


# ***USER'S MANUAL***

## ***TCK-3H II*** ***CORD KNITTING MACHINE***

# IMPORTANT SAFETY INSTRUCTIONS

This User's Manual contains operational instructions and the explanation on the names of parts for TAJIMA Cord Knitting Machine TCK-3HII. Please read through this manual and understand the contents before operating this machine.

In this manual, items which require your special attention on operation and maintenance of the machine are specified following  **CAUTION**. These items must be strictly observed to ensure safety during operation.

This manual may contain discrepancies in detailed information when compared with actual machine due to continued research and improvements. If any question about the machine or contents of this manual arises, please consult your local TAJIMA distributor.

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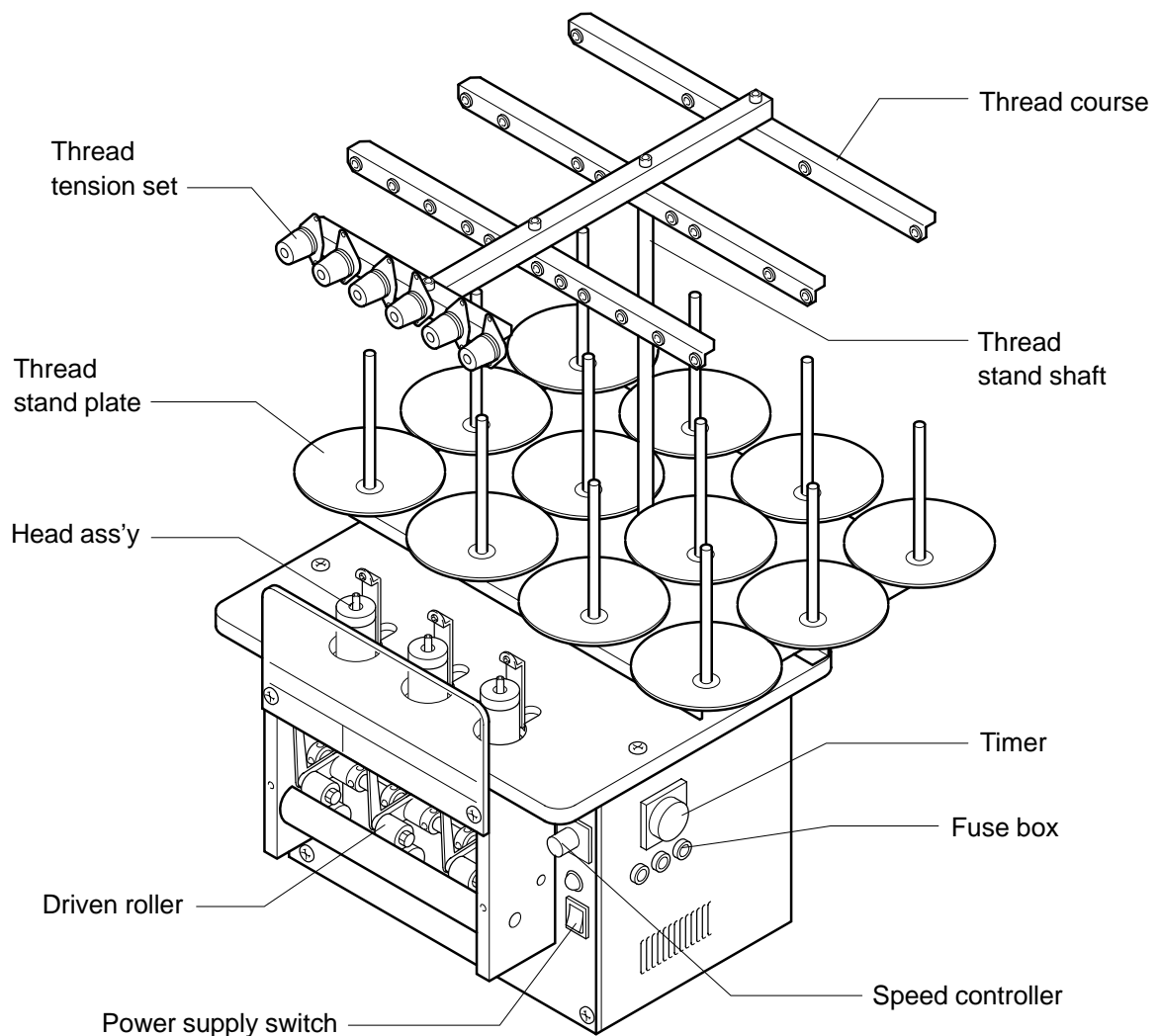
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## PARTS LIST

### GENERAL VIEW

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# 1. NAMES OF PARTS



## 2. SPECIFICATIONS

Power supply	: 100 VAC, 1-phase 50/60Hz
Power consumption	: 90 W
Knitting speed	: 1200 mm to 1700 mm per min. (at 60 Hz)
Number of needles	: 4-/5-/6-needle type (3-needle type: Optional)
Machine size	: 550 mm x 525 mm x 700mm
Machine weight	: 26 kg

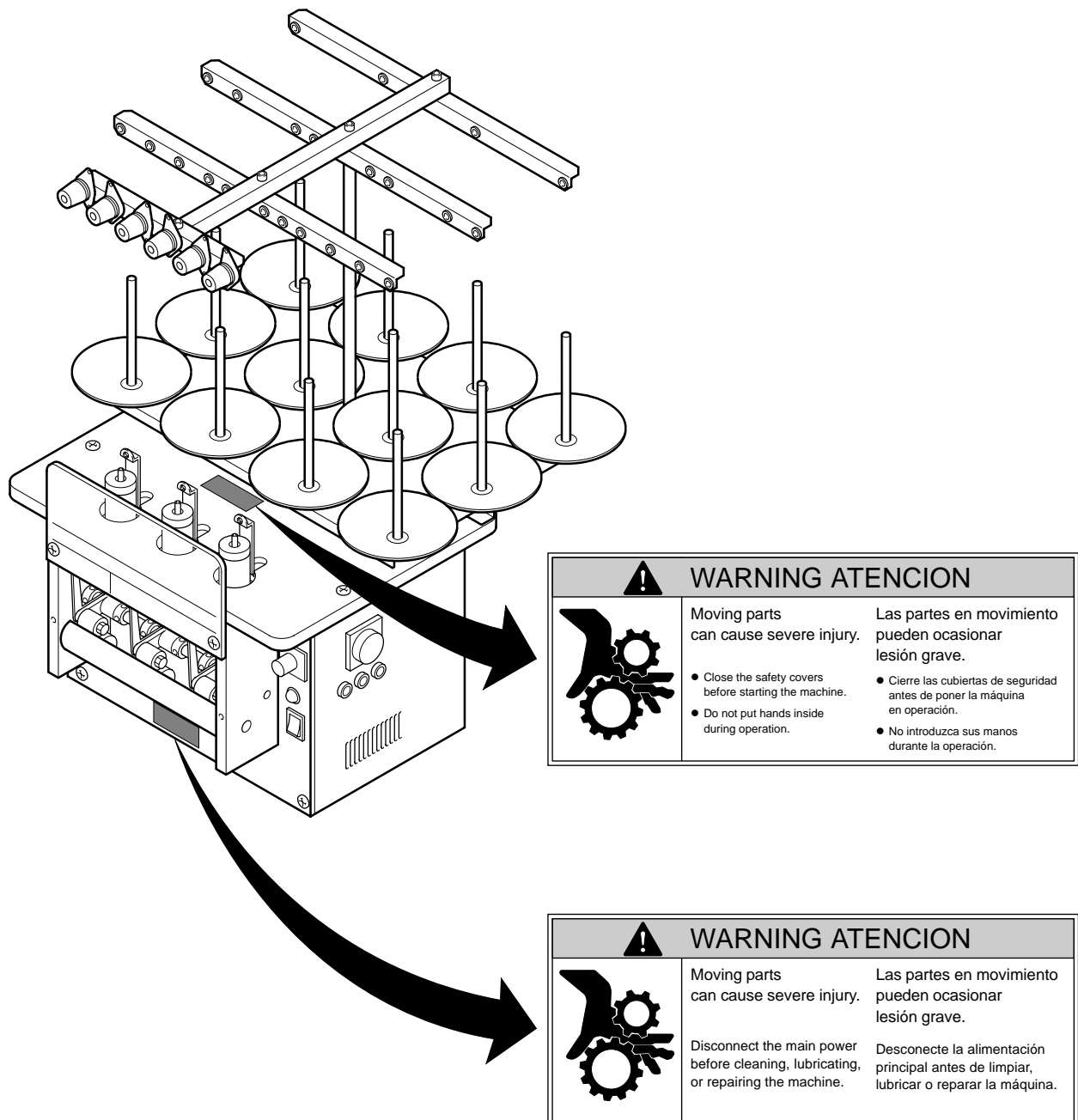
## 3. ACCESSORIES

Knitting needles	: 10 pcs.
Drive belt	: 1 pc.

## 4. SAFETY LABELS

**IMPORTANT :** The machine has safety labels which instructions for safe operation. Machine operators must follow these instructions when operating the machine. Do not detach these seals, nor make illegible them by such as painting.

### ■ Safety label positions and contents

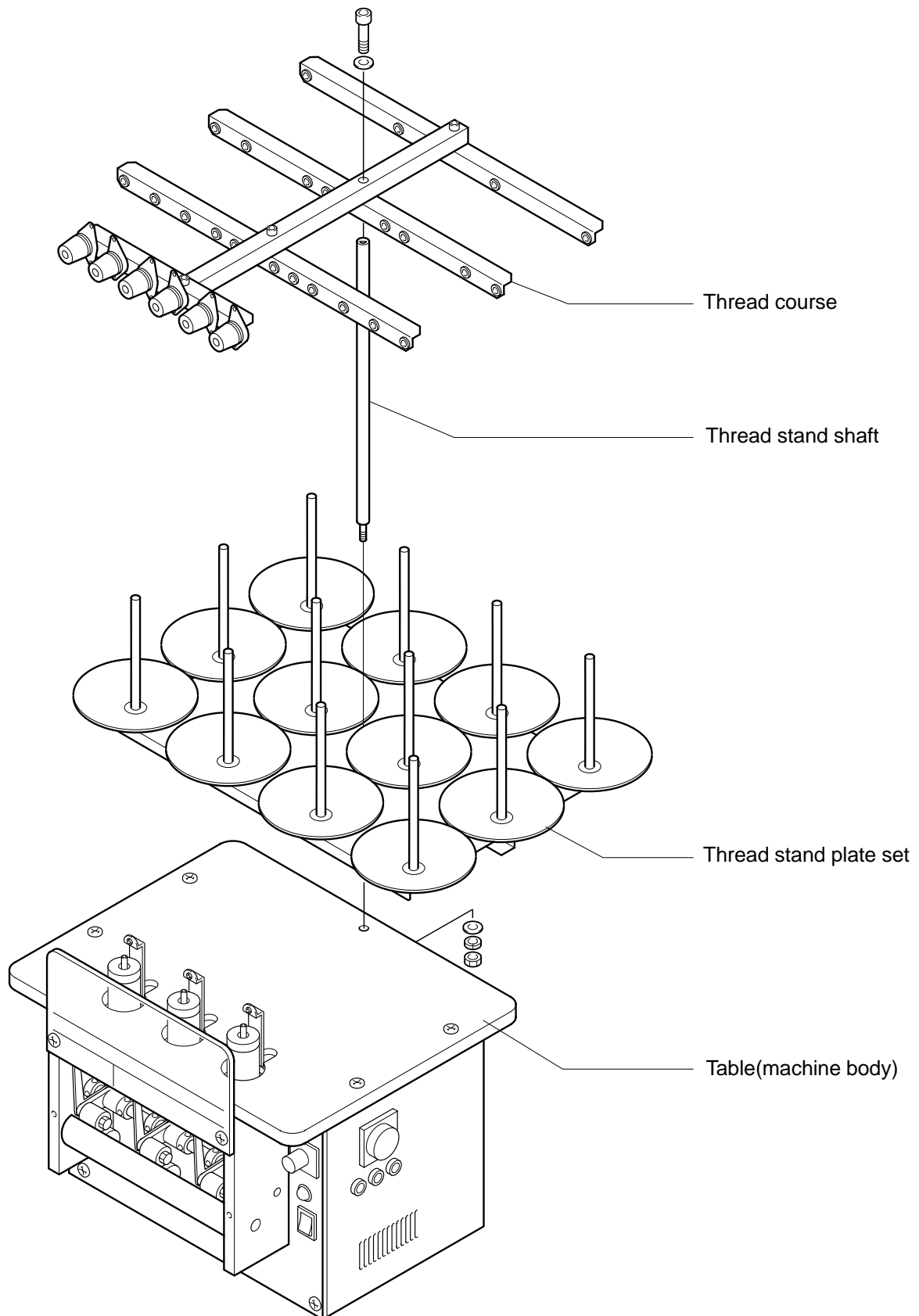


**REMARK:** If the safety label is missed or damaged, please contact TAJIMA distributor.

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## 5. PREPARATION BEFORE STARTING OPERATIONS

Assemble the machines as shown in the illustration below, and secure the parts by tightening bolts and / or nuts.



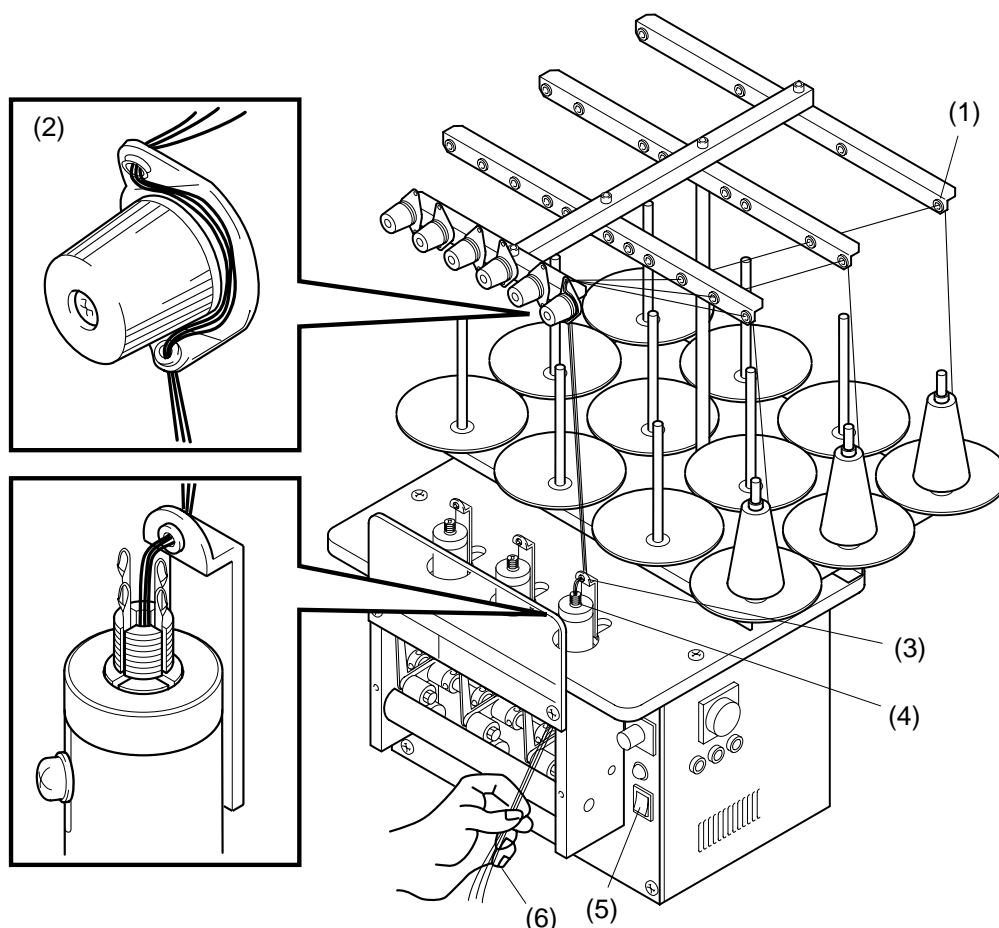
## 6. THREADING PROCEDURE



### CAUTION

Danger of being entangled.

You may be injured due to the moving parts. Do not place your hands or fingers near head ass'y or roller during machine operation.



Thread through the parts given below following the order until the threads comes out underneath the table.

1) Thread course

2) Thread tension set

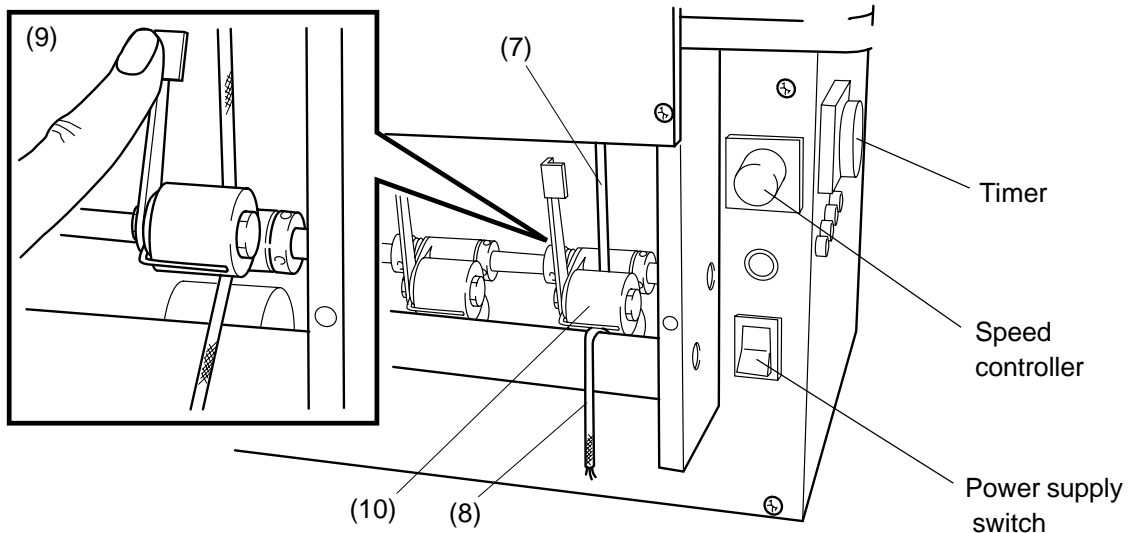
**REMARK:** Run the thread until it reaches the point above the corresponding head while paying attention so that the thread will not be crossed.

3) Needle foot thread course

4) Head center

5) Turn the power ON while holding the threads coming out underneath the table.

6) Immediately after turning the power ON, start pulling the thread down at a constant speed.



- 7) the machine starts generating stitches.
- 8) When the stitches reach the bottom of the roller, turn the power OFF temporarily.
- 9) Raise the roller and pass the cord underneath the roller.
- 10) Pull down the cord so that the cord is lightly pressed by the rollers.

*NOTE: Repeat the procedures above to run the thread up to the roller for each of the heads.*

## 7. OPERATIONS



### CAUTION

**Danger of being entangled.**

**You may be injured due to the moving parts. Do not place your hands or fingers near head ass'y or roller during machine operation.**

### (1) Switch operations

- Power supply switch : By turning this switch ON, the pilot lamp lights up and knitting of cords starts automatically.
- Speed controller : Stitches can be adjusted by using this controller dial.
- Timer : When knitting this cords, this timer differentiates the timing of the head ass'y movement and the driven roller movement so that the cord can be knitted smoothly.

### (2) Thread replacement

Turn the power OFF and wait until the machine comes to a complete stop. Then, set the new thread following the procedures given in "Threading Procedure".



## 8. ADJUSTMENT

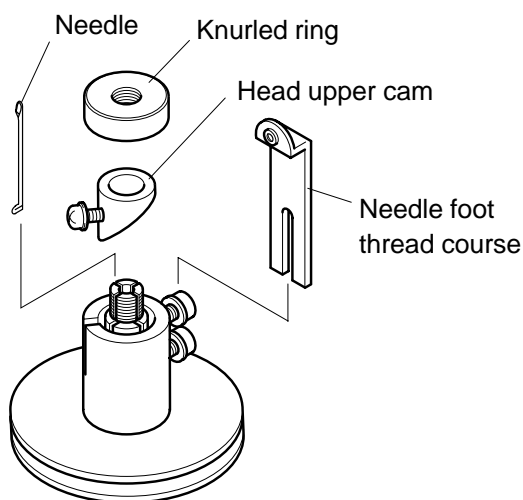
### (1) Needle replacement



**CAUTION**

**Danger of being entangled.**

**You may be injured due to the moving parts. Disconnect the power cable plug from the power source before starting operation so that the machine power does not come ON accidentally.**



- 1) Loosen the needle foot thread course attaching screws.
- 2) Remove the needle foot thread course.
- 3) Remove the knurled ring by turning it clockwise.
- 4) Loosen the head upper cam attaching screw.
- 5) Pull the head upper cam upward and remove it.
- 6) Replace the needle and assemble all the unit by following the steps above in reversed order.

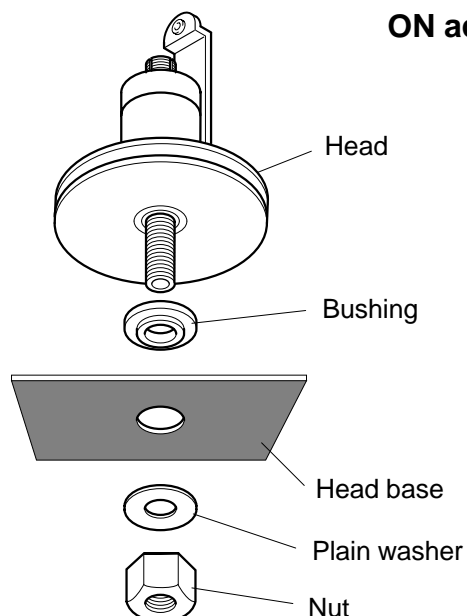
### (2) Head replacement



**CAUTION**

**Danger of being entangled.**

**You may be injured due to the moving parts. Disconnect the power cable plug from the power source before starting operation so that the machine power does not come ON accidentally.**



- 1) Loosen the table fixing screws and remove the table.
- 2) Remove the belt from the head.
- 3) Loosen the nut and remove it.
- 4) Replace the head and mount the new head to the head base. (At this moment, check if the bushing is correctly attached on the head.)
- 5) Tighten the nut.

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### (3) Stitch Adjustment and where to apply lubrication.



#### CAUTION

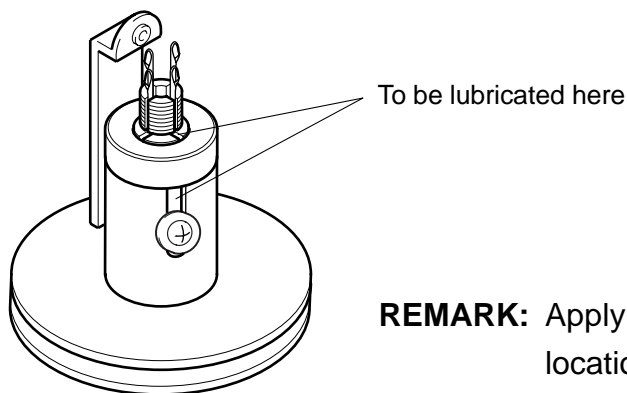
**Danger of being entangled.**

**You may be injured due to the moving parts. Disconnect the power cable plug from the power source before starting operation so that the machine power does not come ON accidentally.**

#### (a) Stitch adjustment

- 1) The position of the head upper cam can be raised up to 3 mm from its bottom position.
- 2) Needle stroke can be adjusted by sliding the head upper cam up and down after loosening the attaching screw.
- 3) Stitches can be changed for some degree by the adjustments indicated above. When the head upper cam is slid upward, the stitch becomes shorter. When the head upper cam is slid downward, the stitch becomes longer and it gives softer texture to the cord. Adjust so that the point of needle is always positioned lower than the top of center pole "A" at the lowermost point of the upper cam. If this is neglected, cord may not be knitted correctly. If the head upper cam is slid beyond the appropriate range, cord may not be knitted correctly.
- 4) Stitches can be adjusted by using the speed controller also.

#### (b) Where to apply lubrication



**REMARK:** Apply lubricating oil to the designated locations twice a day.

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## 9. BEFORE CALLING FOR REPAIR

Carefully read through this Instruction Manual and inspect the machine again before consulting TAJIMA distributors.

Symptoms	Remedies
The power does not come ON even if the power supply switch is turned ON.	<ul style="list-style-type: none"><li>● The power cable plug is disconnected from the outlet. Connect the power cable plug to the outlet.</li><li>● Fuse is blown. Replace the fuse.</li><li>● Drive belt is cut or disengaged. Replace the belt or engage it.</li></ul>
Irregular stitches occur.	<ul style="list-style-type: none"><li>● Needle is broken. Replace the needle.</li><li>● Threading to the needle is uneven. Thread correctly.</li><li>● Head upper cam is incorrectly positioned. Adjust the head upper cam position.</li><li>● Setting of the speed controller is improper. Adjust the speed controller.</li></ul>

## 10. 3-NEEDLE & 3-NEEDLE EXTRAFINE CORD KNITTING HEADS



### CAUTION

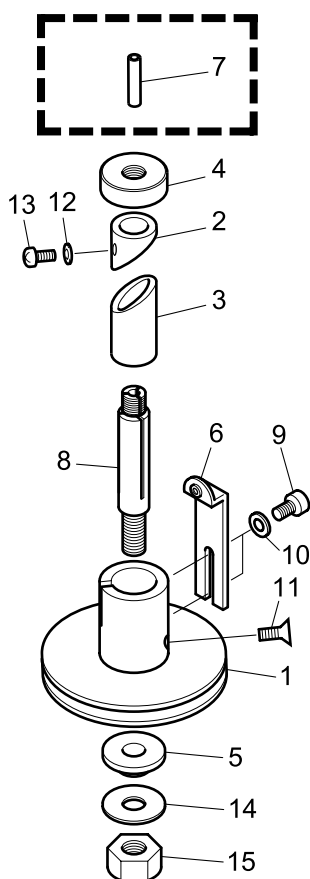
Danger of being entangled.

You may be injured due to the moving parts. Disconnect the power cable plug from the power source before starting operation so that the machine power does not come ON accidentally.

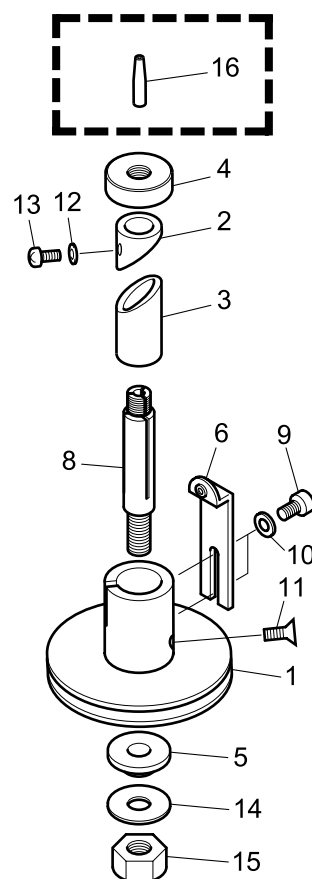
The standard machine is delivered with the 4-, 5- and 6-Needle heads.

The 3-Needle head is available as an option. There are two kinds of 3-Needle heads. The heads for extra fine needle have 2 mm diameter nipple in the center pole "A".

### <For Standard 3-Needle Knit Cord>

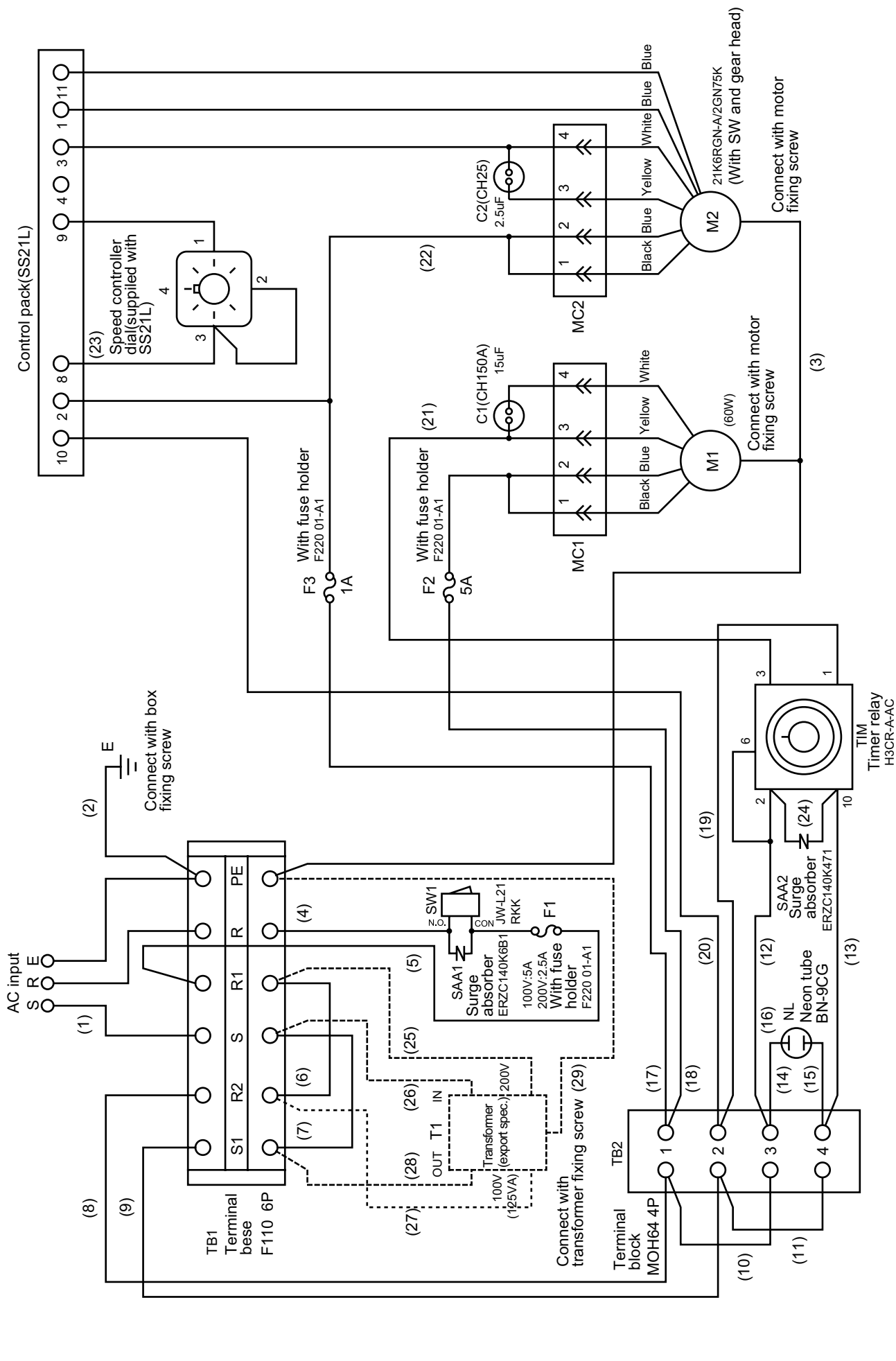


### <For Extrafine 3-Needle Knit Cord>



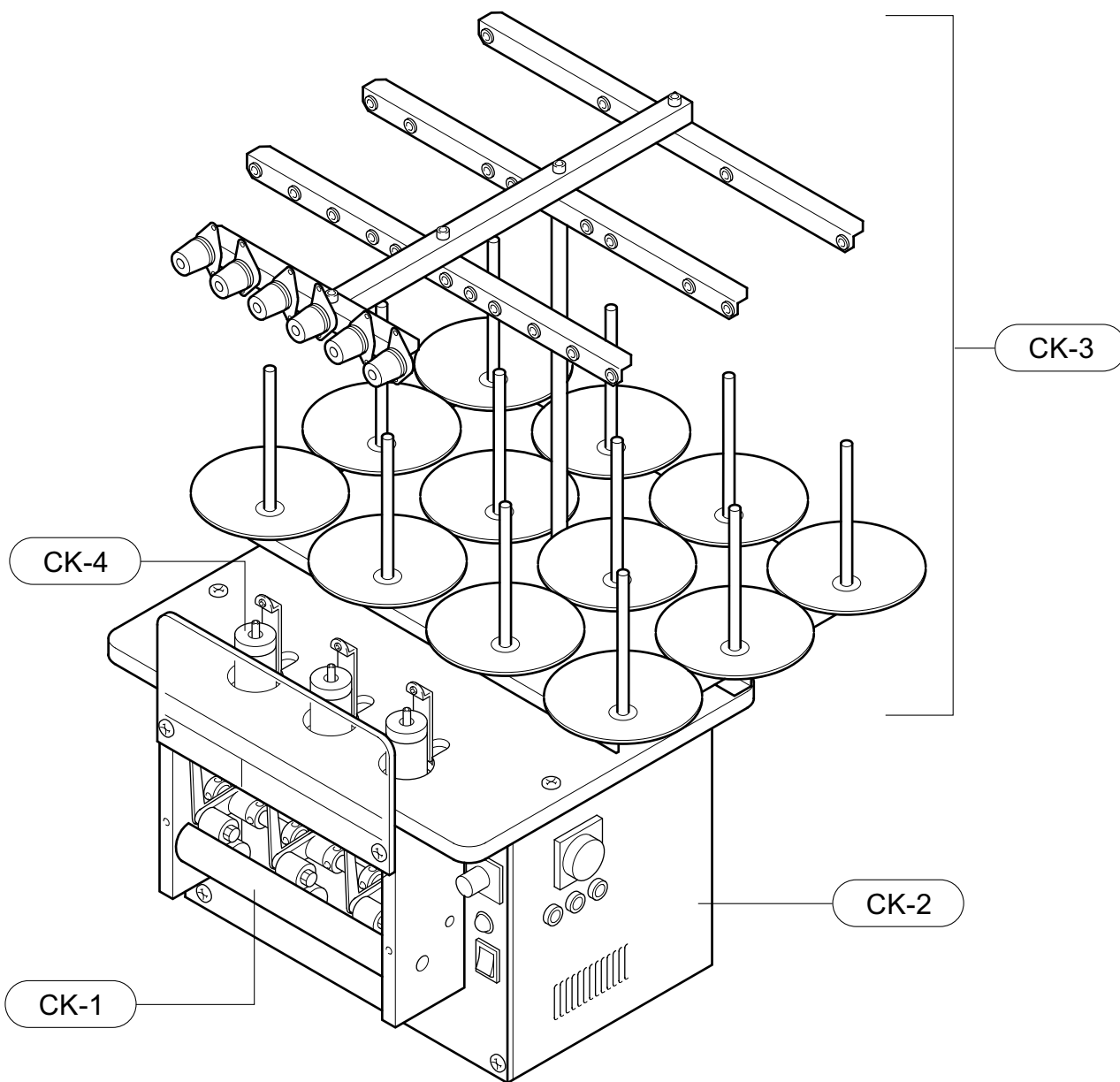
**REMARK:** The use of extrafine 3-Needle head is limited up to 2 heads. When it is used together with the standard 3-, 4-, 5- and 6-Needle heads, trouble may occur in knitting. Use the extrafine needle head alone.

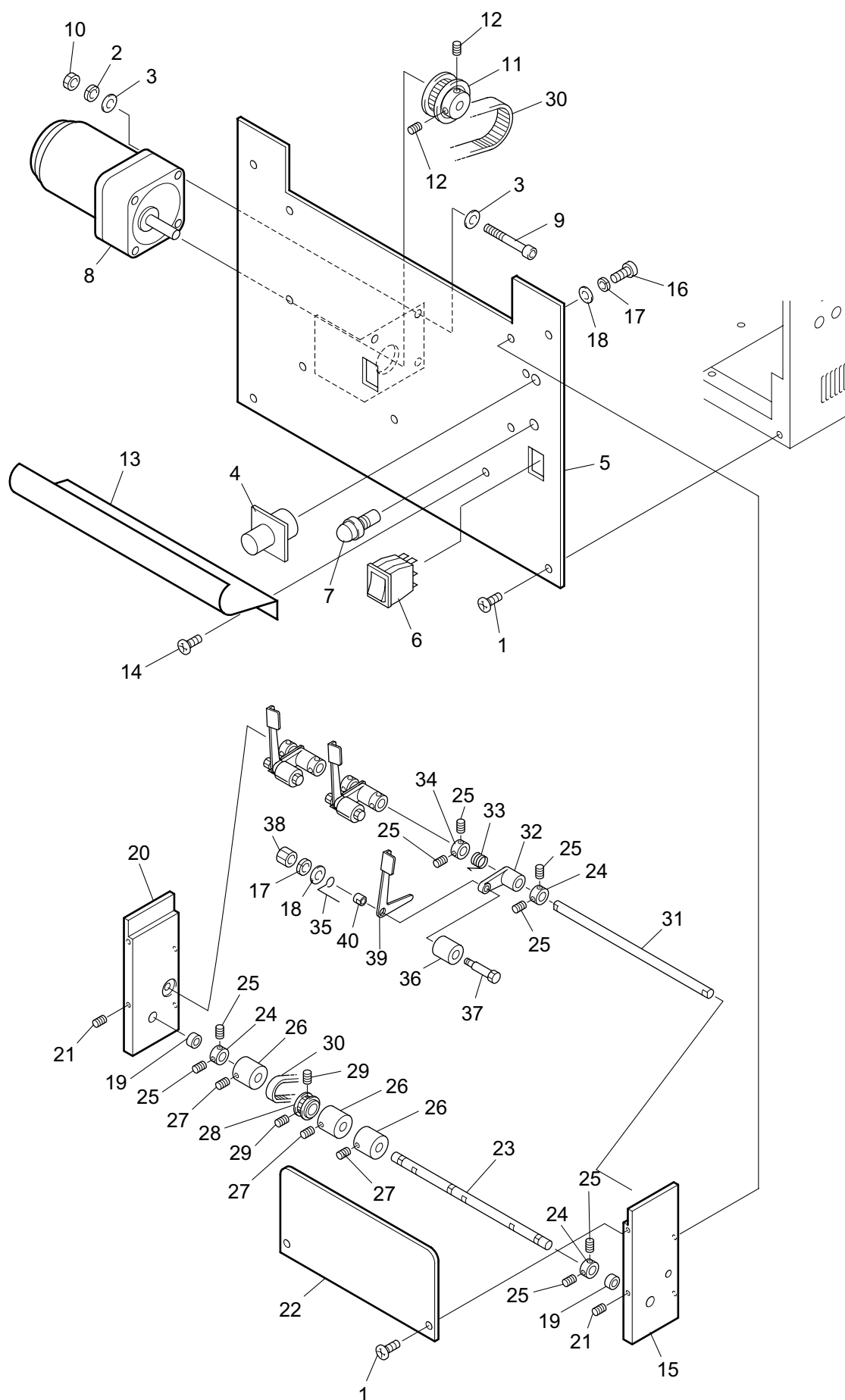
# 11. TCK-3HII Electrical Diagram



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# PARTS LIST



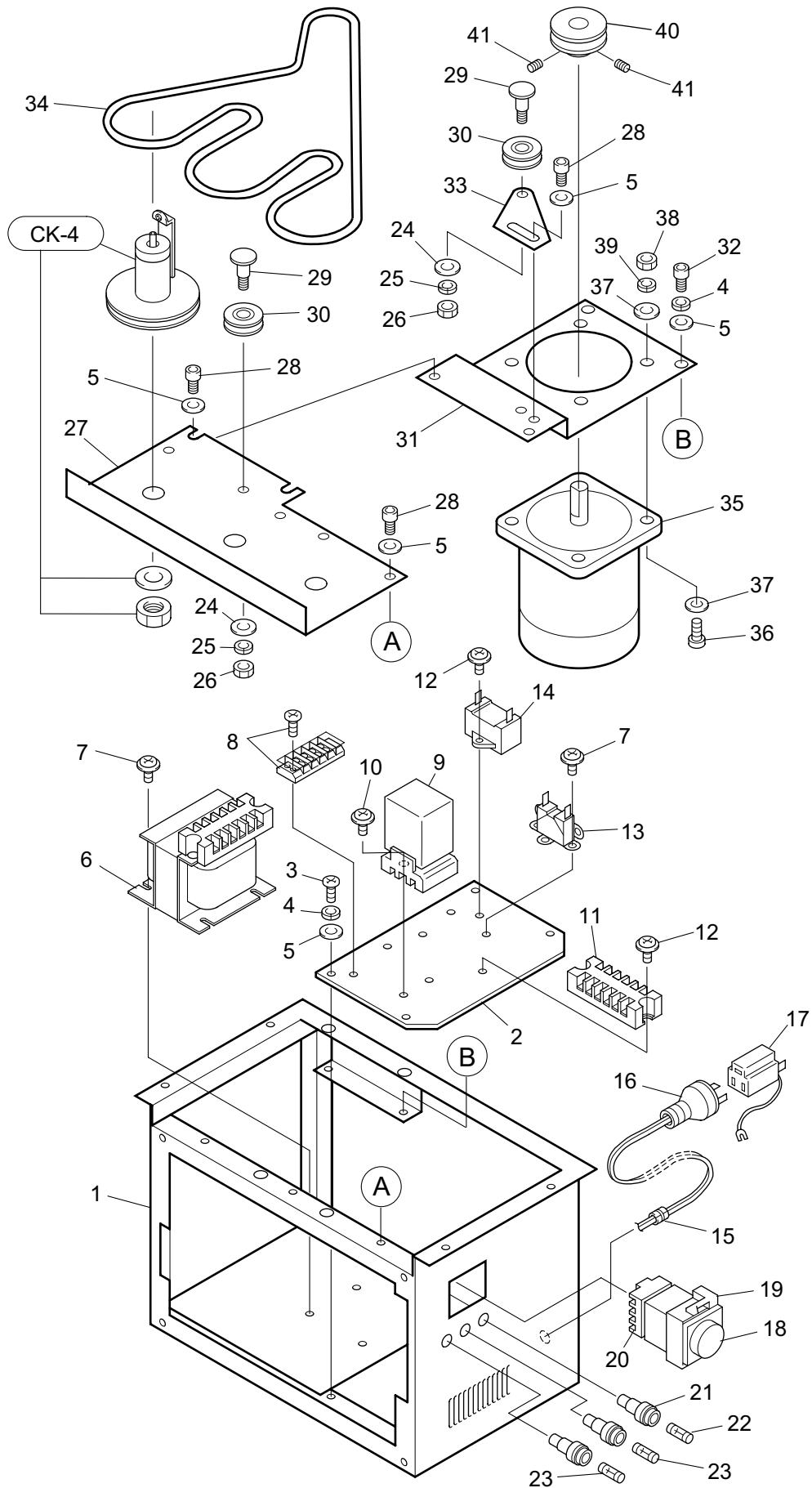




# TCK-3H II DRIVE SYSTEM

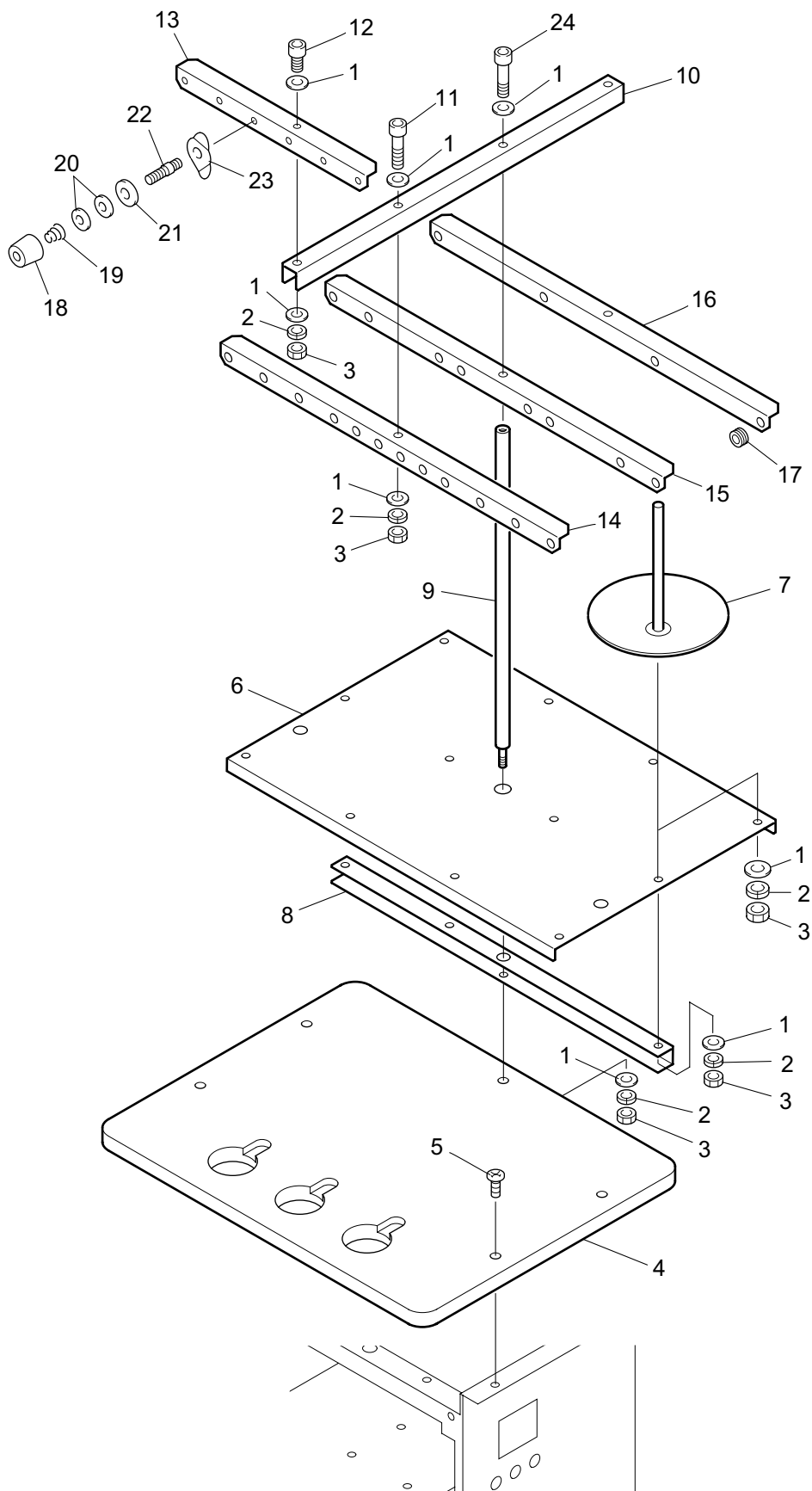
CK-1

Ref.No.	Description	Part No.	Remark
1	Truss Head Screw		M4*8L
2	Spring Washer		M4
3	Plain Washer		M4
4	Control Pack	PB000700BC00	
5	Front Panel	TK01020A0000	
6	Switch	PB000500ST00	
7	Neon Tube	PB000900LP00	
8	Speed Control Motor	PB000600BC00	6W
9	Hexagon Socket Head Cap Screw		M4*45L
10	Nut		M4
11	Roller-side Drive Pulley	TK0109000000	
12	Hollow Set Screw		M4*6L
13	Roller Cover	TK01160A0000	
14	Truss Head Screw		M4*6L
15	Roller Bearing Case R	TK01030A0000	
16	Hexagon Socket Head Cap Screw		M5*12L
17	Spring Washer		M5
18	Plain Washer		M5
19	Needle Bearing	PBHK10120000	
20	Roller Bearing Case L	TK01040A0000	
21	Hollow Set Screw		M5*8L
22	Front Panel Protect Cover	TK0117000000	
23	Drive-side Roller Shaft	TK0105000000	
24	10mm Dia.Collar B	EF0924000000	
25	Hollow Set Screw		M4*5L
26	Drive Roller	TK0107000000	
27	Hollow Set Screw		M5*10L
28	Roller-side Drive Pulley	TK0108000000	
29	Hollow Set Screw		M4*4L
30	Belt	PBB100S3M252	
31	Driven-side Roller Shaft	TK0110000000	
32	Driven Roller Arm	TK01120A0000	
33	Roller Feed Spring	TK0114000000	
34	10mm Dia.Collar	TK0106000000	
35	Cord Feed Pin	TK0115000000	
36	Driven Roller	TK0111000000	
37	Driven Roller Pin	TK0113010000	
38	Nut		M5
39	Roller Lever	TK0127000000	
40	Roller Lever Pin	TK0128000000	
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# TCK-3H II DRIVE SYSTEM AND POWER SUPPLY<sub>CK-2</sub>

Ref.No.	Description	Part No.	Remark
1	Box	TK01000A0000	
2	Electrical Parts Attaching Base	TK01010A0000	
3	Truss Head Screw		M4*8L
4	Spring Washer		M4
5	Plain Washer		M4
6	Transformer	PB004900TV00	
7	Screw with Washer		M3*6L
8	Terminal Base	PB000800TB00	
9	Control Pack	PB000700BC00	
10	Screw with Washer		M3*30L
11	Terminal Base	PB000700TB00	
12	Screw with Washer		M3*10L
13	Condenser		
14	Condenser		
15	Cord Bushing	PB000200BU00	
16	Power Supply Cable Plug	PB000600PA00	
17	Plug Adater	PB000400PA00	
18	Timer Relay	PB000200KH00	For AC
19	Adapter	PB000400KH00	
20	Relay Socket	PB000300KH00	
21	Fuse Holder	PB000200FA00	
22	Glass Tube Fuse	PA5002100000	
23	Glass Tube Fuse	PA5002500000	
24	Plain Washer		M5
25	Spring Washer		M5
26	Nut		M5
27	Head Base	TK01180A0000	
28	Hexagon Socket Head Cap Screw		M4*8L
29	Tension Pulley Pin	TK0119000000	
30	Auxiliary Pulley	TK0120000000	
31	Head-side Motor Base	TK01210A0000	
32	Hexagon Socket Head Cap Screw		M4*8L
33	Tension Pulley Base	TK01230A0000	
34	6mm Wide Belt		1150L
35	Induction Motor	PB000500BC00	60W
36	Hexagon Socket Head Cap Screw		M6*20L
37	Plain Washer		M6
38	Nut		M6
39	Spring Washer		M6
40	Head-side Drive Pulley	TK0122000000	
41	Hollow Set Screw		M5*6L
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# TCK-3H II THREAD STAND

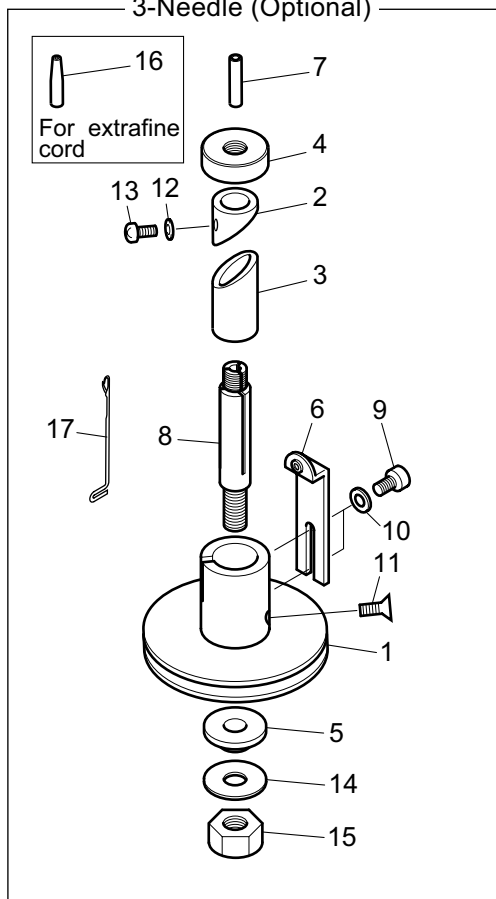
CK-3

Ref.No.	Description	Part No.	Remark
1	Plain Washer		M5
2	Spring Washer		M5
3	Nut		M5
4	Table	TK012402000	
5	Truss Head Screw		M5*18L
6	Thread Stand Plate	TK0125100000	
7	Thread Stand Plate Set	TK0125S00000	
8	Thread Stand Plate Base	TK0125200000	
9	Thread Stand Shaft	TK0126100000	
10	Thread Course A	TK0126200000	
11	Hexagon Socket Head Cap Screw		M5*30L
12	Hexagon Socket Head Cap Screw		M5*8L
13	Tension Base	TK0126600000	
14	Thread Course B	TK0126300000	
15	Thread Course C	TK0126400000	
16	Thread Course D	TK0126500000	
17	Plastic Thread Guide	EF0942A00000	
18	Adjusting Screw	EF0909000000	
19	Thread Course Tension Spring	EF0915000000	
20	Thread Course Tension Disk	EF0913000000	
21	Felt Packing	EF0904000000	
22	Thread Course Tension Stud	EF0914000000	
23	Thread Course Thread Guide	EF0912000000	
24	Hexagon Socket Head Cap Screw		M5*35L
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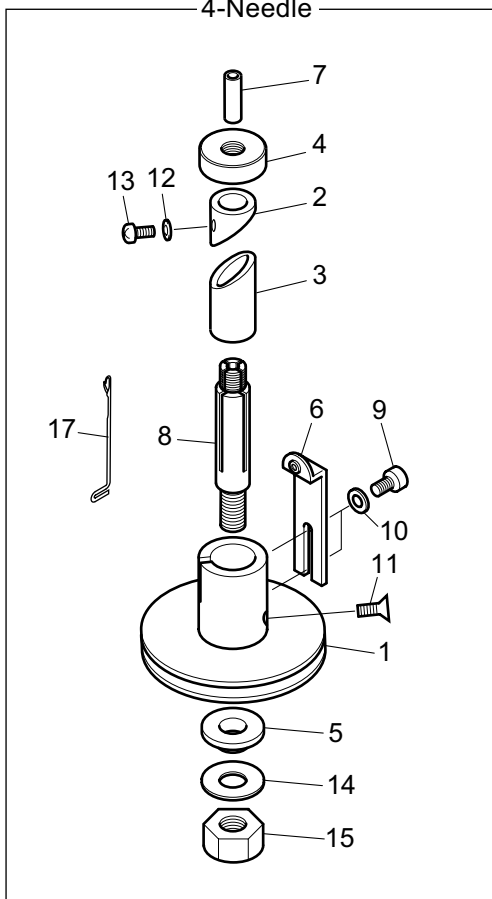
Note: As for parts with marks # on it, please follow the instructions on the label. Contents in your parts order.

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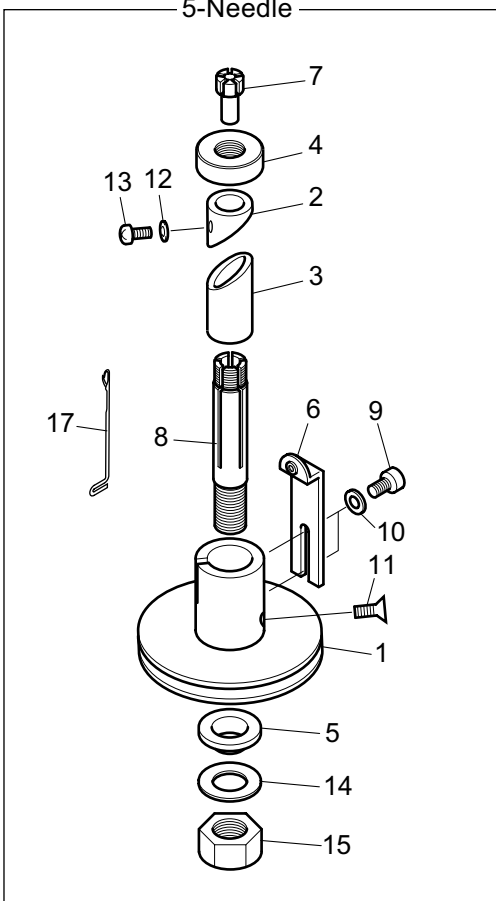
3-Needle (Optional)



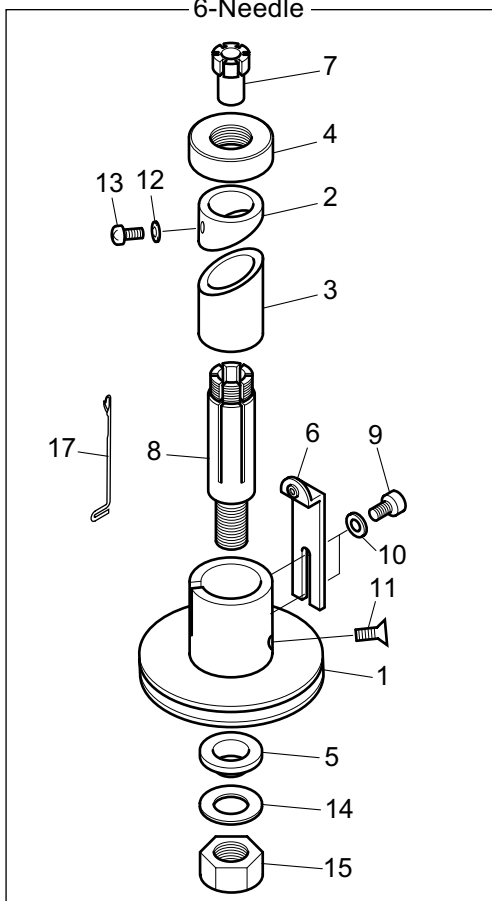
4-Needle



5-Needle



6-Needle



# TCK-3H II HEAD ASSY

CK-4

Ref.No.	Description	Part No.	Remark
1	Circle Head	TK0200000300	3-Needle(Optional)
1	Circle Head	TK0200000400	4,5-Needle
1	Circle Head	TK0200000600	6-Needle
2	Head Upper Cam	TK0201000300	3-Needle(Optional)
2	Head Upper Cam	TK0201000400	4,5-Needle
2	Head Upper Cam	TK0201000600	6-Needle
3	Head Lower Cam	TK0202000300	3-Needle(Optional)
3	Head Lower Cam	TK0202000400	4,5-Needle
3	Head Lower Cam	TK0202000600	6-Needle
4	Knurled Screw	TK0203000300	3-Needle(Optional)
4	Knurled Screw	TK0203000400	4-Needle
4	Knurled Screw	TK0203000500	5-Needle
4	Knurled Screw	TK0203000600	6-Needle
5	Bushing	TK0204000300	3-Needle(Optional)
5	Bushing	TK0204000400	4-Needle
5	Bushing	TK0204000500	5,6-Needle
6	Needle Foot Thread Course	TK0205000000	
7	Center Pole A	TK0206000300	3-Needle(Optional)
7	Center Pole A	TK0206000400	4-Needle
7	Center Pole A	TK0206000500	5-Needle
7	Center Pole A	TK0206000600	6-Needle
8	Center Pole B	TK0207000300	3-Needle(Optional)
8	Center Pole B	TK0207000400	4-Needle
8	Center Pole B	TK0207000500	5-Needle
8	Center Pole B	TK0207000600	6-Needle
9	Hexagon Socket Head Cap Screw	FX0611000000	
10	Plain Washer		M4
11	Countersunk Head Screw		M5*8L
12	Plain Washer		M5
13	Pan Head Screw		M5*8L
14	Plain Washer(for 3 Needles)		M8
14	Plain Washer(for 4 Needles)		M10
14	Plain Washer(for 5 or 6 Needles)		M12
15	Nut(for 3 Needles)		M8
15	Nut(for 4 Needles)		M10
15	Nut(for 5 or 6 Needles)		M12
16	2mm Dia.Nipple	CE0222000300	For 3-Needle Extrafine Cord (OP)
17	Cord Knitting Needle	TCK000000097	
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