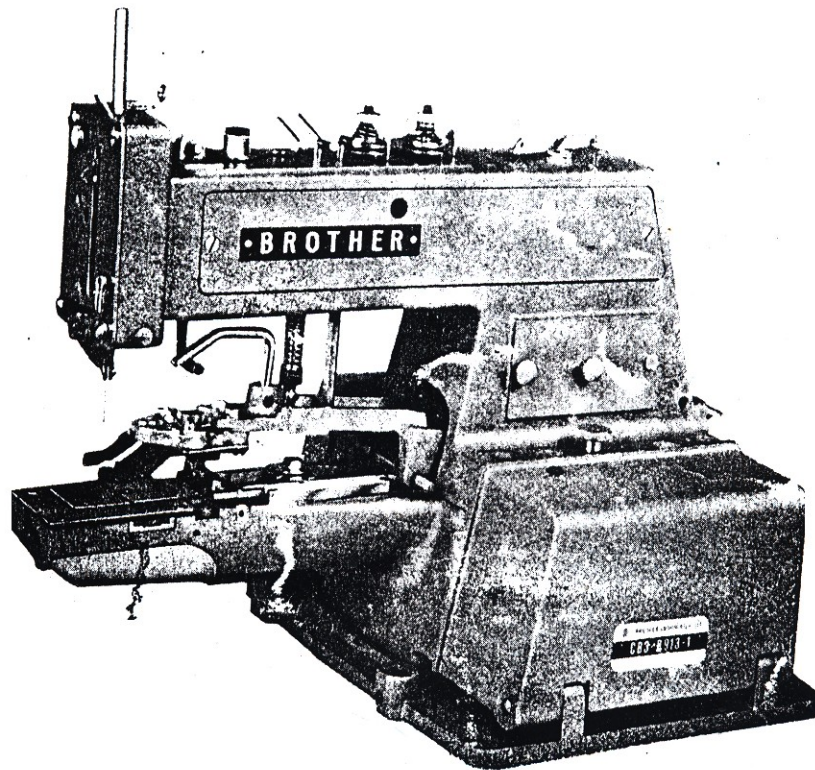


INSTRUCTION MANUAL

FOR

BROTHER CB3—B913



INDUSTRIAL CHAIN STITCH BUTTONING MACHINE

BROTHER INDUSTRIES,
NAGOYA, JAPAN

Cavemac

Identificação
Edição
Conteúdo, BROTHER CB3-B9

EDIÇÃO
01

OPERATING INSTRUCTIONS FOR

MODEL CB3-B913

INDUSTRIAL CHAIN STITCH BUTTONING MACHINE

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Model CB3-B913 Chain Stitch Buttoning Machine

The BROTHER CB3-B913 is ideal for sewing buttons on knitted underwears, work clothes, ladies' garments, ready-made suits, etc.

General

- * The number of stitches per button (8, 16 or 32 stitches) can be easily changed by the simple operation of a lever. This feature makes the machine useful in a wide range of applications.

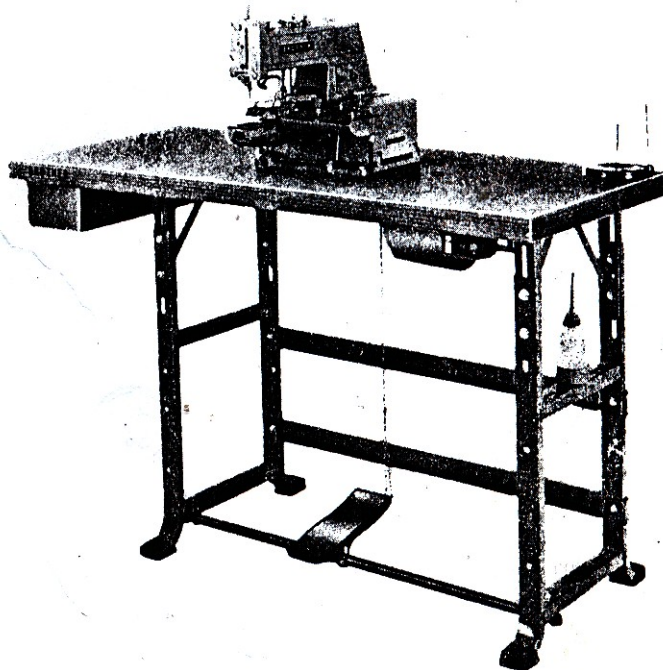
The button grip is raised or lowered by means of a pedal, so that your sewing work will be done in an easy, efficient way.

- * Flat buttons with two or four holes, each pair of which is 2.5~6.5 mm apart, and 8~30 mm in outside diameter can be handled with machine.

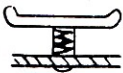
In addition, the use of special attachments permits the machine to sew on snaps, pearl buttons, brass uniform buttons, and shank buttons.

- * The button holder is made of a rigid aluminum alloy for long life and for minimizing pressure on the oscillating mechanism.

The shaft which supports the needle bar drive lever is plated with hard chrome for maximum wear resistance.



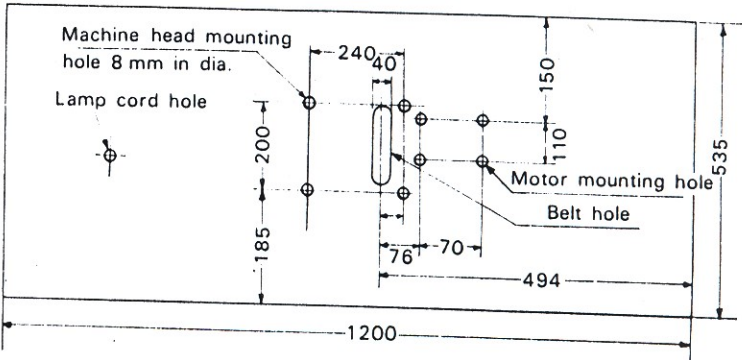
Specifications

Type	Single-needle, single chain stitch	
Sewing speed	1,500 stitches per minute	
Size of buttons	8 to 30 mm in outside diameter; holes 2.5~6.5 mm apart	
No. of stitches per button	8, 16, 32 for Sub-clas - 1 & 6, 12, 24 for Sub-clas - 2	
Needle bar stroke	48 mm	
Needle	TQ × 1 for flat buttons, snaps TQ × 7 for pear buttons, brass uniform buttons, shank buttons.	
Button grip rise	14 mm (normal) 20 mm (maximum)	
Motor	200 W 4 P (single-phase or three-phase) motor	
Belt diameter	6.5 mm, round leather belt	
Stitch form	Flat button	 
	Brass uniform button	
	Snap	 
	Pearl button	
	Shank button	

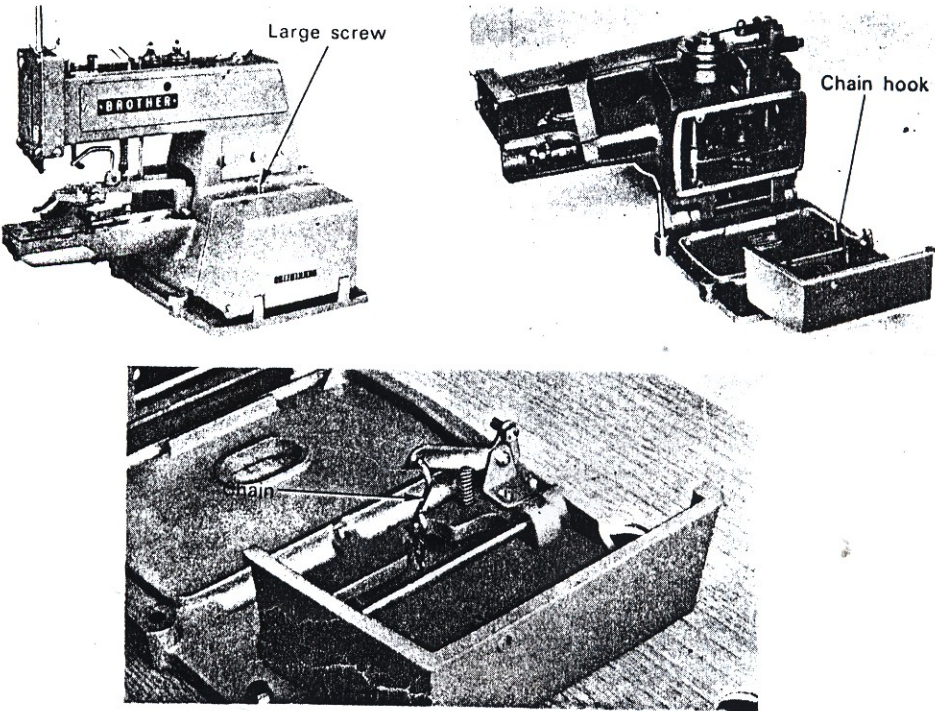
HOW TO USE

1. Installing the machine

*Install the machine with the accessory bolts and nuts according to the following drawing. Fit the button tray to either the right or left position as desired.



*Then, remove the large screw shown in the below photo; tip the machine head leftward; and hook the chain to the chain hook.



2. Motor and pulley

The motor which is required is 200W, 4P, either single or three phase. The speed of this motor is required as follows:—

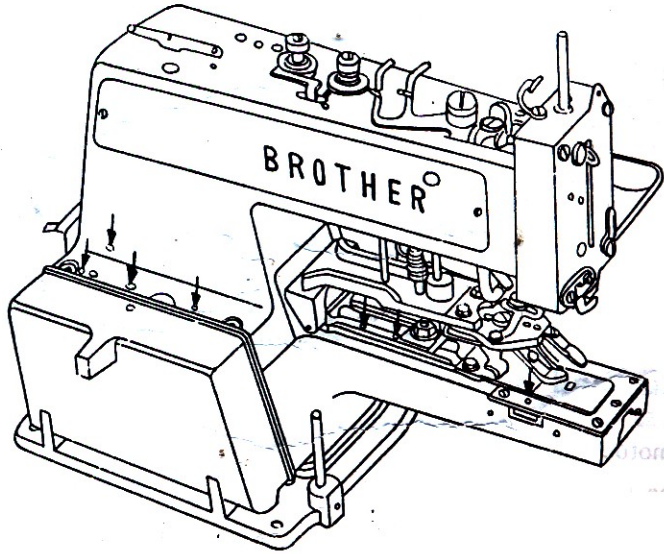
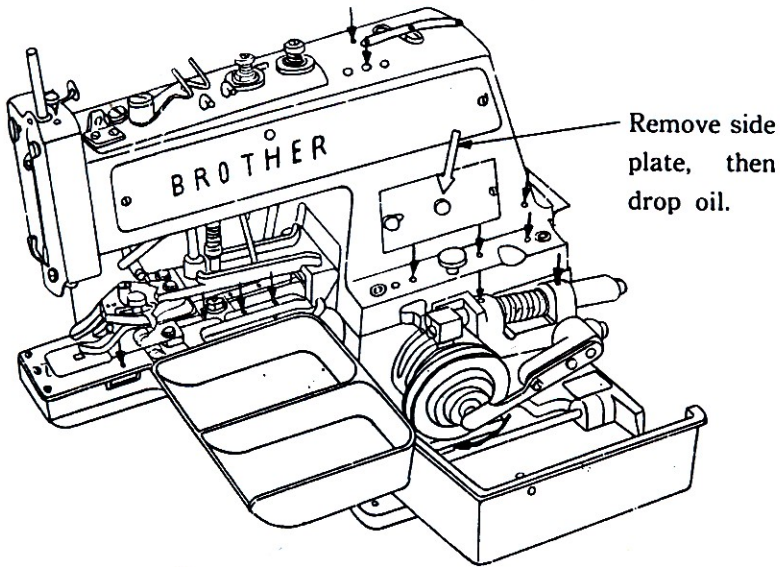
50 Hz 1,400 rpm 60 Hz 1,700 rpm

Please refer to the following table to get proper operating speed of 1,500 s.p.m.

Hz of power supply	Motor pulley		Machine speed (s.p.m.)
	Outside diameter	BROTHER'S pulley No.	
50 Hz	75 mm	N-75	1,500
60 Hz	65 mm	N-65	1,500

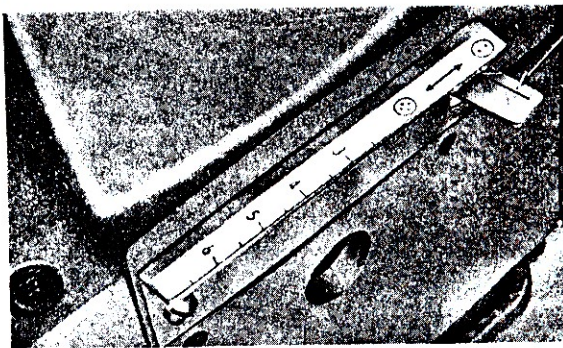
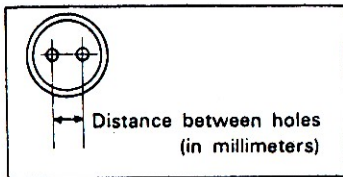
3. Oiling and trial operation

- * When the machine is installed in place, supply sufficient oil to all oiling points shown on the next page and all other moving parts of the machine. Then run the machine for about 10 minutes for trial purposes.
- * The normal operating direction is clockwise as viewed from the pulley side.
- * Drop quality oil a couple of drips into the points indicated with arrow.

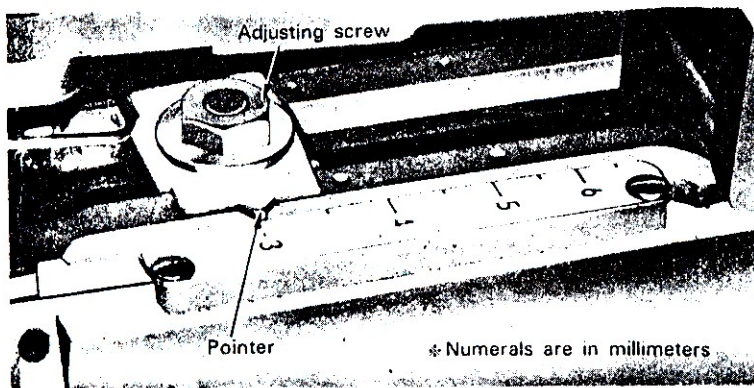


4. Distance between button's holes and scale

a. Buttons with 2 holes

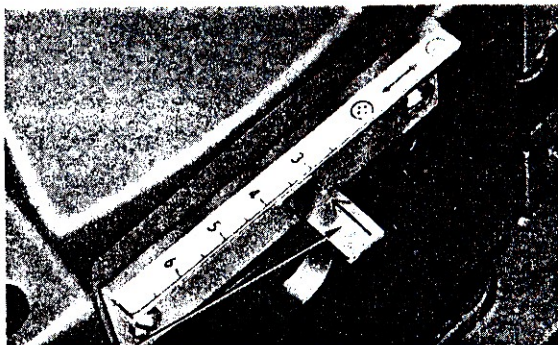
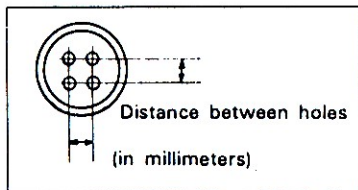


* While pressing this lever, bring the arrow mark to the  position.

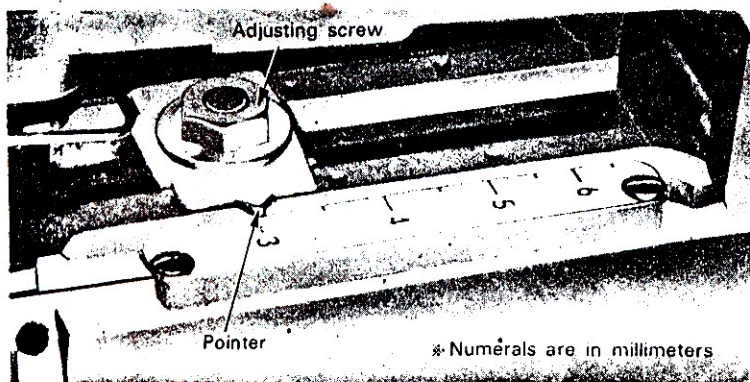


* Bring the pointer to the numeral representing the distance between the holes of the button.

b. Buttons with 4 holes



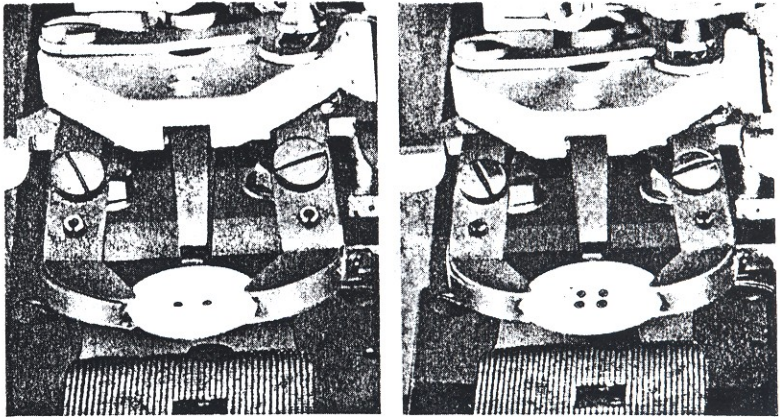
* While pressing this lever, bring its arrow mark to the numeral representing the distance between the holes of button.



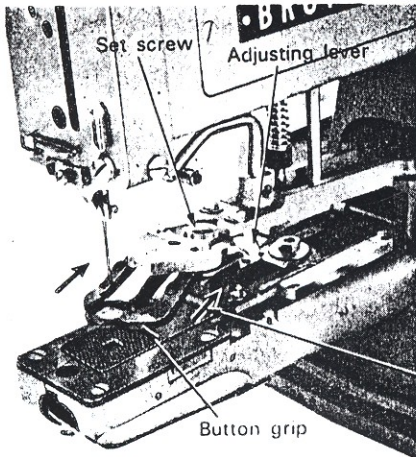
* Bring the pointer to the numeral representing the distance between the holes of the button.

Inserting buttons

- * Insert a button properly between the jaws of the button clamp.



When sewing on buttons of the same size:.....



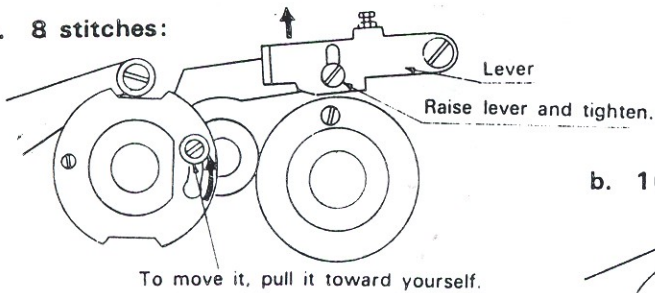
- * Set the opening of the button clamp to the size of the buttons and fasten the adjusting lever.

- * Pressing this widens the opening of the button clamp.

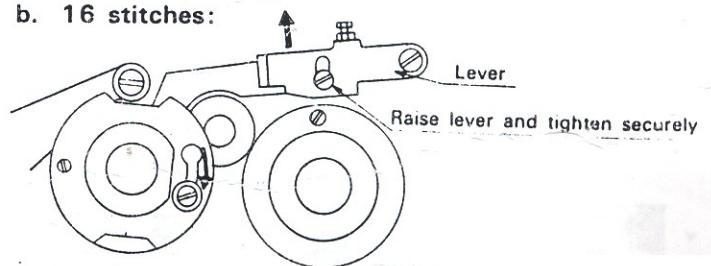
5. Changing the number of stitches

- * With the machine in its normal stop position, switch off the motor, open the left-side bed cover, and depress the pedal to change the number of stitches per button.

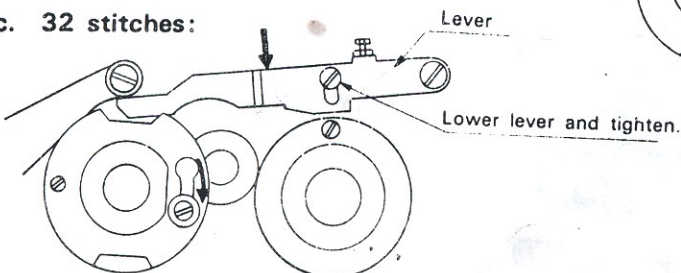
a. 8 stitches:



b. 16 stitches:



c. 32 stitches:



6. Needle and thread

a. Needle selection

- *Use a TQ×1 needle for flat buttons and snaps; use a TQ×7 needle for pearl buttons, brass uniform buttons, shank buttons, etc.
- *Refer to the following table for selecting the proper needle gauge.

Needle gauge	Gauge and kind of thread	Needle gauge	Gauge and kind of thread
# 9	# 100~# 80 Cotton, silk	# 16	# 40~# 30 Cotton, silk
# 11	# 80~# 60 " "	# 18	# 30~# 24 " "
# 14	# 60~# 40 " "	# 20	# 30~# 16 " "

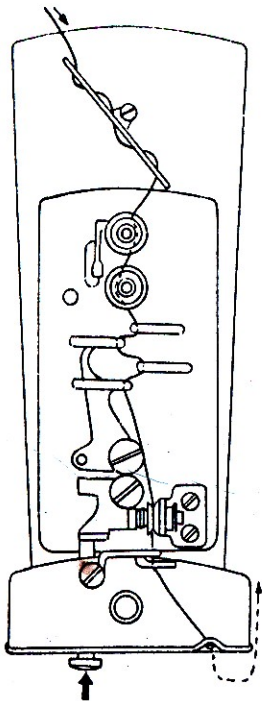
b. Installing the needle



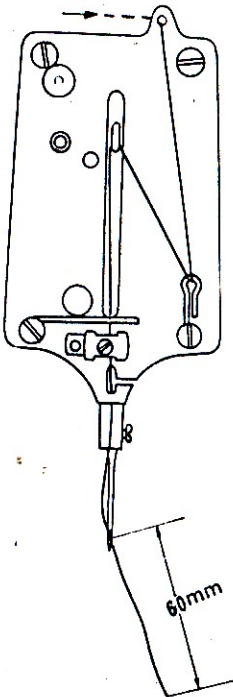
- *Set needle with its long groove side facing toward you and, insert it all the way into the hole in the needle bar, and tighten the needle clamp securely.

Make sure the long groove is up front toward yourself.

7. Threading



Push this button when you will pull out the thread.



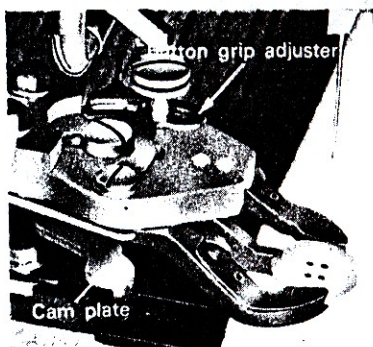
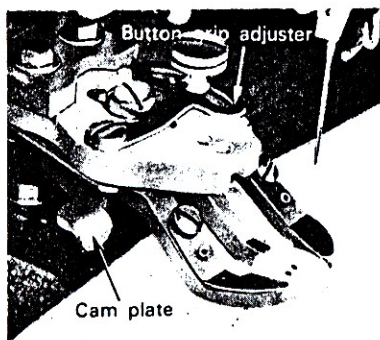
Needle is set as its long groove facing toward you.
(Needle: TQ×1)

8. Operating procedure

* Follow the steps below in numerical order.

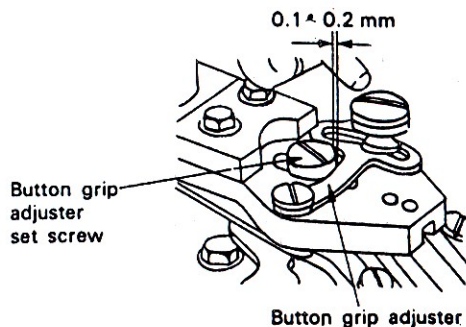
1. Switch on the motor.
2. Press the cam plate with your left hand and insert a button all the way between the jaws of the button grip using your right hand.
3. Place the material on the feed plate and position it properly.
4. Depress the pedal positively and release it quickly.
5. The machine stops upon sewing the preset number of stitches, and the button grip rises.

Button correctly held



When continuously sewing on buttons of the same size:

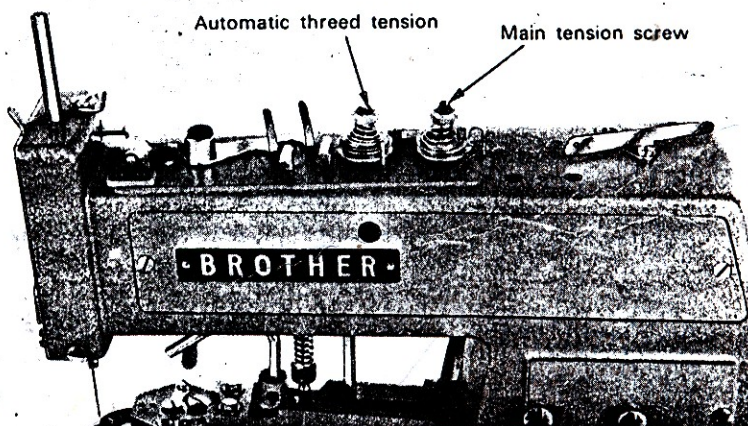
Insert a button in the button grip and make sure that it is securely held. Then pull the button grip adjuster about 0.1~0.2 mm toward yourself and tighten the button grip adjuster set screw. This makes it easier for you to insert succeeding buttons in the button grip.



9. Thread tension

* Use the main tension only for regulating the tension of the thread.

* As a general rule, loosen the tension screw for soft, light weight materials and tighten it for dense, heavyweight materials.

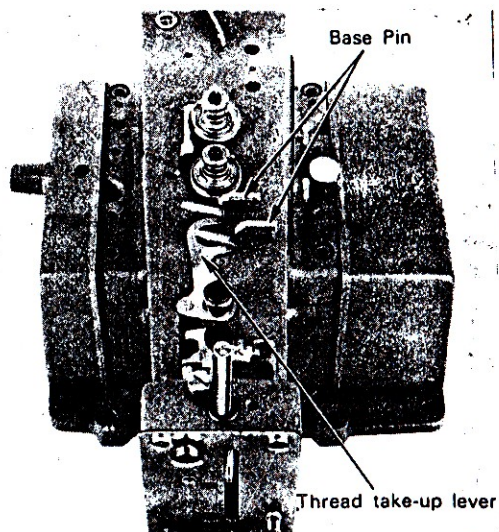


Note:

See that the automatic tension screw is adjusted so the automatic tension holds the thread tight when the tension discs are closed.

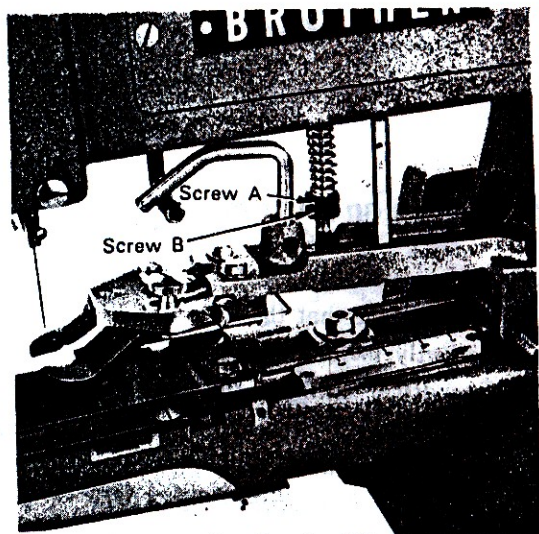
Adjustment of the tension of the thread according to the kind of material and thread should be done by means of the main tension screw.

With the machine in its normal stop position, bring the thread take-up lever closer to the two bent pins for less thread, or bring it farther from the pins for more thread.



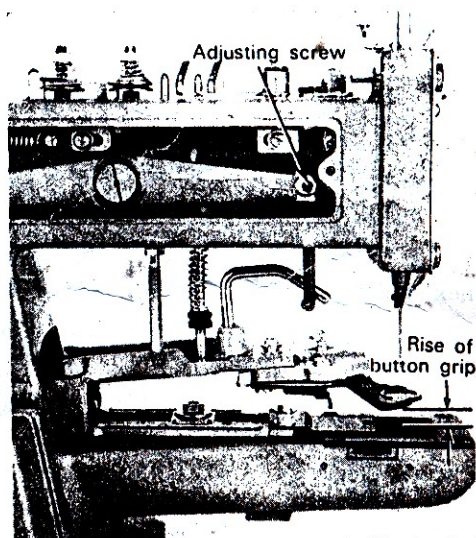
4. Adjusting pressure of button clamp

- * Adjust the pressure of the button clamp on the material according to its thickness and kind.
- * With the button clamp down, pull the material lightly.
- * If, at this instant, the material stays under the button clamp, the pressure is correct.
- * Adjustment can be accomplished by loosening or tightening screw A (Fig. 4).



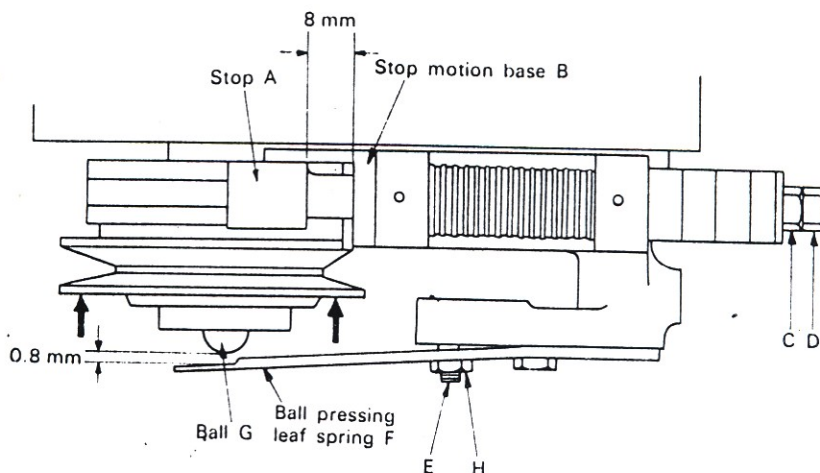
5. Adjusting rise of button clamp

- * The normal rise of the button clamp is 14 mm, but can be adjusted as desired.
 - * Make sure that the machine is in its normal stop position when adjusting the rise of the button clamp.
- Remove the left arm cover, loosen the adjusting screw, adjust the rise as desired, and tighten the screw.



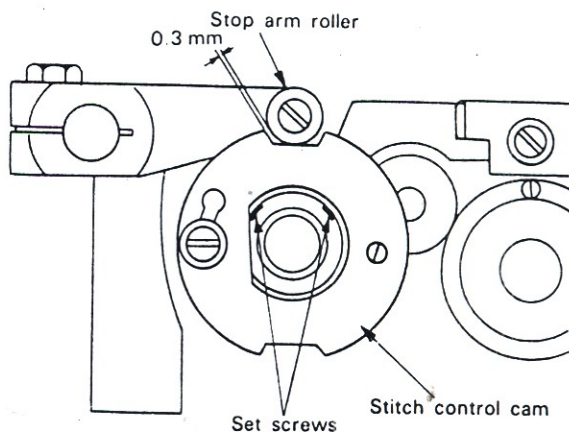
6. Adjusting clutch

- * When the machine is in its normal stop position, the distance between stop A and stop motion base B must be 8 mm. If adjustment is required, loosen the adjusting nut, turn nut C as required, and lock it with nut D.
- * When the pulley is pushed to the machine, there must be a clearance of 0.8 mm between ball G and the thin portion of ball pressing leaf spring F. If otherwise, loosen nut H, turn screw E as required, and lock it with nut II.



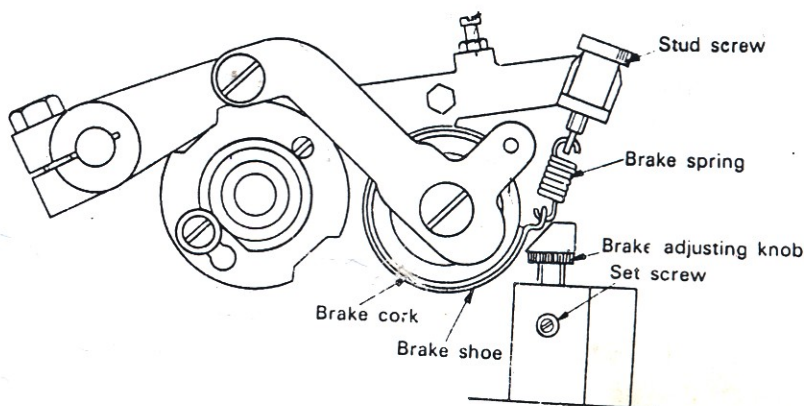
7. Adjusting stop motion

- * When the machine is in its normal stop position, there must be a clearance of 0.8 mm between the stitch control cam and the stop arm roller. If adjustment is necessary, loosen the set screws of the stitch control cam, turn the cam until the clearance is 0.3 mm, and retighten the screws.



8. Adjusting braking device

- * This model CB3-B913 is designed to stop the machine quietly and smoothly to lessen the shock at the stopping so that the braking device is actuated half stitch before final stitch. If in correct timing is set and the machine may not stop at the correct position, loosen set screw and turn brake adjusting knob slightly clockwise and check the correct position then fasten it securely.



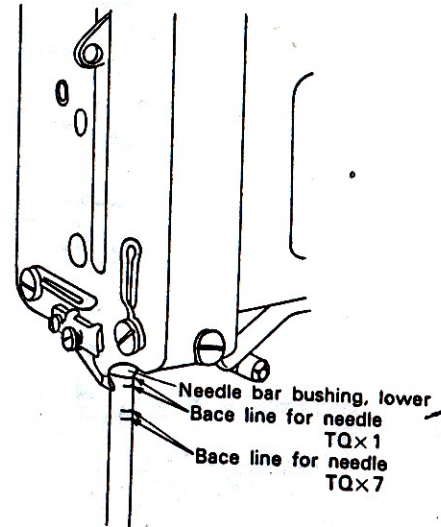
In case of excessive shock at the stopping due to worm-out cork and other reasons, turn brake adjusting knob counter-clock wise until it stop quietly then fasten set screw.

[NOTE]

Take care not to adjust stud screw (B-103) to avoid heat coming from excessive friction between brake shoe and brake pulley.

9. Height of needle bar

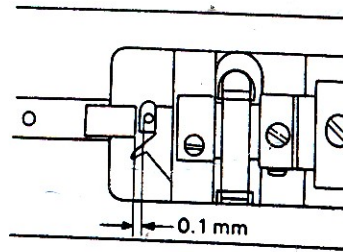
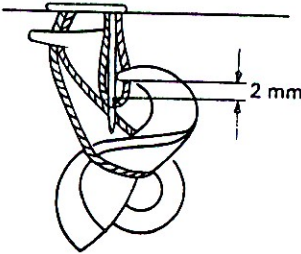
*The normal height of the needle bar is such that when the needle bar is down lowest the highest of the four base lines on the needle bar matches the bottom of the lower needle bar bushing. (In case of using a TQ×7 needle, make adjustment so the second base line matches the bottom of the needle bar bushing.)



10. Timing of needle and looper

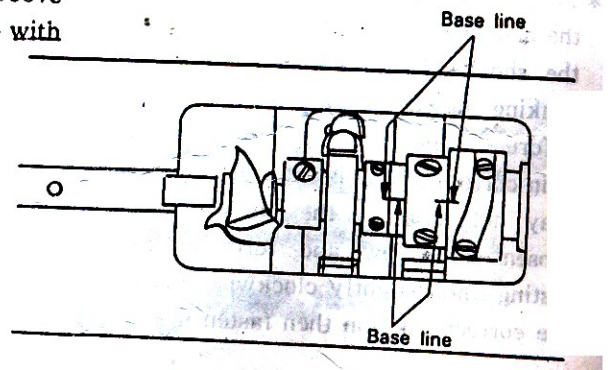
*The timing of needle and looper is correct if the tip of the looper is on the center line of the needle when the needle is 2.2 mm up from its lowest position, or when second base line matches the bottom of the lower needle bar bushing. As shown in Fig. 10, the distance between the tip of the looper and the top of the needle eye is 2 mm. The normal clearance between needle and looper should be 0.03 mm.

*The normal clearance between the needle and needle receiver is 0.1 mm.



11. Timing thread handler

*The thread handle triangle cam and the thread handler groove cam have base lines, which must be brought into line with the base line of the looper shaft.

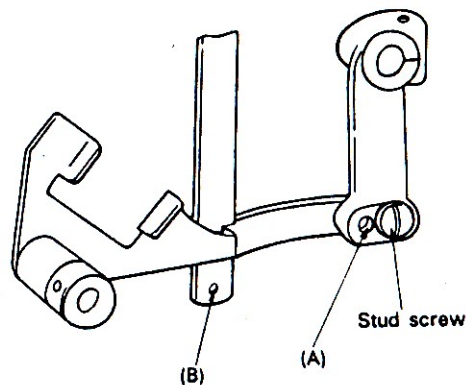


12. Modification to use button clamp lifter pedal

*This machine is designed to lift the button clamp automatically when the machine stops. In case you may use with button clamp liften pedal, loosen stud screw and shift it to hole A and fasten it.

Then the chain from additional pedal is connected with the hole B of button clamp driving connection I.

Especially, in case of using shank attachment, we recommend you to use additional pedal insted of single pedal.



13. Causes of troubles

a. The needle breaks

1. The needle is too slender for the material.
2. Button is not properly held by the button clamp.
3. The button clamp is improperly installed.
4. The feed scale is not properly set to the distance of button holes.
5. The timing of thread handler is incorrect.
6. The feed plate is improperly installed.
7. The timing of needle and looper is incorrect.
8. Poor quality buttons.
9. Button holes are too small.
10. The longitudinal feed lever is not set properly.

(For example, you might have forgotten to operate this lever when buttons were changed from two-hole to four-hole type.)

b. The thread snaps

1. The looper is damaged.
2. Thread is wound around the looper.
3. The thread is too thin for the needle.
4. The needle is improperly installed.
5. Too strong thread tension.
6. The timing of the automatic thread tension is incorrect.
7. The timing of needle and looper is incorrect (too soon or too late).
8. Parts along the thread passage have scars.
9. Thread handler has scars.
10. Poor quality thread.
11. Poor quality buttons.
12. The timing of thread handler is incorrect.
13. Bad needle.
14. The needle hole of the needle plate has scars.
15. The thread presser won't release the thread.

c. Stitch skips

1. The needle is bent.
2. The needle is too thick or too thin for the thread.
3. The needle is curved through contact with the hole periphery of the feed plate.
4. The needle is curved through contact with the hole periphery of the needle plate.
5. The needle contacts thread handler (The timing of thread handler is incorrect.)
6. The timing of needle and looper is incorrect.
7. Too great a clearance between needle and looper.
8. The needle is not properly installed.
9. The thread take-up lever is not adjusted properly.
10. Needle receiver is not adjusted properly.
11. The button grip is not pressing the material hard enough. (The lifter lever improperly adjusted.)
12. The needle bar is not at the proper height.
113. Feed is not set properly to the distance between button holes.

d. Thread tension

1. The main thread tension is too loosen.
2. The automatic thread tension loosens too soon.
3. The timing of thread handler is incorrect.

e. The thread won't be trimmed properly upon sewing a button on

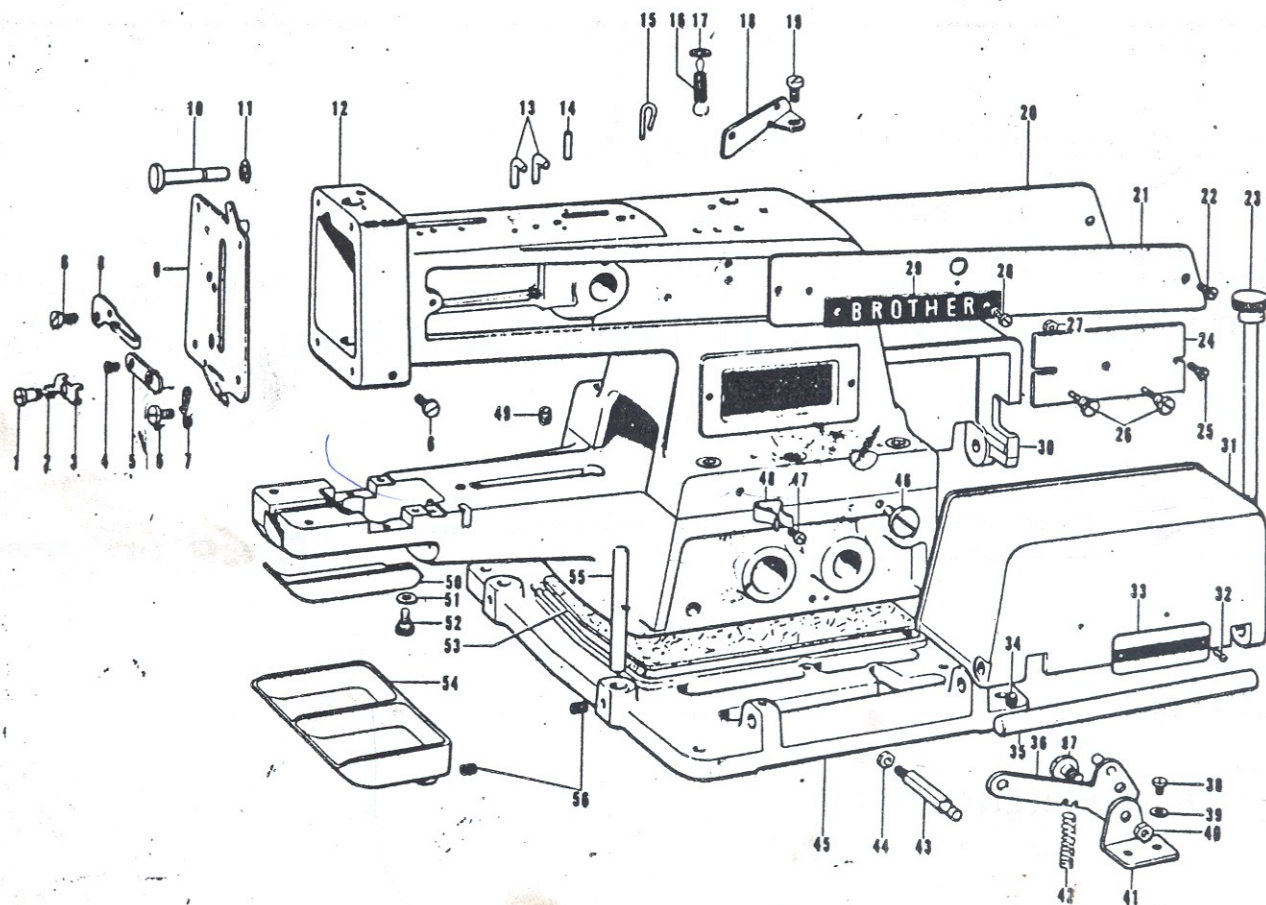
1. Too loose thread tension.
2. The final stitch not formed properly.

f. The machine stops during sewing operation.

1. The stitch control cam is maladjusted.

A. Machine Body

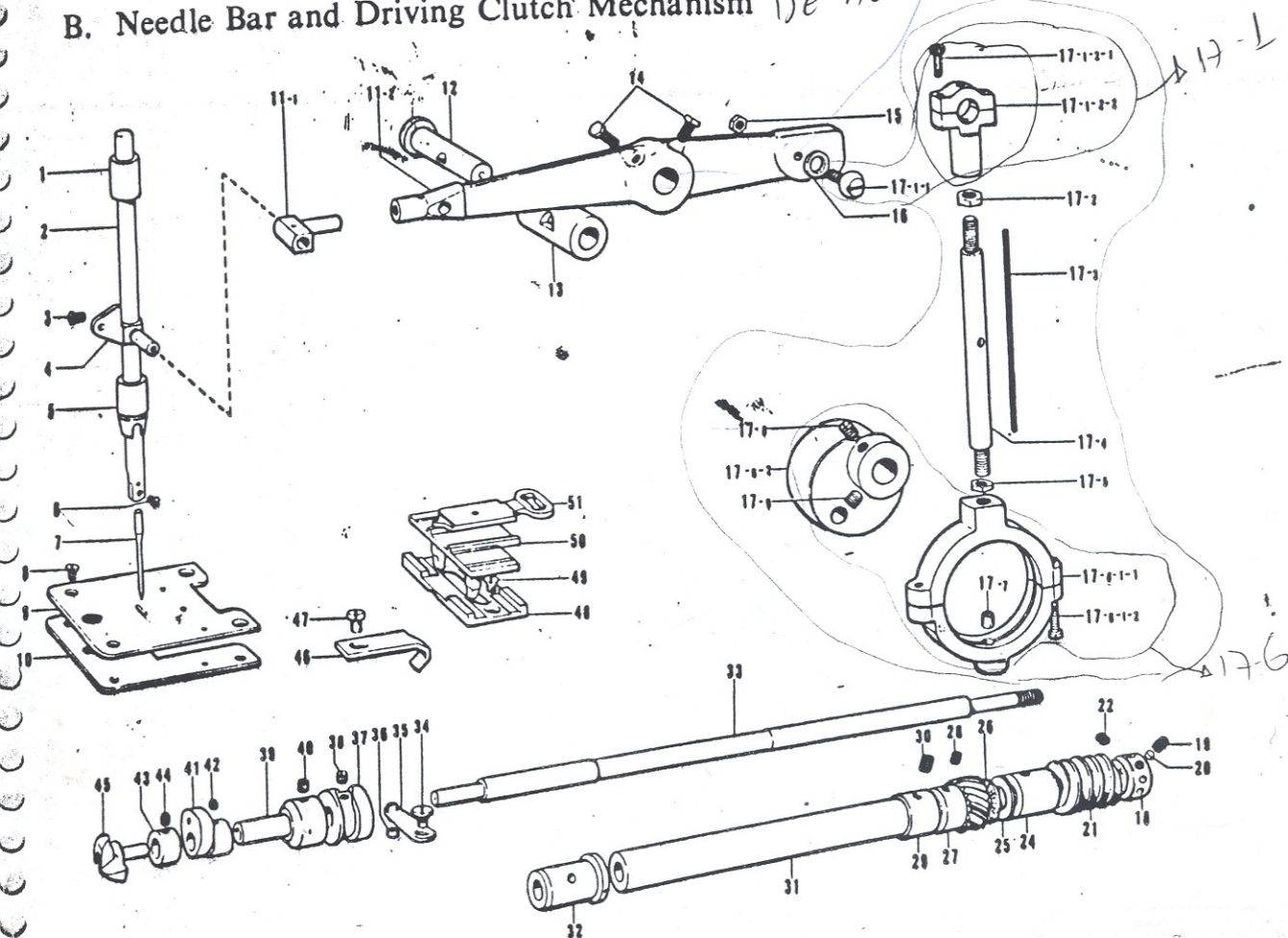
CORPO
DA MAQ.



Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
A-1	Screw 3.18	1	112301-0-01		A-29	Name Plate "BROTHER"	2		
A-2	Spring	1	142361-0-00		A-30	Bed Cover Assembly (Left)	1	154225-0-01	X
A-3	Needle Thread Guard	1	112300-0-01		A-31	Bed Cover Assembly (Right)	1	154224-0-01	X
A-4	Screw 3.57	1	116328-0-01	X	A-32	Pin	2		
A-5	Sub Tension Plate	1	142360-0-01		A-33	Model Plate	1		X
A-6	Screw 4.76 x 10	5	009711-0-12	X	A-34	Screw 5.56	1	013750-6-10	
A-7	Face Plate Thread Guide	1	115212-1-01		A-35	Bed Cover Shaft	2	114984-0-00	X
A-8	Thread Guide	1	151881-0-01		A-36	Clutch Driving Lever	1	142307-0-01	X
A-9	Face Plate	1	117879-0-01		A-37	Screw 5.56	1	115268-0-01	X
A-10	Thread Releaser	1	142672-0-01		A-38	Screw 4.76 x 12	2	009711-2-12	X
A-11	Stop Ring E3	1	048030-3-42		A-39	Washer 4.76	2	025710-2-37	
A-12	Arm-Body	1			A-40	Nut 5.56	1	021750-1-03	
A-13	Pin	2	115192-0-01		A-41	Clutch Drive Lever Plate	1	115025-0-01	
A-14	Pin	1	115189-0-01		A-42	Spring	1	115026-0-01	
A-15	Main Tension Thread Guide	1	115184-0-01		A-43	Spring Hook	1	115022-0-01	
A-16	Spring	1	115137-0-01		A-44	Nut 4.37	1	102571-0-03	
A-17	Spring Hook	1	115138-0-01		A-45	Bed Base	1		X
A-18	Thread Retainer	1	115183-1-01		A-46	Screw 5.56	1	115268-0-01	
A-19	Screw 4.76 x 7	1	009710-7-12		A-47	Screw 4.37	2	009680-7-13	
A-20	Arm Cover (Left)	1	114979-1-01		A-48	Bed Cover Stop Spring	2	114985-0-01	
A-21	Arm Cover (Right)	1	114978-1-01		A-49	Screw 5.56	1	013751-0-10	
A-22	Screw 4.37	4	106629-0-01		A-50	Looper Cover	1	115275-0-01	
A-23	Bolt	1	114986-0-01		A-51	Washer	1	105329-0-01	
A-24	Rear Cover	1	114976-0-01		A-52	Screw 4.37	1	114988-0-01	
A-25	Screw 3.57	1	114977-0-01		A-53	Felt	1	114982-0-00	X
A-26	Screw 3.57	2	100008-0-03		A-54	Button Tray	1	115270-0-01	
A-27	Nut 3.57	1	021670-1-03		A-55	Button Tray Leg	2	115160-0-01	
A-28	Screw 2.38	4		X	A-56	Screw 6.35	4	013770-6-10	X

DO MOVIMENTO
DA MANA
DE AGULHA - B-17

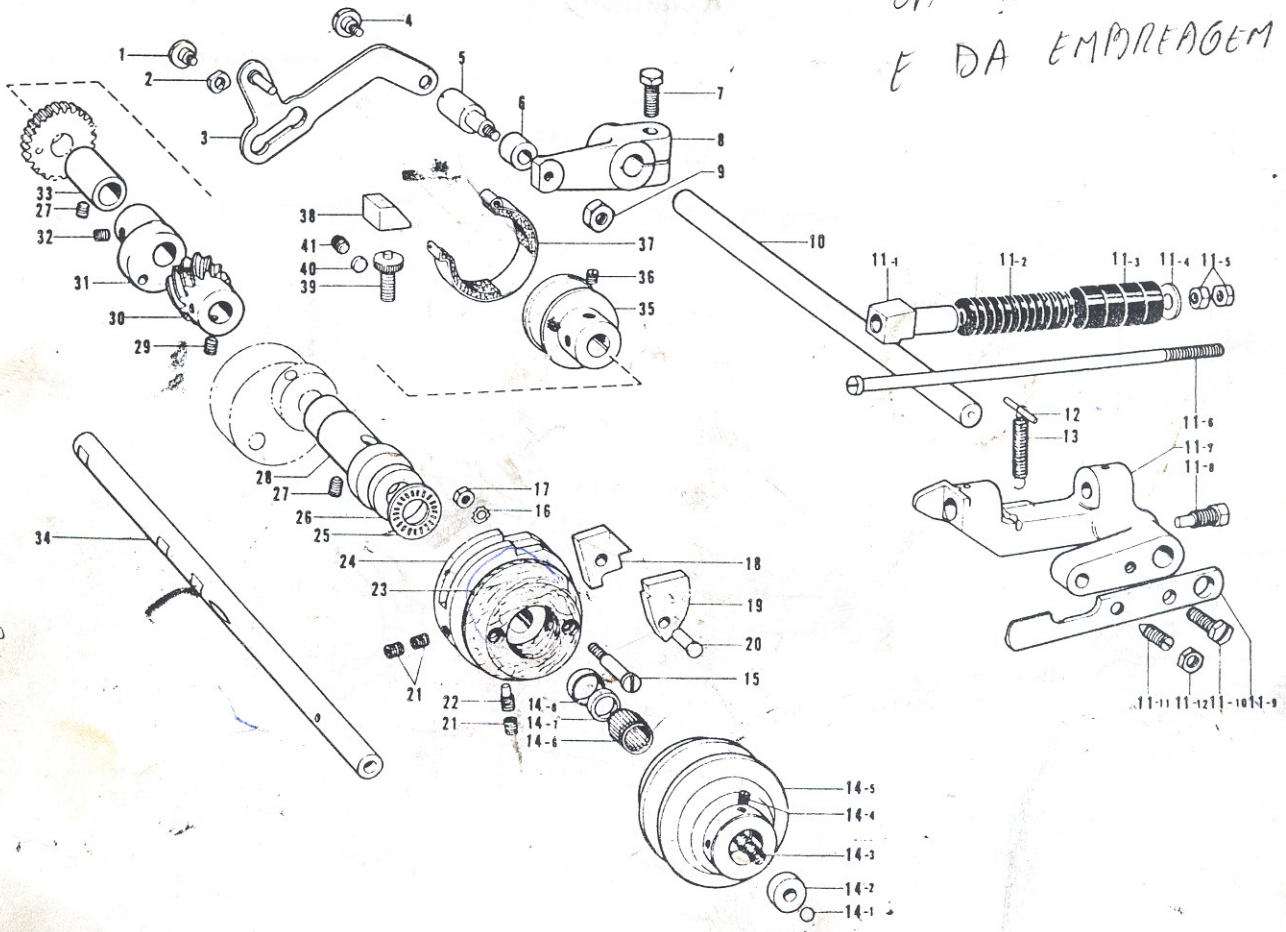
B. Needle Bar and Driving Clutch Mechanism



Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
B-1	Needle Bar Bushing (Upper)	1	115051-0-00		B-18	Fastening Ring	1	114973-0-01	
B-2	Needle Bar	1	115050-0-01		B-19	Screw 6.35	1	014770-6-22	
B-3	Screw 3.57 x 8	1	009670-8-12		B-20	Washer	1	101028-0-00	
B-4	Needle Bar Thread Guide	1	153808-0-01		B-21	Worm	1		
B-5	Needle Bar Bushing (Lower)	1	115052-0-00		B-22	Screw 6.35	2	014770-6-22	
B-6	Screw 3.18	1	140553-1-01	X	B-24	Lower Shaft Bushing (Rear)	1	115059-0-00	X
B-7	Needle TQ x 1	1	115053-0-16	X	B-25	Washer	1	115007-0-01	
B-8	Screw 4.37 x 10	4	005681-0-12		B-26	Thrust Bearing	1	115008-0-00	
B-9	Needle Plate	1	144711-0-01		B-27	Lower Shaft Gear	1	115060-0-01	X
B-10	Needle Plate Subordinate	1	115055-0-01		B-28	Screw 6.35	2	014770-6-22	
B-11-1	Needle Bar Bracket	1	115048-0-01	B-11- Needle Bar Driving Lever Assembly 182350-0-01 X	B-29	Collar	1	115063-0-01	
B-11-2	Needle Bar Driving Lever	1			B-30	Screw 6.35	2	014770-6-22	
B-12	Needle Bar Driving Lever Shaft	1	115046-0-01		B-31	Distance Collar	1	115064-0-01	
B-13	Bushing	1	115047-0-01		B-32	Lower Shaft Bushing (Front)	1	115058-0-00	X
B-14	Bolt 5.56 x 14	2	017751-4-12		B-33	Lower Shaft	1	115057-0-01	
B-15	Nut 5.56	1	021750-1-03		B-34	Screw 4.76	1	115077-0-01	
B-16	Washer	1	144657-0-00		B-35	Thread Handler Link	1	115073-0-01	
B-17-1-1	Round Joint	1		B-17-1 Upper Crank Rod Assembly 181313-0-01	B-36	Thread Handler Link Roller	1	115076-0-01	
B-17-1-2-1	Screw 4.37 x 14	2	148425-0-01	B-17-1-2 Upper Crank Rod Assembly 181314-0-01	B-37	Grooved Cam	1	115065-0-00	
B-17-1-2-2	Upper Crank Rod	1			B-38	Screw 5.56	2	110124-0-01	
B-17-2	Nut 7.14	1	021800-1-03		B-39	Shaft	1	115066-0-00	
B-17-3	Wick	1	144701-0-00		B-40	Screw 5.56	2	013750-6-10	
B-17-4	Crank Rod	1	115041-0-01	B-17 Crank Rod Assembly 144700-1-01	B-41	Triangular Cam	1	115067-0-01	
B-17-5	Nut 7.14	1	115042-0-01		B-42	Screw 4.37	2	151601-0-01	X
B-17-6-1-1	Lower Crank Rod	1		B-17-6 Lower Crank Rod Assembly 182339-0-01	B-43	Collar	1	115068-0-01	
B-17-6-1-2	Screw 4.37	2	142658-0-01		B-44	Screw 4.37	1	151602-0-01	
B-17-6-2	Needle Bar Driving Cam	1		B-17-6 Lower Crank Rod Assembly 181312-0-01	B-45	Rotary Looper	1	115069-0-01	
B-17-7	Felt	1	107155-0-01		B-46	Needle Guide	1	115054-1-01	
B-17-8	Screw 6.35	1	015770-8-12		B-47	Screw 4.76 x 6	1	009710-6-12	
B-17-9	Screw 6.35	1	014770-6-22		B-48	Thread Handler Bracket	1	115070-0-00	
					B-49	Screw 3.57 x 6	2	003670-6-12	
					B-50	Guide Plate	1	115071-0-01	
					B-51	Thread Handler	1	115072-0-01	

C. Driving Clutch and Brake Mechanism

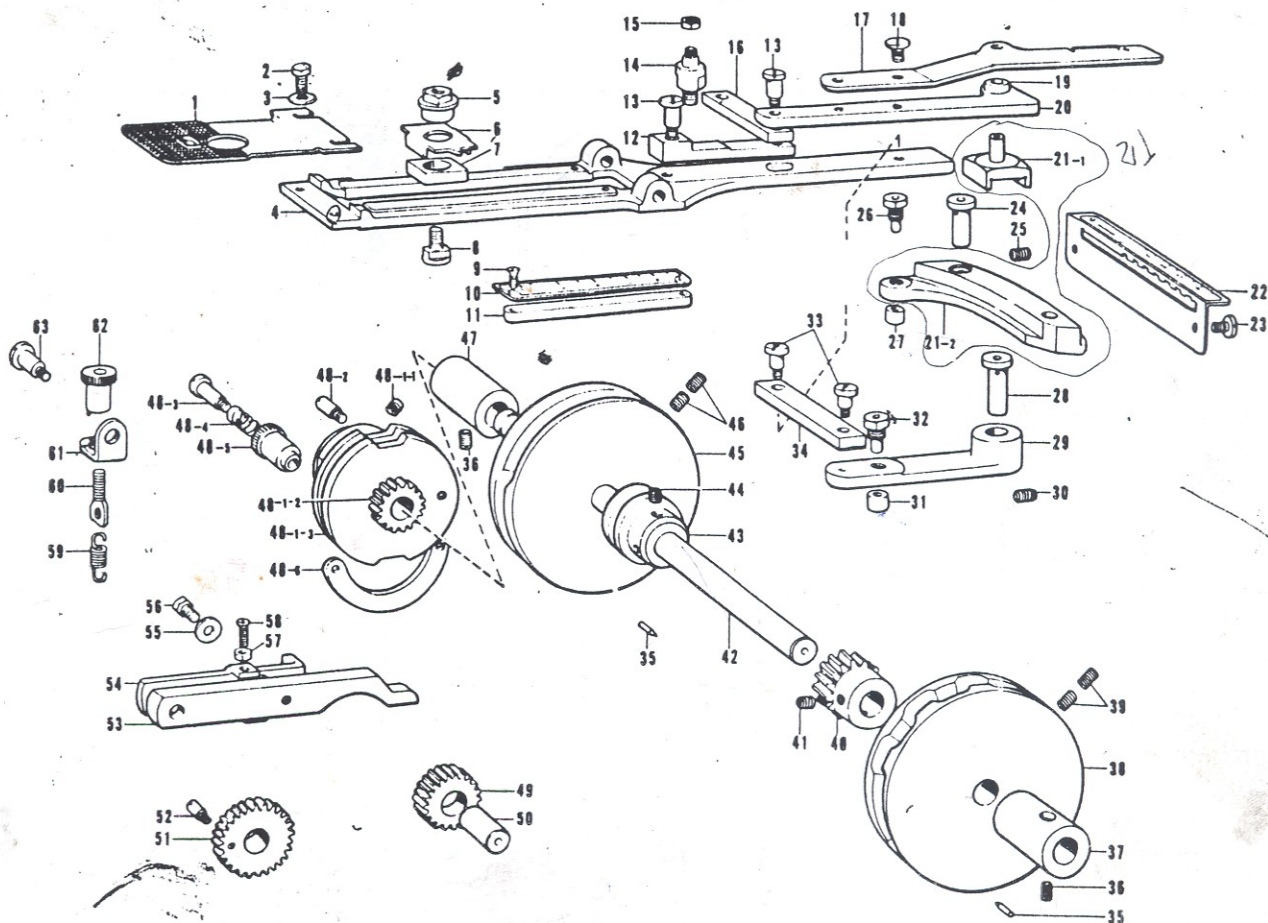
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Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
C- 1	Screw 4.76	1	144523-0-01		C-14- 7	Grease Seal	1	114993-0-00	C-14
C- 2	Slide Block	1	144524-0-00		C-14- 8	Grease Seal Cap	1	114994-0-01	Pulley Assembly
C- 3	Brake Lever	1	144520-0-01		C-15	Screw 5.56	2	114999-0-01	114990-0-01
C- 4	Screw 4.37	1	144526-0-01		C-16	Washer	2	115000-0-00	
C- 5	Stud	1	144525-0-01		C-17	Nut 5.56	2	021750-1-03	
C- 6	Roller	1	105872-0-01		C-18	Brake Cam Segment	1	115002-0-01	
C- 7	Bolt 7.94 x 22	1	017822-2-13		C-19	Flange Cam Segment	1	115003-0-01	
C- 8	Stitch Regulating Lever	1	115027-1-01		C-20	Pin	2	115004-0-01	
C- 9	Nut 4.76	1	110161-0-04		C-21	Screw 7.94	3	014821-0-22	
C-10	Clutch Body Shaft	1	115013-0-01		C-22	Set Screw	1	149996-0-01	
C-11- 1	Stopper Bracket	1	115015-1-01		C-23	Clutch Plate	1	114998-0-00	
C-11- 2	Washer	3	115017-0-01		C-24	Stop Cam	1	142895-0-01	15086200
C-11- 3	Cushion Rubber	4	115018-0-01		C-25	Thrust Bearing	1	115008-0-00	
C-11- 4	Washer 7.14	1	025800-3-33		C-26	Washer	1	115007-0-01	
C-11- 5	Nut 7.14	2	021800-1-03		C-27	Screw 4.76	2	013711-0-10	
C-11- 6	Stopper Shaft	1	115016-0-01		C-28	Bushing (Right)	1	115214-1-00	
C-11- 7	Clutch Body	1	115009-0-01	C-11 Clutch Body Assembly 144747-2-01	C-29	Screw 6.35	2	014770-6-22	
C-11- 8	Set Screw	1	115014-0-01		C-30	Spiral Gear	1	115061-0-01	
C-11- 9	Ball Presser Plate	1	115010-0-01		C-31	Cam	1	115124-0-01	
C-11-10	Bolt 6.35	1	115011-0-01		C-32	Screw 6.35	2	014770-6-22	
C-11-11	Screw 6.35	1	115012-0-01		C-33	Bushing (Left)	1	115215-0-00	
C-11-12	Nut 6.35	1	150554-0-01		C-34	Driving Shaft	1	114989-0-01	
C-12	Pin	1	115021-0-01		C-35	Brake Drum	1	144509-0-00	
C-13	Spring	1	115020-0-01		C-36	Screw 5.95	2	013750-6-10	
C-14- 1	Steel Ball 5/16	1	021079-4-50		C-37	Brake Shoe	1	144510-0-01	
C-14- 2	Ball Holder	1	114995-0-01		C-38	Brake Adjuster	1	144519-0-01	
C-14- 3	Spring	1	114997-0-01		C-39	Brake Adjuster Knob	1	144518-0-01	
C-14- 4	Screw 4.76	2	013710-7-12	C-14 Pulley Assembly 114990-0-01	C-40	Washer	1	107793-0-00	
C-14- 5	Pulley	1	114991-0-01		C-41	Screw 5.95	1	151604-0-01	
C-14- 6	Bearing	2	114992-0-00						

D. Feed Mechanism

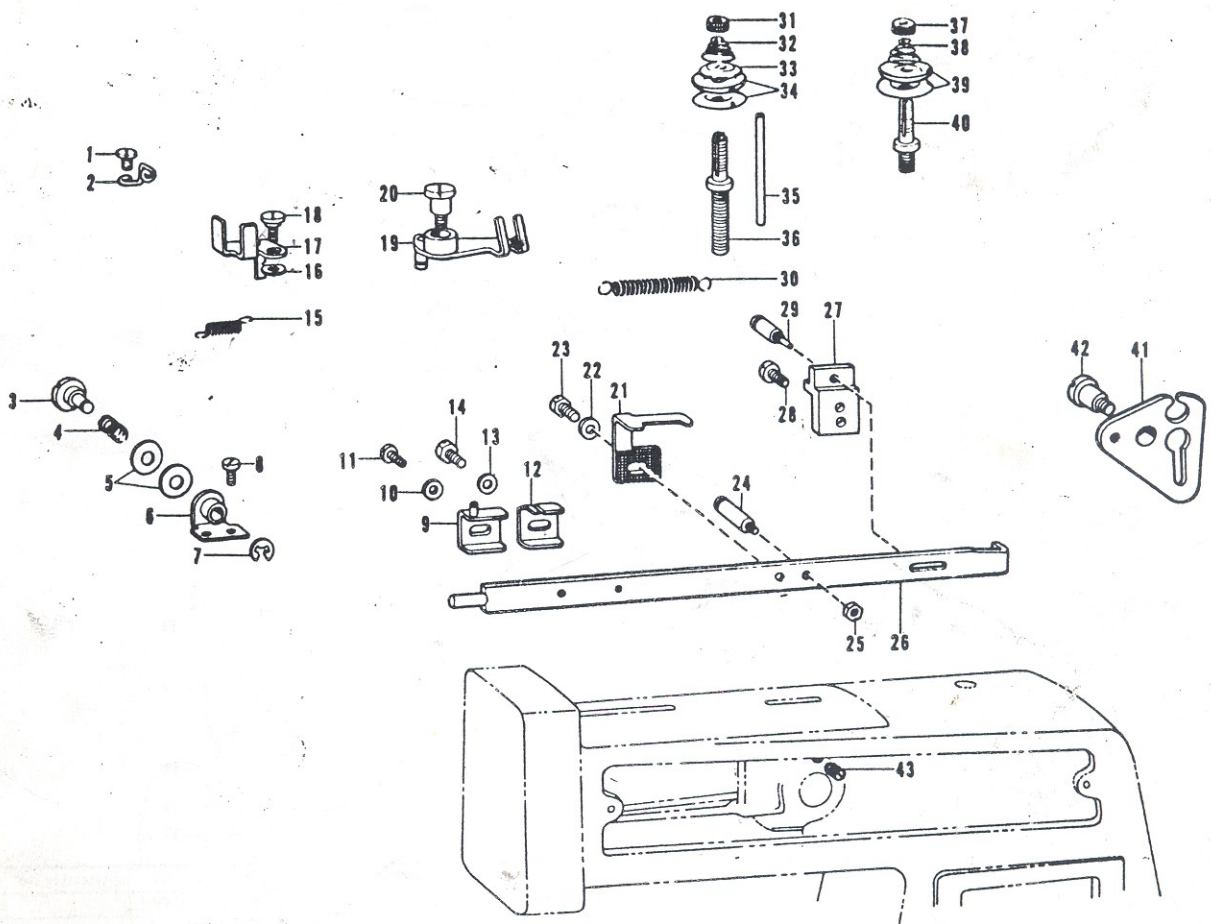
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Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
D-1	Feed Plate (A)	1	144659-1-01		D-35	Pin	2	114980-0-01	
D-2	Bolt 4.76 x 7	2	146360-0-02		D-36	Screw 4.76	2	013711-0-10	
D-3	Washer	2	146354-0-01		D-37	Cam Shaft Bushing (Right)	1	115080-0-00	
D-4	Feed Bracket	1	115087-0-01		D-38	Transverse-Feed Cam	1		
D-5	Transverse-Feed Adjusting Nut	1	115091-0-01		D-39	Screw 6.35	4	014770-6-22	
D-6	Transverse-Feed Plate	1	115090-0-01		D-40	Worm Wheel	1		
D-7	Transverse-Feed Slide Block	1	115088-0-01		D-41	Screw 6.35	2	014770-6-22	
D-8	Screw	1	115089-0-01		D-42	Cam Shaft	1	115078-0-01	
D-9	Screw 3.18	2	117291-0-01		D-43	Button Clamp Driving Link Guide	1	115131-1-01	
D-10	Transverse-Feed Length Indicator	1	115092-0-01		D-44	Screw 6.35	2	014770-6-22	
D-11	Supporting Plate	1	115093-0-01		D-45	Back & Forth Feed Cam	1	115084-0-00	
D-12	Back & Forth Feed Link	1	115100-0-01		D-46	Screw 6.35	4	014770-6-22	
D-13	Screw 4.76	2	115101-0-01		D-47	Cam Shaft Bushing (Left)	1	115079-0-00	
D-14	Stud	1	115102-0-01		D-48-1-1	Screw 6.35	2	014770-6-22	D-48-1
D-15	Nut 4.76	1	021710-1-03		D-48-1-2	Stitch Control Cam Gear	1		Stitch Control
D-16	Feed Link	1	115094-0-01		D-48-1-3	Stitch Control Cam	1		Cam Assembly
D-17	Back & Forth Feed Adjusting Lever	1	115105-0-01		D-48-2	Screw 4.37	1	115113-0-01	115109-0-01
D-18	Screw 4.37	2	009680-6-12		D-48-3	Screw 4.37	1	115116-0-01	
D-19	Bushing	1	115104-0-01		D-48-4	Spring	1	115115-0-01	
D-20	Back & Forth Feed Connector	1	115103-0-01		D-48-5	Stitch Control Knob	1	115114-0-01	
D-21-1	Back & Forth Feed Slide Block	1	115106-0-01	D-21 Back & Forth Feed Adjusting Assembly 180910-0-01	D-48-6	Stitch Control Cam Segment	1	115112-0-01	
D-21-2	Back & Forth Feed Lever	1	115107-0-01		D-49	Stitch Changing Gear	1	115117-0-00	
D-22	Back & Forth Feed Length Indicator	1	115108-0-01		D-50	Shaft	1	115118-0-01	
D-23	Screw 4.76 x 7	2	009710-7-12		D-51	Stitch Changing Gear	1	115119-0-01	
D-24	Feed Lever Shaft	1	115099-0-01		D-52	Pin	1	115120-0-01	
D-25	Screw 5.95	1	117685-0-01		D-53	Lever For 32-Stitches (Major)	1	115121-1-01	
D-26	Stud	1	115097-0-01		D-54	Lever For 32-Stitches (Minor)	1	147114-0-01	
D-27	Roller	1	115098-0-01		D-55	Washer 4.76	1	025710-2-33	
D-28	Feed Lever Shaft	1	115099-0-01		D-56	Bolt 4.76	1	117363-0-02	
D-29	Transverse-Feed Lever	1	115096-0-00		D-57	Nut 3.18	1	021660-1-02	
D-30	Screw 5.95	1	151605-0-02		D-58	Screw 3.18 x 12	1	009661-2-13	
D-31	Roller	1	115098-0-01		D-59	Spring	1	144516-0-01	
D-32	Stud	1	115097-0-01		D-60	Spring Hook	1	144515-0-01	
D-33	Screw 4.76	2	115095-0-01		D-61	Brake Spring Plate	1	144513-0-01	
D-34	Feed Link	1	115094-0-01		D-62	Screw	1	144517-0-01	
					D-63	Screw 4.76	1	144514-0-01	

E. Threading Mechanism

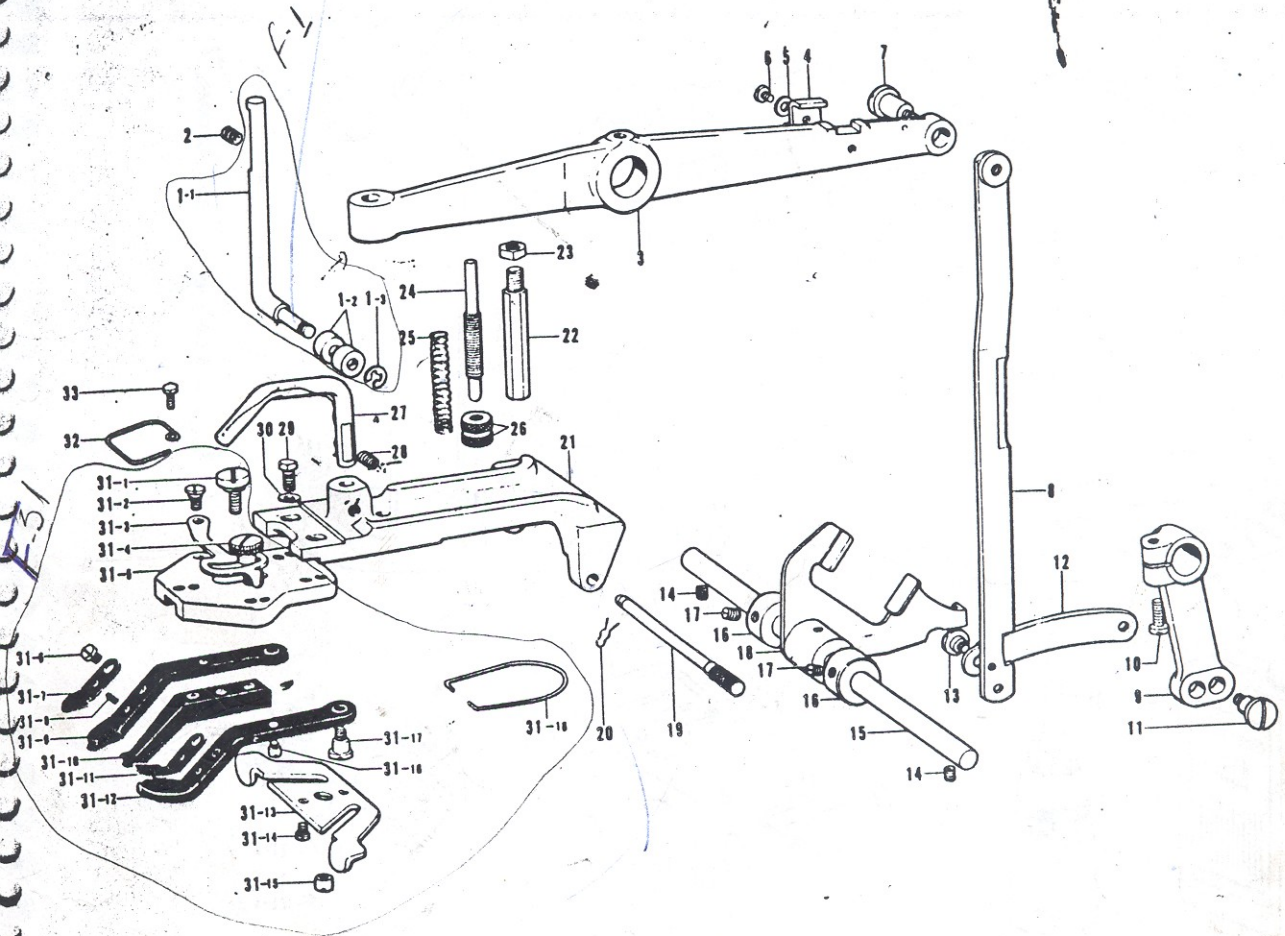
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Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
E-1	Screw 4.76 x 10	1	009711-0-12	✓	E-23	Bolt 4.76	1	117363-0-02	✓
E-2	Arm Thread Guide	1	115204-0-01		E-24	Spring Hook	1	115177-0-01	
E-3	Thread Presser Shaft	1	144673-0-01		E-25	Nut 3.18	1	021660-1-02	
E-4	Thread Presser Spring	1	144674-0-00		E-26	Thread Release Connecting Bar	1	115173-0-01	
E-5	Pre-Tension Disc	2	100546-0-01		E-27	Guide Bracket	1	115174-0-01	
E-6	Indicator Plate	1	144672-0-01		E-28	Screw 4.76 x 12	2	009711-2-13	✓
E-7	Stop Ring E3	1	048030-3-46		E-29	Pin	1	115175-0-01	
E-8	Screw 4.76 x 10	2	009711-0-12	✓	E-30	Spring	1	115176-0-01	
E-9	Presser Lever Bracket	1	115180-0-01		E-31	Tension Control Nut	1	100136-0-01	
E-10	Washer	1	146354-0-01		E-32	Tension Spring	1	104525-0-01	
E-11	Screw 4.76 x 7	1	009710-7-13		E-33	Presser for Tension Disc	1	100134-0-01	
E-12	Adjuster	1	115179-0-01		E-34	Tension Disc	2	115187-0-01	
E-13	Washer	1	146354-0-01		E-35	Pin	1	115191-0-01	
E-14	Bolt 4.76	1	117363-0-02	✓	E-36	Tension Stud	1	115190-0-01	
E-15	Spring	1	144671-0-01		E-37	Tension Control Nut	1	100136-0-01	
E-16	Washer 6	1	025060-1-32		E-38	Spring	1	115188-0-01	✓
E-17	Thread Presser Lever	1	144669-0-01		E-39	Tension Disc	2	115187-0-01	
E-18	Screw 5.56	1	144670-0-01		E-40	Main Tension Stud	1	115186-0-01	
E-19	Thread Take-up Lever	1	144486-0-01		E-41	Thread Release Cam	1	115171-0-01	
E-20	Screw 5.56	1	115249-0-01		E-42	Screw 6.35	1	115172-0-01	
E-21	Thread Release Lever	1	115178-0-01	✓	E-43	Screw 4.76	1	013719-4-12	
E-22	Washer	1	146354-0-01						

F. Button Clamp Mechanism

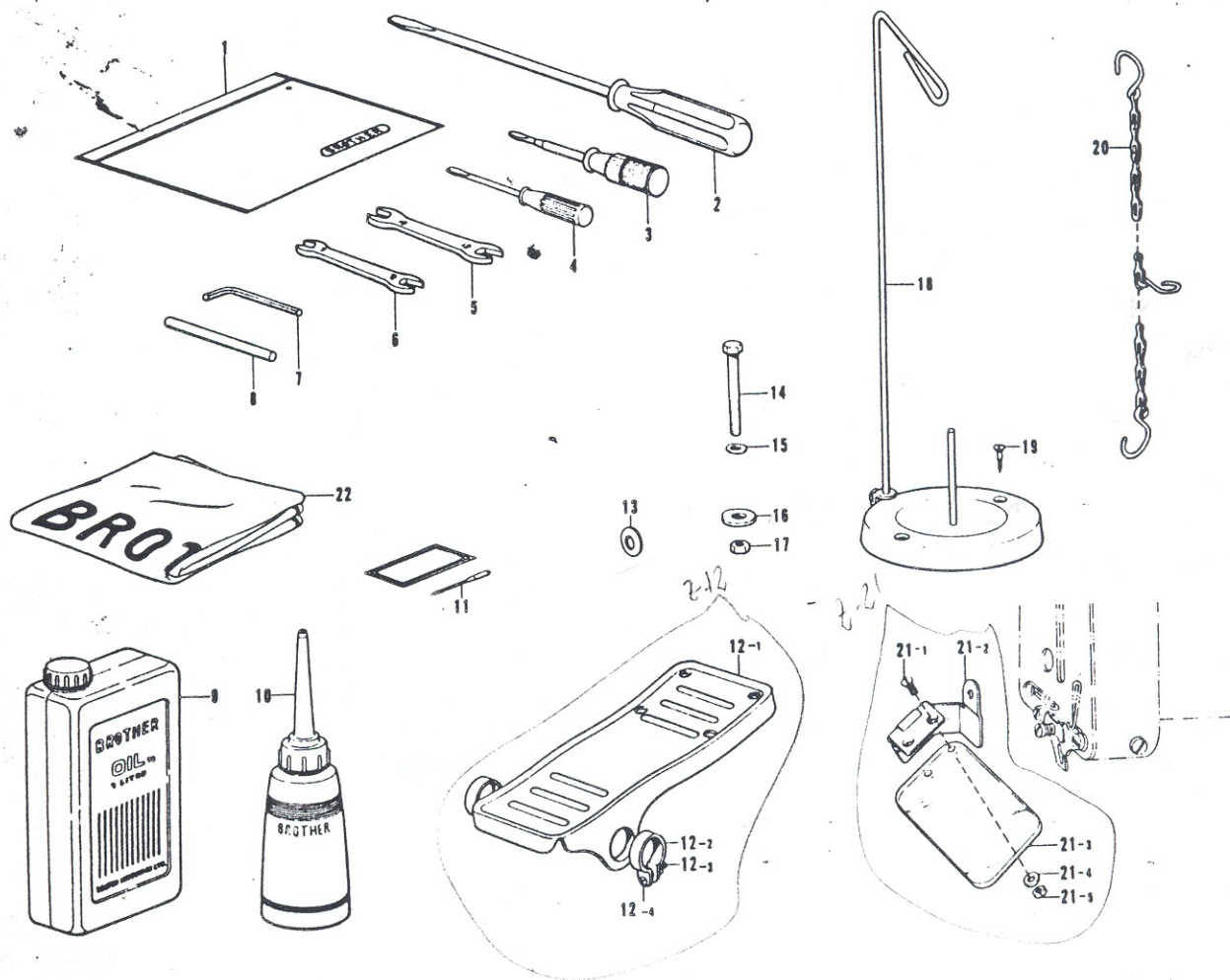
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Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
F-1-1	Button Clamp Lifter	1	115139-0-01	F-1 Clamp Lifter Assembly 142308-0-01	F-25	Spring	1	115147-0-01	
F-1-2	Roller	2	107744-0-01		F-26	Tension Control Nut	2	146994-0-01	
F-1-3	Stop Ring E3	1	048030-3-42		F-27	Hook	1	115146-0-01	
F-2-1	Screw 6.35	1	014770-6-22		F-28	Screw 6.35	1	014770-6-22	
F-3	Button Clamp Lifting Lever	1	115135-1-01		F-29	Bolt 4.76 x 14	2	017711-4-12	
F-4	Stopper	1	117873-1-01		F-30	Washer	2	146354-0-01	
F-5	Washer	1	146354-0-01		F-31-1	Screw 3.57	1	115161-0-01	
F-6	Screw 4.37	1	107407-0-03		F-31-2	Screw 4.37	1	115165-0-01	
F-7	Screw 4.76	1	115101-0-01		F-31-3	Button Clamp Adjusting Plate	1	115164-0-01	
F-8	Button Clamp Driving Connector	1	115134-1-01		F-31-4	Screw 4.37	1	115166-0-01	
F-9	Button Clamp Driving Lever	1	115128-1-00		F-31-5	Button Clamp Bracket	1	115151-0-00	
F-10	Screw 5.56 x 16	1	009751-6-12		F-31-6	Screw 4.37 x 4.5	2	009689-4-12	
F-11	Screw 4.76	1	115132-0-01		F-31-7	Spring	1	150398-0-01	
F-12	Button Clamp Driving Link	1	115130-0-01		F-31-8	Spring Pin	2	047250-6-42	
F-13	Screw 4.76	1	115133-0-01		F-31-9	Button Clamp (Left)	1	150397-1-01	
F-14	Screw 5.56	2	013751-0-10		F-31-10	Button Clamp (Middle)	1	150402-0-01	
F-15	Button Clamp Driving Shaft	1	115126-0-01		F-31-11	Spring	1	150401-0-01	
F-16	Collar	2	115127-0-01		F-31-12	Button Clamp (Right)	1	150399-1-01	
F-17	Screw 4.76	4	013710-5-10		F-31-13	Button Clamp Plate	1	115269-0-01	
F-18	Button Clamp Driving Fork	1	115125-0-01		F-31-14	Screw 3.57 x 8	2	009670-8-12	
F-19	Button Clamp Holder Bar	1	115144-0-01		F-31-15	Nut 3.57	1	115162-0-01	
F-20	Snap	1	115145-0-01		F-31-16	Pin	2	115156-0-01	
F-21	Button Clamp Holder	1	115143-2-01		F-31-17	Screw 4.76	2	115158-0-01	
F-22	Stopper	1	115149-0-01		F-31-18	Spring	1	115163-0-01	
F-23	Nut 5.56	1	107282-0-02		F-32	Finger Guard	1	151051-0-01	
F-24	Screw	1	115148-1-01		F-33	Bolt 4.76 x 7	1		

F-31
Button Clamp
Assembly
150403-1-01

Z. Accessories



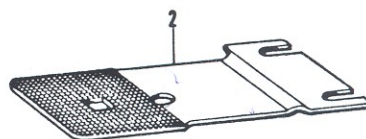
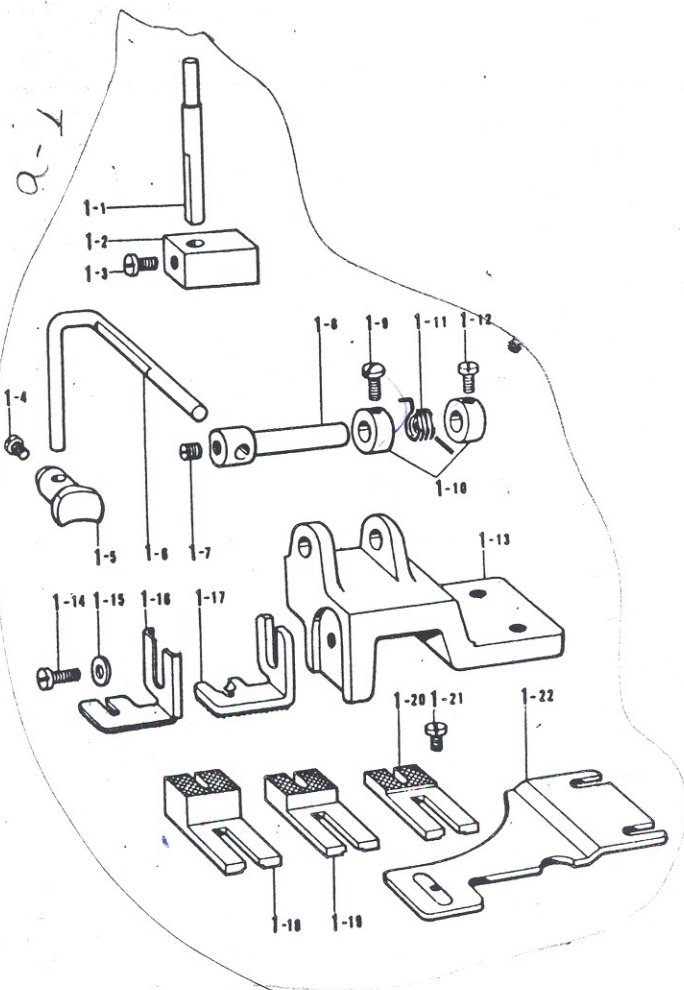
Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
Z- 1	Vinyl Bag		122991-0-01		Z-13	Washer		115017-0-01	
Z- 2	Screw Driver 5.5 x 190		101572-1-01		Z-14	Bolt 6 x 63		144543-0-01	
Z- 3	Screw Driver 3.4 x 70		118837-0-01		Z-15	Washer		025060-2-32	
Z- 4	Screw Driver 2.6 x 70		105344-0-01		Z-16	Washer		115947-0-01	
Z- 5	Spanner 10 x 12		107780-0-01		Z-17	Nut 6		021060-1-02	
Z- 6	Spanner 7 x 8		142205-0-01		Z-18	Spool Stand		109854-0-01	
Z- 7	Spanner 3		142721-0-01		Z-19	Screw 4.5 x 32		100447-0-01	
Z- 8	Worm Adjusting Bar		115123-0-01		Z-20	Chain Assembly		142656-0-01	
Z- 9	Oil Tank		145277-1-03		Z-21- 1	Screw 3.18 x 7		005660-7-13	
Z-10	Oiler		114483-0-01		Z-21- 2	Eye Guard Hinge Assembly		143964-0-01	
Z-11	Needle Assembly		181236-0-01		Z-21- 3	Eye Guard		143966-0-01	
Z-12- 1	Pedal		117437-1-01		Z-21- 4	Washer 3.18		025660-2-32	
Z-12- 2	Pedal Stopper		116016-0-01		Z-21- 5	Nut 3.18		021660-1-03	
Z-12- 3	Nut 4		021400-1-06		Z-22	Head Cover		144224-0-01	
Z-12- 4	Screw 4		001401-4-16						

*The details of included accessories are subject to change.
 *Les détails des accessoires inclus sont sujets à des changements.

*Änderungen in der Aufstellung der mitgelieferten Zubehöre sind vorbehalten.
 *Los detalles de los accesorios incluidos pueden variar.

a. Shank Attachment (Special Oder Parts)

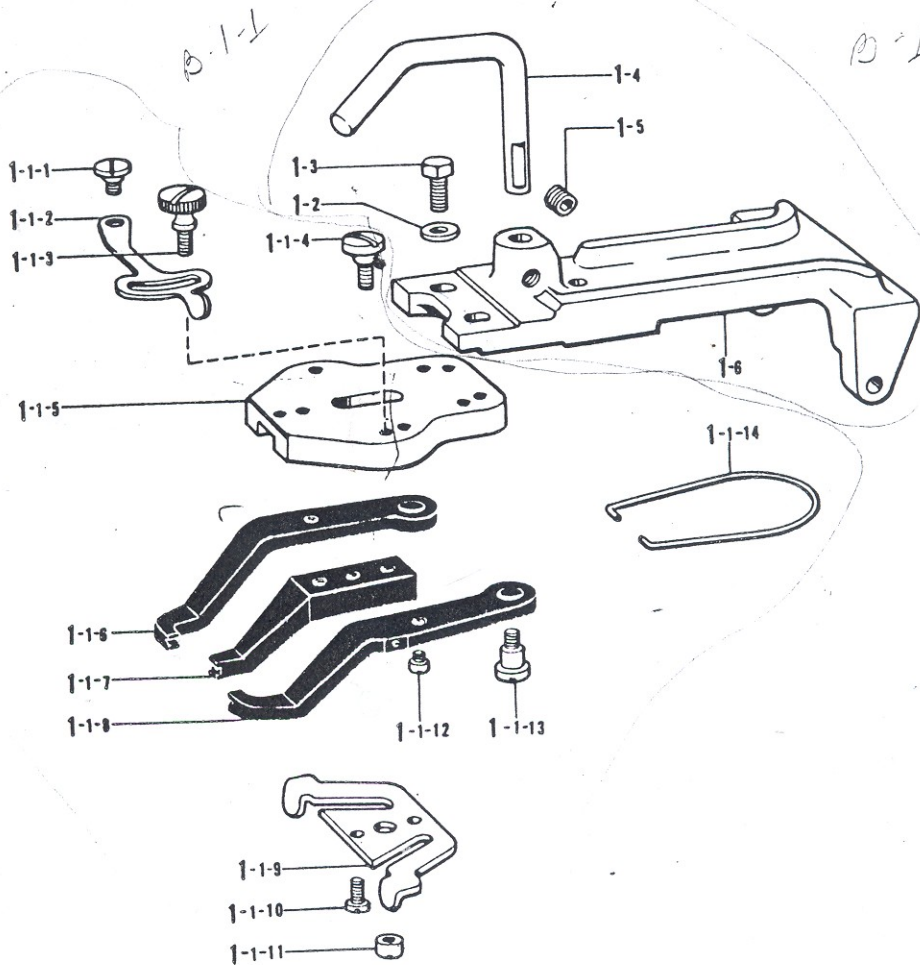
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V/ PREPARAÇÃO
MONTAÇÃO DE
MÁQUINA



Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
a- 1- 1	Button Presser Arm Lifter Bar	1	142684-0-01	a-1 Shank Button Clamp Assembly 142570-0-01	a- 1-13	Shank Button Clamp Bracket	1	142676-0-01	a-1 Shank Button Clamp Assembly 142570-0-01
a- 1- 2	Button Presser Arm Lifter	1	142683-0-01		a- 1-14	Screw 3.57 x 8	1	009670-8-12	
a- 1- 3	Screw 4.37	1	120990-0-01		a- 1-15	Washer	1	102707-0-03	
a- 1- 4	Screw 4.37	1	120990-0-01		a- 1-16	Button Clamp (A)	1	142677-0-01	
a- 1- 5	Button Presser	1	142680-0-01		a- 1-17	Button Clamp (B)	1	142678-0-01	
a- 1- 6	Button Presser Arm	1	142679-0-01		a- 1-18	Cloth Receiver (Large)	1	142688-0-01	
a- 1- 7	Screw 4.76	1	013719-4-12		a- 1-19	Cloth Receiver (Middle)	1	142687-0-01	
a- 1- 8	Button Presser Stud	1	142681-0-01		a- 1-20	Cloth Receiver (Small)	1	142686-0-01	
a- 1- 9	Screw 3.57 x 7	1	009670-7-12		a- 1-21	Screw 3.57 x 5	1	001670-5-12	
a- 1-10	Collar	2	142706-0-01		a- 1-22	Shank Button Feed Plate	1	142685-0-01	
a- 1-11	Spring	1	142682-0-01		a- 2	Feed Plate (B)	1	115085-0-01	
a- 1-12	Screw 3.57 x 5	1	009670-5-12						

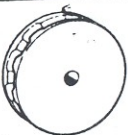
b. Snap Clamp (Special Oder Parts)

CONS. PRENDEDOR
DE ROTÃO



Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
b-1-1-1	Screw 4.37	1	115165-0-01	b-1-1 Snap Button Clamp Assembly 118538-0-01	b-1-1-11	Nut 3.57	1	115162-0-01	b-1-1 Snap Button Clamp Assembly 118538-0-01
b-1-1-2	Button Clamp Adjusting Plate	1	115164-0-01		b-1-1-12	Pin	2	115156-0-01	
b-1-1-3	Screw 4.37	1	115166-0-01		b-1-1-13	Screw 4.76	2	115158-0-01	
b-1-1-4	Screw 3.57	1	115161-0-01		b-1-1-14	Spring	1	115163-0-01	
b-1-1-5	Button Clamp Bracket	1	115151-0-00		b-1-1-15	Washer	2	146354-0-01	b-1 Snap Holder Assembly 115167-0-01
b-1-1-6	Snap Clamp (Left)	1	118541-0-01		b-1-1-16	Bolt 4.76 x 14	2	017711-4-12	
b-1-1-7	Snap Clamp (Middle)	1	118540-0-01		b-1-1-17	Hook	1	115146-0-01	
b-1-1-8	Snap Clamp (Right)	1	118539-0-01		b-1-1-18	Screw 6.35	1	014770-6-22	
b-1-1-9	Button Clamp Plate	1	115269-0-01		b-1-1-19	Button Clamp Holder	1	115143-2-01	
b-1-1-10	Screw 3.57 x 8	2	009670-8-12						

DIFFERENT PARTS LIST

Ref. No.	Sub-class Name of Parts		-1		-2		-3	
			Standard	with Eye Guard & Finger Guard	Standard	with Eye Guard & Finger Guard	Standard	with Eye Guard & Finger Guard
B-21		Worm	115062-0-01		118543-0-01 +		115062-0-01	
D-38		Transverse Feed Cam	115082-0-00		118542-0-00 X		153566-0-00 X	
H-40		Worm Wheel	115081-0-01		118544-0-01 X		115081-0-01	
F-32		Finger Guard	151051-0-01		151051-0-01		151051-0-01	
F-33		Bolt	146360-0-02 X		146360-0-02		146360-0-02 X	
Z-21		Eye Guard Assembly	143971-0-01		143971-0-01		143971-0-01	

I N D E X

Parts No.	Ref. No.	Remark	Parts No.	Ref. No.	Remark	Parts No.	Ref. No.	Remark	Parts No.	Ref. No.	Remark
001401-4-16	Z-12- 4		025060-1-32	E-16		115012-0-01	C-11-11		115101-0-01	F- 7	
001670-5-12	a- 1-21		025060-2-32	Z-15		115013-0-01	C-10		115102-0-01	D-14	
003670-6-12	B-49		025660-2-32	Z-21- 4		115014-0-01	C-11- 8		115103-0-01	D-20	
005660-7-13	Z-21- 1		025710-2-32	A-39		115015-1-01	C-11- 1		115104-0-01	D-19	
005681-0-12	B- 8		025710-2-33	D-55		115016-0-01	C-11- 6		115105-0-01	D-17	
009661-2-13	D-58		025800-3-33	C-11- 4		115017-0-01	C-11- 2		115106-0-01	D-21- 1	
009670-5-12	a- 1-12		047250-6-42	F-31- 8			Z-13		115108-0-01	D-22	
009670-7-12	a- 1- 9		048030-3-42	A-11		115018-0-01	C-11- 3		115109-0-01	D-48- 1	
009670-8-12	B- 3			F- 1- 3		115020-0-01	C-13		115112-0-01	D-48- 6	
	F-31-14		048030-3-46	E- 7		115021-0-01	C-12		115113-0-01	D-48- 2	
	a- 1-14		071079-4-50	C-14- 1		115022-0-01	A-43		115114-0-01	D-48- 5	
	b- 1- 1-10		100008-0-03	A-26		115025-0-01	A-41		115115-0-01	D-48- 4	
009680-6-12	D-18		100134-0-01	E-33		115026-0-01	A-42		115116-0-01	D-48- 3	
009680-7-13	A-47		100136-0-01	E-31		115027-1-01	C- 8		115117-0-00	D-49	
009689-4-12	F-31- 6			E-37		115041-0-01	B-17- 4		115118-0-01	D-50	
009710-6-12	B-47		100447-0-01	Z-19		115042-0-01	B-17- 5		115119-0-01	D-51	
009710-7-12	A-19		100546-0-01	E- 5		115046-0-01	B-12		115120-0-01	D-52	
	D-23		101028-0-00	B-20		115047-0-01	B-13		115121-1-01	D-53	
009710-7-13	E-11		101572-1-01	Z- 2		115048-0-01	B-11- 1		115123-0-01	Z- 8	
009711-0-12	A- 6		102571-0-03	A-44		115050-0-01	B- 2		115124-0-01	C-31	
	E- 1		102707-0-03	a- 1-15		115051-0-00	B- 1		115125-0-01	F-18	
	E- 8		104525-0-01	E-32		115052-0-00	B- 5		115126-0-01	F-15	
009711-2-12	A-38		105329-0-01	A-51		115053-0-16	B- 7		115127-0-01	F-16	
009711-2-13	E-28		105344-0-01	Z- 4		115054-1-01	B-46		115128-1-00	F- 9	
009751-6-12	F-10		105872-0-01	C- 6		115055-0-01	B-10		115130-0-01	F-12	
013710-5-10	F-17		106629-0-01	A-22		115057-0-01	B-33		115131-1-01	D-43	
013710-7-12	C-14- 4		107155-0-01	B-17- 7		115058-0-00	B-32		115132-0-01	F-11	
013711-0-10	C-27		107282-0-02	F-23		115059-0-00	B-24		115133-0-01	F-13	
	D-36		107407-0-03	F- 6		115060-0-01	B-27		115134-1-01	F- 8	
013719-4-12	E-43		107744-0-01	F- 1- 2		115061-0-01	C-30		115135-1-01	F- 3	
	a- 1- 7		107780-0-01	Z- 5		115062-0-01	B-21		115137-0-01	A-16	
013750-6-10	A-34		107793-0-00	C-40		115063-0-01	B-29		115138-0-01	A-17	
	B-40		109854-0-01	Z-18		115064-0-01	B-31		115139-0-01	F- 1- 1	
	C-36		110124-0-01	B-38		115065-0-00	B-37		115143-2-01	F-21	
013751-0-10	A-49		110161-0-04	C- 9		115066-0-00	B-39			b- 1- 6	
	F-14		110249-0-01	E-20		115067-0-01	B-41		115144-0-01	F-19	
013770-6-10	A-56		112300-0-01	A- 3		115068-0-01	B-43		115145-0-01	F-20	
014770-6-22	B-17- 9		112301-0-01	A- 1		115069-0-01	B-45		115146-0-01	F-27	
	B-19		114483-0-01	Z-10		115070-0-00	B-48			b- 1- 4	
	B-22		114973-0-01	B-18		115071-0-01	B-50		115147-0-01	F-25	
	B-28		114976-0-01	A-24		115072-0-01	B-51		115148-1-01	F-24	
	B-30		114977-0-01	A-25		115073-0-01	B-35		115149-0-01	F-22	
	C-29		114978-1-01	A-21		115076-0-01	B-36		115151-0-00	F-31- 5	
	C-32		114979-1-01	A-20		115077-0-01	B-34			b- 1- 1- 5	
	D-39		114980-0-01	D-35		115078-0-01	D-42		115156-0-01	F-31-16	
	D-41		114982-0-00	A-53		115079-0-00	D-47			b- 1- 1-12	
	D-44		114984-0-00	A-35		115080-0-00	D-37		115158-0-01	F-31-17	
	D-46		114985-0-01	A-48		115081-0-01	D-40			b- 1- 1-13	
	D-48- 1- 1		114986-0-01	A-23		115082-0-00	D-38		115160-0-01	A-55	
	F- 2		114988-0-01	A-52		115084-0-00	D-45		115161-0-01	F-31- 1	
	F-28		114989-0-01	C-34		115085-0-01	a- 2			b- 1- 1- 4	
	b- 1- 5		114990-0-01	C-14		115087-0-01	D- 4		115162-0-01	F-31-15	
014821-0-22	C-21		114991-0-01	C-14- 5		115088-0-01	D- 7			b- 1- 1-11	
015770-8-12	B-17- 8		114992-0-00	C-14- 6		115089-0-01	D- 8		115163-0-01	F-31-18	
017711-4-12	F-29		114993-0-00	C-14- 7		115090-0-01	D- 6			b- 1- 1-14	
	b- 1- 3		114994-0-01	C-14- 8		115091-0-01	D- 5		115164-0-01	F-31- 3	
017751-4-12	B-14		114995-0-01	C-14- 2		115092-0-01	D-10			b- 1- 1- 2	
017822-2-13	C- 7		114997-0-01	C-14- 3		115093-0-01	D-11		115165-0-01	F-31- 2	
021060-1-02	Z-17		114998-0-00	C-23		115094-0-01	D-16			b- 1- 1- 1	
021400-1-06	Z-12- 3		114999-0-01	C-15			D-34		115166-0-01	F-31- 4	
021660-1-02	D-57		115000-0-00	C-16		115095-0-01	D-33			b- 1- 1- 3	
	E-25		115002-0-01	C-18		115096-0-00	D-29		115167-0-01	b- 1	
021660-1-03	Z-21- 5		115003-0-01	C-19		115097-0-01	D-26		115171-0-01	E-41	
021670-1-03	A-27		115004-0-01	C-20			D-32		115172-0-01	E-42	
021710-1-03	D-15		115007-0-01	B-25		115098-0-01	D-27		115173-0-01	E-26	
021750-1-03	A-40			C-26			D-31		115174-0-01	E-27	
	B-15		115008-0-00	B-26		115099-0-01	D-24		115175-0-01	E-29	
	C-17			C-25			D-12		115176-0-01	E-30	
021800-1-03	B-17- 2		115010-0-01	C-11- 9		115100-0-01	D-12		115177-0-01	E-24	
	C-11- 5		115011-0-01	C-11-10		115101-0-01	D-13		115178-0-01	E-21	

Parts No.	Ref. No.	Remark	Parts No.	Ref. No.	Remark	Parts No.	Ref. No.	Remark
179-0-01	F-12		143964-0-01	Z-21- 2		182339-0-01	B-17- 6- 1	
180-0-01	E- 9		143966-0-01	Z-21- 3		182350-0-01	B-11	
183-1-01	A-18		143971-0-01	Z-21				
184-0-01	A-15		144224-0-01	Z-22				
186-0-01	E-40		144486-0-01	E-19				
187-0-01	E-34		144509-0-00	C-35				
	E-39		144510-0-01	C-37				
188-0-01	E-38		144513-0-01	D-61				
189-0-01	A-14		144514-0-01	D-63				
190-0-01	E-36		144515-0-01	D-60				
191-0-01	E-35		144516-0-01	D-59				
192-0-01	A-13		144517-0-01	D-62				
19204-0-01	E- 2		144518-0-01	C-39				
212-1-01	A- 7		144519-0-01	C-38				
214-1-00	C-28		144520-0-01	C- 3				
215-0-00	C-33		144523-0-01	C- 1				
268-0-01	A-37		144524-0-00	C- 2				
	A-46		144525-0-01	C- 5				
269-0-01	F-31-13		144526-0-01	C- 4				
	b- 1- 1- 9		144543-0-01	Z-14				
270-0-01	A-54		144657-0-00	B-16				
275-0-01	A-50		144659-1-01	D- 1				
2947-0-01	Z-16		144669-0-01	E-17				
3016-0-01	Z-12- 2		144670-0-01	E-18				
3185-2-01	Z-12		144671-0-01	E-15				
3323-0-01	A- 4		144672-0-01	E- 6				
3791-0-01	D- 9		144673-0-01	E- 3				
37363-0-02	D-56		144674-0-00	E- 4				
	E-14		144700-1-01	B-17				
	E-23		144701-0-00	B-17- 3				
37437-1-01	Z-12- 1		144711-0-01	B- 9				
37685-0-01	D-25		144747-2-01	C-11				
37873-1-01	F- 4		145277-1-03	Z- 9				
37879-0-01	A- 9		146354-0-01	D- 3				
38538-0-01	b- 1- 1			E-10				
38539-0-01	b- 1- 1- 8			E-13				
38540-0-01	b- 1- 1- 7			E-22				
38541-0-01	b- 1- 1- 6			F- 5				
38542-0-00	D-38			F-30				
38543-0-01	B-21			b- 1- 2				
38544-0-01	D-40		146360-0-02	D- 2				
38837-0-01	Z- 3			F-33				
39990-0-01	a- 1- 3		146994-0-01	F-26				
	a- 1- 4		147114-0-01	D-54				
42291-0-01	Z- 1		148425-0-01	B-17- 1-2-1				
40553-1-01	B- 6		149995-0-01	C-24				
42205-0-01	Z- 6		149996-0-01	C-22				
42307-0-01	A-36		150397-1-01	F-31- 9				
42308-0-01	F- 1		150398-0-01	F-31- 7				
42360-0-01	A- 5		150399-1-01	F-31-12				
42361-0-00	A- 2		150401-0-01	F-31-11				
42570-0-01	a- 1		150402-0-01	F-31-10				
42656-0-01	Z-20		150403-1-01	F-31				
42658-0-01	B-17- 6-1-2		150554-0-01	C-11-12				
42672-0-01	A-10		151051-0-01	F-32				
42676-0-01	a- 1-13		151601-0-01	B-42				
42677-0-01	a- 1-16		151602-0-01	B-44				
42678-0-01	a- 1-17		151604-0-01	C-41				
42679-0-01	a- 1- 6		151605-0-02	D-30				
42680-0-01	a- 1- 5		151881-0-01	A- 8				
42681-0-01	a- 1- 8		153566-0-00	D-38				
42682-0-01	a- 1-11		153808-0-01	B- 4				
42683-0-01	a- 1- 2		154224-0-01	A-31				
42684-0-01	a- 1- 1		154225-0-01	A-30				
42685-0-01	a- 1-22		180910-0-01	D-21				
42686-0-01	a- 1-20		180982-0-01	D-48				
42687-0-01	a- 1-19		181236-0-01	Z-11				
42688-0-01	a- 1-18		181312-0-01	B-17- 6				
42706-0-01	a- 1-10		181313-0-01	B-17- 1				
42721-0-01	Z- 7		181314-0-01	B-17- 1- 2				

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- Esta máquina é similar a:

Marca da máquina	Modelo da máquina

- Outras modificações:

[illegible]