

HIGHLEAD

GC0318-2ADZ

**Direct Drive Heavy Duty Top And Bottom Feed
Lockstitcher With Thread Trimmer**

**Instruction Manual
Parts Catalog**

SHANGHAI HUIGONG NO.3 SEWING MACHINE FACTORY

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1. PRECAUTIONS BEFORE STARTING OPERATION

1) Safety precautions

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

2) Precaution before Starting Operation

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

3) Precaution for Operating Conditions

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

2. SPECIFICATIONS

Material weight	GC0318-2ADZ	
Max. speed	2000rpm	
Stitch length	0 to 8mm	
Needle bar stroke	35mm	
Presser foot clearance	Hand Lifter	6 mm
	Knee lifter	13 mm
Needle type	DP×17 #18~#22	
Rotating hook	Auto lubricated large hook for trimmer	
Lubrication	Auto lubricated	
Motor	220V550W Servo motor	

3. PREPARATION AND LUBRICATION

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

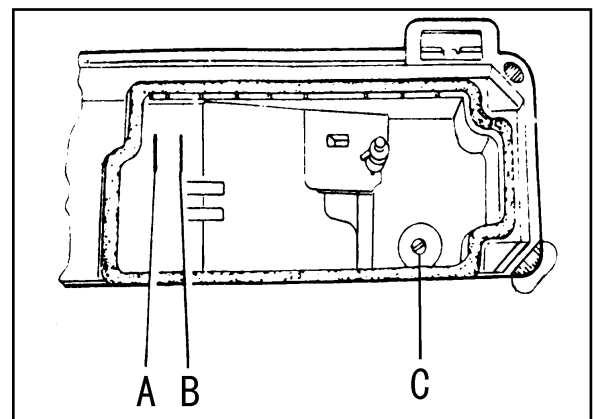
(1) Required amount of oil. Line (A) on the oil reservoir: Max. oil level. Line (B) on the oil reservoir: Min. oil level. If oil level goes down under line (B), oil cannot be distributed to each part of the machine, thus causing the parts a seizure.

(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.



4) Run-in operation

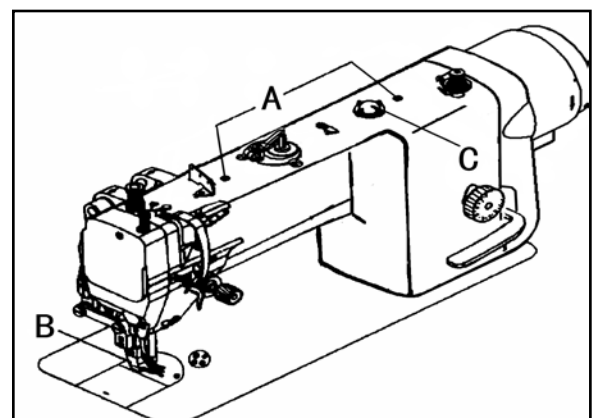
Run-in operation is required for a new sewing machine, or a sewing machine left out operation for a considerable length of time.

(1) Remove Red 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.

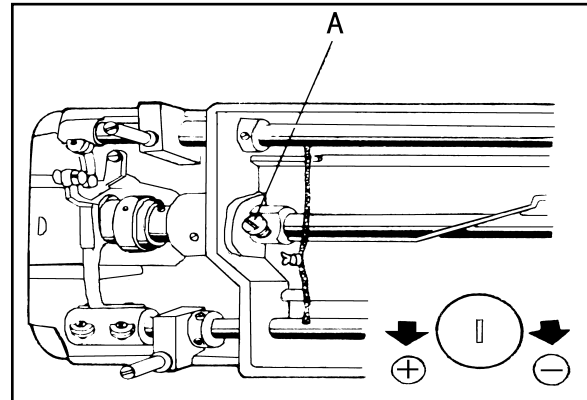
5) Adjusting the lubrication of rotating hook

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.

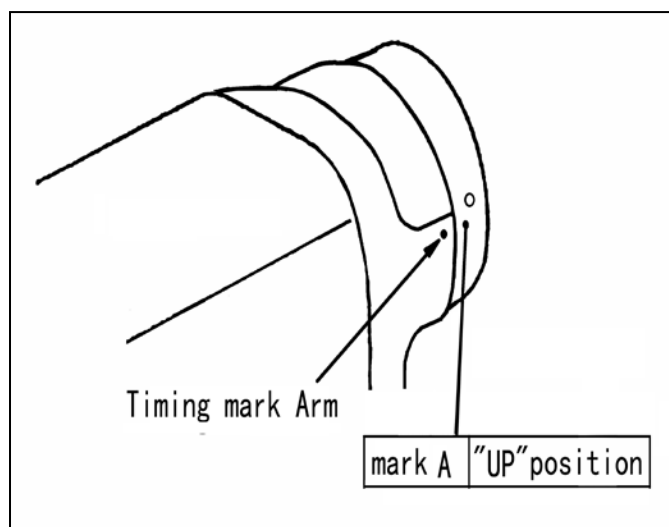
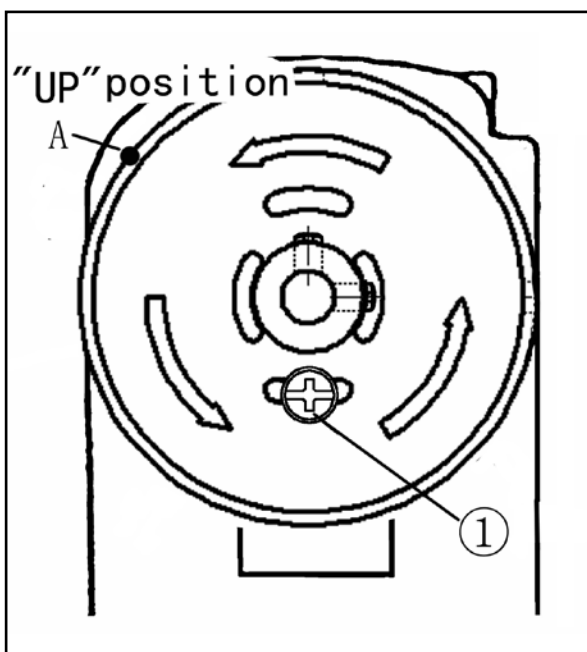


4. PREPARATION BEFORE START TO OPERATE

Adjustment of needle bar stop position Adjust of "UP" position

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

Release the set screw (1) of the magnet positioned piece, adjust the position of magnet positioning piece, until the machine stops in the needle up position (the marker (A) and the marker point of motor cover to coincide), then tighten the screw (1).



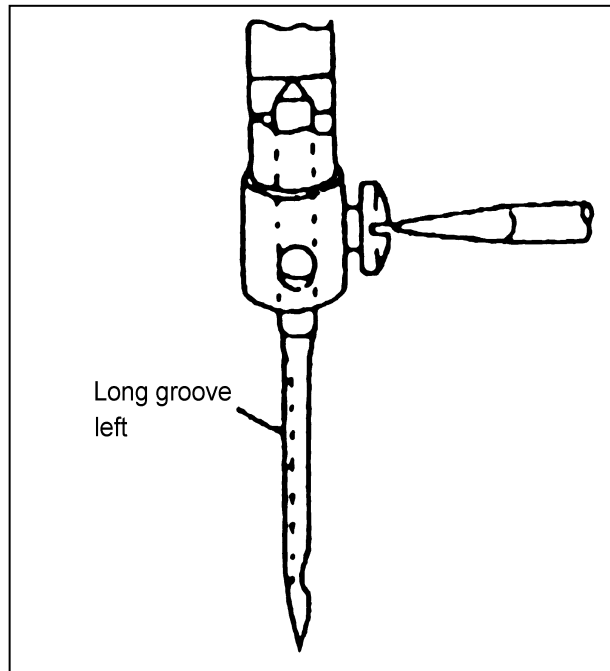
5. HOW TO USE THE MACHINE

1) How to attach needle

Note: Before making the following adjustment, be sure to switch off the power source.

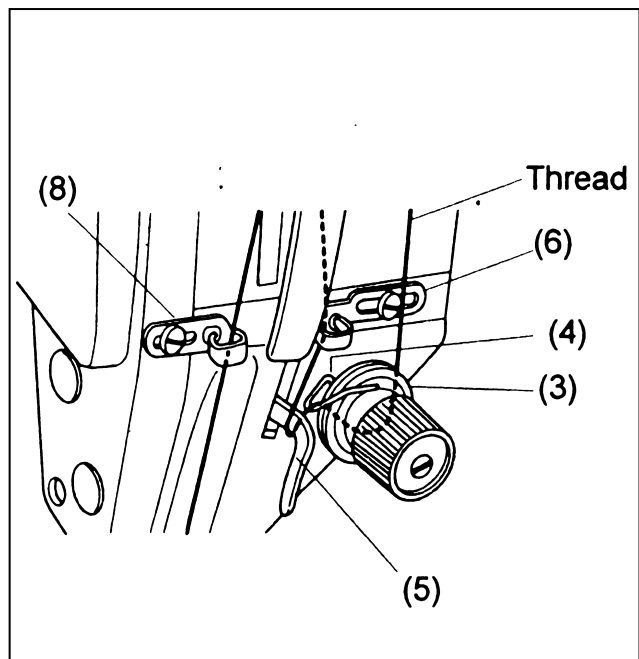
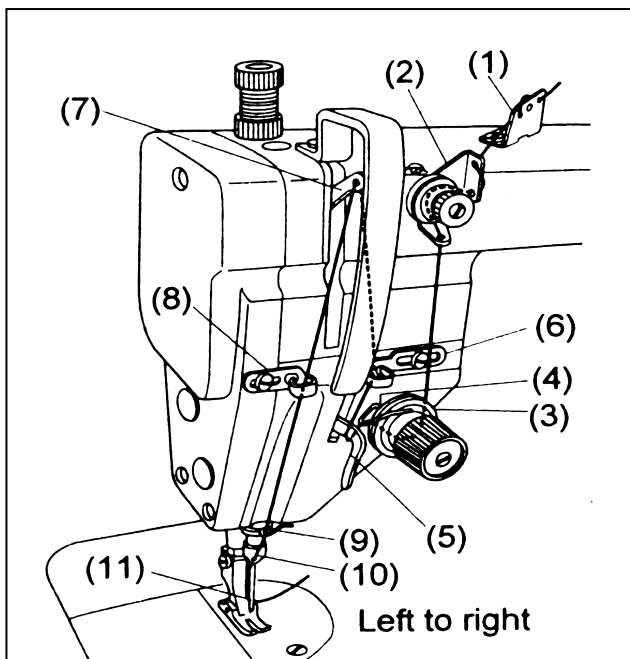
Insert the needle up to the bottom of needle clamp and tighten the screw keeping the long groove side of needle forward the left.

Note: if snapping of thread occurs during back Sewing with polyester threads, it may be avoided by fitting the needle with the long groove Shifted to the front side.



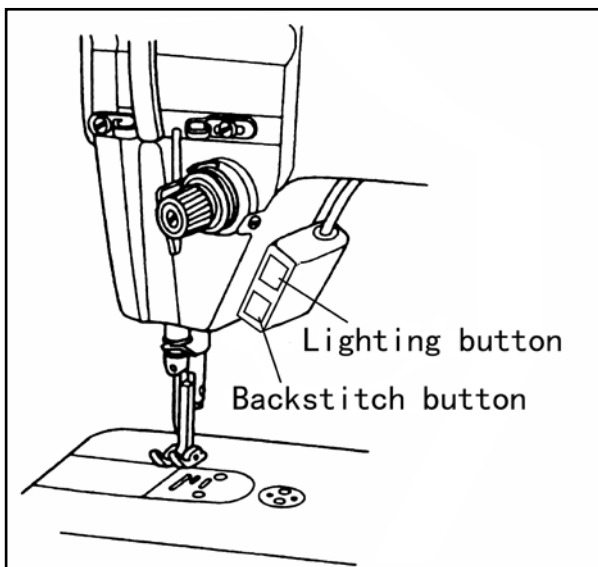
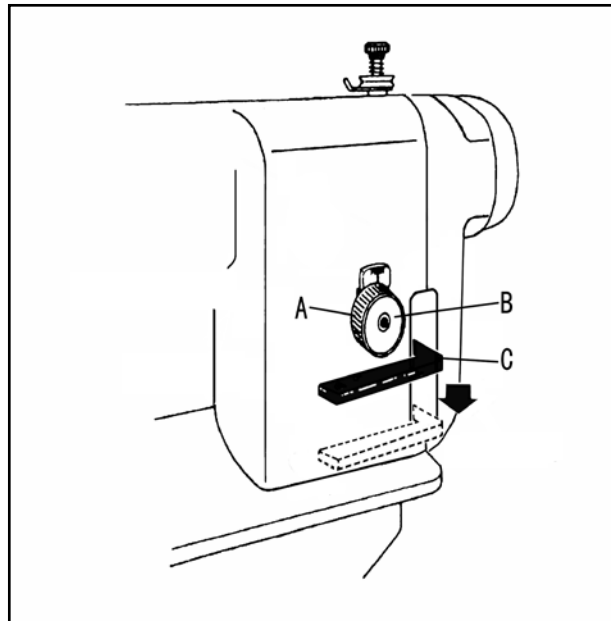
6. THREADING

Raise the thread take-up lever to its highest position and thread the upper thread in the following order. 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 front ward under presser foot.



7. SET STITCH LENGTH AND REVERSE FEEDING

- 1) Stitch length can be set by turning Dial (A).The figures on Face (B) of dial show stitch length in mm.
- 2) Reverse feeding starts when Reverse Feed Lever (C) is depressed, and the machine will feed forward again if Reverse Feed lever (C) is released.



(3) Touchback switch

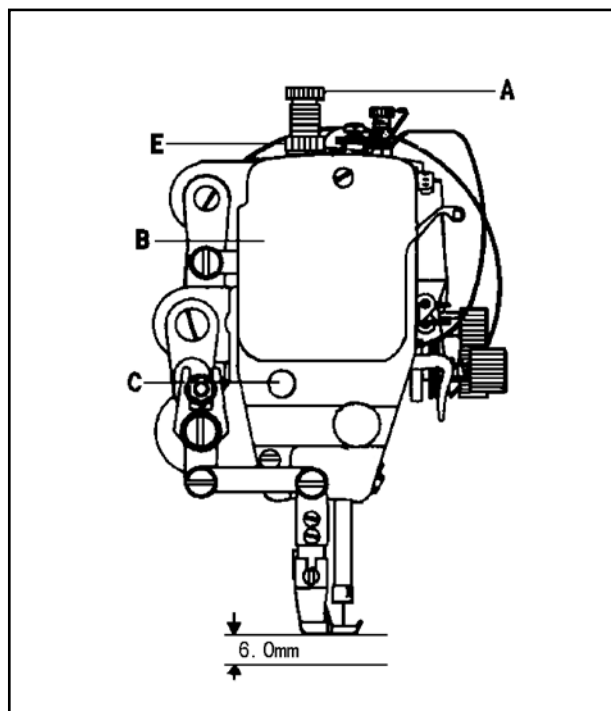
With the backstitch button pressed lightly during sewing, reverse sewing can be done.

Reverse sewing will take place while the push-button is pressed.

When the push-button is released, reverse sewing turns into forward sewing.

8. POSITION PRESSER BAR

- 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).

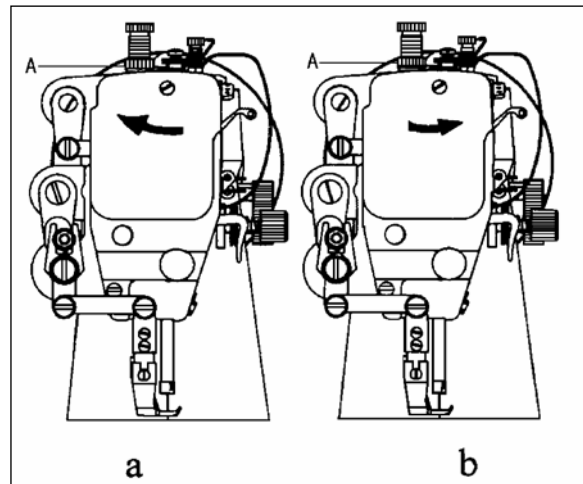


9. ADJUST THE PRESSURE OF PRESSER FOOT

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).

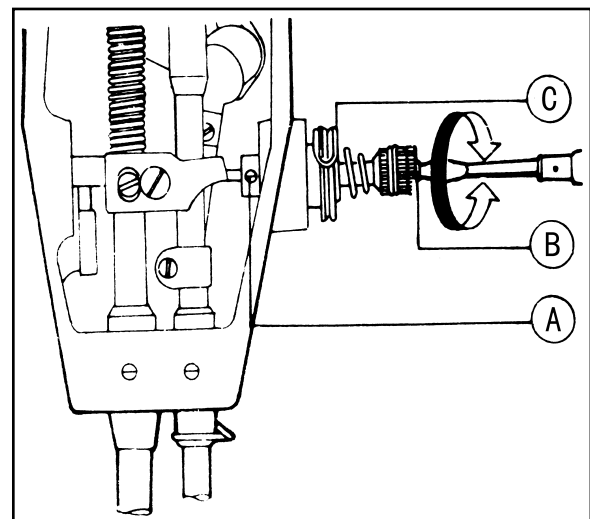
The pressure of presser foot is recommended to be less as long as normal feeding is ensured.



10. ADJUST THREAD TAKE-UP SPRING

1) Adjusting the thread take-up spring tension

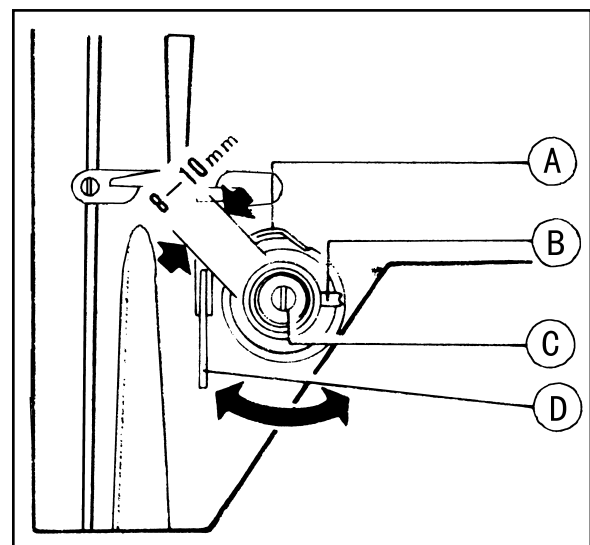
Loosen Set Screw (A), turn Tension Stud (B) clockwise to increase the spring tension, or turn the stud counter-clockwise to decrease the spring tension. After the adjustment, be sure to tighten Set Screw (A). The thread take-up spring tension should be about 30g. To Attain this. First loosen Set Screw (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



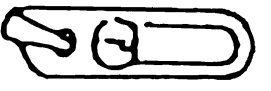
Loosen Set Screw (B), turn Stud (C) clockwise to increase the stroke or turn Stud (C) counter-clockwise to decrease the stroke. After the adjustment, tighten Set Screw (B).

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.



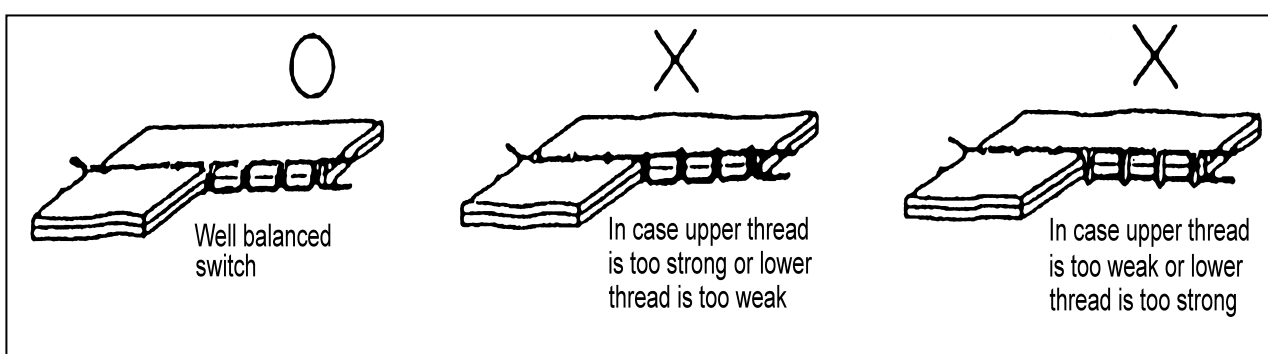
11. ADJUST THREAD GUIDE AND THREAD TENSION

1) Adjusting of the thread guide

	1	2	3
Thread guide position	Left 	Middle 	Light 
Materials	Heavy	Medium	Light

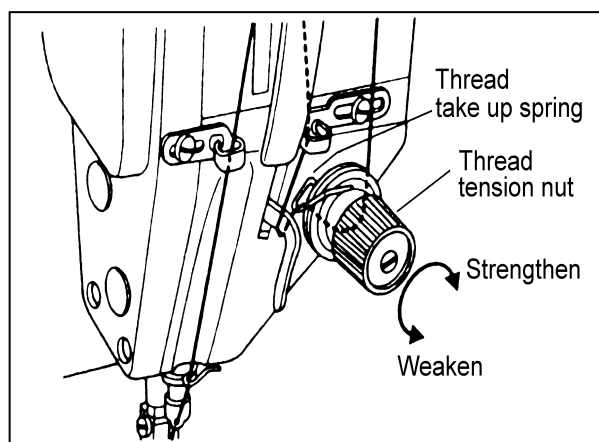
Refer to the table above, and adjust according to the stitching conditions, the material and thread

2) Adjusting of thread tension



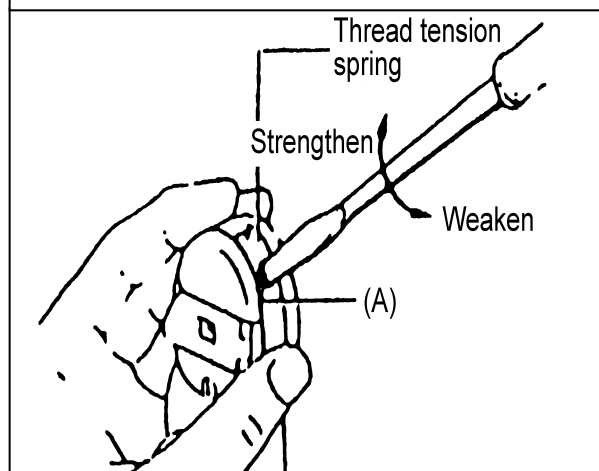
3) Adjusting of upper thread tension

- (1) Upper thread tension can be adjusted by thread tension nut.
- (2) Upper thread is to be adjusted according to the lower thread tension.
- (3) For special fabric sewing with special thread, the desired tension can be obtained by adjusting the strength and operating range of thread take-up spring.

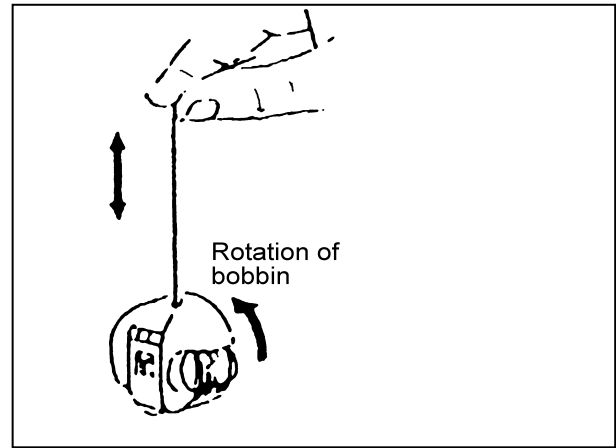
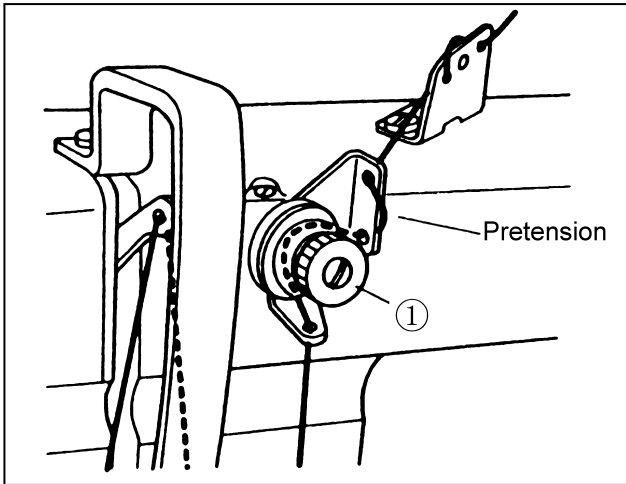


4) Adjusting of lower thread tension

- (1) Lower thread tension can be adjusted by screw (A).



(2) In the case of cotton thread #60, the thread tension can be checked as the following. Hold the end of pulled out thread and if the bobbin case fall slowly, the tension is proper.

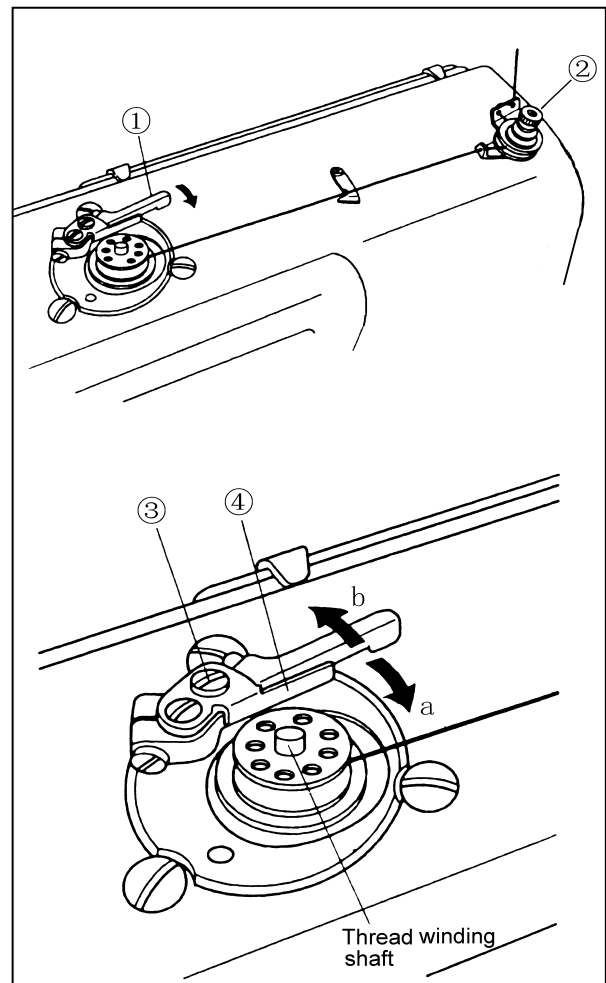


5) Adjustment of remaining needle thread length after thread trimming

- (1) Turn the pretension nut ① and adjust.
- (2) When turned clockwise, the length of thread left in the needle will be short. When turned counterclockwise, the length of the thread left in the needle will be long.

12. HOW TO WIND THE IOWER THREAD ON THE BOBBIN

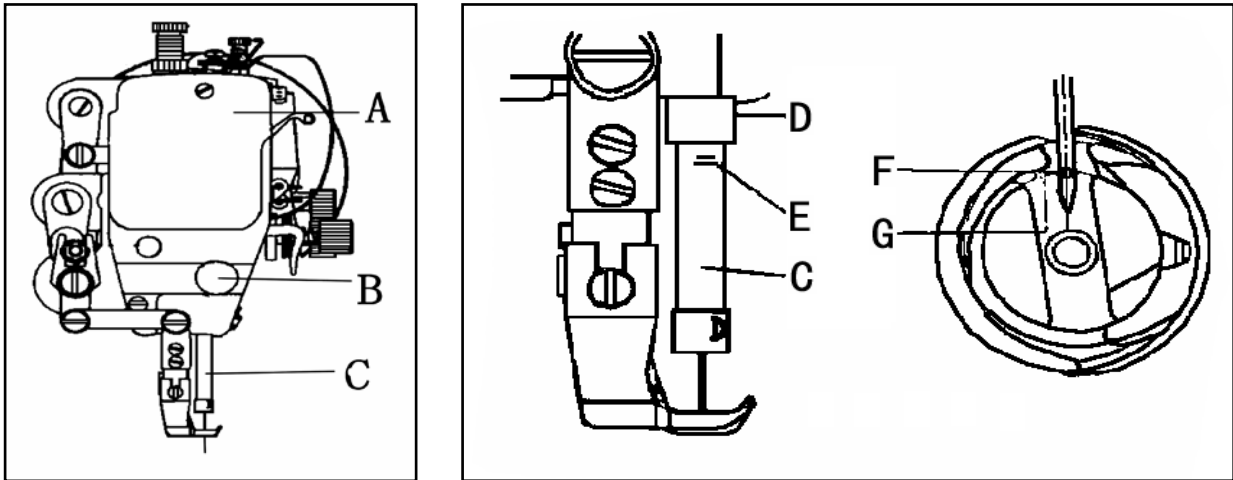
- (1) Press the bobbin onto the thread winding shaft.
- (2) Pass the thread for winding thread as shown in the figure, and wind the end of the thread clockwise around the bobbin several times, then wind the thread on the thread adjuster side counter-clock wise several times.
- (3) Press lever ① in the direction of the arrow, and start the sewing machine.
- (4) The operation will automatically stop when winding is completed.
- (5) Adjustment of thread winding strength
Adjust with the thread adjuster nut ②.
- (6) Adjustment of thread winding amount
Adjust by loosening screw ③ and moving the adjustment plate ④



13. TIME NEEDLE TO ROTATING HOOK

A. Adjusting the needle position

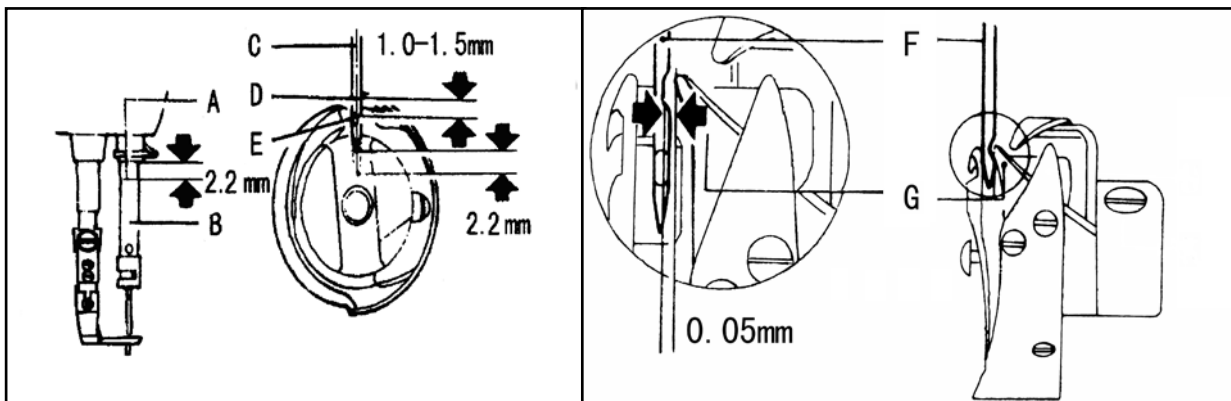
- 1) Turn balance wheel by hand to bring Needle Bar (C) to the lowest position of its stroke.
- 2) Remove rubber plug from Face Plate (A).
- 3) Loosen Set Screw (B) of needle bar adaptor.
- 4) Move Needle Bar (C) vertically to adjust needle timing.
- 5) After the adjustment, tighten Set Screw (B) and put in the rubber plug. The standard needle timing is to align Timing Mark (E) on the needle bar and the bottom of Needle Bar Bushing (D) and meanwhile align the Inner Surface (G) of the hook and the center of Needle Eye (F) when the needle bar gets down to its lowest position.



B. Adjusting the hook point timing

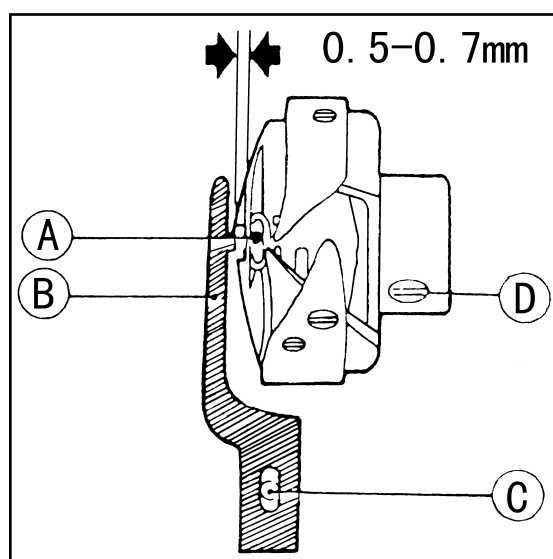
Timing of needle motion to rotating hook motion has a great effect on sewing performance. The standard hook point timing is to align Hook Point (D) and Needle Centerline (C) when Needle Bar (B) is lifted by 2.2mm from the lower end of its stroke. Besides, Hook Point (D) should be 1.0-1.5mm above the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

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

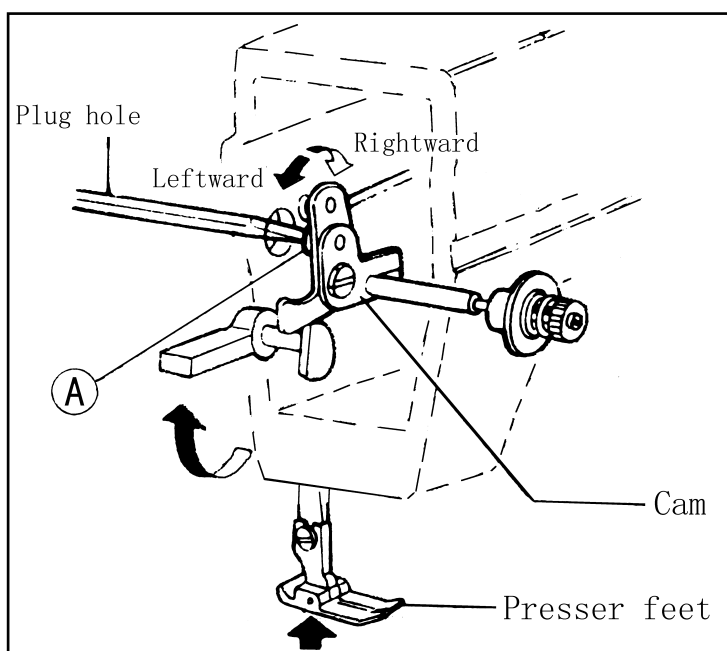


14. REPLACE ROTATING HOOK

- 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 position and take down Hook Position (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 Position (A) should align with a clearance of 0.5-0.7mm between them.



15. ADJUST OPENING TIME OF THE TENSION DISCS



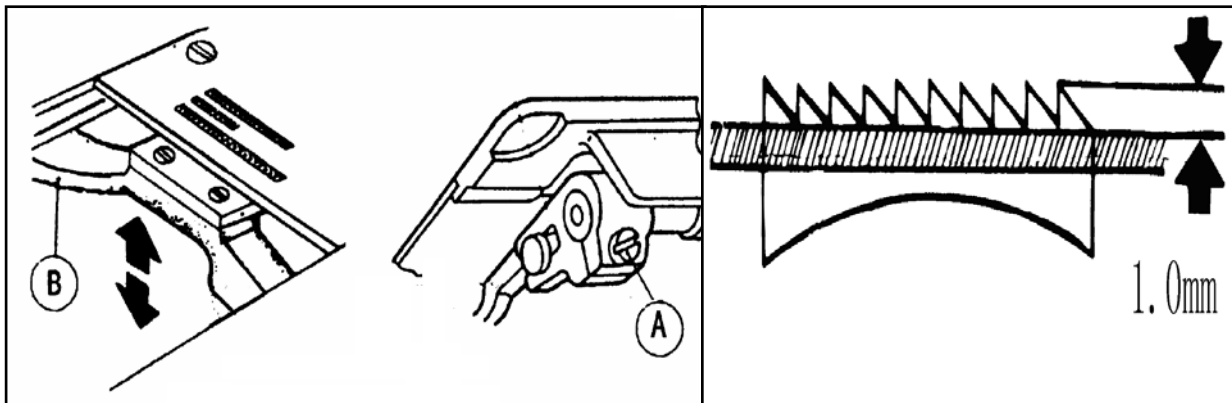
Within the presser foot lift range of 2-7mm opening time of the tension discs can be adjusted as follows:

- 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).

16. ADJUST THE HEIGHT OF FEED DOG

- 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
- 3) Move Feed Bar (B) in the direction shown by the arrow 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).

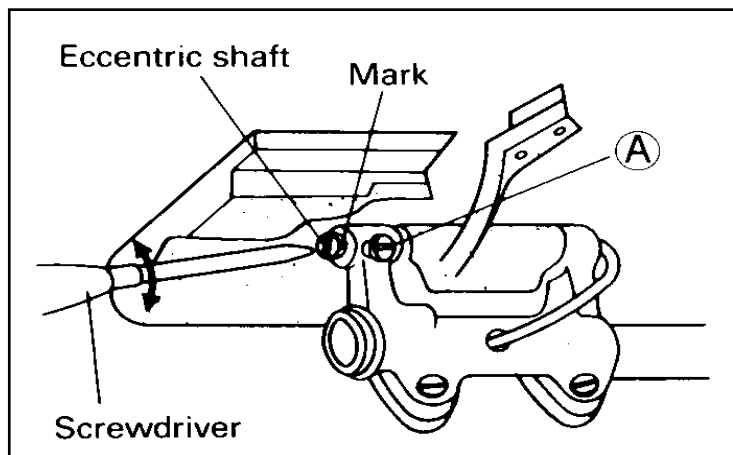
4) After the adjustment, be sure to tighten Screw (A).


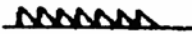






17. ADJUSTMENT OF FEED DOG INCLINATION

If necessary, adjust the inclination according to the material to be sewn as follows:

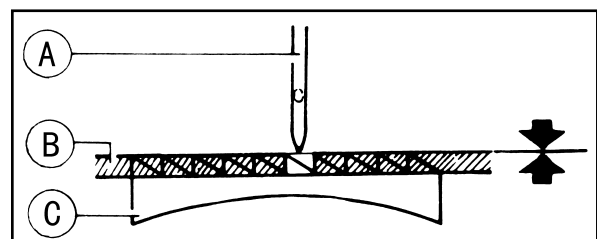
- 1) Loosen the screw "A".
- 2) Rotate the eccentric shaft clockwise or counterclockwise with screw driver.
- 3) Tighten the screw "A".



Position of mark on the eccentric shaft	Feed dog
 → Horizontal	 Standard
 ↑ Up	 Front up (MAX)
 ↓ Down	 Front down (MAX)

18. TIME FEED MOTION TO NEEDLE MOTION

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).

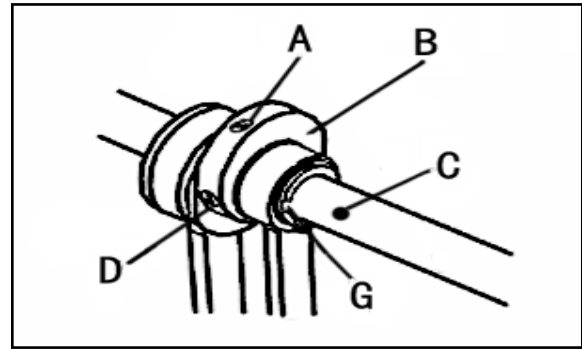


If feed motion is not timed to needle motion, adjust as follows

- 1) Remove Arm Side Cover .
- 2) Loosen Set Screws (A) and (D) of feed and feed lifting eccentric.

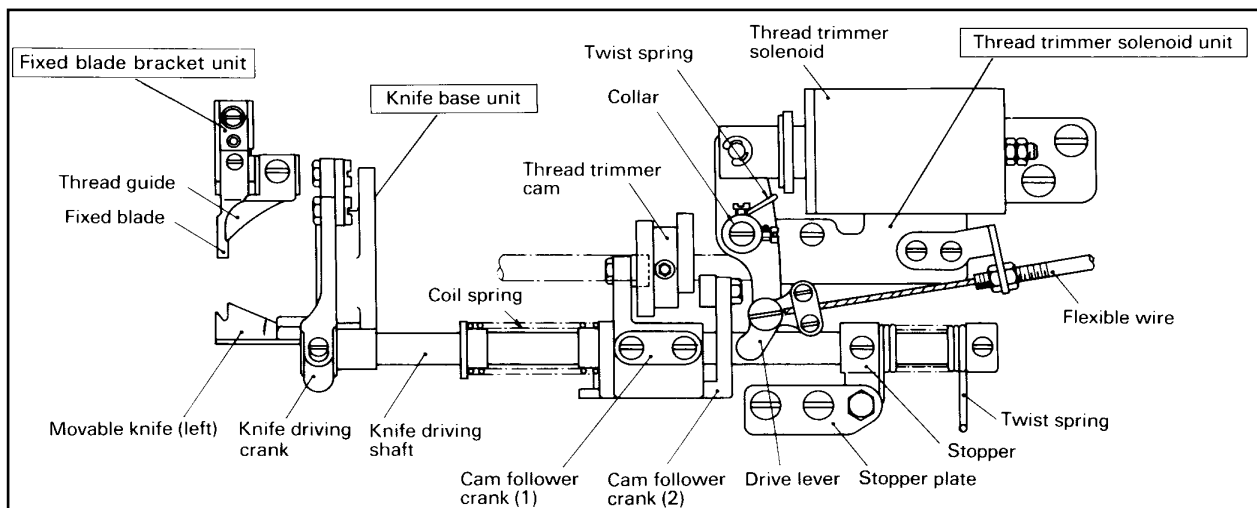
Hold Feed and Feed Lifting Eccentric (B) and turn Balance Wheel slowly until the upper edge of Arm Shaft

Oil Hole (C) aligns with the lower edge of Reference Hole (G) of feed and feed lifting eccentric.



19. ADJUSTMENT OF THREAD TRIMMER MECHANISM

- 1) The thread trimmer mechanism illustrated



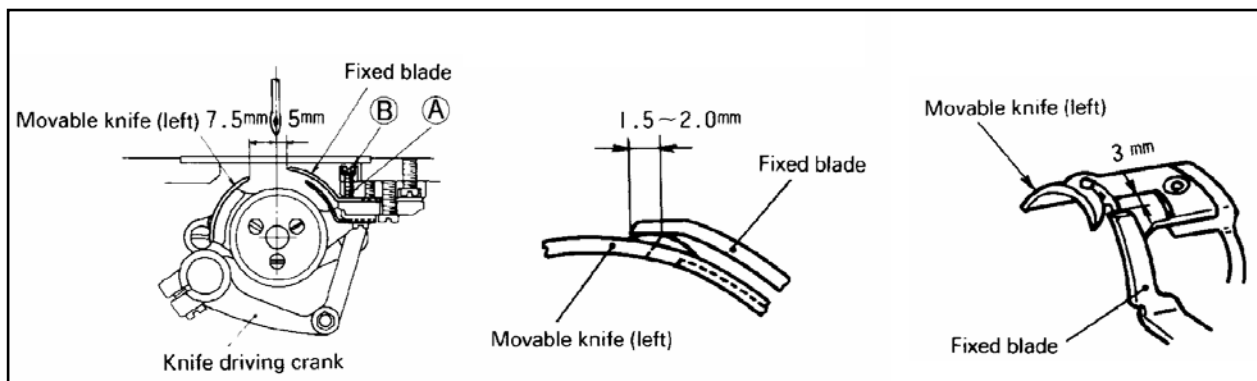
Operation stroke of the thread trimmer solenoid:

- a. Standard operation stroke is 6.0mm.
- b. This stroke can be adjusted by using nut "A".

- 2) Adjustment of knife engagement

(1) Position of movable knife (left) and fixed blade:

the standard distances from the needle center are 7.5mm and 5mm from the movable knife (left) and fixed blade



respectively.

(2) Adjustment of knife engagement:

With the solenoid activated, turn on the machine. This rotates the thread trimming cam which rotates the movable knife (left).

When the movable knife (left) has moved to its farthest distance, the standard engagement of the blade is 1.5mm-2.0mm. The engagement can be adjusted properly mounting the drive arm.

(3) Adjustment of knife engagement pressure:

a. If a thread is poorly cut, particularly when it is thick, slightly increase the engaging pressure. This should solve the problem.

b. The engaging pressure can be adjusted in this way: Loosen lock nut "B" and adjust it by using adjusting screw "A"

20. PERIODICAL CLEANING

a. Machine

- (1) Remove the throat plate and clean the feed dog.
- (2) Assembling is to be made by screwing in the screw by 2 to 3 rotations by hand at first, then tightening them evenly by use of a long size screw driver.
- (3) Lay down the machine head and clean the hook and inner bobbin case.

b. Maintenance of motor

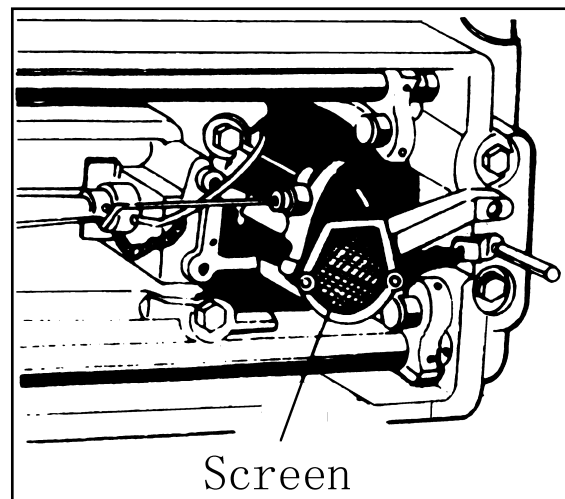
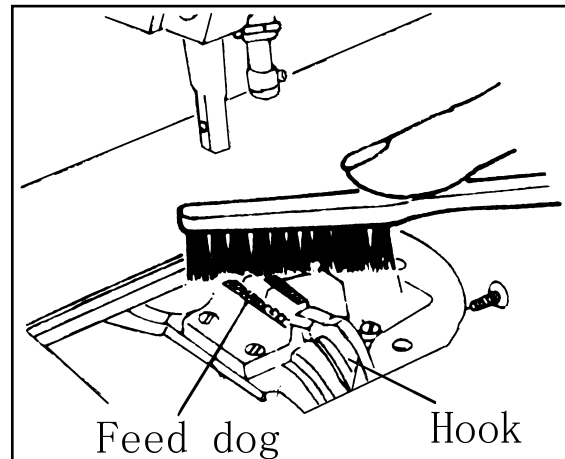
Remove dust from the motor cover every one or two month. (If operation is continued with the motor cover clogged with lint or dust, the motor might overheat.)

c. Control box

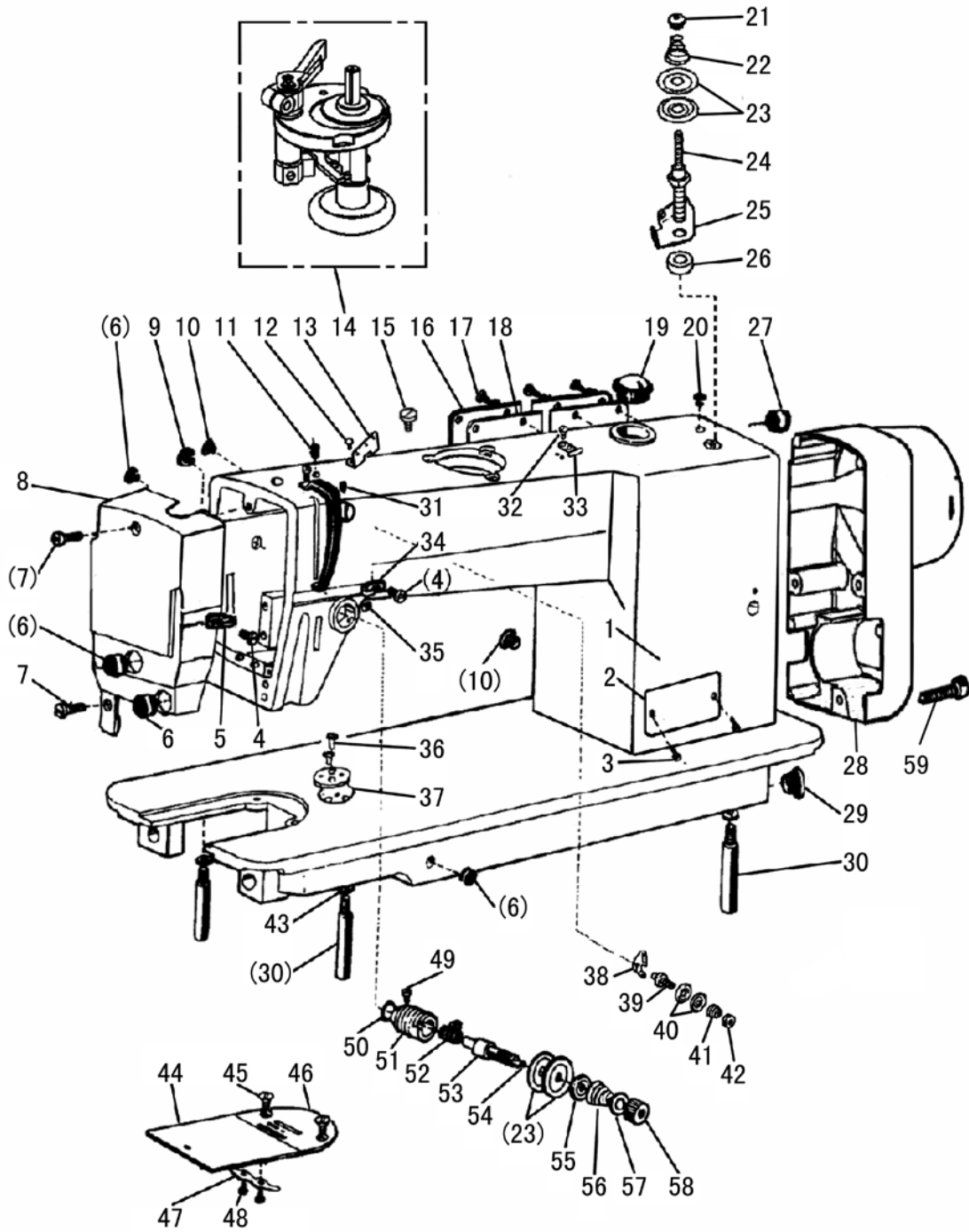
Remove dust from the connector (If the connector covered with dust, machine might misoperation)

d. Cleaning oil pump, screen

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



A. ARM BED AND IT'S ACCESSORIES



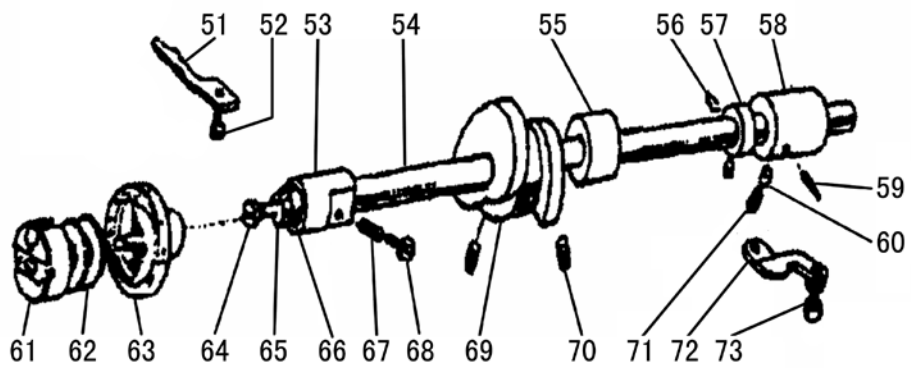
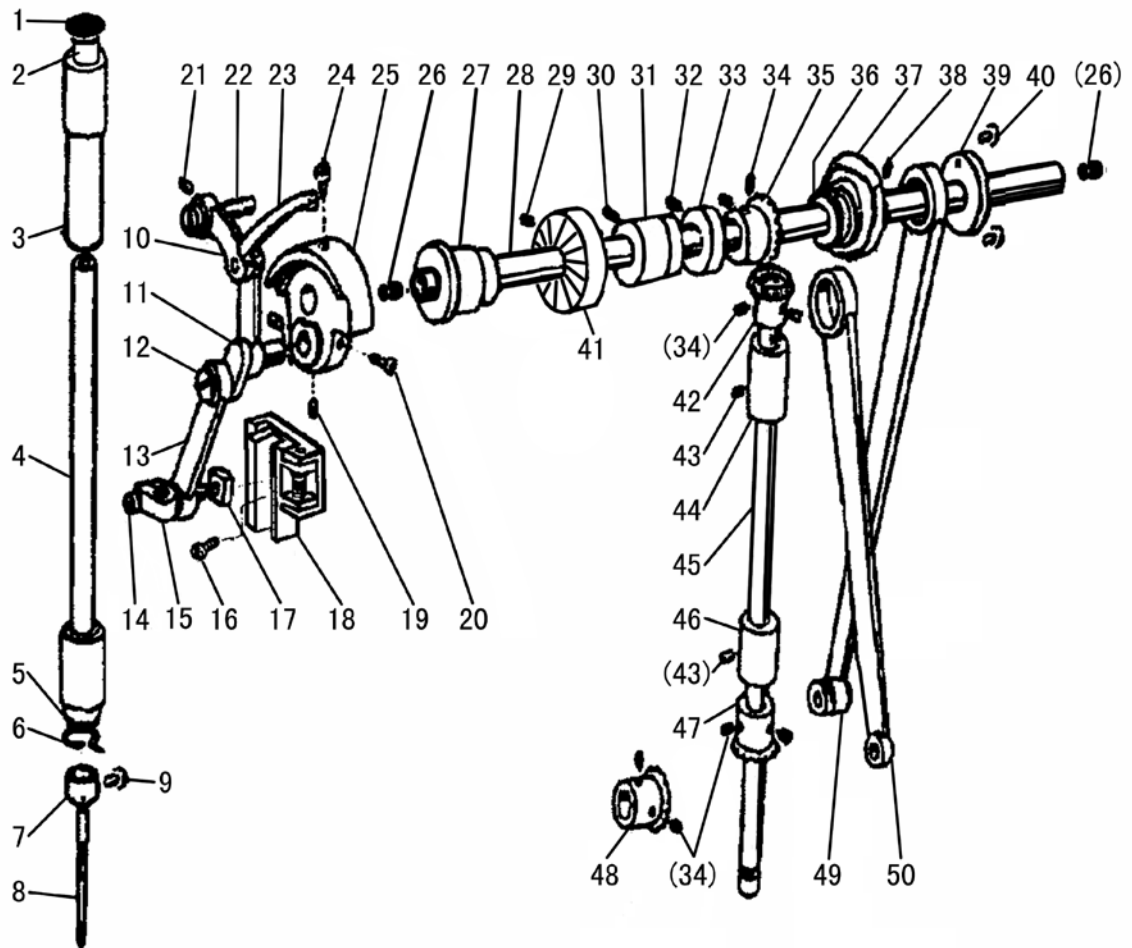
A. ARM BED AND IT' S ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
A01	HY90B57101	Arm	1	
A02	HY90B98001	Trade mark plate	1	
A03	H924025050	Rivet	2	φ 2.5×5
A04	HA106B0676	Thread guide screw	2	SM9/64" × 40
A05	HA607B0671	Thread guide on face plate	1	
A06	HA307B0674	Rubber plug (φ 11.8)	4	
A07	HA700B2030	Face plate screw	2	SM11/64" × 40
A08	HN310B8001	Face plate	1	
A09	HA307B0673	Rubber plug (φ 19)	3	
A10	HA300B2090	Rubber plug (φ 8.8)	3	
A11	HA300B2110	Rubber plug (φ 5.7)	1	
A12	HA700B2060	Set screw	1	
A13	HA700B2050	Three-hple thread guide	1	
A14	HY91B37101	Bobbin winder assy	1	
A15	H2400I2080	Set screw	3	
A16	H6028B8001	Arm side cover	1	
A17	HA300B2170	Screw group	4	
A18	H6029B8001	Gasket for arm side cover	1	
A19	H1210B0671	Check window	1	
A20	HA300F2050	Rubber plug (φ 10.8)	1	
A21	HA710B0671	Nut	1	
A22	H6739B8001	Thread tension spring	1	
A23	HA310B0705	Thread tension disc	4	
A24	H6735B8001	Thread tension stud	1	
A25	H6736B8001	Thread guide	1	
A26	H6737B8001	Spacer	1	
A27	H6030B8001	Rubber plug (φ 22)	1	
A28	HY90N58001	Motor cover	1	
A29	HA300B2100	Rubber plug (φ 27)	2	
A30	HA100B2220	Leg	3	
A31	HA100B2110	Set screw	1	SM11/64" × 40
A32	H6762B8001	Screw	2	
A33	H6756B8001	Thread cutter	1	
A34	HA600B2050	Thread guide at arm center	1	
A35	HA300B2080	Set screw	1	SM15/64" × 28
A36	HA300B2130	Screw	2	SM11/64" × 40
A37	HA300B2140	Plate for guide	1	
A38	HA710B0674	Pre-tension thread guide	1	
A39	HA710B0673	Screw type tension stud	1	SM11/64" × 40
A40	HA112B0693	Disc for pre-tension	2	
A41	HA710B0672	Spring for pre-tension	1	
A42	HA710B0671	Nut	1	
A43	H005008060	Spring washer	2	

A. ARM BED AND IT' S ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
A44	HA124B0711	Slide plate	1	SM11/64" × 40
A45	HA300B2190	Needle plate screw	2	
A46	H1100B2060	Needle plate	1	
A47	HA324B0711	Slide plate spring	1	
A48	HA124B0713	Screw	2	
A49	HA115B0708	Screw	1	
A50	HA115B7011	O-ring	1	
A51	HA310B0703	Thread tension regulating bushing	1	
A52	HA505B0672	Thread take-up spring	1	
A53	HA115B0701	Screw type tension stud	1	
A54	HA115B0709	Thread tension releasing pin	1	
A55	HA310B0702	Thread tension releasing disc	1	
A56	HA505B0671	Thread tension spring	1	
A57	HA115B7010	Stop disc	1	
A58	HA310B0701	Oil thumb nut	1	
A59	HZ11050200	Screw	3	

B. NEEDLE BAR AND TAKE-UP LEVER & ARM SHAFT MECHANISM



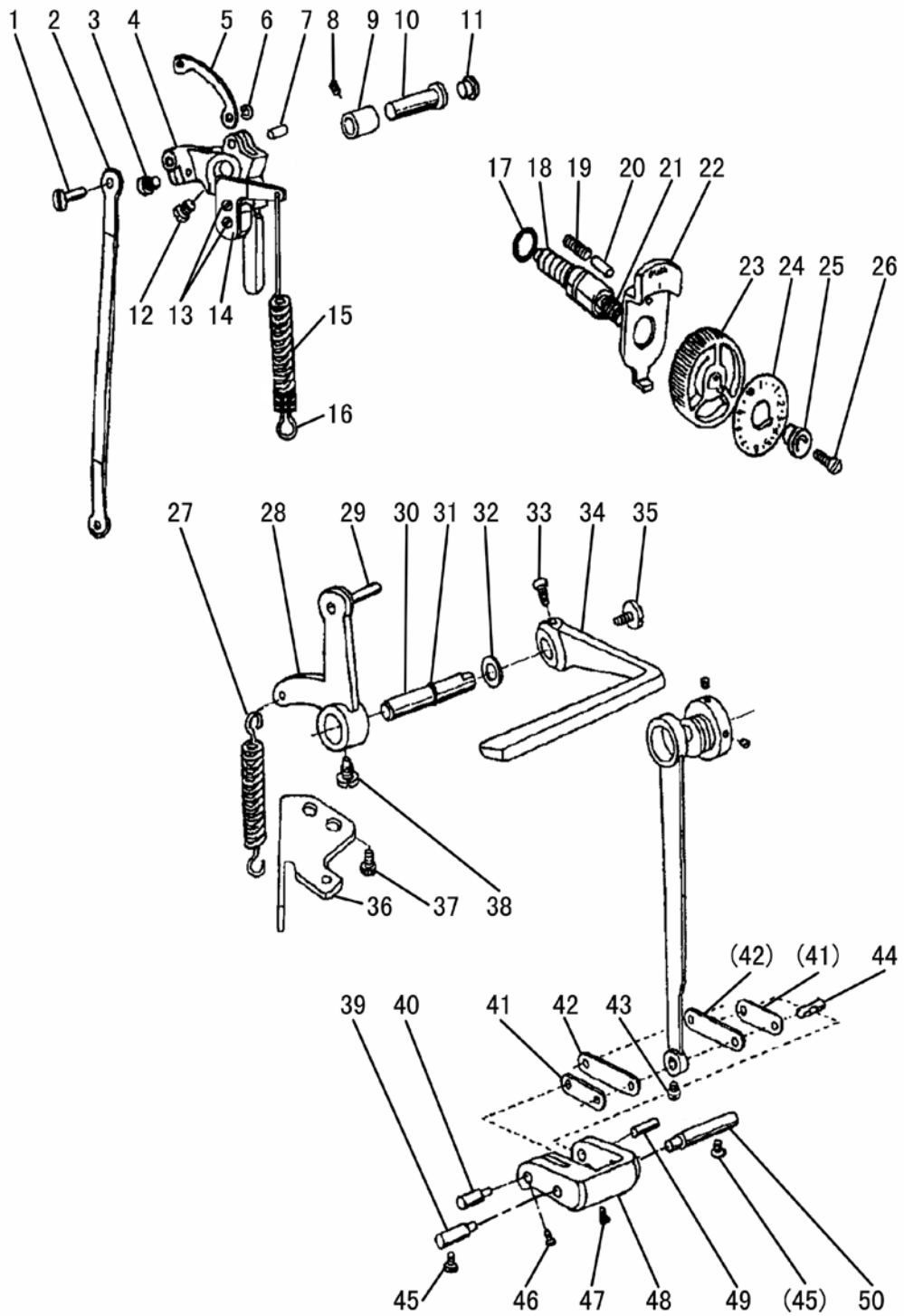
B. NEEDLE BAR AND TAKE-UP LEVER & ARM SHAFT MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
B01	HA300C2050	Rubber plug	1	
B02	HA100C2100	Felt plug	1	
B03	HA100C2080	Needle bar bushing (upper)	1	
B04	HN608C8001	Needle bar	1	
B05	HN606C8001	Needle bar bushing (lower)	1	
B06	HA500C2060	Thread guide for needle bar bushing	1	
B07	HA500C2030	Thread guide for needle bar	1	
B08	JZPD1700G2203	Needle	1	DP×17 #22
B09	HA100C2170	Needle clamp screw	1	SM1/8" ×44
B10	H11112C104	Thread take-up lever link	1	
B11	H6008C8001	Thread take-up crank	1	
B12	H2004H0067	Set screw (left-handed)	1	SM9/64" ×40
B13	H6616C8001	Needle bar link	1	
B14	HA106B0676	Screw	1	SM9/64" ×40
B15	HA104C0658	Needle bar adaptor	1	
B16	HA100C2190	Set screw	2	SM11/64" ×40
B17	HA100C2200	Slide block	1	
B18	HA704G0065	Guide for slide block	1	
B19	HA307C0662	Set screw	2	SM1/4" ×40
B20	HA100C2060	Set screw	1	SM9/32" ×28
B21	HA100C2020	Set screw	1	SM15/64" ×28
B22	HA104C0653	Hinge pin	1	
B23	H2004H0681	Thread take-up lever	1	
B24	HA100C2070	Set screw	1	SM9/32" ×28
B25	HA307C0661	Needle bar crank	1	
B26	HA104D0652	Rubber plug (Φ7.4×10)	2	
B27	HA100D2030	Arm shaft bushing(left)	1	
B28	HY90D58001	Arm shaft	1	
B29	H5349B8001	Set screw	2	SM11/64" ×40
B30	HA100C2020	Set screw	1	SM15/64" ×28
B31	HA100D2040	Arm shaft bushing(middle)	1	
B32	HA105D0662	Set screw	2	SM1/4" ×40
B33	HA108G0661	Collar for	1	
B34	HA108C0663	Set screw	8	SM1/4" ×40
B35	HA113D2112	Bevel gear for arm shaft	1	
B36	HA112D3012	Retaining ring	1	
B37	H6510D8001	Feed and feed lifting eccentric	1	
B38	HA100C2020	Set screw	2	
B39	H6511D8001	Feed cam cover	1	
B40	HA7311C306	Set screw	3	
B41	HY91B28001	Bobbin winder driving wheel	1	
B42	HA113D2122	Bevel gear for vertical shaft(upper)	1	
B43	HA100C2020	Set screw	2	SM15/64" ×28

B. NEEDLE BAR AND TAKE-UP LEVER & ARM SHAFT MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
B44	HA100D2110	Vertical shaft bushing(upper)	1	
B45	H2100D2010	Vertical shaft	1	
B46	HA600D2010	Vertical shaft bushing(lower)	1	
B47	HA113D2222	Bevel gear for vertical shaft(lower)	1	
B48	HA113D2212	Bevel gear for hook shaft	1	
B49	HA7311C506	Feed rock	1	
B50	HA112D3013	Crank rod for feed lifting rock shaft	1	
B51	H2100E2010	Rotating hook positioner	1	
B52	HA100E2150	Screw	1	SM11/64" × 40
B53	HA704B0654	Hook shaft bushing (left)	1	
B54	HA904E0651	Hook shaft	1	
B55	HA704B0653	Hook shaft bushing	1	
B56	HA305E0662	Set screw	2	SM15/64" × 28
B57	HA305E0661	Collar for hook shaft	1	
B58	HA311E0671	Hook shaft bushing (right)	1	
B59	HA110E0672	Oil pipe for hook shaft bushing	1	
B60	HA300E2100	Plunger	1	
B61	HA900E2030	Bobbin case	1	
B62	HA600E2060	Bobbin	1	
B63	H6519B8001	Rotating hook complete	1	
B64	HA1111E104	Filter screw	1	
B65	HA1111E204	Filter	1	
B66	HA700E2030	Oil seal for rotating hook shaft	1	
B67	HA100E2060	Spring for oil adjuster	1	
B68	HA100E2050	Oil adjusting screw	1	
B69	HA710E0691	Cam	1	
B70	HA710E0692	Screw	1	
B71	HA300E2110	Plunger spring	1	
B72	HA900M0010	Guide plate	1	
B73	HA104F0654	Screw	1	SM15/64" × 28

C. STITCH REGULATOR MECHANISM



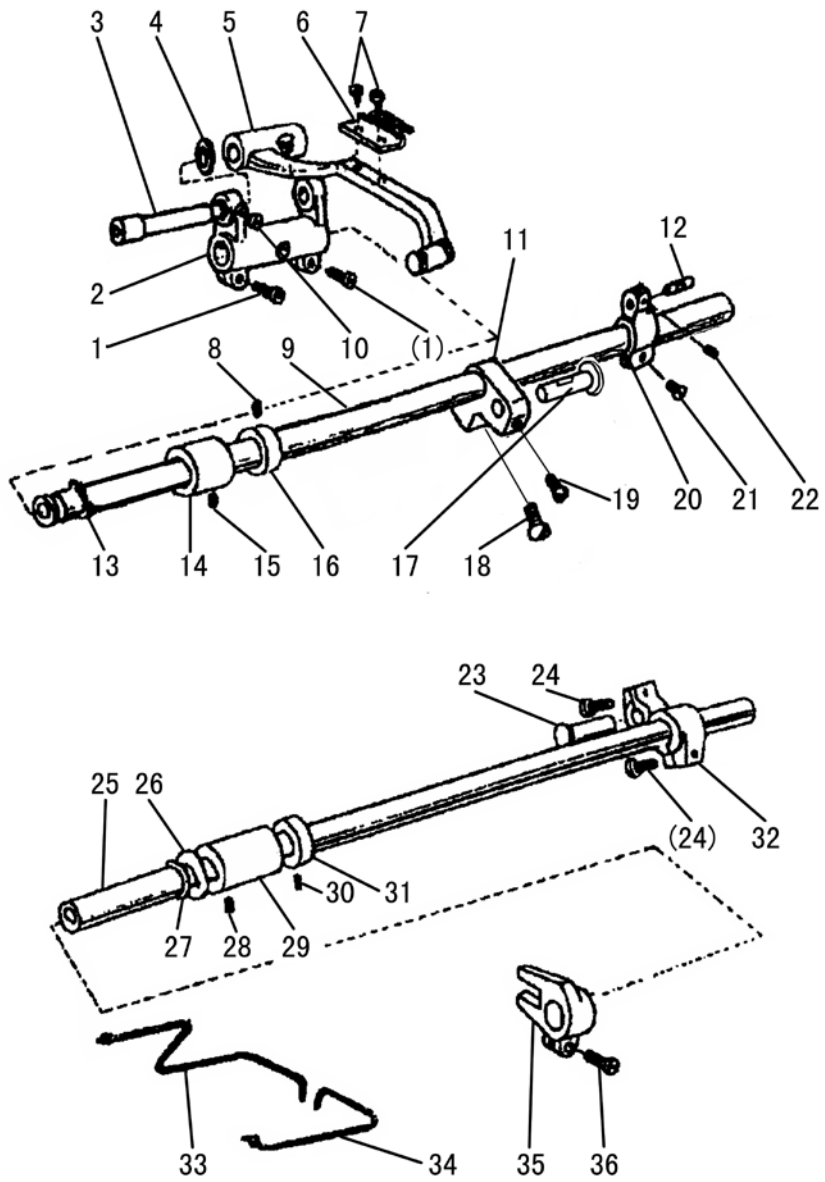
C. STITCH REGULATOR MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
C01	HA700C2060	Pin	1	
C02	HY90D78001	Connecting rod stud	1	
C03	HA111G0683	Screw	1	
C04	HY90F58001	Feed regulator	1	
C05	HB5255F081	Reverse link	1	
C06	H007013040	Stop ring	1	
C07	H2204D0652	Pin	1	
C08	HA100C2020	Screw	1	SM15/64" ×28
C09	HA704B0655	Bushing for feed regulator	1	
C10	HA100F2040	Pin	1	
C11	HA700B2120	Rnbber plug(φ20×6)	1	
C12	HA113F0684	Screw	1	
C13	HA100C2190	Screw	2	
C14	HY90F78001	Spring retainer	1	
C15	HY90F68001	Spring	1	
C16	HA806C0675	Spring retainer	1	
C17	HA109F0674	O-ring	1	
C18	HA720F0681	Screw bar	1	
C19	HA100F2090	Spring for stopper pin	1	
C20	HA700F2030	Stopper pin	1	
C21	HA720F0687	Coil spring	1	
C22	HA720F0683	Stopper pin releasing lever	1	
C23	HA7421F120	Dial	1	
C24	HB5253F081	Plate for stitch length	1	
C25	HA720F0685	Bushing	1	
C26	HA720F0686	Screw	1	
C27	H2600E2050	Spring	1	
C28	HY90F98001	Reverse feed crank	1	
C29	H2207D0671	Slide block pin	1	
C30	HY91F68001	Reverse feed lever shaft	1	
C31	HA113F3022	O-ring	1	
C32	HA100F2110	Washer	1	
C33	HA104F0654	Screw	2	
C34	HA309F0671	Reverse feed lever	1	
C35	HA113F0683	Screw	1	
C36	HA800F2010	Spring holder	1	
C37	HA800F2020	Screw	1	
C38	HA100F2130	Screw	1	SM15/64" ×28
C39	HA700C2050	Feed regulator shaft (left)	1	
C40	HA7311CF06	Eccentric shaft	1	
C41	HA706C1191	link (short)	2	
C42	HA8211C305	Link (long)	2	
C43	HA7311C806	Screw	1	

C. STITCH REGULATOR MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
C44	HA706C11B1	Link stud	1	
C45	HA111G0683	Screw	2	
C46	HA7311CC06	Screw	1	
C47	HA7311CD06	Screw	1	
C48	HA7311CG06	Stitch length adjusting crank	1	
C49	HA7311CE06	Link stud	1	
C50	HA700C2040	Feed regulator shaft (right)	1	

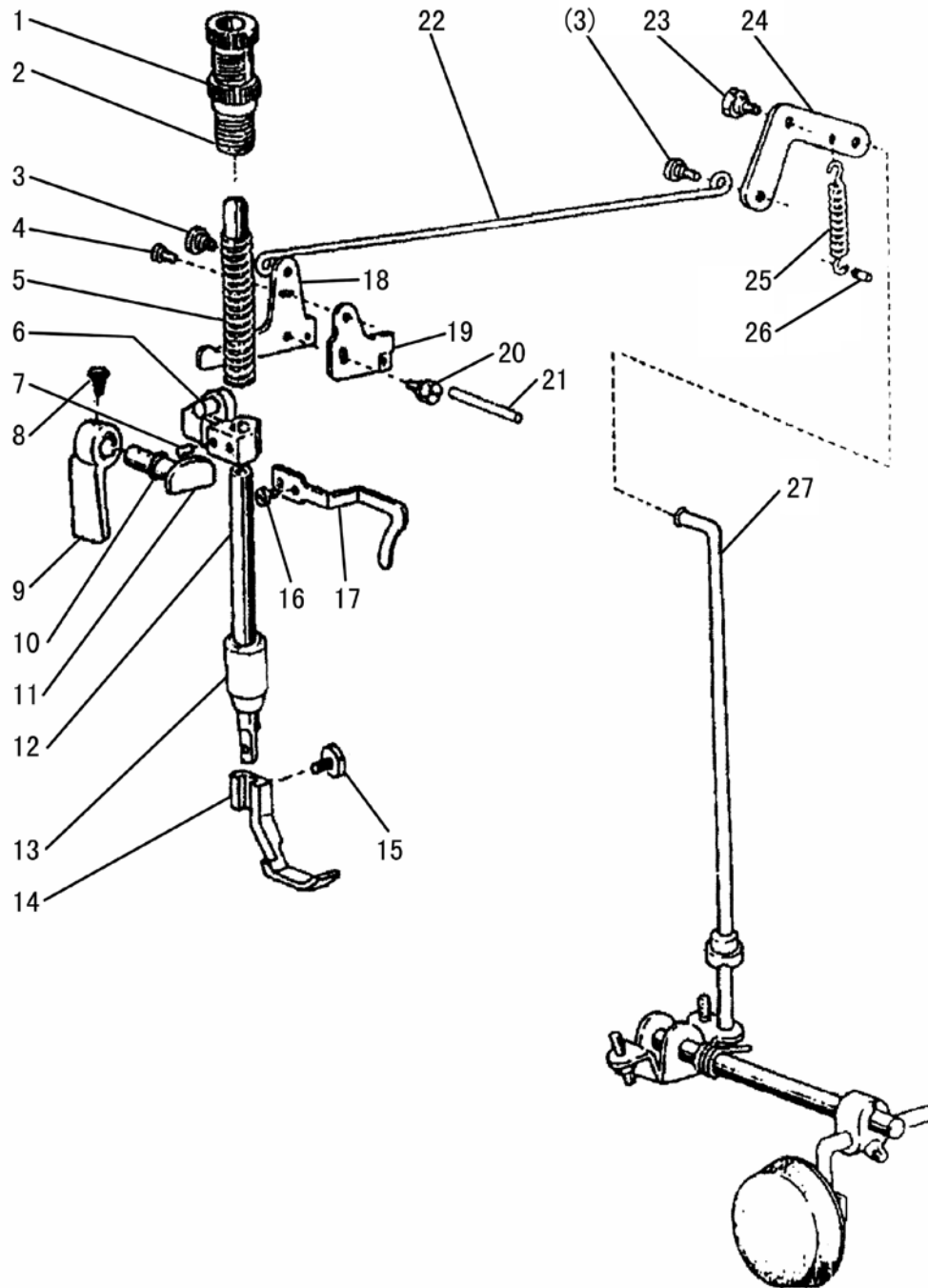
D. FEEDING AND FEED LIFTING MECHANISM



D. FEEDING AND FEED LIFTING MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
D01	HA104G0012	Screw	2	
D02	HA104G0011	Crank	1	
D03	HA705J0654	Eccentric shaft	1	
D04	HA104G0656	Washer	1	
D05	H6506G8001	Feed bar	1	
D06	H6005D8001	Feed dog	1	
D07	HA104G0654	Screw	2	
D08	HA105D0662	Set screw	2	SM1/4" × 40
D09	H2100G2010	Feed rock shaft	1	
D10	HA300C2030	Screw	1	
D11	H6504G8001	Feed rock shaft crank	1	
D12	HA706C11B2	Link stud	1	
D13	H007009150	C-type stop ring	1	15
D14	H2100G2020	Bushing for feed rock shaft	1	
D15	HA305E0662	Set screw	1	SM15/64" × 28
D16	HA108G0661	Collar	1	
D17	H6505G8001	Hinge pin	1	
D18	HA104G0012	Screw	1	
D19	HA113F0684	Screw	1	
D20	HA8211C205	Feed rock shaft crank (right)	1	
D21	HA7311C606	Screw	1	
D22	HA7311C806	Screw	1	
D23	HA100G2070	Hinge pin	1	
D24	HA104G0012	Screw	2	SM3/16" × 28
D25	HA704K0652	Feed lifting rock shaft	1	
D26	HA100G2130	Washer	1	
D27	H007009150	C-type stop ring	1	
D28	HA100C2020	Set screw	1	SM15/64" × 28
D29	HA100G2120	Bushing for feed lifting rock shaft	1	
D30	HA105D0662	Screw	2	SM1/4" × 40
D31	HA108G0661	Collar	1	
D32	HA306G0671	Feed lifting rock shaft crank (right)	1	
D33	HA304G0655	Oil braid	1	
D34	HA305G0664	Oil braid	1	
D35	H1204D0651	Guide crank	1	
D36	HA111G0683	Screw	1	

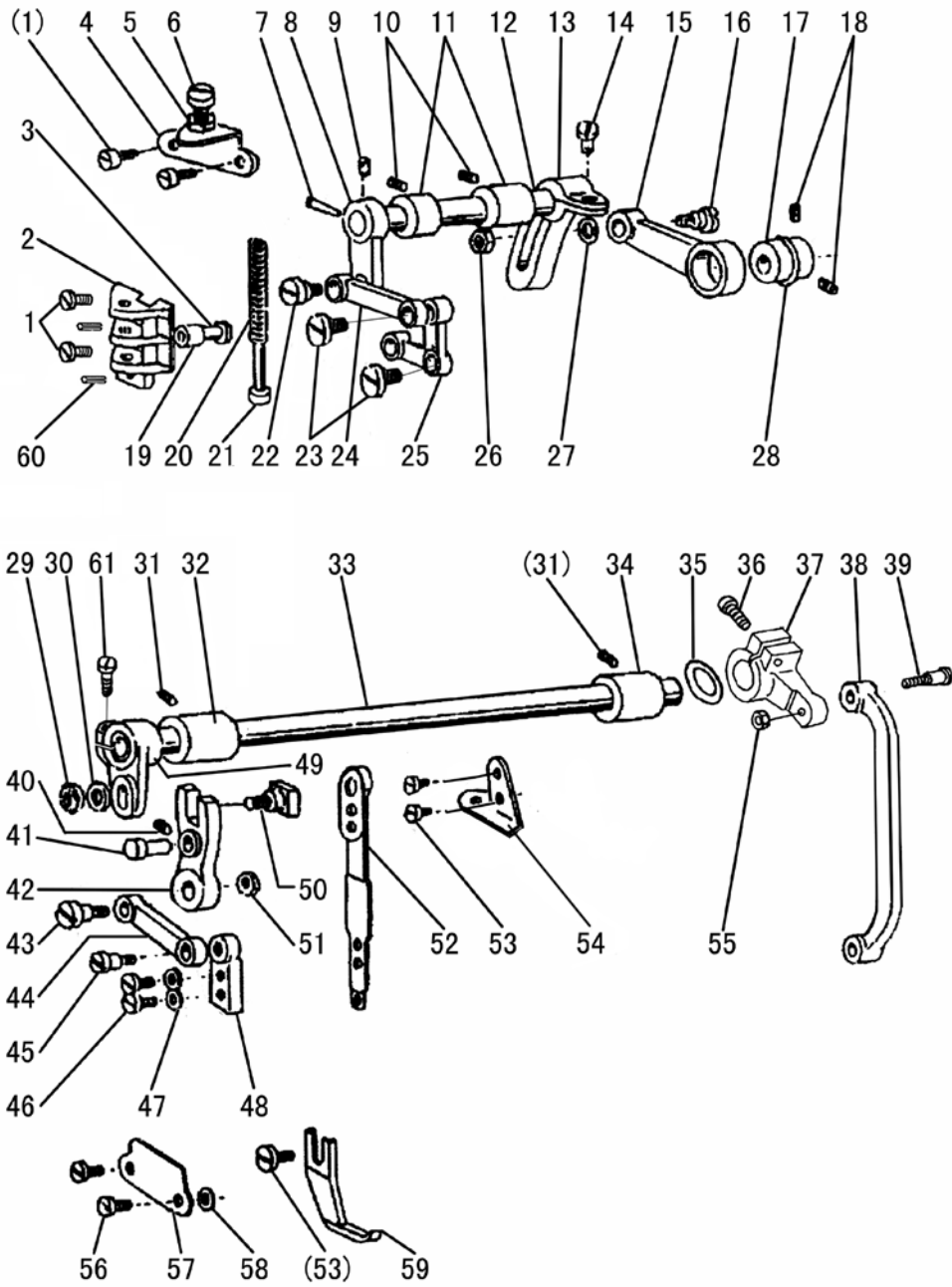
E. PRESSER FOOT MECHANISM



E. PRESSER FOOT MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
E01	HA117H0692	Lock nut	1	
E02	H2005I0065	Pressure regulating thumb screw	1	
E03	HA107H0662	Hinged screw	2	
E04	HA107H1013	Screw	1	
E05	H1100H2020	Presser spring	1	
E06	HM305H8001	Presser bar lifting bracket	1	
E07	HA3411D308	Set screw	1	SM15/64 (5.95) × 28/7
E08	HA100B2110	Set screw	1	
E09	H2104H0651	Presser bar lifter	1	
E10	HA300H2080	O-ring	1	
E11	H2104H0661	Presser bar lifting cam	1	
E12	H2000I2010	Presser bar	1	
E13	HA300H2090	Presser bar bushing	1	
E14	H3800H2020	Presser loot complete	1	
E15	HA100H2150	Set screw	1	SM9/64" × 40
E16	HA100C2190	Screw	1	SM11/64" × 40
E17	HA300H2120	Upper thread guide	1	
E18	HA107H1011	Knee lifter lever (left)	1	
E19	HA305H6611	Tension releasing cam	1	
E20	HA100H2050	Bolt	1	
E21	HA700I2070	Tension releasing pin	1	
E22	HA107H0663	Knee lifter rod	1	
E23	HA100H2050	Bolt for knee lifter lever	1	SM15/64" × 28
E24	HA110H0671	Knee lifter lever (right)	1	
E25	H3211E0692	Spring	1	
E26	HA720B0651	Pin for spring	1	
E27	HA306H0671	Knee lifter connecting rod	1	

F. PRESSER LIFTING & FEEDING MECHANISM



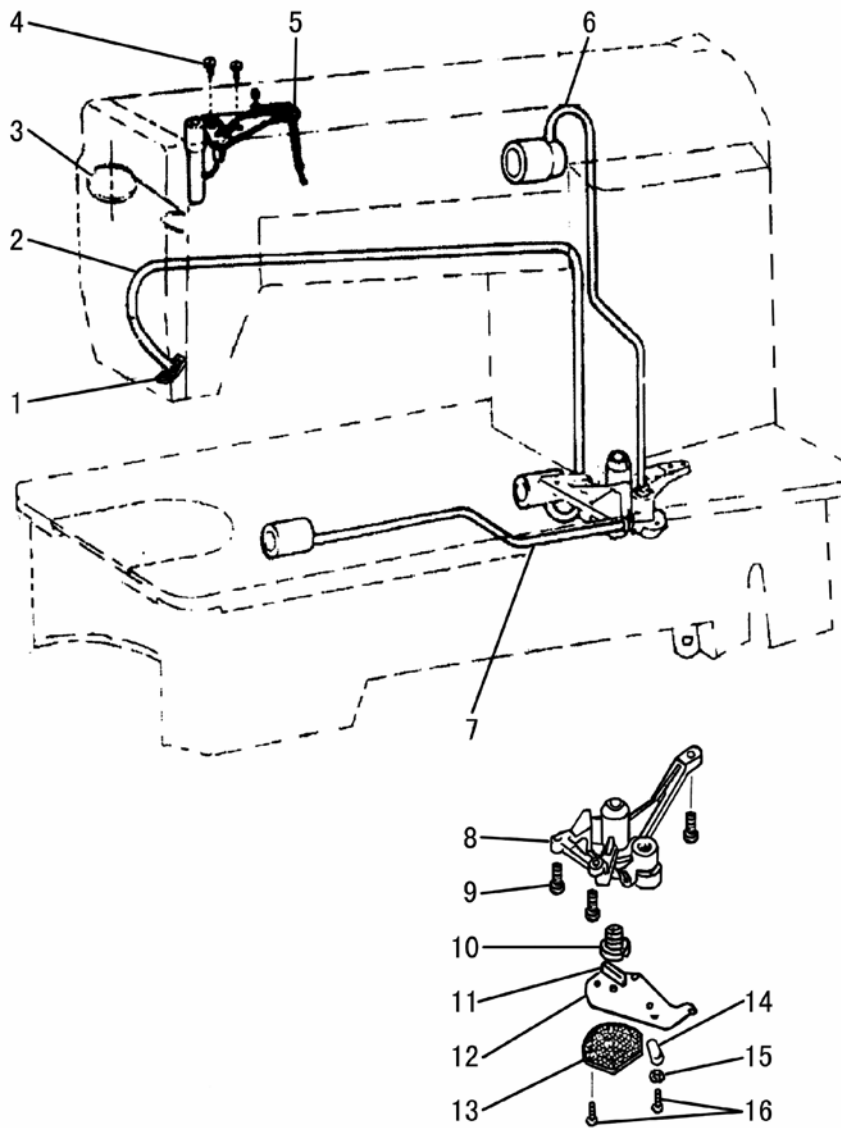
F. PRESSER LIFTING & FEEDING MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
F01	HA300C2030	Screw	4	
F02	H2000J2020	Lifting presser plate	1	
F03	H2004J0655	Feed crank guide shaft	1	
F04	H2000J2060	Lifting presser bracket for spring	1	
F05	H2010J0066	Lifting presser adjusting nut	1	
F06	H2010J0065	Lifting presser adjusting screw	1	
F07	H602040200	Pin	1	
F08	H2011J0065	Presser lifting crank	1	
F09	H3000D2030	Set screw	1	
F10	HA100B2110	Screw	2	
F11	H2009B0068	Presser lifting shaft bushing	2	
F12	H2011J0066	Shaft	1	
F13	H2100I2010	Presser lifting shaft	1	
F14	H2012N0652	Set screw	1	
F15	H2104I0065	Eccentric wheel rod	1	
F16	H2000J2100	Set screw	1	
F17	H2014J0652	Eccentric wheel	1	
F18	HA307C0662	Screw	2	
F19	H2000J2030	Lifting presser spring guide pin	1	
F20	H2100I2190	Lifting presser spring	1	
F21	H2007J0066	Presser spring guide	1	
F22	H2004J0662	Screw	1	
F23	H2004J0653	Screw	2	
F24	H2100I2130	Presser feed crank link	1	
F25	H2100I2020	Presser feed crank	1	
F26	H0030020608	Nut	1	M6 × 0.75
F27	H2013J0065	Washer	1	
F28	H007009250	C-type stop ring	1	
F29	H2013N0067	Presser crank connecting nut	1	
F30	H2013J0065	Washer	1	
F31	HA100B2110	Screw	2	
F32	H2100I2060	Presser swing shaft bushing (left)	1	
F33	H6507I8001	Presser swing shaft	1	
F34	HA100G2040	Presser swing shaft bushing (right)	1	
F35	H6018F8001	O-ring	1	
F36	H6017F8001	Screw	1	
F37	H6013F8001	Presser swing crank(right)	1	
F38	H6505I8001	Presser swing crank (right) rod	1	
F39	H2012N0066	Screw	1	
F40	H2100I2070	Screw	1	
F41	H2013N0066	Lifting presser sway crank guide pin	1	
F42	H2013N0069	Lifting presser sway crank	1	
F43	H2100I2140	Screw	1	

F. PRESSER LIFTING & FEEDING MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
F44	H2013N0070	presser lifting connecting rod	1	
F45	H2004J0662	Screw	1	
F46	H2004J0067	Screw	2	
F47	HA100I2050	Washer	2	
F48	H2004J0661	Presser rod guide	1	
F49	H6006F8001	Presser swing crank	1	
F50	H2121I0065	Lifting presser sway crank shaft compl	1	
F51	H2008N0066	Lock nut	1	
F52	H2004J0654	Presser rod	1	
F53	H2000I2050	Screw	3	
F54	H2004J0658	Lifting presser guide plate	1	
F55	H2010J0066	Lifting presser adjusting nut	1	
F56	HA111G0683	Screw	2	
F57	H2000N0030	Lifting presser rod plate	1	
F58	H2000N0040	Space for presser rod plate	2	
F59	H2000N0010	Out presser	1	
F60	H609030080	Pin	2	
F61	H6017F8001	Screw	1	

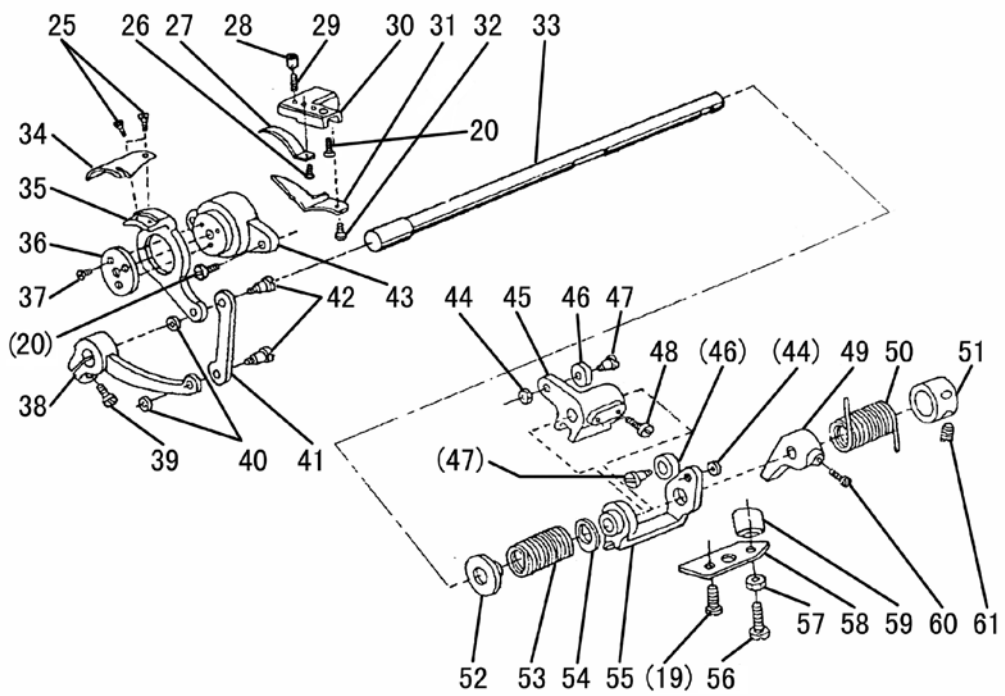
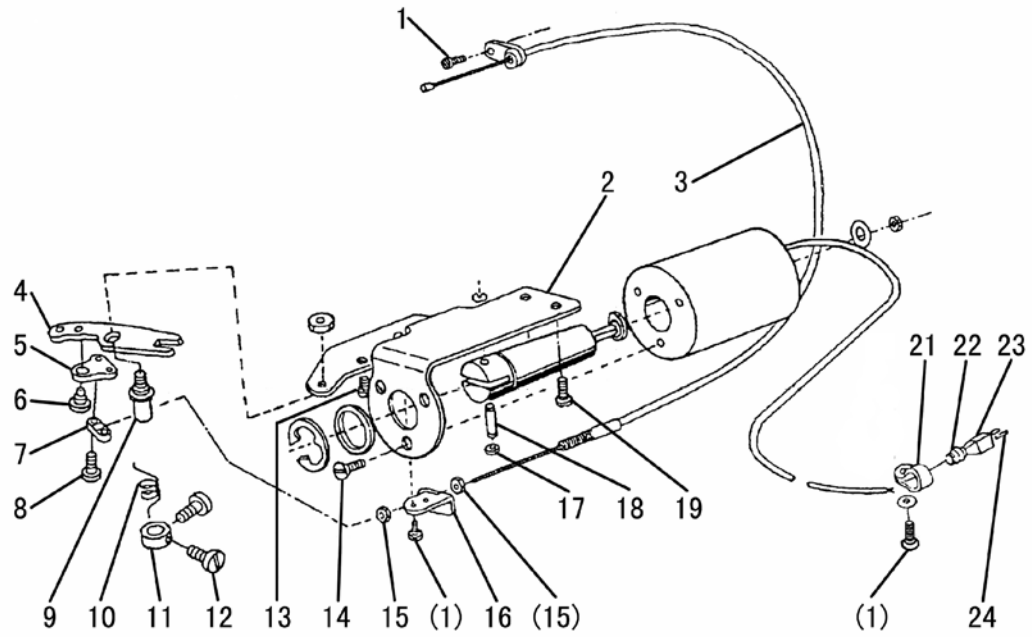
G. OIL LUBRICATION MECHANISM



G. OIL LUBRICATION MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
G01	HA100I2150	Felt pouch	1	
G02	HA305I0661	Oil return pipe	1	3×650
G03	HA300I2060	Pipe holder	1	
G04	HA100H2150	Screw	2	SM9/64" ×40
G05	H2104J0065	Oil braid fitting plate	1	
G06	H5604G0065	Oil pipe for arm shaft	1	
G07	HA707L0065	Oil pipe for hook shaft	1	
G08	H6006I8001	Oil pump body	1	
G09	HA100I2090	Screw	3	
G10	H6010I8001	Oil pump impeller	1	
G11	H6011I8001	Impeller slide	1	
G12	H6012I8001	Oil pump fitting plate	1	
G13	HA111I0065	Oil pump screen complete	1	
G14	H6021I8001	Oil adjusting plate	1	
G15	HA100I2050	Spring washer	1	
G16	HA300I2050	Screw	3	

H. THREAD TRIMMER MECHANISM



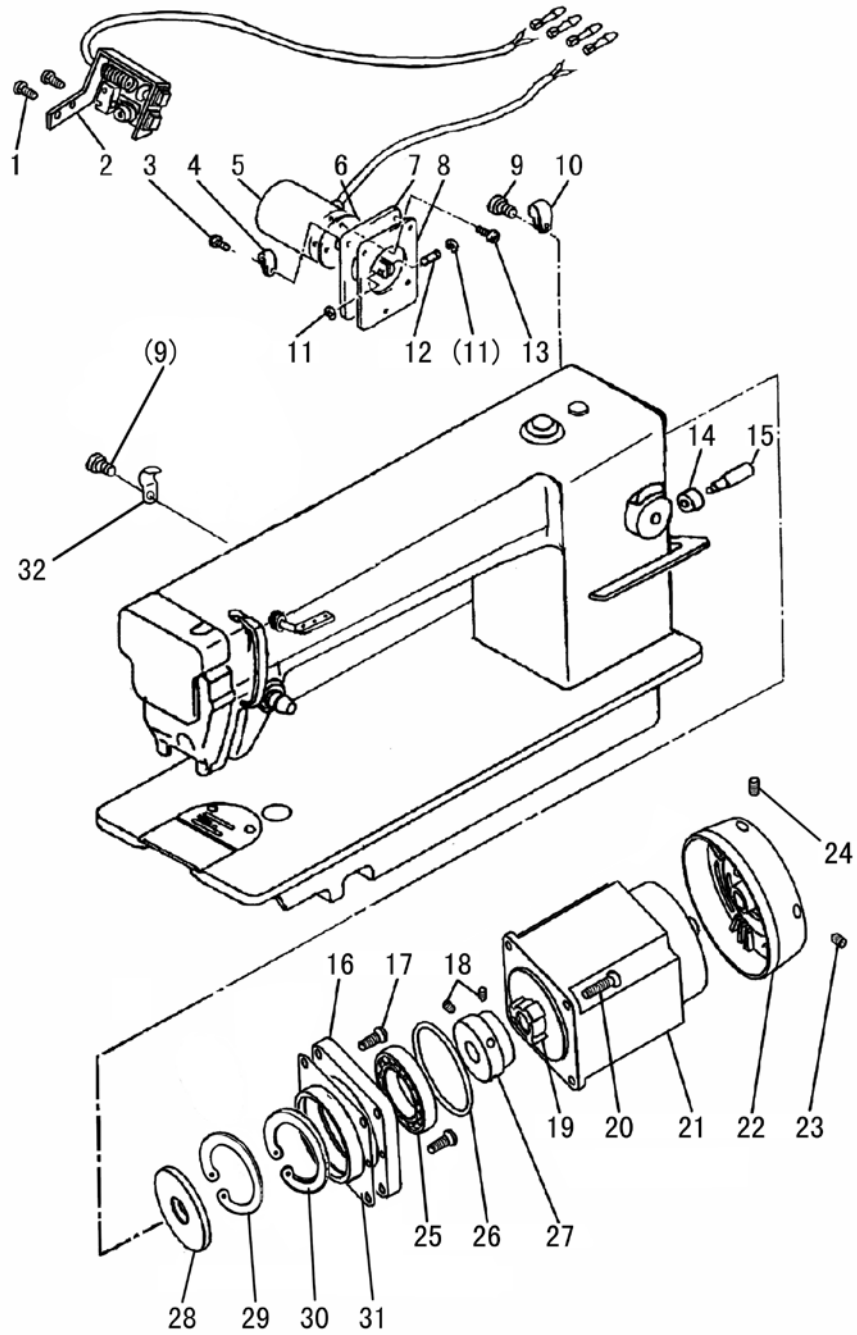
H. THREAD TRIMMER MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
H01	HA300B2170	Screw group	5	
H02	HA7511N212	Solenoid bracket	1	
H03	HA713N0702	Flexible wire	1	
H04	HA712N0698	Thread trimmer driving plate	1	
H05	HA712N6910	Flexible wire bracket	1	
H06	HA712N0699	Set screw	1	
H07	HA712N6911	Link bracket	1	
H08	HA712N6912	Set screw	2	
H09	HA712N0695	Stud screw	1	
H10	HA712N0697	Spring	1	
H11	HA712N0696	Collar	1	
H12	HA7311CC06	Set screw	2	
H13	HA100E2150	Set screw	1	
H14	HA7511N312	P-type screw	3	
H15	H003002050	Nut M5	2	
H16	HA712N6913	Holder	1	
H17	H007013040	E-type ring	2	
H18	HA712N0692	Pin	1	
H19	HA700N0080	Set screw	4	
H20	HA300C2030	Set screw	4	
H21	HA708P0668	Cord holder	1	
H22	HA70400657	Rubber plug	1	
H23	HA700Q0010	Connector plug	2	
H24	HA7641B319	Connector	2	
H25	HA7111N704	Set screw	1	
H26	HA7121N304	Set screw	1	
H27	H22121H104	Fixed blade	1	
H28	HA7121N704	Nut	1	
H29	HA7121N604	Set screw	1	
H30	HA7121N104	Bracket for fixed blade	1	
H31	H22121H204	Thread finger	1	
H32	HA7311CH06	Set screw	1	
H33	HA900N0020	Knife driving shaft	1	
H34	H2806H8001	Movable knife	1	
H35	H2809H8001	Knife holding bracket saddle (left)	1	
H36	HA704N1113	Washer	1	
H37	HA704N1114	Set screw	3	
H38	HA7111N604	Knife driving crank	1	
H39	HA719B7011	Set screw	1	
H40	HA7111N304	Nut	2	
H41	HA7111N404	Link	1	
H42	HA7111N204	Set screw	2	
H43	HA704N1111	Knife holding bracket saddle	1	

H. THREAD TRIMMER MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
H44	HA706N0663	Nut	2	
H45	HA7211N106	Cam follower crank 1	1	
H46	HA7221N106	Roller	2	
H47	HA7221N206	Roller stud	2	
H48	HA113F0684	Set screw	2	
H49	HA906N0661	Stopper lever	1	
H50	HA700N0110	Coil spring	1	
H51	HA715N0711	Collar with screw	1	
H52	HA700N0050	Brshing	1	
H53	HA700N0040	Coil spring	1	
H54	HA706N0664	Washer	1	
H55	HA7211N206	Cam follower crank 2	1	
H56	HA7411N110	Set screw	1	SM15/64" × 28
H57	HA710N0683	Nut	1	
H58	HA710N0682	Lever stopper plate	1	
H59	HA7411N210	Dead block	1	
H60	HA113F0684	Set screw	1	
H61	HA105D0662	Set screw	1	

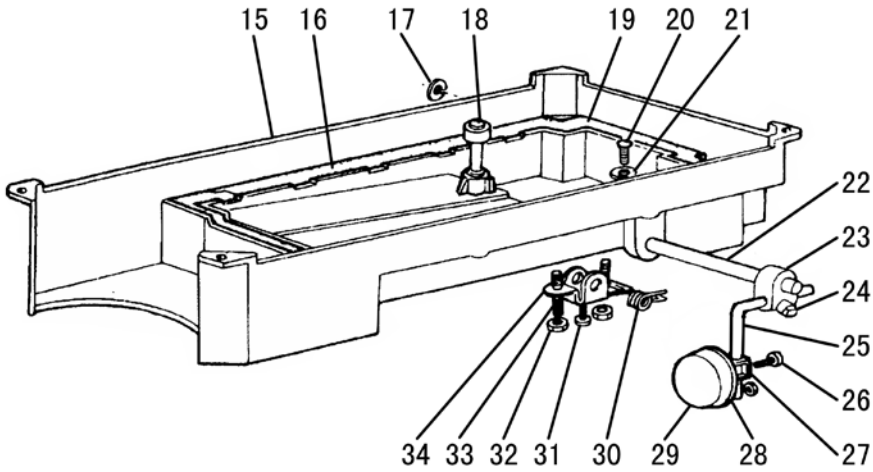
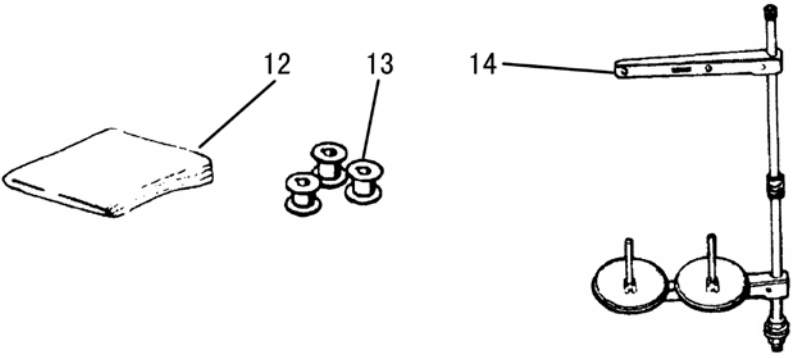
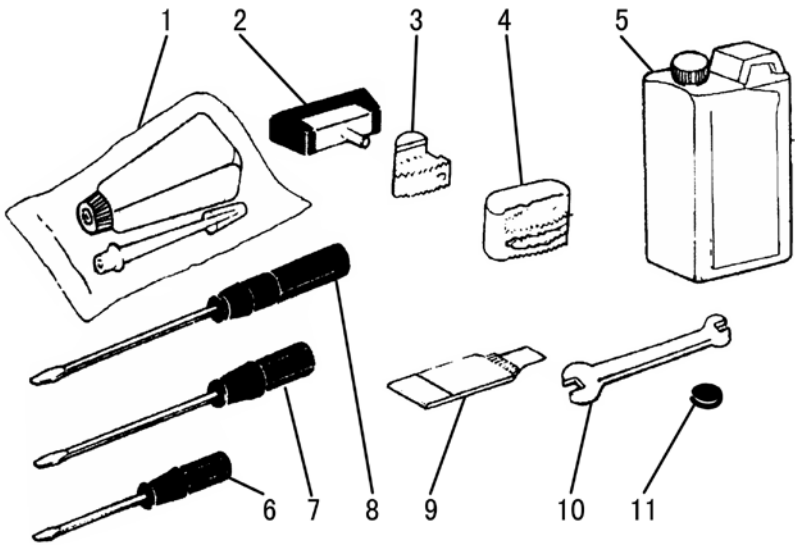
I. TOUCH BACK MECHANISM & MOTOR MECHANISM



I. TOUCH BACK MECHANISM & MOTOR MECHANISM

Fig. No.	Part No.	Description	Pcs.	Remarks
I01	HA300B2160	Screw	2	
I02	HY90K47101	Backstitch switch assy	1	
I03	HA300B2170	Screw	5	
I04	HA708P0668	Cord holder	2	
I05	H2611E8001	Solenoid assy for touch black	1	
I06	H2609E0674	Washer	1	
I07	HY91F08001	Arm bed cover	1	
I08	HY91F18001	Gasket for arm bed cover	1	
I09	HA300B2160	Screw	2	
I10	HA700Q0050	Cord holder	1	
I11	H007013040	E-type ring	2	
I12	HA712N0692	Pin	1	
I13	HA300B2160	Screw	4	SM11/64" × 40
I14	HY91F48001	Rubber plug	1	
I15	H2204G0651	Screw	1	
I16	HY91L98001	Upper shaft cap set	1	
I17	HA111G0683	Screw	2	
I18	HD10C88001	Screw	2	
I19	HY91L48001	Motor connector	1	
I20	H415050300	Screw	4	
I21	HY90L48001	Motor	1	
I22	HY90L87101	Round of the components	1	
I23	H429050060	Screw	1	
I24	H431060061	Screw	1	
I25	HY91L88001	Connect block	1	
I26	HY92L48001	Ring	1	
I27	HY91L58001	Axis connector	1	
I28	HY92L58001	Oil seal	1	
I29	HY92L28001	Ring	1	1mm
I30	HY92L38001	Ring	1	2mm
I31	HY92L18001	Oil pad	1	
I32	H3200K0190	Holder	1	

J. ACCESSORIES



J. ACCESSORIES

Fig. No.	Part No.	Description	Pcs.	Remarks
J01	HA100J2110	Oiler	1	
J02	HA307J0067	Hinge of machine head assy	1	
J03	HA300J2060	Rubber cushion(small)	2	
J04	HA300J2050	Rubber cushion(big)	2	
J05	HA300J2170	Oil container	1	
J06	HA300J2210	Screw driver(short)	1	
J07	HA300J2200	Screw driver(medium)	1	
J08	HA300J2070	Screw driver(long)	1	
J09	JZDP1700G2201	Needle	4	DPx17 #22
J10	HA300J2220	Double-end wrench	1	
J11	HA100J2120	Magnet	1	
J12	HA100J2180	Vinyl cover	1	
J13	HA600E2060	Bobbin	3	
J14	HA200J2030	Thread stand assy	1	GXJ-2
J15	HA304J0651	Oil seservoir	1	
J16	HA104J0655	Gasket for oil reservoir (big)	1	
J17	H007013090	E-type ring	1	
J18	HA106J0661	Knee lifter lifting rod	1	
J19	HA104J0654	Gasket for oil reservoir (small)	1	
J20	HA104J0652	Oil drain screw	1	
J21	HA104J0653	Washer	1	
J22	HA300J2160	Hinge pin for knee lifter	1	
J23	HA106J0663	Joint for knee lifter bell crank	1	
J24	HA106J0664	Set screw	2	SM5/16" × 18
J25	HA106J0662	Knee lifter bell crank	1	
J26	HA106J0667	Set screw	1	SM15/64" × 28
J27	HA106J0666	Bracket for knee lifter plate	1	
J28	HA106J0665	Knee lifter plate	1	
J29	HA106J0668	Pad for knee lifter plate	1	
J30	HA104J0657	Backspring for knee lifter	1	
J31	HA110D0672	Screw	1	
J32	HA104J6510	Lock nut	2	
J33	HA104J0659	Adjusting screw	2	
J34	HA104J0658	Knee lifter stop bracket	1	

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The description covered in this manual is subject to change for improvement of the commodity without notice

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