HIGHLEAD

GC0318-1CE

HEAVY DUTY TOP AND BOTTOM FEED LOCKSTITCH SEWING MACHINE WITH EDGE CUTTER AND EDGE BINDER

Instruction Manual

Parts Catalog

SHANGHAI BIAOZHUN HAILING SEWING MACHINERY CO., LTD.

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

1. MAIN SPECIFICATIONS

1) Sewing material: Light-Medium material
2) Max. sewing speed: 2000 spm.
3) Stitch length: 0-8mm.
4) Needle bar stroke: 35mm.
5) Presser fool lift: 6mm (by hand) 13mm (by knee).
6) Needle: DP×17 No.18-No.22
7) Lubrication: Automatic
8) Width to be cut: Standard8.0mm. Special6,10,12mm
9) Reverse feeding mechanism: Have

2.INSTALL THE MOTOR (Fig.1)

Align Motor Pulley Groove (B) and Balance Wheel Groove (A) by moving the motor leftward or rightward.

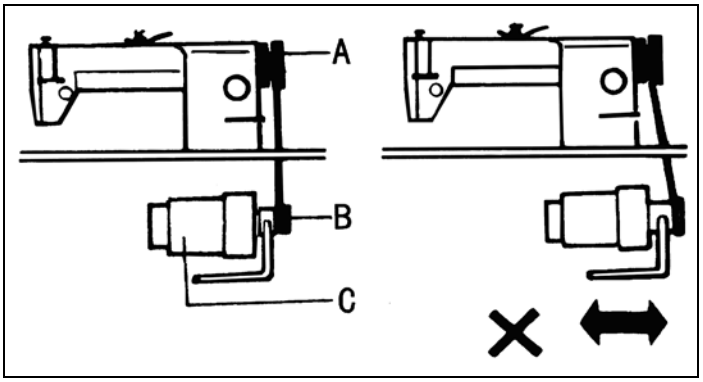


Fig. 1

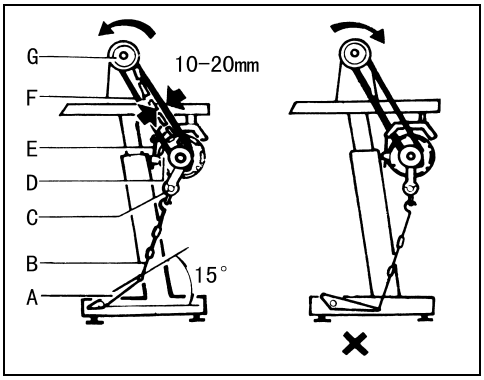


Fig. 2

3. CONNECT THE CLUTCH LEVER WITH THE PEDAL (Fig.2)

1) The optimum tilt angle of pedal (A) is approximately 15 deg.
2) Adjust Clutch Cover (D) so that Clutch-Lever (C) and Draw Bar (B) run in line.
3) The balance wheel should rotate counter-clockwise when viewed from the outside of Balance Wheel (G). The direction of the motor pulley rotation can be reversed by reversing (turning over 180 deg .) the power plug of the motor.
4) Adjust the tension of V-belt (F) by turning Motor Vertical Position Screw (E). The proper tension of the V-belt is a slack of 10-20mm when the belt is depressed at the center of the belt by finger.

4. PREPARATION AND LUBRICATION (Fig.3)

1) Cleaning the machine

Before leaving the factory, the machine parts are coated with rust-preventive grease, which may be hardened and contaminated by dust during storage and shipment. This grease must be removed with gasoline.

2) Examination

Though every machine is confirmed by strict inspection and test before leaving the factory, the machine parts may be loose or deformed after long distance transportation with jolt. A thorough examination must be performed after cleaning the machine. Turn the balance wheel to see if there is running obstruction, parts collision, uneven resistance or abnormal noise. If these exist, adjustment must be made accordingly before

run-in operation.

3) Oiling

(1) Required amount of oil.

Line (A) on the oil reservoir: Max. oil level. Line (B) on the oil reservoir: Min. oil level. If oil level goes down under line (B), oil cannot be distributed to each part of the machine, thus causing the parts a seizure.

(2) Replenishing

Always use only No.18 special machine oil for high speed sewing. Be sure to replenish oil to Line (A) before starting operation.

(3) Replacing oil

To replace oil, remove Screw (C) to drain oil. After completely draining off oil, clean the oil reservoir and securely tighten Screw (C), then fill the reservoir with fresh oil.

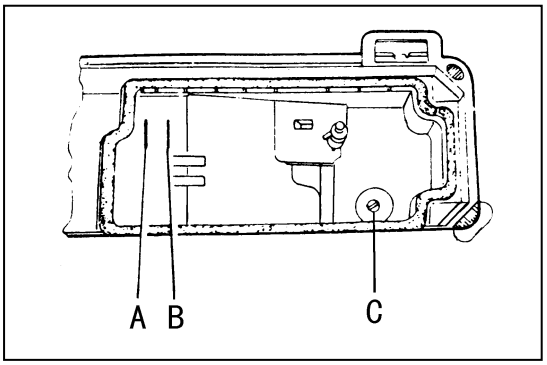


Fig. 3

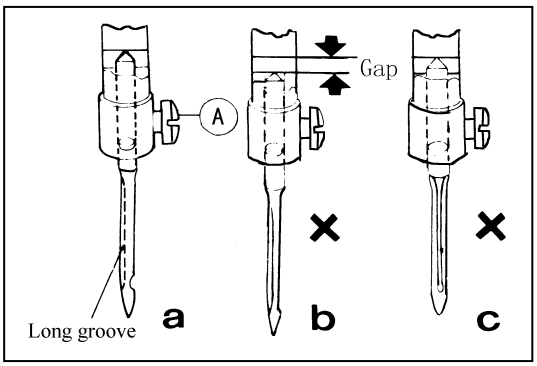


Fig. 4

5. REPLACE NEEDLES (Fig.4)

Turn the balance wheel to lift needle bar to the upper end of its stroke. Loosen Needle Clamp Screw A. While keeping the long groove of the needle leftward fully insert the needle shank up to the bottom of the needle socket. Then tighten Needle Clamp Screw A.

Note: Fig. (b): insufficient insertion.

Fig. (c): wrong direction of long groove.

6. RUN-IN OPERATION (Fig. 5)

Run-in operation is required for a new sewing machine, or a sewing machine left out operation for a considerable length of time.

1) Remove Rubber Plugs (A) on the top of the arm and replenish sufficient amount of oil.

2) Lift Presser Foot (B).

3) Run the machine at a low speed (1000-1500spm) to check oil distributing condition through Oil Check Window (C).

4) Perform run-in operation at 1000-1500spm for 30minutes. After a lapse of one month of service during which the working speed is increased gradually and the machine runs sufficiently well, the high speed 2000spm can be adopted according to the nature of the work.

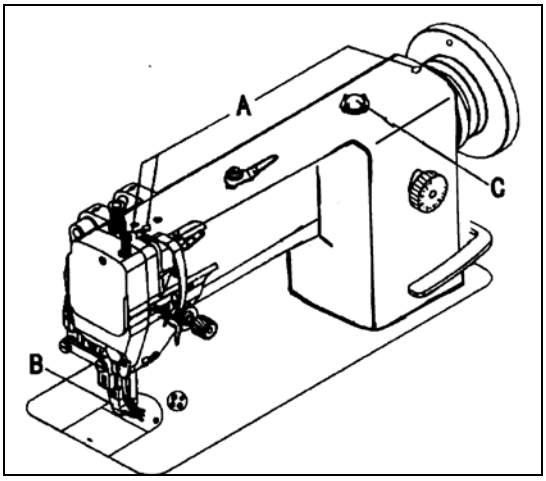


Fig. 5

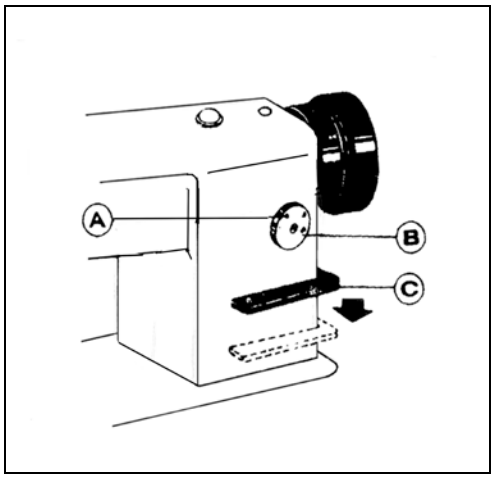


Fig. 6

7. SET STITCH LENGTH AND REVERSE FEEDING (Fig.6)

1) Stitch length can be set by turning Dial (A).

2) The figures on Face (B) of dial show stitch length in mm.

3) Reverse feeding starts when Reverse Feed Lever (C) is depressed, and the machine will feed forward again if Reverse Feed lever (C) is released.

8. THREADING (Fig.7)

To thread the needle thread, raise needle bar to the upper end of its stroke, lead the thread from spool and perform threading as shown in Fig.7 . To draw the bobbin thread, hold the end of the needle thread and turn the balance wheel to lower the needle bar and then to lift it to its highest position. Pull the needle thread and the bobbin thread is drawn up. Put the ends of needle thread and bobbin thread frontward under presser foot.

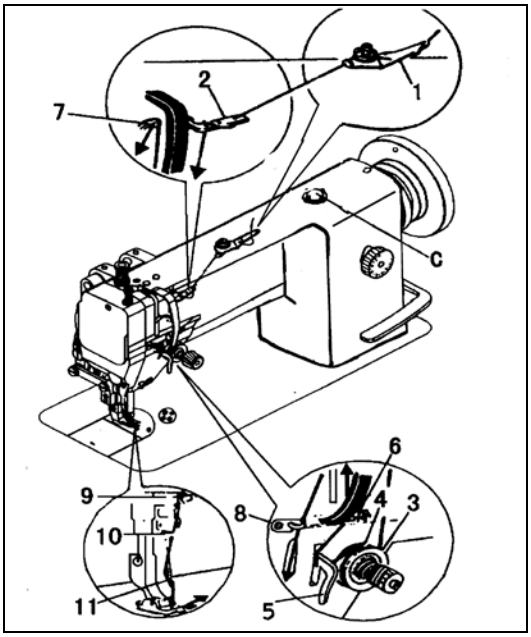


Fig. 7

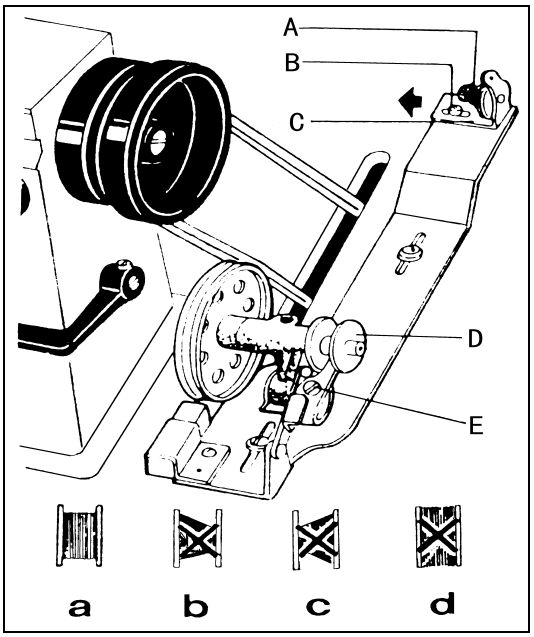


Fig. 8

9. WINDING ADJUSTMENT (Fig.8)

1) The wound bobbin thread should be neat and tight, if not, adjust the winding tension by turning Tension Stud Nut (A) of bobbin winder tension bracket.

Note: nylon or polyester thread should be wound with little tension, otherwise, Bobbin (D) might break or deform.

2) When the wound thread layer does not present a cylindrical shape as shown in Fig.8 (a), loosen Set Screw (B) of bobbin winder tension bracket and slide Bracket (C) leftward or rightward. If thread is wound as shown in Fig.8 (b), move the bracket rightward, but if thread is wound as shown in Fig.8 (c), move the bracket leftward.

After adequately positioning the bracket, tighten Set Screw (B).

3) Do not overfill the bobbin. The optimum length of thread will fill about 80% of bobbin capacity. This can be adjusted by Adjusting Screw (E) of bobbin winder stop latch.

10.POSITION PRESSER BAR (Fig.9)

1) Loosen lock Nut (E) and Pressure Regulating Thumb Screw (A).
2) Remove rubber plug from Face Plate (B).
3) Loosen Screw (C) and adjust the position of Presser Bar (D) till the presser foot is 6 mm above the throat plate will the presser foot lifted to its highest.
4) Tighten Screw (C) and put in the rubber plug.
5) Tighten pressure Regulating Thumb Screw (A) and Lock Nut (E).

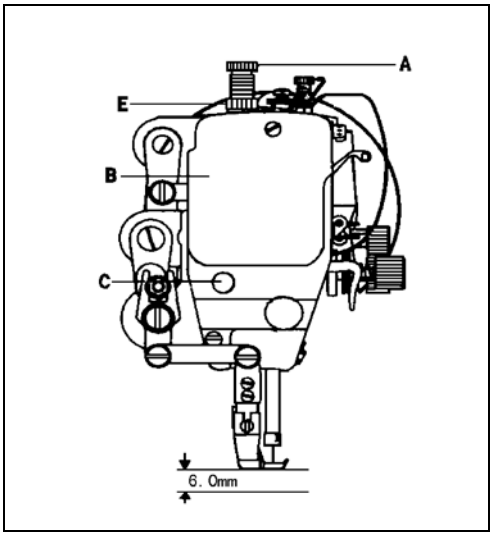


Fig. 9

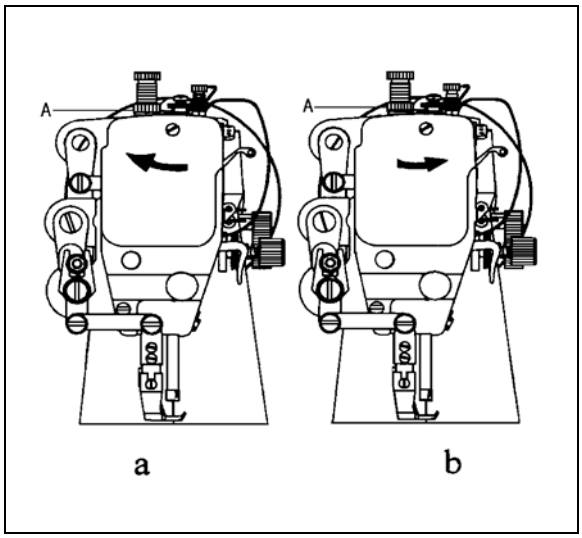


Fig. 10

11. ADJUST THE PRESSURE OF PRESSER FOOT (Fig.10)

Pressure of presser foot is to be adjust in accordance with thickness of materials to be sewn.

First loosen Lock Nut (A). For heavy materials, turn the pressure regulating thumb screw as shown in Fig.10 (a) to increase the pressure, while for light materials, turn the pressure regulating thumb screw as shown in Fig.10 (b) to decrease the pressure. Then tighten Lock Nut (A).

The pressure of presser foot is recommended to be less as long as normal feeding is ensured.

12. ADJUST THREAD TENSION (Fig.11,12)

In principle, thread tension is to be adjusted in accordance with materials, thread and other factors.

In practice, thread tension is adjusted according to the stitches obtained. The needle thread tension should

be adjusted with reference to the bobbin thread tension. Turn Tension Spring Regulating Screw (A) of bobbin case clockwise for more tension, or turn the screw counter-clockwise for less tension.

It is common practice to test the bobbin test the bobbin thread tension as shown in Fig.12 . Hold the end of the thread from delivery eye. If the bobbin case is falling slowly, the proper tension is obtained. The needle thread tension can be adjusted by setting (1) the take-up spring tension. (2) the thread take-up spring stroke and (3) tension spring. All these adjustments will be described in the following.

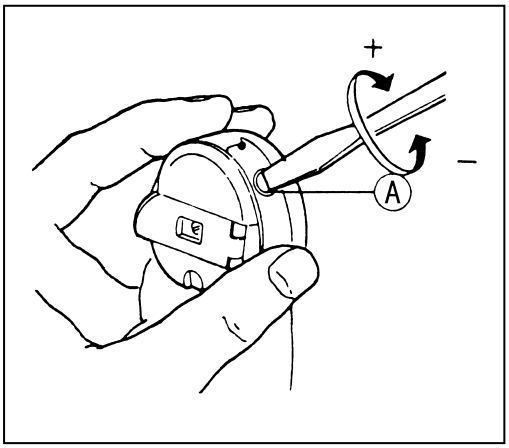


Fig. 11

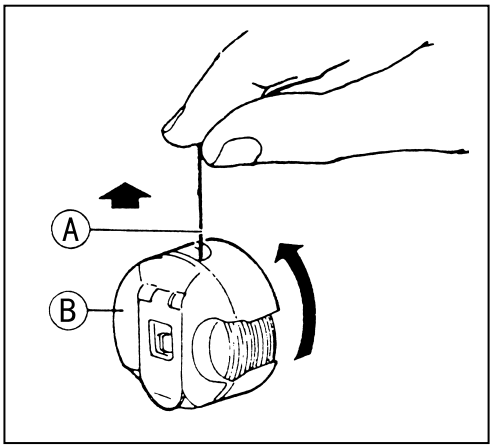


Fig. 12

13. ADJUST THREAD TAKE-UP SPRING (Fig.13,14)

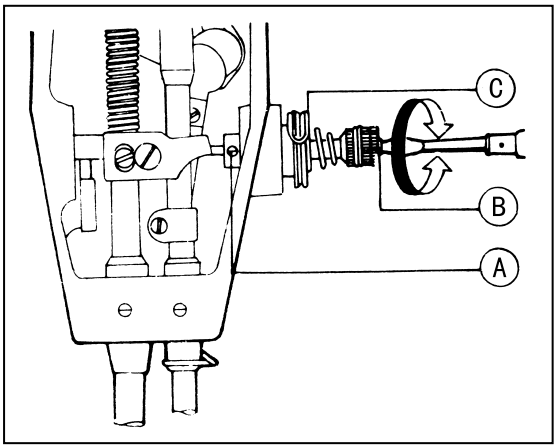


Fig. 13

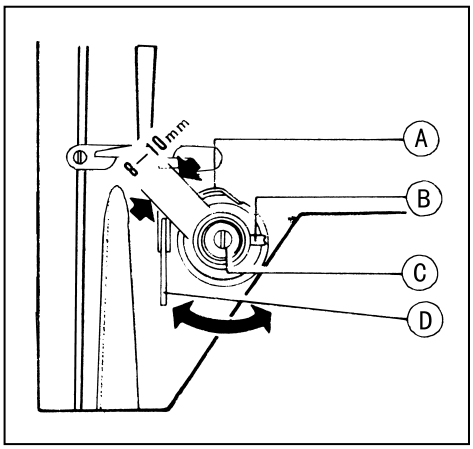


Fig. 14

1) Adjusting the thread take-up spring tension

Loosen Set Screw (A), turn Tension Stud (B) clockwise to increase the spring tension, or turn the stud counter-clockwise to decrease the spring tension. After the adjustment, be sure to tighten Set Screw (A). The thread take-up spring tension should be about 30g. To Attain this. First loosen Set Screw (A), turn Tension Stud (B) counter-clockwise to decrease the tension of Thread Take-up Spring (C) to zero, then turn Tension Stud (B) clockwise until Spring (C) comes to the notch of thread tension regulating bushing, and again turn Tension Stud (B) halfway back (counterclockwise) After the adjustment. Tighten Set Screw (A).

2) Adjusting the thread take-up spring stroke

Loosen Set Screw (B), turn Stud (C) clockwise to increase the stroke or turn Stud (C) counter-clockwise to decrease the stroke. After the adjustment, tighten Set Screw (B).

Before leaving the factory, the thread take-up spring has properly been adjusted. Readjustment is needed only in the case of special material or special thread.

14. ADJUST THREAD GUIDE AND THREAD TENSION (Fig.15,16)

The position of the thread guide affects stitch tightness and therefore must be adjusted according to sewing materials and sewing conditions.

Fig15 shows different stitch forms. Normal stitch form should be as shown in Fig.15 (a). When abnormal stitches cause puckering and thread break-age, the tension of needle thread and bobbin thread must be adjusted accordingly.

	1	2	3
Thread guide position	Leftward	Center	Rightward
Material weight	Heavy	Medium	Light

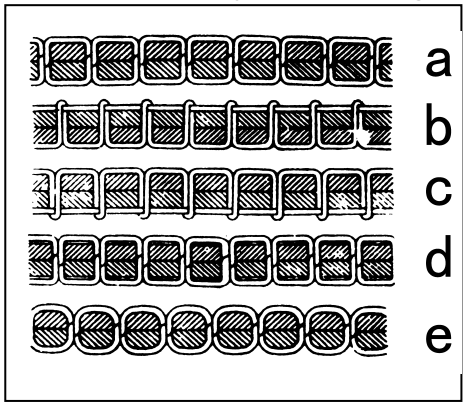


Fig. 15

1) In case needle thread tension is too strong or bobbin thread tension is too weak, as shown in Fig.15 (b), turn the thumb nut counterclockwise to decrease the needle thread tension, or tighten the tension spring regulating screw of bobbin case to increase the bobbin thread tension (See Fig.16)

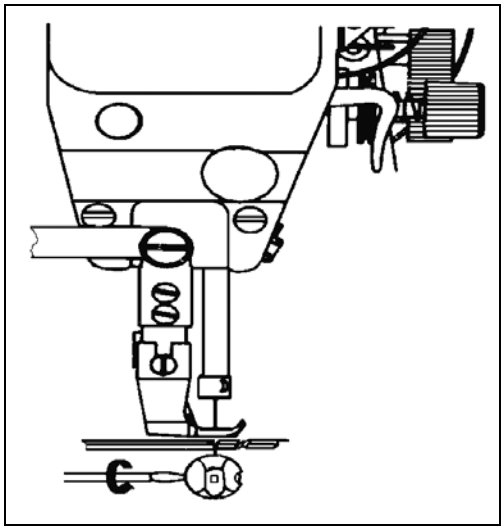


Fig. 16

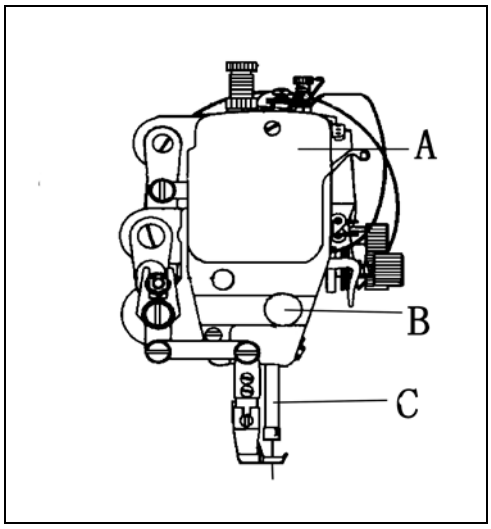


Fig. 17

2) In case needle thread tension is too weak or bobbin thread tension is too strong, as shown in Fig.15 (c), turn the thumb nut clockwise to increase the needle thread tension, or loosen the tension spring regulating screw of bobbin case to decrease the bobbin thread tension.

3) In case of the stitch forms as shown in Fig.15 (d) and (e), adjustments can be made with reference to the above means.

15. TIME NEEDLE TO ROTATING HOOK (Fig.17,18,19,20)

A. Adjusting the needle position (See Fig.17)

1) Turn balance wheel by hand to bring Needle Bar (C) to the lowest position of its stroke.

2) Remove rubber plug from Face Plate (A).

3) Loosen Set Screw (B) of needle bar adaptor.

4) Move Needle Bar (C) vertically to adjust needle timing.

5) After the adjustment, tighten Set Screw (B) and put in the rubber plug. The standard needle timing (See Fig.18) is to align Timing Mark (B) on the needle bar and the bottom of Needle Bar Bushing (A) and

meanwhile align the Inner Surface (E) of the hook and the center of Needle Eye (D) when the needle bar gets down to its lowest position.

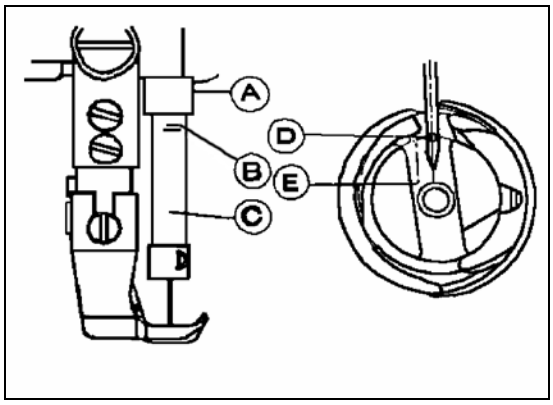


Fig. 18

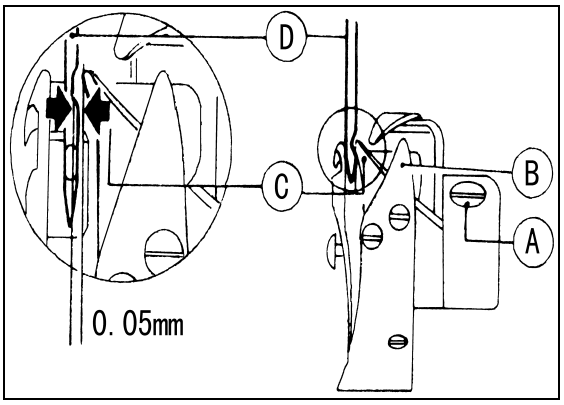


Fig. 19

B. Adjusting the hook point timing

Timing of needle motion to rotating hook motion has a great effect on sewing performance. The standard hook point timing (See Fig.20) is to align Hook Point (D) and Needle Centerline (C) when Needle Bar (B) is lifted by 2.2mm from the lower end of its stroke. Besides, Hook Point (D) should be 1.0-1.5mm above the upper end of needle eye (E).

When adjusting the hook point timing, also notice that the clearance between the bottom of needle notch and Hook Point (C) should be approx. 0.05mm (See Fig.19)

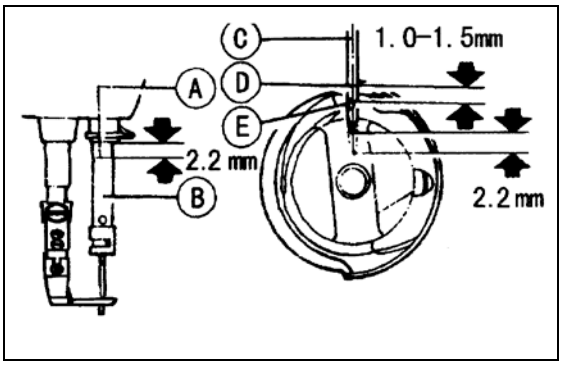


Fig. 20

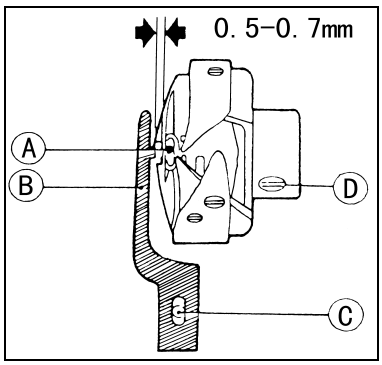


Fig. 21

16. REPLACE ROTATING HOOK (Fig.21)

1) Lift needle bar to the highest position of its stroke.
2) Remove throat plate, take down needle and bobbin case.
3) Loosen Screw (C) of hook positioner and take down Hook Positioner (A).
4) Loosen two Screws (D) of rotating hook.
5) Turn balance wheel to raise feed bar to its highest position, then take down the rotating hook by turning it away from feed bar.
6) Installing the hook can be done in reverse sequence. Note that Needle (B) and the convex surface of Hook Positioner (A) should align with a clearance of 0.5-0.7mm between them.

17. ADJUST THE HEIGHT OF FEED DOG (Fig.22,23)

1) Turn balance wheel until feed dog is lifted to its highest position from throat plate surface.
2) Loosen Screw (A) of feed lifting rock shaft crank right (See Fig.22,b)

3) Move Feed Bar (B) in the direction shown by the arrow in Fig22 (a) to adjust the height of the feed dog. The standard height of feed dog is that the top of feed dog is 1mm above Throat Plate Surface (B).

4) After the adjustment, be sure to tighten Screw (A).

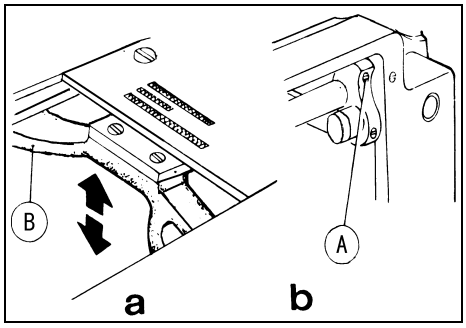


Fig. 22

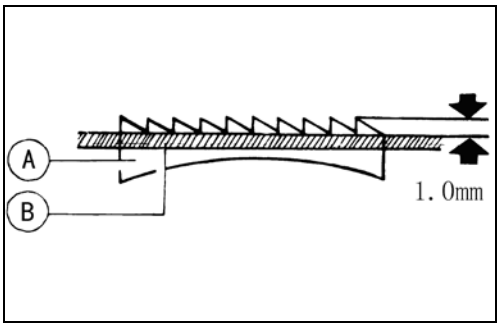


Fig. 23

18. ADJUST THE POSITION OF FEED DOG (Fig.24,25)

The standard position of feed dog is that the clearance between the front end of the throat plate slot and the first tooth of the fully advanced feed dog is l mm, as shown in Fig.24 .

1) Fully advance the feed dog toward the front end of the throat plate slot.
2) Loosen Feed Rock Shaft Crank Screw (A). See Fig.25 (b).
3) Move Feed Bar (B) in the direction shown by the arrow in Fig. 25 (a) to adjust the feed dog position.
4) After the adjustment, be sure to tighten Screw (A).

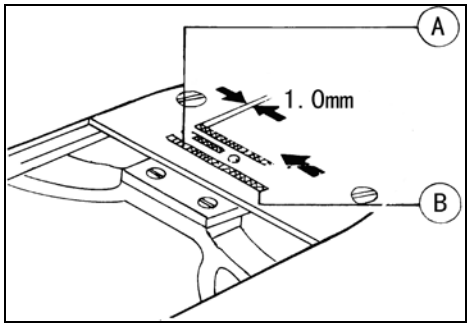


Fig. 24

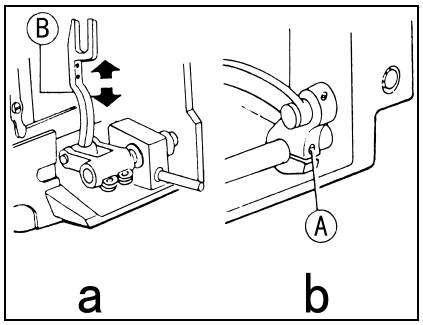


Fig. 25

19. TIME FEED MOTION TO NEEDLE MOTION (Fig.26,27,28)

The standard timing of feed motion to needle motion is that the top of feed Dog (C) is flush with Throat Plate Surface (B) when the point of Needle (A) reaches Throat Plate Surface (B). See Fig.26 .

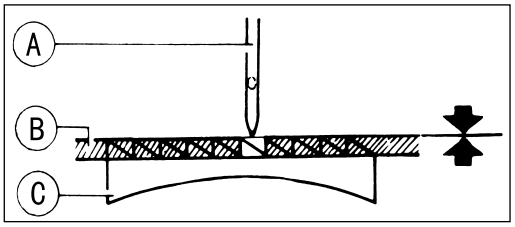


Fig. 26

If feed motion is not timed to needle motion, adjust as follows (See Figs.27 and 28).

1) Remove Arm Side Cover .

2) Loosen Set Screws (A) and (D) of feed and feed lifting eccentric.

3) Hold Feed and Feed Lifting Eccentric (B) and turn Balance Wheel (E) slowly until the upper edge of Arm Shaft Oil Hole (C) aligns with the lower edge of Reference Hole (G) of feed and feed lifting

eccentric.

4) Leave a clearance of 0.3-0.5mm between Feed and Feed Lifting Eccentric (B) and Eccentric Sleeve (H), then tighten Set Screws (A) and (D).

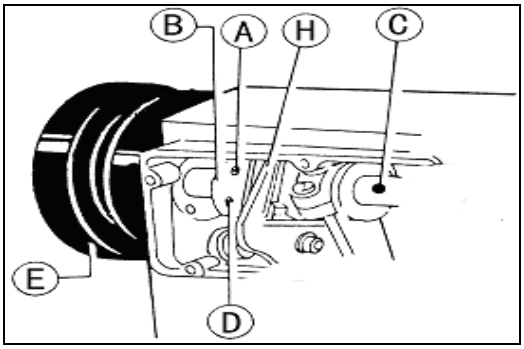


Fig. 27

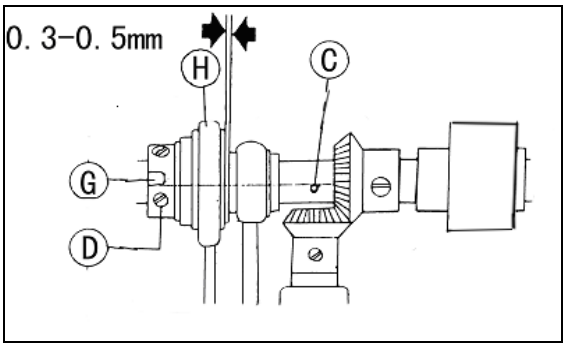


Fig. 28

20. ADJUST OPENING TIME OF THE TENSION DISCS (Fig.29)

within the presser foot lift range of 2-7mm opening time of the tension discs can be adjusted as follows:

1) Remove the rubber plug from the back of arm and loosen Screw (A) of knee lifter lever (left).

2) Move the tension releasing cam leftward for earlier opening or rightward for later opening. It will facilitate the adjustment to put under the presser foot a block as thick as the presser foot lift.

3) After the adjustment, fully tighten Screw (A).

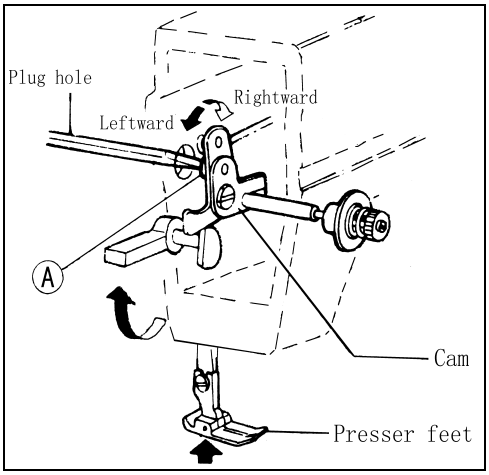


Fig. 29

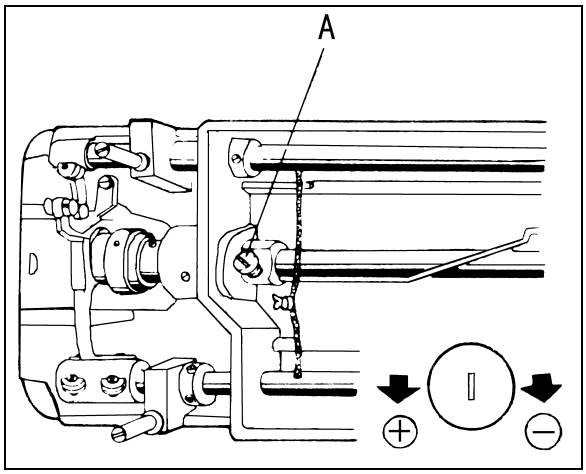


Fig. 30

21. LUBRICATION ADJUSTMENT (Fig.30)

A. Adjusting oil pump.

In ordinary operation, adjustment is not required for the oil pump. If oil splashing does not occur in the oil check window when the machine runs at a low, speed (approx.2000spm), reduce the clearance of the by-pass hole.

B. Adjusting the lubrication of rotating hook.

The lubrication of the rotating hook can be adjusted by Oil Adjusting Screw (A) as follows:

1) Turn Oil Adjusting Screw (A) clockwise to increase oil and turn Oil Adjusting Screw (A) counterclockwise to decrease oil.

2) Oil Adjusting Screw (A) adjusts oil amount within 5 turns. When Oil Adjusting Screw (A) is fully

tightened, oil amount is maximum.

3) Readjustment depends on temperature, sewing speed and the like. In practice, oil amount can be judged as follows: remove the throat plate and place a piece of paper on instead, run the machine for about 20 seconds, then check the oil splashed on the paper.

22.INSTALLING OF THE NEDDLE PLATE (Fig.31)

To attach the needle plate, bring the cloth-cutting knife to its lowest position, and gradually tighten the two set screws alternately while lightly pressing the needle plate onto the cloth-cutting knife.

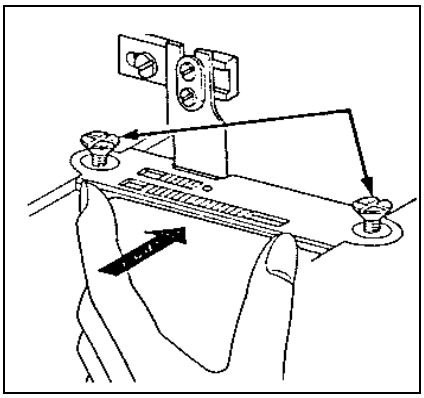


Fig. 31

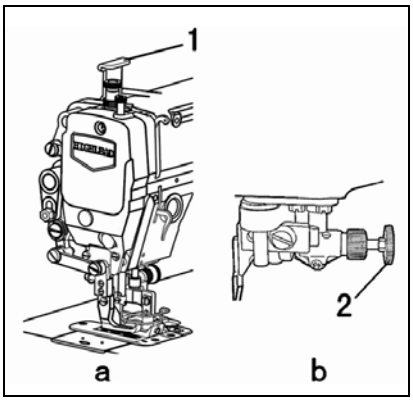


Fig. 32

23. CLOTH CUTTING KNIFE (Fig.32,33)

1) Operation of the cloth cutting knife
   (1) To actuate the cloth-cutting knife, press down knife setting plate 1.
   (2) To stop the cloth-cutting knife and reset the machine to the normal lockstitching mode, pull knob 2 in the direction of the arrow.
2) Attaching the cloth cutting knife
   (1) Raise or lower the cloth-cutting knife so that section A of the cloth-cutting knife is positioned 0-0.5 mm below the top face of the needle plate when the knife is in its lowest position.
   (2) Loosen two knife set screws 1, and replace the cloth-cutting knife.
3) Changing the cutting width
   (1) The needle plate decides the cutting width. whenthe needle plate is replaced, loosen knife guiding shaft set screw 1 so that proper parallelism is obtained and the sharpness of the knife blade is increased as shown in the figure.
   (2) When the position of the knife is changed in accordance with the change of the needle plate size, loosen set screw 2, and position the knife so that the blade of the needle plate comes in contact with the knife blade. Then tighten set screw 2.
   (3) For the standard machine, 8.0 mm wide needle plate is installed at the time of delivery.

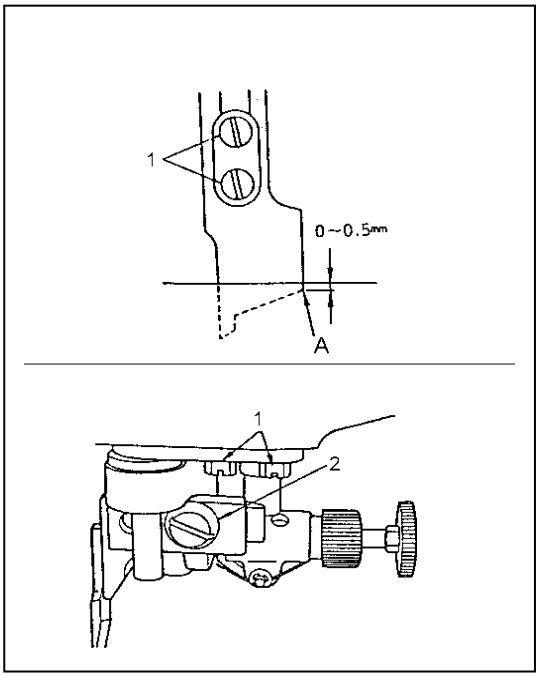


Fig. 33

24. REGULAR CLEANING (Fig.34,35,36)

1) Cleaning feed dog (See Fig.34)

Remove the throat plate and clear off the dust and lint between feed dog tooth slots.

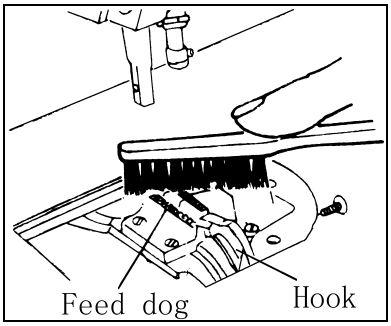


Fig. 34

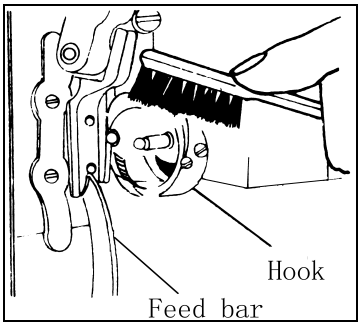


Fig. 35

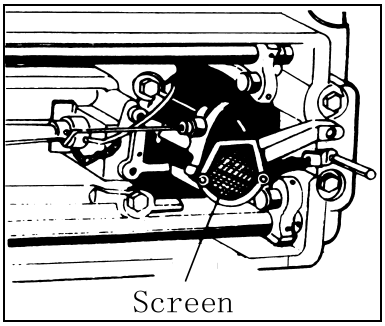


Fig. 36

2) Cleaning rotating hook (See Fig 35)

Swing out the machine head and clean the hook. Wipe the bobbin case with soft cloth.

3) Cleaning oil pump, screen (See Fig.36)

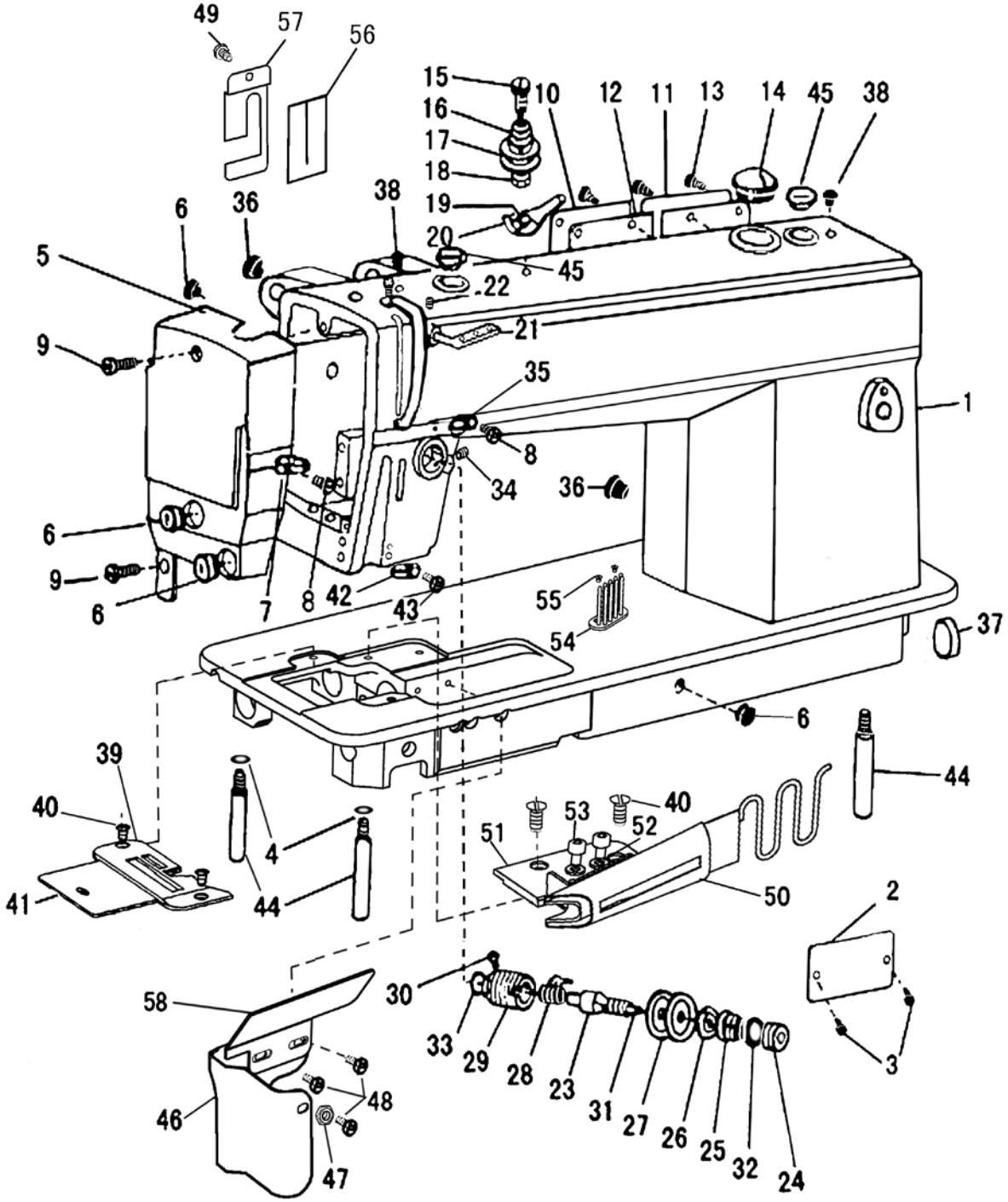
Swing out the machine head and clear off the dust and dirt on oil pump screen.

25. OTHER REPLACEMENT PARTS

The standard cutting width of the machine is 8.0mm. We offer the other specs according to your need. Please choose as follow sheet.

Cutting width	Needle plate	Presser	Chip guard plate	Screw	Washer
6mm	HM32B77101	HM30H78001		-	-
8mm	HM31B37101	HM30H58001		-	-
10mm	HM32B97101	HM30H88001		-	-
12mm	HM33B17101	HM30H98001	HM31H08001	HE108E8001	H3200I2030

A.ARM BED AND ITS ACCESSORIES



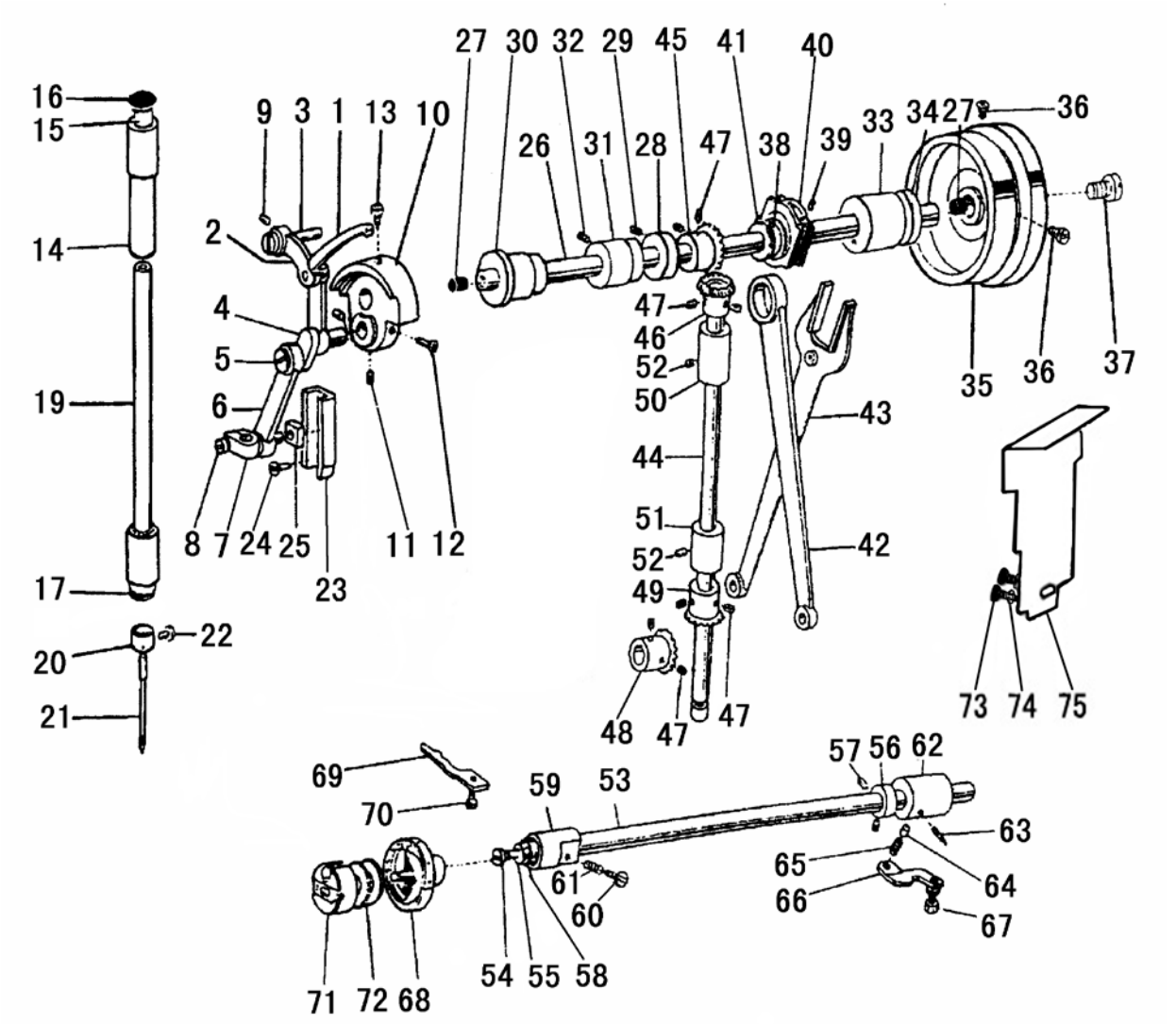
A.ARM BED AND ITS ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
A01	HM30B47101	Arm	1	
A02	HM31B08001	Trade mark plate	1	
A03	H924025050	rivet	2	GB/T827 2.5×5
A04	H005008060	Spring washer	2	GB/T93 6
A05	H2100B2110	Face plate	1	
A06	HA306B0674	Rubber plug (φ11.8)	3	
A07	HA607B0671	Thread guide on face plate	1	
A08	HA106B0676	Thread guide screw	1	SM9/64(40)×6
A09	HA700B2030	Face plate screw	2	SM11/64(40)×20
A10	H2100B2070	Arm sidecover(left)	1	
A11	H2100B2080	Arm sidecover(right)	1	
A12	H2100B2090	Gasket for arm side cover	1	
A13	HA300B2170	Set screw	8	
A14	H1210B0671	Check window	1	
A15	HA112B0691	Screw type tension stud	1	SM11/64(40)×16
A16	HA112B0692	Spring for pre-tension	1	
A17	HA112B0693	Disc for pre-tension	2	
A18	HA112B0694	Spacer for pre-tension	1	
A19	H007013030	Stop ring	1	GB/T896 3
A20	HA112B0695	Pre-tension thread guide	1	
A21	HA100B2100	Three-hple thread guide	1	
A22	HA100B2110	Set screw	1	SM11/64(40)×5
A23	HA115B0701	Thread tension stud	1	SM1/4(40)×17
A24	HA310B0701	Oil thumb nut	1	
A25	HA505B0671	Thread tension spring	1	
A26	HA310B0702	Thread tension releasing disc	1	
A27	HA310B0705	Thread tension disc	2	
A28	HA505B0672	Thread take-up spring	1	
A29	HA310B0703	Thread tension regulating bushing	1	
A30	HA115B0708	Set screw	1	SM9/64(40)×6
A31	HA115B0709	Thread tension releasing pin	1	
A32	HA115B7010	Stop disc	1	
A33	HA115B7011	Rubber ring	1	
A34	HA300B2080	Set screw	1	SM15/64(28)×6
A35	HA600B2050	Thread guide at arm center	1	
A36	HA300B2090	Rubber plug (φ8.8)	2	
A37	HA300B2100	Rubber plug (φ27)	1	
A38	HA300B2110	Red rubber plug (φ5.7)	2	
A39	HM31B37101	Needle plate	1	
A40	HA300B2190	Needle plate screw	4	SM11/64(40)×4.5
A41	HM32B18001	Slide plate	1	
A42	HA500C2060	Thread guide	1	
A43	HA500C2070	Screw	1	SM9/64(40)×5

A.ARM BED AND ITS ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
A44	HA100B2220	Leg	3	
A45	HA307B0673	Rubber plug	2	
A46	HM32B28001	Chip funnel	1	
A47	H5734F8001	Nut	1	SM9/64"×40
A48	HA106B0676	Screw	3	SM9/64(40)/6
A49	HA100C2040	Screw	1	SM11/64(40)/5
A50	HM32B47101	Single needle binders	1	
A51	HM32B38001	Single needle binders mounting plate	1	
A52	H3200I2030	Washer	2	
A53	H415040060	Screw	2	M4×6
A54	H7339C7101	Mounting plate complete	1	
A55	H7342C8001	Screw	2	
A56	H2100B2130	Felt	1	
A57	H2100I2050	Shelter platr	1	
A58	HM34B78001	Chip guide plate	1	

B.SEWING MECHANISM



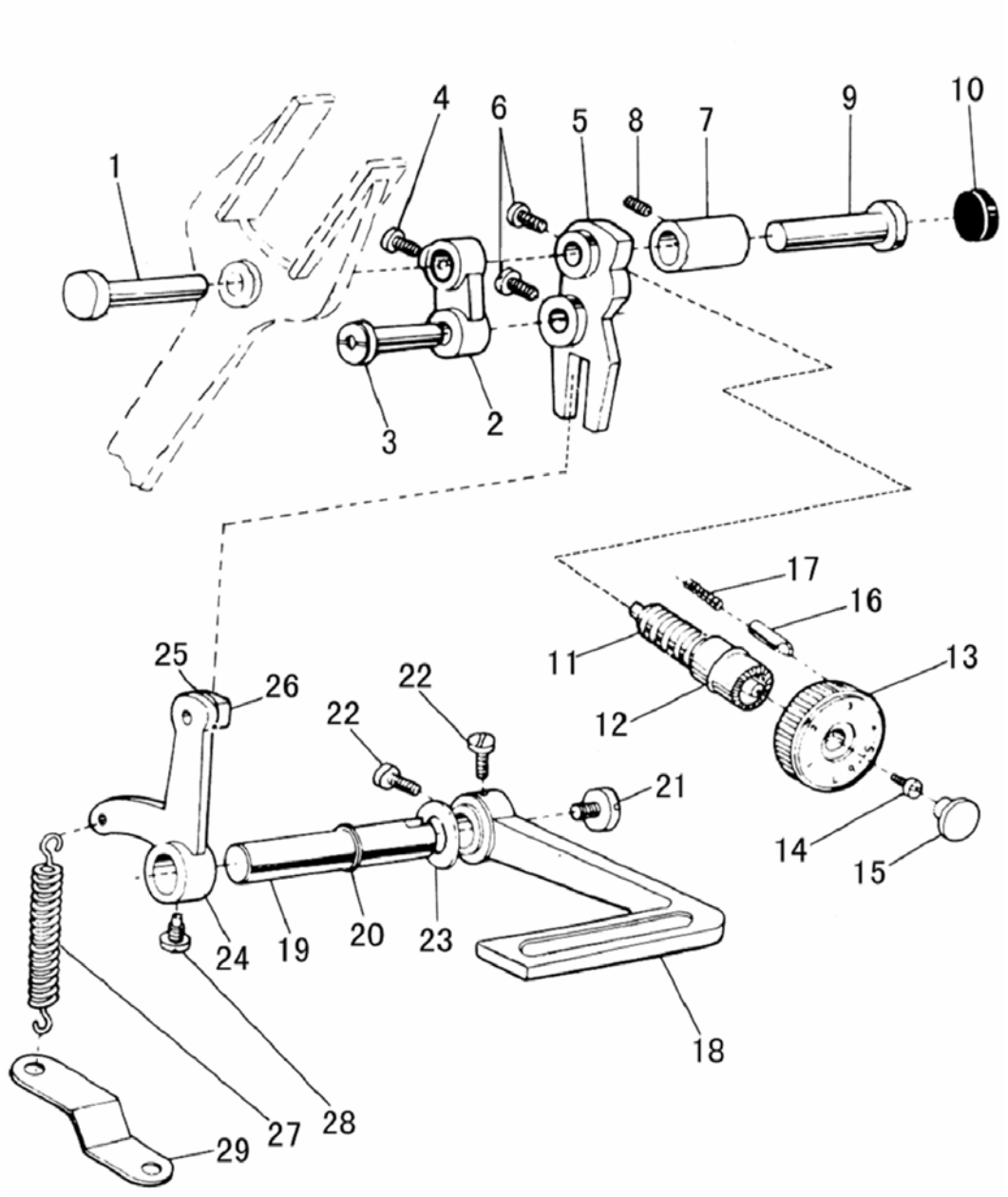
B.SEWING MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
B01	H11111C104	Therad take-up lever	1	
B02	H11112C104	Thread take-up lever link	1	
B03	HA104C0653	Hinge pin	1	
B04	HA504C0651	Thread take-up crank	1	
B05	HA104C0656	Set screw (left-handed)	1	SM9/64(40)×7
B06	HA304C0653	Needlc bar link	1	
B07	HA104C0658	Needle bar adaptor	1	
B08	HA106B0676	Screw	1	SM9/64(40)×6
B09	HA100C2020	Set screw	1	SM15/64(28)×10
B10	HD90C68001	Needle bar crank	1	
B11	HA307C0662	Set screw	2	SM1/4(40)×6
B12	HA100C2060	Set screw	1	SM9/32(28)×13
B13	HA100C2070	Set screw	1	SM9/32/(28)×14
B14	HA100C2080	Needle bar bushing (upper)	1	
B15	HA100C2100	Felt plug	1	
B16	HA300C2050	Red rubber plug (φ8.8)	1	
B17	HA804B0652	Needle bar bushing (lower)	1	
B19	HD90C88001	Needle bar	1	
B20	HD90C98001	Thread guide for needle bar	1	
B21		Needle	1	DP×17 #22
B22	HA100C2170	Needle clamp screw	1	SM1/8(44)×4.5
B23	HA100C2180	Guide for slide block	1	
B24	HA100C2190	Set screw	2	SM11/64(40)×8
B25	HA100C2200	Slide block	1	
B26	HD90D58001	Arm shaft	1	
B27	HA104D0652	Rubber plug (Φ7.4×10)	1	
B28	HA108G0661	Collar for	1	
B29	HA105D0662	Set screw	2	SM1/4(40)×4
B30	H6507D8001	Arm shaft bushing(left)	1	
B31	HA100D2040	Arln shaft bushing(middle)	1	
B32	HA100C2020	Set screw	1	SM15/64(28)×10
B33	HA300D2020	Arvn shaft bushing(right)	1	
B34	HA306D0066	Oil seal	1	
B35	H2000C2040	Balance wheel	1	
B36	HA110D0672	Set screw	2	SM15/64(28)×12
B37	HA100D2080	Screw	1	SM11/32(28)×10
B38	H11211D105	Feed and feed lifting eccentric	1	
B39	HA3411D308	Set screw	2	SM15/54(28)×7
B40	HA3411D208	Eccentric sleeve	1	
B41	HA112D3012	Retaining ring	1	
B42	HA112D3013	Crank rod for feed lifting rock shaft	1	
B43	HA504D0651	Feed forked connection	1	
B44	H2100D2010	Vertical shaft	1	

B.SEWING MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
B45	HA113D2112	Bevel gear for arm shaft	1	
B46	HA113D2122	Bevel gear for vertical shaft(upper)	1	
B47	HA108C0663	Set screw	8	SM1/4(40)×7
B48	HA113D2212	Bevel gear for hook shaft	1	
B49	HA113D2222	Bevel gear for vertical shaft(lower)	1	
B50	HA100D2110	Vertical shaft bushing(upper)	1	
B51	HA600D2010	Vertical shaft bushing(lower)	1	
B52	HA100C2020	Set screw	2	SM15/64(28)×10
B53	HA904E0651	Rotating hook shaft	1	
B54	HA1111E104	Filter screw	1	SM3/16(32)×9
B55	HA1111E204	Filter	1	
B56	HA305E0661	Collar for hook shaft	1	
B57	HA305E0662	Set screw	2	SM15/64(28)×4
B58	HA106E0071	Oil seal for rotating hook shaft	1	
B59	HA100E2040	Hook shaft bushing (left)	1	
B60	HA100E2050	Oil adjusting screw	1	SM11/64(40)×28.5
B61	HA100E2060	Spring for oil adjuster	1	
B62	HA311E0671	Hook shaft bushing (right)	1	
B63	HA110E0672	Oil pipe for hook shaft bushing	1	
B64	HA300E2100	Plunger	1	
B65	HA300E2110	Plunger spring	1	
B66	HA600E2020	Guide plate	1	
B67	HA104F0654	Screw	1	SM15/64(28)×10
B68	H1105E0065	Rotating hook complete	1	
B69	HM30E48001	Rotating hook positioner	1	
B70	HA100E2150	Screw	1	SM11/64(40)×10
B71	HA608E0067	Bobbin case	1	
B72	H1100E2010	Bobbin	1	
B73	HA712N6912	Screw	2	SM1/8(44)×7
B74	H005001040	Washer	2	垫圈4(镀锌)
B75	H2100B2100	Arm sidecover baffle	1	

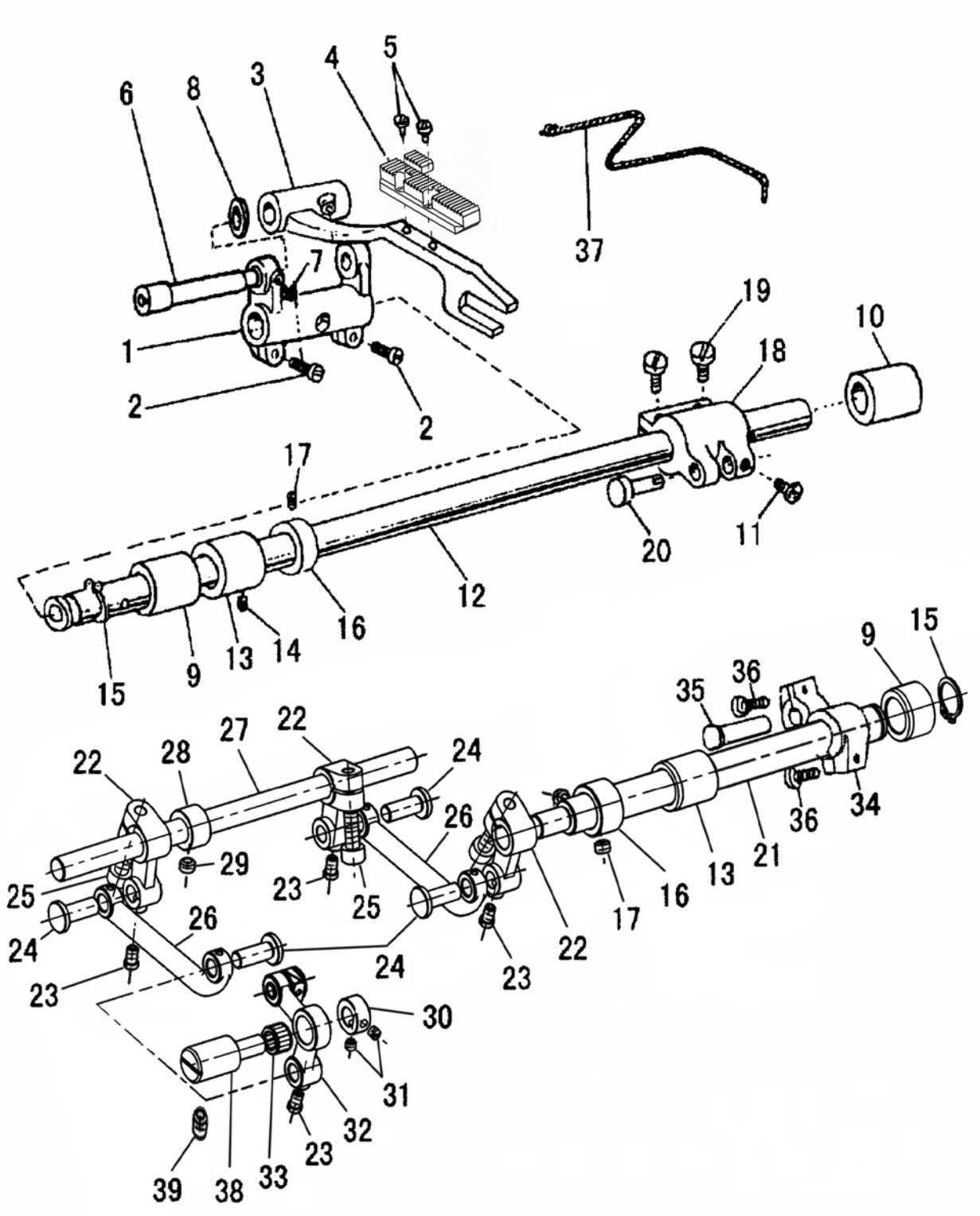
C.STITCH REGULATOR MECHANISM



C.STITCH REGULATOR MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
C01	HA104F0651	Hinge pin	1	
C02	HA104F0652	Feed connecting link	1	
C03	HA104F0653	Hinge pin for feed connecting link	1	
C04	HA104F0654	Screw	1	SM15/64(28)×10
C05	H1000F2010	Feed regulator	1	
C06	HA104F0654	Screw	2	SM15/64(28)×10
C07	HA300F2020	Feed regulator bushing	1	
C08	HA100C2020	Set screw	1	SM15/64(28)×10
C09	HA100F2040	Hinge pin for feed regulator	1	
C10	HA700B2120	Rubber plug (Φ20×6)	1	
C11	HA506F0671	Feed regulator screw bar	1	
C12	HA109F0674	O-ring	2	Φ14×2.4
C13	H1104F0651	Dial	1	
C14	HA109F0673	Screw	1	SM3/16(28)×8
C15	HA300F2050	Rubber plug	1	
C16	HA100F2080	Stopper pin	1	
C17	HA100F2090	Spring for stopper pin	1	
C18	HA309F0671	Reverse feed lever	1	
C19	HA113F3021	Reverse feed lever shaft	1	
C20	HA113F3022	O-ring	1	Φ9×1.9
C21	HA113F0683	Screw	1	SM3/16(28)×6.5
C22	HA104F0654	Screw	2	
C23	HA100F2110	Washer	1	
C24	HA115F0691	Reverse feed crank	1	
C25	HA1511F115	Slide block pin	1	
C26	HA1511F215	slide block	1	
C27	HA115F0692	Spring for feed crank	1	
C28	HA100F2130	Screw	1	SM15/64(28)×14
C29	HA100F2140	Bracket spring	1	

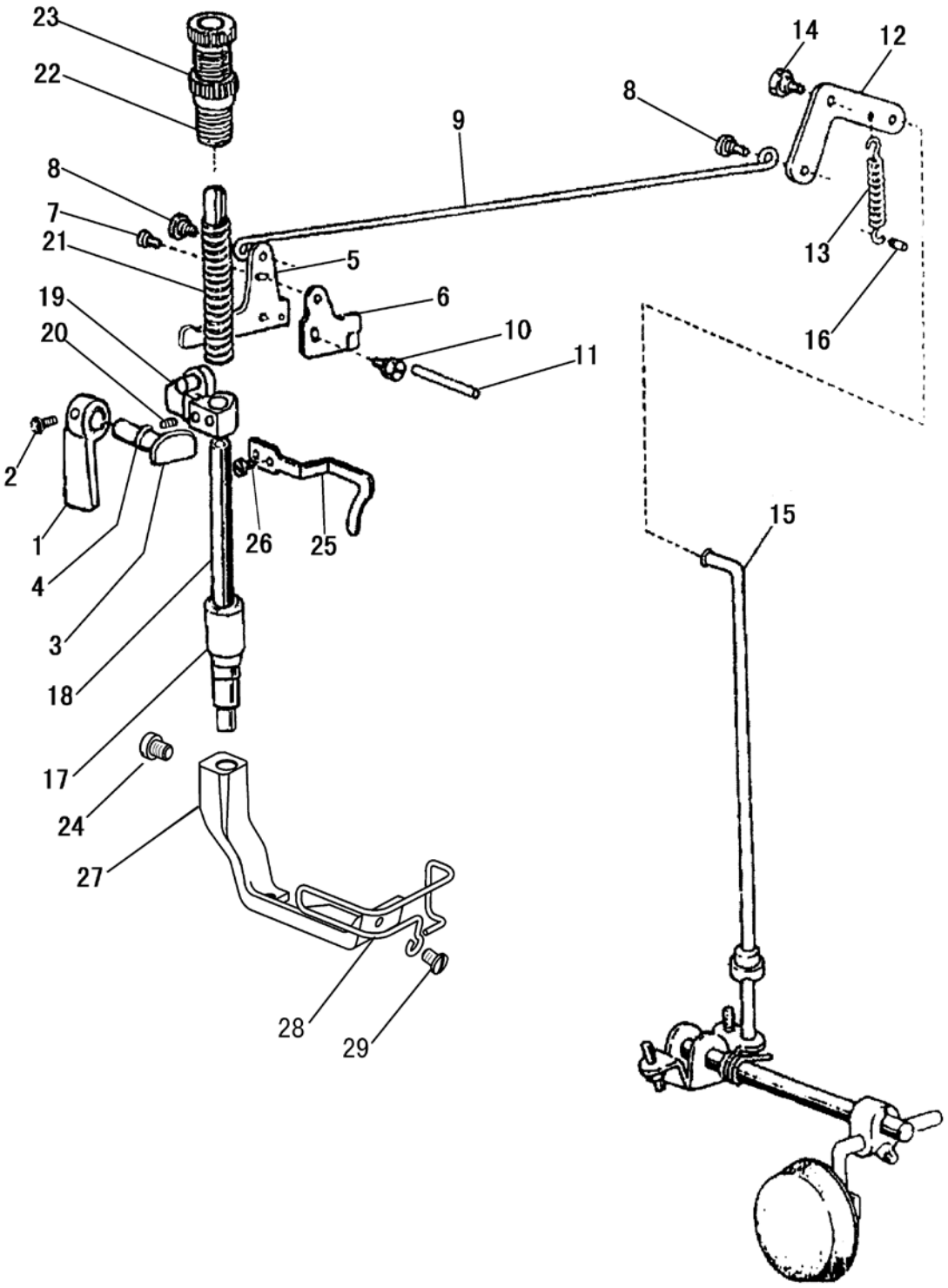
D.FEEDING AND FEED LIFTING MECHANISM



D.FEEDING AND FEED LIFTING MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
D01	HA104G0011	Feed rock shaft crank (left)	1	
D02	HA304G0656	Screw	2	SM3/16(28)×15
D03	H2004L0661	Feed bar	1	
D04	HM30G58001	Feed dog	1	
D05	HA104G0654	Screw	2	SM1/8(44)×6
D06	H1100G2040	Hinge pin for feed regulator	1	
D07	HA100C2190	Screw	1	SM11/64(40)×8
D08	HA104G0656	Washer	1	
D09	H2100G2060	Bushing for feed rock shaft(left)	1	
D10	H2100G2050	Bushing for feed rock shaft(right)	1	
D11	HA104F0654	Screw	1	SM15/64(28)×10
D12	H2100G2010	Feed rock shaft	1	
D13	H2100G2020	Bushing for feed rock shaft	1	
D14	HA305E0662	Set screw	1	SM15/64(28)×4
D15	H007009150	C-type stop ring	1	
D16	HA108G0661	Collar	1	
D17	HA105D0662	Set screw	2	SM1/4(40)×4
D18	H2100G2030	Feed rock shaft crank (right)	1	
D19	HA104G0012	Screw	2	SM3/16(28)×12
D20	H2100G2040	Hinge pin	1	
D21	HM31G18001	Feed lifting rock shaft	1	
D22	H9110E8001	Lever(left)	3	
D23	HA7311C806	Screw	4	
D24	HM31G28001	Pin	4	
D25	HA7651B319	Screw	3	
D26	HM31G38001	Plate	2	
D27	HM31G48001	Feed lifting rock shaft	1	
D28	HA715N0711	Collar for feed lifting rock shaft	1	
D29	HA105D0662	Screw	1	
D30	HK326I8001	Collar for feed lifting rock shaft	1	
D31	H6039G8001	Screw	2	
D32	HM30G77101	Feed lifting rock shaft crank (left)	1	
D33	HA104C0655	Needle bearing	1	
D34	HA306G0671	Feed lifting rock shaft crank (right)	1	
D35	HA100G2070	Hinge pin	1	
D36	HA104G0012	Screw	2	SM3/16(28)×12
D37	HA304G0655	Oil braid	1	
D38	HM30G98001	Feed lifting rock shaft	1	
D39	HA100C2020	Screw	1	SM15/64(28)×10

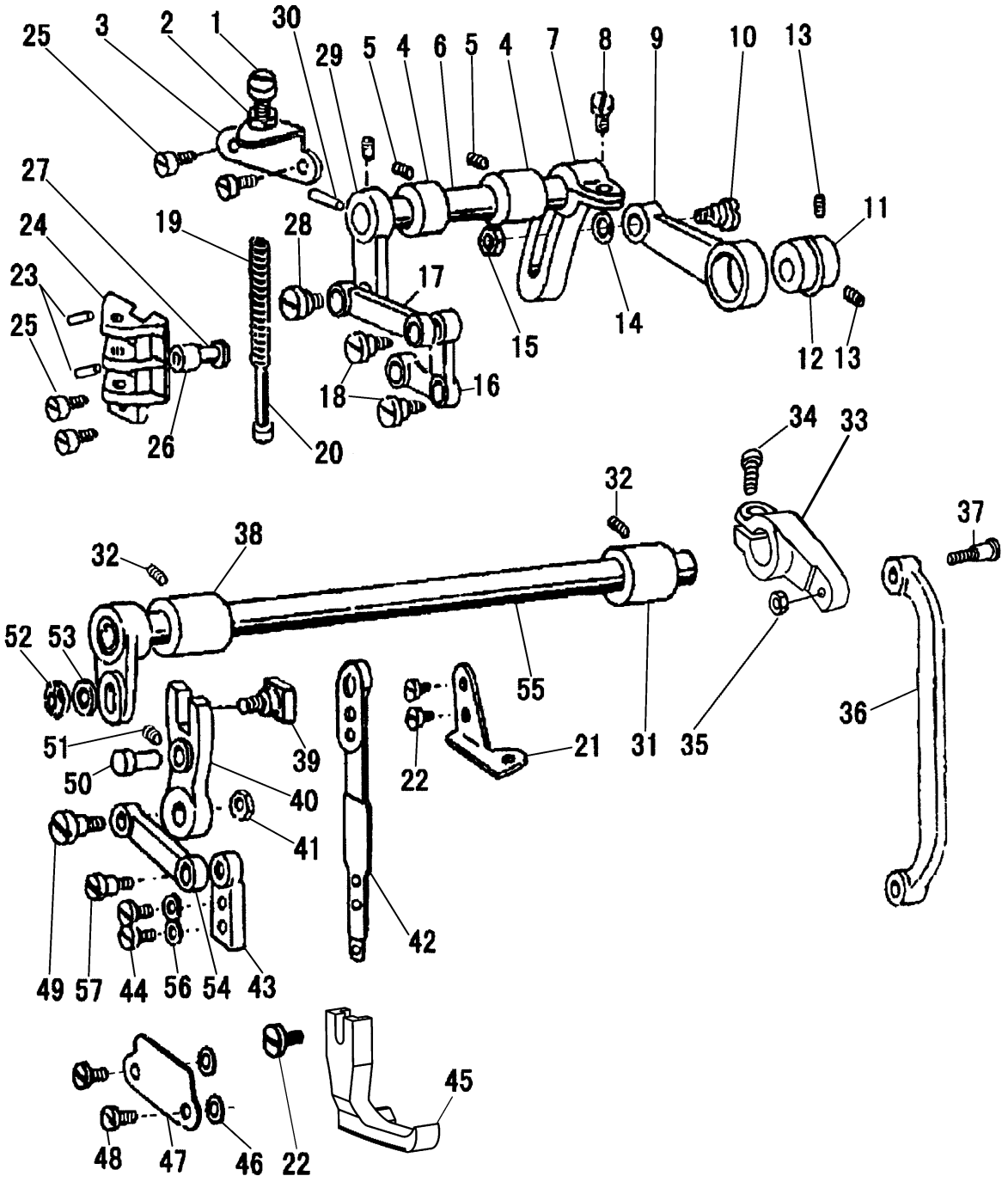
E.PRESSER FOOT MECHANISM



E.PRESSER FOOT MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
E01	H2104H0651	Presser bar lifter	1	
E02	HA100B2110	Set screw	1	SM11/64(40)×5
E03	HD90H58001	Presser bar lifting cam	1	
E04	HA300H2080	Oi1 seal fot presser bar litting cam	1	8×1.9
E05	HA107H1011	Knee lifter lever (left)	1	
E06	HA305H6611	Tension releasing cam	1	
E07	HA107H1013	Screw	1	SM11/64(40)×6
E08	HA107H0662	Hinged screw	2	SM3/16(28)×3.5
E09	HA107H0663	Knee lifter rod	1	
E10	HA100H2050	Bolt	1	SM15/64(28)×13
E11	HA100H2060	Tension releasing pin	1	
E12	HA110H0671	Knee lifter lever (right)	1	
E13	HA110H0672	Spring	1	
E14	HA100H2050	Bolt for knee lifter lever	1	SM15/64(28)×10
E15	HA306H0671	Knee lifter connecting rod	1	
E16	HA100H2080	Pin for spring	1	
E17	HA300H2090	Presser bar bushing	1	
E18	HD90H68001	Presser bar	1	
E19	H2305H0671	Presser bar lifting bracket	1	
E20	HA3411D308	Set screw	1	SM15/64(28)×7
E21	H1100H2020	Presser spring	1	
E22	H2005I0065	Pressure regulating thumb screw	1	SM1/2(28)×43
E23	HA117H0692	Lock nut	1	
E24	HA300B2130	Set screw	1	SM9/64(40)×5.5
E25	HA300H2120	Upper thread guide	1	
E26	HA100C2040	Screw	1	SM11/64(40)×5
E27	HM30H58001	Presser loot complete	1	
E28	HM30H68001	Walking foot guard cover	1	
E29	HA500C2070	Screw	1	SM9/64(40)×5

F.TOP FEED MECHANISM



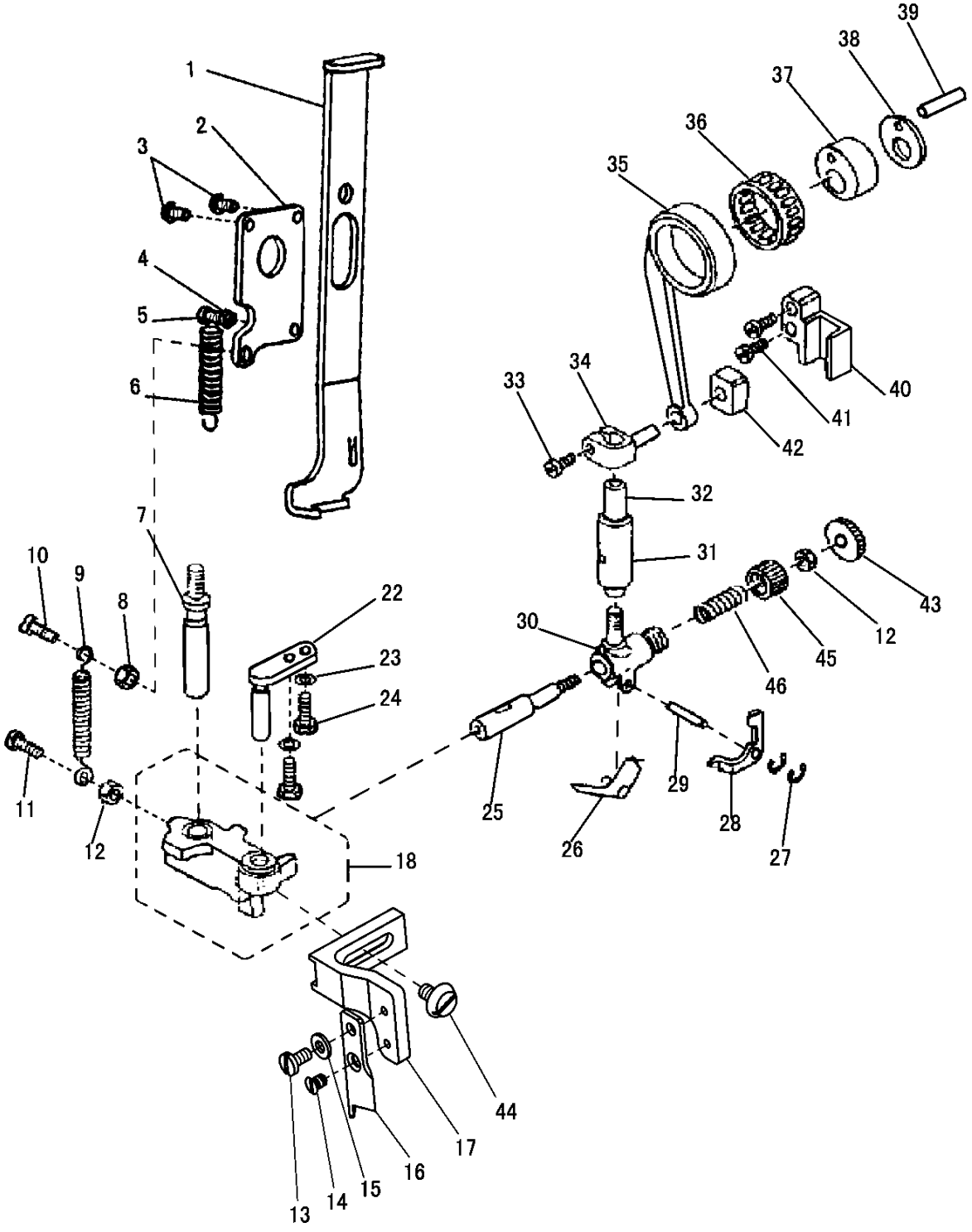
F.TOP FEED MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
F01	H2010J0065	Lifting presser adjusting screw	1	SM9/32(28)×35
F02	H2010J0066	Lifting presser adjusting nut	1	SM9/32(28)
F03	H2100I2080	Lifting presser bracket for spring	1	
F04	H2009B0068	Presser lifting shaft bushing	2	
F05	HA100B2110	Screw	2	
F06	H2011J0066	Shaft	1	
F07	H2100I2010	Presser lifting shaft	1	
F08	H2012N0652	Set screw	1	
F09	H2104I0065	Eccentric wheel rod	1	
F10	H2000J2100	Set screw	1	M6(0.75)×29
F11	H2014J0652	Eccentric wheel	1	
F12	H007009250	C-type stop ring	1	GB/T894.1 25
F13	HA307C0662	Screw	2	SM1/4(40)×6
F14	H2013J0065	Washer	1	
F15	H0030580608	Nut	1	GB/T52008 M6×0.75
F16	H2100I2020	Presser feed crank	1	
F17	H2100I2130	Presser feed crank link	1	
F18	H2004J0653	Screw	2	SM3/16(28)×10
F19	H2100I2190	Lifting presser spring	1	
F20	H2007J0066	Presser spring guide	1	
F21	H2100I2090	Lifting presser guide plate	1	
F22	H2000I2050	Screw	3	SM9/64(40)×8
F23	H609030080	Pin	2	GB/T879.1 3×8
F24	H2000J2020	Lifting presser plate	1	
F25	HA300C2030	Screw	4	SM11/64(40)×8
F26	H2000J2030	Lifting presser spring guide pin	1	
F27	H2004J0655	Feed crank guide shaft	1	
F28	H2004J0662	Screw	1	SM1/4(40)×15
F29	H2011J0065	Presser lifting crank	1	
F30	H602040200	Pin	1	GB/T117 4×20
F31	H2100I2060	Presser swing shaft bushing (left)	1	
F32	HA100B2110	Screw	2	SM11/64(40)×5.5
F33	H2012N0651	Presser swing crank(right)	1	
F34	H2012N0652	Screw	1	SM1/4"(24)×16
F35	H2010J0066	Lifting presser adjusting nut	1	SM9/32(28)
F36	H2100I2030	Presser swing crank (right) rod	1	
F37	H2012N0066	Screw	1	SM9/32(28)×28
F38	H2100I2060	Presser swing shaft bushing (left)	1	
F39	H2121I0065	Lifting presser sway crank shaft compl	1	
F40	H2013N0069	Lifting presser sway crank	1	
F41	H2008N0066	Lock nut	1	SM1/4(40)
F42	H2004J0654	Presser rod	1	
F43	H2004J0661	Presser rod guide	1	

F.TOP FEED MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
F44	H2004J0067	Screw	2	SM9/64(40)×9
F45	HM30I48001	Out presser	1	
F46	H2000N0040	Space for presser rod plate	2	
F47	H2000N0030	Lifting presser rod plate	1	
F48	HA111G0683	Screw	2	SM11/64(40)×12
F49	H2100I2140	Screw	1	SM1/4(40)×18
F50	H2013N0066	Lifting presser sway crank guide pin	1	
F51	H2100I2070	Screw	1	SM3/16(32)×7
F52	H2013N0067	Presser crank connecting nut	1	SM1/4(24)
F53	H2013J0065	Washer	1	
F54	H2013N0070	Presser swing crank(left)	1	
F55	H2009N0066	Presser swing shaft	1	
F56	HA100I2050	Washer	2	
F57	H2004J0662	Screw	1	SM1/4(40)×15

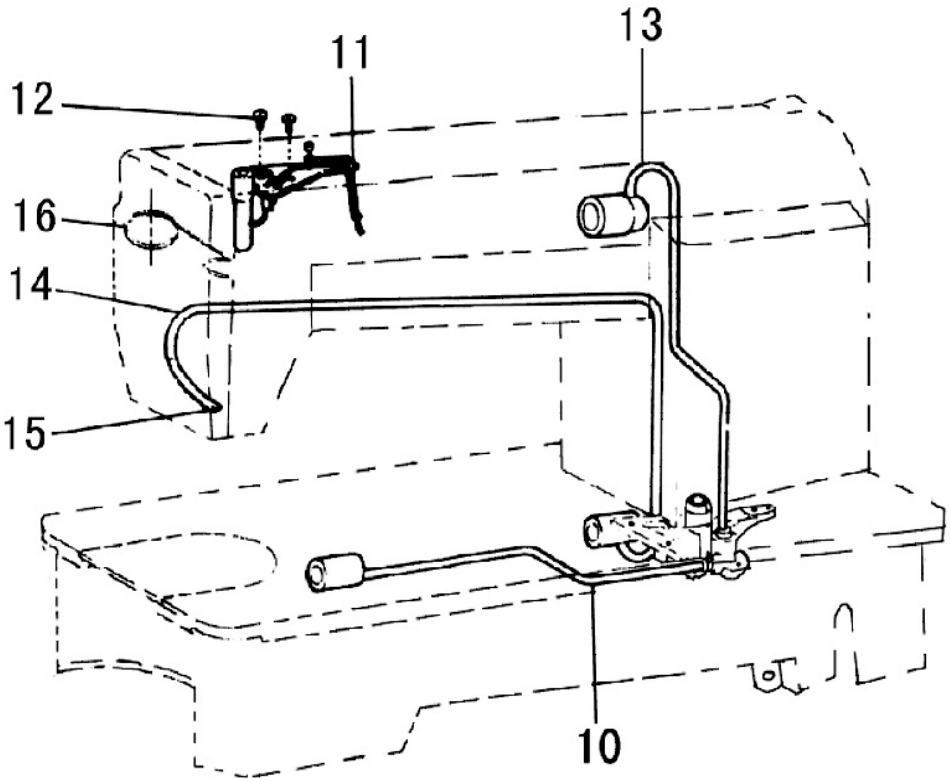
G.KNIFE MECHANISM

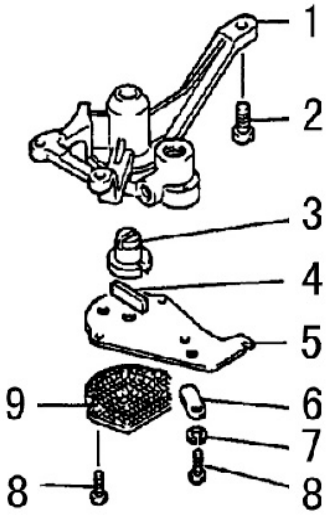


G.KNIFE MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
G01	HD90J48001	Knife positioning plate	1	
G02	HD90J68001	Knife positioning plate mounting plate	1	
G03	HA300B2170	Set screw	2	SM11/64(40)×8
G04	H5729F8001	Nut	1	SM11/64(40)
G05	H3107G0661	Screw	1	SM11/64(40)×14
G06	H5317G8001	Spring	1	
G07	H5732F8001	Knife driving block stud	1	
G08	HA104J6510	Nut	1	SM15/64(28)
G09	H5707F8001	Spring	1	
G10	H6017F8001	Screw	1	SM15/64(28)×18
G11	H4753E8001	Screw	1	SM11/64(40)×17.5
G12	H5729F8001	Nut	2	SM11/64(40)
G13	HE108E8001	Screw	1	SM9/64(40)×7
G14	HA7121N304	Screw	1	SM9/64(40)×5
G15	H3200I2030	Washer	1	
G16	HM30J68001	Knife	1	
G17	HM30J78001	Knife holder	1	
G18	HD90J98001	Knife driving block Asm	1	
G22	HD90J58001	Guide stud for knife driving	1	
G23	H005004050	Washer	2	4.8×8.4×0.8
G24	H5735F8001	Screw	2	SM3/16(28)×9
G25	H5715F8001	Knife driving rod clutch pin	1	
G26	H5716F8001	Spring	1	
G27	H007013015	Stop ring	2	
G28	H5717F8001	Knife release lever	1	
G29	H5718F8001	Pin	1	
G30	H5719F8001	Knife driving rod clutch pin guide	1	
G31	H5720F8001	Bushing	1	
G32	H5721F8001	Knife driving stud	1	
G33	HA106B0676	Screw	1	SM9/64(40)×6
G34	H5722F8001	Knife driving stud connection	1	
G35	H5723F8001	Knife driving rod	1	
G36	H30211C206	Knife needle bearing	1	K25×29×10
G37	HD91C08001	Knife cam	1	
G38	HD91C18001	Thrust plate	1	
G39	H5726F8001	Pin	1	
G40	H5727F8001	Slide block guide	1	
G41	HA100C2190	Screw	2	SM11/64(40)×8
G42	HA100C2200	Slide block	1	
G43	H5728F8001	Knob	1	
G45	H5730F8001	Cap	1	
G46	H5731F8001	Spring	1	
G47	H5733F8001	Screw	1	SM11/64(40)×8

H.OIL LUBRICATION MECHANISM

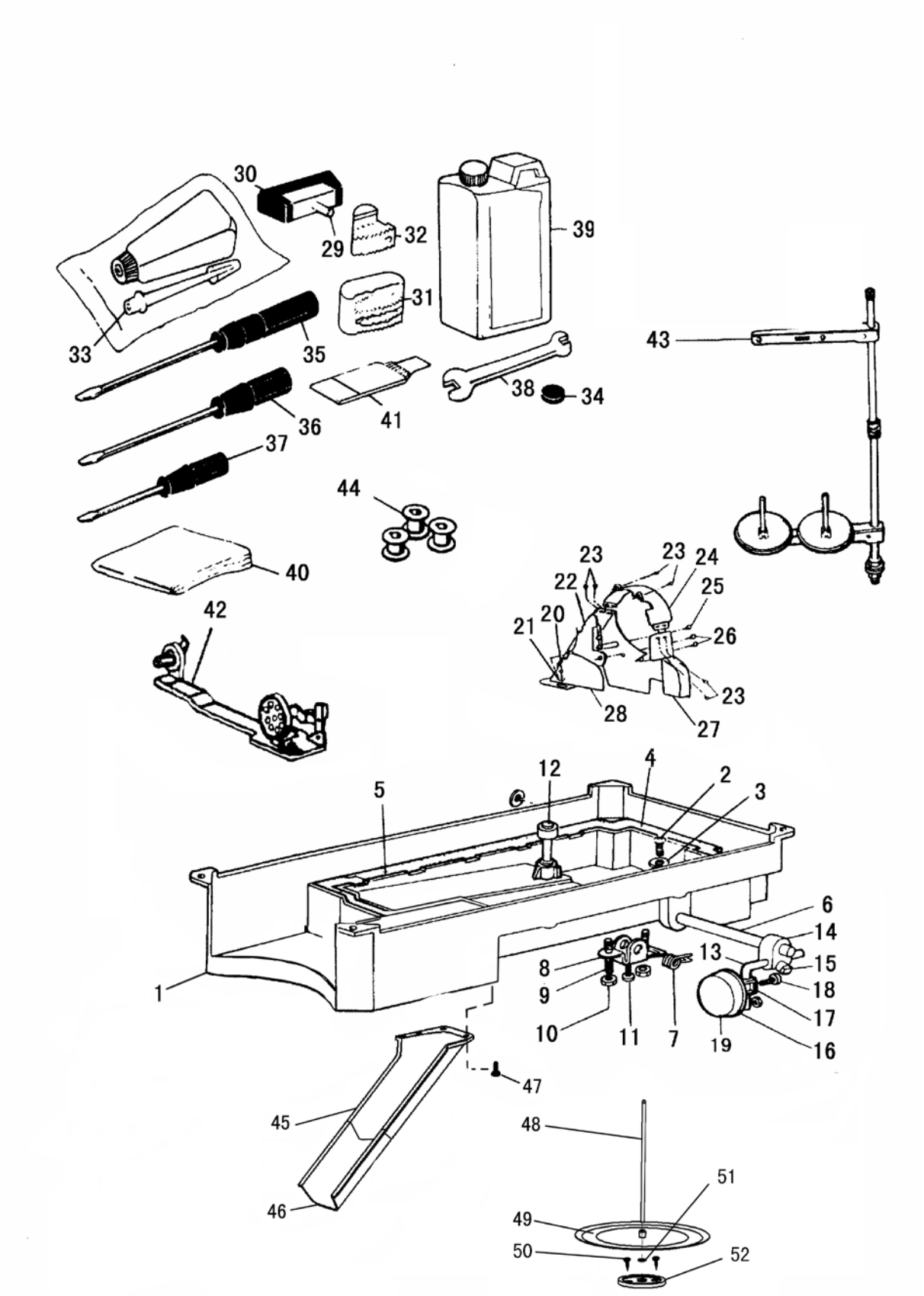




H.OIL LUBRICATION MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
H01	H6006I8001	Oil pump body	1	
H02	HA100I2090	Screw	3	SM11/64(40)×13
H03	H6010I8001	Oil pump impeller	1	
H04	H6011I8001	impeller	1	
H05	H6012I8001	Oil pump fitting plate	1	
H06	H6021I8001	Oil adjusting plate	1	
H07	HA100I2050	Spring washer	1	
H08	HA300I2050	Screw	3	SM1/8(44)×13
H09	HA111I0065	Oil pump screen complete	1	
H10	HA113I0066	Oil pipe for hook shaft	1	
H11	H2104J0065	Oil braid fitting plate	1	
H12	HA100H2150	Screw	2	SM9/64(40)×11
H13	H5604G0065	Oil pipe for arm shaft	1	
H14	HA305I0661	Oil return pipe	1	
H15	HA100I2150	Felt pouch	1	
H16	HA300I2060	pipe holder	1	

I.OIL RESERVOIR AND OTHER ACCESSORIES



I.OIL RESERVOIR AND OTHER ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
I01	HM30L58001	Oil seservoir	1	
I02	HA104J0652	Oil drain screw	1	SM5/16(28)×10
I03	HA104J0653	Washer	1	
I04	HA104J0654	Gasket for oil reservoir (small)	1	
I05	HA104J0655	Gasket for oil reservoir (big)	1	
I06	HA300J2160	Hinge pin for knee lifter	1	
I07	HA104J0657	Backspring for knee lifter	1	
I08	HA104J0658	Knee lifter stop bracket	1	
I09	HA104J0659	Adjusting screw	2	SM15/64(28)×28
I10	HA104J6510	Lock nut	2	
I11	HA110D0672	Screw	1	SM15/64(28)×14.8
I12	HA106J0661	Knee lifter lifting rod	1	
I13	HA106J0662	Knee lifter bell crank	1	
I14	HA106J0663	Joint for knee lifter bell crank	1	
I15	HA300J2180	Set screw	2	SM5/16(28)×16
I16	HA106J0665	Knee lifter plate	1	
I17	HA106J0666	Bracket for knee lifter plate	1	
I18	HA106J0667	Set screw	1	SM15/64(28)×8
I19	HA106J0668	Pad for knee lifter plate	1	
I20	H801045200	Screw	4	GB/T99 4.5×20
I21	HA300J2230	Washer	4	
I22	H200800068	Belt(upper)	1	
I23	HA300B2170	Screw	2	SM11/64(40)×8
I24	H200800671	Belt mark complrte	1	
I25	HA300J2250	Screw	1	M4×12.5
I26	HA300J2280	Screw	2	SM15/64(28)×8
I27	H200800067	Belt (lower)	1	
I28	HA305J0665	Belt complete	1	
I29	HA110J0701	Hinge of machine head	2	
I30	HA307J0671	Rubber socket for hinge	2	
I31	HA300J2050	Rubber cushion(big)	2	
I32	HA300J2060	Rubber cushion(small)	2	
I33	HA100J2110	Oiler	1	
I34	HA100J2120	Magnet	1	
I35	HA300J2070	Screw driver(long)	1	
I36	HA300J2200	Screw driver(medium)	1	
I37	HA300J2210	Screw driver(short)	1	
I38	HA300J2220	Double-end wrench	1	
I39	HA100J2170	Oil container	1	
I40	HA100J2180	Vinyl cover	1	
I41		Needle	4	DP×17 #22
I42	HA905S0066	Bobbin winder assy	1	
I43	HA200J2030	Washer	1	

I.OIL RESERVOIR AND OTHER ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
I44	H1100E2010	Bobbin	3	
I45	H5704I8001	Waste material chure(large)	1	
I46	H5705I8001	Waste material chure(small)	1	
I47	H401040080	Screw	4	M4×8
I48	H7323H8001	Shelf	1	
I49	H7320H7101	Plate complete	1	
I50	H801055250	Screw	2	5.5×25
I51	HA300J2230	Washer	1	
I52	H7326H8001	Seat	1	

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2018.3. Printed