

**SIRUBA®**

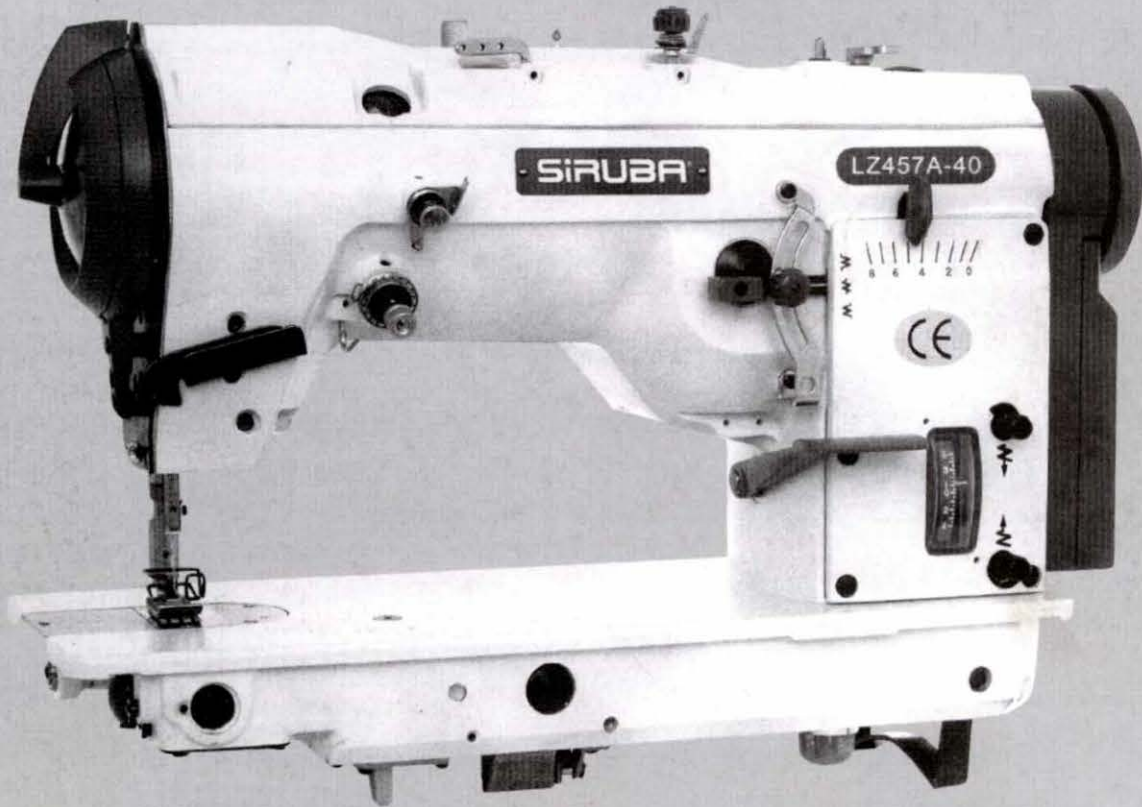
銀箭牌工業用縫紉機

INDUSTRIAL SEWING MACHINE

**LZ457A**

使用說明與零件圖

**INSTRUCTION AND PARTS LIST**



高林股份有限公司  
**KAULIN MFG. CO., LTD.**

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## APPLICATION

High speed single needle lock stitch zigzag machine.  
High speed single needle lock stitch zigzag machine with automatic thread trimmer.

## NOTES ON SAFETY

The machine must only be commissioned in full knowledge of the instruction manual and operated by persons with appropriate training.

Before putting into service also read the safety notes and the instruction manual of the motor supplier.

The machine must be used only for the purpose intended.  
Use of the machine without the safety devices belonging to it is not permitted.

When gauge parts are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin), during threading, when the workplace is left, and during service work, the machine must be isolated from the mains by switching off the main switch or disconnecting the mains plug.

On mechanically operated clutch motors without start inhibitor it is necessary to wait until the motor has stopped.

General servicing work must be carried out only by appropriately trained persons.

Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.

For service or repair work on pneumatic systems the machine must be isolated from the compressed air supply system. Exceptions to this are only adjustments and function checks made by appropriately trained technicians.

Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.

Work on parts and systems under electric current is not permitted, except as specified in regulations EN50110.

Conversions or changes to the machine must be made only on adherence to all safety regulations.

For repairs, only replacement parts approved by us must be used.

Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC regulations.

Meanings of the symbols:



Danger spot!  
Items requiring special attention



Danger of injury to operative or service staff  
Be sure to observe and adhere to these safety notes!

## COMMISSIONING



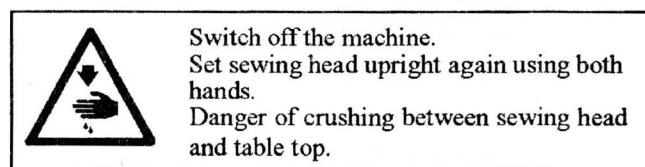
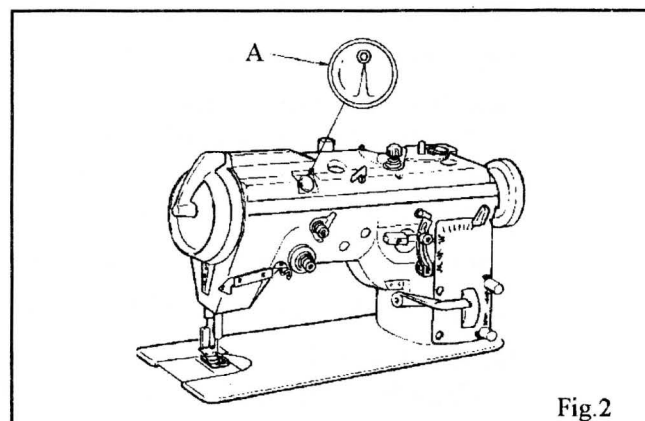
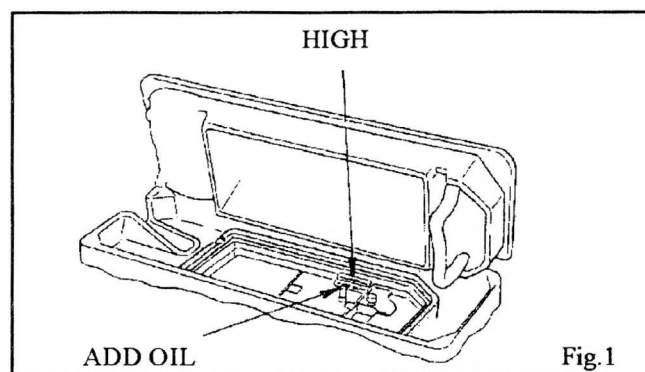
To avoid disturbances or damages it is absolutely necessary to observe the following instructions:

Before you put the machine into operation for the first time clean it thoroughly, and oil it well (see page 2).

Have the machine check whether the motor can be used with existing mains voltage or not, and that junction box is correctly connected. Do not start the machine if the voltage is not correct!

When the machine runs, the balance wheel must rotate toward the operator. If it does not, have the electrician change the wires on the motor.

## OILING



Switch off the machine.  
Set sewing head upright again using both hands.  
Danger of crushing between sewing head and table top.

Tip machine back on its hinges and fill the oil reservoir to HIGH mark as illustrated in Fig. 1.

Correct lubrication is indicated by a continuous stream of oil passing the oil flow window A while machine is running, as shown in Fig. 2.

Should this oil flow become erratic, STOP the machine and check the reservoir oil level, fill if needed.

At least twice each month, check the oil level in the reservoir. Never allow the oil level to drop below add oil mark, shown in Fig. 1.

Only use oil with a viscosity of 20.0 mm<sup>2</sup>/sec. at 38 ° C and a density of 0.888 g/cm<sup>3</sup> at 15 ° C. We recommend SINGER C-oil.

## NEEDLE AND THREAD

Size of needle should be determined in accordance with the size of thread used and type of material being sewn. A correct size needle will permit the thread to pass freely through the eye of the needle and avoid strain and breaking. A bent needle will cause your machine to skip stitches. A hook or burr on the needle point will result in a finish that looks blurred and when short stitches are used some materials may be cut. Therefore, to obtain best sewing results, use SINGER needles.

Application of class		For light-weight materials	For medium-weight materials
Max. thread size-synthetic ▲	Metric No.	120-100	100- 60
	Cotton No.	80- 60	60- 30
Needle size	JIS (SINGER)	#8-#10	#12-#16
	Metric	60- 70	80-100
Catalog No. (Needle system)		1906-01 (135×53)	1906-07 (135×53 M Ball)
		8752-64 (135×53 Lg Ecc G L Ball)	
▲ or an equivalent size of other type of thread.			

## INSERTING THE NEEDLE (See Fig.3)

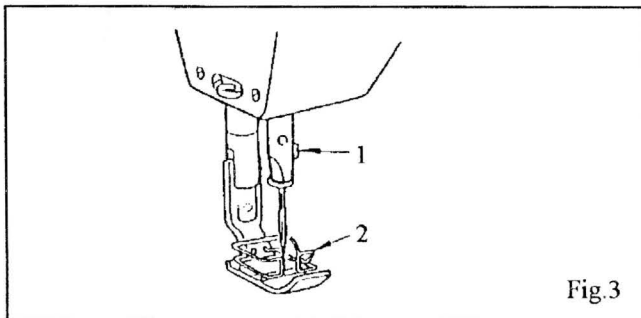


Fig.3



Switch off the machine.  
Do not operate without finger guard (2)! (See Fig. 3)  
Danger of injury!

Use cat. No. 1906-01 (135 × 53), 1906-07 (135 × 53 M Ball), 8752-64 (135 × 135 Lg G Ecc L Ball) needles only. (See table page.)

Set the needle bar at its highest point. Loosen needle set screw (1). (see Fig. 3) Insert the needle in the needle bar and push it up as far as it will go. Make sure its long groove faces toward the front. Tighten needle set screw (1) securely.

## WINDING THE BOBBIN (See Fig.4)

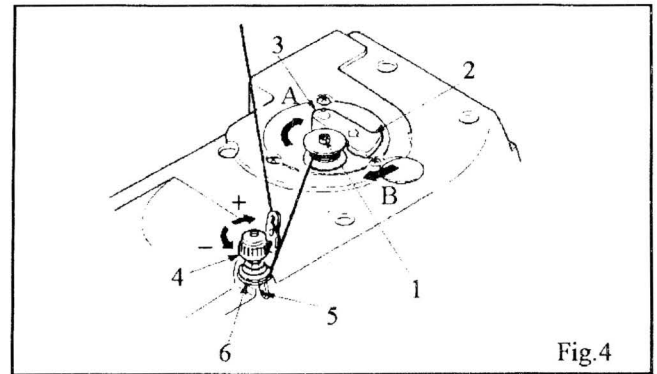


Fig.4

Bobbin winder spindle (1) rotates in the direction of arrow (A).

Push lever (2) in the direction of arrow (B) to wind the bobbin. To adjust amount of thread on bobbin, loosen set screw (3) in lever (2) and move lever (2), as required. Securely tighten set screw (3).

Adjust the thumb nut (4) to regulate the tension for bobbin winding.

If thread winds unevenly on bobbin, loosen screw (5) and move bobbin winder pretension (6) up or down, as required, and tighten screw (5).

## THREADING THE BOBBIN CASE

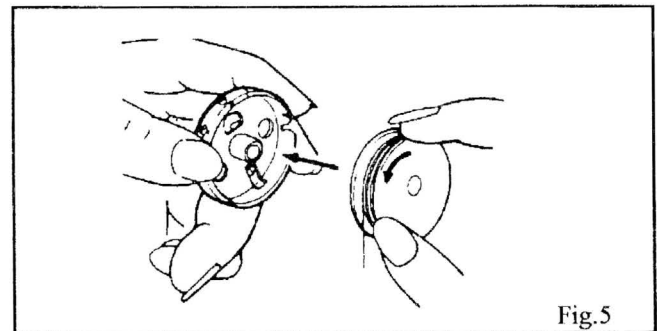


Fig.5

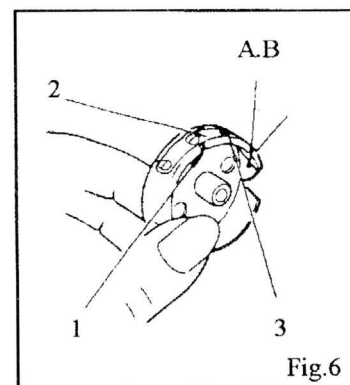


Fig.6

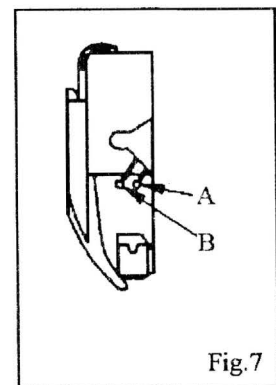


Fig.7



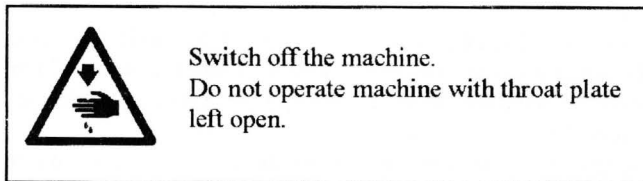
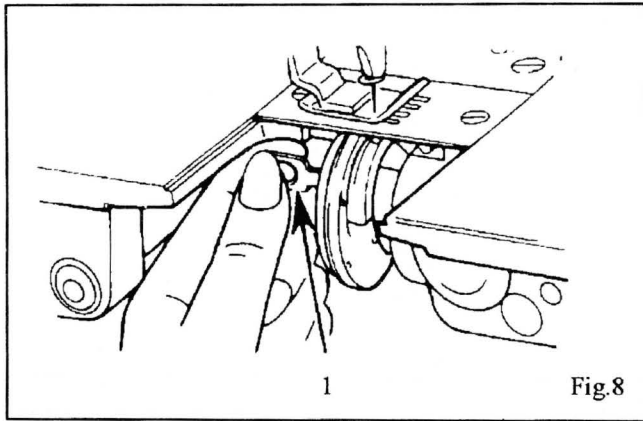
Switch off the machine.

Hold bobbin so that thread will unwind in the direction shown in Fig. 5 and place the bobbin into bobbin case.

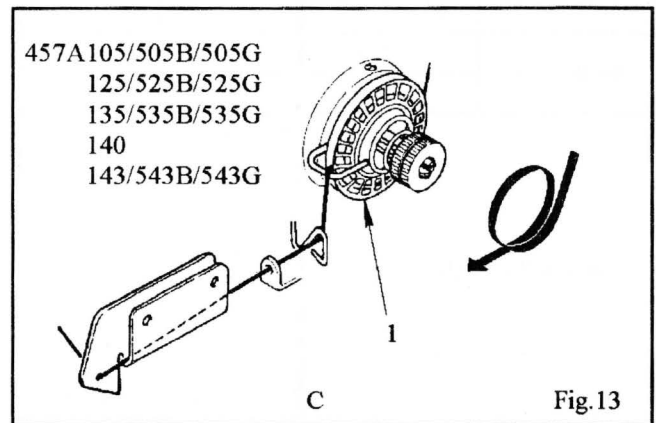
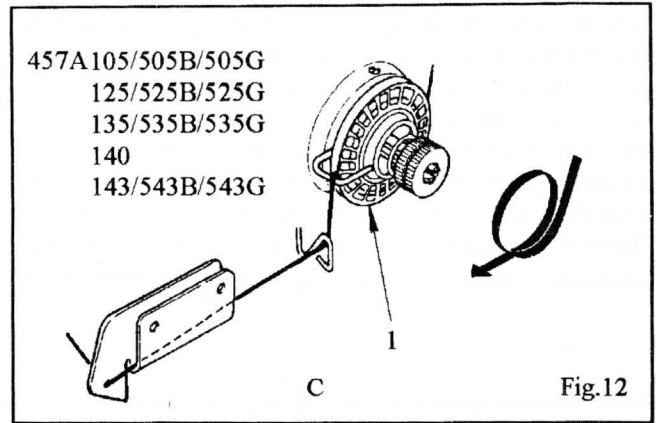
Pull the thread into slot (1) and under the tension spring (2) and into slot (3) as shown in Fig. 6. Then draw thread into delivery eye (A or B), as shown in Fig. 6. Use delivery eye (A) for sewing light weight material, as shown in Fig. 7.

Use delivery eye (B) for sewing medium weight material.

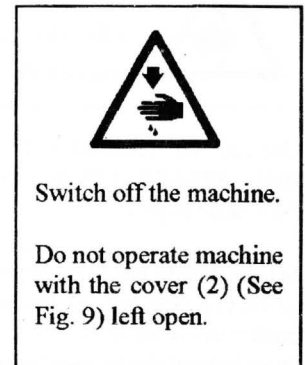
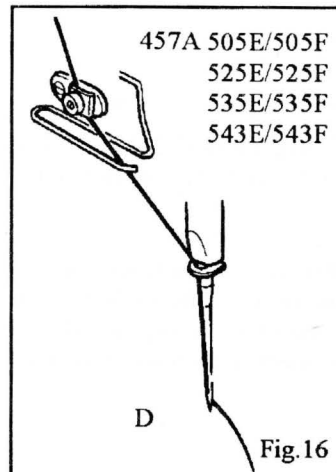
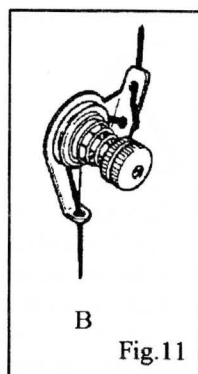
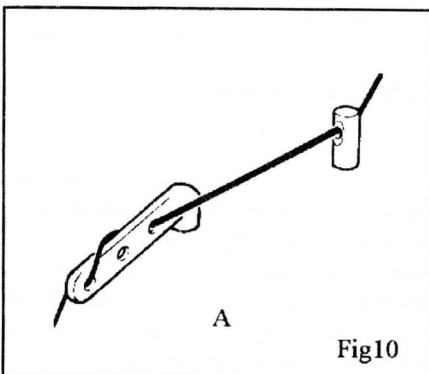
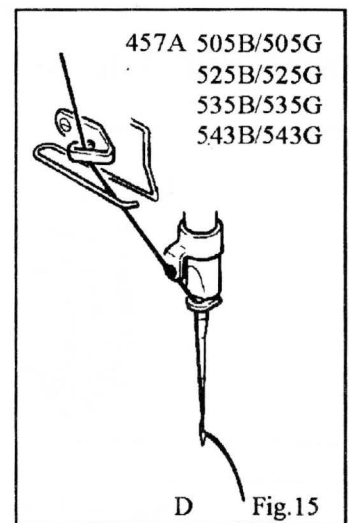
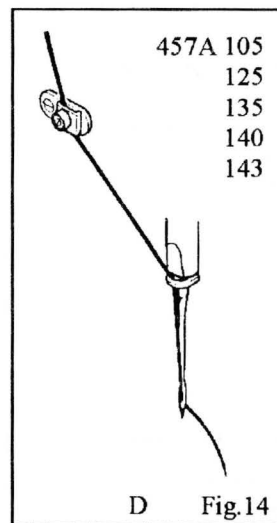
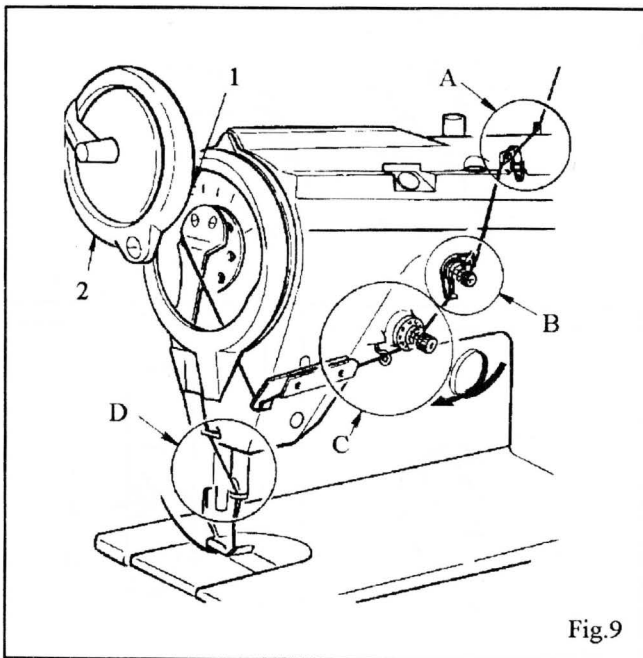
TO REMOVE THE BOBBIN CASE



Open latch (1) and remove bobbin case from sewing hook.  
(Fig. 8)



THREADING THE MACHINE



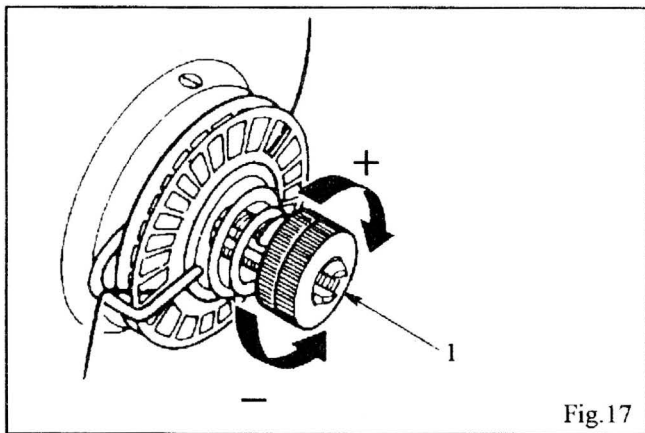
Check and make sure no thread is caught in the rotary take-up before threading the machine.

**CAUTION:** Be careful not to injure your fingers with the thread cutter (1), Fig. 9, on the face plate when threading the rotary take-up.

Pass the thread from the unwinder through threading points A (Fig. 10), B (Fig. 11), C (Figs. 12 and 13) and D (Figs. 14, 15 and 16) in the order shown.

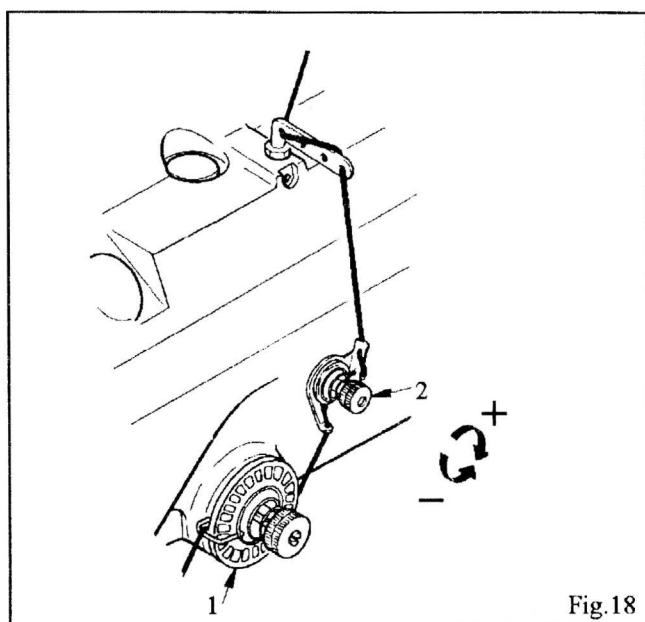
**NOTE:** When passing thread through threading point C (Figs. 12 and 13), wind thread around rotary tension wheel (1) once.

### REGULATING THE NEEDLE THREAD TENSION



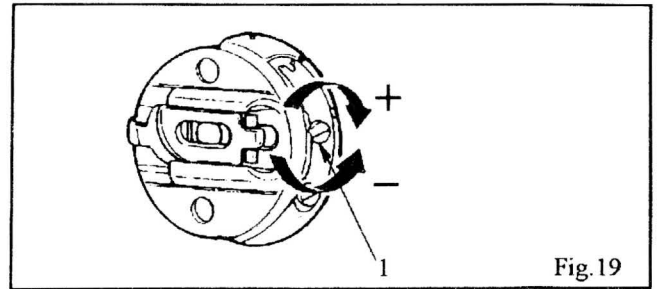
Regulate needle thread tension with tension regulating thumb nut (1) as shown in Fig. 17.

### REGULATING THE PRETENSION



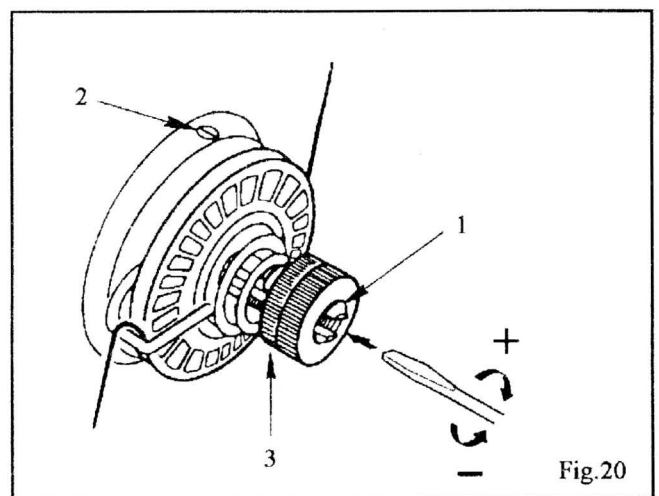
Pretension thumb nut (2) should be adjusted so that the needle thread will rotate the rotary tension wheel (1) without slippage. (Fig. 18)

### REGULATING THE BOBBIN THREAD TENSION



Regulate bobbin thread tension with tension regulating screw (1) as shown in Fig. 19.

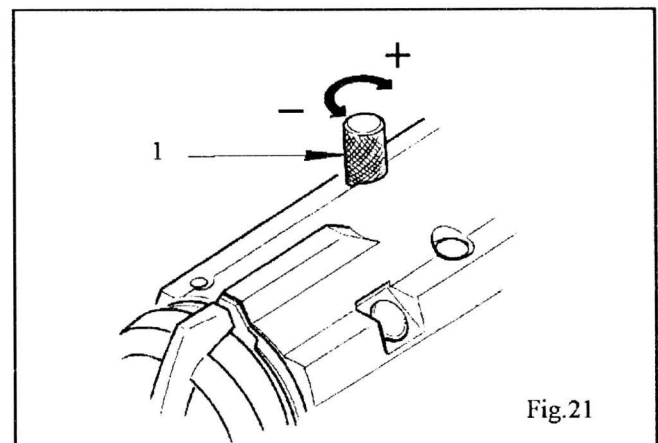
### REGULATING THE TAKE-UP SPRING



Using a large screwdriver in slot of stud (1), regulate take-up spring tension by turning stud (1), as required.

To adjust the amount of take-up spring movement, loosen screw (2), Fig. 20, and set take-up spring height by turning the entire tension assembly (3) toward left or right, as required. Securely tighten screw (2).

### REGULATING THE PRESSER FOOT PRESSURE



To regulate the presser foot pressure, turn knurled thumb screw (1), Fig. 21, toward left or right as required.

**REGULATING THE STITCH LENGTH**  
(457A 105/125/135/143/505/525/535/543)

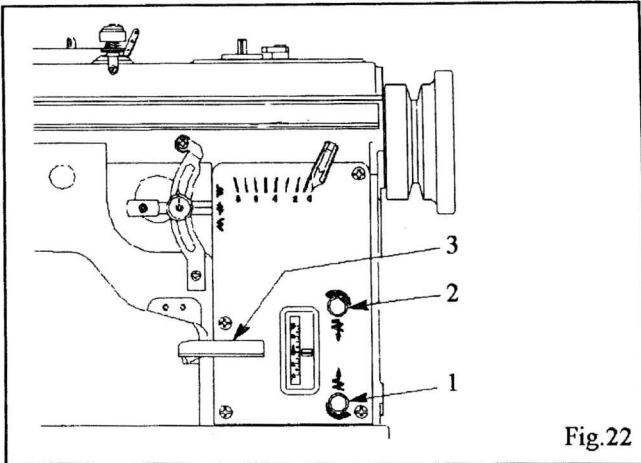


Fig.22

To regulate stitch length for forward feed, turn stitch length regulating screw stud (1), Fig. 22, clockwise to shorten the stitch length and counterclockwise to lengthen the stitch length.

To regulate stitch length for reverse feed, turn stitch length regulating screw stud (2), Fig. 22, clockwise to shorten the stitch length and counterclockwise to lengthen the stitch length.

To change the direction of feed for back tacking, depress feed reverse lever (3) quickly to lowest position and hold lever (3) in this position until back tack is completed. The machine will return to forward feed when lever (3) is released.

**REGULATING THE STITCH LENGTH**  
(457A140)

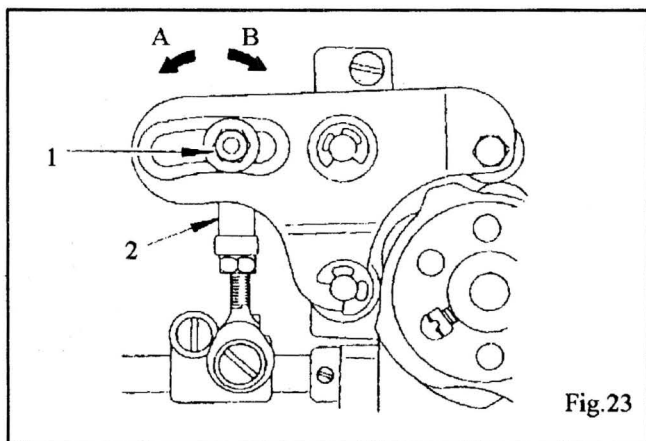


Fig.23

To regulate the stitch length, tip machine back on its hinges, loosen lock nut (1) and turn rod (2), as required. (Fig. 23)

To make the stitch length longer, move rod (2) in the direction of arrow (A).

To shorten the stitch length, move rod (2) in the direction of arrow (D).

**SELECTING THE NEEDLE POSITION**  
(457A 105/125/135/140/505/525/535)

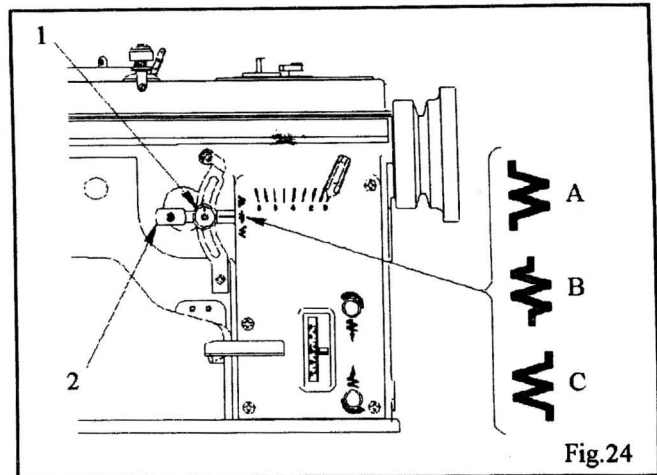


Fig.24

To select desired needle position, loosen thumb nut (1) and move lever (2) to desired needle position & tighten thumb nut.

- A ... Left needle position
- B ... Center needle position
- C ... Right needle position

**SETTING THE STITCH WIDTH**  
(457A 105/125/135/140/505/525/535)

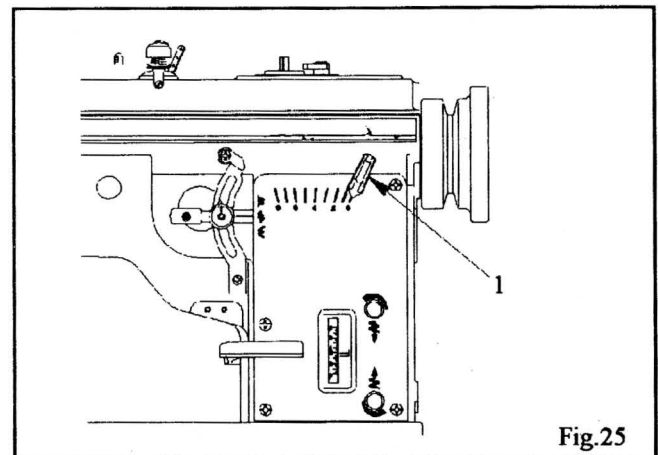


Fig.25

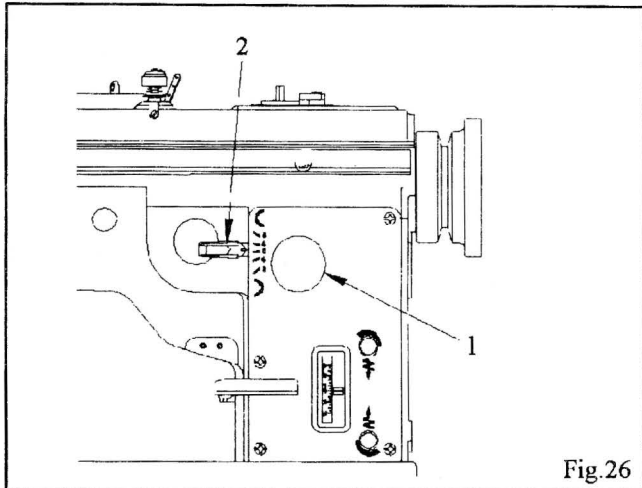
The width of zigzag stitch is regulated with lever (1), Fig. 25.

- 457A125/525 ..... 0 ~ 5mm
- 457A105/135/140/505/535 ..... 0 ~ 8mm



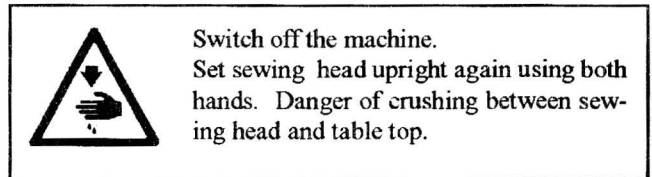
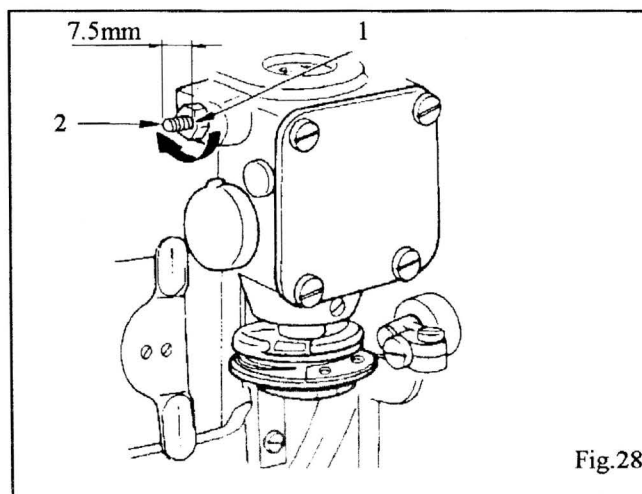
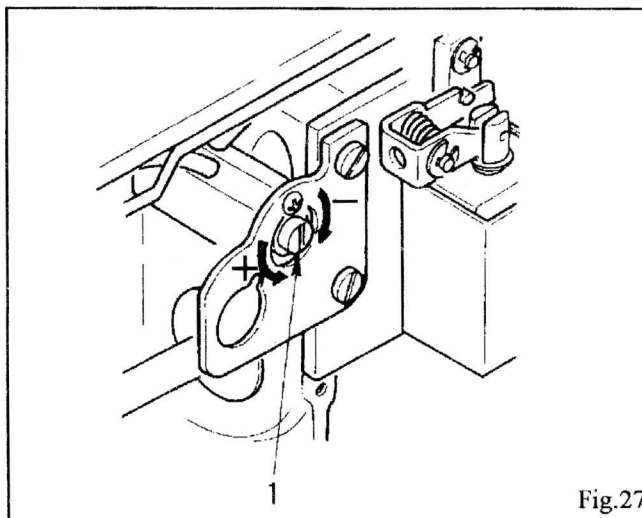
Switch off the machine.  
Set sewing head upright again using both hands. Danger of crushing between sewing head and table top.

## SETTING THE STITCH WIDTH (457A 143/543)



To regulate the width of zigzag stitch, loosen thumb screw(1), Fig. 26, and set lever (2) to desired setting.

## REGULATING THE AMOUNT OF OIL FLOW TO SEWING HOOK



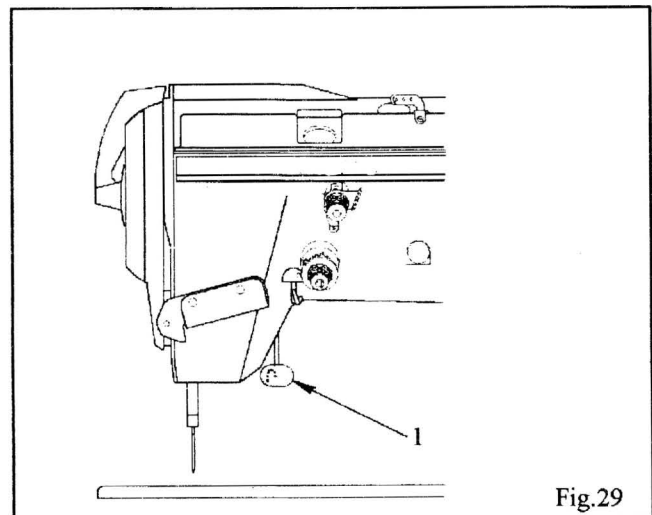
To regulate the amount of oil flow to sewing hook, tip machine back on its hinges and turn oil flow regulating valve (1) as shown in Fig. 27.

To decrease the amount of oil flow, turn valve clockwise.  
To increase the amount of oil flow, turn valve counterclockwise.

NOTE: If oil supply to sewing hook is still not sufficient even when oil flow regulating valve (1) is adjusted to maximum, loosen nut (1), Fig. 28, and turn oil flow regulating screw (2) in the direction of arrow (A).  
(Oil flow regulating screw (2) is adjusted to approximately 7.5mm when machine leaves the factory.)

## BACK TACK SWITCH

(457A505G/505F/525G/525F/535G/535F/543G/543F)



Push back tack switch (1), Fig. 29, for back tacking. The machine will continue to sew in reverse while the back tack switch is pushed.



## ADJUSTING THE SLACK NEEDLE THREAD REGULATOR

(457A 505E/505F/525E/525F/535E/535F/543E/543F)

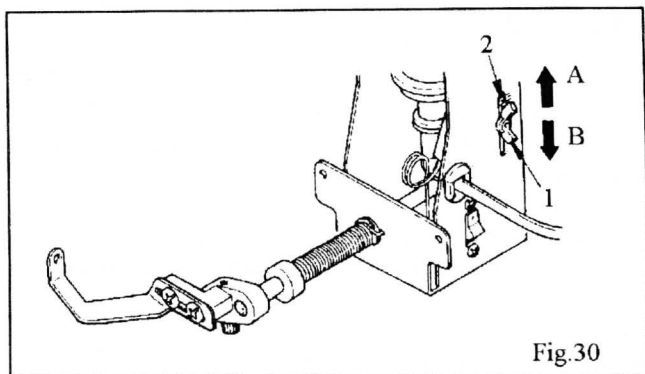
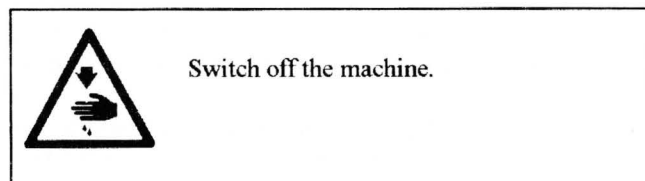


Fig.30



To adjust the slackness of the needle thread, loosen wing bolt (1) and slide it up or down, as required, using the indicator (2) and graduation as a yardstick as shown in Fig. 30.

Move wing bolt upward in the direction of arrow (A) to increase slackness.

Move wing bolt downward in the direction of arrow (B) to decrease slackness.

**NOTE:** Excessive slackness of the needle thread may cause birds nest and thread breakage at start of sewing. Insufficient slackness may result in needle thread being pulled out of needle eye, skip stitching and needle breakage at start of sewing. When slack needle thread regulator function is not required, turn off switch (3) shown in Fig. 30.

## ADJUSTING THE BOBBIN THREAD HOLDER

(457A 505/525/535/543)

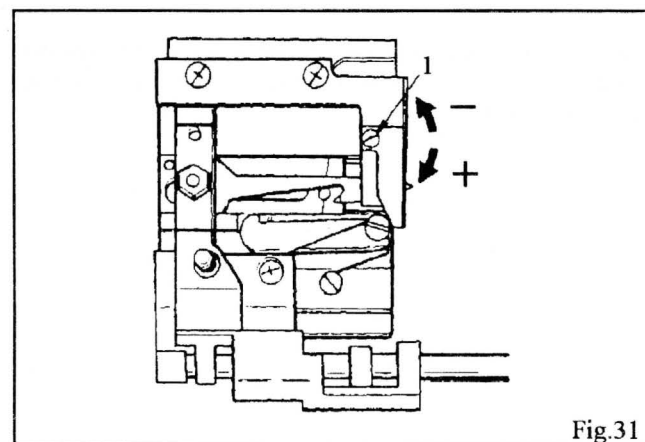
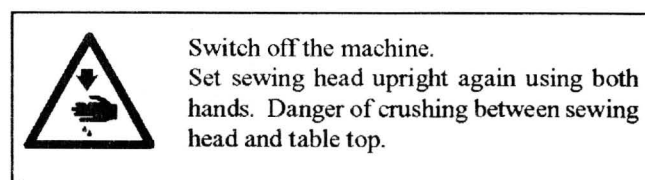


Fig.31



To adjust the length of thread end remaining on the underside of the material at start of sewing, tip machine back on its hinges and turn adjusting screw (1) as shown in Fig. 31.

To increase the length of thread end, turn adjusting screw (1) clockwise.

To decrease the length of thread end, turn adjusting screw (1) counterclockwise.

## ADJUSTING THE LENGTH OF THREAD END IN NEEDLE EYE

(457A 505/525/535/543)

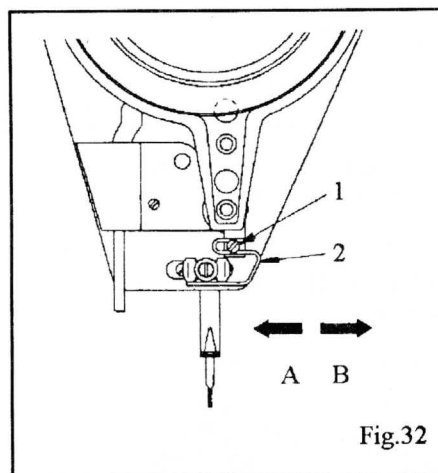
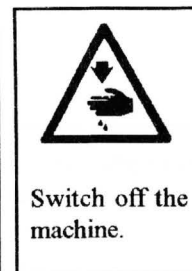


Fig.32



To adjust the length of thread end remaining in the needle eye, loosen screw (1), Fig. 32, and move face plate thread puller (2), as required.

To shorten the thread end, move thread puller in the direction of arrow (A).

To lengthen the thread end, move thread puller in the direction of arrow (B).

## ADJUSTING THE NEEDLE THREAD HOLDER PULLER

(457A 505E/505F/525E/525F/535E/535F/543E/543F)

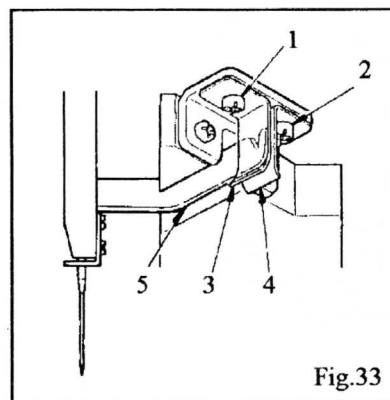
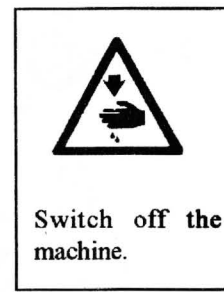


Fig.33



To adjust the holding strength of needle thread holder puller, loosen screws (1) and (2), Fig. 33, and adjust the pressure of the needle thread holder puller springs (3) and (4) against needle thread holder puller.

## INSTALLING THE BELT GUARD

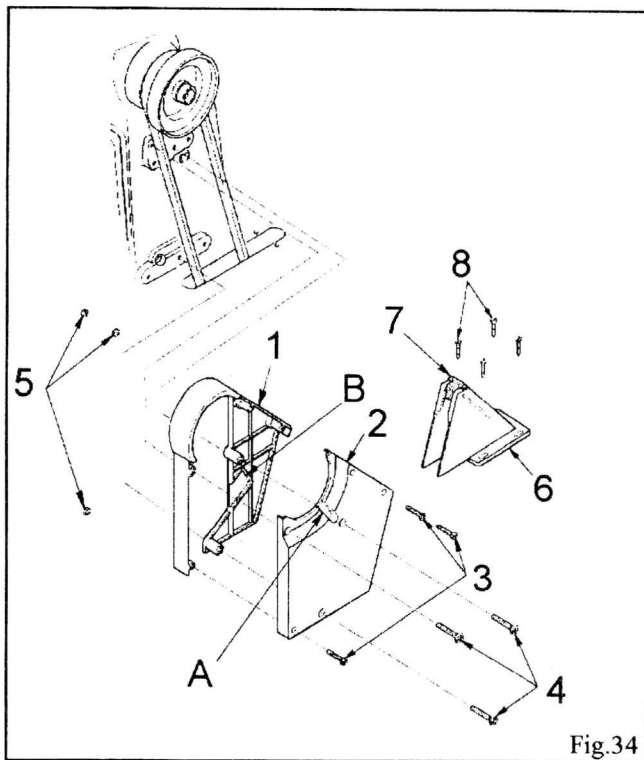


Fig.34



Switch off the machine.  
Set sewing head upright again using both hands. Danger of crushing between sewing head and table top.  
Do not run machine without belt guard!  
Danger of inaccidents!

## SPECIFICATIONS

Stitch type : see table page 10  
Variety : see table page 10  
Machine pully : 74mm effective dia. for V-belt  
Needle catalog No. : see table page 10  
Needle size : see table page 10  
Fabric clearance :  
105/125/135/140/143 : 6.2mm  
505/525/535/543 : 5.7mm  
Workspace width : 280mm  
Workspace high : 120mm  
Bed dimensions : 477 × 178mm  
Max.stitch length : see table page 10  
Max.sewing speed : see table page 10

Subject to alterations in design and dimensions.

## MACHINE CARE



Switch off the machine.  
Set sewing head upright again using both hands. Danger of crushing between sewing head and table top.

When the machine is in regular use, remove the lint and dust from around sewing hook area once a day.  
A machine in frequent use should be cleaned and oiled more frequently.

### Above table surface



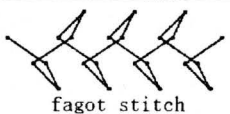




Fasten belt guards (1) and (2) to machine head with belt guard screws (3) and (4) and also with nuts (5) as shown in Fig. 34. Then fasten belt guard (6) to table with wood screws (8) making sure it will not interfere with belt guard (1) and (2), and so that the V-belt will rest against the belt guard slide (7) when machine is tipped back on its hinges.

When installing belt guard for machines with thread trimmer, remove portion "A" from belt guard (2).

When installing belt guard for machines with touch back system remove portion "A" and "B" from belt guard (1) and (2).

### Below table surface

Install belt guard so that motor pulley and V-belt will rotate freely without interference.

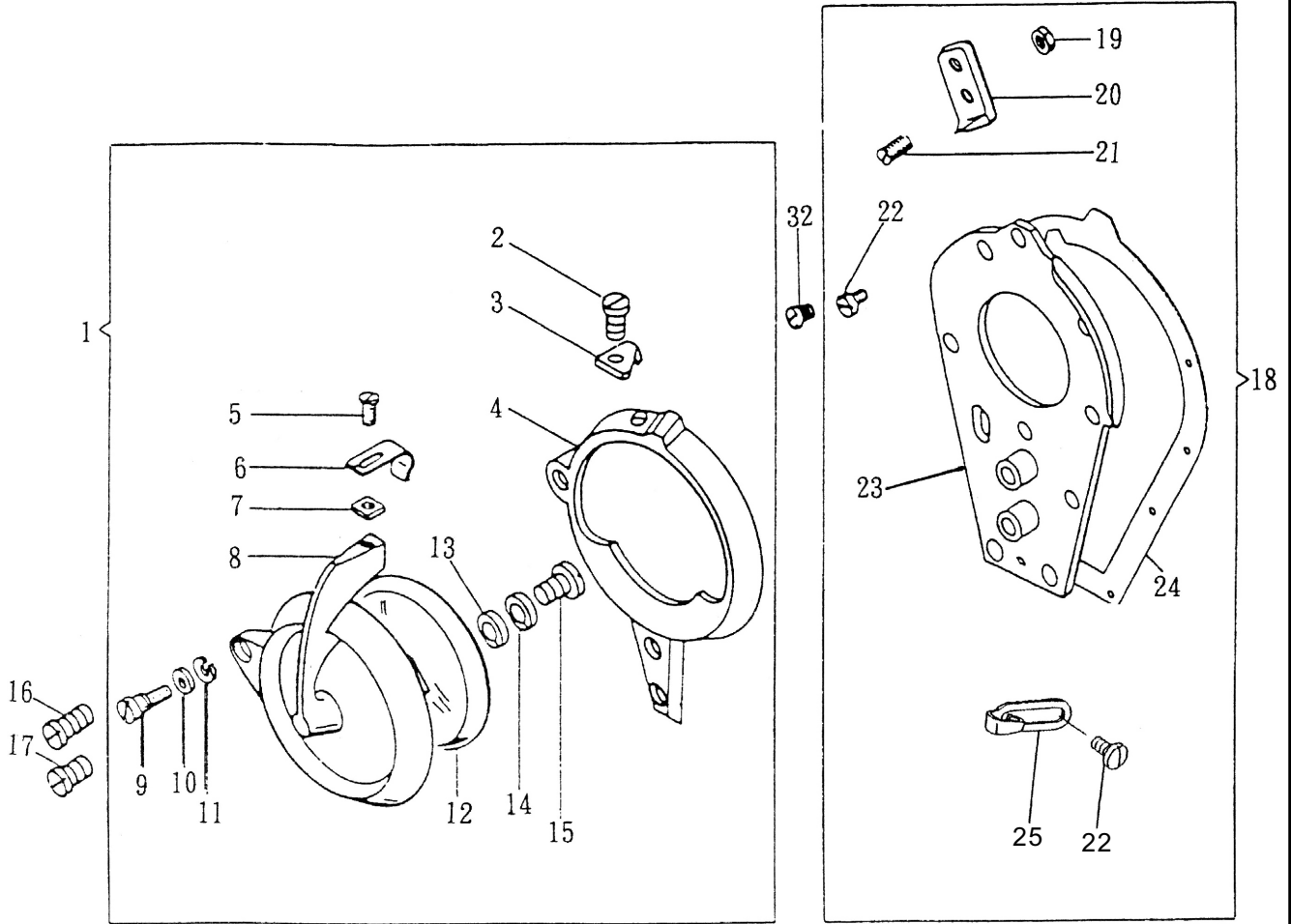
Max. sewing speed					
Variety	Stitch type	Max. sewing speed in s.p.m ▲	Max. needle bight	Max. stitch length	Needle catalog No. (Needle system)
105L		5,000	8.0 mm	1.3 mm	1906-07
105M				20 SPI	(135×53 M Ball)
125L	304(zigzag lockstitch)	5,000	5.0 mm	5.1 mm	1906-01
125M				5 SPI	(135×53)
135L		4,500	8.0 mm	2.0 mm	1906-07
135M				13 SPI	(135×53 M Ball)
140M	fagot stitch 	4,500	8.0 mm	4.2 mm	1906-01
143L	scallop stitch 	4,200	8.0 mm	6 SPI	(135×53)
143M				10 SPI	(135×53)
505L		5,000	8.0 mm	1.3 mm	1906-07
505M				20 SPI	(135×53 M Ball)
525L	304(zigzag lockstitch)	5,000	5.0 mm	5.1 mm	1906-01
525M				5 SPI	(135×53)
535L		4,200	8.0 mm	2.0 mm	1906-07
535M				13 SPI	(135×53 M Ball)
543L	scallop stitch 	4,200	8.0 mm	4.2 mm	1906-01
543M				6 SPI	(135×53)
				1.3 mm	1906-07
				20 SPI	(135×53 M Ball)
				2.5 mm	1906-01
				10 SPI	(135×53)
				1.3 mm	1906-07
				10 SPI	(135×53 M Ball)
				2.5 mm	1906-01
				10 SPI	(135×53)

▲ Depending on material and operation.

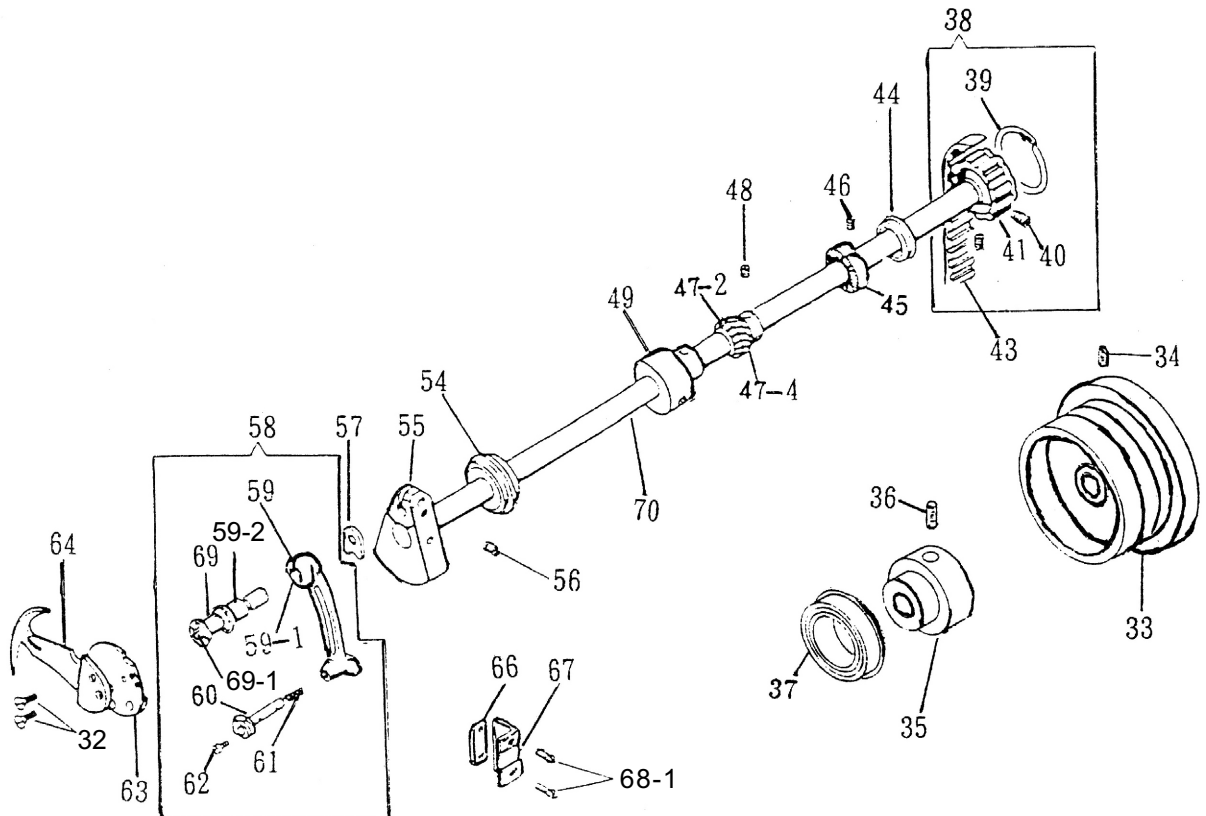
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# ROTARY TAKE-UP GUARD, FACE PLATE

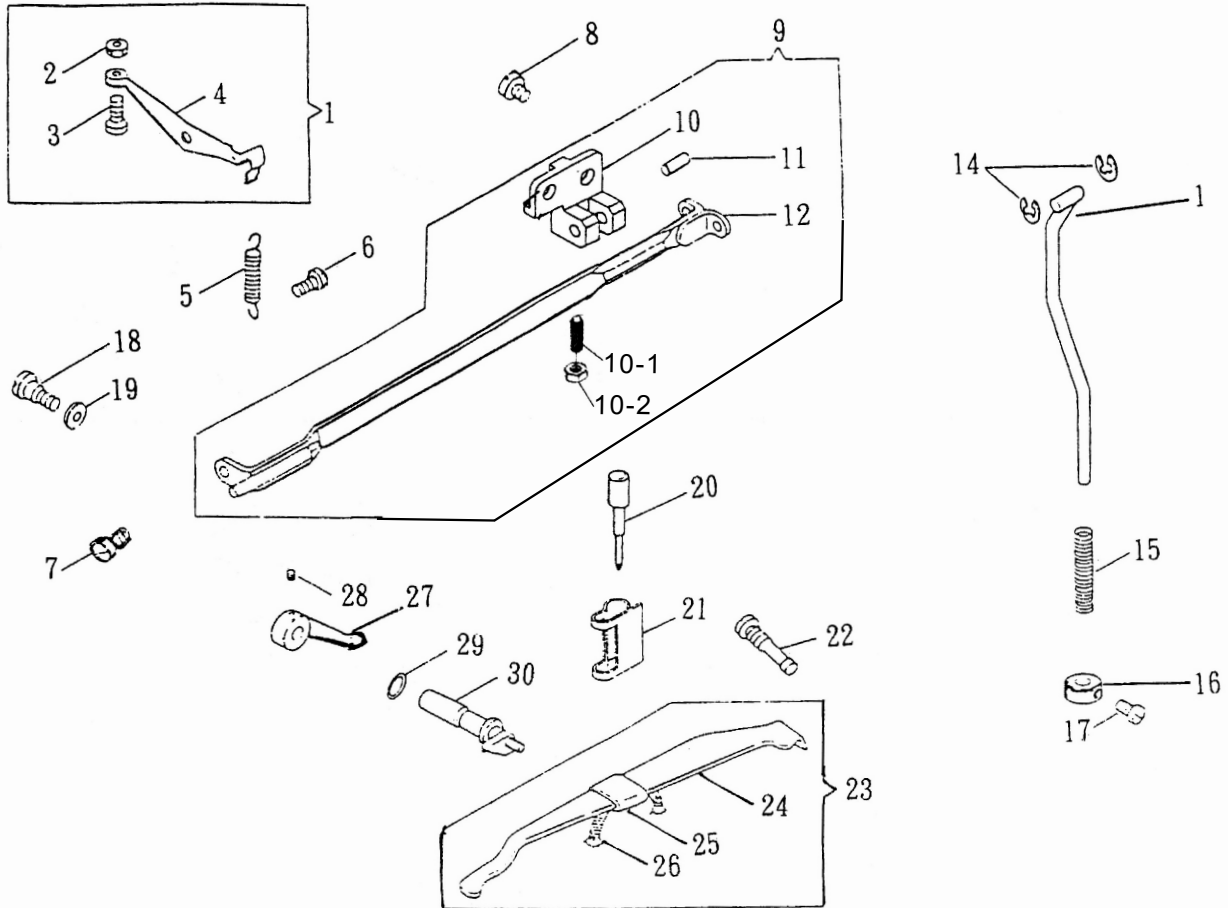


# ARM SHAFT, ROTARY TAKE-UP

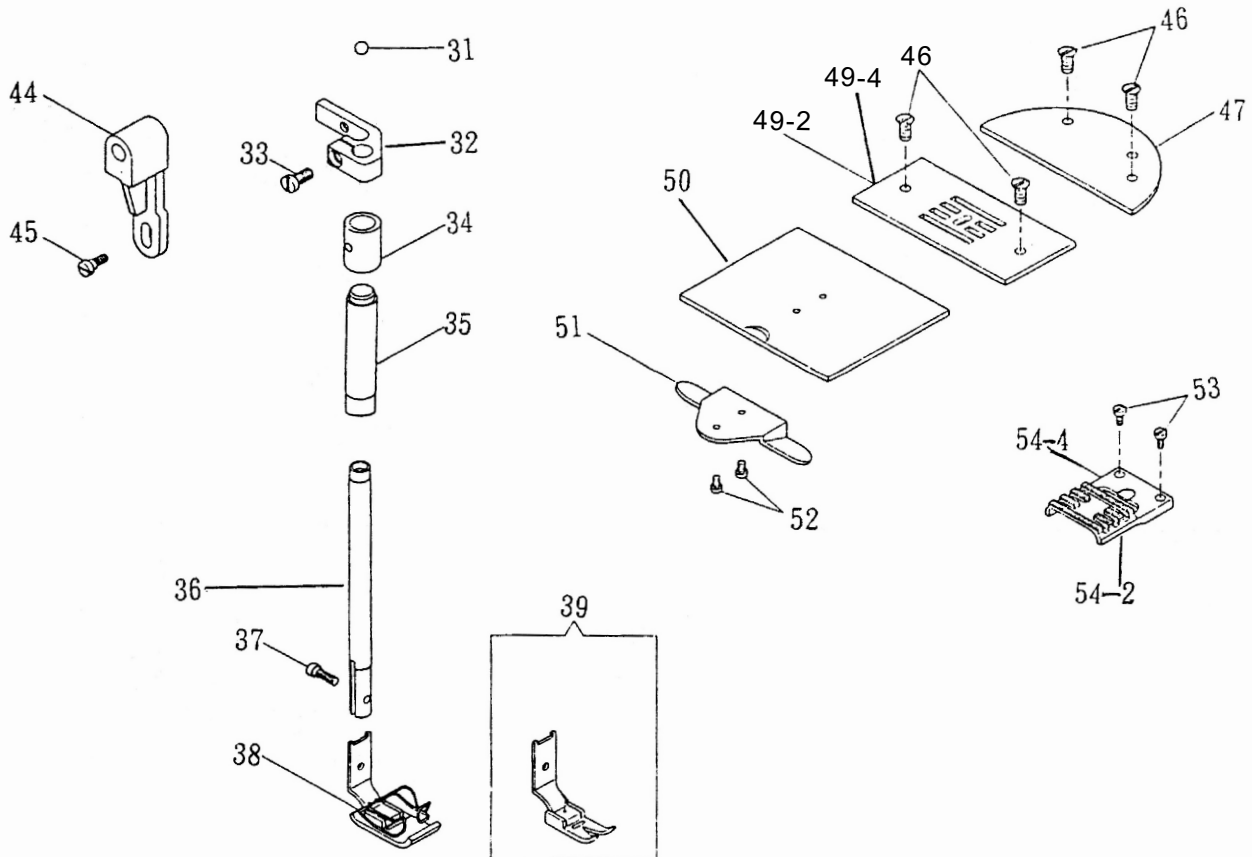




TENSION RELEASER, KNEE LIFTER ROCK FRAME



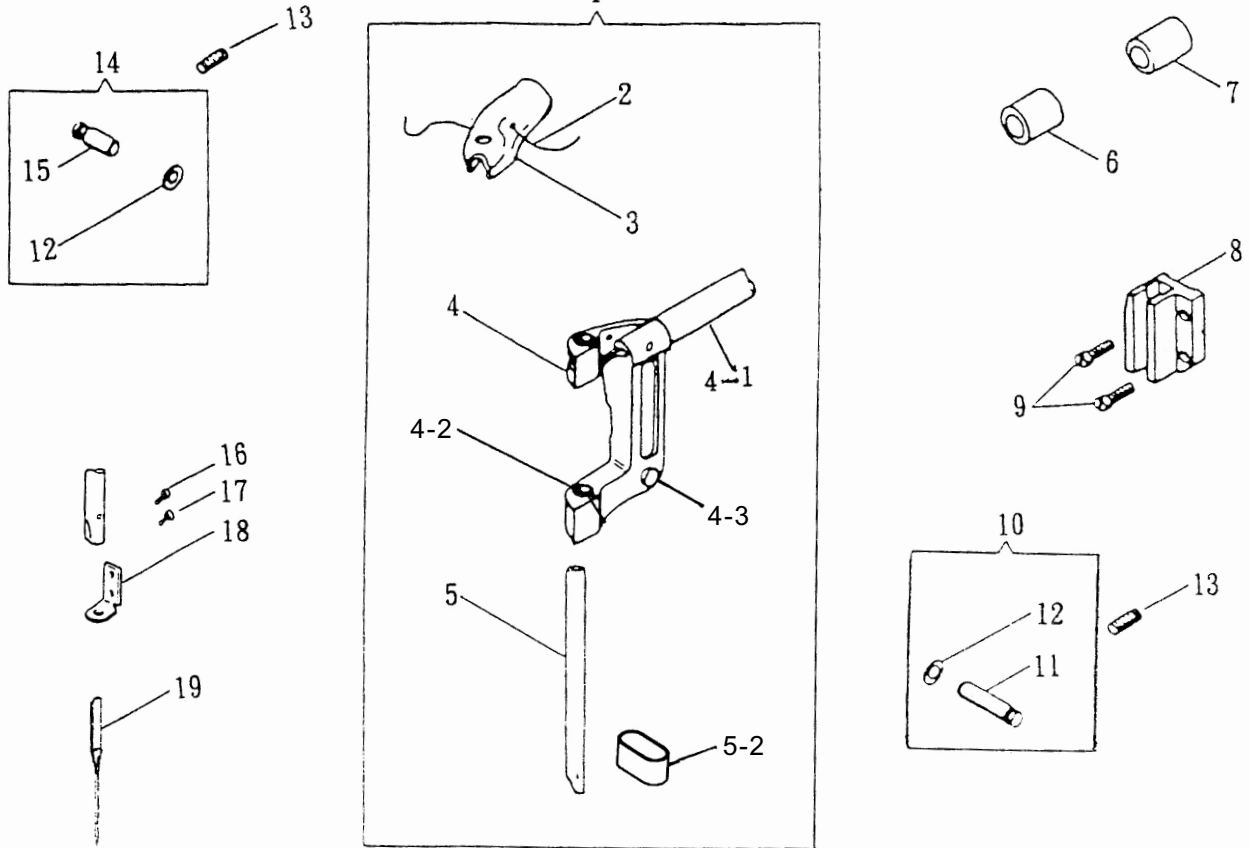
PRESSER BAR, THROAT PLATE, FEED DOG



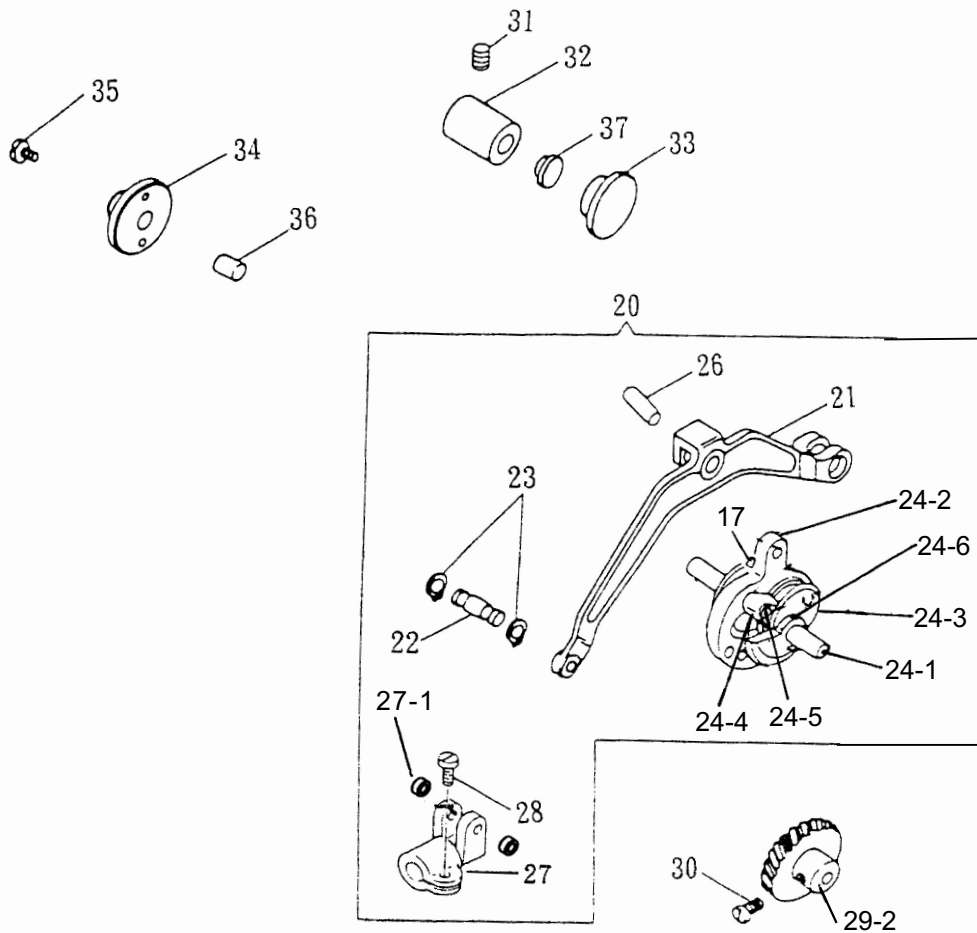




NEEDLE BAR YOKE, NEEDLE

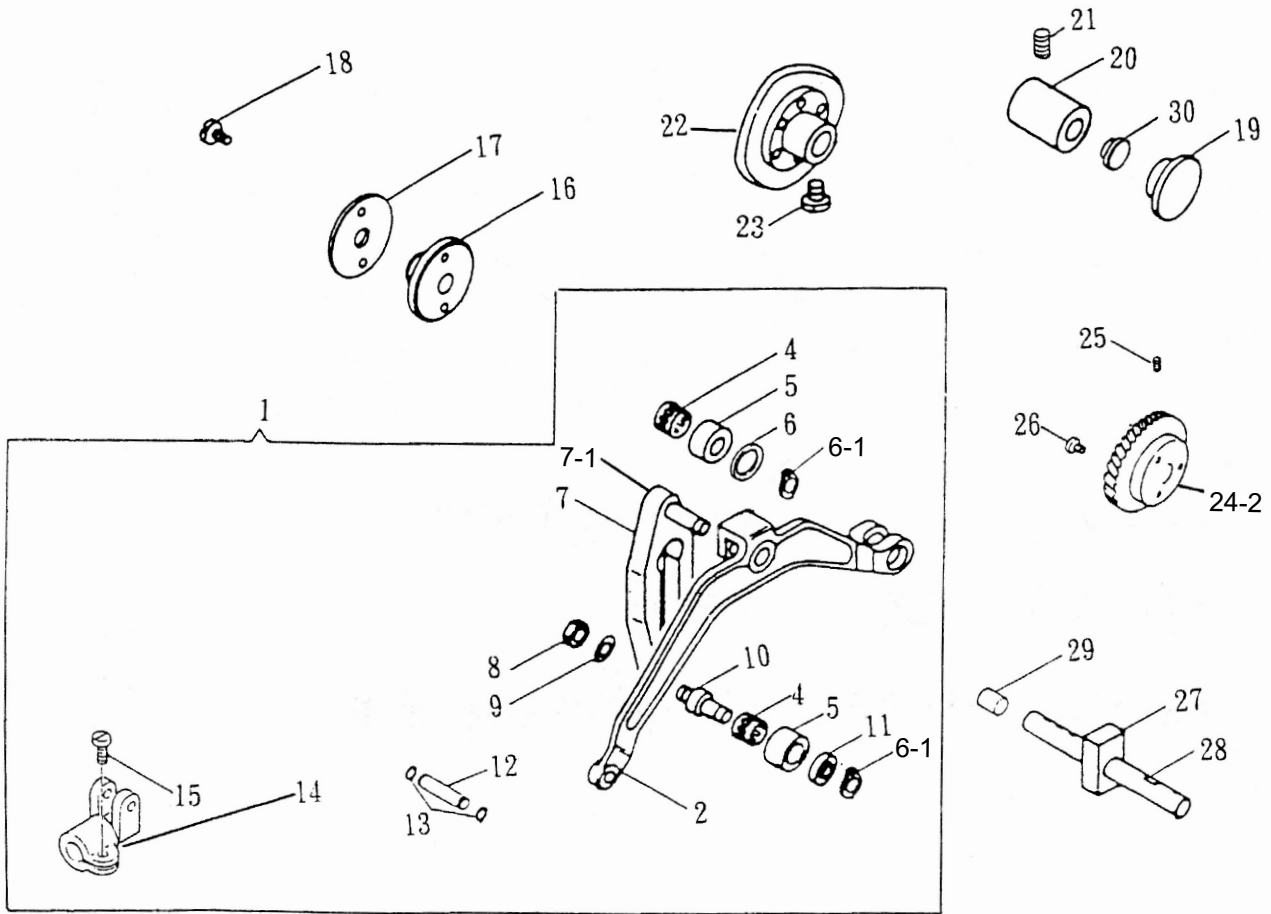


NEEDLE BAR CONNECTING LINK (FOR 105/125)

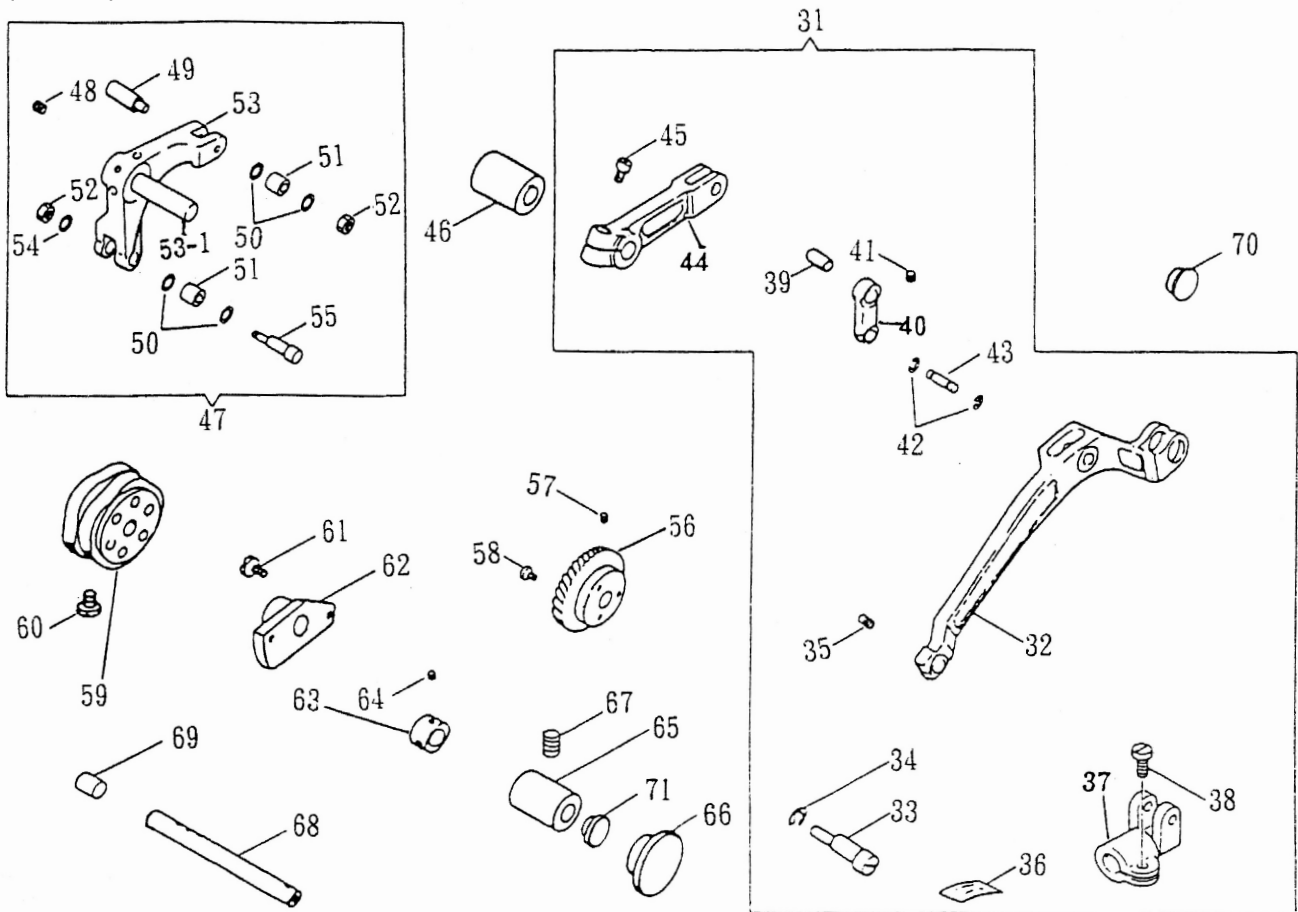




NEEDLE BAR CONNECTING LINK (FOR 135/140)



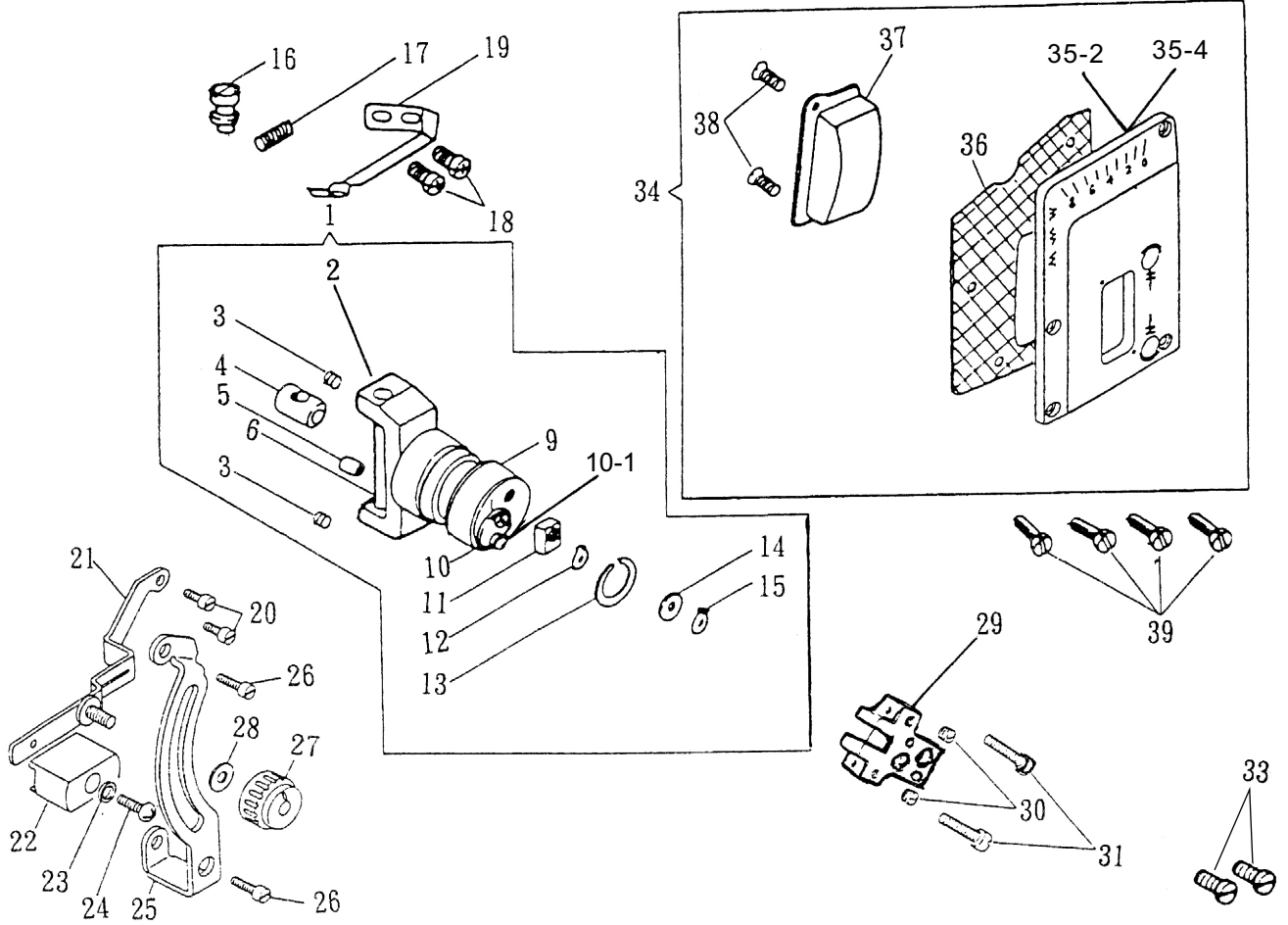
(143用)



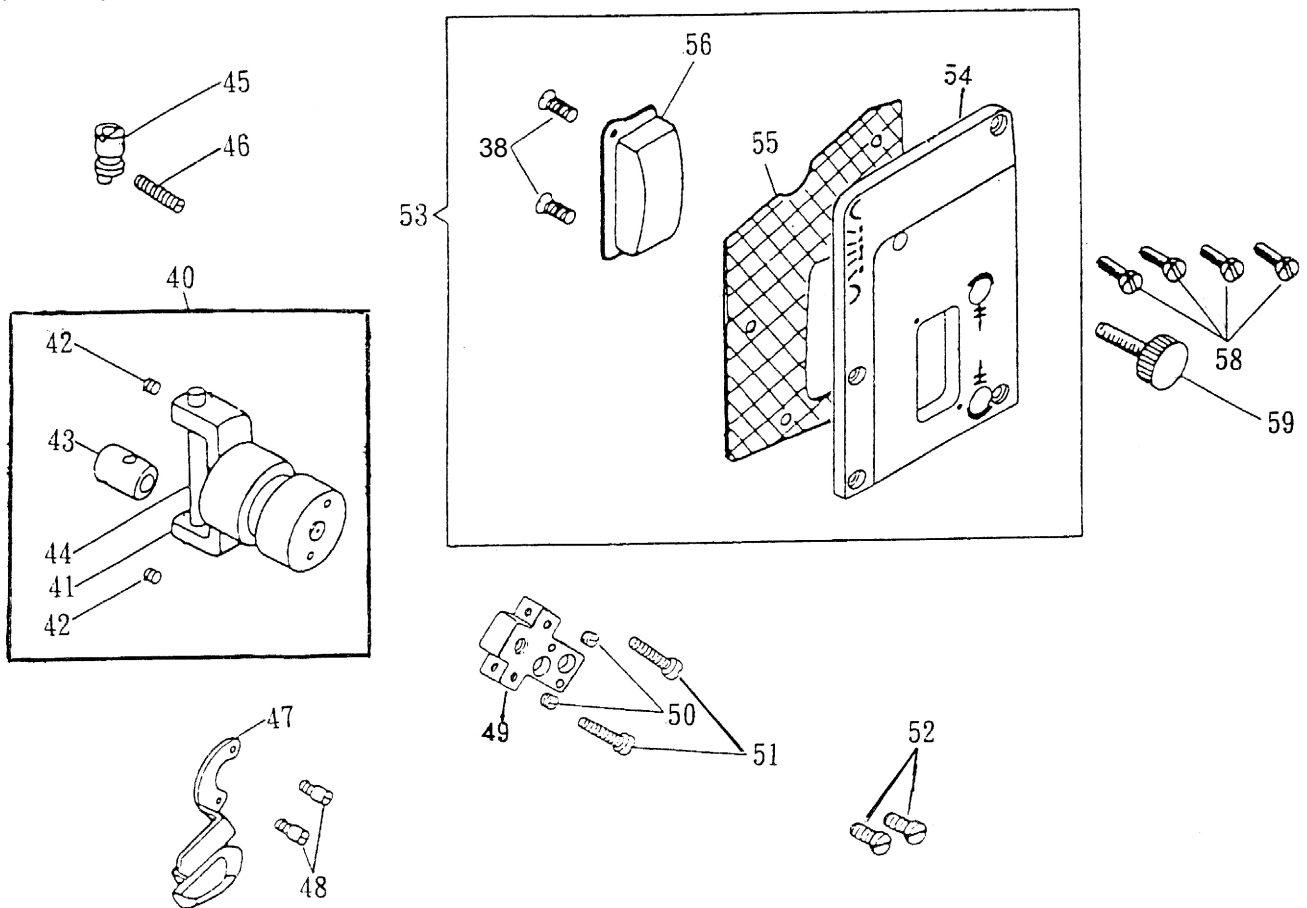
# PULLY MECHANISM

REF. NO. 部件編號	DESCRIPTION 說明	QTY. 需求數量
F4-01	NEEDLE BAR CONN. LINK (CPL.) 移位推柄組	
F4-02	NEEDLE BAR CONN. LINK 移位推柄	1
F4-04	NEEDLE VIBRATING CAM ROLLER BEARING CAGE 滾針軸承	2
F4-05	NEEDLE VIBRATING CAM ROLLER 軸承套	2
F4-06	NEEDLE BAR YOKE CONN. LINK SNAP RING 墊圈	4
F4-06-1	NEEDLE BAR CONN. LINK HINGE STUD SNAP RING E型扣環	1
F4-07	NEEDLE VIBRATING CAM ROLLER GUIDE (CPL.) 導軌座	1
F4-07-1	NEEDLE VIBRATING CAM SHAFT 固定軸心	1
F4-08W	NEEDLE VIBRATING CAM (ECC.) NUT 螺母	1
F4-09	NEEDLE VIBRATING CAM ROLLER WASHER 墊圈	1
F4-10	NEEDLE VIBRATING CAM ROLLER STUD (ECC.) 雙頭螺栓	1
F4-11	NEEDLE VIBRATING CAM ROLLER WASHER 墊圈	1
F4-12	NEEDLE BAR CONN. LINK HINGE STUD 軸栓	1
F4-13	NEEDLE BAR CONN. LINK HINGE STUD SNAP RING E型扣環	2
F4-14	NEEDLE BAR CONN. LINK HINGE BEARING 連結套	1
F4-15P	NEEDLE BAR CONN. LINK HINGE BEARING SCREW 螺釘	1
F4-16	NEEDLE VIBRATING CAM SHAFT BUSHING (BACK) 嵌入軸套	1
F4-17	NEEDLE VIBRATING CAM SHAFT BUSHING (BACK) 軸套墊圈	1
F4-18P	NEEDLE VIBRATING CAM SHAFT BUSHING SCREW 螺釘	2
F4-19	NEEDLE VIBRATING CAM SHAFT BUSHING CAP 橡膠塞	1
F4-20	NEEDLE VIBRATING CAM SHAFT BUSHING (FRONT) 軸承	1
F4-21P	NEEDLE VIBRATING CAM SHAFT BUSHING SCREW 螺釘	1
F4-22	NEEDLE VIBRATING CAM 花樣凸輪	1
F4-23P	NEEDLE VIBRATING CAM SET SCREW 螺釘	2
F4-24-2	NEEDLE VIBRATING WORM WHEEL 齒輪	1
F4-25P	NEEDLE VIBRATING WORM WHEEL SCREW 螺釘	2
F4-26P	NEEDLE VIBRATING WORM WHEEL DISC SCREW 螺釘	3
F4-27	NEEDLE VIBRATING CAM SHAFT SLIDE BLOCK 四方滑塊	1
F4-28	NEEDLE VIBRATING CAM SHAFT 軸心	1
F4-29	NEEDLE VIBRATING CAM SHAFT OIL HOLE PLUG 橡膠塞	1
F4-30	NEEDLE VIBRATING CAM SHAFT BUSHING PLUG 橡膠塞	1
F4-31	NEEDLE BAR CONN. LINK (CPL.)	
F4-32	NEEDLE BAR CONN. LINK	1
F4-33	NEEDLE BAR CONN. LINK HINGE STUD (ECC.)	1
F4-34	NEEDLE BAR CONN. LINK HINGE STUD SNAP RING	1
F4-35P	NEEDLE BAR CONN. LINK HINGE STUD SCREW	1
F4-36	NEEDLE BAR CONN. LINK HINGE BEARING FELT	1
F4-37	NEEDLE BAR CONN. LINK HINGE BEARING	1
F4-38P	NEEDLE BAR CONN. LINK HINGE BEARING SCREW	1
F4-39	NEEDLE BAR CONN. LINK PIN	1
F4-40	NEEDLE BAR CONN. LINK DRIVING LEVER LINK	1
F4-41P	NEEDLE BAR CONN. LINK SCREW	1
F4-42	NEEDLE BAR CONN. LINK RETAINING RING	2
F4-43	NEEDLE BAR CONN. LINK PIN	1
F4-44	NEEDLE BAR CONN. LINK DRIVING LEVER	1
F4-45P	NEEDLE BAR CONN. LINK SCREW	1
F4-46	Z/Z CAM FOLLOWER LEVER SHAFT BUSHING	1
F4-47	Z/Z CAM FOLLOWER LEVER SHAFT (CPL.)	
F4-48	Z/Z CAM FOLLOWER LEVER SET SCREW	1
F4-49	Z/Z CAM FOLLOWER ROLLER HINGE STUD	1
F4-50	Z/Z CAM FOLLOWER ROLLER THRUST WASHER	4
F4-51	Z/Z CAM FOLLOWER ROLLER	2
F4-52W	Z/Z CAM FOLLOWER ROLLER NUT	2
F4-53	Z/Z CAM FOLLOWER LEVER (CPL.)	
F4-54	Z/Z CAM FOLLOWER ROLLER HINGE STUD WASHER	1
F4-55	Z/Z CAM FOLLOWER ROLLER HINGE STUD (ECC.)	1
F4-56	NEEDLE VIBRATING WORM WHEEL	1
F4-57P	NEEDLE VIBRATING WORM WHEEL SCREW	2
F4-58P	NEEDLE VIBRATING WORM WHEEL DISC SCREW	3
F4-59	NEEDLE VIBRATING CAM	1
F4-60P	NEEDLE VIBRATING CAM SCREW	1
F4-61P	NEEDLE VIBRATING CAM (BACK) SCREW	2
F4-62	NEEDLE VIBRATING CAM SHAFT BUSHING (BACK)	1
F4-63	NEEDLE VIBRATING CAM SHAFT COLLER	1
F4-64P	NEEDLE VIBRATING CAM SHAFT COLLER SCREW	2
F4-65	NEEDLE VIBRATING CAM SHAFT BUSHING	1
F4-66	NEEDLE VIBRATING CAM SHAFT BUSHING CAP	1
F4-67P	NEEDLE VIBRATING CAM SHAFT BUSHING SCREW	1
F4-68	NEEDLE VIBRATING CAM SHAFT	1
F4-69	NEEDLE VIBRATING CAM SHAFT OIL HOLE PLUG	1
F4-70	NEEDLE POSITION FING ADJ. HOLE PLUG	1
F4-71	NEEDLE VIBRATING CAM SHAFT BUSHING PLUG	1

NEEDLE VIBRATING YOKE CONNECTING LINK CARRIER FRAME (CPL.) (FOR 105/125/135/140)

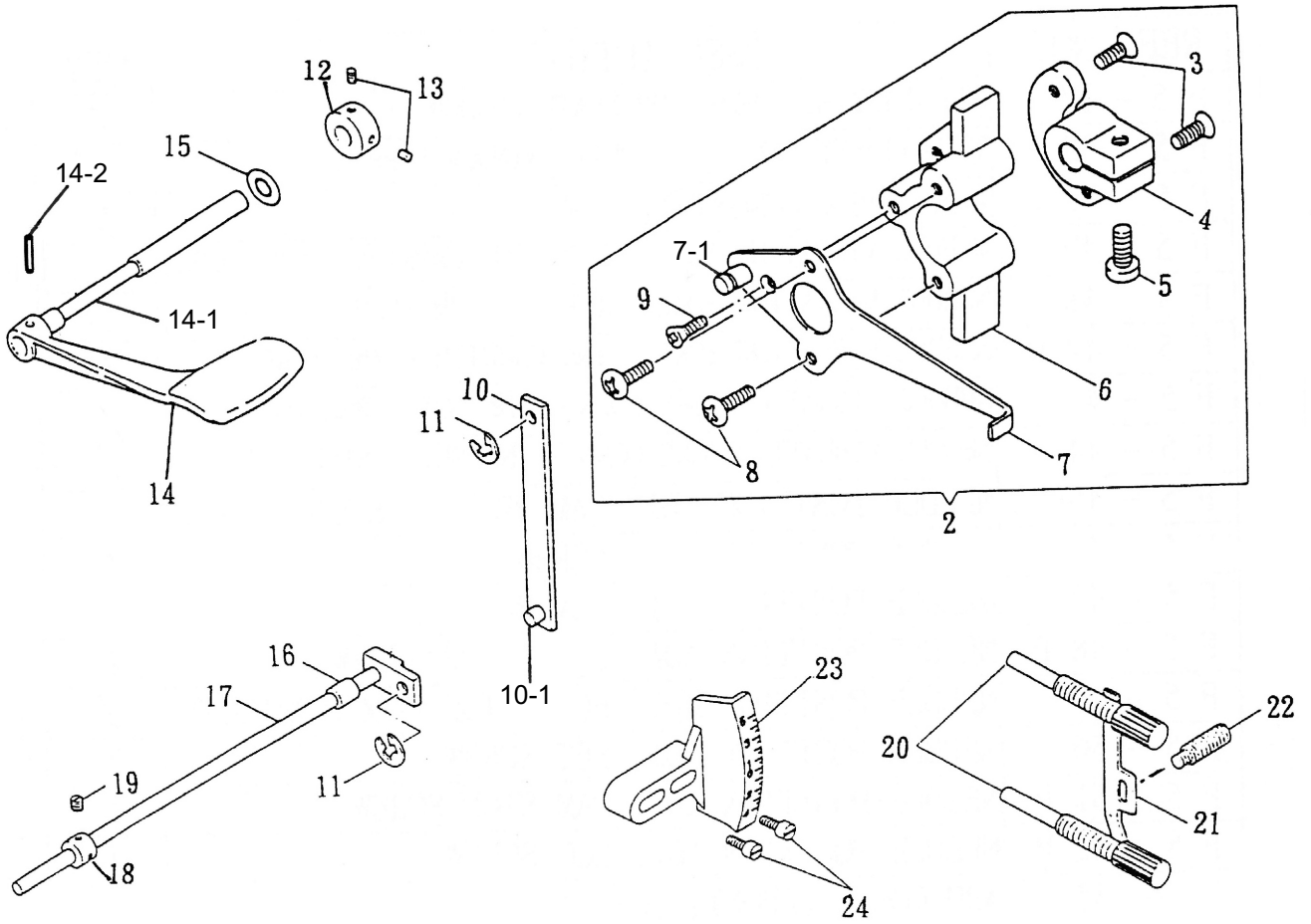


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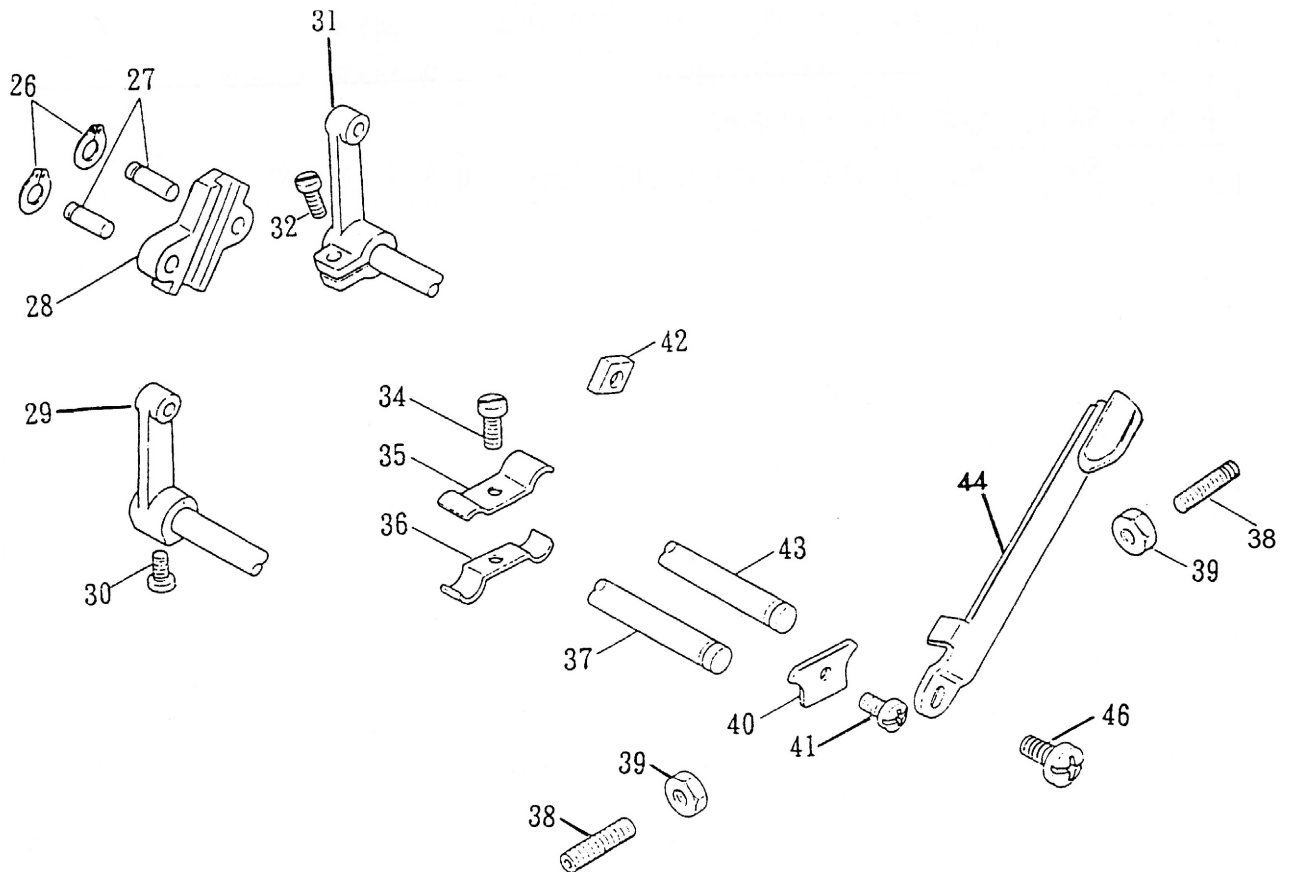




# FEED REGULATING INDICATOR, LINK



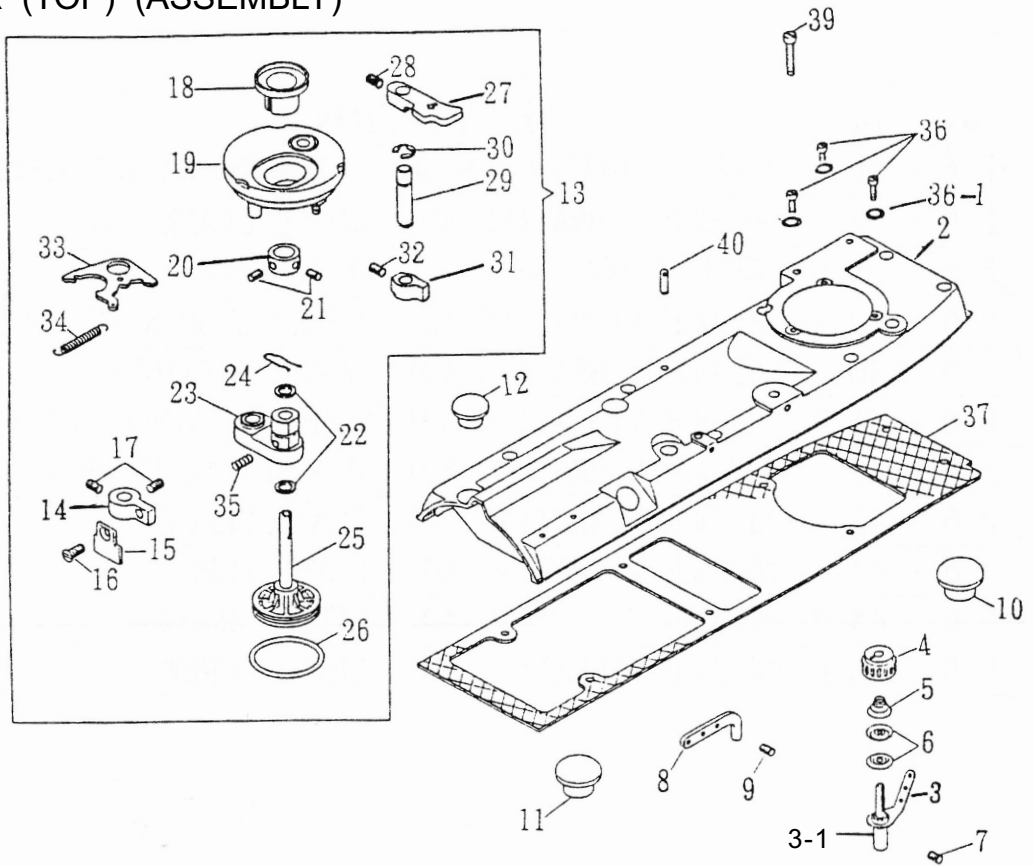
# NEEDLE VIBRATING ADJUSTING BRACKET



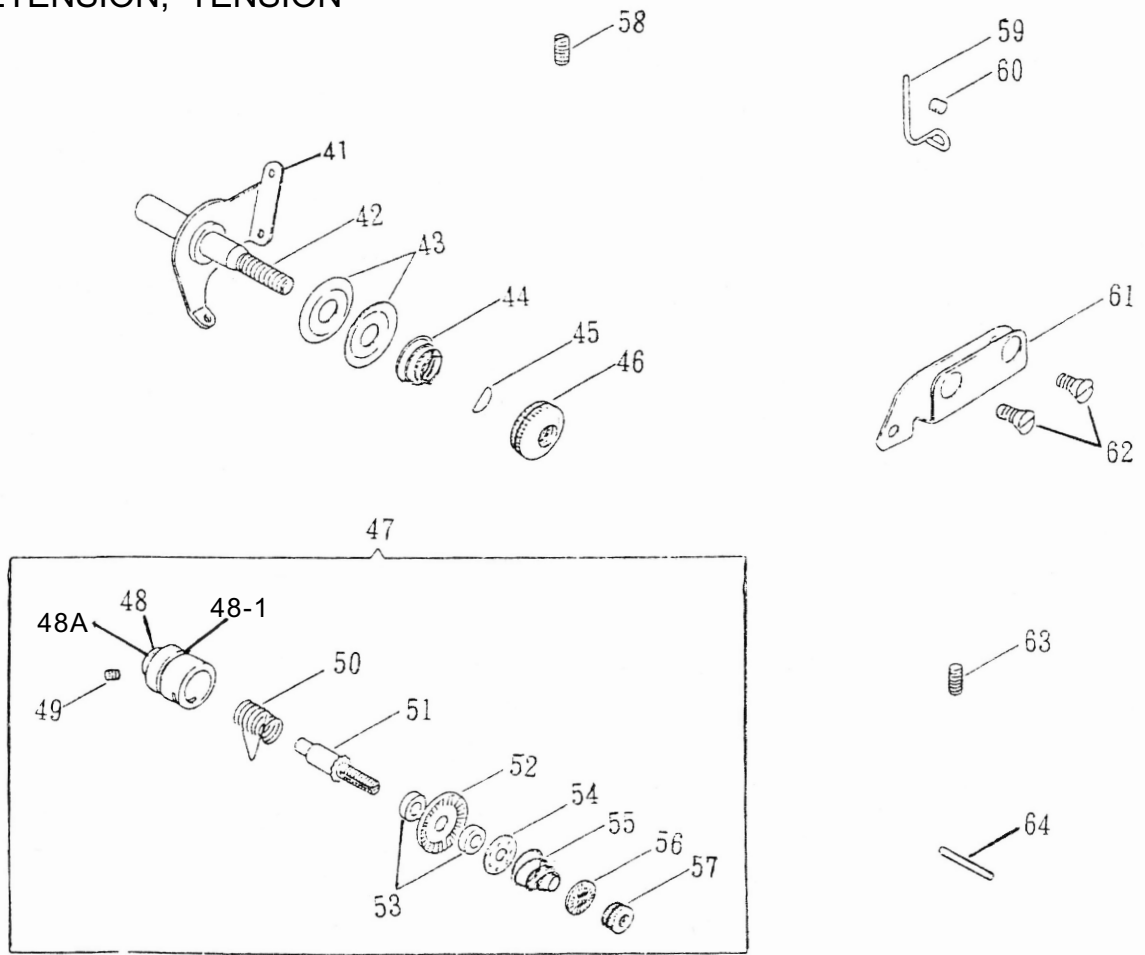




# ARM COVER (TOP) (ASSEMBLY)

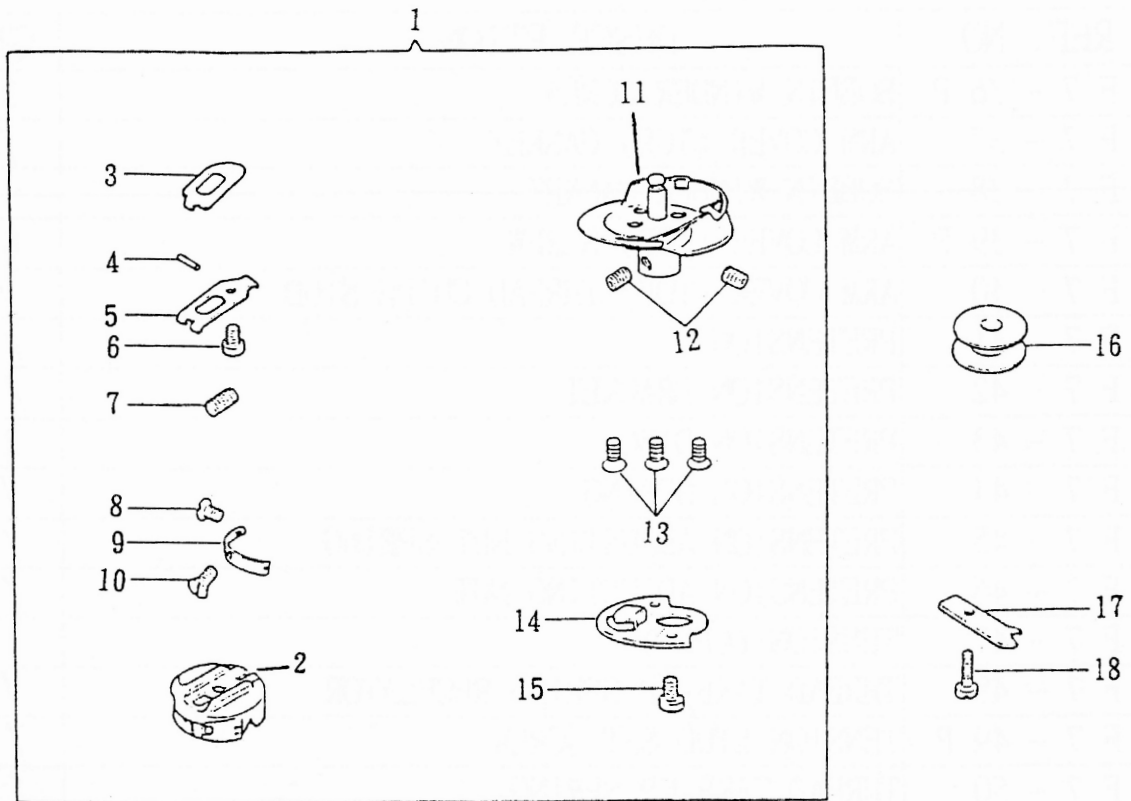


# PRETENSION, TENSION

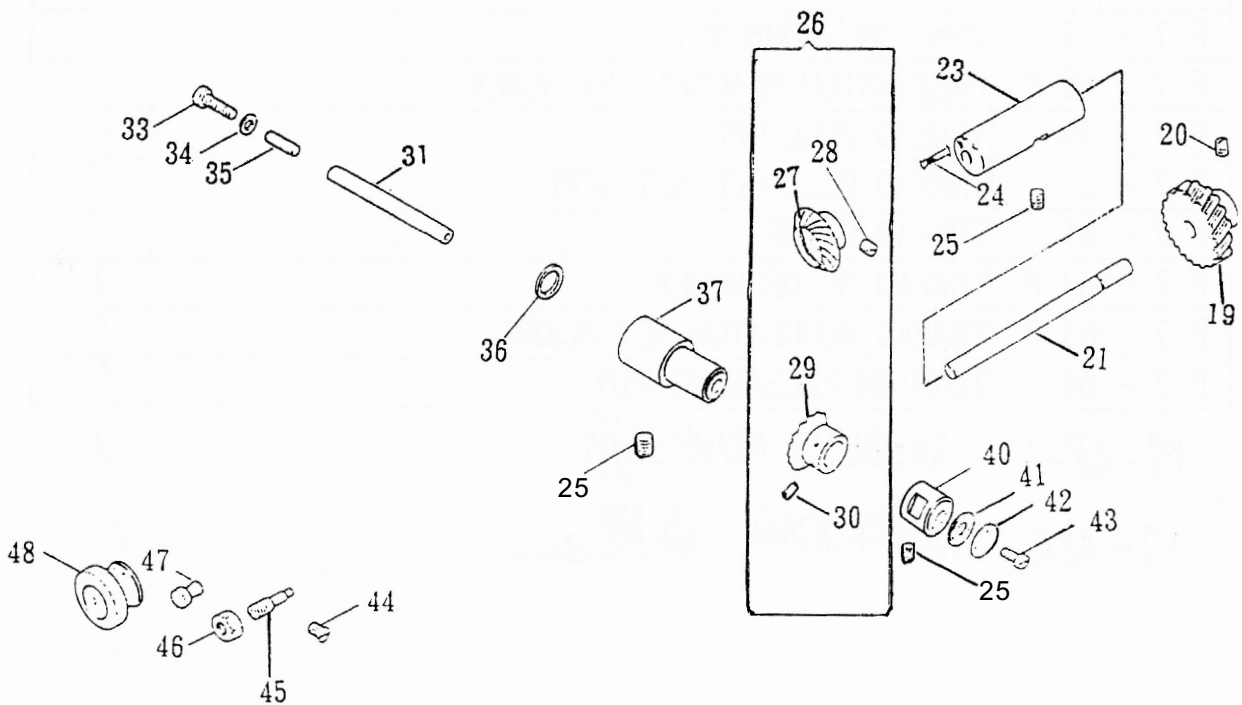




# HOOK, BOBBIN CASE



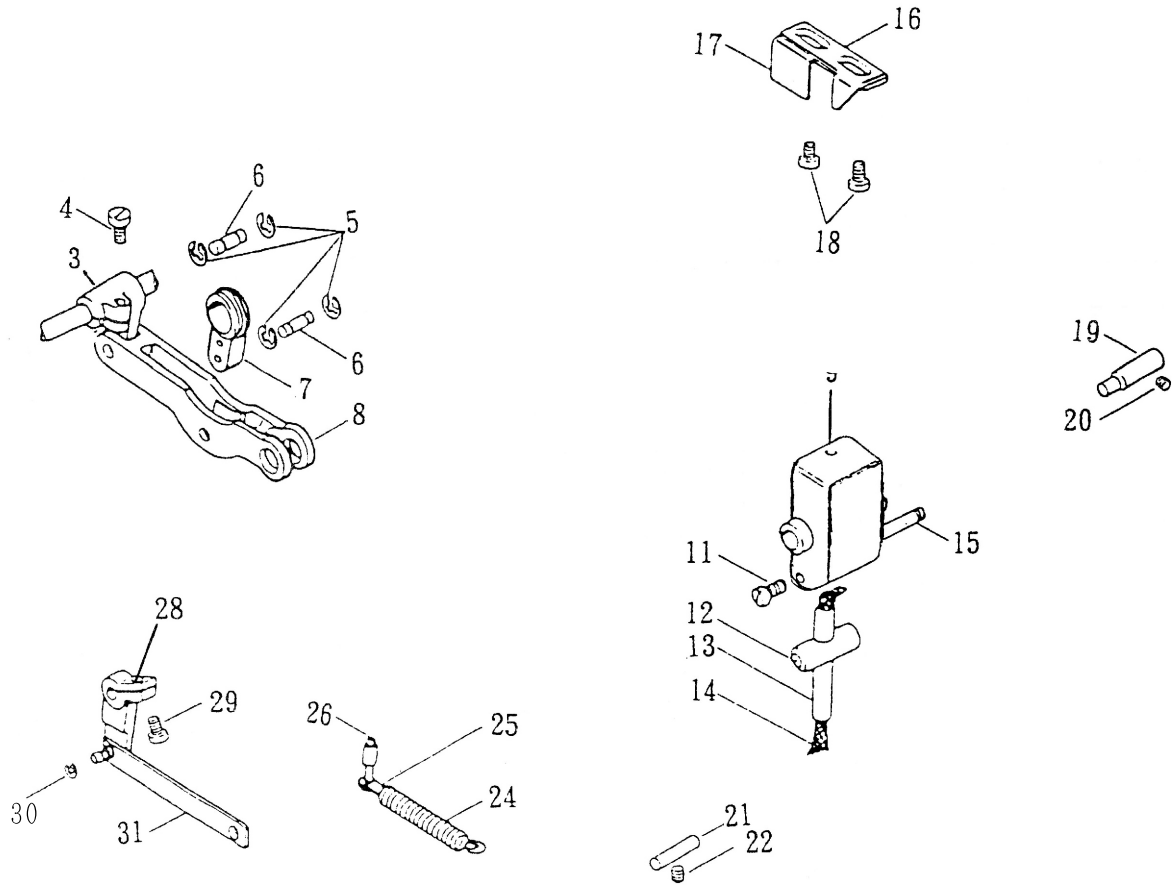
# HOOK SHAFT BEVEL GEAR



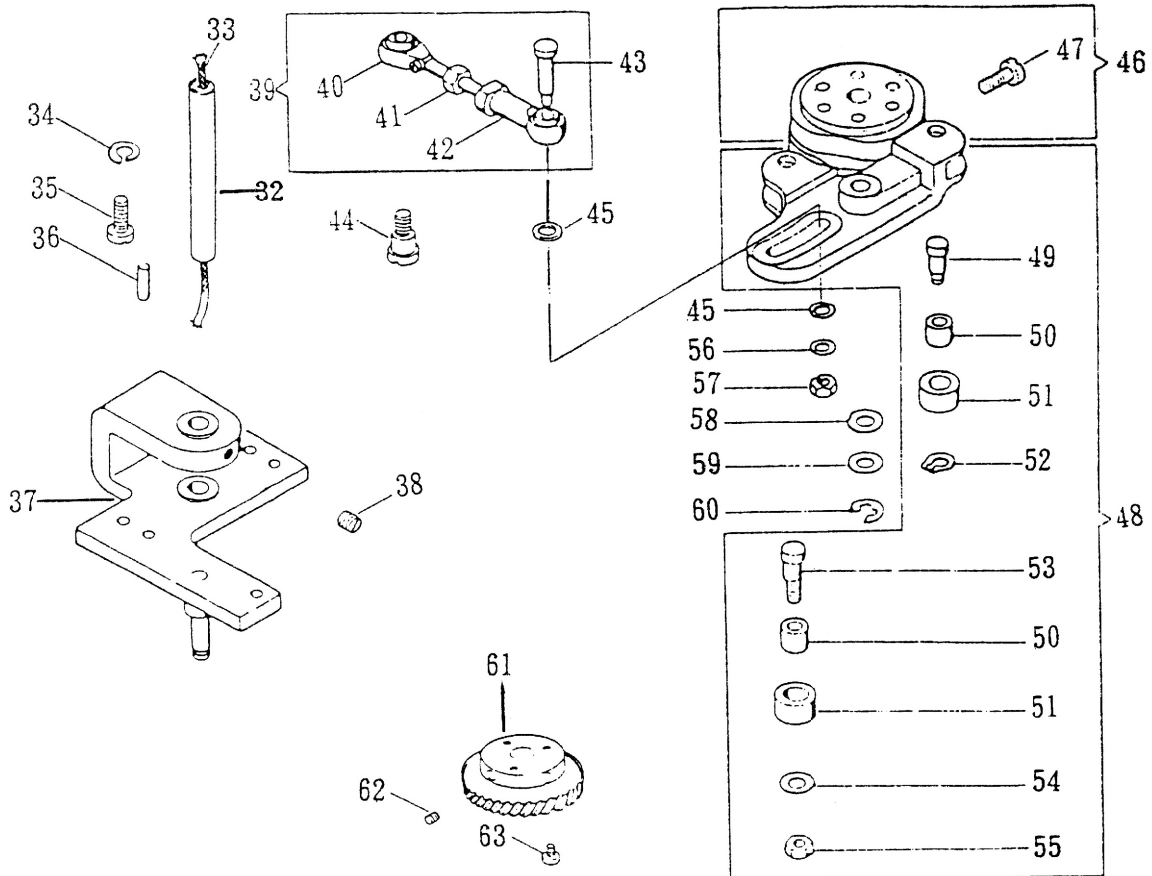
# LOWER THREADING MECHANISM

REF. NO. 部件編號	DESCRIPTION 說明	QTY. 需求數量
F8-01	HOO K AND BOBBIN CASE (CPL.) 旋梭組	
F8-02	BOBBIN CASE CAP 旋梭蓋	1
F8-03	BOBBIN CASE LATCH LEVER 旋梭蓋門	1
F8-04	BOBBIN CASE LATCH PIN 銷	1
F8-05	BOBBIN CASE LATCH 旋梭蓋鎖片	1
F8-06P	BOBBIN CASE LATCH STOP SCREW 螺釘	1
F8-07P	BOBBIN CASE LATCH SPRING 螺釘	1
F8-08P	BOBBIN CASE CAP TENSION SPRING SCREW 螺釘	1
F8-09	BOBBIN CASE CAP TENSION SPRING 張力壓片	1
F8-10P	BOBBIN CASE CAP TENSION SPRING SCREW 螺釘	1
F8-11	HOO K 旋梭主體	1
F8-12P	HOO K SET SCREW 螺釘	2
F8-13P	HOO K GIB SCREW 螺釘	3
F8-14	HOO K NEEDLE GUARD AND COUNTERBALANCE 旋梭平衡片	1
F8-15P	HOO K NEEDLE GUARD AND COUNTERBALANCE SCREW 螺釘	1
F8-16	BOBBIN 儲線器	1
F8-17	BOBBIN CASE STOP 旋梭定位片	1
F8-18P	BOBBIN CASE STOP SCREW 螺釘	1
F8-19	HOO K DRIVING SHAFT HELICAL GEAR 齒輪	1
F8-20P	HOO K DRIVING SHAFT HELICAL GEAR SET SCREW 螺釘	2
E7-21	HOO K DRIVING SHAFT 軸心	1
F8-23	HOO K DRIVING SHAFT BUSHING 旋梭供油軸套	1
F8-24	HOO K DRIVING SHAFT BUSHING WICK 油蕊	1
F8-25P	BED SHAFT BUSHING SET SCREW 螺釘	3
F8-26	A PAIR OF BEVEL GEARS 傘型齒輪組	
F8-27	HOO K DRIVING SHAFT BEVEL GEAR 傘型齒輪	1
F8-28P	HOO K DRIVING SHAFT BEVEL GEAR SET SCREW 螺釘	2
F8-29	HOO K SHAFT BEVEL GEAR 傘型齒輪	1
F8-30P	HOO K SHAFT BEVEL GEAR SET SCREW 螺釘	2
F8-31	HOO K SHAFT 軸心	1
F8-33P	HOO K SHAFT OIL FILTER WICK HOLDER 螺釘	1
F8-34	HOO K SHAFT OIL FILTER WICK HOLDER SEAL 橡膠圈	1
F8-35	HOO K SHAFT OIL FILTER FELT 油棉	1
F8-36	HOO K SHAFT BUSHING (BACK) OIL SEAL 橡膠圈	1
F8-37	HOO K SHAFT BUSHING (BACK) 軸套	1
F8-40	HOO K SHAFT BUSHING (FRONT) 銅軸套	1
F8-41	HOO K SHAFT BUSHING CAP GASKET 墊圈	1
F8-42	HOO K SHAFT BUSHING CAP 固定圈	1
F8-43P	HOO K SHAFT BUSHING (FRONT) CAP SCREW 螺釘	3
F8-44P	HOO K OIL BYPASS SCREW 螺釘	1
F8-45	HOO K OIL REGULAI NG SCREW 調節螺釘	1
F8-46W	HOO K OIL BYPASS SCREW LOCK NUT 螺母	1
F8-47	HOO K SHAFT GEAR BOX PLUG 塑膠塞	1
F8-48	HOO K GEAR BOX VENT CAP 塑膠塞	1

# FEED DRIVING CONNECTION, CARRIER FRAME



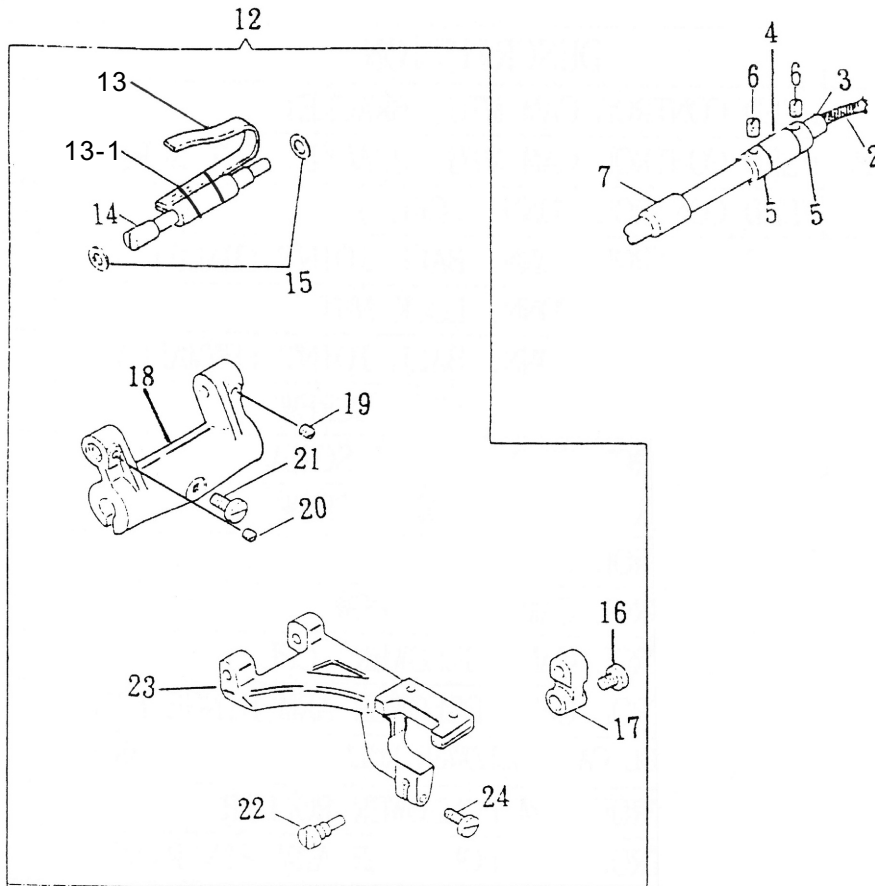
# FEED CONTROL CAM (143用)



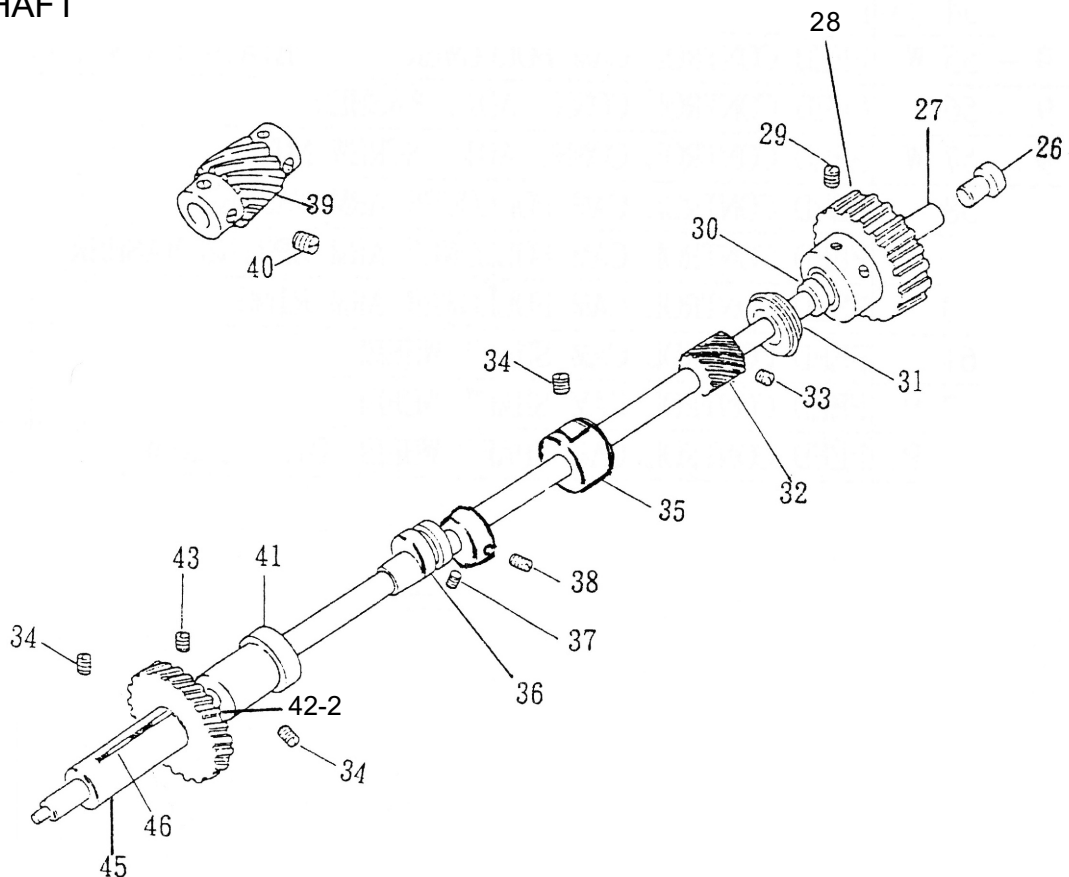
## LOWER SHAFT MECHANISM-GAUGE PARTS

REF. NO. 部件編號	DESCRIPTION 說明	QTY. 需求量
F9-03	FEED DRIVING CONN. CRANK 送料曲柄	1
F9-04P	FEED DRIVING CONN. CRANK PINCH SCREW 螺釘	1
F9-05	FEED DRIVING CONN. LEVER HINGE PIN RETAINER E型扣環	4
F9-06	FEED DRIVING CONN. LEVER HINGE PIN 插栓	2
F9-07	FEED DRIVING CONN. LINK 軸套傳動柄	1
F9-08	FEED DRIVING CONN. LEVER 送料驅動連桿	1
F9-09	FEED DRIVING CONN. CARRIER FRAME 送料驅動導程塊	1
F9-11P	NEEDLE POSITION ADJ. ECC. SCREW 螺釘	1
F9-12	FEED DRIVING CONN. LEVER SLIDE BEARING 銅滑塊	1
F9-13	FEED DRIVING CONN. CARRIER FRAME SLIDE STUD 軸心	1
F9-14	FEED DRIVING CONN. OIL WICK 油棉	1
F9-15	FEED DRIVING CONN. LEVER FRAME SPRING STUD 懸掛栓	1
F9-16	FEED DRIVING CONN. LEVER FRAME STOP (BACK) 限位板(上)	1
F9-17	FEED DRIVING CONN. LEVER FRAME STOP (FRONT) 限位板(下)	1
F9-18P	FEED DRIVING CONN. LEVER FRAME STOP SCREW 螺釘	2
F9-19	FEED DRIVING CONN. BEARING STUD (RIGHT) 偏心軸心	1
F9-20P	FEED DRIVING CONN. BEARING STUD SCREW (RIGHT) 螺釘	1
F9-21	FEED DRIVING CONN. BEARING STUD (LEFT) 軸心	1
F9-22P	FEED DRIVING CONN. BEARING STUD SCREW (LEFT) 螺釘	1
F9-24	FEED DRIVING CONN. LEVER FRAME SPRING 彈簧	1
F9-25	FEED DRIVING CONN. LEVER FRAME SPRING RETAINER 彈簧炭片	1
F9-26	FEED DRIVING CONN. LEVER FRAME SPRING STUD 懸掛栓	1
F9-28	FEED DRIVING CONN. SHAFT CRANK LINK (CPL.) 運動拉桿	1
F9-29P	FEED DRIVING CONN. SHAFT CRANK PINCH SCREW 螺釘	1
F9-30	FEED DRIVING CONN. RETAINING RING E型扣環	1
F9-31	FEED DRIVING CONN. SHAFT CRANK LINK 連接柄	1
F9-32	FEED CONTROL CAM SHAFT	1
F9-33	FEED CONTROL CAM SHAFT OIL WICK	1
F9-34	FEED CONTROL CAM MTG. LOCK WASHER	3
F9-35P	FEED CONTROL CAM MOUNTING BRACKET SCREW	3
F9-36	FEED CONTROL CAM MTG. BRACKET DOWEL PIN	2
F9-37	FEED CONTROL CAM MTG. BRACKET	1
F9-38P	FEED CONTROL CAM MTG. BRACKET SET SCREW	1
F9-39	FEED CONTROL CONN. (CPL.)	
F9-40	FEED CONTROL CONN. BALL JOINT (MALE)	1
F9-41	FEED CONTROL CONN. LOCK NUT	1
F9-42	FEED CONTROL CONN. BALL JOINT (FEMALE)	1
F9-43	FEED CONTROL CONN. ADJ. SCREW	1
F9-44P	FEED CONTROL CONN. HINGE SCREW	1
F9-45	FEED CONTROL CONN. ADJ. SCREW	2
F9-46	FEED CONTROL CAM (CPL.)	
F9-47P	FEED CONTROL CAM SET SCREW	2
F9-48	FEED CONTROL CAM FOLLOWER (CPL.)	
F9-49	FEED CONTROL CAM FOLLOWER ARM HINGE PIN	1
F9-50	FEED CONTROL CAM FOLLOWER ROLLER NEEDLE BEARING	2
F9-51	FEED CONTROL CAM FOLLOWER ROLLER	2
F9-52	FEED CONTROL CAM FOLLOWER ROLLER ARM PIN RING	1
F9-53P	FEED CONTROL CAM FOLLOWER ROLLER ARM HINGE SCREW	1
F9-54	FEED CONTROL CAM FOLLOWER ROLLER ARM SPRING WASHER	1
F9-55W	FEED CONTROL CAM FOLLOWER ROLLER ARM RETAINING NUT	1
F9-56	FEED CONTROL CONN. ADJ. WASHER	1
F9-57W	FEED CONTROL CONN. ADJ. SCREW NUT	1
F9-58	FEED CONTROL CAM FOLLOWER ROLLER ARM WASHER	1
F9-59	FEED CONTROL CAM FOLLOWER ROLLER ARM SPRING WASHER	1
F9-60	FEED CONTROL CAM FOLLOWER ROLLER ARM RING	1
F9-61	FEED CONTROL CAM SHAFT WHEEL	1
F9-62P	FEED CONTROL CAM SHAFT WHEEL SET SCREW	1
F9-63P	FEED CONTROL CAM SHAFT WHEEL DISC SCREW	3

# FEED DRIVING ROCK SHAFT CRANK



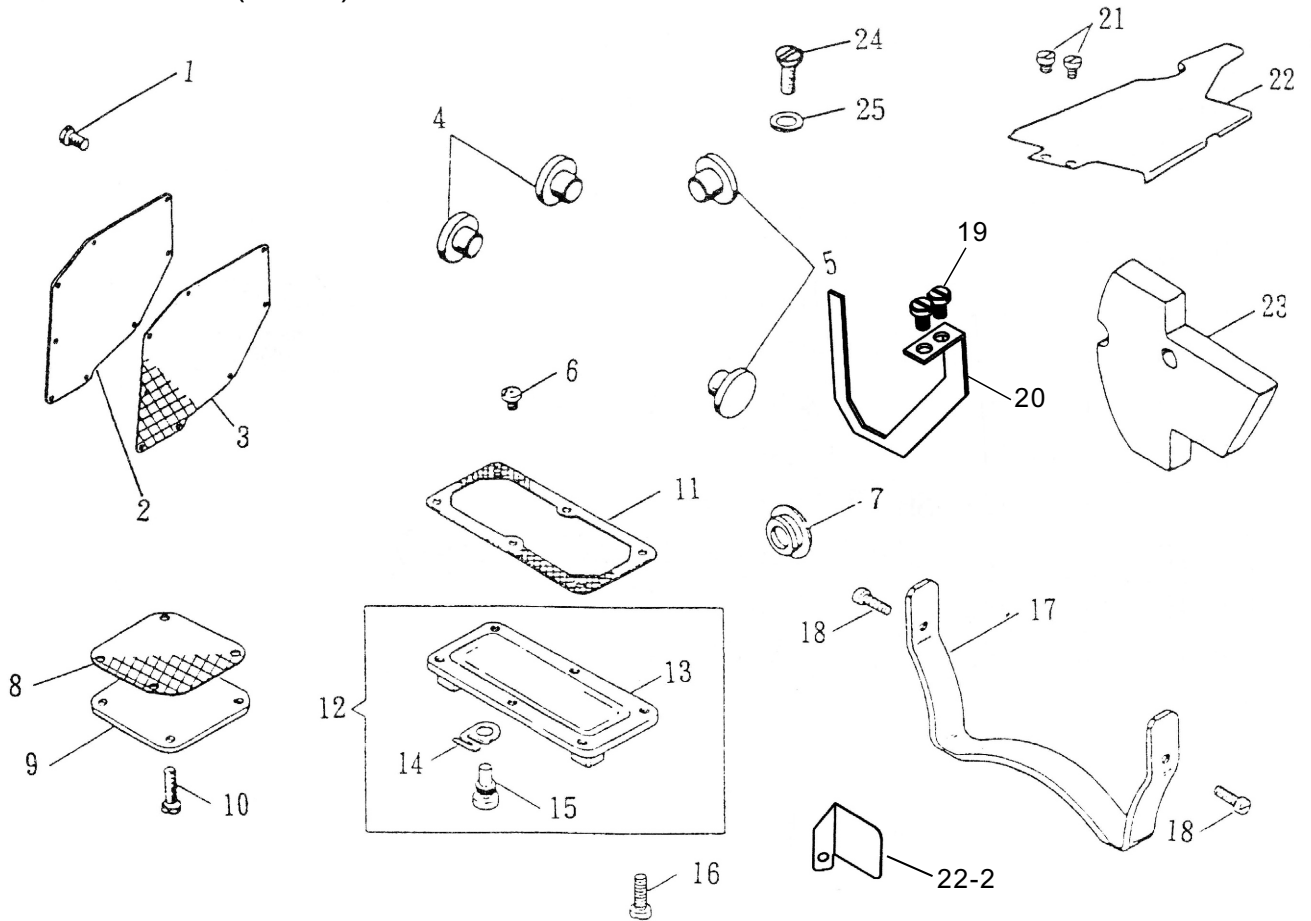
# BED SHAFT



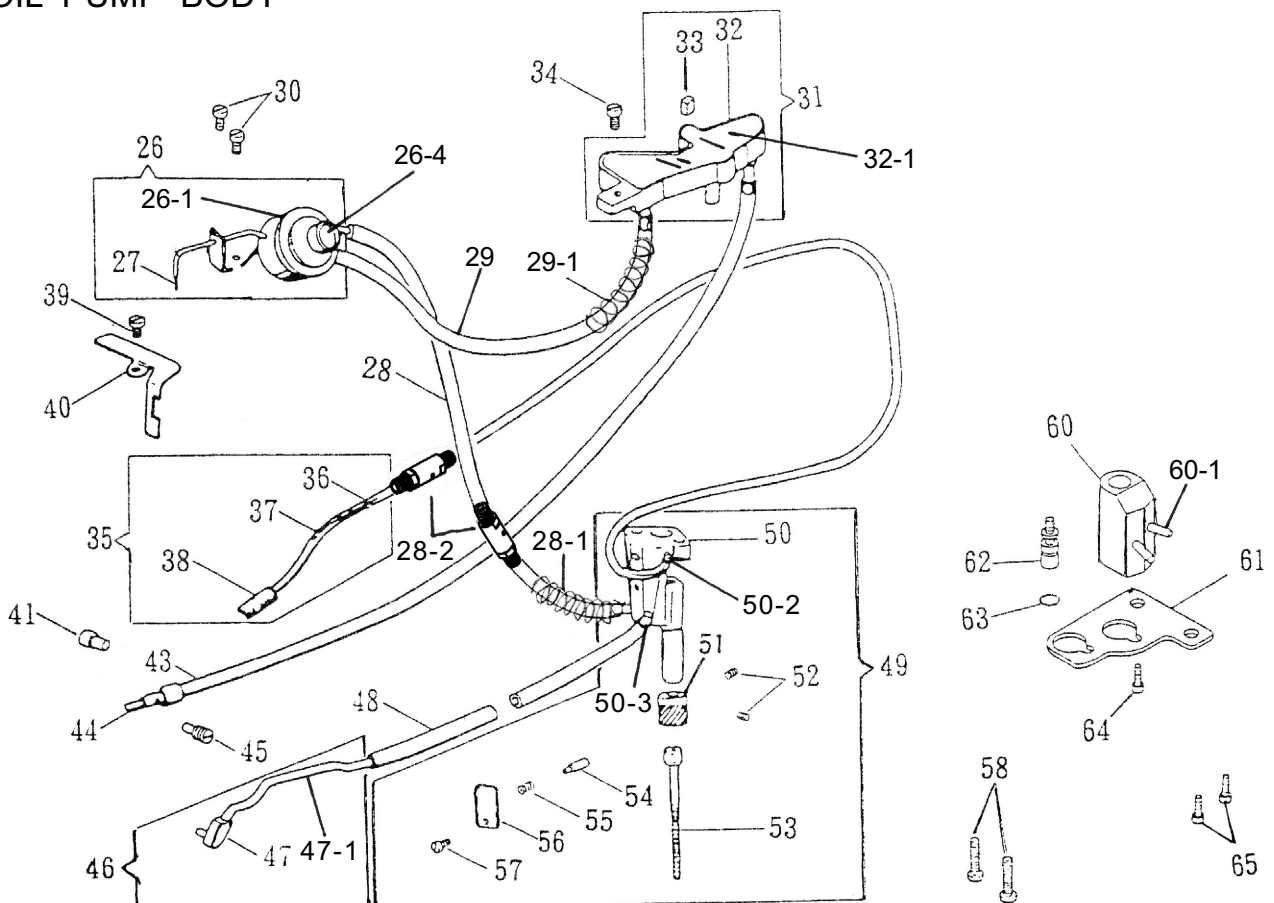




# ARM COVER (BACK)



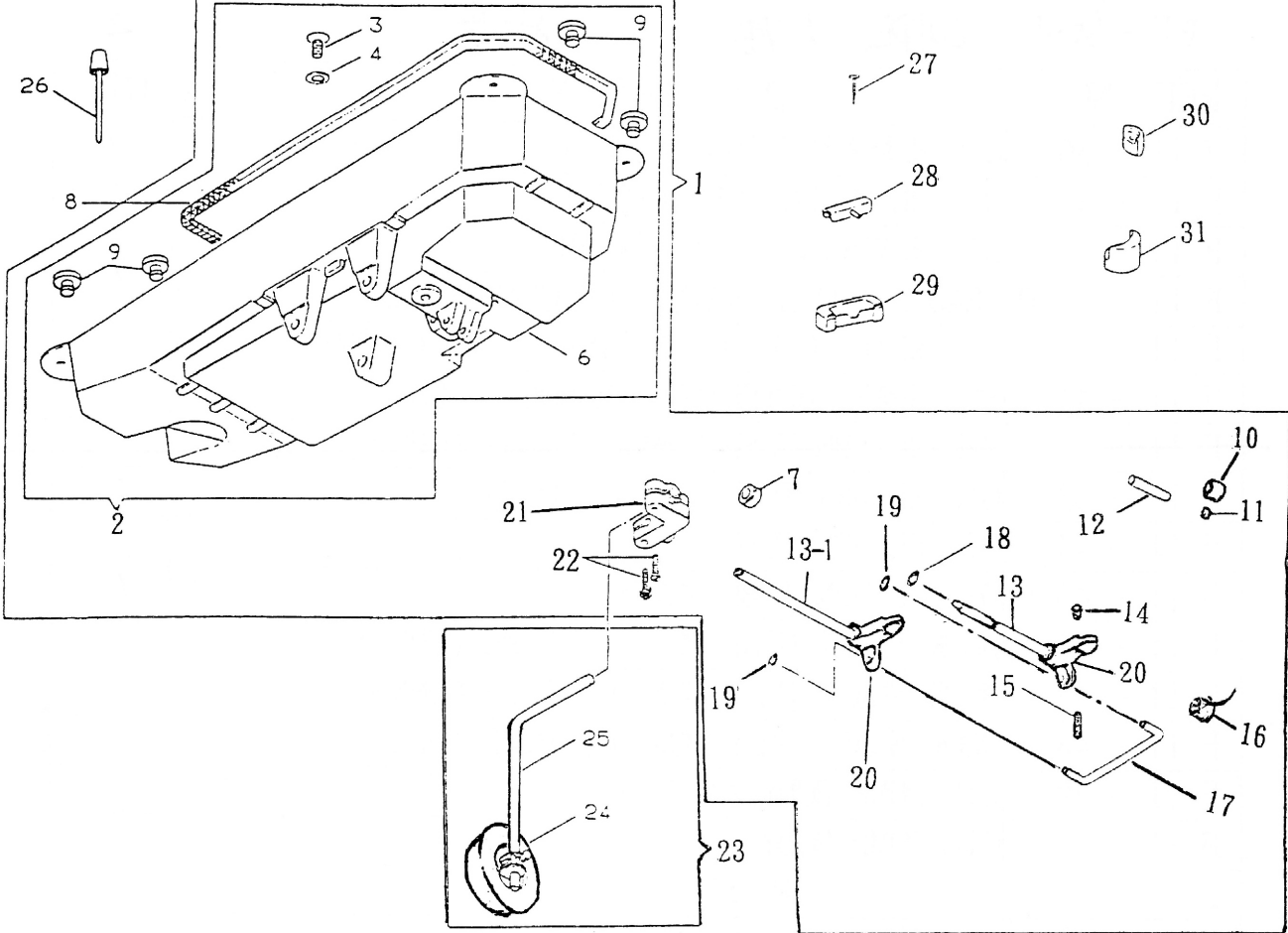
# OIL PUMP BODY



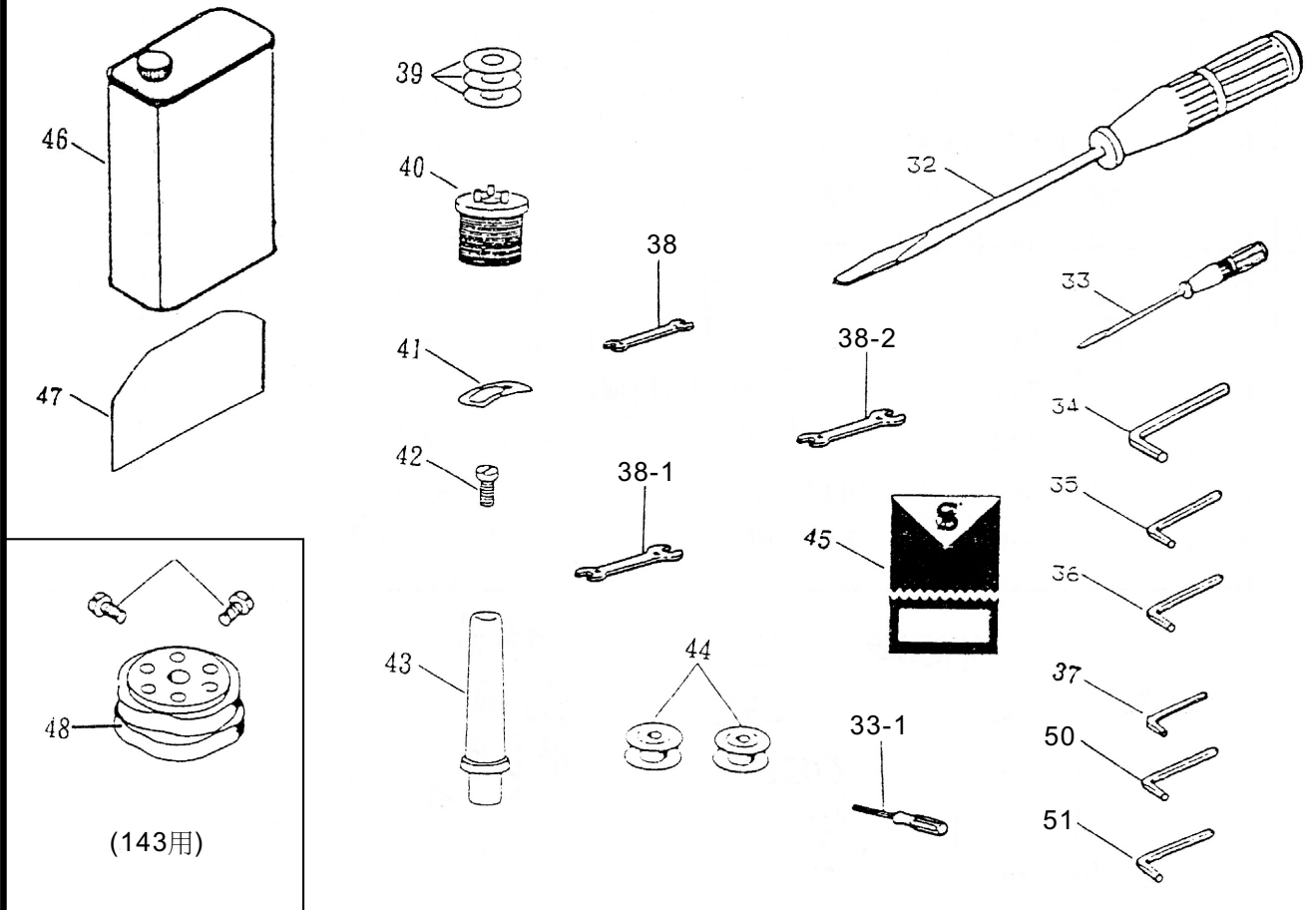
# PULLER DEVICE MECHANISM

REF. NO. 部件編號	DESCRIPTION 說明	QTY. 需求量
F11-01P	ARM COVER (BACK) SCREW 螺釘	8
F11-02	ARM COVER (BACK), GASKET (CPL.) 側蓋	1
F11-03	ARM COVER (BACK), GASKET 側蓋墊片	1
F11-04	BED PLUG (REAR) 橡膠塞	2
F11-05	BED PLUG (FRONT) 橡膠塞	2
F11-06P	SCREW 螺釘	1
F11-07	FEED REGULATING SHAFT HOLE PLUG 橡膠塞	1
F11-08	HOOK SHAFT GEAR BOX COVER GASKET 下蓋墊片	1
F11-09	HOOK SHAFT GEAR BOX COVER 下蓋	1
F11-10P	HOOK SHAFT GEAR BOX COVER SCREW 螺釘	4
F11-11	BED SHAFT GEAR BOX COVER GASKET 下鋁蓋墊片	1
F11-12	BED SHAFT GEAR BOX COVER (CPL.) 下鋁蓋組	1
F11-13	BED SHAFT GEAR BOX COVER 下鋁蓋	1
F11-14	FEED BAR HINGE PIN OILING FELT CLAMP 彈片	1
F11-15P	BED SHAFT GEAR BOX COVER DRAIN SCREW 調節螺釘	1
F11-16P	BED SHAFT GEAR BOX COVER SCREW 螺釘	6
F11-17	MACHINE LEG 機體支架	1
F11-18P	MACHINE LEG SCREW 螺釘	2
F11-19P	ARM OIL SHIELD RETAINER SCREW 螺釘	2
F11-20	ARM OIL SHIELD RETAINER 固定片	1
F11-21P	OIL GUARD SCREW 螺釘	2
F11-22	OIL GUARD COVER 擋油蓋	1
F11-22-1	ARM OIL SHIELD 擋油板	1
F11-22-2	OIL GVARD COVER 擋油蓋	1
F11-23	ARM OIL SHIELD 擋油板	1
F11-24P	EARTH WIRE SCREW 螺釘	1
F11-25	EARTH WIRE SCREW WASHER 墊圈	1
F11-26	OIL SIGHT BODY 油壺組	1
F11-26-1	OIL SIGHT WINDOW 油鏡	1
F11-26-4	GLIB 油嘴(銅)	1
F11-27	OIL SIGHT WICK 油蕊	1
F11-28	OIL DELIVERY TUBE 油管	1
F11-28-1	SPRING COIL 彈簧圈	1
F11-28-2	CHECK VALVE 逆止閥	2
F11-29	OIL RETURN TUBE UPPER (SHORT) 油管	1
F11-29-1	SPRING COIL 彈簧圈	1
F11-30P	OIL SIGHT BODY SCREW 螺釘	2
F11-31	OIL DISTRIBUTOR PLATE (CPL.) 儲油器組	1
F11-32	OIL DISTRIBUTOR PLATE 儲油器	1
F11-32-1	MODELS THE EARPIECE 塑膠蓋	1
F11-33	OIL DISTRIBUTOR PLATE FOAM PAD 栓	1
F11-34P	OIL DISTRIBUTOR PLATE SCREW 螺釘	1
F11-35	OIL REMOVING TUBE, OIL REMOVING LINT SCREEN (CPL.) 回油組	1
F11-36	OIL REMOVING TUBE (CPL.) 油蕊	1
F11-37	OIL REMOVING TUBE WIRE 銅線	1
F11-38	OIL REMOVING LINT SCREEN 油棉	1
F11-39P	HEAD END OIL DRAIN WICK CLAMP SCREW 螺釘	1
F11-40	ARM MEAD OIL DRAIN WICK CLAMP (FRONT) 固定片	1
F11-41	BED SHAFT BUISHING OIL HOLE PLUG 橡膠塞	1
F11-43	OIL RETURN TUBE LOWER (LONG) 油管	1
F11-44	OIL RETURN TUBE 油管接頭	1
F11-45P	OIL RETURN TUBE SCREW 螺釘	1
F11-46	HOOK SHAFT GEAR BOX OIL PIPE (CPL.) 油管接頭組	1
F11-47	HOOK SHAFT GEAR BOX OIL PIPE CONNECTOR 油管接頭	1
F11-47-1	COPPER PIPE 銅管	1
F11-48	HOOK SHAFT GEAR BOX OIL PIPE TUBE 油管	1
F11-49	OIL PUMP BODY (ASS'Y) 油泵組	1
F11-50	OIL PUMP BODY 油泵	1
F11-50-2	COPPER PIPE 銅管	2
F11-50-3	COPPER PIPE 銅管	1
F11-51	OIL PUMP GEAR 齒輪	1
F11-52P	OIL PUMP GEAR SCREW 螺釘	2
F11-53	OIL PUMP SCREW SHAFT 油泵軸	1
F11-54	OIL REMOVING PUMP PISTON 活動栓	1
F11-55	OIL REMOVING PUMP PISTON SPRING 彈簧	1
F11-56	OIL REMOVING PUMP PISTON SPRING BRACKET 壓封片	1
F11-57P	OIL REMOVING PUMP PISTON SPRING BRACKET SCREW 螺釘	1
F11-58P	OIL PUMP MOUNTING SCREW 螺釘	2
F11-60	HOOK OIL FLOW REGULATING VALVE. PIPE (CPL.) 回油器	1
F11-60-1	COPPER PIPE 銅管	1
F11-61	HOOK OIL FLOW REGULATING VALVE. BRACKET 固定片	1
F11-62	HOOK OIL FLOW REGULATING VALVE. 調節栓	1
F11-63	HOOK OIL FLOW REGULATING VALVE. ORING 橡膠圈	1
F11-64P	HOOK OIL FLOW REGULATING VALVE. SCREW 螺釘	1
F11-65P	HOOK OIL FLOW REGULATING VALVE. BRACKET SCREW 螺釘	2

# OIL RESERVOIR AND KNEE FIFTER



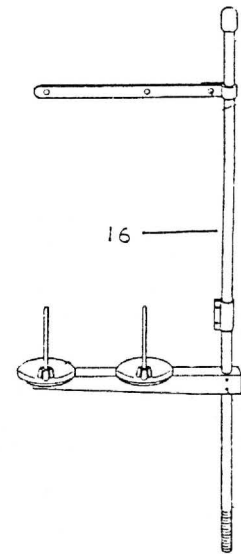
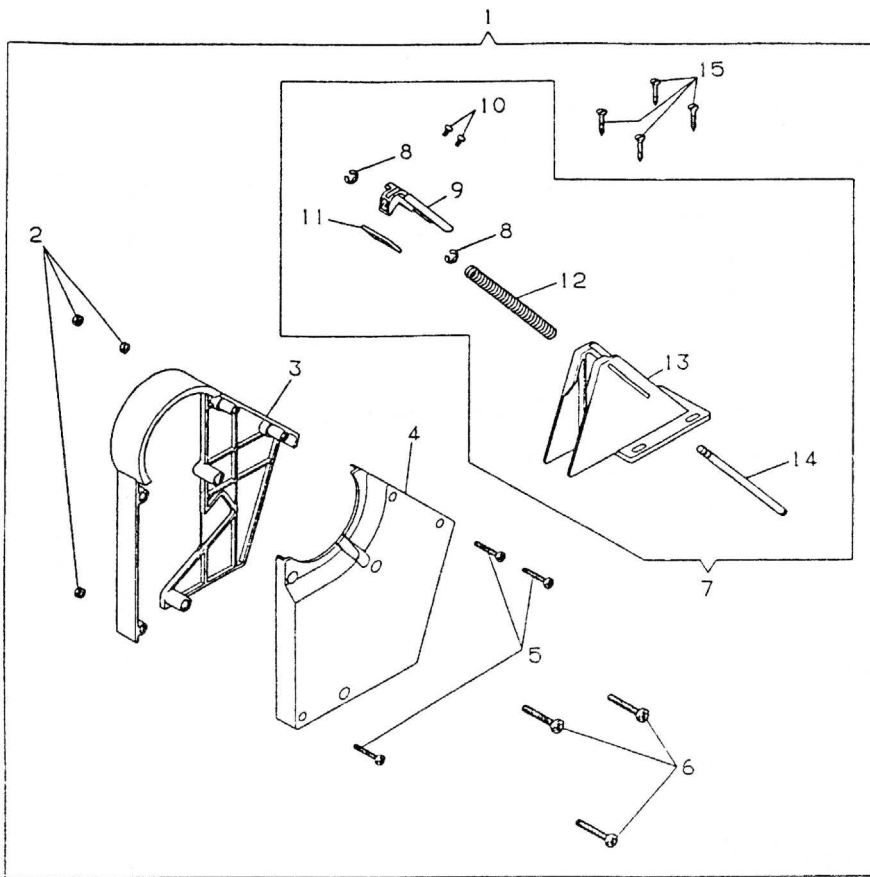
# ACCESSORIES



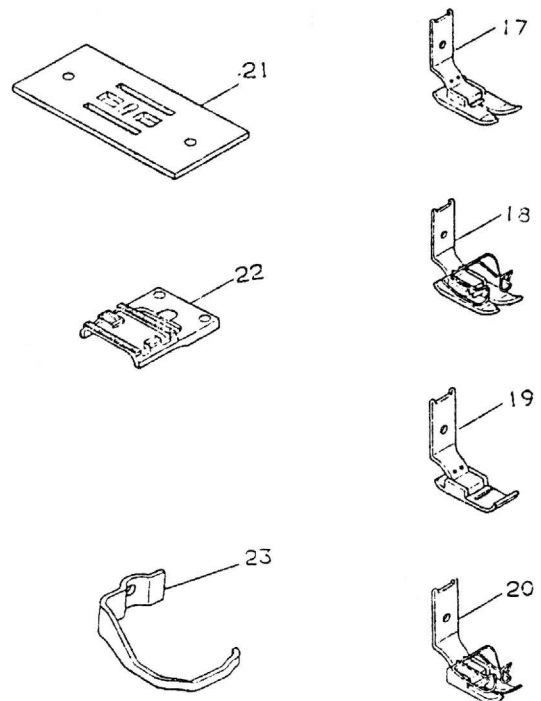
# ACCESSORIES

REF. NO. 部件編號	DESCRIPTION 說明	QTY. 需求量
F12-01	OIL RESERVOIR AND KNEE LIFTER (ASS'Y) 油盤及膝提組	
F12-02	OIL RESERVOIR (CPL.) 油盤組	
F12-03P	OIL RESERVOIR DRAIN PLUG SCREW 螺釘	1
F12-04	OIL RESERVOIR DRAIN PLUG SCREW GASKET 橡膠圈	1
F12-06	OIL RESERVOIR 油盤	1
F12-07	KNEE LIFTER ROCK SHAFT 墊圈	2
F12-08	OIL RESERVOIR CUSHION 油盤橡膠框	1
F12-09	MACHINE BASE CUSHION 橡膠塞	1
F12-10	FOOT CONTROL REVERSE FEED PIN COLLAR 固定圈	1
F12-11P	FOOT CONTROL REVERSE FEED PIN COLLAR SCREW 螺釘	1
F12-12	FOOT CONTROL REVERSE FEED LEVER PIN 軸心	1
F12-13	KNEE LIFTER CONTROL SHAFT 傳動軸	1
F12-13-1	KNEE LIFTER CONTROL SHAFT 傳動軸	1
F12-14P	KNEE LIFTER CONTROL SHAFT SCREW NUT 螺釘	1
F12-15P	KNEE LIFTER CONTROL SHAFT CRANK STOP SCREW 螺釘	1
F12-16	KNEE LIFTER RETURNING SPRING 彈簧	1
F12-17	KNEE LIFTER ROCK SHAFT CONNECTION 連結柄	1
F12-18	KNEE LIFTER CONTROL SHAFT CRIP RING 墊圈	2
F12-19	KNEE LIFTER ROCK SHAFT CONNECTION CRIP RING 墊圈	2
F12-20	KNEE LIFTER ROCK SHAFT 傳動柄	2
F12-21	KNEE LIFTER ROCK SHAFT HIB 驅動桿	1
F12-22P	KNEE LIFTER ROCK SHAFT HUB PINCH SCREW 螺釘	2
F12-23	KNEE LIFTER KNEE PLATE. ARM (CPL.) 膝提器組	
F12-24	KNEE LIFTER KNEE PLATE. (CPL.) 塑膠提器	1
F12-25	KNEE LIFTER KNEE PLATE. ARM 連結柄	1
F12-26	KNEE LIFTER PLUNGER 膝提頂柱	1
F12-27	MACHINE HINGE CONN. CUSHION WIRE NAIL 螺釘	6
F12-28	MACHINE HINGE CONN. 後鈕	2
F12-29	MACHINE HINGE CONN. CUSHION 後鈕橡膠框	2
F12-30	MACHINE BASE OIL RESSERVOIR CUSHION (BACK) 橡膠墊	2
F12-31	MACHINE BASE OIL RESSERVOIR CUSHION (FRONT) 橡膠墊	2
F12-32	SCREW DRIVER (LARGE) 大起子	1
F12-33	SCREW DRIVER (SMALL) 中起子	1
F12-33-1	HEXAGON BOTTLEDPENNER 六角起子	1
F12-34	HEXAGON WRENCH (4MM) L型六角扳手	1
F12-35	HEXAGON WRENCH (1/8 INCH) L型六角扳手	1
F12-36	HEXAGON WRENCH (3MM) L型六角扳手	1
F12-37	HEXAGON WRENCH (2MM) L型六角扳手	1
F12-38	WRENCH(#7) 梅花扳手(#7)	1
F12-38-1	WRENCH(#8) 梅花扳手(#8)	1
F12-38-2	WRENCH(#10) 梅花扳手(#10)	1
F12-39	ANTISPILAGE SPACER 墊圈	3
F12-40	OIL FILTER WITH OIL FILTER MOUNTING SUPPORT 過濾器	1
F12-41	BOBBIN CASE ANTISPILAGE SPRING 彈片	1
F12-42P	ATTATCHMENT SCREW 螺釘	1
F12-43	REST PIN 木樁	1
F12-44	BOBBIN 儲線器	2
F12-45	NEEDLE BAG 針	1
F12-46	OIL CAN 油壺	1
F12-47	MACHINE COVER (EXP.) 擋油板	1
F12-48	FEED CONTROL CAM 確動凸輪	1
F12-49P	FEED CONTROL CAM SET SCREW 螺釘	2
F12-50	HEXAGON WRENCH L型六角扳手	1
F12-51	HEXAGON WRENCH L型六角扳手	1

BELT GUARD, THREAD UNWINDER (2-SPOOL)



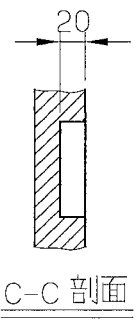
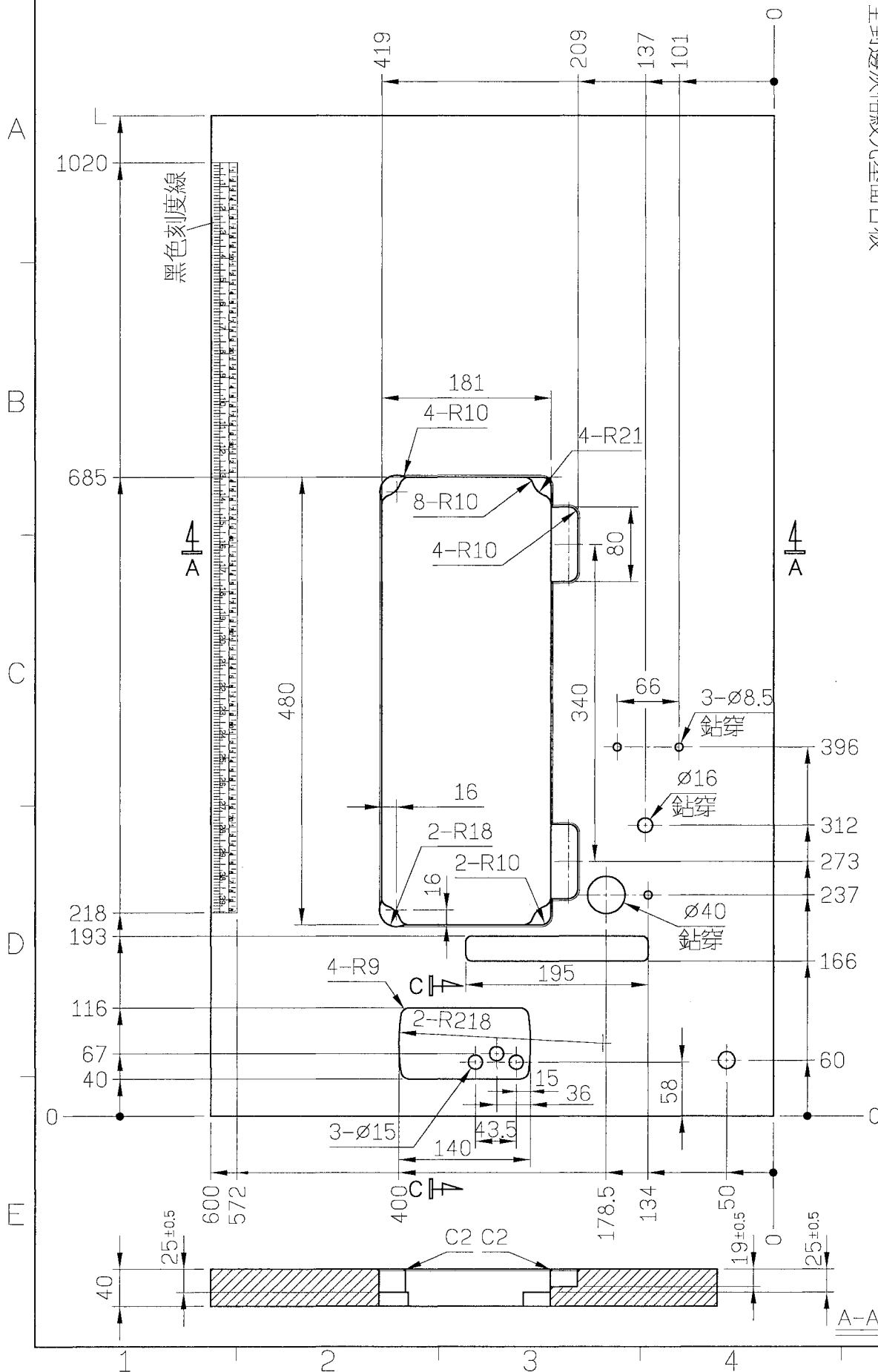
OPTION 1





# TABLE CUT-OUT OF LZ457A-T1

高速機械式折曲縫紉機桌板圖  
 TABLE CUT-OUT FOR LZ457A  
 單位/UNIT:mm  
 所有尺寸公差/DIFFERENCE:±2  
 LZ457A-T1長度(L):1200/重量:11.4kg±5%  
 全封邊灰格紋光塑面台板





# LZ457A

高林股份有限公司 KAULIN MFG. CO.,LTD.

The specification and/or appearances of the equipment described in this instruction book and parts list are subject to change because of modification without previous notice.

0303 MAR.2006