marks deviate large than 5 mm, adjust as follows.

- 1) Disconnect the plug (12 pins) of cable from the machine head
- 2) Run the machine and stop at "Down" position.
- 3) While holding the pulley, insert the "adjusting tool" in the hole "B", then remove the tool.



III Confirm the stop operation, then set the plug (12 pins) coming from the machine head into the receptacle.

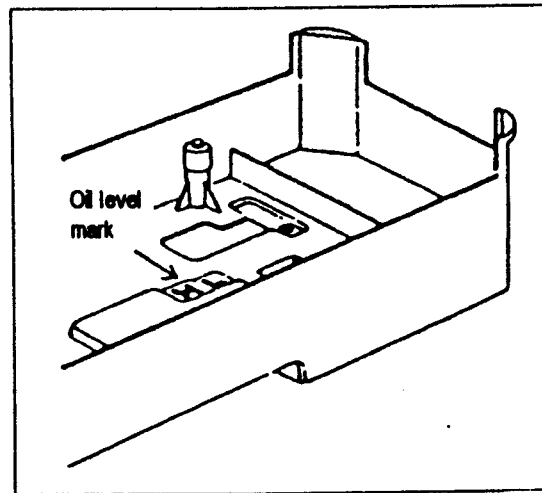
CAUTIONS ON USE

1. Oiling (1)

Fill the oil reservoir with oil up to "H" mark.

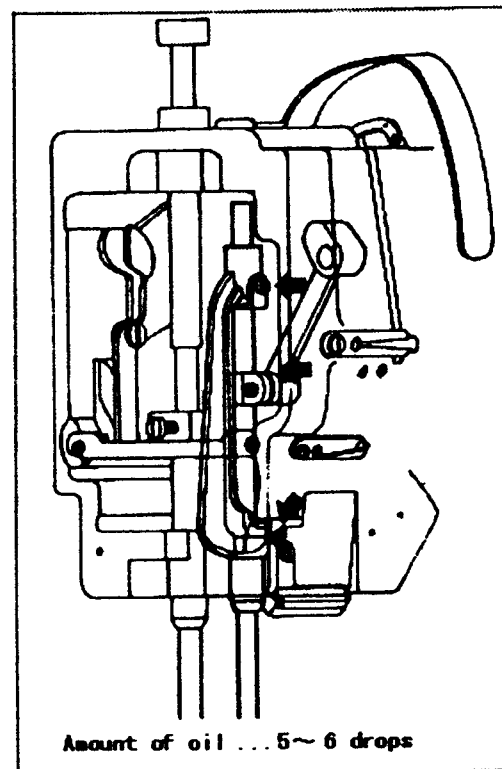
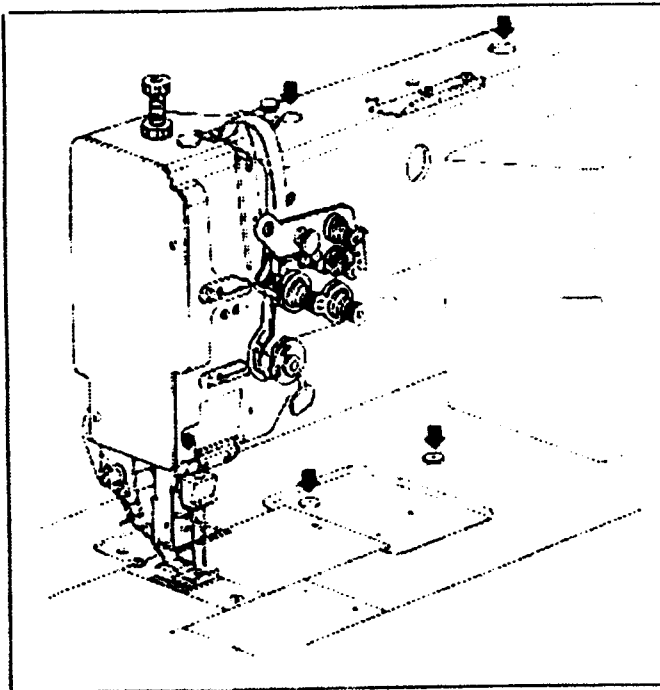
Oil level should be periodically checked. If oil level is found below "L" level replenish oil to "H" level.

For oil, Use white spindle oil



2. Oiling (2)

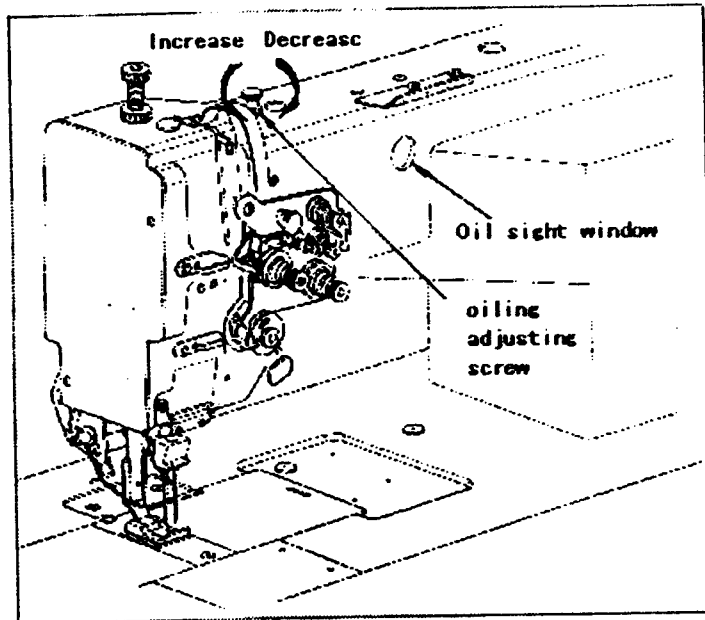
When a new sewing machine is used for the first time, or sewing machine left out of use for considerably long time is used again, replenish a suitable amount of oil to the portions indicated by arrow in the below figure.



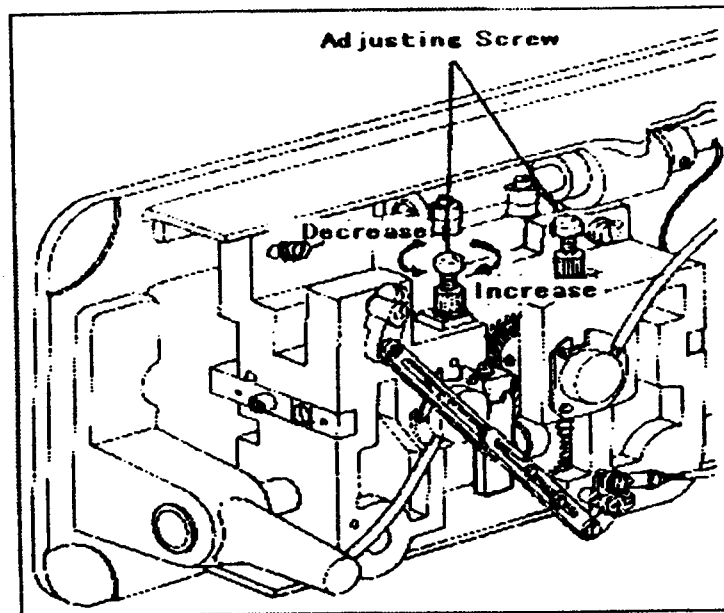
3. Oiling condition

(1) See dripping of oil during operation through the oil sight window to check oiling condition in the machine arm.

(2) Please use the oiling adjusting screw with respect to oiling to take-up lever mechanism.



4. Adjustment of oiling to rotating hook



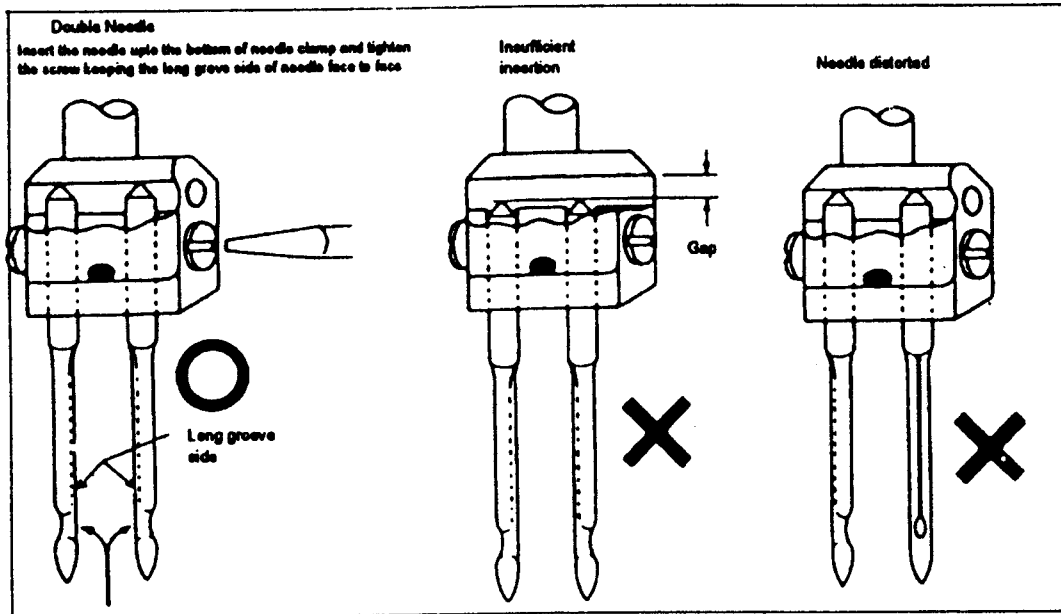
5. Cautions on operation

- (1) When the power is turned on or off, keep foot away from the pedal.
- (2) It should be noted that the brake may not work when the power is interrupted or power failure occurs during sewing machine operation.
- (3) Since dust in the control box might cause malfunction or control troubles, be sure to keep the control box cover close during operation.
- (4) Do not apply a multimeter to the control circuit for checking; otherwise voltage of multimeter might damage semiconductor components in the circuit.

OPERATION

1. Installation of needles

Note: Before installing the needles, be sure to turn off the power.



2. Winding of bobbin thread

Note: When bobbin thread is wound, keep the presser foot lifted.

Adjustment:

Tension of wound thread

Slack winding is recommended for polyester thread and nylon thread.

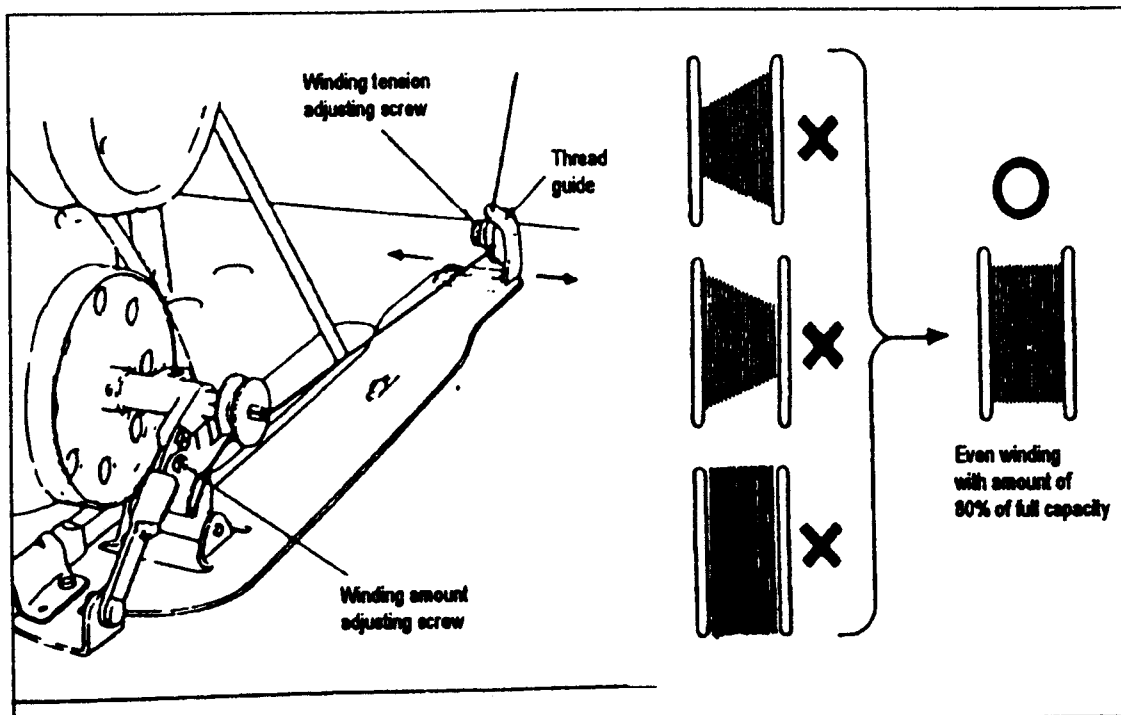
Conically wound thread

Move the thread guide toward smaller diameter of wound thread layer.

Length of wound thread

Loosen the thread length adjusting screw to increase length of thread

and tighten the screw to decrease length of thread.

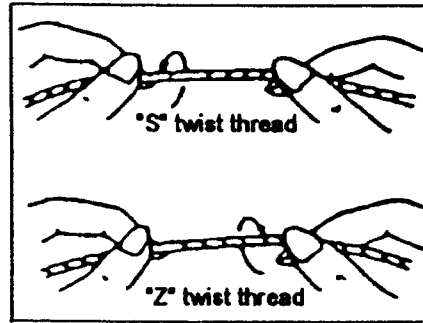


3. Selection of thread

It is recommended to use "S" twist thread in the left needle (viewed from front), and "Z" twist thread in the right needle.

When discriminate use of needle threads is impossible, use "Z" twist thread in both the needles.

For bobbin thread, "S" twist thread as well as "Z" twist Thread can be used.



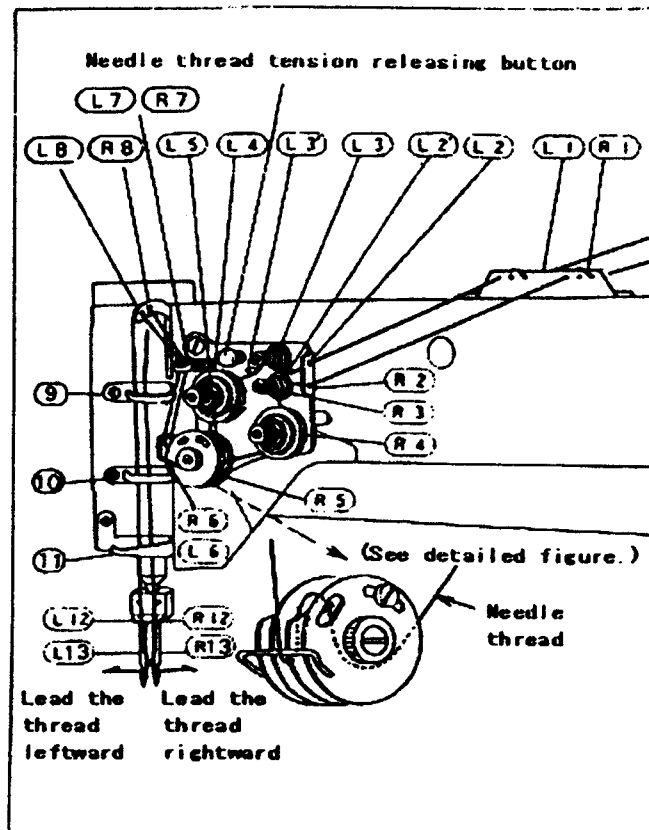
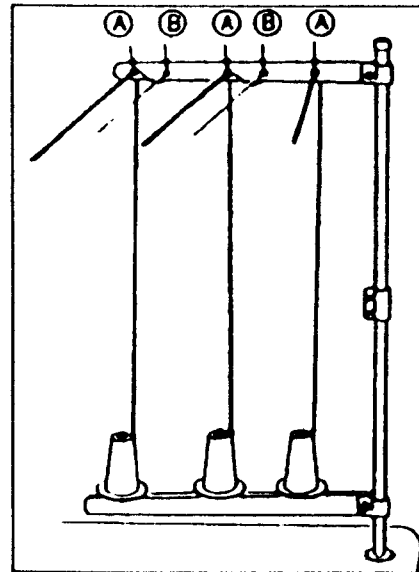
4. Threading of needle threads

(1) Pass each needle thread through thread guide A

Note: When thin slippery thread (polyester Thread or filament thread, for example) is used pass the thread through thread guide B as well.

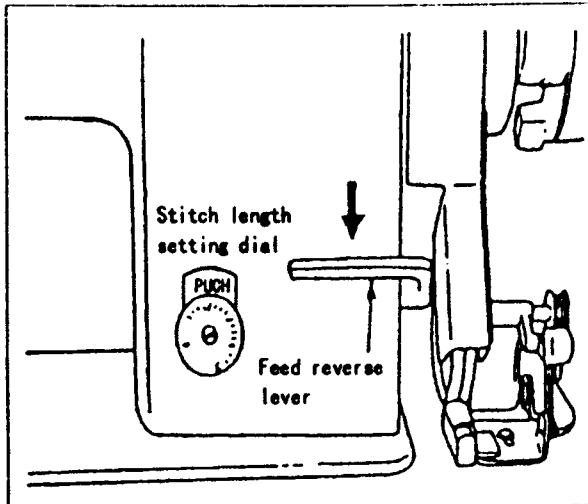
(2) With the take-up lever located at the upper most position, pass each needle thread in the order shown in the following figure.

Note: Pressing the upper thread loosening button shown in the figure below opens the saucer of the upper thread tension adjuster, and the upper thread can easily pulled out.

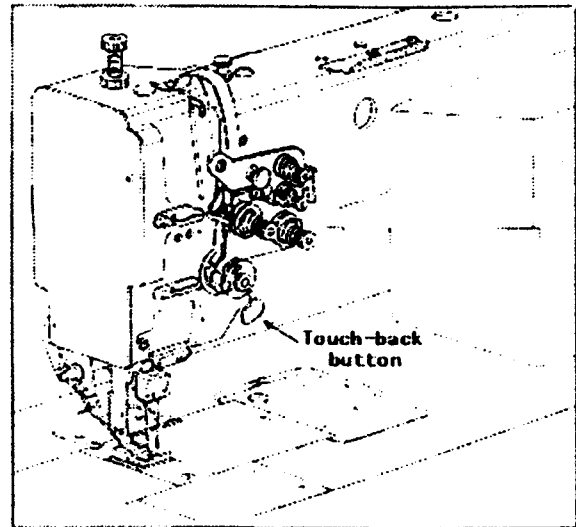


5. Adjustment of feed (stitch) length and stitch reversing (touch back)

Note: To make feed (stitch) length smaller, depress the feed reverse lever and set the feed length setting dial to a desired position

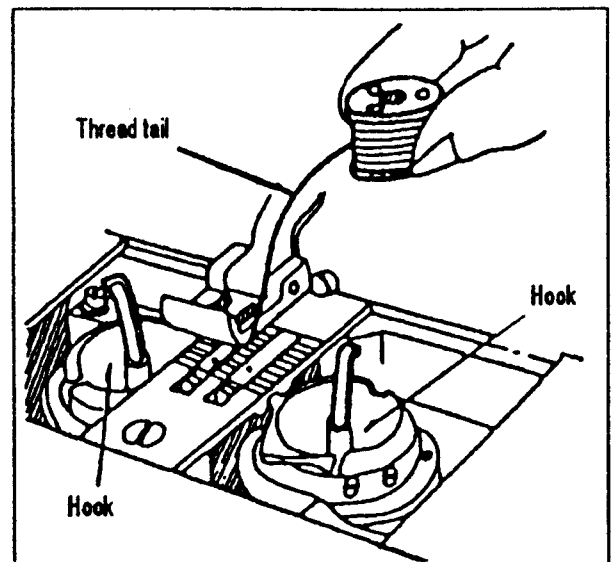


• Touch-back button . . . Direction of stitching can be reversed by depressing this button. Stitching goes on in reversed direction while the button is held down, and returns to forward direction when the button is released.



6. Setting of bobbin

- (1) Pulling out 5 cm thread tail from the bobbin.
- (2) Hold the bobbin so that the bobbin thread is would in right direction and put it into the hook.



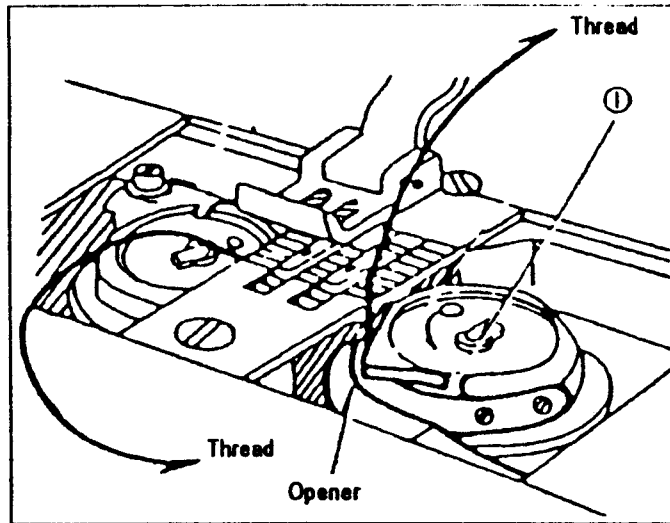
7. Adjusting of needle thread guide

Please adjust needle thread guide of needle thread tensioner according to sewing condition.

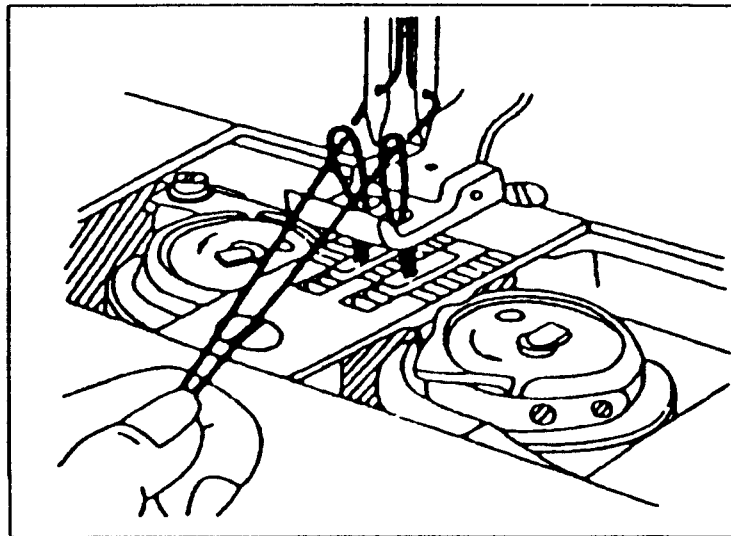
Thread guide position	Left	Middle	Right
Materials	The thicker than standard	L } Standard M } B }	The thinner than standard
Needle thread supply	More	Standard	Less

8. Threading of bobbin threads

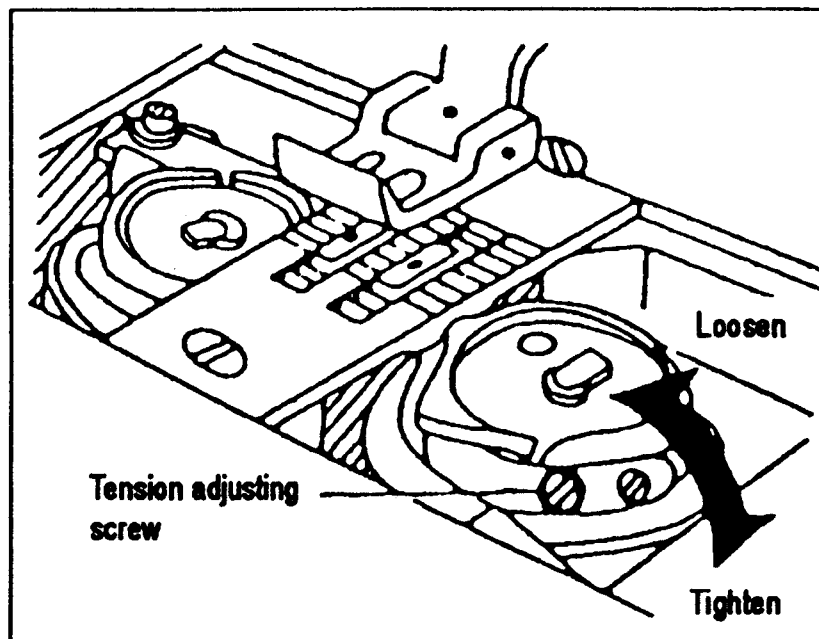
- (1) Put the hook into the bobbin case and press down the latch ①. The thread end should be left on the bed.



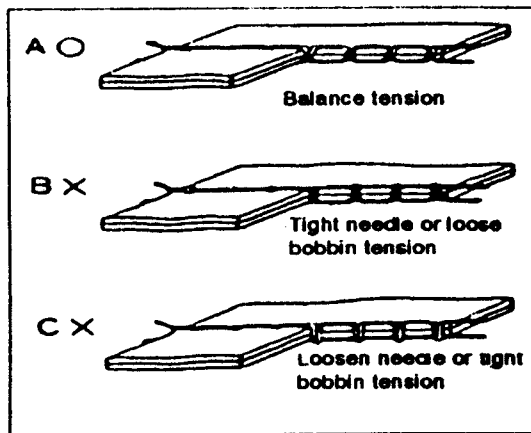
- (2) While holding the two needle threads by left hand, rotate the handwheel one turn by right hand. By pulling up the needle threads, as shown in the figure, the bobbin threads will be lifted. Each combination of bobbin thread and needle thread should be aligned and led backward.



9. Tension adjustment of bobbin threads



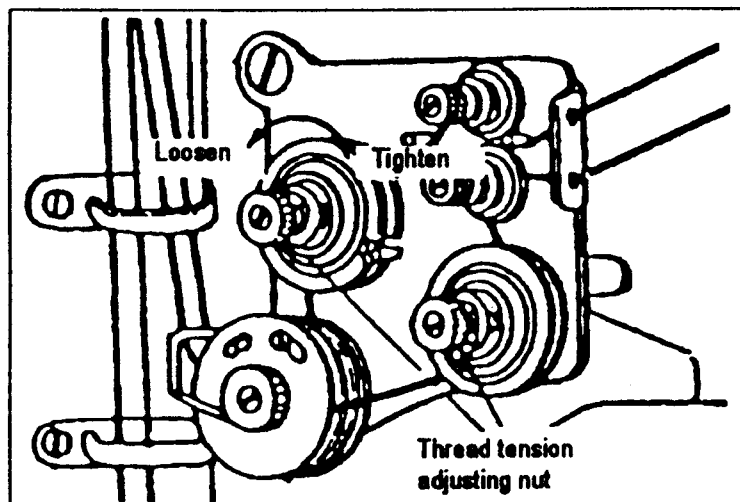
10. Balance of thread tension



11. Needle thread tension

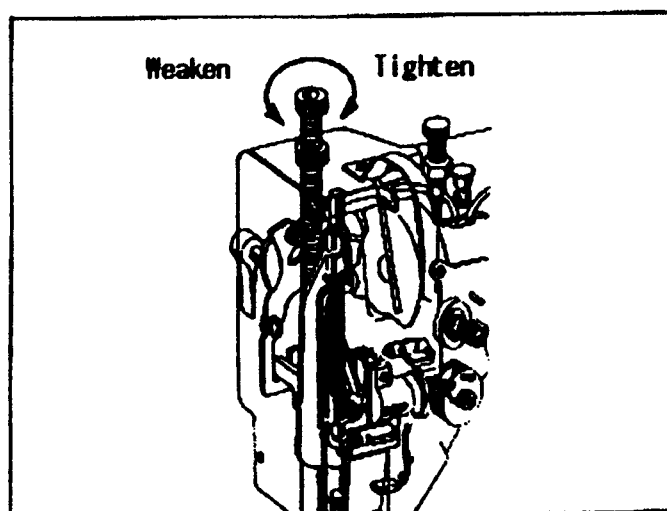
- Needle thread tension should be adjusted in reference to bobbin thread tension.
- To adjust needle thread tension, turn each tension adjusting nut.

Needle thread tension can be also adjusted for special fabric and thread by changing intensity and movable range of slack thread adjusting spring.



12. Adjustment of presser foot pressure

Pressure to fabric(s) can be adjusted by turning the pressure adjusting screw.

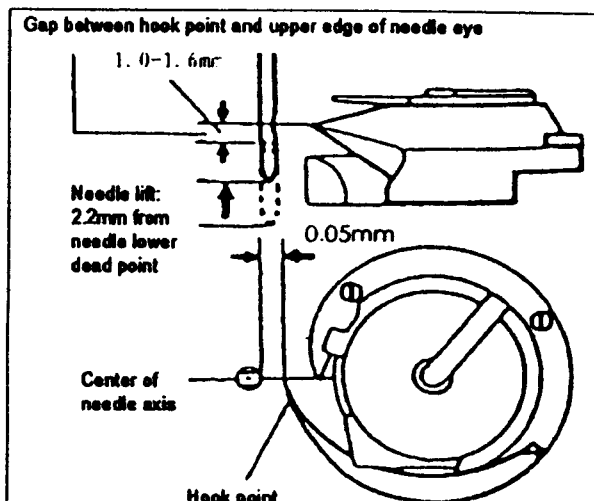


13. Timing between rotating hook motion and needle motion

- (1) Set stitch length on the stitch length setting dial shown table.
- (2) When needle is lifted A shown table, from the lowest positional , as shown in Figure, the following positional ship should be maintained.

Model	2242	2242-LH
Set the stitch length	3	4.5
Needle lift A	2.2mm	2.4mm

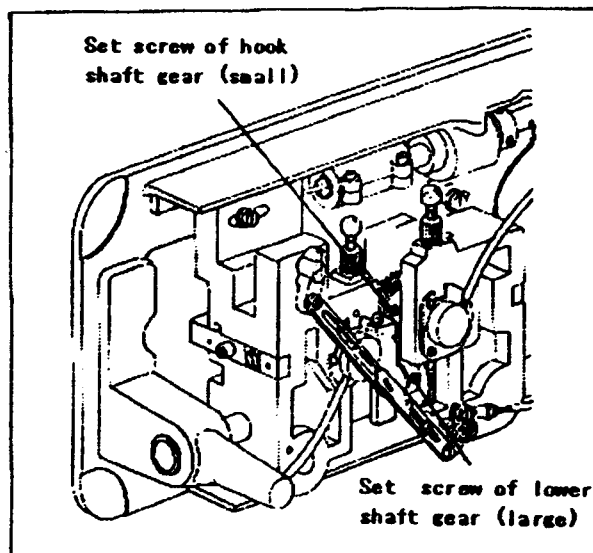
- The upper edge of needle eye should be 1.0-1.6mm below the hook point.
- The hook point should be located at the center of needle axis.
- Gap between the hook point and the side face of needle should be 0.05mm.



Position adjustment of hook point

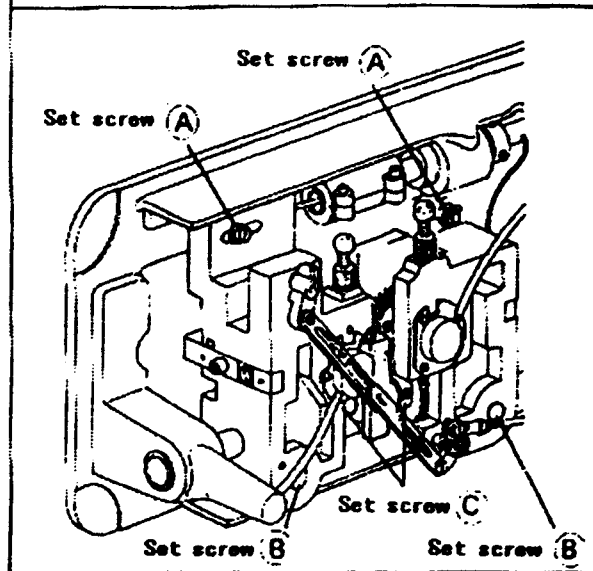
Adjust the hook point so that it comes to the center of Needle axis.

- (1) Lean the machine head backward and loosen three set screws of hook shaft gear (small)
- (2) Turn the balance wheel and stop when the needle is lifted 2.2 mm shown table from the lowest position.
- (3) Rotate the hook by hand to position the hook point to the center of needle axis.
- (4) Move the hook bracket leftward or rightward and position it so that gap between the hook point and side face of needle is 0.05mm. For this adjustment, each screws A, B and two of C should be loosened.



Note: In the adjustment, do not excessively loosen set screws C and always maintain meshing of hook shaft gear and lower shaft gear.

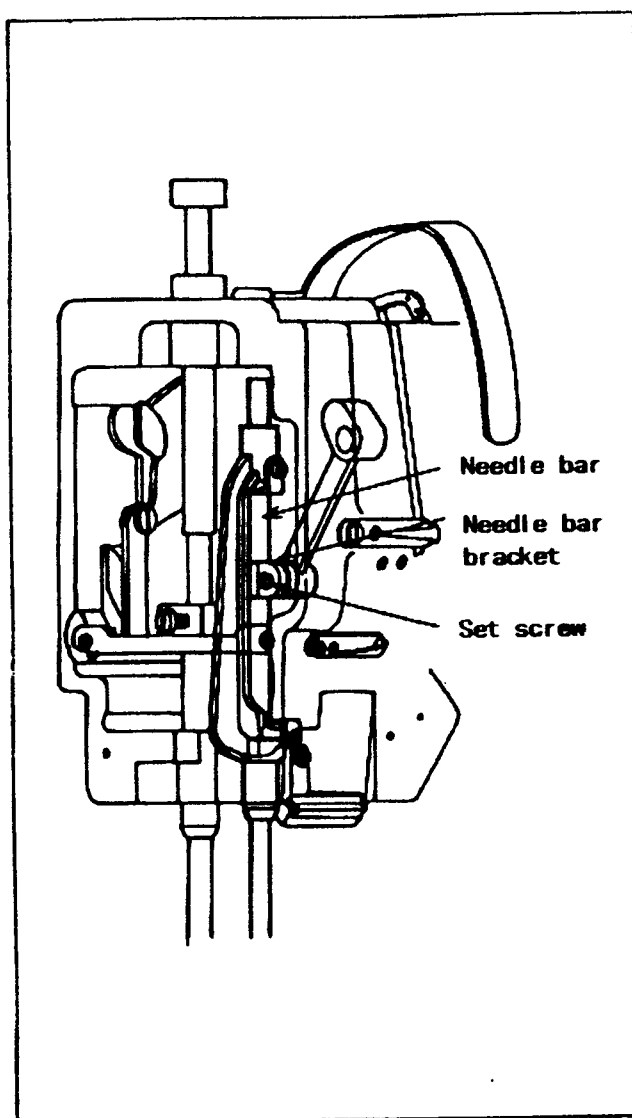
- (5) Tighten the set screws in the following order:
 - a. While pressing the lower shaft gear (large) against the side face of hook bracket, tighten the set screws C first.
 - b. After checking gap between the needle and the hook, tighten the set screws A.
 - c. Then tighten the set screws B.



- **Position adjustment of needle point**

Adjust needle position so that gap between the upper edge of needle eye and the hook point is 1.0-1.6 mm when the needle is lifted by 2.2 mm from its lowest position shown in before page.

- (1) Remove the face plate, loosen the set screw of needle bar bracket and vertically move the bar to adjust.
- (2) After the adjustment, tighten the set screw.

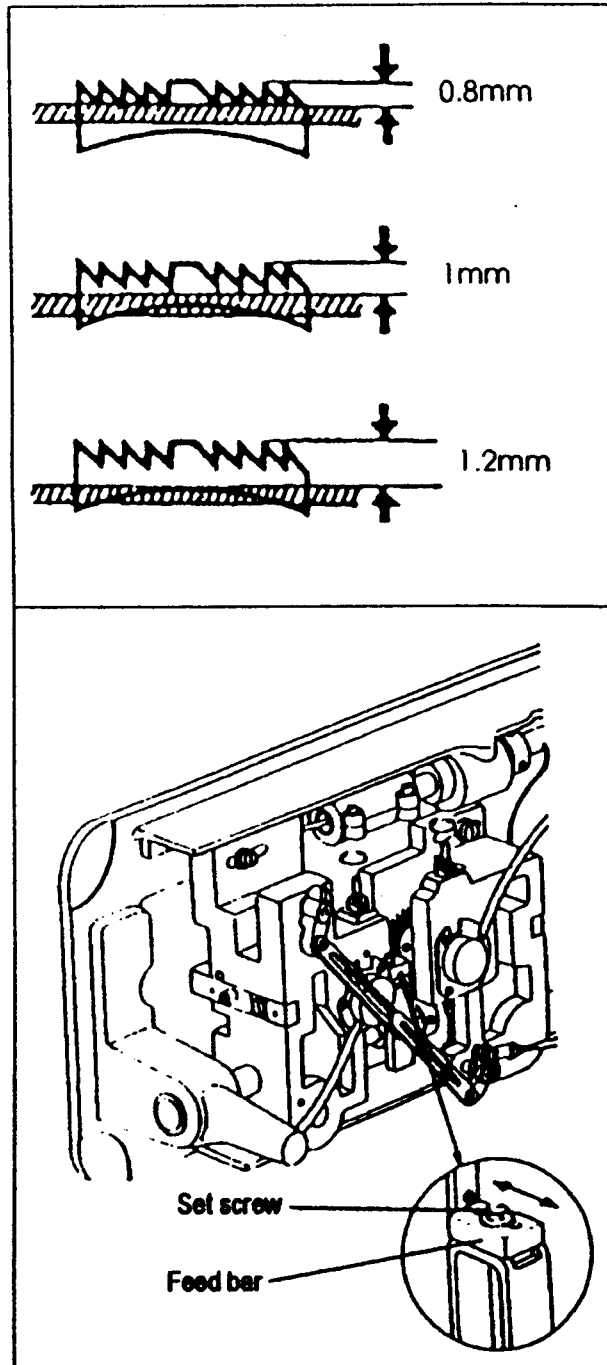


14. Adjustment of feed dog height

Height of feed dog and pressure of presser foot should be adjusted for individual fabric(s) with the following cautions:

- Fabric will be damaged if the feed dog extends too high, or pressure of presser foot is too large.
- Even stitch length cannot be assured if the feed dog is too low or pressure of presser foot is too small.
- Feed dog height should be measured at the point where the needle is at the top position.

For light fabrics	Approx. 0.8mm from throat plate
For usual fabrics	Approx. 1.0mm from throat plate
For heavy fabrics	Approx. 1.2mm from throat plate



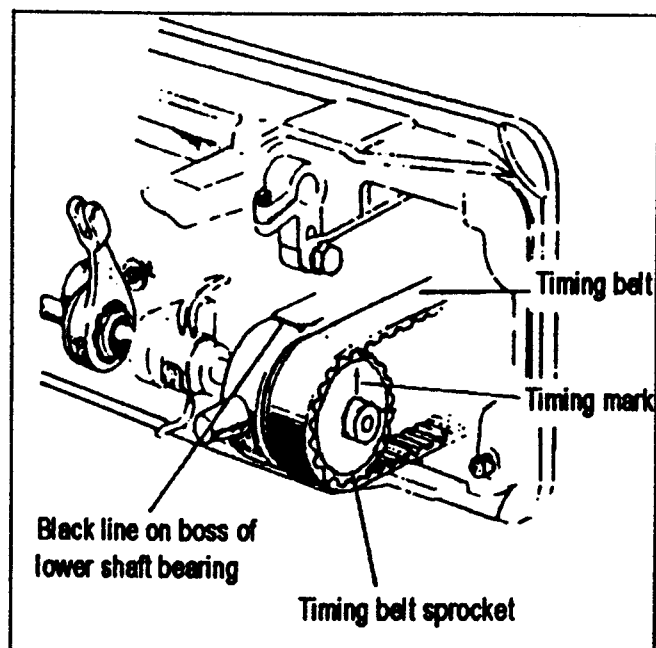
Adjustment procedure

- (1) Lean the machine head backward.
 - (2) Turn the hand wheel by hand and stop when the feed dog rises to the maximum height.
 - (3) Loosen the feed bar set screw.
 - (4) Vertically move the feed bar (in the direction indicated by arrow in the figure) to adjust it to adequate height.
 - (5) After the adjustment, tighten the feed bar set screw.
- The feed dog height is factory-adjusted to 1.0mm

15. Relationship between rotating hook motion and take-up lever motion

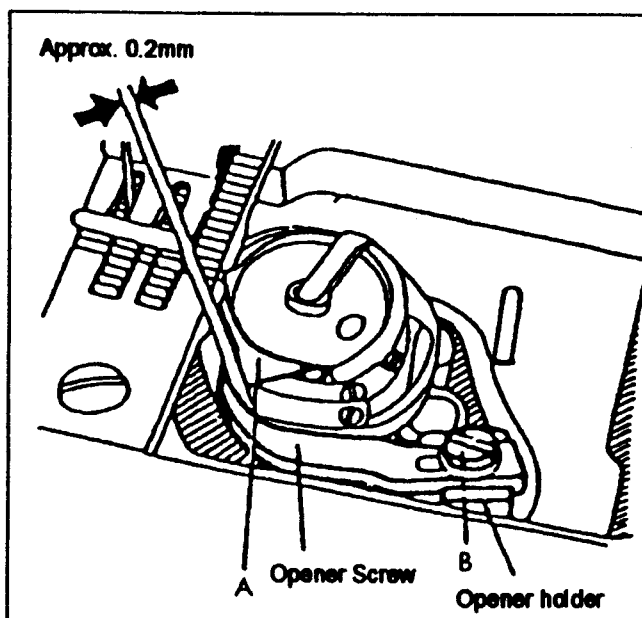
When the timing belt (toothed belt) was removed for its replacement, for example, the relationship between rotating hook motion and take-up lever motion should be adjusted as follows:

- (1) Turn the balance wheel and stop when the take-up lever is lifted to its top position.
- (2) Lean the machine head backward and make sure the arrow (timing mark) put on the timing belt is in line with the black line on the boss of hook shaft bearing.
- (3) If the timing mark is not in line with the black line ,remove the timing belt and install it again to adjust



16. Relationship between hook motion and opener motion

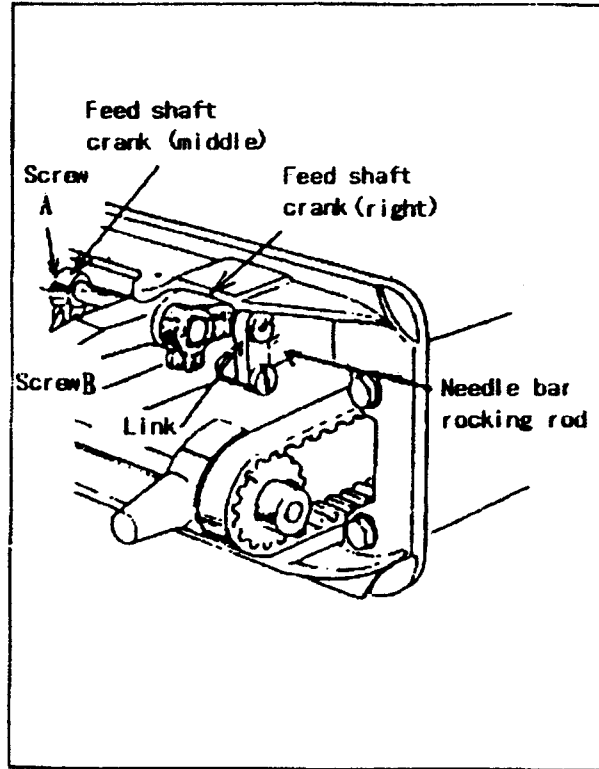
- (1) Turn the balance wheel by hand and stop when the opener holder is located most remotely from the throat plate.
- (2) Make sure gap between the bobbin case holder A and the opener is approximately 0.2mm.
- (3) If the gap is too large or small , loosen the opener holder set screw A and adjust position of the opener.



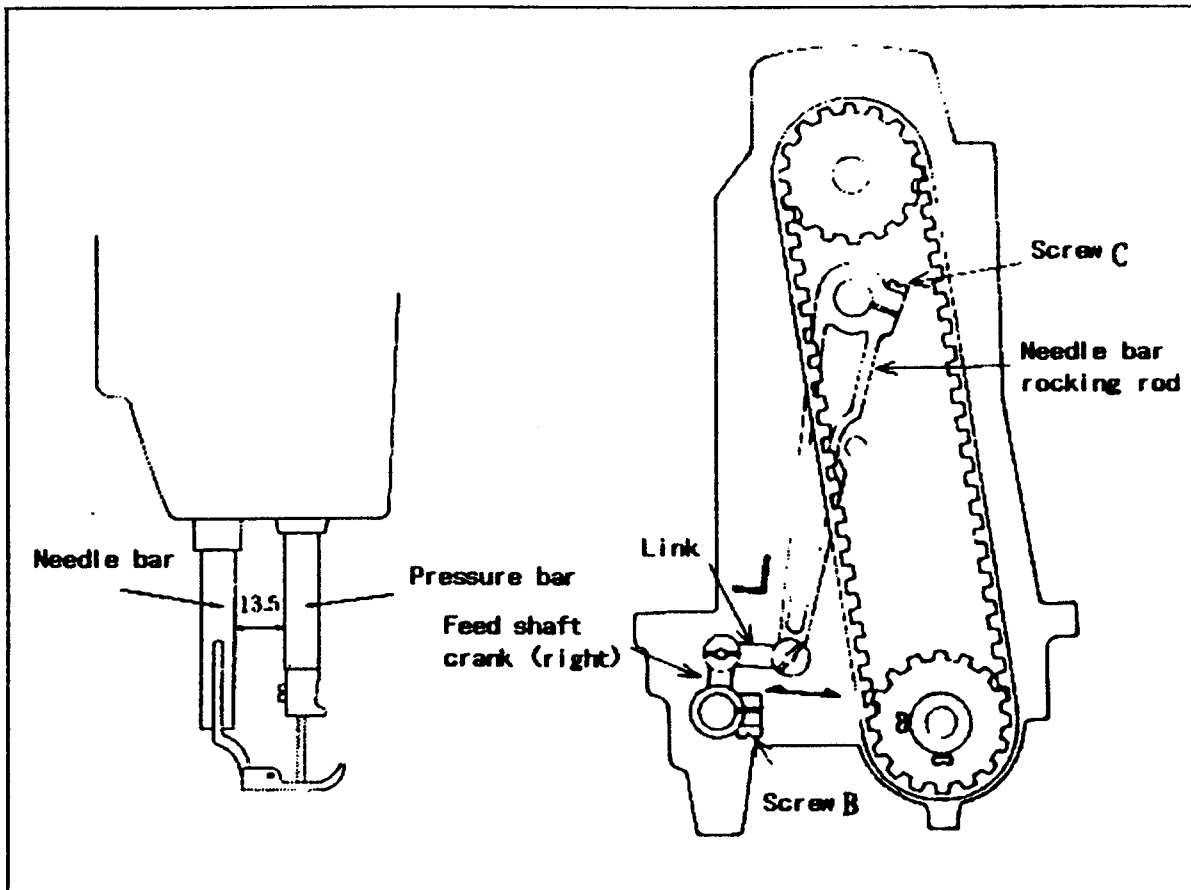
17. Relationship between needle motion and feed dog motion

- The feed dog should be adjusted so that the needle can plunge into the feed dog needle hole at the center of the hole.

- (1) Set stitch length to "0" on the stitch length setting dial
- (2) Lean the machine head backward
- (3) Loosen the feed shaft crank set Screws A and B
- (4) Set the needle at the lowest position.
- (5) Adjust the distance between the pressure bar and the needle bar to be 13.5, and tentatively tighten the screws A and B of the feed shaft crank.
- (6) Check that the right feed shaft crank is connected with the link at right angle, as shown in Figure.
- (7) If the connection is not at right angle, remove the back cover, loosen screw C and move the needle bar rocking rod in the arrow direction to adjust.



- 8) After the completion of adjustment, fully tighten the screws A, B and C.



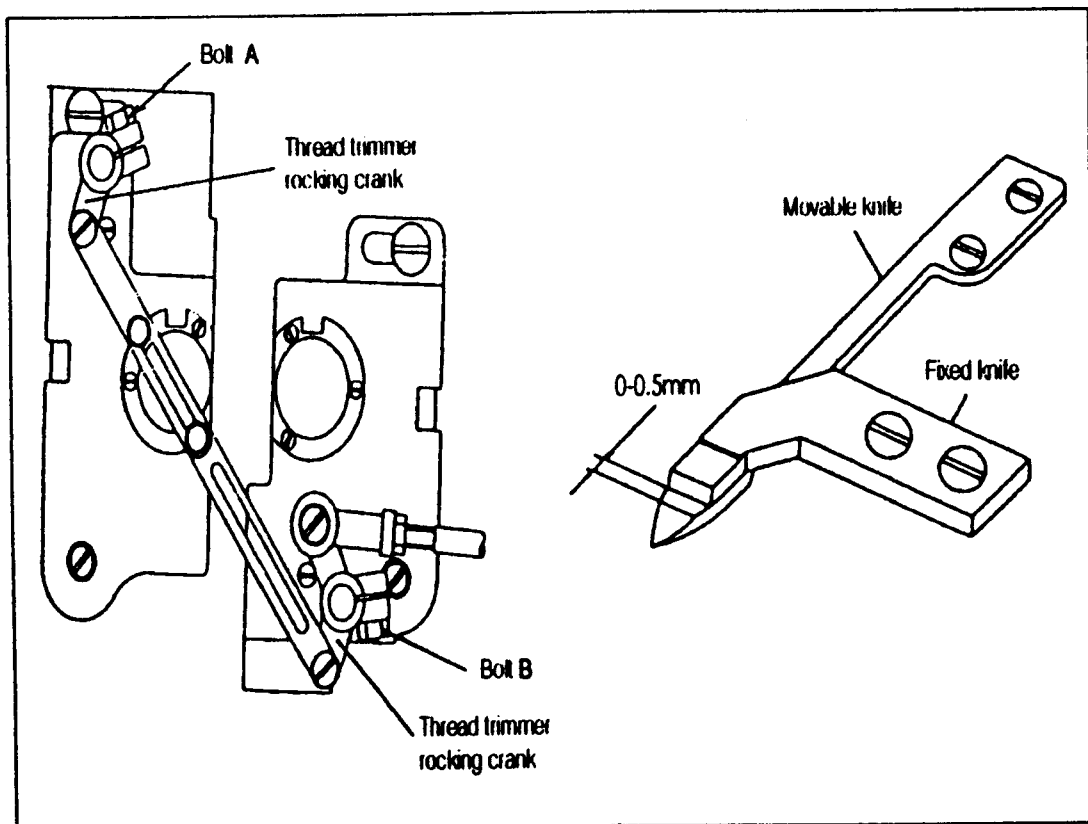
18. Installation of movable knife

(1) Initial position of movable knife

- a. Turn the balance wheel and lower the needle bar to the lowest position.
- b. Push the cam follower crank so that the cam roller enters into the thread trimmer cam groove.
- c. Turn the balance wheel until the black mark point on the arm meets the white mark point on the balance wheel.

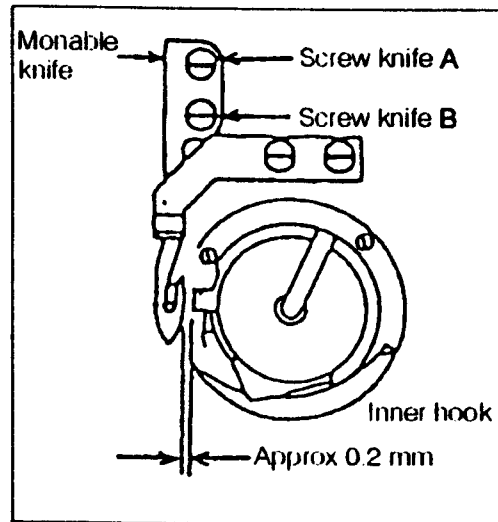
Set the cam follower crank at this position with a screwdriver temporarily preventing the cam roller coming out from the cam groove.

- d. Loosen the thread trimmer rocking crank clamp bolts A and B.
- e. Adjust the movable knife so that the movable knife end slant portion protrudes 0-0.5 mm from the fixed knife, as shown in Figure and tighten the bolts A and B.



(2) Gap between movable knife and bobbin case holder stopper

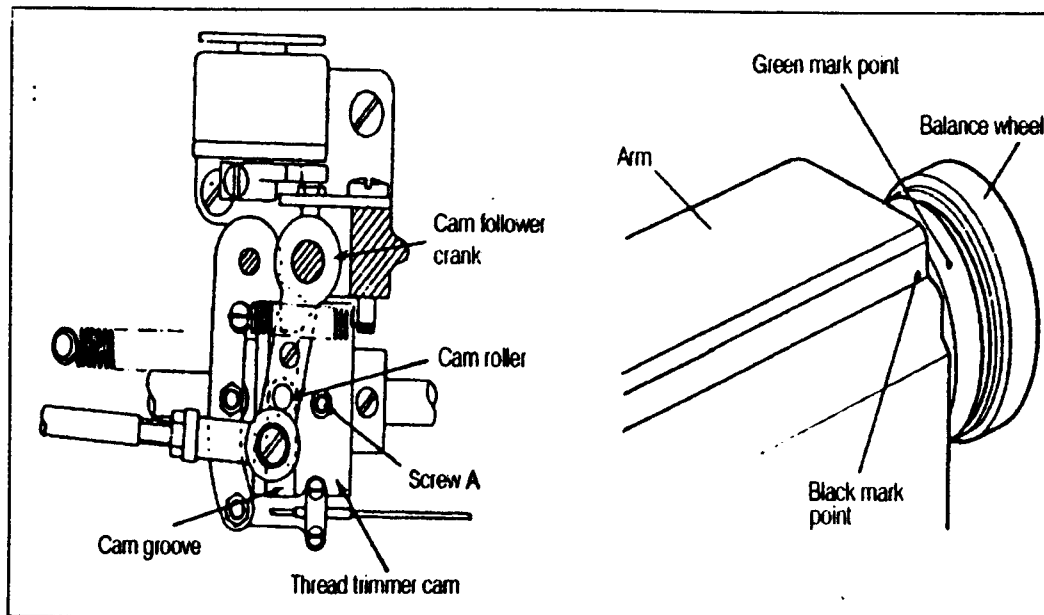
- a. Turn the balance wheel by hand until needle reaches the lowest position
- b. With the needle at the lowest position, depress cam follower crank, turn the balance wheel until the movable knife reaches the extremity of its stroke.
- c. Manually rotate the inner hook in the direction indicated by arrow in Figure and adjust gap between the movable knife and the inner hook stopper to about 0.2 mm (the screws A and B should be loosened for this adjustment).



19. Adjustment of thread trimmer cam

- (1) Turn the balance wheel by hand until the needles reach the lowest position.
- (2) Maintaining the needle position, depress the cam follower crank and put the cam roller into the groove of thread trimmer cam.
- (3) Turning the balance wheel by hand, adjust the thread trimmer cam so that the movable knife starts moving when the green mark point on the balance wheel comes in line with the black mark point on the arm.

To adjust, loosen two thread trimmer cam clamp screws A.



20. Adjustment of thread tension regulator

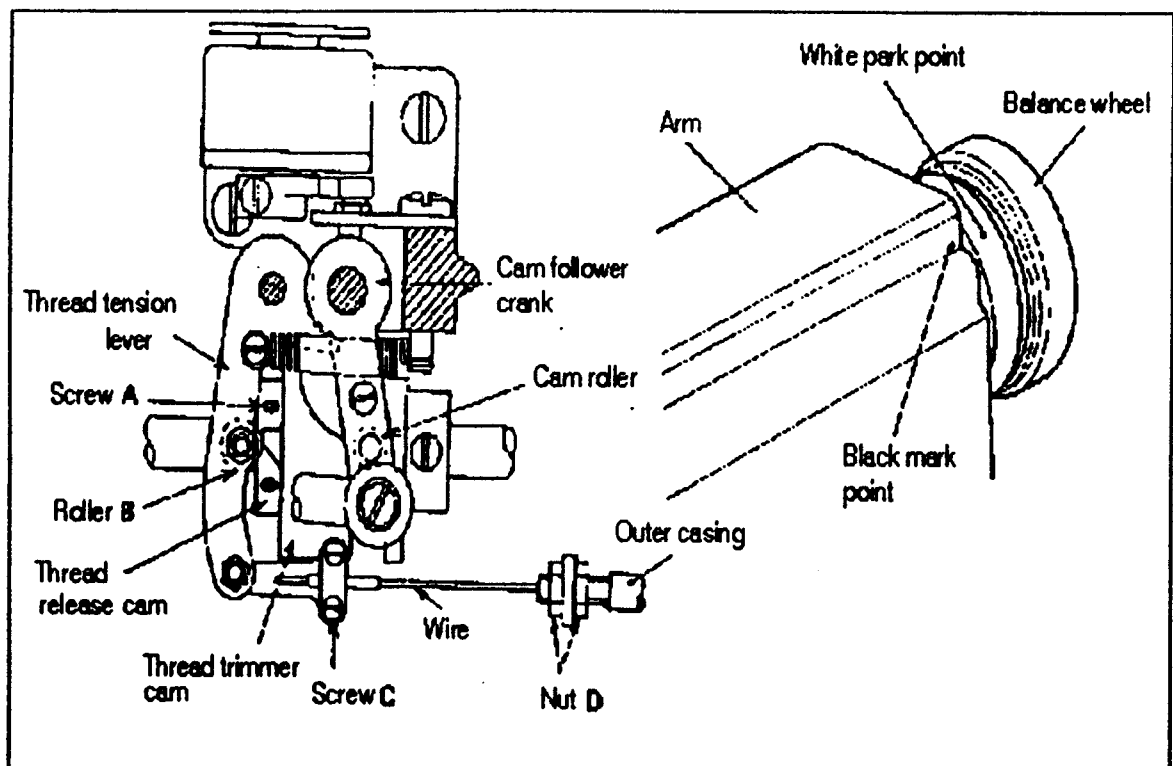
- (1) Turn the balance wheel by hand until the needles reach the lowest position.
- (2) Maintaining the needle position, depress the cam follower crank and put the cam roller into the groove of thread trimmer cam.
- (3) Turning the balance wheel by hand, adjust the thread tension release cam so that the tension disc close when the white mark point on the balance wheel comes in line with the black mark point on the arm.

To adjust, loosen two tension release cam clamp screws A.

- (4) Opening degree of tension disc should be adjusted with the tension release roller B mounted on the convexed portion of thread release cam, as shown in Fig.

To adjust, loosen the screws C and draw the wire.

- (5) Make fine adjustment by loosening the nut D.

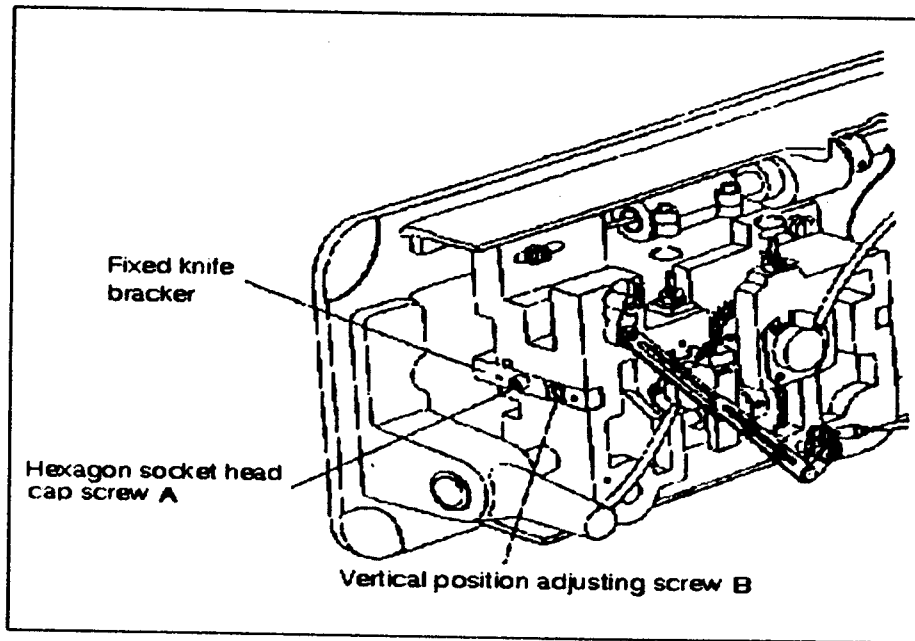


21. Adjustment of scissoring pressure of movable knife and fixed knife

- (1) Loosen the fixed knife bracket clamp hexagon socket head cap screw A.
- (2) Turn the vertical position adjusting screw B to adjust meshing pressure and then tighten the hexagon socket head cap screw A.

Note: Since excess pressure causes large torque to the thread trimming mechanism and trimming failure, adjust it so that thread can be trimmed with minimum pressure.

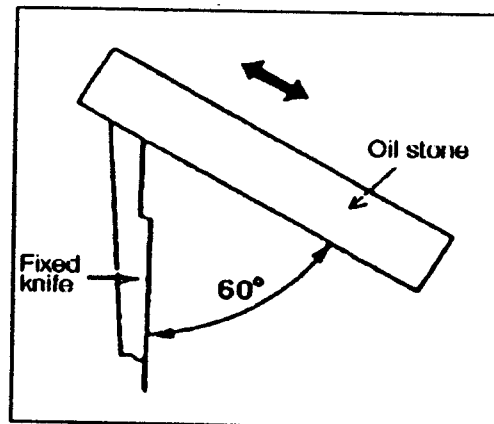
- (3) Move the movable knife and check that the thread can be sharply trimmed.



22. Sharpening of fixed knife

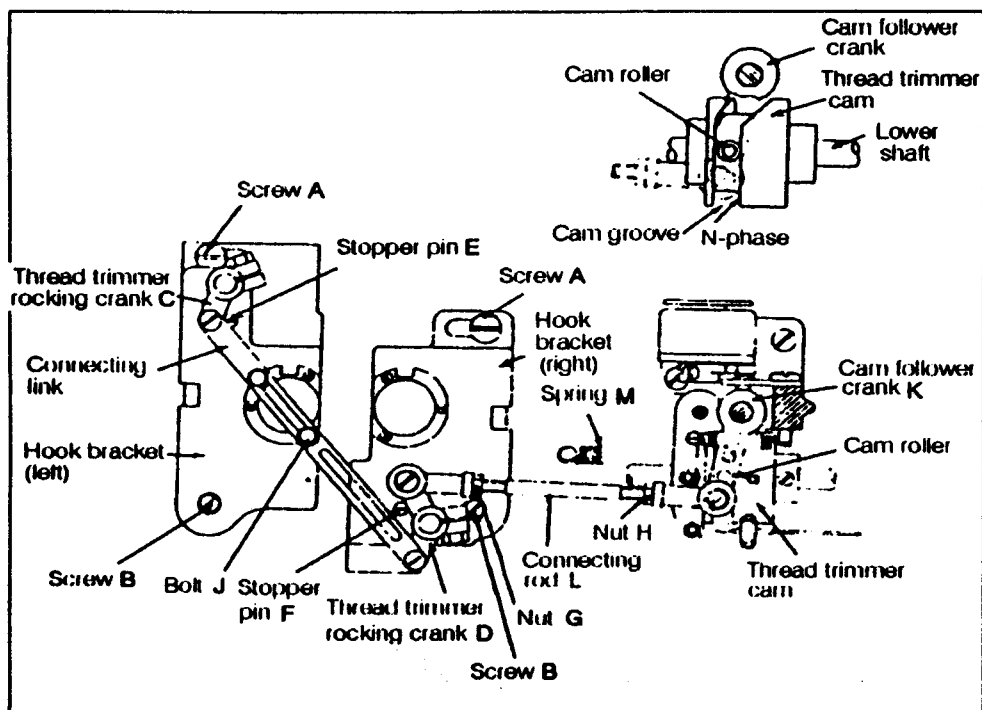
When the knives dull, the fixed should be sharpened as illustrated in Fig.

Since it is very difficult to sharpen the movable knife, replace it with a new one when it dulls.



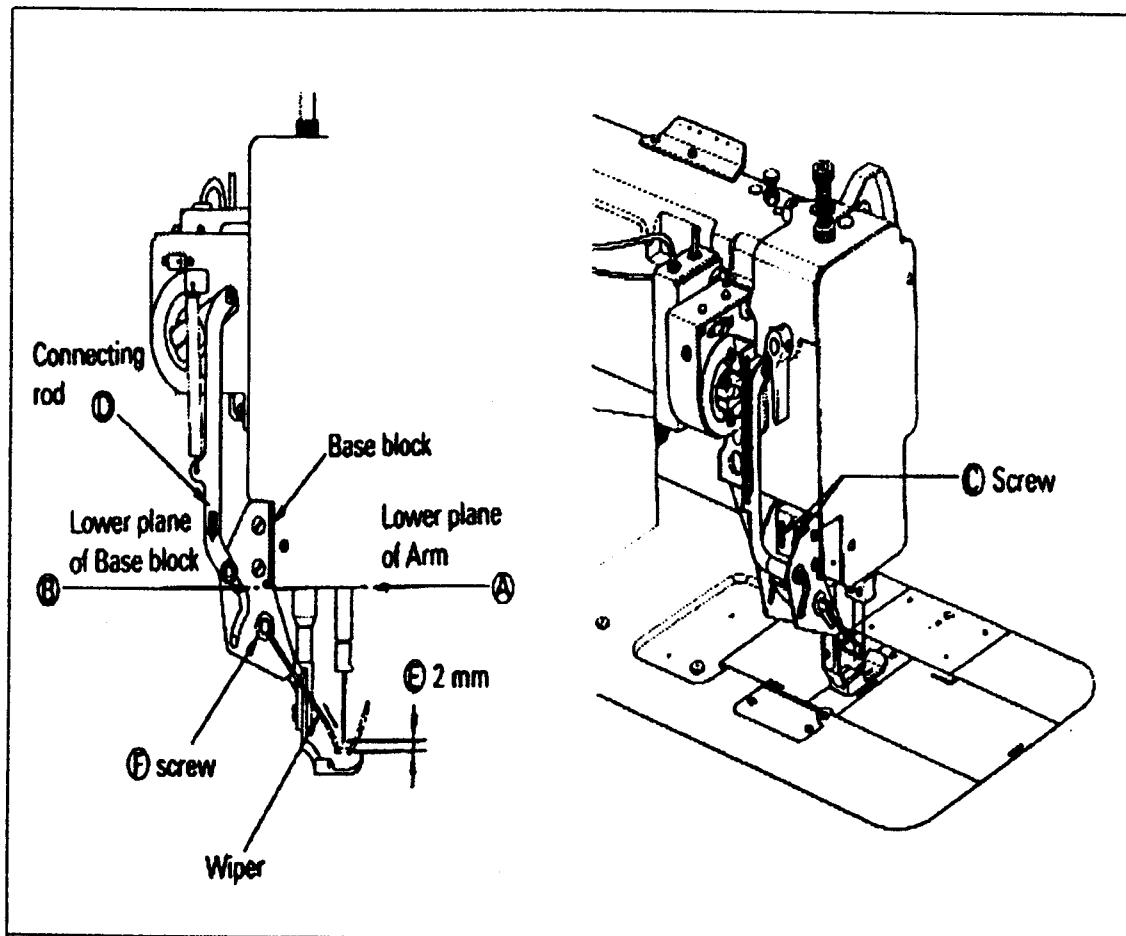
23. Adjustment for change of needle gage

- (1) Replace the throat plate, feed dog and needle clamp.
(Since the throat plate and feed dog are special parts designed for thread trimming machine, be sure to use those specified by us.)
- (2) Lean the machine head backward.
- (3) Loosen two connecting link clamp bolts J.
- (4) Remove the spring M.
- (5) Loosen the hook bracket clamp screws A and B and adjust gap between each needle and hook.
- (6) When the needles and hooks have been adjusted, install the spring M.
- (7) Contact the rocking cranks C and D to the stopper pins E and F and tighten the connecting link clamp bolt J.
- (8) Turn the balance wheel by band until the needles reach the lowest position.
- (9) Loosen the nuts G and H.
- (10) Depress the cam follower crank K and adjust the connecting rod L so that the cam roller can smoothly enter the groove of thread trimmer cam. Then tighten the nuts G and H.
- (11) Adjustment of the cam groove and the cam roller
 - a. Push the cam follower crank K so that the cam roller enters into the cam groove.
 - b. Turn the connecting rod L and adjust the clearance between the cam roller and the cam groove surface N as small as possible, and tighten the nuts G and H.
 - c. Push the cam follower crank K again and check that the cam roller enters into the thread trimmer cam groove smoothly.



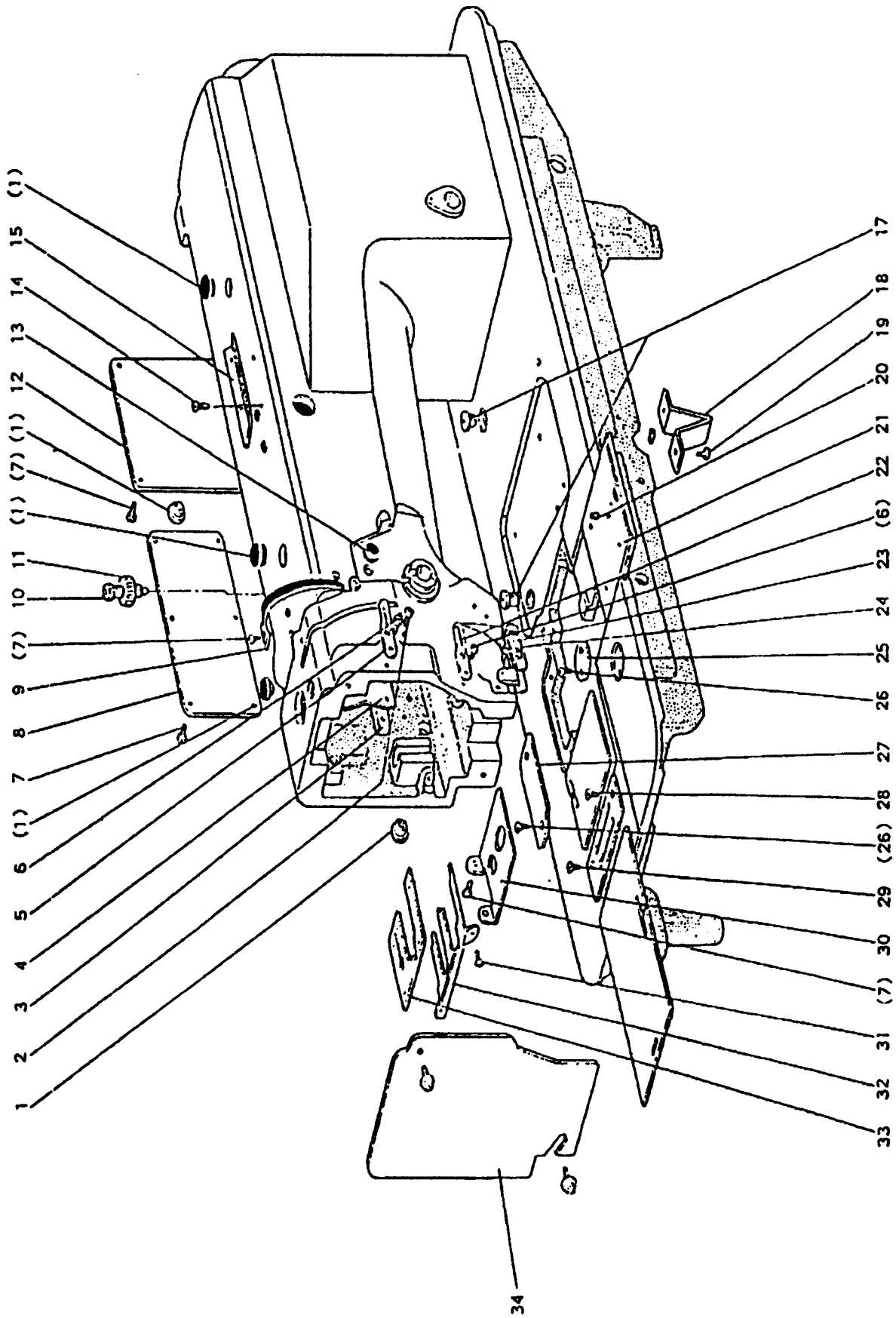
24. Wiper adjustment

- a) Run the machine then stop at "up" position.
- b) Loosen the screw C, then adjust the base block so that the line A and the line B are the same plane, then tighten the screw C.
- c) Loosen the screw F, then adjust the wiper move so as the E clearance is 2mm, then Tighten the screw F.



Model		DN-2242	DN-2242-LH									
Specification												
material weight		Light to medium material	Medium material									
Max speed		4000r.p.m.	3000r.p.m.									
Stitch length		0-5mm	0-7mm									
Needle bar stroke		33.4mm	35mm									
Presser foot clearance		kneel lifter 13 mm	Hand 7 mm									
Needle		DP×5 (Standard #14)	DP×5 (Standard #18)									
Rotating hook		Rotary automatic lubrication horizontal rotating hook (Standard rotating hook)	Rotary automatic lubrication horizontal rotating hook (Twice rotating hook)									
Take-up lever		Slide type										
Adjustment of stitch		Dial type										
Lubrication		Automatic lubrication										
Motor		Clutch motor 550W										
Gap between two needles	Standar	6.4mm										
	Special	2.4	3.2	4.8	5.6	8	9.5	12.7	16	19	25.4	28.6

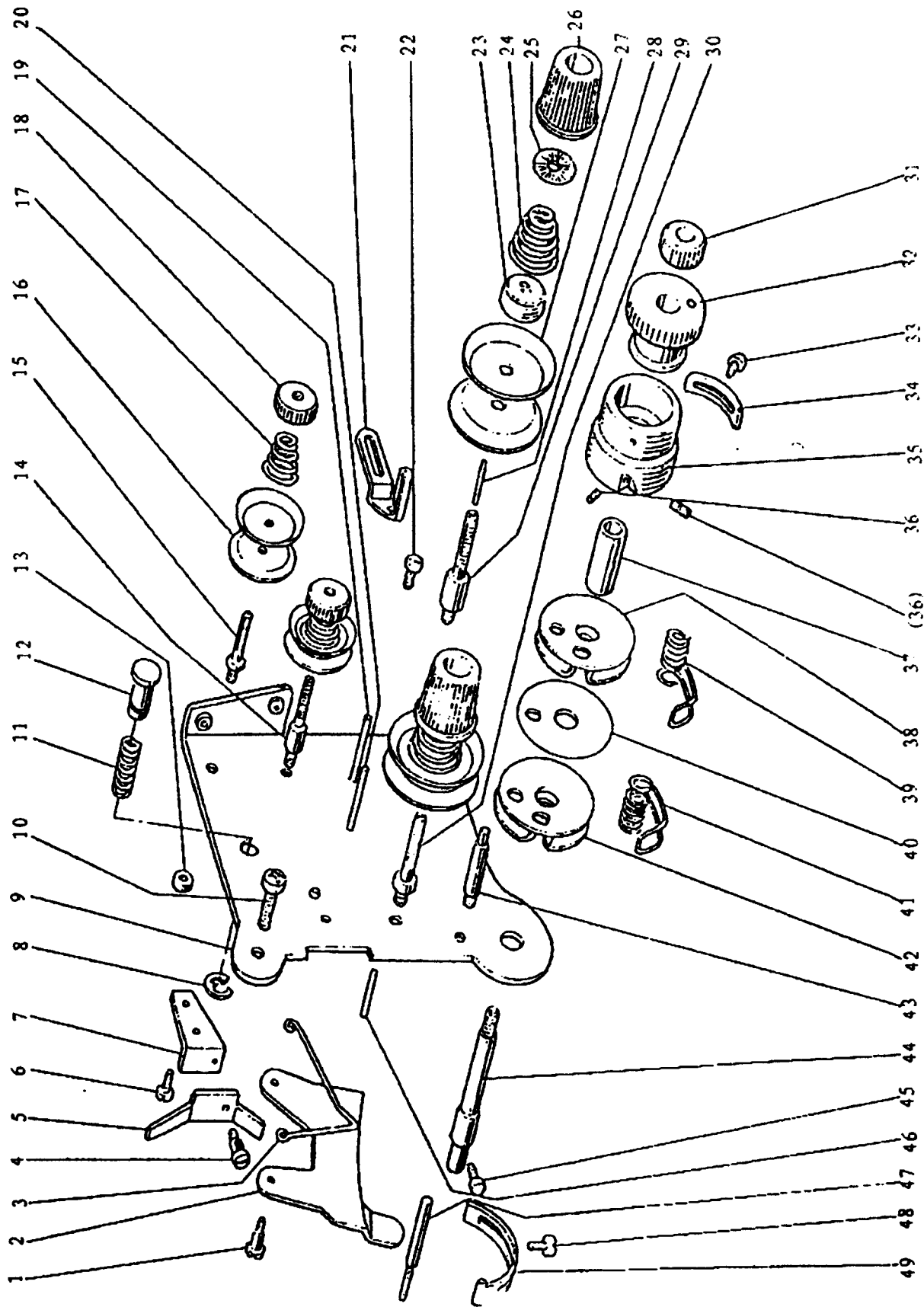
A: BODY AND IT'S ACCESSORIES



A:BODY AND IT'S ACCESSORIES

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69A001	Rubber plug	5	5
2	H69A002	Screw	2	2
3	H69A003	Spacer	1	1
4	H69A004	Oil guard plate	1	1
5	H69A005	Thread guide	1	1
6	H69A006	Screw	2	2
7	H69A007	Screw	11	11
8	H69A008	Side cover	1	1
9	H69A009	Thread take-up cover	1	1
10	H69A010	Thumb screw	1	1
11	H69A011	Special nut	1	1
12	H69A012	Rear cover	1	1
13	H69A013	Rubber plug	1	1
14	H69A014	Screw	2	2
15	H69A015	Thread guide	1	1
17	H69A016	Cap	2	2
18	H69A017	Supportor	1	1
19	H69A018	Screw	2	2
20	H69A019	Screw	1	1
21	H69A020	Slide plate	1	1
22	H69A021	Thread guide	1	1
23	H69A022	Thread guide	1	1
24	H69A023	Screw	1	1
25	H69A024	Cover	1	1
26	H69A025	Screw	4	4
27	H69A026	Cover	1	1
28	H69A027	Screw	1	1
29	H69A028	Screw	1	1
30	H69A029	Cover	1	1
31	H69A030	Screw	2	2
32	H69A031	Oil guard plate	1	1
33	H69A032	Felt	1	1
34	H69A033	Face plate	1	1

B: THREAD TENSION REGULATOR MECHANISM



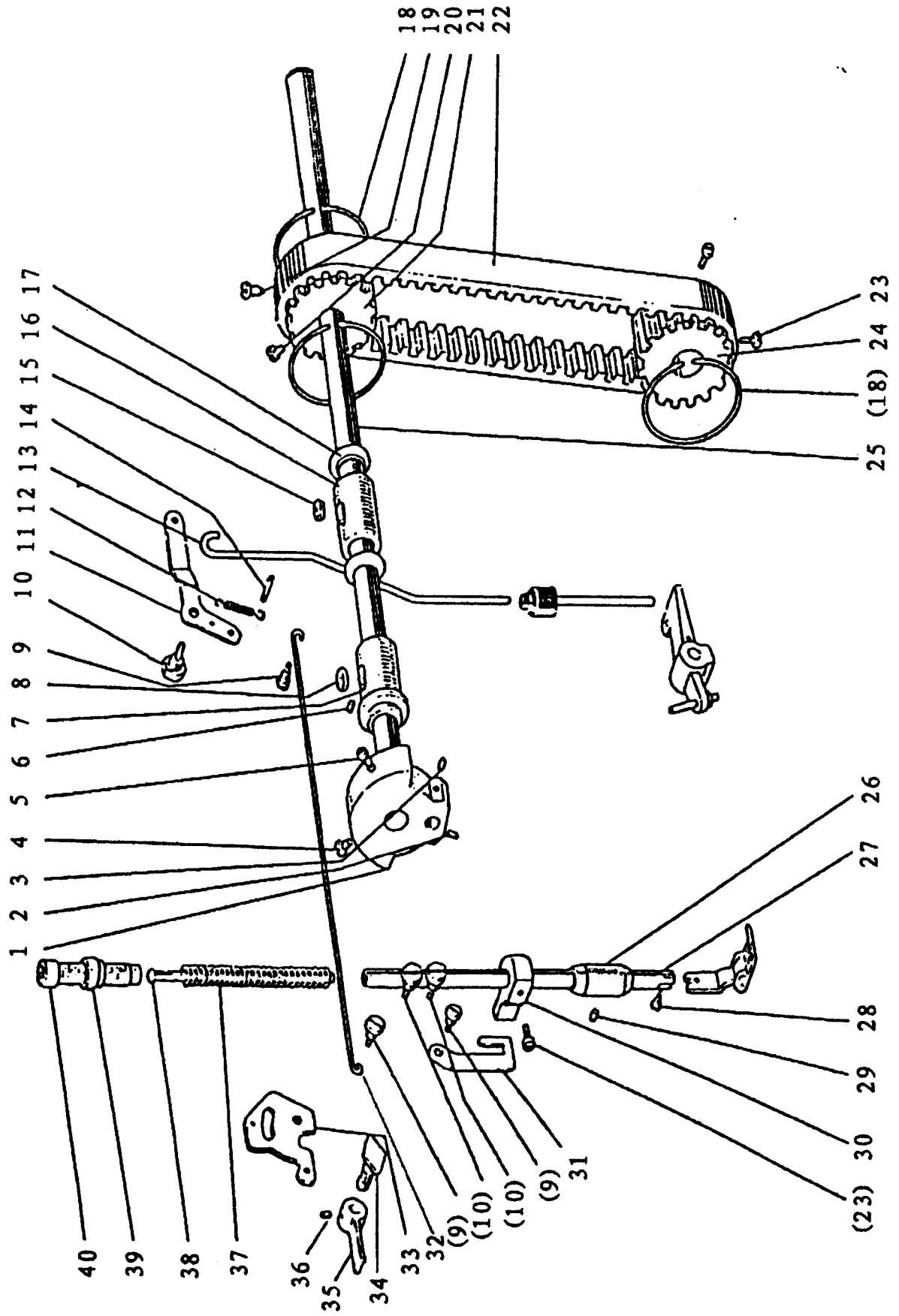
B:THREAD TENSION REGULATOR MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69B001	Screw	2	2
2	H69B002	Tension releasing plate	1	1
3	H69B003	Tension releasing spring	1	1
4	H69B004	Screw	1	1
5	H69B005	Lever	1	1
6	H69B006	Screw	1	1
7	H69B007	Mounting plate	1	1
8	H69B008	E-type stopring	1	1
9	H69B009	Mounting plate	1	1
10	H69B010	Screw	2	2
11	H69B011	Spring	1	1
12	H69B012	Push button	1	1
13	H69B013	Nut	2	2
14	H69B014	Thread tension stud	1	1
15	H69B015	Thread tension stud	1	1
16	H69B016	Thread tension disc	4	4
17	H69B017	Spring	2	2
18	H69B018	Thumb nut	2	2
19	H69B019	Pin	1	1
20	H69B020	Pin	1	1
21	H69B021	Thread guide	1	
21	H92B021	Thread guide		1
22	H69B022	Screw	1	1
23	H69B023	Thread tension releasing disc	2	2
24	H69B024	Spring	1	
24	H92B024	Spring		1
25	H69B025	Thumb nut revolution stopper	2	2
26	H69B026	Thumb nut	2	2
27	H69B027	Thread tension disc	4	4
28	H69B028	Pin	1	1
29	H69B029	Thread tension stud	1	1
30	H69B030	Thread tension stud	1	1
31	H69B031	Thumb nut	1	1
32	H69B032	Take-up spring guide	1	1
33	H69B033	Screw	1	1
34	H69B034	Stopper	1	1

B:THREAD TENSION REGULATOR MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
35	H69B035	Thread tension post	1	1
36	H69B036	Screw	2	2
37	H69B037	Bush	1	1
38	H69B038	Plate complete	1	1
39	H69B039	Thread take-up spring	1	1
40	H69B040	Plate	1	1
41	H69B041	Thread take-up spring	1	1
42	H69B042	Plate complete	1	1
43	H69B043	Screw	1	1
44	H69B044	Thread tension stud	1	1
45	H69B045	Screw	1	1
46	H69B046	Pin	1	1
47	H69B047	Tension releasing pin	1	1
48	H69B048	Screw	1	1
49	H69B049	Stopper	1	1

C: UPPER SHAFT & PRESSER FOOT MECHANISM



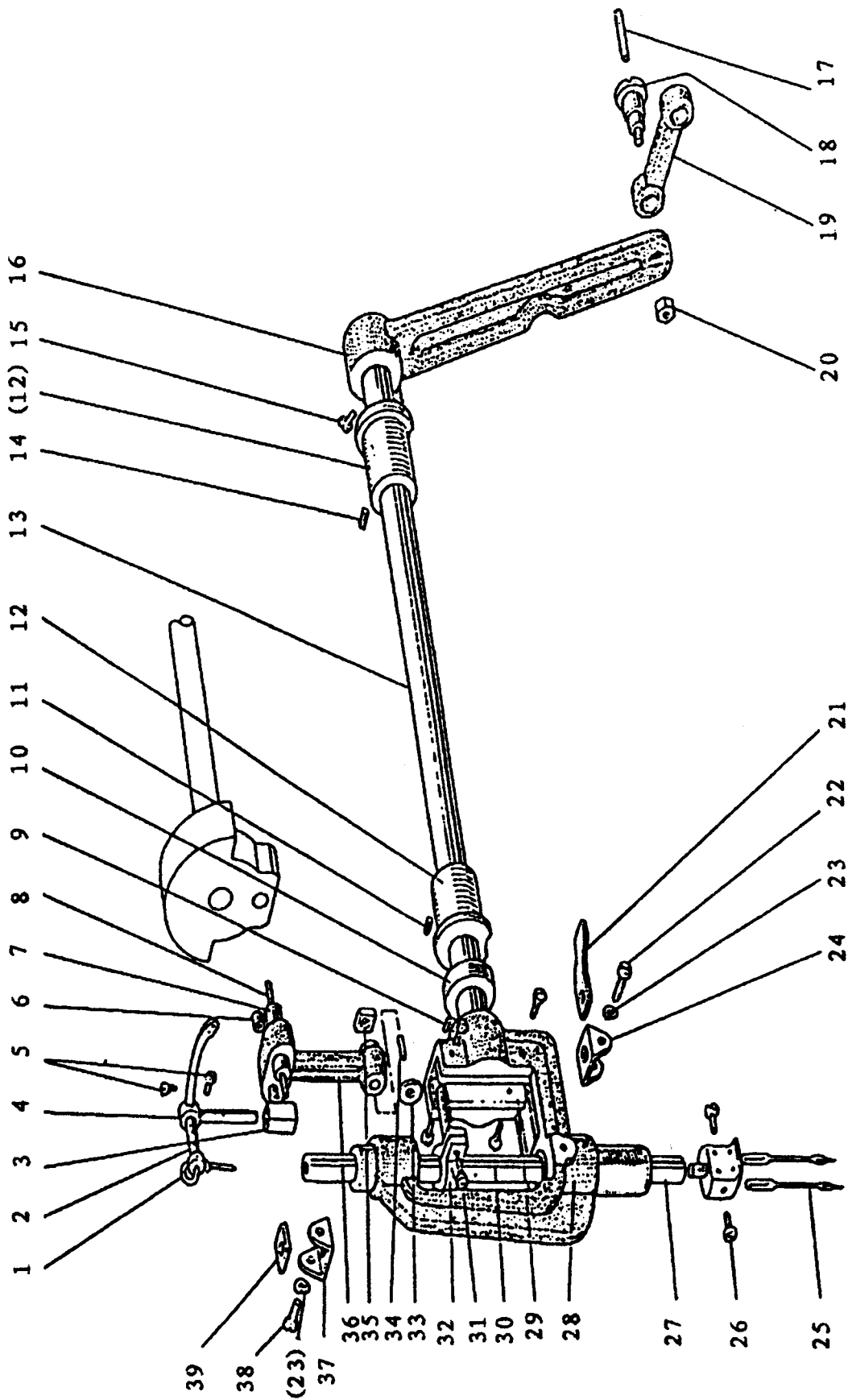
C:UPPER SHAFT & PRESSER FOOT MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69C001	Crank (complete)	1	
1	H92C001	Crank (complete)		1
2	H69C002	Screw	1	1
3	H69C003	Screw	1	1
4	H69C004	Screw	1	1
5	H69C005	Screw	1	1
6	H69C006	Screw	1	1
7	H69C007	Arm shaft bushing left (complete)	1	1
8	H69C008	Felt	1	1
9	H69C009	Screw	3	3
10	H69C010	Bolt	3	3
11	H69C011	Knee lifter lever (right)	1	1
12	H69C012	Spring	1	1
13	H69C013	Knee lifter connecting rod	1	1
14	H69C014	Pin	1	
15	H69C015	Felt	1	
16	H69C016	Arm shaft bushing (middle)	1	
17	H69C017	Oil seal	2	
18	H69C018	Spring flange	3	3
19	H69C019	Screw	1	1
20	H69C020	Screw	1	1
21	H69C021	Pulley (upper)	1	1
22	H69C022	Cog belt	1	1
23	H69C023	Screw	3	3
24	H69C024	Pulley (lower)	1	1
25	H69C025	Arm shaft	1	1
26	H69C026	Bushing	1	1
27	H69C027	Presser bar	1	1
28	H69C028	Screw	1	1
29	H69C029	Screw	1	1
30	H69C030	Presser bar guide bracket	1	1
31	H69C031	Operation plate	1	1
32	H69C032	Knee lifter rod	1	1
33	H69C033	Knee lifter lever left	1	1
34	H69C034	Presser bar lifting cam	1	1
35	H69C035	Presser bar lifter	1	1

C:UPPER SHAFT & PRESSER FOOT MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
36	H69C036	Screw	2	2
37	H69C037	Spring	1	1
38	H69C038	Presser spring guide	1	1
39	H69C039	Special nut	1	1
40	H69C040	Thumb nut	1	1

D: THREAD TAKE-UP LEVER & NEED BAR ROCK MOTION MECHANISM



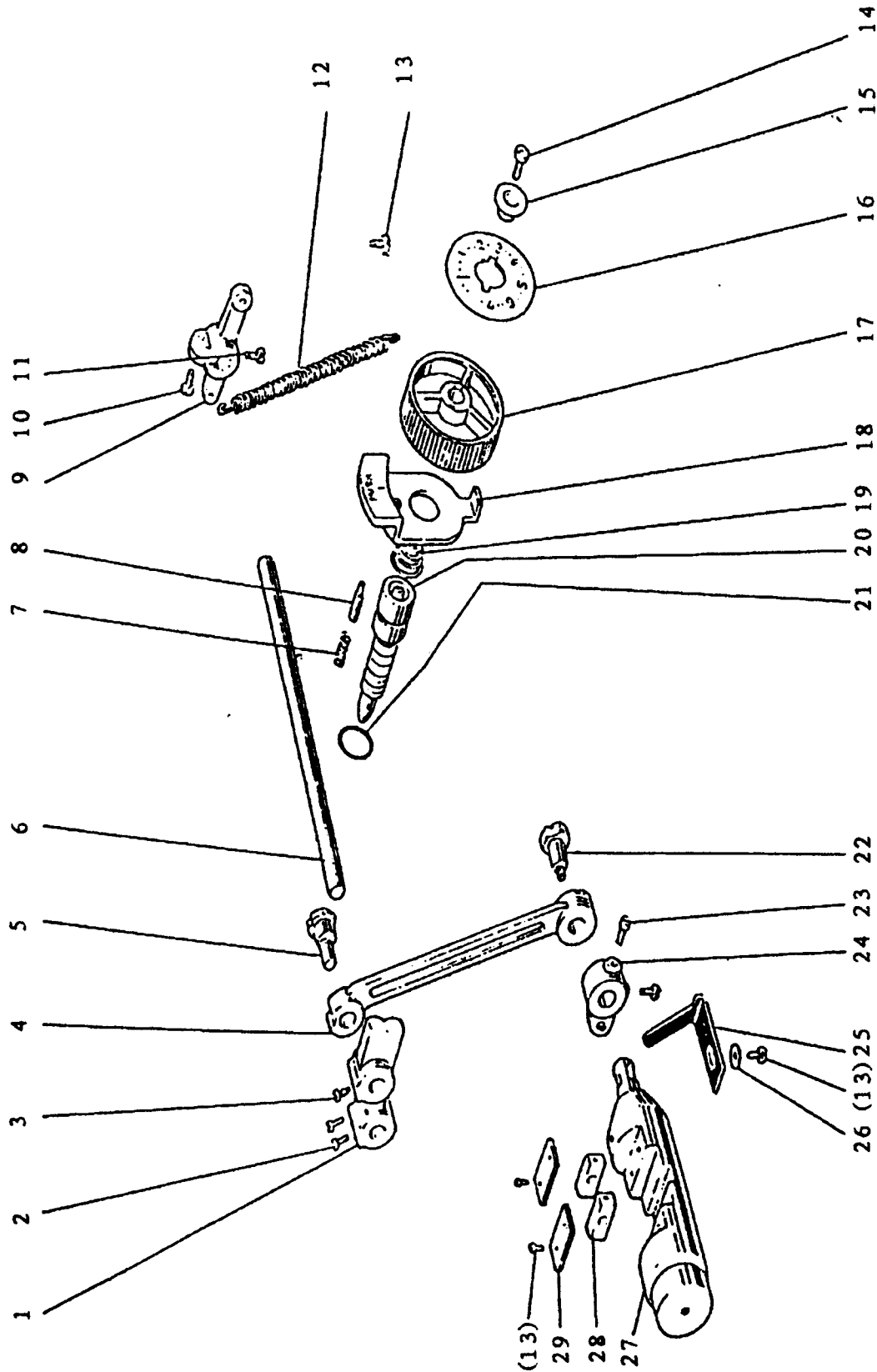
D:NEEDLE BAR ROCK MOTION MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69D001	Oil wick	1	1
2	H69D002	Thread take-up guide bracket pin	1	1
3	H69D003	Thread take-up link	1	
3	H92D003	Thread take-up link		1
4	H69D004	Thread take-up lever	1	
4	H92D004	Thread take-up lever		1
5	H69D005	Screw	3	3
6	H69D006	Plug	1	1
7	H69D007	Needle bar crank pin	1	1
8	H69D008	Oil wick	1	1
9	H69D009	Screw	1	1
10	H69D010	Collar	1	1
11	H69D011	Screw	1	1
12	H69D012	Needle bar rock shaft bushing	2	2
13	H69D013	Needle bar rock shaft	1	1
14	H69D014	Screw	1	1
15	H69D015	Screw	1	1
16	H69D016	Needle bar rock shaft crank	1	1
17	H69D017	Oil wick	1	1
18	H69D018	Screw	1	1
19	H69D019	Link	1	1
20	H69D020	Nut	1	1
21	H69D021	Felt	1	1
22	H69D022	Screw	2	2
23	H69D023	Spring washer	4	4
24	H69D024	Holder	1	1
25	H69D025	Needle DP×#14	2	
25	H92D025	Needle DP×#14		2
26	H69D026	Screw	2	2
27	H69D027	Needle bar	1	1
28	H69D028	Needle bar rock frame	1	1
29	H69D029	Spacer	2	2
30	H69D030	Screw	4	4
31	H69D031	Screw	1	1
32	H69D032	Needle bar connecting stud	1	1
33	H69D033	Washer	1	1

D:NEEDLE BAR ROCK MOTION MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
34	H69D034	Felt	1	1
35	H69D035	Square block	1	1
36	H69D036	Needle bar connecting link	1	1
37	H69D037	Holder	1	1
38	H69D038	Screw	2	2
39	H69D039	Felt	1	1

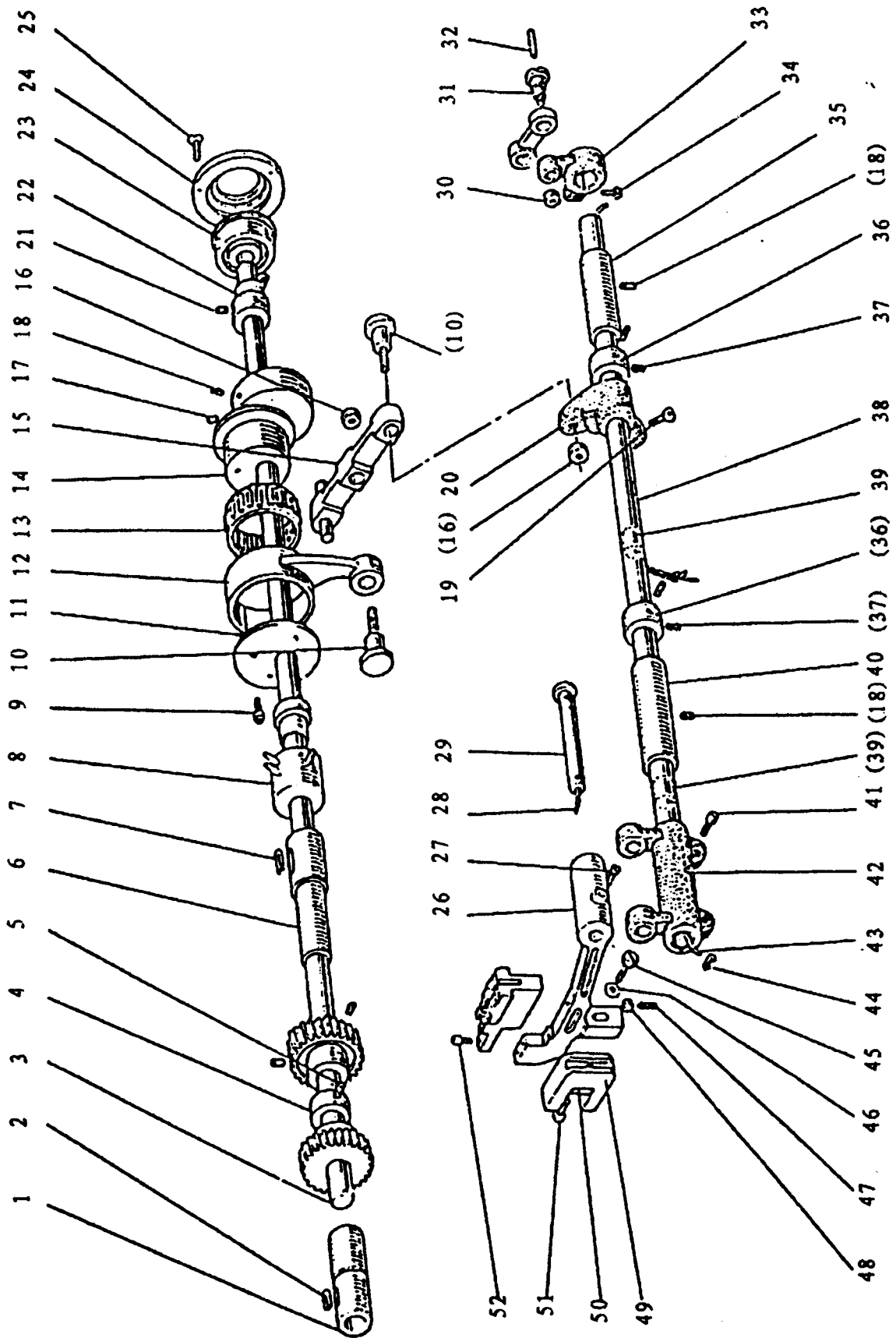
E: STITCH REGULATOR MECHANISM



E:STITCH REGULATOR MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69E001	Feed regulator	1	1
2	H69E002	Screw	2	2
3	H69E003	Screw	1	1
4	H69E004	Connecting link	1	1
5	H69E005	Eccentric shaft	1	1
6	H69E006	Reverse stitch shaft	1	1
7	H69E007	Spring	1	1
8	H69E008	Pin	1	1
9	H69E009	Arm	1	1
10	H69E010	Screw	1	1
11	H69E011	Screw	1	1
12	H69E012	Spring	1	1
13	H69E013	Screw	5	5
14	H69E014	Screw	1	1
15	H69E015	Bushing	1	1
16	H69E016	Stitch length indicating plate	1	
16	H92E016	Stitch length indicating plate		1
17	H69E017	Dial	1	1
18	H69E018	Stopper pin releasing lever	1	1
19	H69E019	Coil spring	1	1
20	H69E020	Screw bar	1	1
21	H69E021	O-ring	1	1
22	H69E022	Bolt	1	1
23	H69E023	Screw	2	2
24	H69E024	Stitch length indicating plate	1	1
25	H69E025	Holding plate of reverse bar	1	1
26	H69E026	Washer	1	1
27	H69E027	Reverse bar	1	1
28	H69E028	Square block	2	2
29	H69E029	Guide plate	2	2

F: LOWER SHAFT & FEED ROCK SHAFT MECHANISM



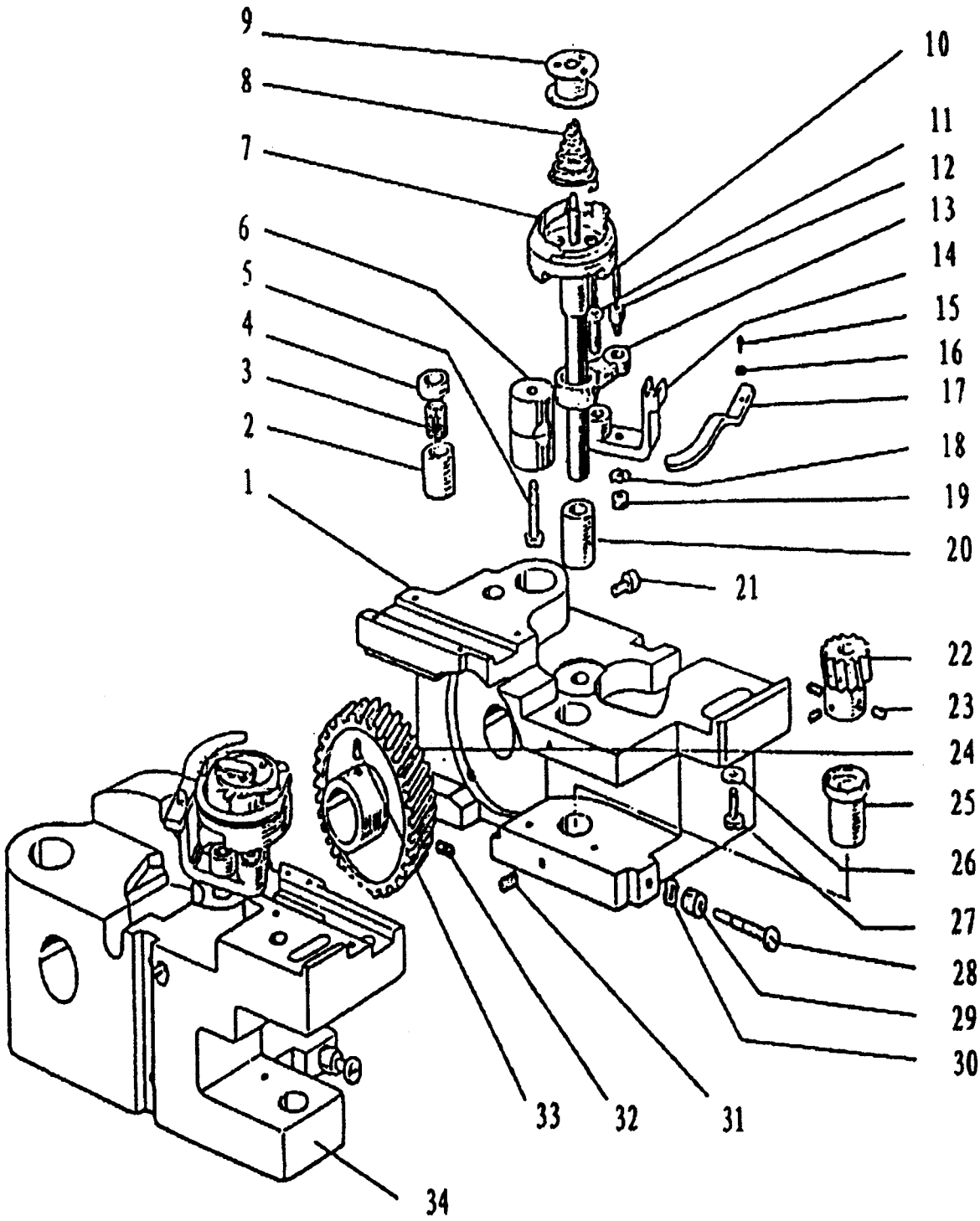
F:LOWER SHAFT & FEED ROCK SHAFT MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69F001	Lower shaft bushing left	1	1
2	H69F002	Oil wick	1	1
3	H69F003	Lower shaft	1	1
4	H69F004	Feed lifting cam	1	1
5	H69F005	Screw	1	1
6	H69F006	Lower shaft bushing right	1	1
7	H69F007	Oil wick	1	1
8	H69F008	Lower shaft bushing middle	1	1
9	H69F009	Screw	3	3
10	H69F010	Screw	2	2
11	H69F011	Washer	1	1
12	H69F012	Feed connecting rod	1	1
13	H69F013	Needle bearing	1	1
14	H69F014	Lever feed connecting cam	1	
14	H92F014	Lever feed connecting cam		1
15	H69F015	Link	1	1
16	H69F016	Nut	2	2
17	H69F017	Screw	1	1
18	H69F018	Screw	3	3
19	H69F019	Screw	1	1
20	H69F020	Connecting rod crank	1	1
21	H69F021	Screw	2	2
22	H69F022	Bushing	1	1
23	H69F023	Ball bearing	1	1
24	H69F024	Bearing holder	1	1
25	H69F025	Screw	3	3
26	H69F026	Feed bar	1	1
27	H69F027	Screw	1	1
28	H69F028	Oil wick	1	1
29	H69F029	Feed bar shaft	1	1
30	H69F030	Nut	1	1
31	H69F031	Screw	1	1
32	H69F032	Oil wick	1	1
33	H69F033	Feed rock shaft crank (right)	1	1
34	H69F034	Screw	1	1
35	H69F035	Feed rock shaft bushing (right)	1	1

F: LOWER SHAFT & FEED ROCK SHAFT MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LI
36	H69F036	Collar	2	2
37	H69F037	Screw	4	4
38	H69F038	Feed rock shaft	1	1
39	H69F039	Felt	2	2
40	H69F040	Feed rock shaft bushing (left)	1	1
41	H69F041	Screw	2	2
42	H69F042	Feed rock shaft Crank (left)	1	1
43	H69F043	Oil wick	1	1
44	H69F044	Holder	1	1
45	H69F045	Bolt	1	1
46	H69F046	Washer	1	1
47	H69F047	Screw	1	1
48	H69F048	Nut	1	1
49	H69F049	Feed bar connecting fork	1	1
50	H69F050	Felt	1	1
51	H69F051	Screw	1	1
52	H69F052	Bolt	2	2

G: HOOK SADDLE MECHANISM



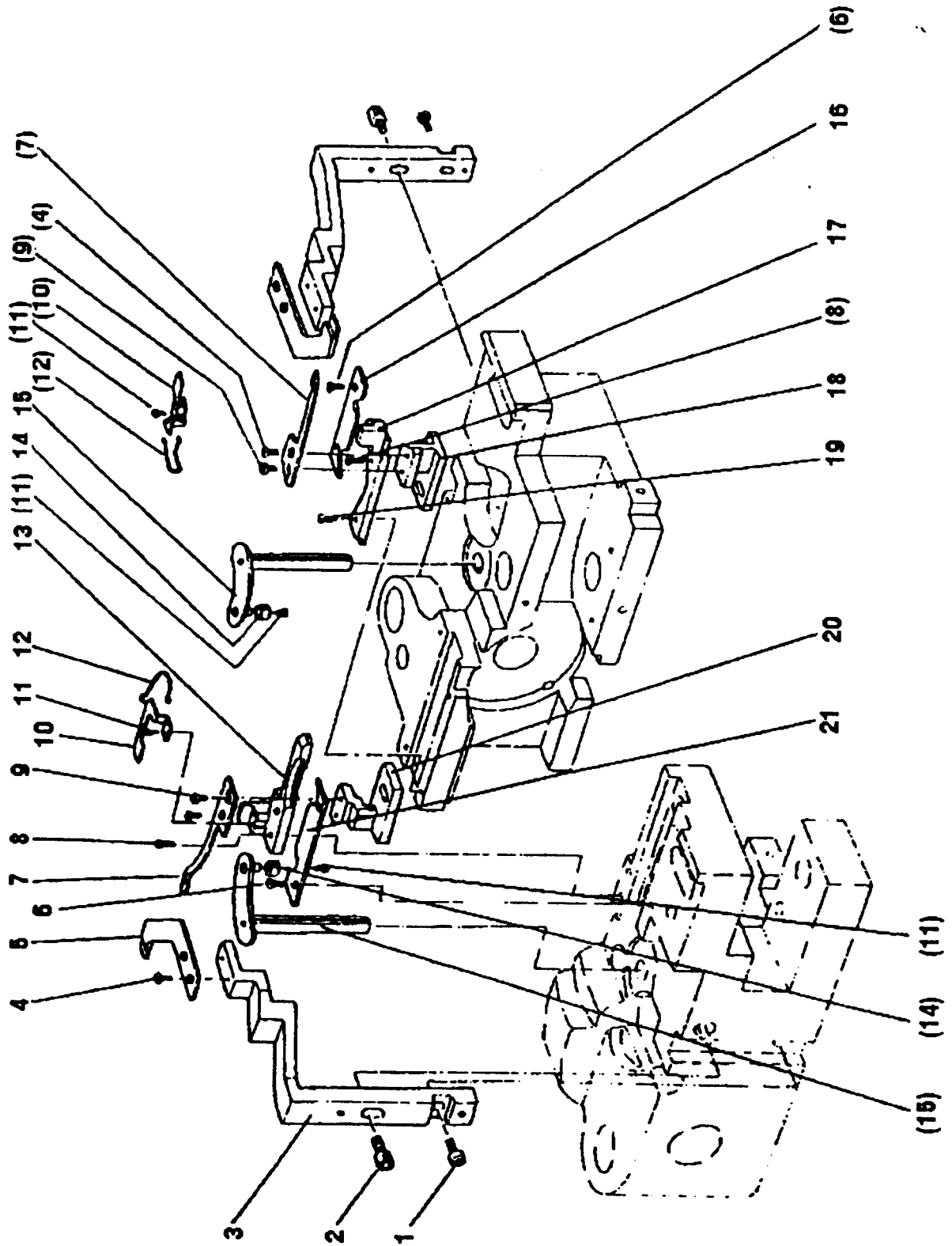
G:HOOK SADDLE MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69G001	Hook saddle (right)	1	
1	H92G001	Hook saddle (right)		1
2	H69G002	Hook shaft bushing (upper)	2	
2	H92G002	Hook shaft bushing (upper)		2
3	H69G003	Needle bearing	2	
4	H69G004	Spacer	2	
4	H92G004	Spacer		2
5	H69G005	Screw	2	2
6	H69G006	Bushing	2	2
7	H69G007	Hook complete	2	
7	H92G007	Hook complete		2
8	H69G008	Spring	2	
8	H92G008	Spring		2
9	H69G009	Bobbin	2	
9	H92G009	Bobbin		2
10	H69G010	Oil wick	2	2
11	H69G011	Bobbin case opener holder pin	2	2
12	H69G012	Screw	2	2
13	H69G013	Ling	2	
13	H92G013	Ling		2
14	H69G014	Bobbin case opener holder	2	2
15	H69G015	Screw	2	2
16	H69G016	Washer	2	2
17	H69G017	Opener	2	
17	H92G017	Opener		2
18	H69G018	Spring washer	2	2
19	H69G019	Nut	2	2
20	H69G020	Hook shaft bushing (upper)	2	
20	H92G020	Hook shaft bushing (upper)		2
21	H69G021	Screw	2	2
22	H69G022	Gear (small)	2	2
23	H69G023	Screw	6	6
24	H69G024	Gear (large)	2	2
25	H69G025	Hook shaft bushing (lower)	2	2
26	H69G026	Washer	2	2
27	H69G027	Screw	2	2

G:HOOK SADDLE MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
28	H69G028	Screw	2	2
29	H69G029	Nut	2	2
30	H69G030	Spring washer	1	1
31	H69G031	Screw	4	4
32	H69G032	Screw	2	2
33	H69G033	Screw	2	2
34	H69G034	Hook saddle (left)	1	
34	H92G034	Hook saddle (left)		1

H: KNIFE MECHANISM (I)



H:KNIFE MECANISM(1)

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69H001	Screw	2	2
2	H69H002	Bolt	2	2
3	H69H003	Trimming knife holder	2	2
4	H69H004	Screw	6	6
5	H69H005	Fixed blade	2	2
6	H69H006	Screw	4	4
7	H69H007	Move knife	2	2
8	H69H008	Screw	2	2
9	H69H009	Screw	2	2
10	H69H010	Spring plate	2	2
11	H69H011	Screw	6	6
12	H69H012	Reversing spring	2	2
13	H69H013	Guide (left)	1	
13	H92H013	Guide (left)		1
14	H69H014	Roller	2	2
15	H69H015	Lever	2	2
16	H69H016	Cover (right)	1	1
17	H69H017	Guide (right)	1	
17	H92H017	Guide (right)		1
18	H69H018	Knife pad (right)	1	1
19	H69H019	Screw	1	1
20	H69H020	Knife pad (left)	1	1
21	H69H021	Cover (left)	1	1

KNIFE MECANISM(2)

Q.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69I001	Screw	2	2
2	H69I002	Thread releading bracket	1	1
3	H69I003	Spring	1	1
4	H69I004	Thread releading plate	1	1
5	H69I005	Screw	1	1
6	H69I006	Screw	4	4
7	H69I007	Flexible wire complete	1	1
8	H69I008	Arm	1	
8	H92I008	Arm		1
9	H69I009	Bolt	1	1
0	H69I010	Spring	1	1
1	H69I011	Screw	1	1
2	H69I012	Roller	1	1
3	H69I013	Screw	1	1
4	H69I014	Mounting plate	1	1
5	H69I015	Nylon clip	1	1
6	H69I016	Mounting plate	1	1
7	H69I017	Nut	2	2
8	H69I018	Screw	1	1
9	H69I019	Arm	1	1
0	H69I020	Bolt	1	1
1	H69I021	Link	1	1
2	H69I022	Screw	2	2
3	H69I023	Pin type	1	1
4	H69I024	Thread releasing lever	1	1
5	H69I025	Spring	1	1
6	H69I026	Nut	1	1
7	H69I027	Nut	1	1
8	H69I028	Screw	2	2
9	H69I029	Bushing	1	1
0	H69I030	Vibrating crank	1	1
1	H69I031	Screw	1	1
2	H69I032	Screw	2	2
3	H69I033	Nylon clip	1	1
4	H69I034	Screw	2	2
5	H69I035	Bushing	1	1

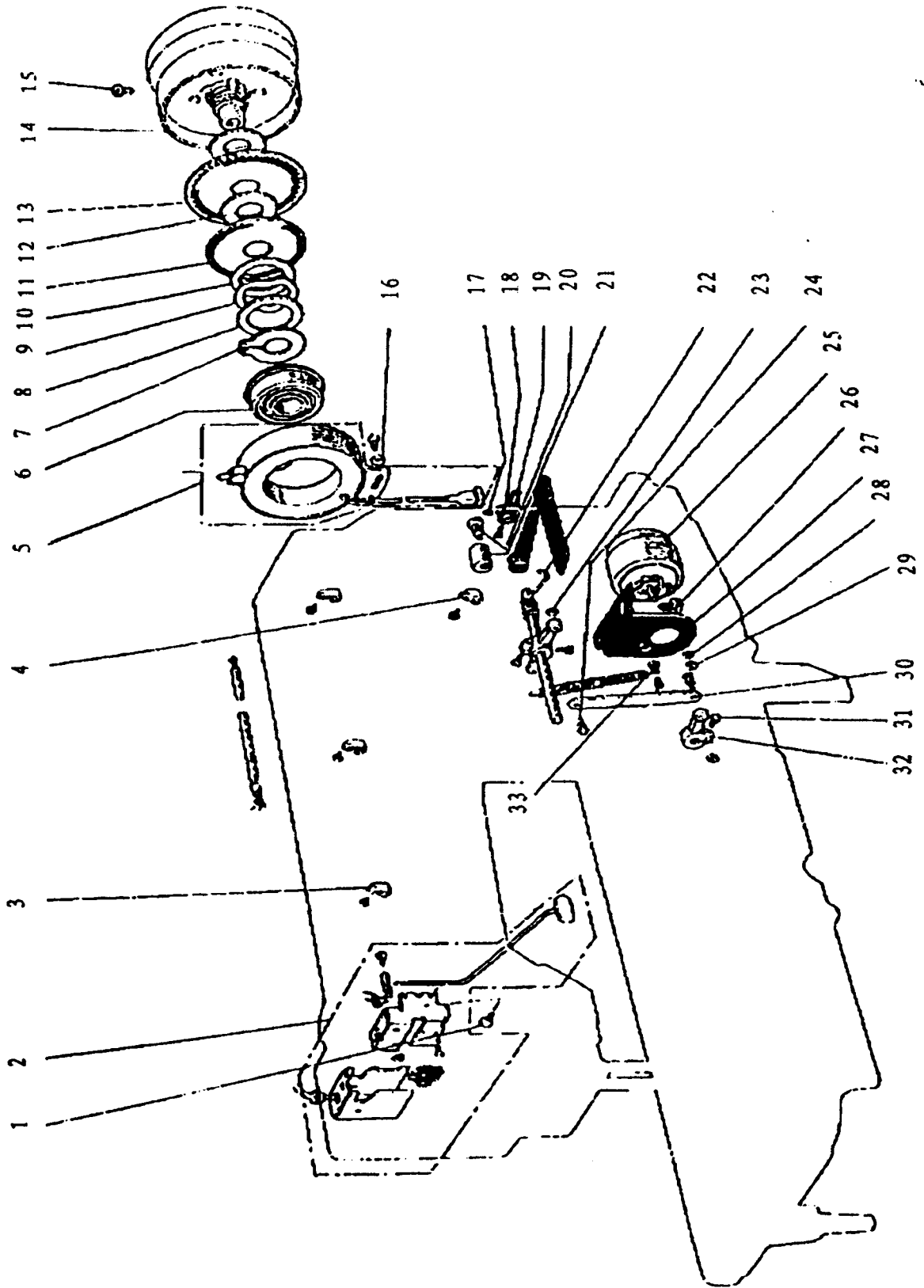
I:KNIFE MECANISM(2)

No.	Ref.No.	Description	DN-2242	DN-2242-LH
36	H69I036	Link	1	1
37	H69I037	Washer	1	1
38	H69I038	Bolt	2	2
39	H69I039	Screw	2	2
40	H69I040	Ball joint (left)	1	1
41	H69I041	Nut (left)	1	1
42	H69I042	Bolt	1	1
43	H69I043	Nut (right)	1	1
44	H69I044	Shaft	1	1
45	H69I045	Shaft	1	1
46	H69I046	Screw	1	1
47	H69I047	Ball joint (right)	1	1
48	H69I048	Screw	2	2
49	H69I049	Cam	1	1
50	H69I050	Screw	2	2
51	H69I051	Cam	1	1
52	H69I052	Spring	1	1
53	H69I053	Screw	2	2
54	H69I054	Screw	1	1
55	H69I055	Screw	1	1
56	H69I056	Screw	3	3
57	H69I057	Stopper	1	1
58	H69I058	Holder	1	1
59	H69I059	Nut	2	2
60	H69I060	Mounting plate	1	1
61	H69I061	Holder	2	2
62	H69I062	Set plate	1	1
63	H69I063	Pin type	1	1
64	H69I064	Screw	1	1
65	H69I065	Screw	1	1
66	H69I066	Lever	1	1
67	H69I067	Screw	1	1
68	H69I068	Pin	1	1
69	H69I069	Arm	1	1
70	H69I070	Screw	1	1
71	H69I071	Nut	1	1

I:KNIFE MECANISM(2)

No.	Ref.No.	Description	DN-2242	DN-2242-LH
72	H69I072	Solenoid complete	1	1

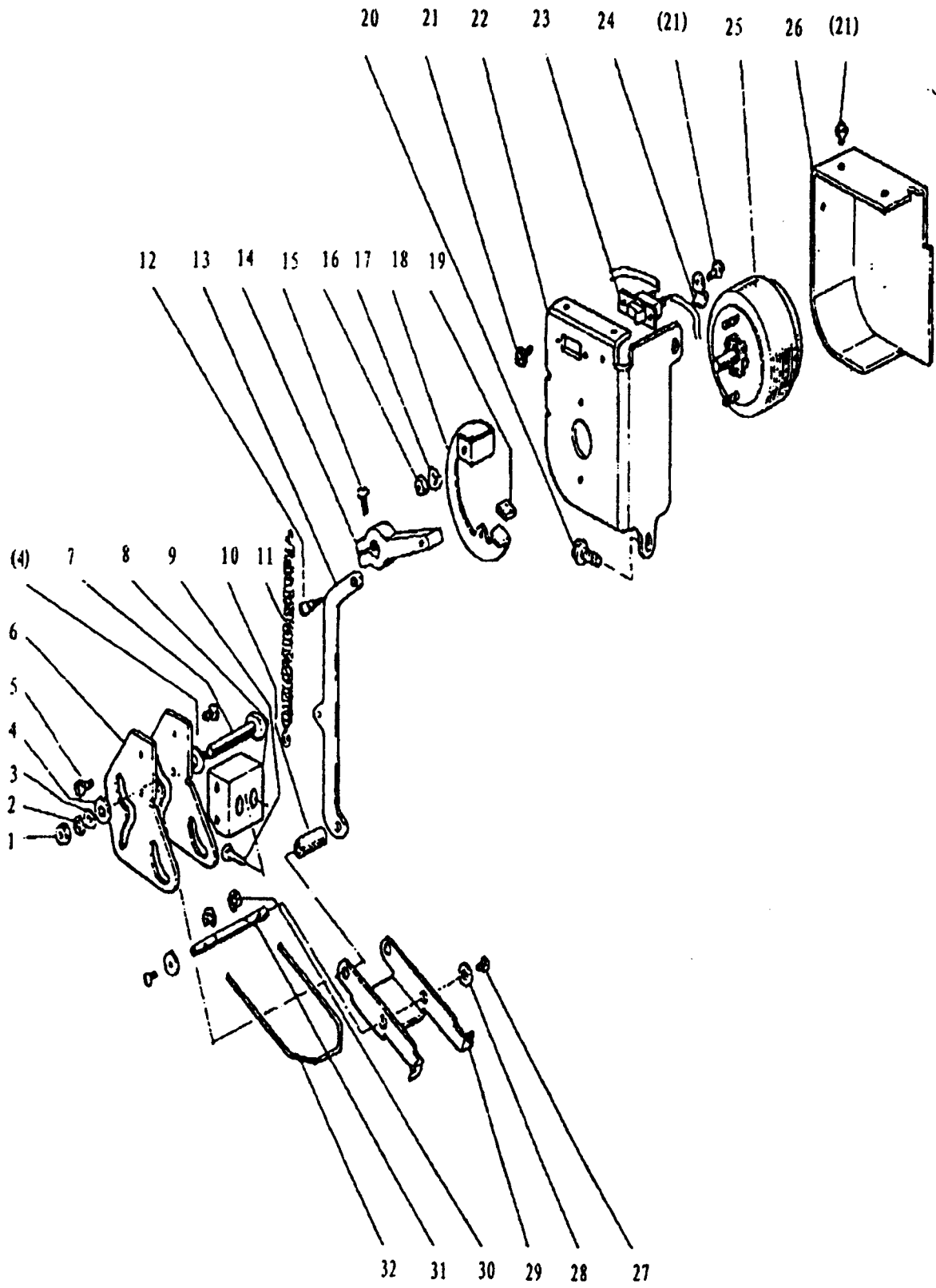
J: TOUCH BACK, COMPENSATION STITCHING & DETECTOR MECHANISM



J:TOUCH BACK AND DETECTOR MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69J001	Screw	2	2
2	H69J002	Touch switch (complete)	1	1
3	H69J003	Cord holder	3	3
4	H69J004	Cord holder	1	1
5	H69J005	Detector bracket (complete)	1	1
6	H69J006	Ball bearing	1	1
7	H69J007	Retaining ring C-type	1	1
8	H69J008	Washer	1	1
9	H69J009	Support spring	1	1
10	H69J010	Spacer B	1	1
11	H69J011	Speed command disk F20 (up)	1	1
12	H69J012	Spacer A	2	2
13	H69J013	Speed command disk F11 (down)	1	1
14	H69J014	Pulley (complete)	1	1
15	H69J015	Screw	1	1
16	H69J016	Washer	1	1
17	H69J017	Screw	1	1
18	H69J018	Lever (complete)	1	1
19	H69J019	Screw	1	1
20	H69J020	Screw	1	1
21	H69J021	Rubber ring	1	1
22	H69J022	Spring	1	1
23	H69J023	Nut	2	2
24	H69J024	Screw	2	2
25	H69J025	Solenoid (complete)	1	1
26	H69J026	Blot	2	2
27	H69J027	Set plate	1	1
28	H69J028	Spring washer	2	2
29	H69J029	Nut	2	2
30	H69J030	Link	1	1
31	H69J031	Blot	1	1
32	H69J032	Arm	1	1

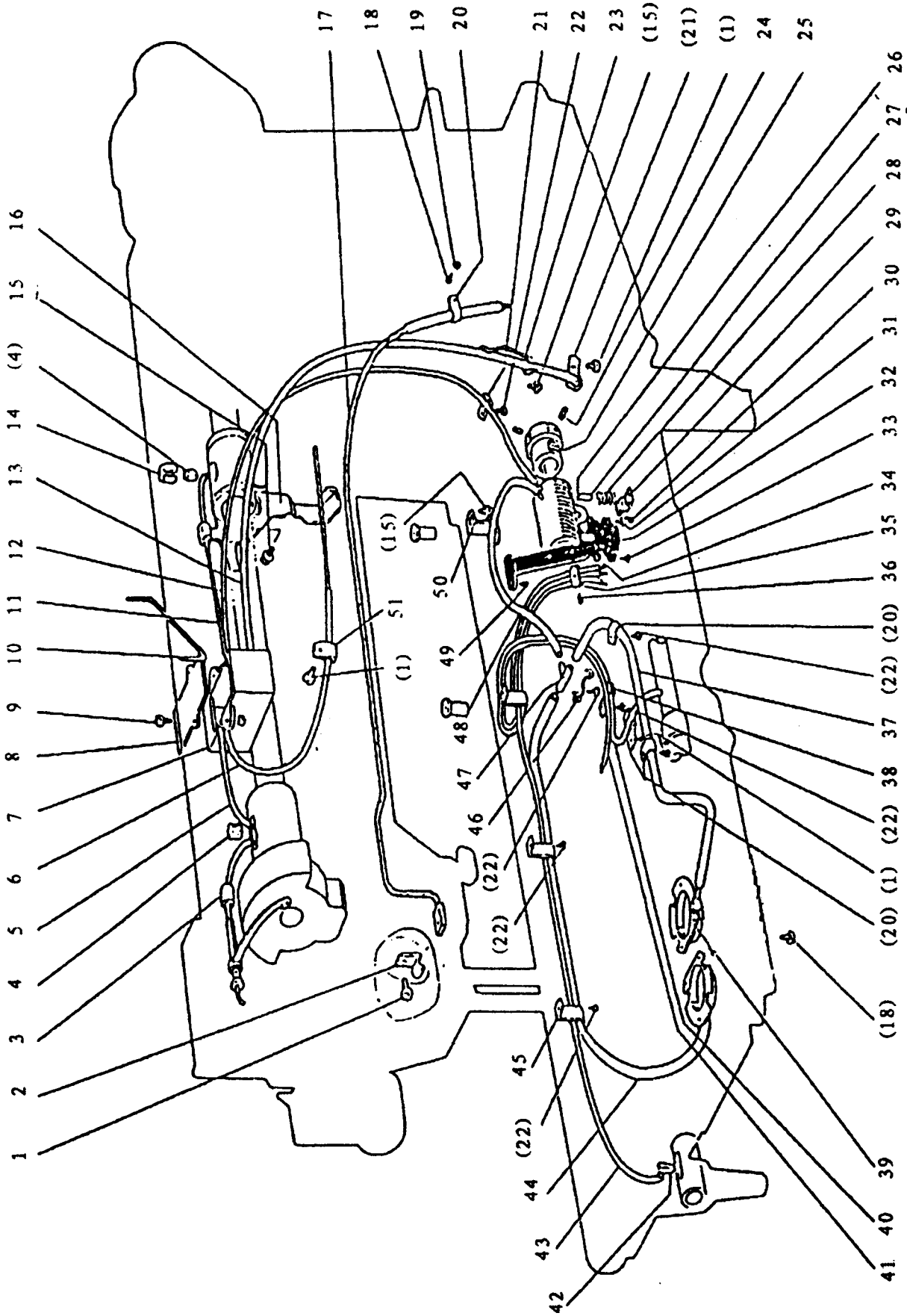
K: WIPER MECHANISM



K:WIPER MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69K001	Nut	1	
2	H69K002	Spring washer	1	
3	H69K003	Washer	1	
4	H69K004	Washer	2	
5	H69K005	Screw	4	
6	H69K006	Cam plate (complete)	2	
7	H69K007	Shaft	1	
8	H69K008	Wiper stand	1	
9	H69K009	Screw	2	
10	H69K010	Collar	1	
11	H69K011	Spring	1	
12	H69K012	Screw	1	
13	H69K013	Link	1	
14	H69K014	Wiper crank	1	
15	H69K015	Screw	1	←
16	H69K016	Nut	2	
17	H69K017	Spring washer	2	
18	H69K018	Stopper plate	1	
19	H69K019	Cushion	1	
20	H69K020	Screw	2	
21	H69K021	Screw	6	
22	H69K022	Solenoid plate	1	
23	H69K023	Switch	1	
24	H69K024	Cord holder	1	
25	H69K025	Rotary solenoid	1	
26	H69K026	Cover	1	
27	H69K027	Screw	2	
28	H69K028	Washer	2	
29	H69K029	Wiper slide plate	1	
30	H69K030	E-type stop ring	2	
31	H69K031	Wiper shaft	1	
32	H69K032	Wiper	1	

L: OIL LUBRICATION MECHANISM



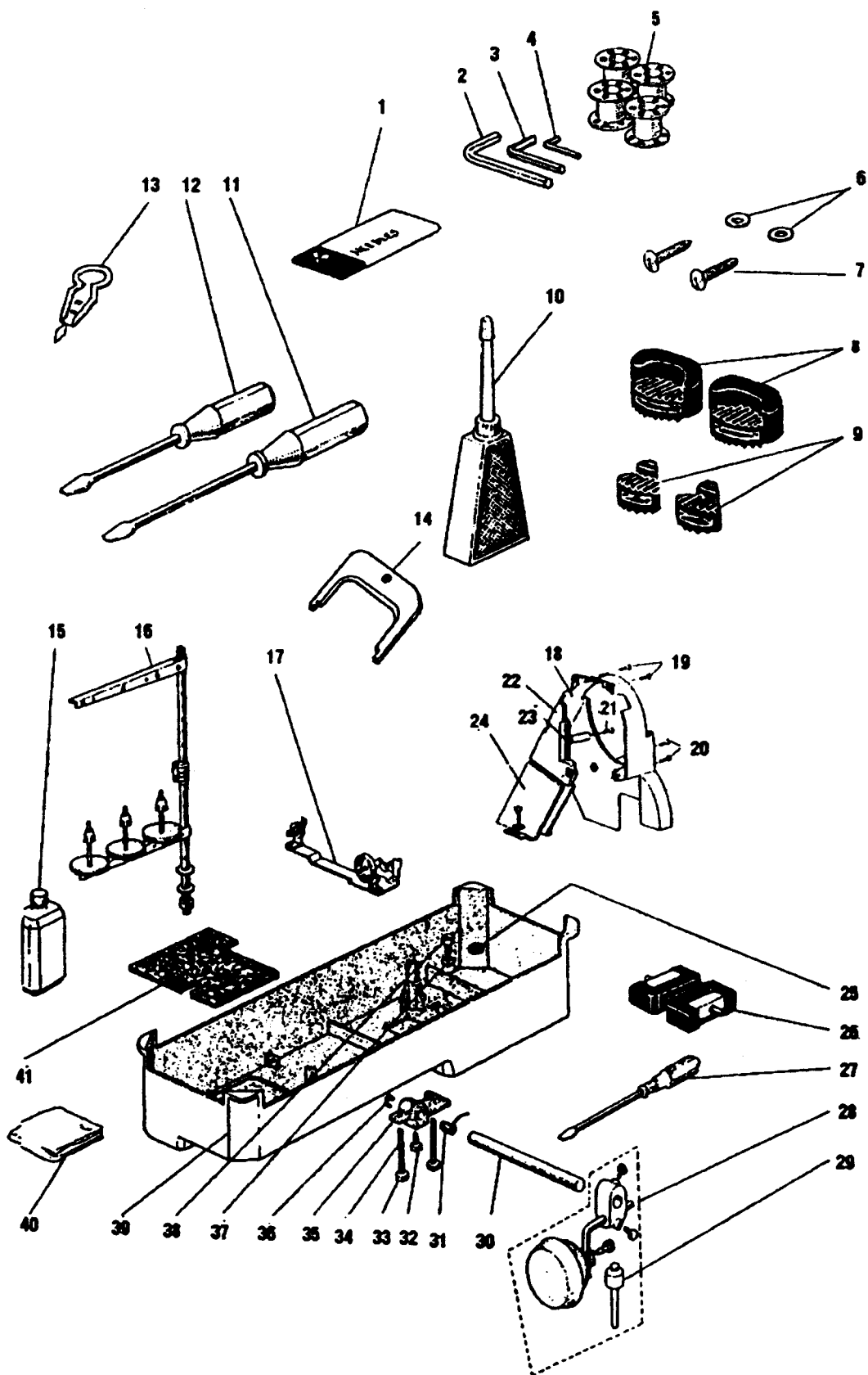
L:OIL LUBRICATION MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69L001	Screw	3	3
2	H69L002	Holder	1	1
3	H69L003	Pipe	1	1
4	H69L004	Felt	2	2
5	H69L005	Oil pipe & wick complete	1	1
6	H69L006	Oil pipe & wick complete	1	1
7	H69L007	Oil tank complete	1	1
8	H69L008	Gasket	1	1
9	H69L009	Screw	2	2
10	H69L010	Holder	1	1
11	H69L011	Oil pipe & wick complete	1	1
12	H69L012	Pipe	1	1
13	H69L013	Pipe	1	1
14	H69L014	Pipe	1	
15	H69L015	Screw	3	3
16	H69L016	Holder	1	1
17	H69L017	Pipe & felt complete	1	1
18	H69L018	Screw	6	6
19	H69L019	Spring washer	1	1
20	H69L020	Holder	3	3
21	H69L021	Holder	2	2
22	H69L022	Screw	7	7
23	H69L023	Holder	1	1
24	H69L024	Screw	2	2
25	H69L025	Bushing	1	1
26	H69L026	Pipe	1	1
27	H69L027	Pin	1	1
28	H69L028	Spring	1	1
29	H69L029	Spring holder	1	1
30	H69L030	Screw	1	1
31	H69L031	Screw	1	1
32	H69L032	Filter	1	1
33	H69L033	Screw	1	1
34	H69L034	Base plate complete	1	1
35	H69L035	Holder	1	1
36	H69L036	Screw	1	1

L:OIL LUBRICATION MECHANISM

No.	Ref.No.	Description	DN-2242	DN-2242-LH
37	H69L037	Pipe	1	1
38	H69L038	Holder	1	1
39	H69L039	Cover complete	2	2
40	H69L040	Oil pipe & wick complete	1	1
41	H69L041	Oil pipe & wick complete	1	1
42	H69L042	Oil wick	3	3
43	H69L043	Oil pipe & wick complete	1	1
44	H69L044	Pipe	1	1
45	H69L045	Holder	2	2
46	H69L046	Holder	1	1
47	H69L047	Oil pipe connector	1	1
48	H69L048	Pipe	1	1
49	H69L049	Screw	2	2
50	H69L050	Holding plate	1	1
51	H69L051	Holder	1	1

M: ACCESSORIES



M:ACCESSORIES

No.	Ref.No.	Description	DN-2242	DN-2242-LH
1	H69M001	Needle DP×#14	6	
1	H92M001	Needle DP×#14		6
2	H69M002	Socket wrench 2.5	1	1
3	H69M003	Socket wrench 3	1	1
4	H69M004	Socket wrench 2	1	1
5	H69M005	Bobbin	4	
5	H69M005	Bobbin		4
6	H69M006	Washer	4	4
7	H69M007	Screw	4	4
8	H69M008	Vibration preventing rubber	2	2
9	H69M009	Vibration preventing rubber	2	2
10	H69M010	Oiler	1	1
11	H69M011	Screw driver (middle)	1	1
12	H69M012	Screw driver (small)	1	1
13	H69M013	Thread a needle kit	1	1
14	H69M014	Adjusting plate for speed command d	1	1
15	H69M015	Oil can	1	1
16	H69M016	Cotton Stand	1	1
17	H69M017	Bobbin winder	1	1
18	H69M018	Belt cover 1	1	1
19	H69M019	Screw	2	2
20	H69M020	Screw	2	2
21	H69M021	Screw	1	1
22	H69M022	Belt cover 2	1	1
23	H69M023	Nut	1	1
24	H69M024	Belt cover 3	1	1
25	H69M025	Magnet block for reservoir	1	1
26	H69M026	Hinge complete	2	2
27	H69M027	Screw driver (large)	1	1
28	H69M028	Small parts	1	1
29	H69M029	Knee lifter pin	1	1
30	H69M030	Knee lifter shaft	1	1
31	H69M031	Spring	1	1
32	H69M032	Bolt	1	1
33	H69M033	Nut	2	2
34	H69M034	Screw	2	2

M:ACCESSORIES

No.	Ref.No.	Description	DN-2242	DN-2242-LH
35	H69M035	Knee lifter crank	1	1
36	H69M036	E-type stop ring	1	1
37	H69M037	Washer	1	1
38	H69M038	Screw	1	1
39	H69M039	Oil reservoir	1	1
40	H69M040	Vinyl cover	1	1
41	H69M041	Felt	1	1