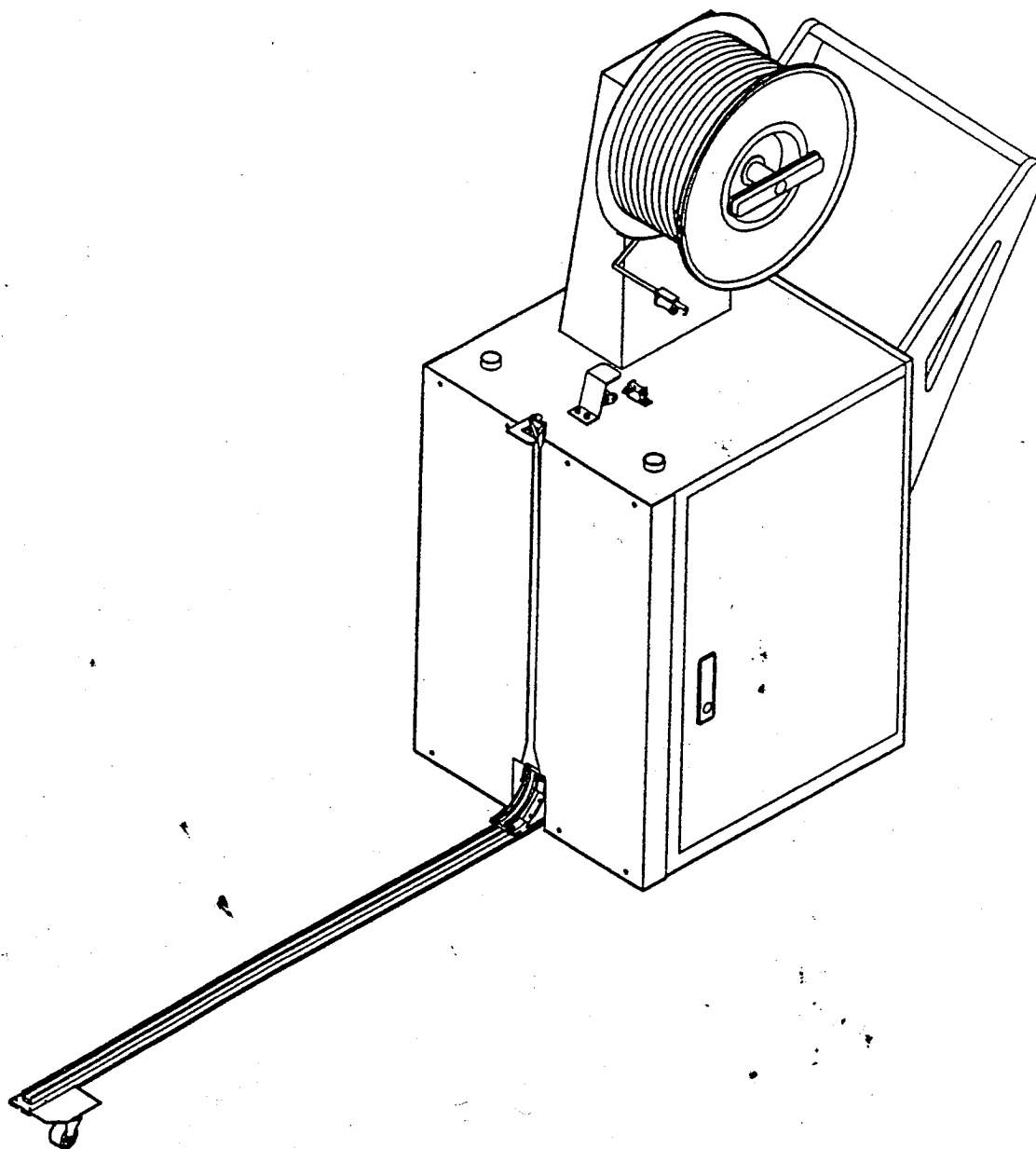


FULLY AUTOMATIC STRAPPING MACHINE

■ Operation / Technical Manual

■ Parts List



Carefully read Safety Information and instructions in
this Manual before operating machine.

2002/08

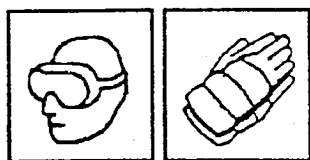


SAFETY INSTRUCTIONS

This manual gives you information on safety instructions, specifications, operation and maintenance of your strapping machine.

Before operating or servicing the machine, please read the following safety instructions carefully.

BEFORE MACHINE OPERATION



- * Read the operating instructions.
- * Wear eye (or face) and hand protection.
- * Check the voltage and use the specified electric power to insure proper operation of the machine.
- * Check that all guards are in place and all safety devices are working properly.
- * Do not operate machine with any safety devices removed.
- * Make sure machine is clear of all tools, debris, and other objects not related to machine function.

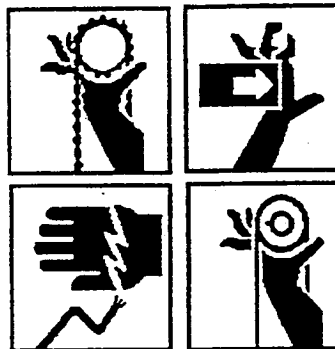
DURING MACHINE OPERATION

- * Follow the instructions provided in this manual.
- * Never put any part of your body near, under or into a moving machine.
- * Keep hands out of the strap chute area.
- * Only trained persons should operate the machine, even though operation is simple and easy.
- * Do not strap any part of your body.

AFTER MACHINE OPERATION

- * Remove all tools, debris and other objects from machine area.
- * Shut off all electric and air power and make sure that the electric power is off.

MACHINE MAINTENANCE



- * Shut off and lock out all electric and air power.
- * Do not stand or walk on the conveyor to service the machine.
- * Follow the maintenance instructions in this manual.
- * Use the correct tools and parts to repair the machine.

ADDITIONAL CONSIDERATIONS

- * To insure proper operation of machine, use the specified electric or air power sources.
- * Do not attempt to change machine design unless written approval is received from our company.
- * Additional safety instructions are located throughout this manual. They serve to warn the operator and serviceman about potentially hazardous situations.

SIGNS

- * Read all of the signs on the machine.
- * Do not remove any signs from machine.
- * Replace all missing or damaged signs.

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MACHINE ASSEMBLY

NOTE:

The dispenser and handle was disassembled from the body to prevent machine from damage during the transportation. Customers should assemble them back before operation.

HANDLE ASSEMBLY

1. Please release all the screws and washers (4 sets) from the frame body. (Ref. Fig.A-1).
2. Connect the handle with machine by screws and washers and please check again if the handle is firmly installed on the machine.

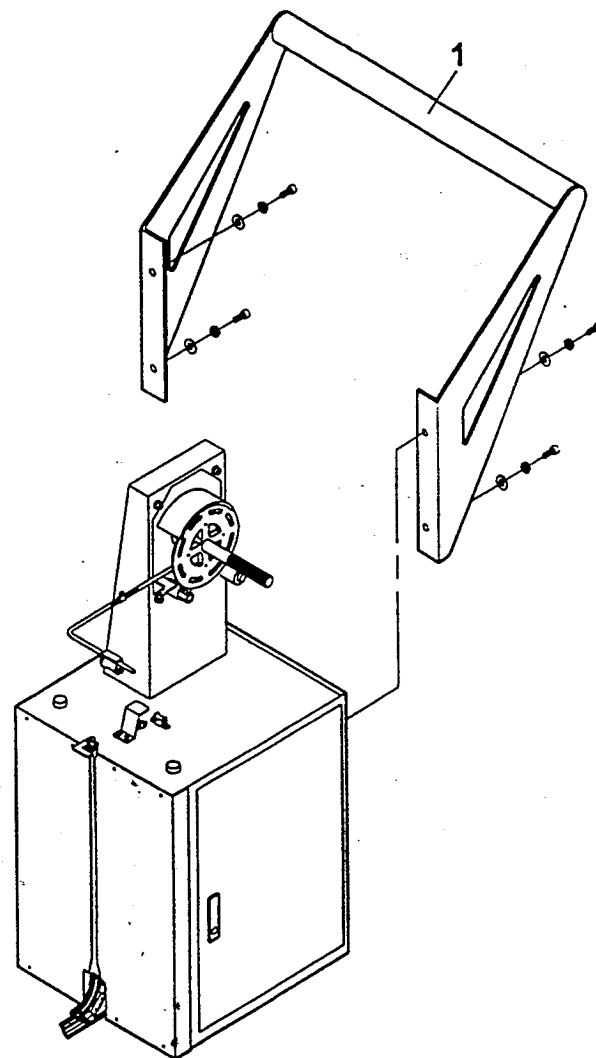


FIG.A HANDLE ASSEMBLY

DISPENSER ASSEMBLY

1. Please release all the screws and washers (4 sets) from the base-disc of dispenser.
2. Assembly the left Dispenser disc (Ref. Fig.B-1) with Coil base (Ref. Fig.B-2) and firmly connect them by screws and washers when a strap coil was installed.

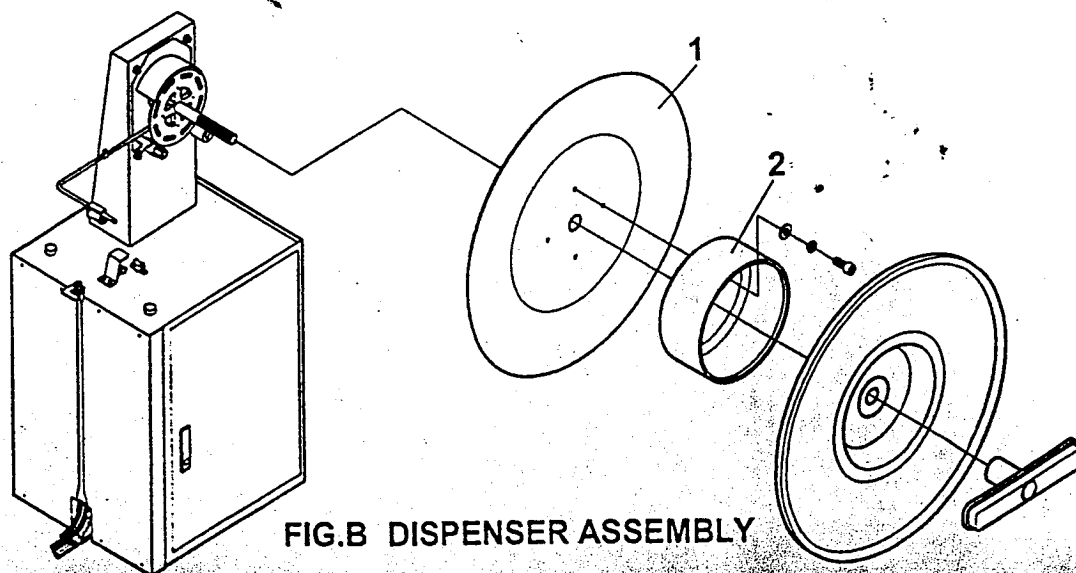


FIG.B DISPENSER ASSEMBLY

PREFACE

Thank you for purchasing your new strapping machine. This machine has been designed by our engineering staff to provide you with the newest in modern strapping system technology.

The system with its strong yet lightweight construction has been designed to minimize maintenance and give you trouble-free operation for many years when operated properly in accordance with the instructions in this manual.

We ask you to read the instructions in the manual carefully and to regularly keep your machine clean and follow the maintenance instructions here in to guarantee and prolong the life of the machine.

Please check to see that all of the following accessories are supplied with your machine.

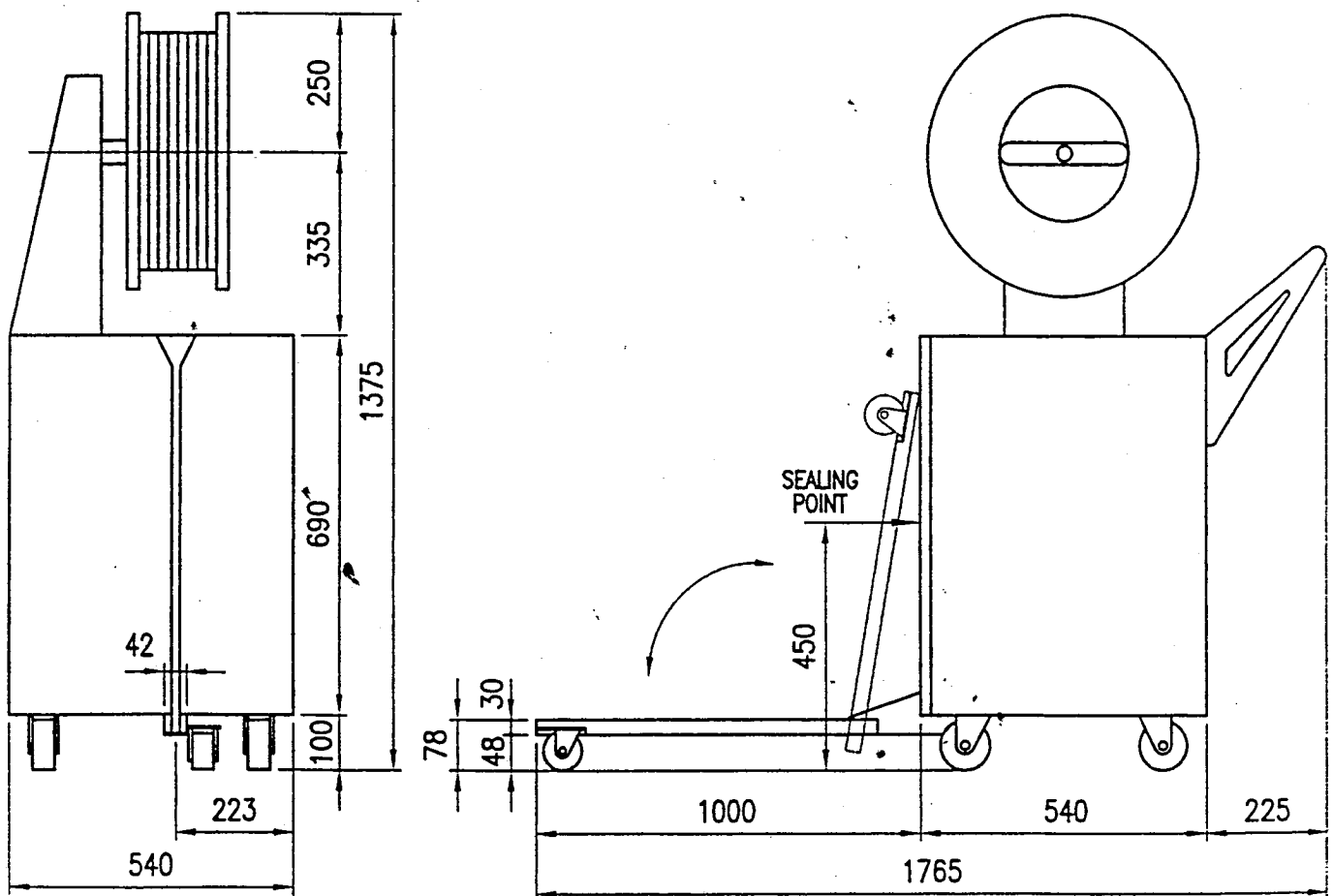


FIG.1 SPECIFICATIONS

SPECIFICATIONS

NO	DESCRIPTION		STANDARD TYPE
1-1	DIMENSIONS	LENGTH	830
		WIDTH	550
		HEIGHT	1390
1-2	SEALING METHOD		HEAT SEAL
1-3	STRAP WIDTH		9, 12, 15, 19mm
1-4	SPEED		5 SEC./ STRAP
1-5	TENSION		70KGS
1-6	POWER SUPPLY		1Ø 110V/ 220V/ 50/ 60 HZ 3Ø 380V/ 220V/ 50/ 60 HZ
1-7	PACKING SIZE		MIN. 550Hmm 21" MAX. 1000Lmm 39"

Supplies and Consumption

(a) Electricity

Voltage: 110V / 220V / 380V

Frequency: 50 / 60 Hz

Main breaker: 25A / 16A / 10A

Wire size: 2.0mm

Power consumption: 0.5 kW

(b) Spring Parts

0721-00 FEED SPRING

0916-00 ARCH FLAP SPRING

0616-02 TENSION ARM SPRING

1125-02 BRAKE ARM SPRING

(c) Belt Parts

0121-23A V-BELT 260J6

0120-07 V-BELT M-24 (J)

OPERATION BOARD

- (1). **POWER SWITCH:** This is the main power switch on the machine. Electrical power supply to the machine from the power source is controlled through this switch.
- (2). **FEED TIMER:** This switch is used to adjust the length of the P.P strap.
- (3). **RESET BUTTON:** Push this at first time to reverse strap back out from the roller, push this button at second time to let the cam return "Zero" point.

CAUTION: EVERY TIME WHEN PUSHING "RESET" BUTTON, PLEASE ROTATE THE STRAP REEL AND WITHDRAW STRAP AND THEN RE-THREAD STRAP WHEN PREPARING ANOTHER STRAPPING ACTION.

- (4). **FORWARD:** The feed-button is for manually feeding strap to get a proper length for strapping.

※ If you shut down the system then turn it on again. It is necessary to push "RESET" button and make the machine stand-by. Otherwise a threading problem will be occurred and the machine will be unable to thread strap.

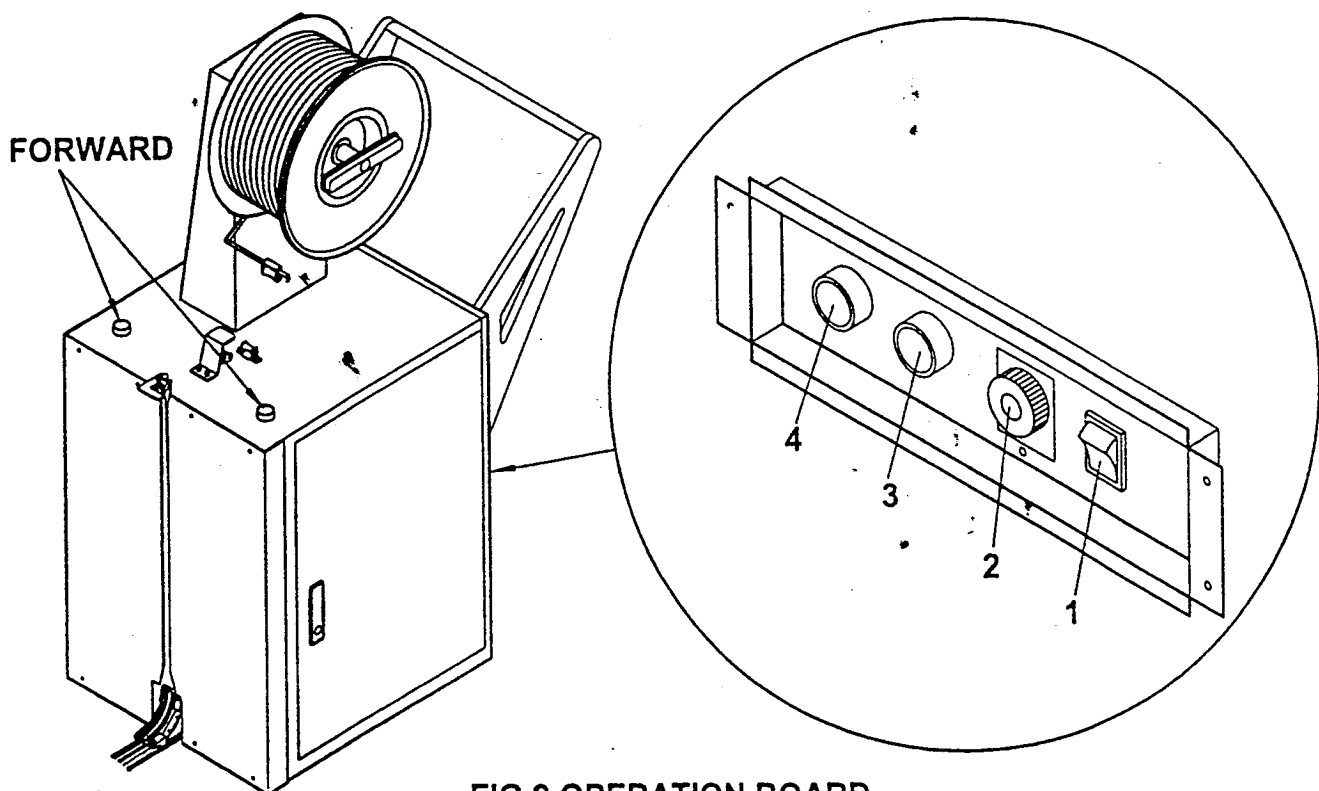


FIG.2 OPERATION BOARD

OPERATION PROCEDURE

- (1). Push the machine close to the palletized packages and thread the ARCH GUIDE through the pallet till the guide end appear out from the pallet. Keep the package very CLOSE and FIRM on the strapping table of machine.

CAUTION: IF THE CLEARANCE IS TOO WIDE BETWEEN PACKAGES AND THE STRAPPING TABLE WILL CAUSE FAILURE OF STRAPPING.

- (2). Manually INSERT the strap end into the strap guide insertion to activate the strapping cycle.

- (3). When the strapping cycle is activated, the system will be completed and automatically ready for another strapping application.

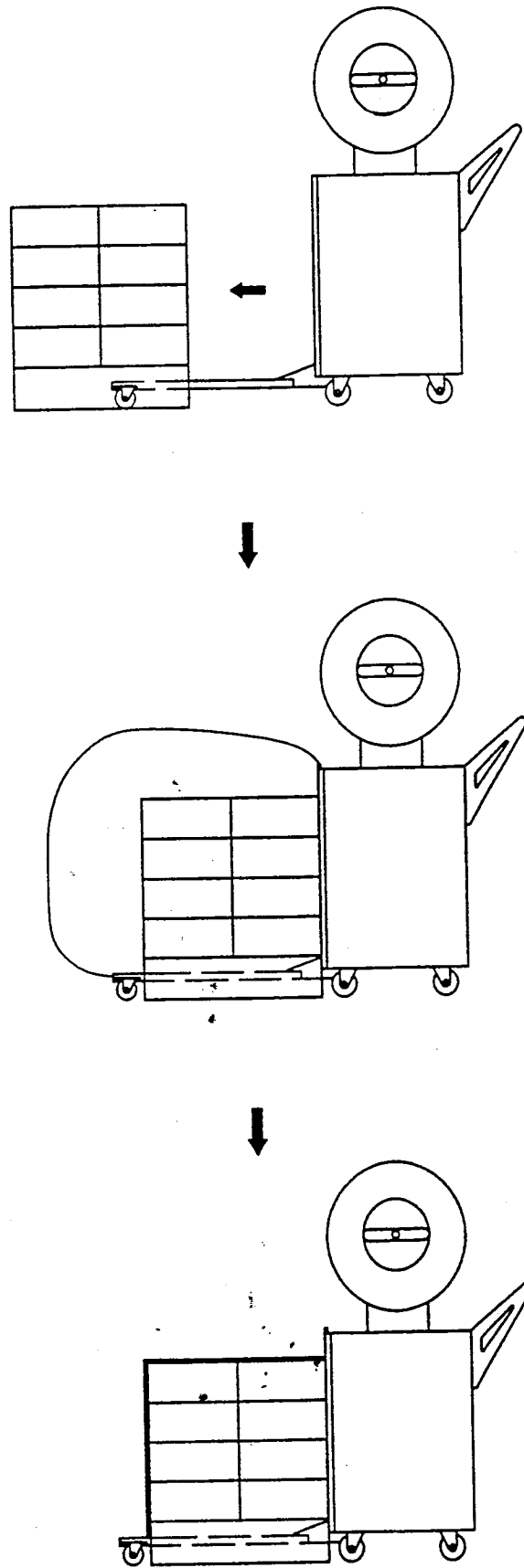


FIG.3 OPERATION PROCEDURE

MAJOR COMPONENT & STRUCTURE

FEED UNIT

Forward and reverse feeding of strap into the arch-way

REEL UNIT

Mounting of polypropylene strap spool and automatic control of the revolving inertia of the reel.

FORWARD BUTTON

TENSION NUT

Manual tension adjustment selection.

ELECTRICAL UNIT

Contains system electronic parts: PLC, Magnetic Switches, Relays, Timers, Terminals and Fuses.

ELECTRICAL POWER CORD W/PUG

SEAL & CONTROL UNIT

Cutting and heat sealing of strap.

ARCH UNIT

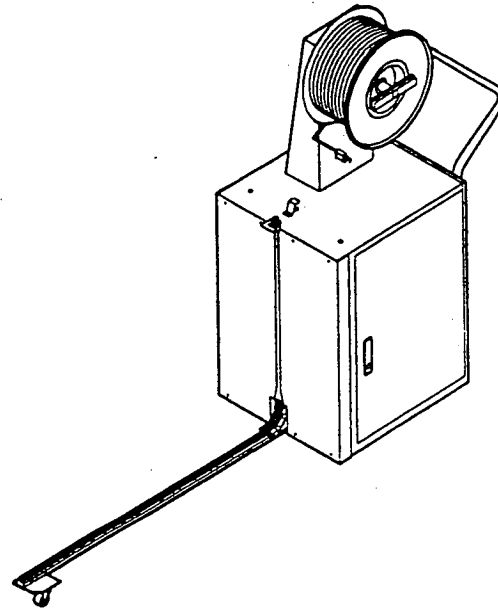
Pre-positions a supply of strap and releases the arch flap during tensioning

FIG. 4 MAJOR COMPONENT & STRUCTURE

INSTALLATION & SETTING PROCESS OF P.P STRAP

WARNING !

Please turn off the power switch before setting the P.P. strap. Then open the right-hand door and install P.P. strap according to the following procedure.



SETTING STRAP 1

Remove the packing paper on the P.P. strap coil. Refer to the drawing below to install the strap coil onto the inner dispenser disc (FIG.5.A) and tighten the dispenser outer disc (FIG.5.B) locking knob(FIG.5.C) against the coil. Cut the packing strings(FIG.5.D) if any on the P.P. strap coil.

SETTING STRAP 2

Pull a sufficient amount (about 100cm) of P.P. strap from the coil and thread it through Brake Roller(FIG.5.1). and Roller(FIG.5.2) to the Pool Box Entrance Roller(FIG.5.3).

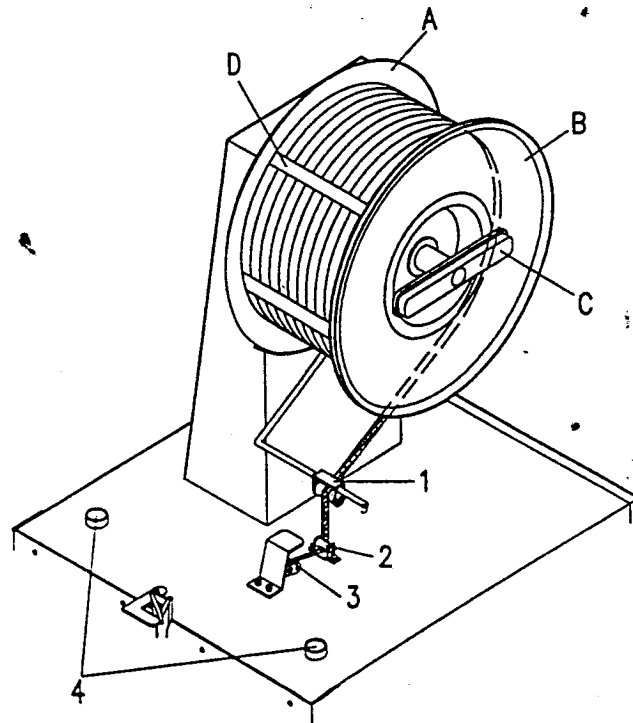
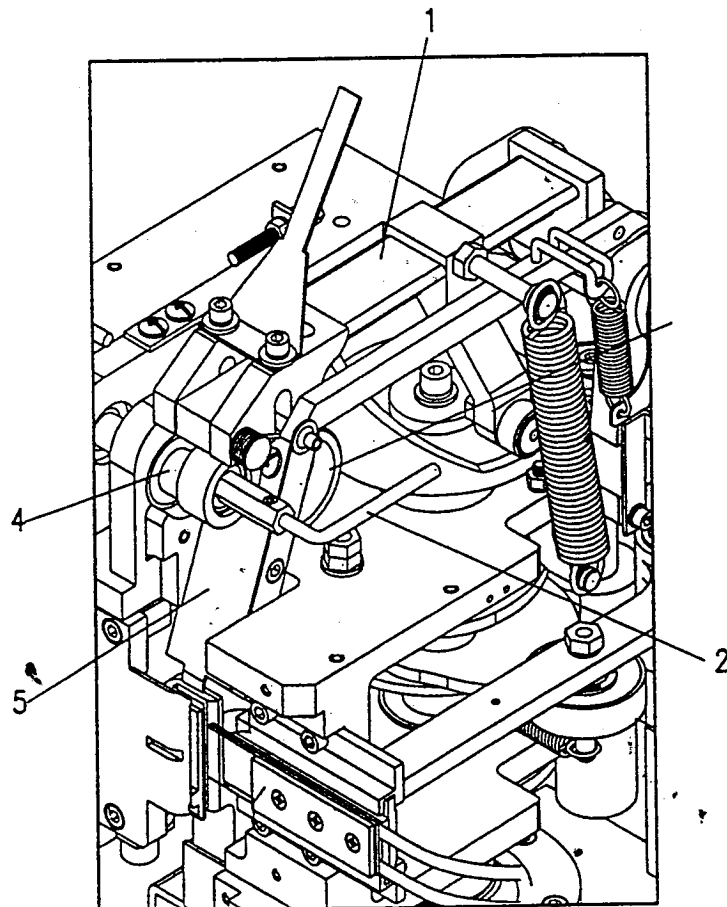


FIG. 5 SETTING STRAP PROCESS

SETTING STRAP 3

Release the rollers by pushing the Upper Roller Grip (FIG.6.2) Thread the strap tip through the Tension Arm (FIG.6.1) between Feed Rollers (FIG.6.3) and (FIG.6.4) until the strap stays in the Feed Shooter (FIG.6.5). The setting (threading) process is now finished and please close the cabinet door of the machine.

Release the Strap Guide from the angle plate and turn on the power switch. Press the "Forward" feeding switch (Ref. FIG.5.4) on top of each side of machine to feed proper length of strap out from the strap guide. The machine is now ready for strapping.



*Make 5
Strap
in Fe
shooter
against
Big Roll
seal
If it
cues
plate
won't
of be
real*

FIG. 6 SETTING STRAP PROCESS

TENSION ADJUSTMENT

When doing tension adjustments, open the right-hand door of machine and then gently pull up the Tension Selecting Dial (FIG.7.1). Turn the dial left or right for desired tension strength to your strapping packages.

When the strapping strength is set, push the dial back to secure your setting.
(NOTE: Try degree "5" at first strapping then making necessary adjustment with reference to your packaging material).

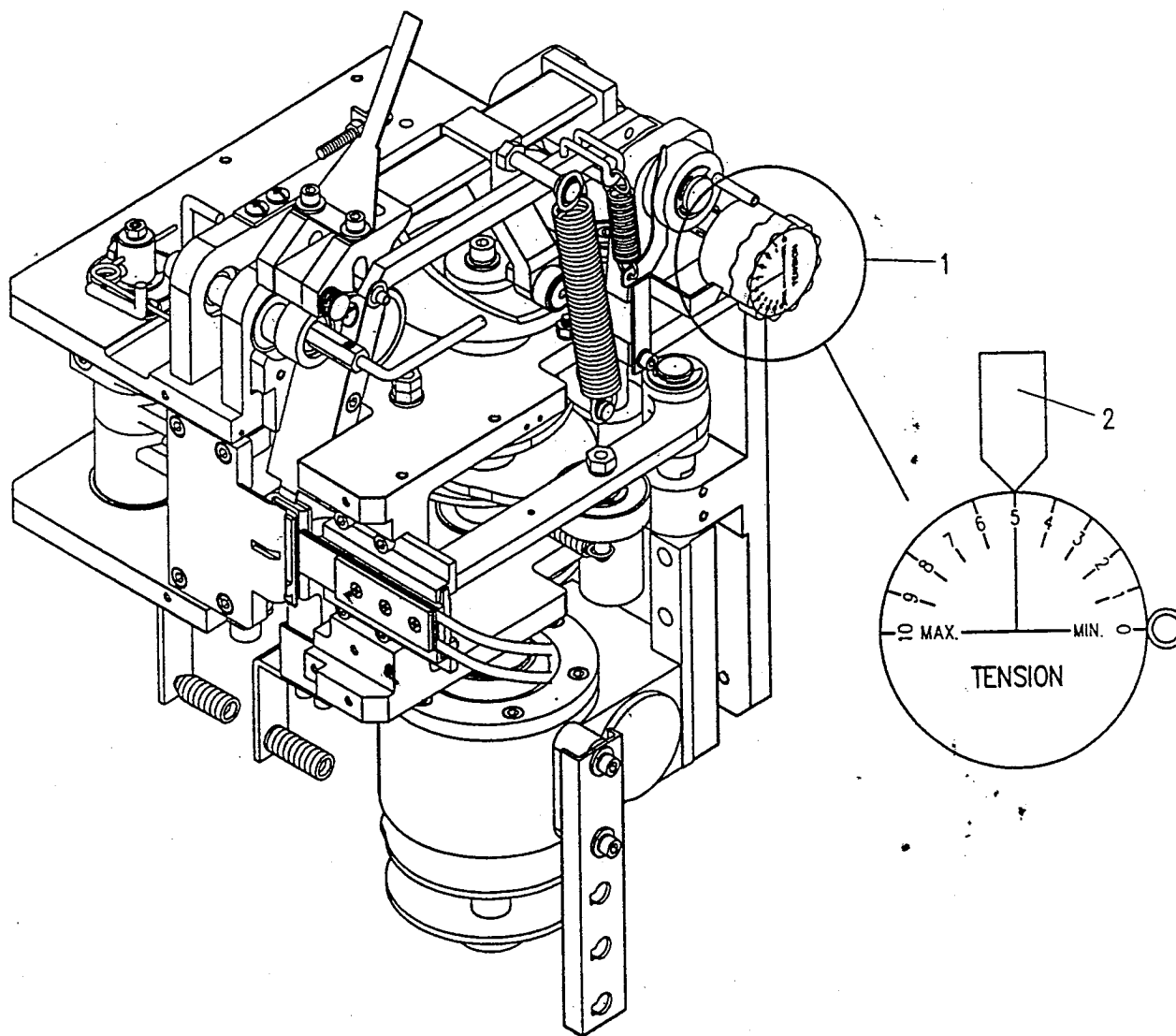


FIG. 7 TENSION ADJUSTMENT

ELECTRICAL CONTROL UNIT

MG1 : Controls Timing Motor

MG2 : Controls Forward & Reverse Feed Motor

OVERLOAD SW-1 : Thermal Relay.

Setting 5.5 ~ 8A if the voltage is 220V/1PH

Setting 2.5 ~ 4A if the voltage is 220V/3PH.

Setting 9 ~ 13A if the voltage is 110V/1PH

Setting 1.6 ~ 2.5A if the voltage is 380V/415V/3PH

OVERLOAD SW-2 : Thermal Relay.

Setting 2.5 ~ 4A if the voltage is 220V/1PH and

Setting 1.6 ~ 2.5A if the voltage is 220V/3PH.

Setting 5.5 ~ 8A if the voltage is 110V/1PH and

Setting 1.6 ~ 2.5A if the voltage is 380V/415V/3PH.

NOTICE: When you find either the Timing Motor MG1 or Feeding Motor MG2 switches have tripped due to overload current. Do as following to reset the system.

1. Turn off the system "POWER"
2. Wait "15" seconds and then push the "RESET" button.
3. Turn the "POWER" back on.

A) When the PLC is turned on the POWER and RUN lamps will keep lighting up.

B) When the PROG/ C.P.U.E lamp twinkling, it shows there program is irregular.

C) When the PROG/ C.P.U.E lamp keep lighting, it shows the CPU is out of order.

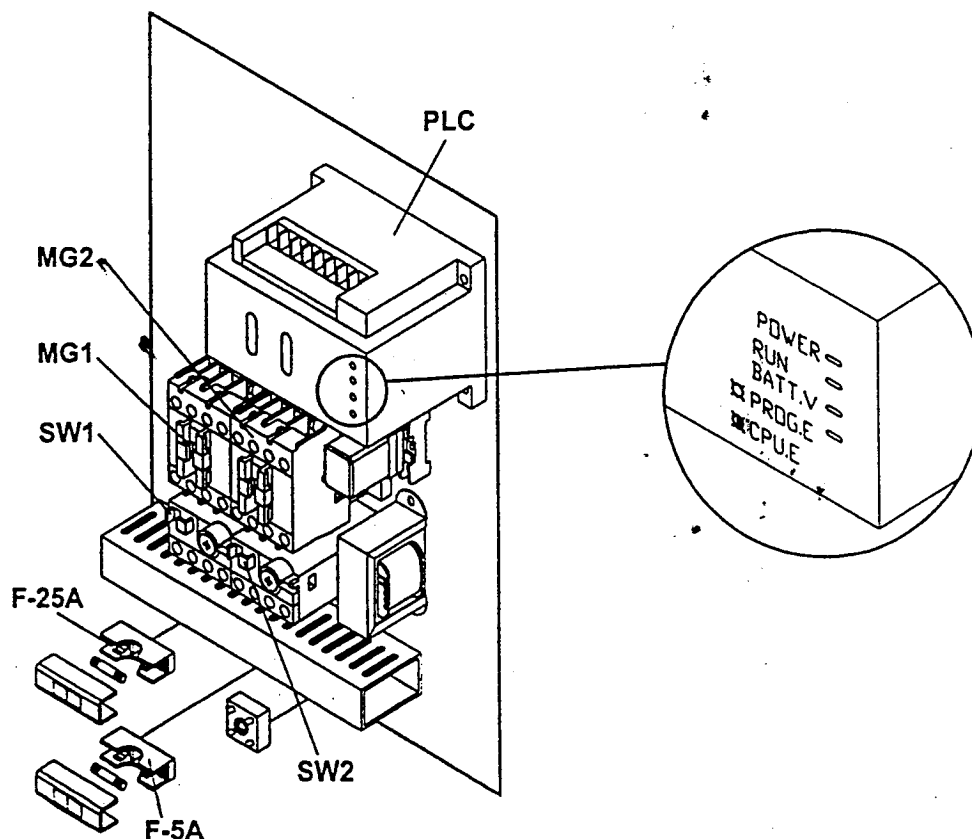


FIG.8 ELECTRICAL CONTROL UNIT

TEMPERATURE ADJUSTMENT

Please allow approximately 2 minutes for the heater blade to reach the working temperature after initial Power-ON of machine.

The primary set-up of heater temperature in the factory is 3-4 degree and that is suitable for the working place on most environments.

In certain areas where the ambient working environment temperature is extreme, adjustment of the Temperature Adjusting Dial may become necessary.

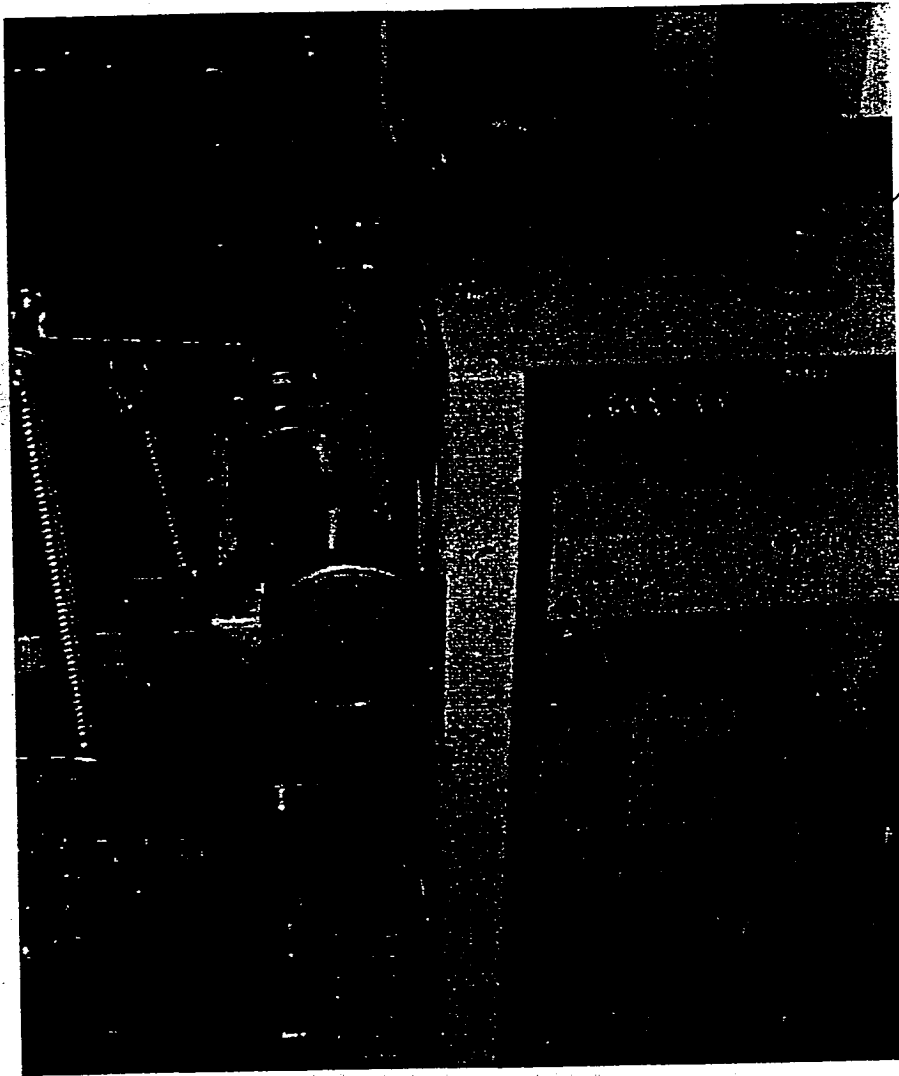


FIG. 9 TEMPERATURE ADJUSTMENT

FORWARD & REVERSE FEED ROLLER GAP ADJUSTMENT

The roller gap setting on the forward and reverse feeding strength in the factory is for strap Thickness between 0.55mm $\pm$ 0.10mm (normal size). If your strap in use is out of this range, please take the following steps to adjust the roller gap.

1. Insert strap between Feed Roller (FIG.10-1.0704-00) and Upper Feed Roller (FIG.10-2.0703-00) on the Feed Shooter (FIG.10-1.0710-00).
2. If the clearance is too much or too little, loosen 2 bolts (FIG.10-2.1) holding The RH Block Arm (FIG.10-2.2). The Press Arm Shaft (FIG.10-2.3) then moves easily.
3. Adjust the clearance between 0.5 to 1mm depends on the thickness of your strap at Upper Roller Spring (FIG.10-2.4) and Upper Roller Weight Adj. (FIG.10-2.5) in the circle shows.

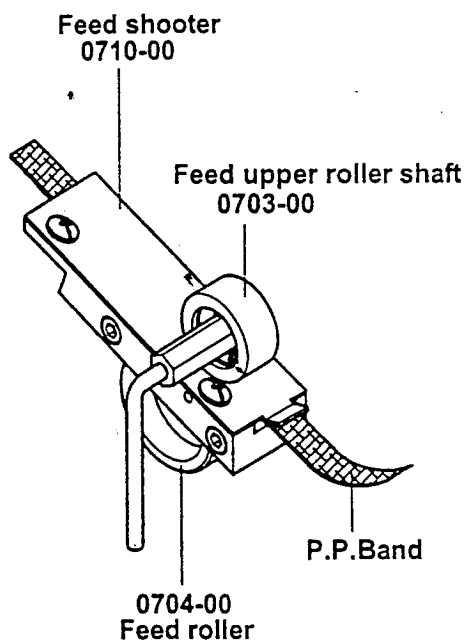


FIG.10-1 SHOOTER

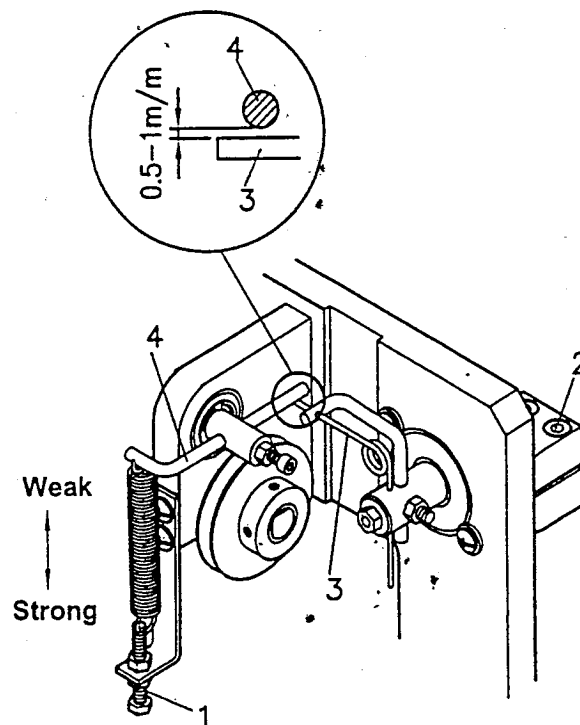


FIG.10-2 PRESS ARM SHAFT

PROXIMITY SWITCH ADJUSTMENT

There are three proximity switches on the left side of the reduction gear. They are used to determine the accurate position of the Cam to the Cam Follower during machine operation. At installations where there is insufficient or poor power supply to the system there arises the need to re-adjust the pre-set positions of the LS Cam to the Proximity Switch.

The red lamp on the proximity switch is "ON" when the switch is activated.

LS-1 RETURN ZERO PROXIMITY SWITCH

1. When LS-1 is activated the Cam Follower should be in the position of the Tension Cam as shown in Fig. A-A. The system is in Return Zero condition.

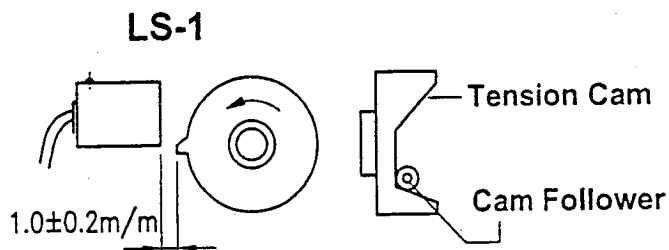


FIG. A

FIG. A-A

LS-2 FORWARD & REVERSE FEED PROXIMITY SWITCH

1. When LS-2 is activated the Cam Follower should be in the position of the Tension Cam as Shown in Fig. C-C. In this position proper forward feed occurs.
2. If the position of the LS-2 and the LS-2 Cam are not the same as in Fig. B then forward feed problems will occur. Adjustment of LS-2 Cam position is then necessary.
3. When LS-2 is activated the Cam Follower should be in the position of the Tension Cam as shown in Fig. C-C. In this position proper reverse feed occurs.
4. If the position of the LS-2 and the LS-2 Cam are not the same as in Fig. C then reverse feed problems will occur. Adjustment of LS-2 Cam position is then necessary.

LS-2

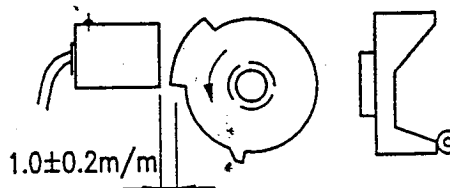


FIG. B

FIG. B-B

LS-2

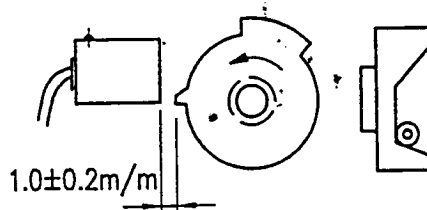


FIG. C

FIG. C-C

EASY TROUBLE-SHOOTING GUIDE

**CONDITION (A) : AFTER THE SETTING STRAP PROCESS
THE P.P. STRAP RETURNS TO THE TENSION
ARM WITHOUT FEEDING STRAP.**

Reason

1) The setting strap process was done incorrectly not allowing the end gripper to grip the end of the P.P. strap properly.

2) The P.P. strap is of poor quality or has a curve of over 5mm per meter.

3) Proximity Switch and Cam adjustment are incorrect.

4) The inner part of the Feed Shooter is worn causing erratic and or delayed strap feed.

Solution

1) Refer to the Installation of P.P. strap and setting strap process.

2) Replace with good P.P. strap.

5) Refer to page 12 Proximity Switch Adjustment.

6) Replace the Feed shooter.
(Part No. 0710-00)

**CONDITION (B) : REVERSE FEED OCCURS OR THE P.P. STRAP IS CUT
WITHOUT TIGHTENING.**

Reason

1) Reverse Feed Tension Adjustment is incorrect.

2) Proximity Switch and Cam Adjustment are incorrect.

3) The inner part of the Feed Shooter is worn causing erratic and or delayed strap feed.

Solution

1) Refer to page 10

2) Refer to page 12.
Proximity Switch Adjustment.

3) Replace the Feed Shooter.
(Part No. 0710-00)

CONDITION (C) : P.P. STRAP CANNOT BE BANDED TIGHTLY.

Reason

1) The Tension Jaw is worn.

Solution

1) Replace the Tension Jaw.
(Part No. 0606-01)

CONDITION (D) : MOTOR, M1 AND M2 ARE NOT FUNCTIONING.

Reason

1) The motor is faulty

2) When the amperage to the motor exceeds pre-set limitations the protective breaker will be activated.

Solution

1) Replace motor.

2) Refer to the Electric Control Box capital (page 8).

(a) Press the reset button to recover power supply.

(b) Check voltage source. If the voltage is too low, it will cause high electric current. Please re-adjust the electric current of Overload SW-1 or SW-2.

PROPER P. P. STRAP ALIGNMENT

NOTE: PLEASE DO AS FOLLOWING STEPS TO ADJUST THE ALIGNMENT OF THE P. P. STRAP WHEN IT IS NOT CONNECTED UNIFORMLY (REFER TO THE DRAWING BELOW).

CONDITION A :



STEP 1 : Loosen the Hex. Nut of RH. Band Way and then move the RH. Band Way forward till the strap is uniformly sealed.

STEP 2 : Tighten the Hex. Nut to secure the adjustment.

CONDITION B :



STEP 1 : Loosen the Hex. Nut of RH. Band Way and then move the RH. Band Way backward till the strap is uniformly sealed.

STEP 2 : Tighten the Hex. Nut to secure the adjustment.

Also, adjust the bandwidth block and to match the P.P width plus 0.5mm of clearance after the previous 2 steps is made. To adjust the bandwidth block, please do as following steps:

- (1). Loosen the socket screw on the strap head block.
- (2). Adjust the bandwidth block to match the strap width plus 0.5mm.
- (3). Tighten the socket screw to secure the adjustment.

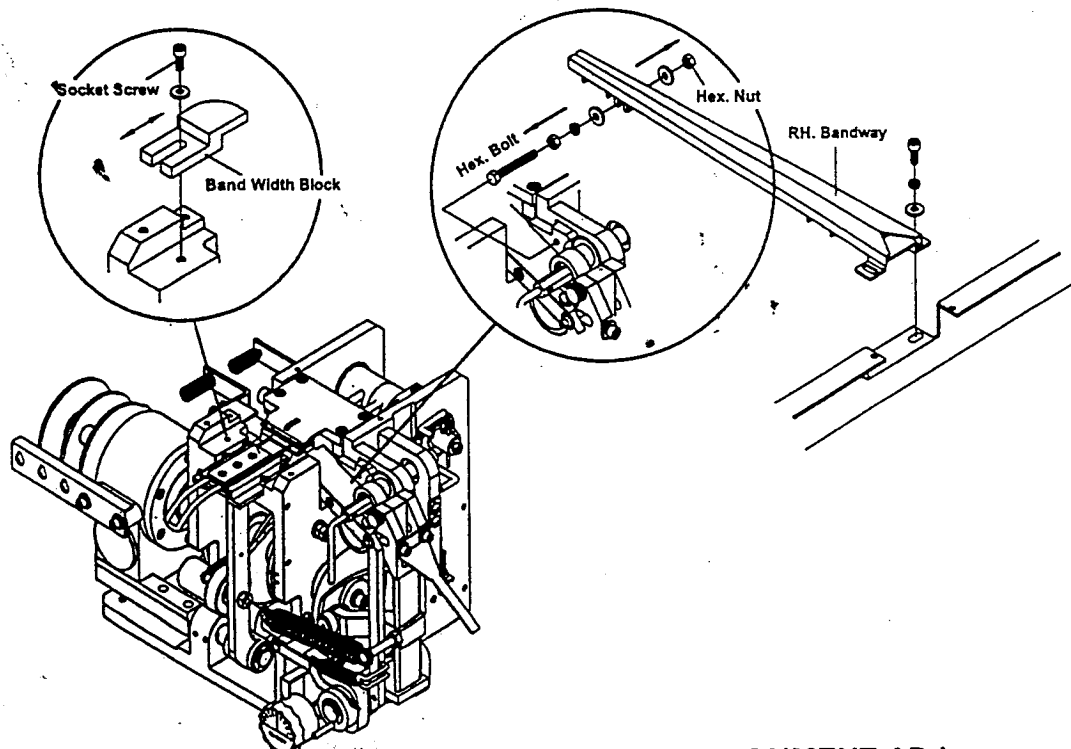
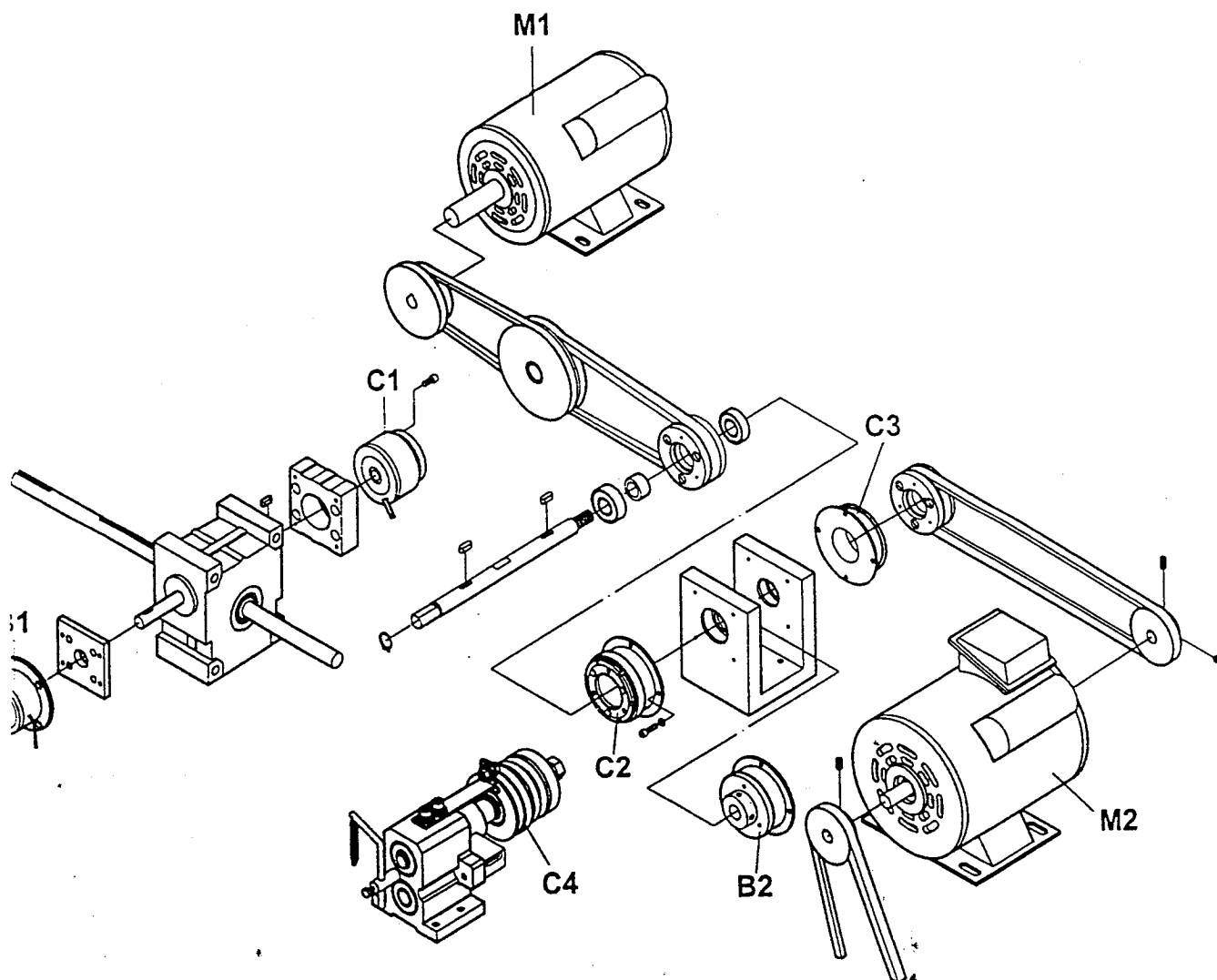


FIG 12 STRAP ALIGNMENT AD.1

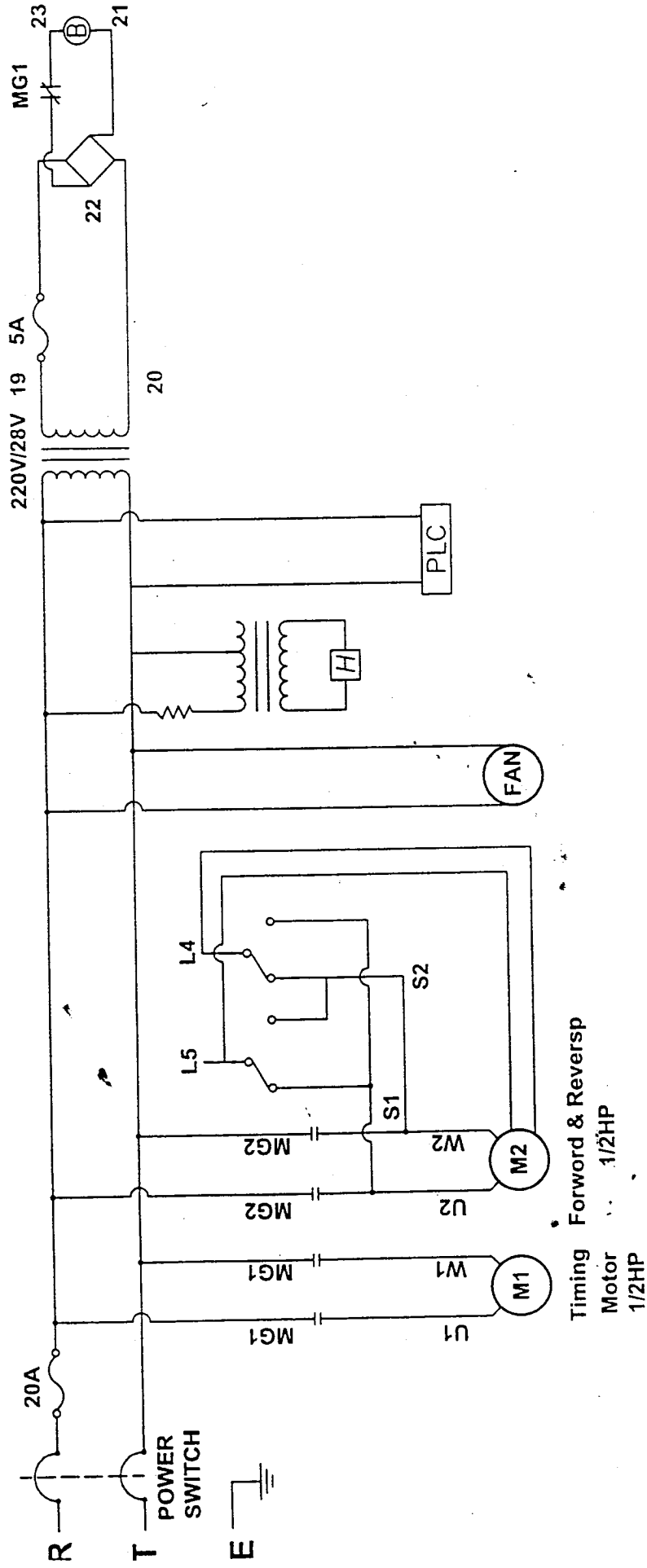
SYMBOL OF ELECTRIC ACCESSORY OF DRIVE UNIT



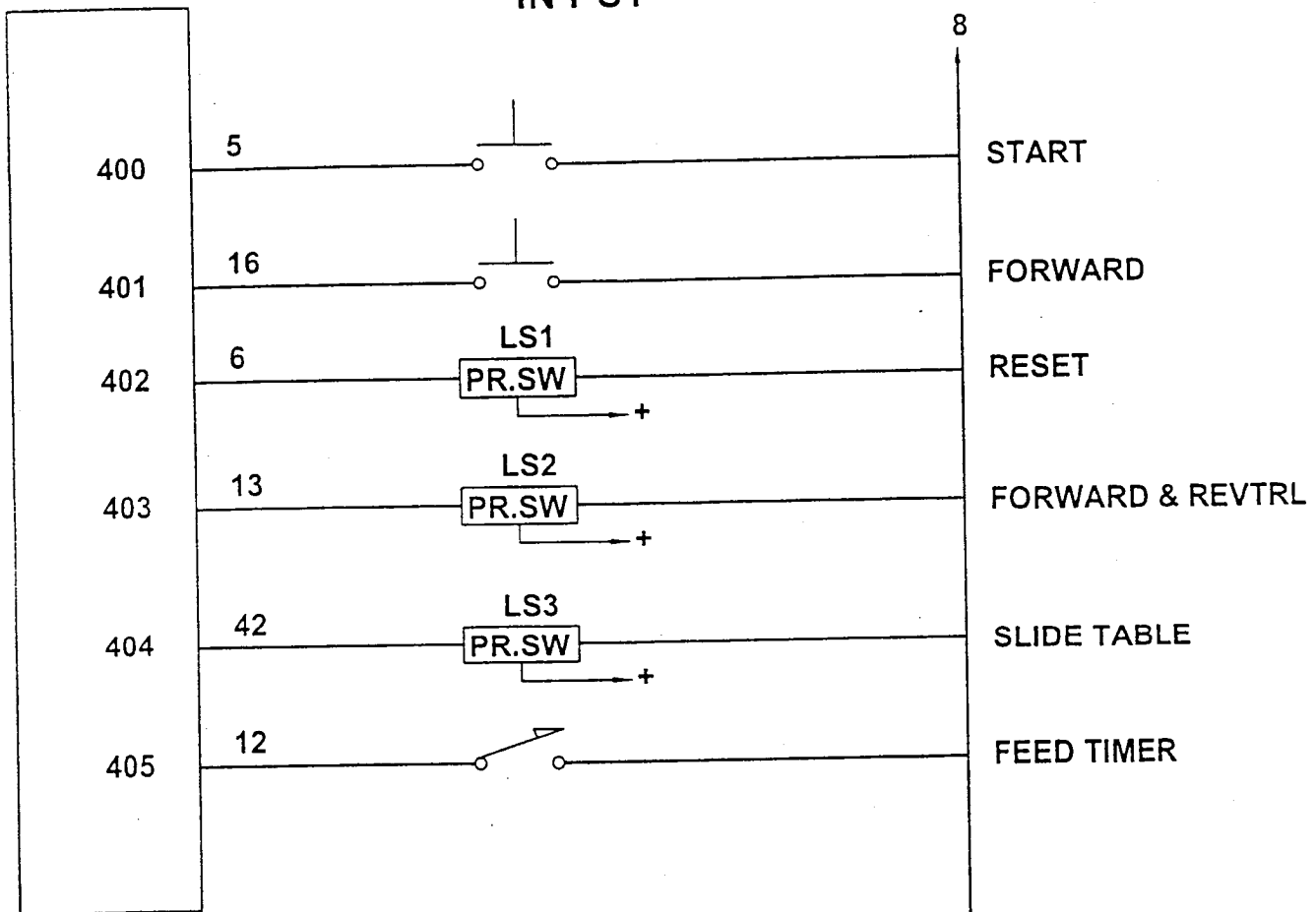
SYMBOL LIST OF DRIVE UNIT

SYMBOL	DESCRIPTION
M1	Timing Motor 1/2HP Single Phase/ Three Phase
M2	Pool Motor 1/3HP Single Phase/Three Phase
C1	Reducer Clutch 0.6K 24DC
C2	Forward Feeding Clutch 0.6K 24DC
C3	Reverse Feeding Clutch 0.6K 24DC
C4	Pool Clutch 0.6K 24DC
B1	Reducer Brake 0.6K 24Dc
B2	Forward & Reverse Feeding Brake 0.6K 24DC

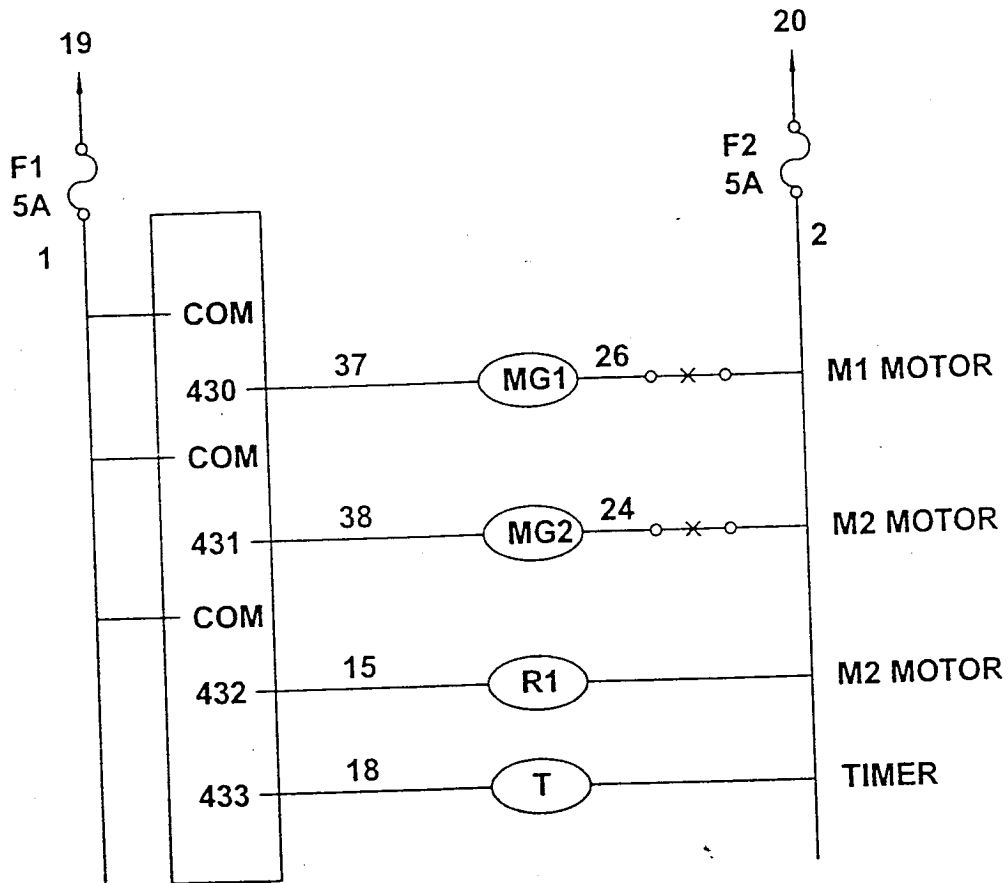
ELECTRICAL SCHEMATIC



IN PUT



OUT PUT



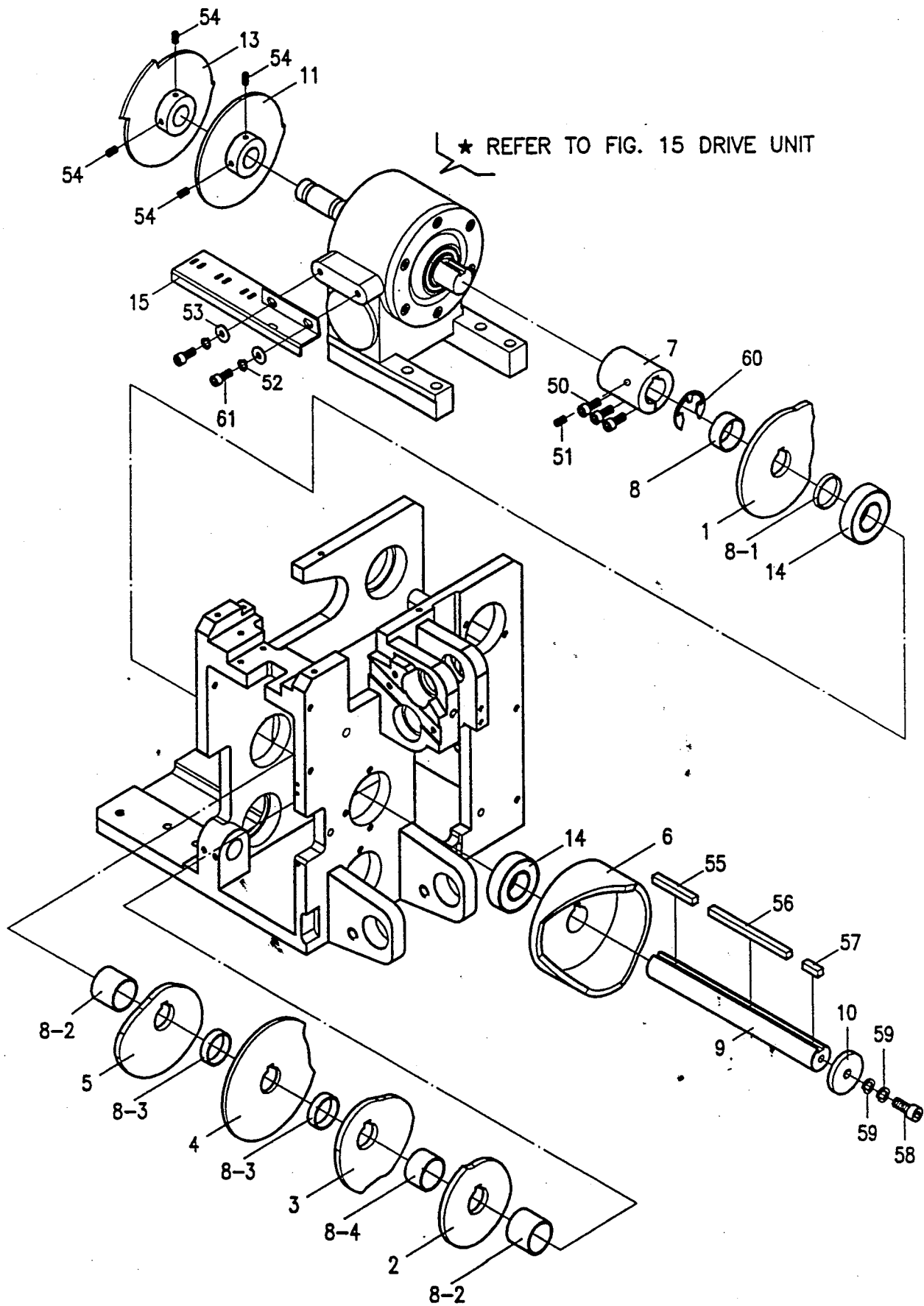
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FIG. 15	DRIVE UNIT-----	27

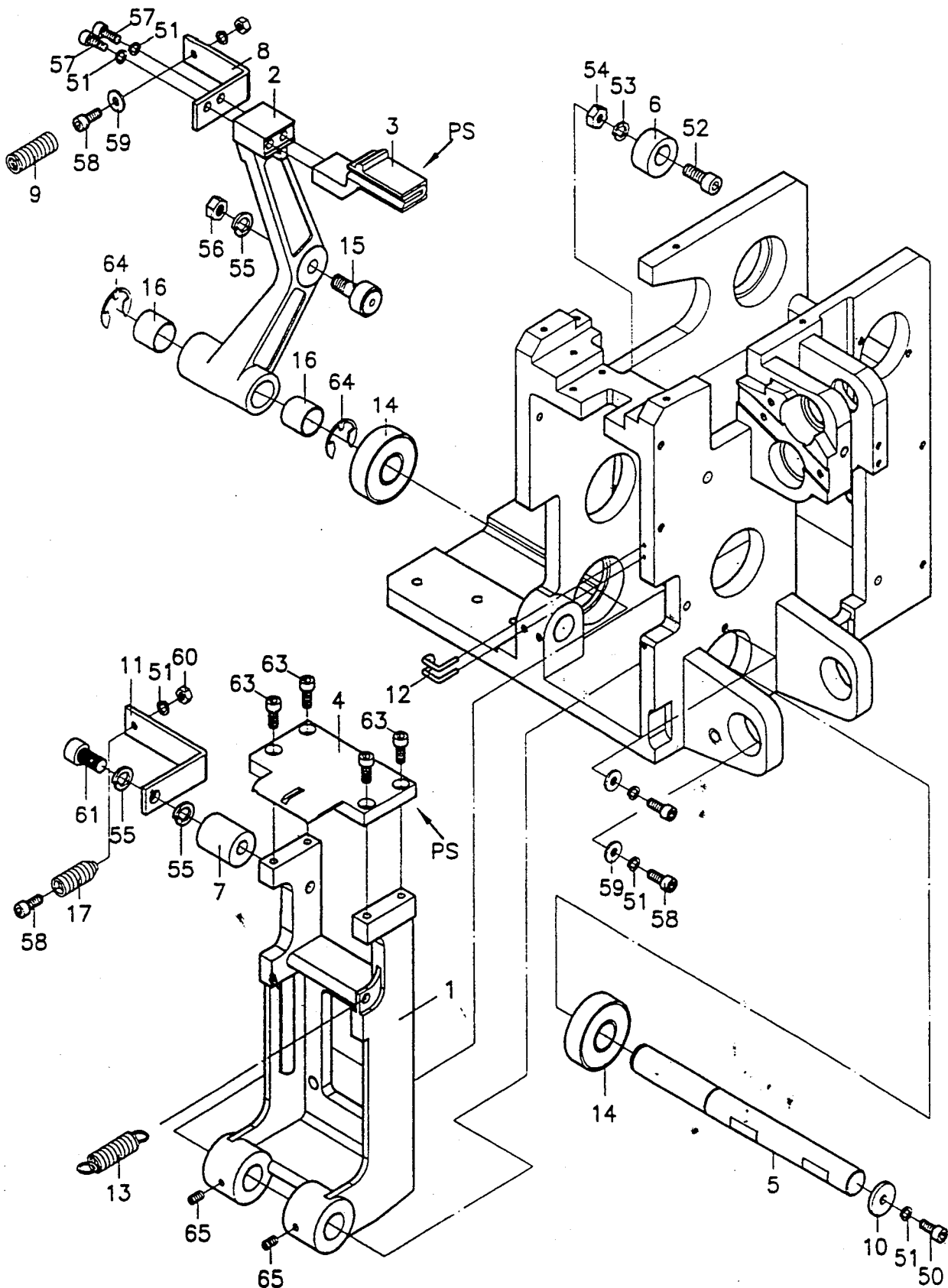
* When ordering or asking for replace parts, please state the phase, voltage and parts number.

Fig. 1 CAM UNIT



KEY	PARTS NO.	QTY	DESCRIPTION
1	0101-00	1	Slide Table Cam
2	0102-00	1	Right Press Cam
3	0102-01	1	Center Press Cam
4	0103-00	1	Heater Cam
5	0103-01	1	Left Press Cam
6	0104-00	1	Tension Cam
7	0105-00	1	Cam Shaft Coupling
8	0106-00	1	Cam Collar (L-13 mm)
8-1	0106-01	1	Cam Collar (L-15 mm)
8-2	0106-02	2	Cam Collar (L-27 mm)
8-3	0106-03	2	Cam Collar (L-7 mm)
8-4	0106-04	1	Cam Collar (L-19 mm)
9	0107-00	1	Cam Shaft
10	0108-00	1	Cam Shaft End Plate
11	0111-00	1	Proximity Switch Cam (LS-3) (85PS)
13	0112-00	1	Proximity Switch Cam (LS-1) (85PS)
14	2201-02B	2	Ball Bearing 6205ZZ (NBK)
15	0122-02	1	Proximity Bracket
50	SCM6X20R	3	Socket Head Cap Screw 6 x 20R
51	SSM8X10	1	Set Socket Cap Screw 8 x 10
52	SSPWM6	2	Spring Washer 6 mm
53	SWM6X21	2	Plain Washer 6 x 21
54	SSM6X10	6	Set Socket Cap Screw 6 x 10
55	KEY-7750	1	Key 7 x 7 x 50
56	KEY-77100-1	1	Key 7 x 7 x 100
57	KEY-7720	1	Key 7 x 7 x 20
58	SCM8X25R	1	Socket Head Cap Screw 8 x 25R
59	SSPWM8	2	Spring Washer 8 mm
60	RE-24	1	Ring E-24
61	SLCM6X20R	2	Socket Head Cap Screw 6 x 20R

Fig. 2 SLIDE TABLE UNIT



PS: PLEASE REFER TO FIG. 13 WHEN THE UNDER OF SLIDE TABLE (KEY NO.3 & KEY NO.4) BE INSTALLED WITH PROXIMITY SWITCH.

FIG. 2 SLIDE TABLE UNIT

KEY	PART NO.	Q'TY	DESCRIPTION
1	0201-00	1	Slide Table Frame
2	0202-01	1	Band Guide Arm
3	0203-02	1	Band Guide
4	0204-00	1	Slide Table 12mm
	0204-01	1	Slide Table 15mm
	0204-02	1	Slide Table 9mm
	0204-03	1	Slide Table 6mm & 7mm
5	0205-00	1	Slide Table Frame Shaft
6	0206-00	1	Slide Table Stopper
7	0207-00	1	Slide Table Back Adj.
8	0208-00	1	Flap Connecting Spring Bracket
9	0208-01	1	Band Guide Spring
10	0210-00	1	Slide Table Shaft End Plate
11	0222-00	1	Band Guide Spring Bracket
12	0212-00	1	Slide Table Frame Spring Hook
13	0220-00	1	Slide Table Tension Spring
14	2201-03	2	Ball Bearing 6304ZZ
15	2204-00	1	Cam Follower CF-10
16	2202-04	2	Metal Bush MB2025
17	0214-00	1	Band Guide Spring
50	SCM6x20R	1	Socket Head Cap Screw 6x20R
51	SSPWM6	7	Spring Washer 6mm
52	SCM8x30	1	Socket Head Cap Screw 8x30
53	SSPWM8	1	Spring Washer 8mm
54	SNM8x125R	1	Hex. Nut 8x125R
55	SSPWM10	1	Spring Washer 10Ø
56	SNM10x15R	3	Hex. Nut 10m/m
57	SCM6x50R	2	Socket Head Cap Screw 6x50R
58	SCM6x15R	4	Socket Head Cap Screw 6x15R
59	SWM6x21	3	Plain Washer 6x21Ø
60	SNM6x10R	2	Hex. Nut 6x10R
61	SCM10x50R	1	Socket Head Cap Screw
63	SSCM6x15	4	Stainless Socket Cap 6x15
64	RE-15	2	Ring E-15
65	SSM6x10	2	Set Socket Cap Screw 6x10

Fig. 3 PRESS UNIT

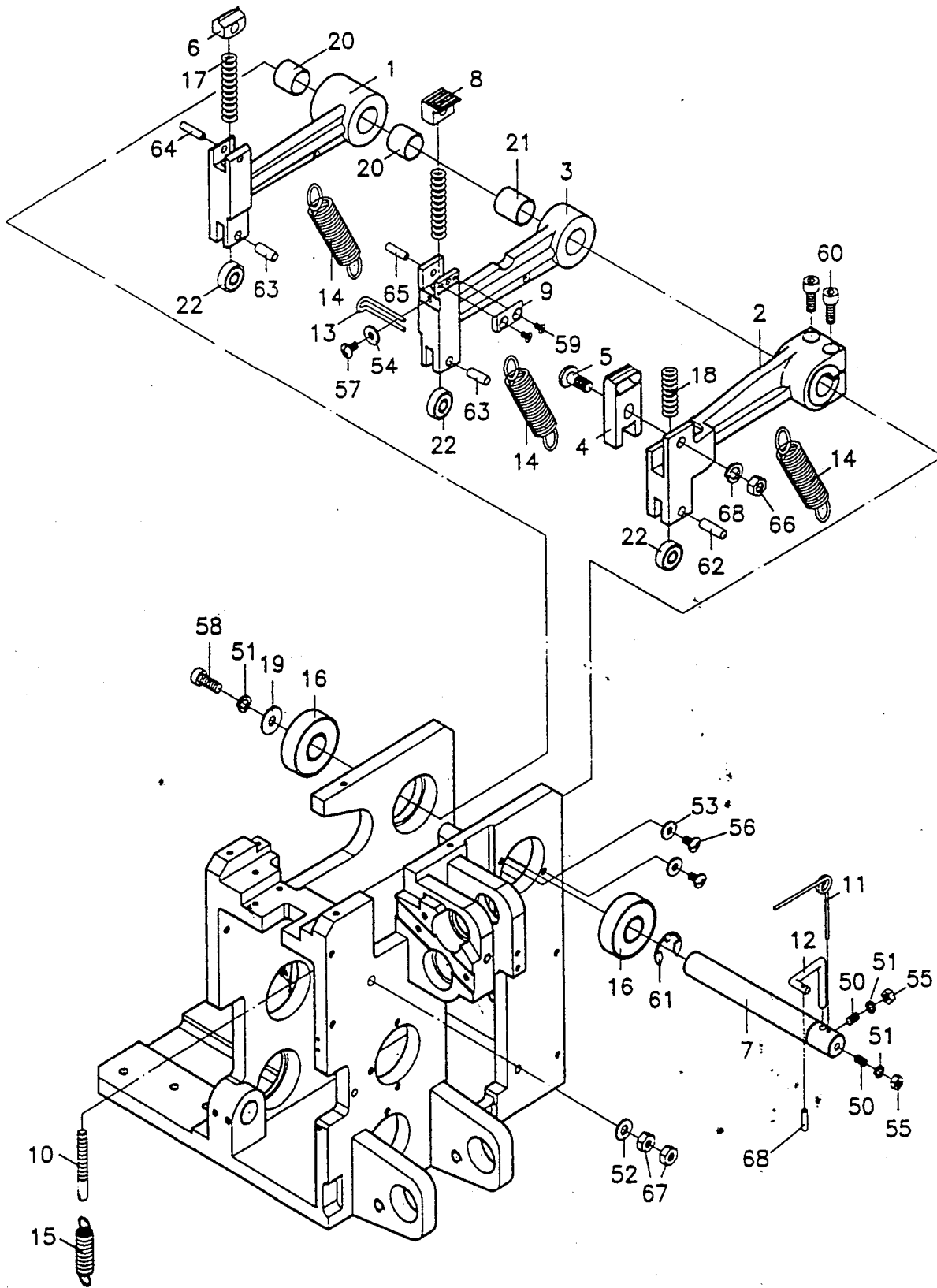


FIG. 3 PRESS UNIT

KEY	PART NO.	Q'TY	DESCRIPTION
1	0301-00	1	Lf. Block Arm
2	0302-02	1	Rh. Block Arm
3	0303-00	1	Center Block Arm
4	0304-00	1	Cutter (Upper) (9-15mm)
	0304-01	1	Cutter (Upper) (6mm & 7mm)
	0304-02	1	Cutter (Upper) 19mm
5	0305-00	1	Cutter Pin
6	0306-01	1	Jam (Lf.)
7	0307-00	1	Press Arm Shaft
8	0308-00	1	Universal Press
9	0309-00	1	Cutter (Lower)
10	0310-00	1	Cutter Tension Spring
11	0311-00	1	Upper Roller Spring
12	0312-00	1	Upper Shaft Spring Adjuster
13	0313-00	1	Cutter Spring Hook
14	0314-00	3	Press Tension Spring
15	0315-00	1	Cutter Tension Spring
16	2201-03	2	Ball Bearing 6304ZZ
17	0317-01	2	Lf. & Center Block Spring
18	0318-00	1	Rh. Block Spring
19	0319-00	1	Press Arm End Plate
20	2202-03	2	Metal Bush MB2020
21	2202-04	1	Metal Bush MB2025
22	2201-05C	3	Ball Bearing 628ZZ
50	SSM6x16	2	Set Screw 6x16
51	SSPWM6	4	Spring Washer 6mm
52	SWM8x18	1	Plain Washer 5/16x18
53	SWM6x21	2	Plain Washer 6x21
54	SWM6x16	2	Plain Washer 6x16
55	SNM6x10R	2	Hexagon Nut 6x1.0
56	SB1M6x15	1	Truss Head Screw 6x15
57	SB1M6x10	1	Truss Head Screw 6x10
58	SCM6x20R	1	Socket Head Cap Screw 6x20
59	SCH5x8	2	Flat Head Socket Screw 5x8
60	SSCM8x35R	2	Socket Head Cap Screw 8x35R
61	RE-15	1	E-Stop Ring No.15
62	PIN-822	1	V-Spring Pin (Straight) 8 ϕ x22
63	PIN-820	2	V-Spring Pin (Straight) 8 ϕ x20
64	PIN-624	1	V-Spring Pin (Straight) 6 ϕ x24
65	PIN-622	1	V-Spring Pin (Straight) 6 ϕ x22
66	SNM10x15	1	Hexagon Nut 10x1.5
67	SNM8x125R	2	Hexagon Nut 8x1.25
68	PIN-218	1	V-Spring Pin (Straight) 2 ϕ x18

Fig. 4 HEATER UNIT

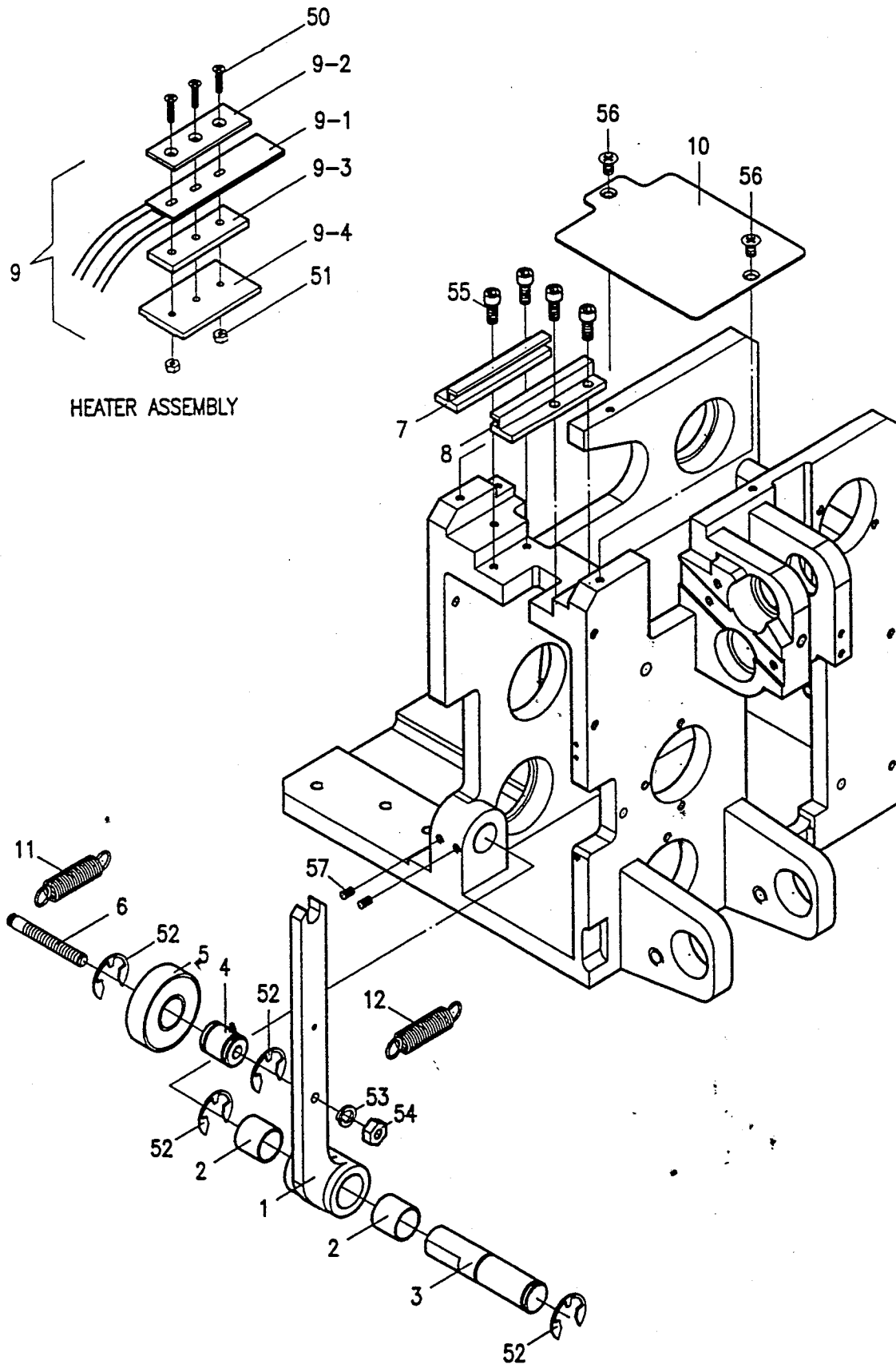


FIG. 4 HEATER UNIT

KEY	PART NO.	Q'TY	DESCRIPTION
1	0401-00	1	Heater Crank
2	2202-03	2	Metal Bush MB2020
3	0404-01	1	Heater Crank Shaft
4	0405-00	1	Heater Crank Roller Collar
5	2201-03	1	Ball Bearing 6304ZZ
6	0407-02	1	Heater Bearing Shaft
7	0403-01	1	Heater Slide Guide (Lf.)
8	0403-00	1	Heater Slide Guide (Rh.)
9	0409-AS1	1	Heater Assembly
9-1	0409-02	1	Heater Plate
9-2	0409-03	1	Cover Plate
9-3	0409-04	1	Heater Guide
9-4	0409-05	1	Heater Seat
10	0408-02	1	Heater Cover
11	0411-00	1	Heater Crank Spring
12	0409-10	1	Spring
50	SFM4X20	3	Flat Head Screw
51	SNM4X0.7R	2	Hex. Nut 4 x 0.7R
52	RE-15	2	Ring E-15
53	SSPWM8	1	Spring Washer 8mm
54	SNM8X125R	1	Hex. Nut 8 x 12.5R
55	SCM5X16	4	Socket Head Cap Screw 5 x 16
56	SFM5X10	2	Flat Head Cap Screw
57	SSM6X10	2	Set Screw 6 x 10

Fig. 5 CONTROL FRAME UNIT

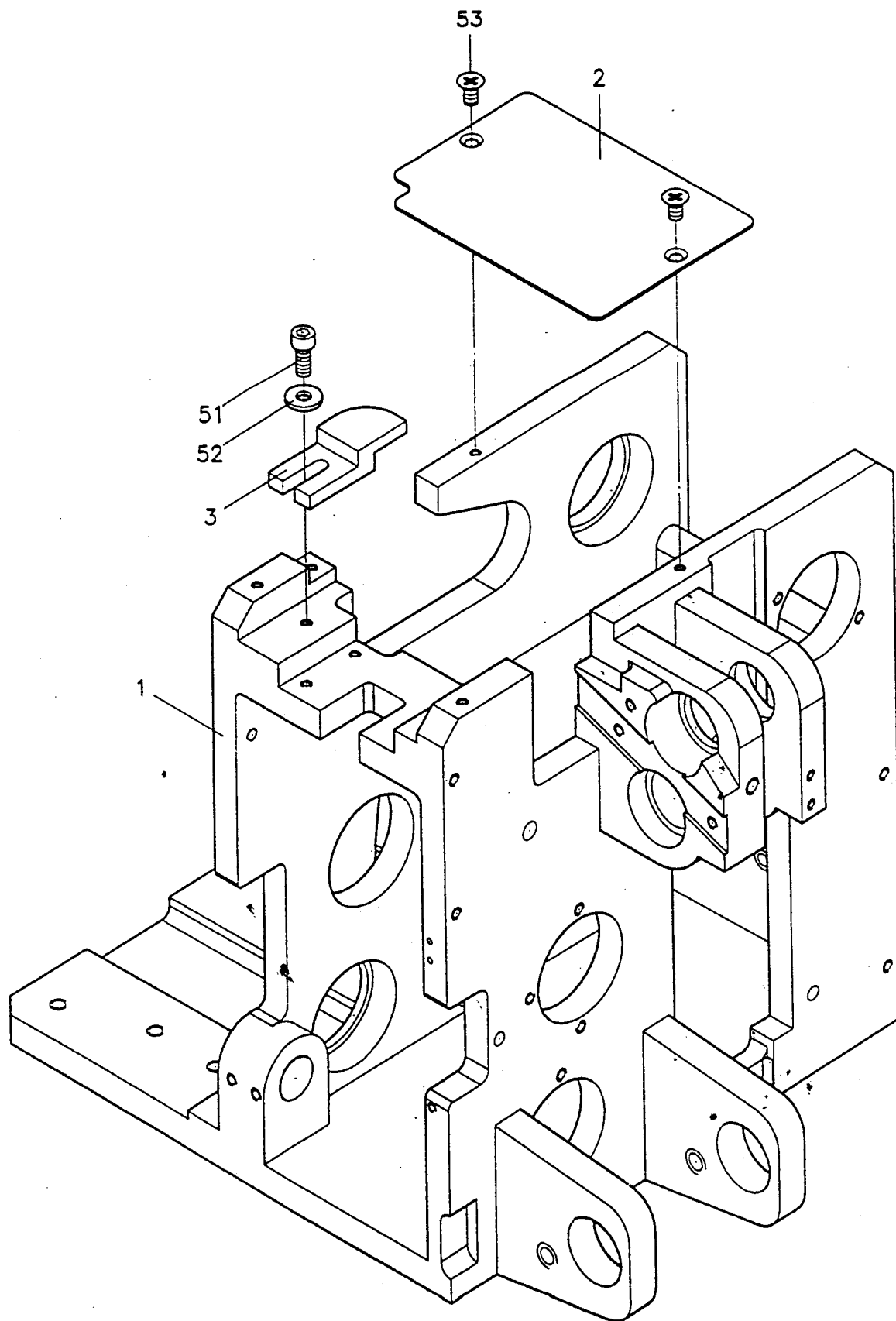
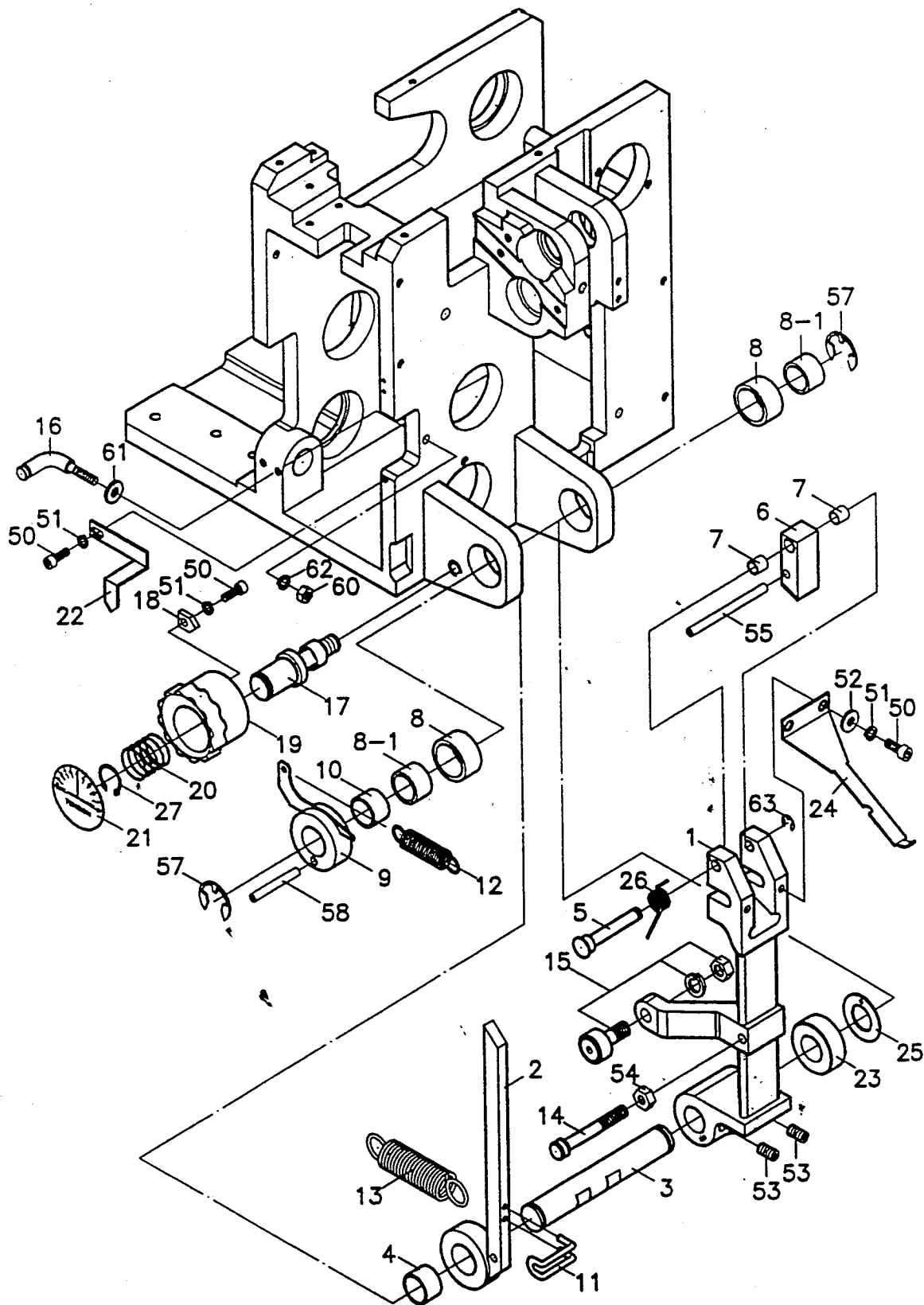


FIG. 5 CONTROL FRAME UNIT

KEY	PART NO.	Q'TY	DESCRIPTION
1	0501-06	1	Control Frame
2	0507-01	1	Slide Table Cover
3	0506-02	1	Band Width Block
51	SCM6x16	1	Socket Head Cap Screw
52	SWM6x16	1	Plain Washer
53	SFM5x10	2	Flat Head Cap Screw

Fig. 6 TENSION UNIT



KEY	PARTS NO.	QTY	DESCRIPTION
1	0601-00	1	Tension Arm
2	0602-02	1	Tension Adj. Arm
3	0603-00	1	Tension Arm Shaft
4	2202-02	1	Metal Bush MB2015
5	0605-00	1	Tension Jaw Shaft
6	0606-01	1	Tension Jaw
7	2202-00	2	Metal Bush MB 0808
8	2203-00A	2	Needle Bearing HK2516
8-1	2203-00B	2	Needle Bearing (Inner) IRT2015-1
9	0609-02	1	Tension Adj.
10	2202-02	1	Metal Bush MB2015
11	0611-00	1	Tension Adj. Arm Spring Hook
12	0617-02	1	Tension Adj. Arm Spring Hook
13	0616-02	1	Tension Arm Spring
14	0614-00	1	Tension Arm Spring Hook-1
15	2204-00	1	Cam Follower CF-10
16	0620-00	1	Tension Arm Hook
17	0638-01	1	Tension Adj. Cam Shaft
18	0646-02	1	Tension Adj. Cam Lock
19	0613-01	1	Tension Adj. Cam
20	0643-02	1	Tension Adj. Cam Spring
21	0632-00	1	Tension Select Dial
22	0628-00	1	Tension Finger
23	0634-01	1	Tension Arm Collar
24	0612-10	1	Strap Guide 9 mm (85PS)
	0612-11	1	Strap Guide 12 mm (85PS)
	0612-12	1	Strap Guide 15 mm (85PS)
25	2205-00	1	Metal Plate WC18DUN
26	0615-00	1	Tension Jaw Spring
50	SCM5X12	1	Socket Head Cap Screw
51	SSPWM5	4	Spring Washer M5
52	SWM5X12	2	Plain Washer 5 x 12
53	SSM6X10	2	Set Socket Cap Screw 6 x 10
54	SWM8X125	1	Plain Washer 8 x 125
55	PIN-675	1	Pin 6 x 75
57	RE-15	2	Ring E-15
58	PIN-645	1	Pin 6 x 45
59	RR-20	1	Ring R-20
60	SNM6X10	1	Hex. Nut M6
61	SWM6X16	1	Plain Washer 6 x 16
62	SSPWM6	1	Spring Washer M6
63	RE-6	1	Ring E-6

Fig. 7 FEED UNIT

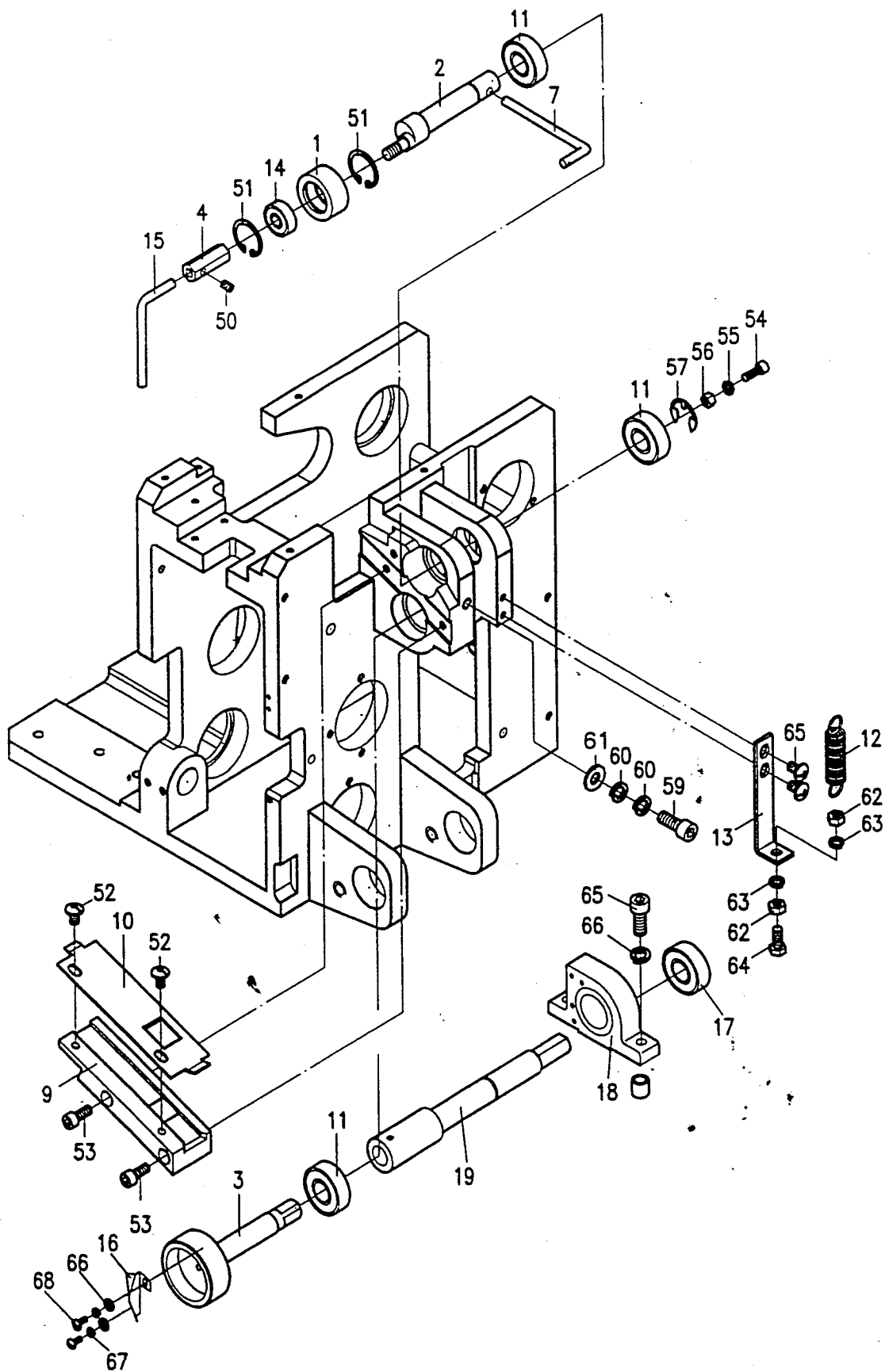
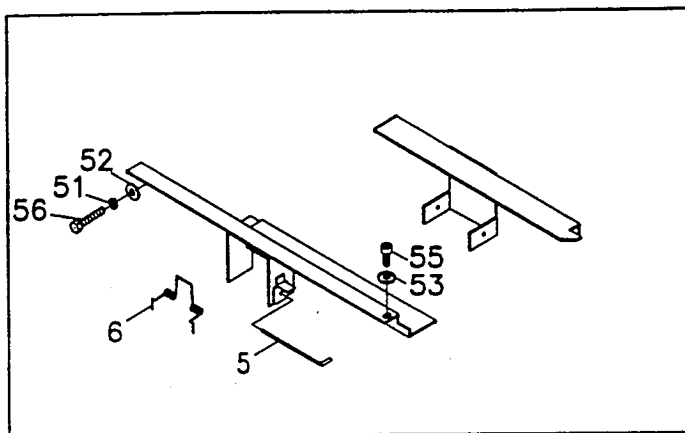


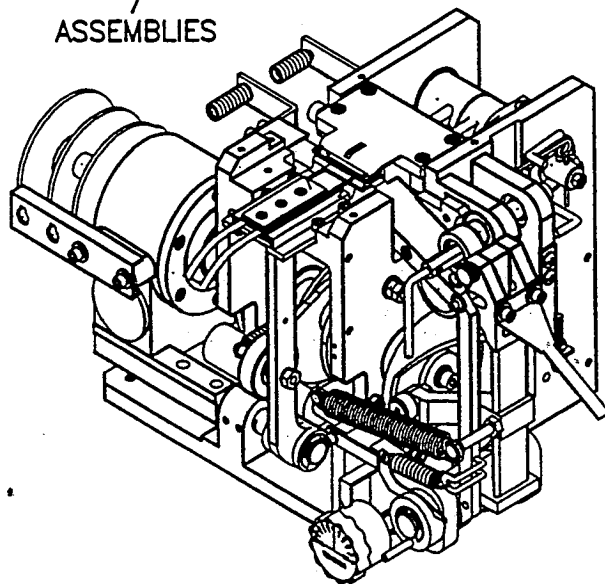
FIG. 7 FEED UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	0702-00	1	Upper Feed Roller (6#)
	0702-01	1	Upper Feed Roller (7# & 9#)
	0702-02	1	Upper Feed Roller (12#)
	0702-03	1	Upper Feed Roller (15#)
	0702-AS1	1	Upper Feed Roller Assembly
2	0703-00	1	Upper Feed Roller Shaft
3	0704-00	1	Feed Roller
4	0705-01	1	Upper Roller Grip
7	0708-02	1	Upper Roller Weight Adj.
9	0710-00B	1	Feed Shooter 6#
	0710-01B	1	Feed Shooter 7# & 9#
	0710-02B	1	Feed Shooter 12#
	0710-03B	1	Feed Shooter 15#
10	0711-00	1	Feed Shooter Cover
11	2201-01	4	Ball Bearing 6202ZZ
12	0721-00	1	Feed Spring
13	0724-00	1	Pool Clutch Holder
14	2201-05D	1	Bearing 628ZZ NBK
15	0726-00	1	Upper Roller Grip (L type)
16	0701-00	1	Cooling Fan
17	D-05-01	1	Ball Bearing 6003ZZ
18	D-06-00	1	Bearing Bracket
19	0704-03	1	Shaft
50	SSM6X6	1	Set Cap Screw 6 x 6
51	RR-24	2	Ring R-24
52	SB1M6X10	2	Phillips Head Screw 6 x 10
53	SCM6X45R	2	Socket Head Cap Screw 6 x 45R
54	SCM6X16	1	Socket Head Cap Screw 6 x 16
55	SSPWM6	1	Spring Washer M6
56	SNM6X10	1	Hex. Nut M6
57	RE-12	1	Ring E-12
58	SSM6X10	2	Set Socket Cap Screw 6 x 10
59	SCM8X12	1	Socket Head Cap Screw 8 x 12
60	SSPWM8	2	Spring Washer M8
61	0607-00	1	Shim 8.1 x 13 x 0.3m/m
62	SNM6X10	2	Hex. Nut M6
63	SSPWM6	2	Spring Washer M6
64	0722-00	1	Adj. Screw 6 x 50 m/m
65	SB1M5X10	2	Truss Head Screw 5 x 10
66	SWM4X12R	2	Plain Washer 4 x 12R
67	SSPWM4	2	Spring Washer 4 m/m
68	SBM4X8	2	Phillips Head Screw M4 x 8

Fig. 8 BAND WAY UNIT



7
ASSEMBLIES



ASSEMBLIES
4

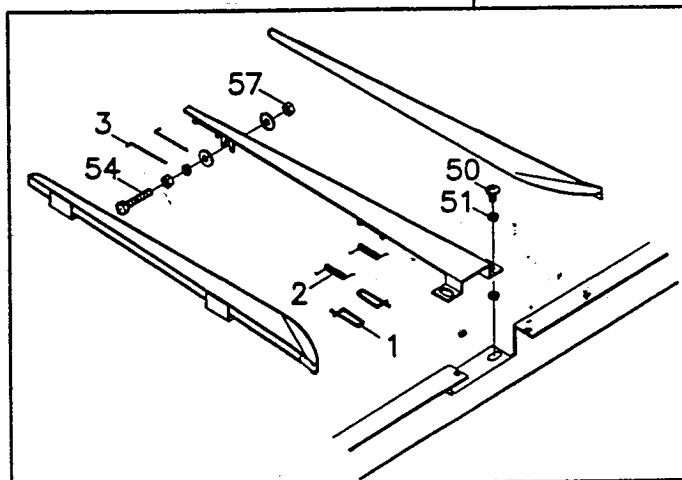


FIG. 8 BAND WAY UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	0807-00	2	Rh. Bandway Flap Pin
2	0808-00	2	Rh. Bandway Flap Spring
3	0811-00	2	Rh. Bandway Flap Pin
4	0820-UN01	1	Rh. Bandway Unit
5	0806-00	1	Lf. Bandway Flap Pin
6	0810-00	1	Lf. Bandway Flap Spring
7	0819-UN01	1	Lf. Bandway Unit
50	SB1M6X15	2	Truss Head Screw 6 x 15
51	SSPWM6R-1	4	Spring Washer M6
52	SWM6X16R	1	Plain Washer 6 x 16R
53	SWM5X12R	1	Plain Washer 5 x 12R
54	SSHM6X50	1	Case Roller Shaft
55	SCM5X16R	1	Socket Head Cap Screw 5 x 16R
56	SCM6X10R	1	Hex. Square Head Bolt 6 x 10
57	SNM6X10R	1	Hex. Nut 6 x 10R

Fig. 9 ARCH UNIT

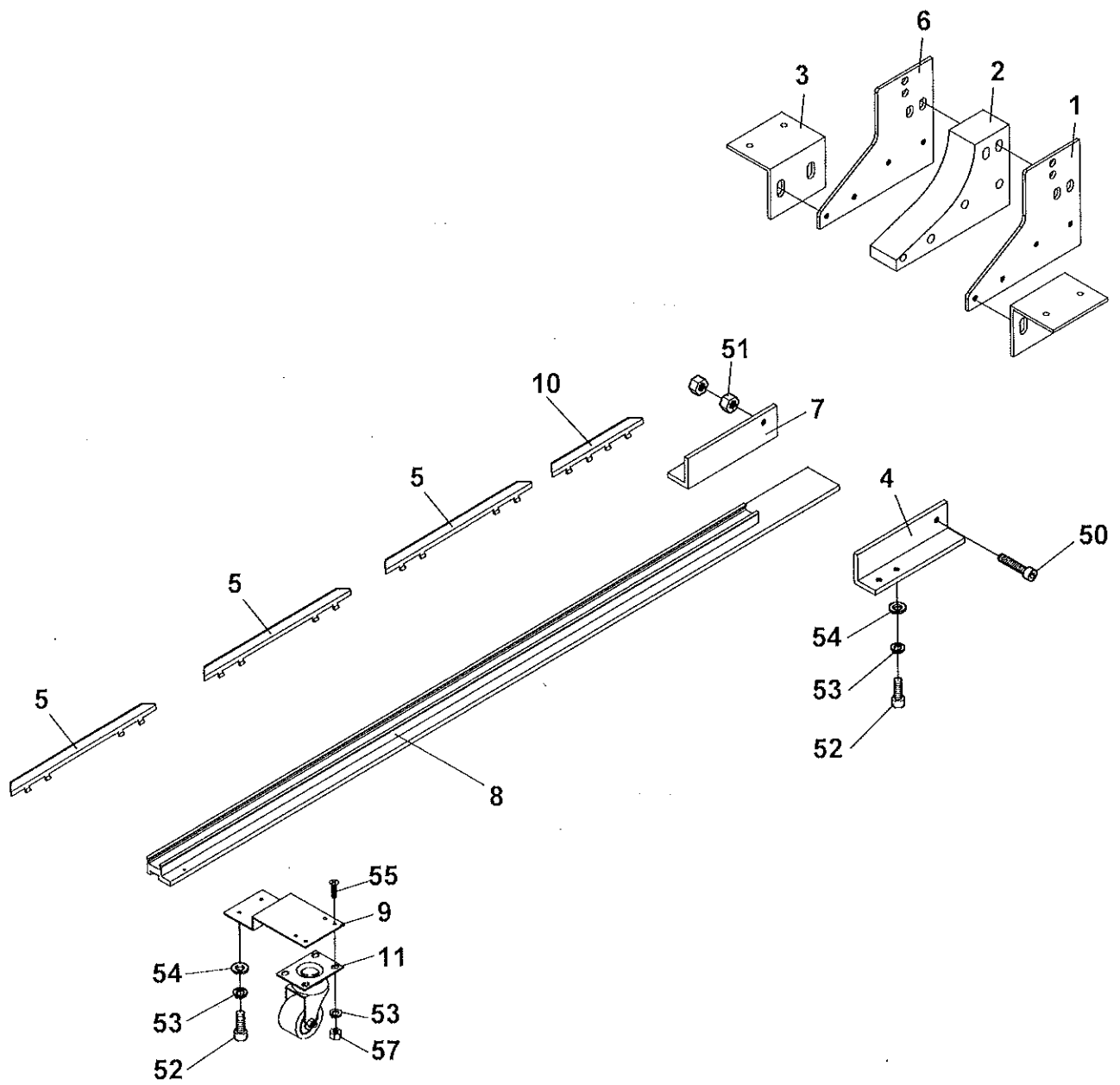


FIG. 9 ARCH UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	0984-07R	1	Arch Frame Plate (R)
2	0984-06	1	Arch Frame 9-15mm
3	0984-08	2	Arch Frame Plate
4	0994-00R	1	Connected Plate (R)
5	0985-09-1	3	Arch Flap (15 mm)
6	0984-07L	1	Arch Frame Plate (L)
7	0994-00L	1	Connected Plate (L)
8	0995-00	1	Aluminum Arch L970 mm
	0995-02	1	Aluminum Arch L1170 mm
9	0994-01	1	Caster Seat
10	0985-09	1	Arch Flap
11	1226-12	1	Wheel Swivel
50	SLCM6X55	1	Socket Head Cap Screw 6 x 55
51	SNM6X10R	3	Hex. Nut 6 x 1.0R
52	SLCM5X12R	2	Socket Head Cap Screw 5 x 12
53	SSPWM5R	6	Spring Washer 5m/m
54	SWM5X12R	2	Plain Washer 5 x 12R
55	SFM5X15	4	Flat Head Cap Screw 5 x 15

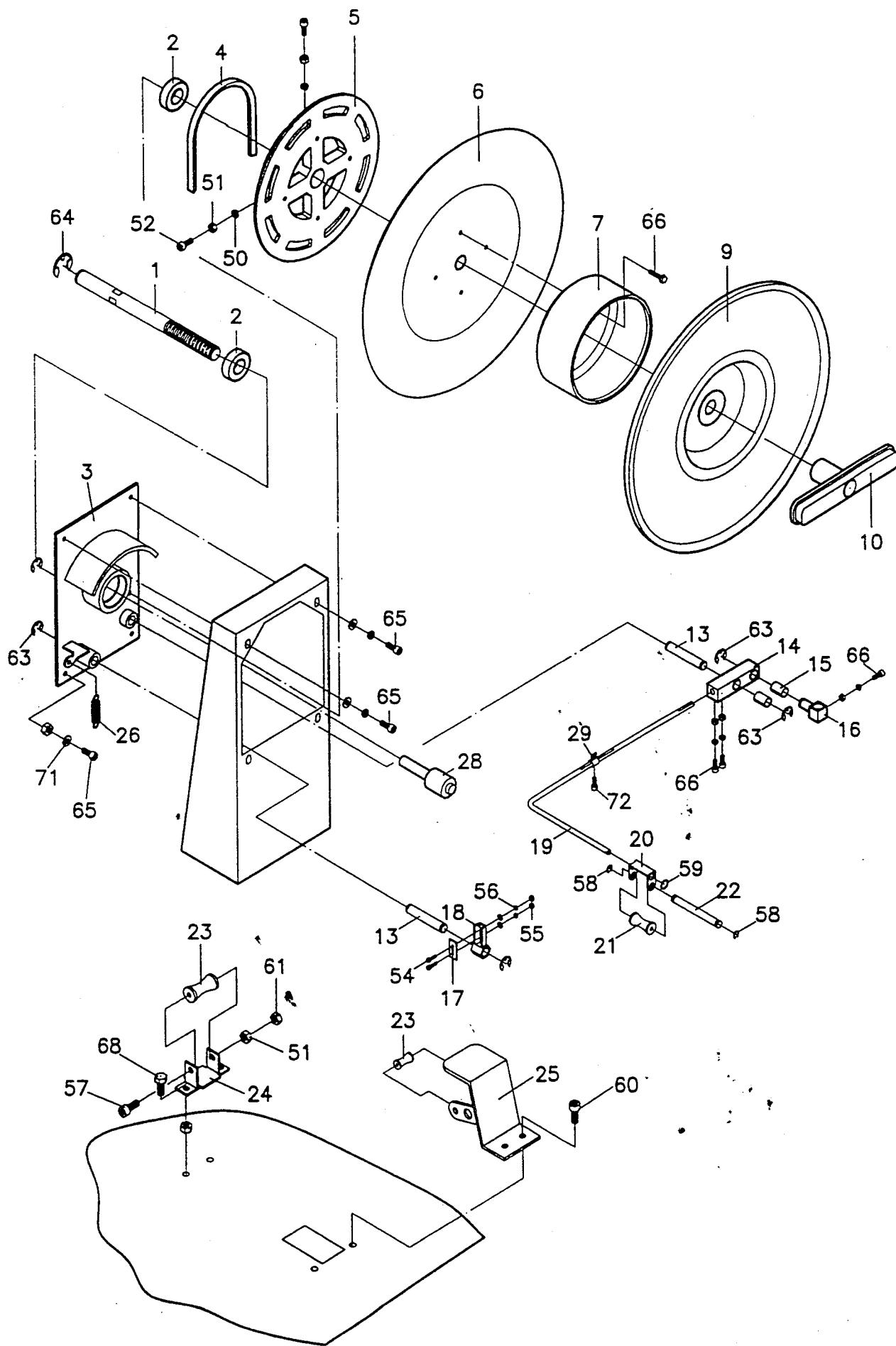


FIG. 11 REEL UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	1107-02	1	Shaft (Dispenser)
2	2201-02B	2	Ball Bearing 6205ZZ (NBK)
3	1101-07	1	Reel Unit Base
4	1126-01	1	Brake V-Belt
5	1103-02	1	Reel Brake Pulley
6	1118-00	1	Inner Reel Flange
7	1124-00	1	Reel Center Drum 200 ϕ
9	1119-00	1	Outer Reel Flange 200 ϕ
10	1108-00	1	Reel Handle
13	1109-01	2	Helder Shaft
14	1105-00	1	Brake Tension Holder
15	2202-01	2	Metal Bush MB1525
16	1106-02	1	Brake Belt Tightener
17	J-17-20	1	Brake Belt Plate
18	1104-04	1	Brake Belt Guard
19	1111-09	1	Brake Arm
20	1113-01	1	Roller Bracket
21	1115-00	1	Brake Roller
22	J-11-11-1	1	Brake Roller Shaft
23	1115-01A	2	Nylon Roller
24	1113-02	1	Roller Bracket
25	1113-03	1	Roller Bracket
28	1111-04	1	Brake Holder
29	1111-AS1	1	Brake Spring Adj. Assembly
50	SSPWM6R-1	5	Spring Washer M6
51	SNM6X10R	10	Hex. Nut 6 x 10R
52	SLCM6X16R	4	Socket Head Cap Screw 6 x 16R
54	SSCM4X25	2	Socket Head Cap Screw 4 x 25
55	SNM4X07R	2	Hex. Nut 4 x 0.7R
56	SSPWM4	2	Spring Washer 4m/m
57	SLCM6X35R	1	Socket Head Cap Screw 6 x 35
58	RE-5	2	Ring E-5
59	1133-00	1	Ring
60	SLCM5X12R	2	Socket Head Cap Screw 5 x 12R
61	SUNM5	1	Hex. Nut M5 (U#)
63	RE-12	2	Ring E-12
65	SLCM8X25R	4	Socket Head Cap Screw 8 x 25R
66	SLCM6X20R	7	Socket Head Cap Screw 6 x 20R
70	SWM8X18X2R	7	Plain Washer 8 ϕ x 18 ϕ
72	SLCM6X20R	1	Socket Head Cap Screw 6 x 20R

Fig. 12 BODY UNIT

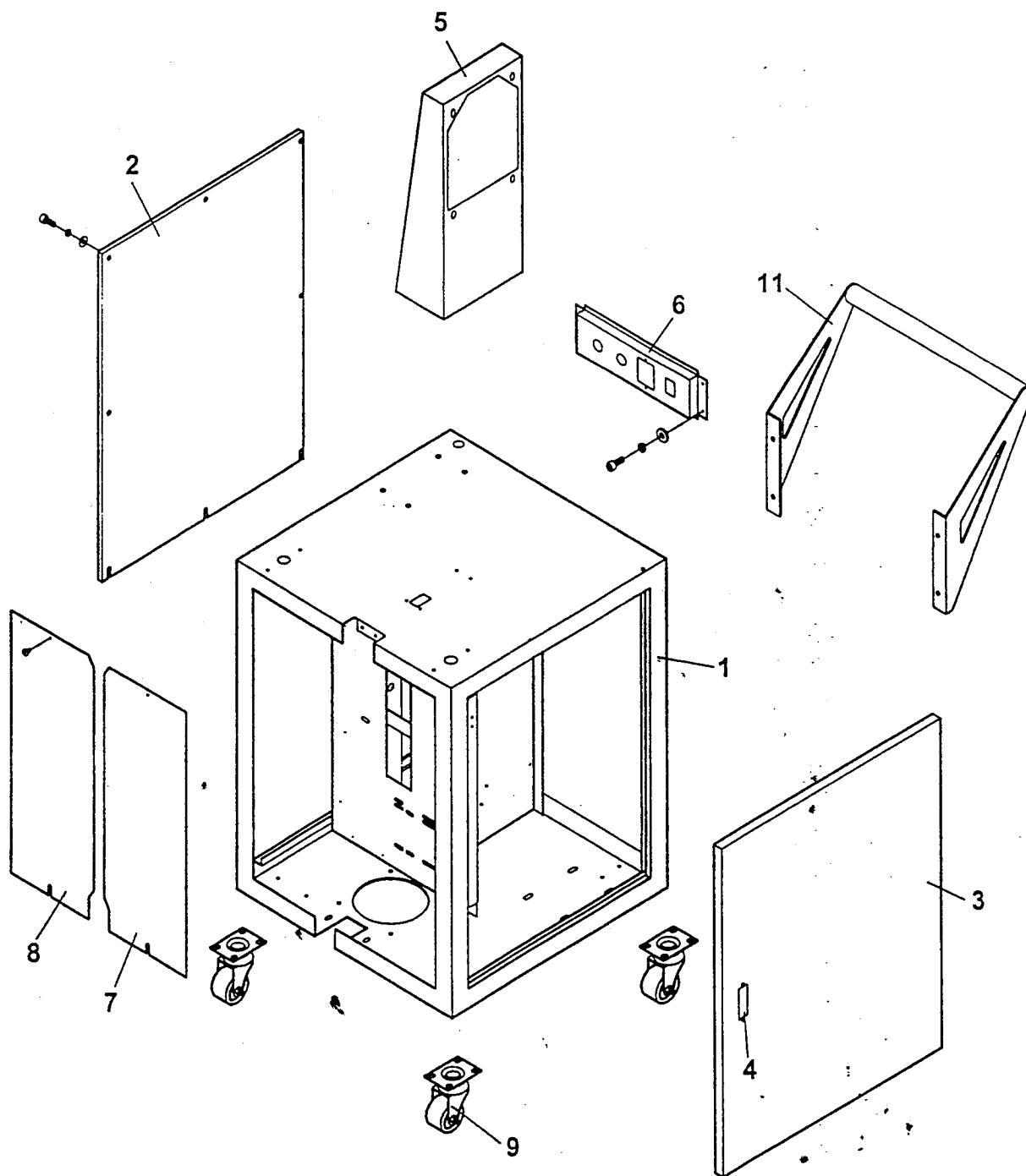


FIG. 12 BODY UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	1201-46	1	Case Assembly (85PS)
2	1201-46-01	1	Left Plate
3	1201-46-02	1	Right Door
4	J-07-05	1	Control Box Lock
5	1101-08	1	Dispenser Frame
6	1205-25	1	Control Panel
7	1210-4-1R	1	Aluminum Cover (R) 9 & 15 mm
8	1210-4-1L	1	Aluminum Cover (L) 9 & 15 mm
9	1226-03	4	Wheel Shivel 3" PU
11	1201-46-00	1	Handle

FIG. 13 ELECTRIC UNIT

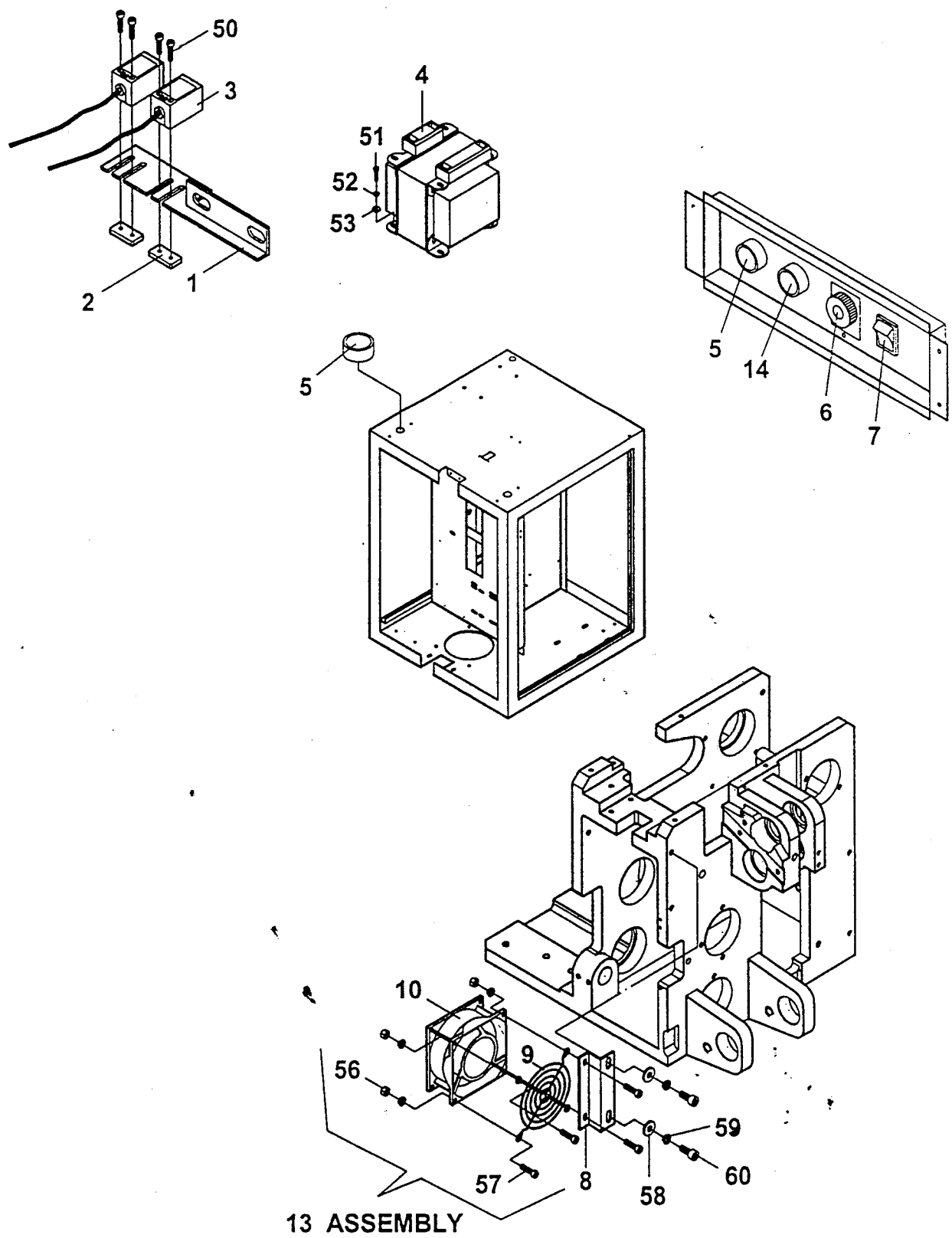


FIG. 13 ELECTRIC UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	0122-02	1	Proximity Bracket
2	0123-00	2	Proximity Bracket Guide
3	1503-11	2	Proximity Switch
4	1306-08	1	Transformer (Heater) 210-240V
	1306-09	1	Transformer (Heater) 110V-120V
5	1407-17	2	Start Switch 22 ϕ 1A
6	1405-22	1	Timer H3Y-10S AC/DC 24V
7	KSW-20A	1	Power Switch
8	1324-01	1	Smoke Fan Fixed Plate
9	1325-00	1	Smoke Fan Cover 3"
10	1324-00	1	Smoke Fan 220V
	1324-03	1	Smoke Fan 110V
13	1324-AS2	1	Smoke Fan Assembly 110V
	1324-AS1	1	Smoke Fan Assembly 220V
14	1407-18	1	Switch 22 ϕ 1A
50	SBM3X25	2	Phillips Head Screw 3 x 25
51	SB1M4X8	8	Phillips Head Screw 4 x 8
52	SSPWM4R	8	Spring Washer 4 mm
53	SWM4X12R	8	Plain Washer 4 x 12R
56	SNM4X07R	4	Hex. Nut 4 x 0.7R
57	SBM4X15	4	Phillips Head Screw 4 x 15
58	SWM6X16X2R	2	Plain Washer 6 x 16 x 2.0R
59	SSPWM6R-1	2	Spring Washer 6 mm
60	SLCM6X20R	2	Socket Head Cap Screw 6 x 20R

Fig. 14 CONTROL BOX UNIT

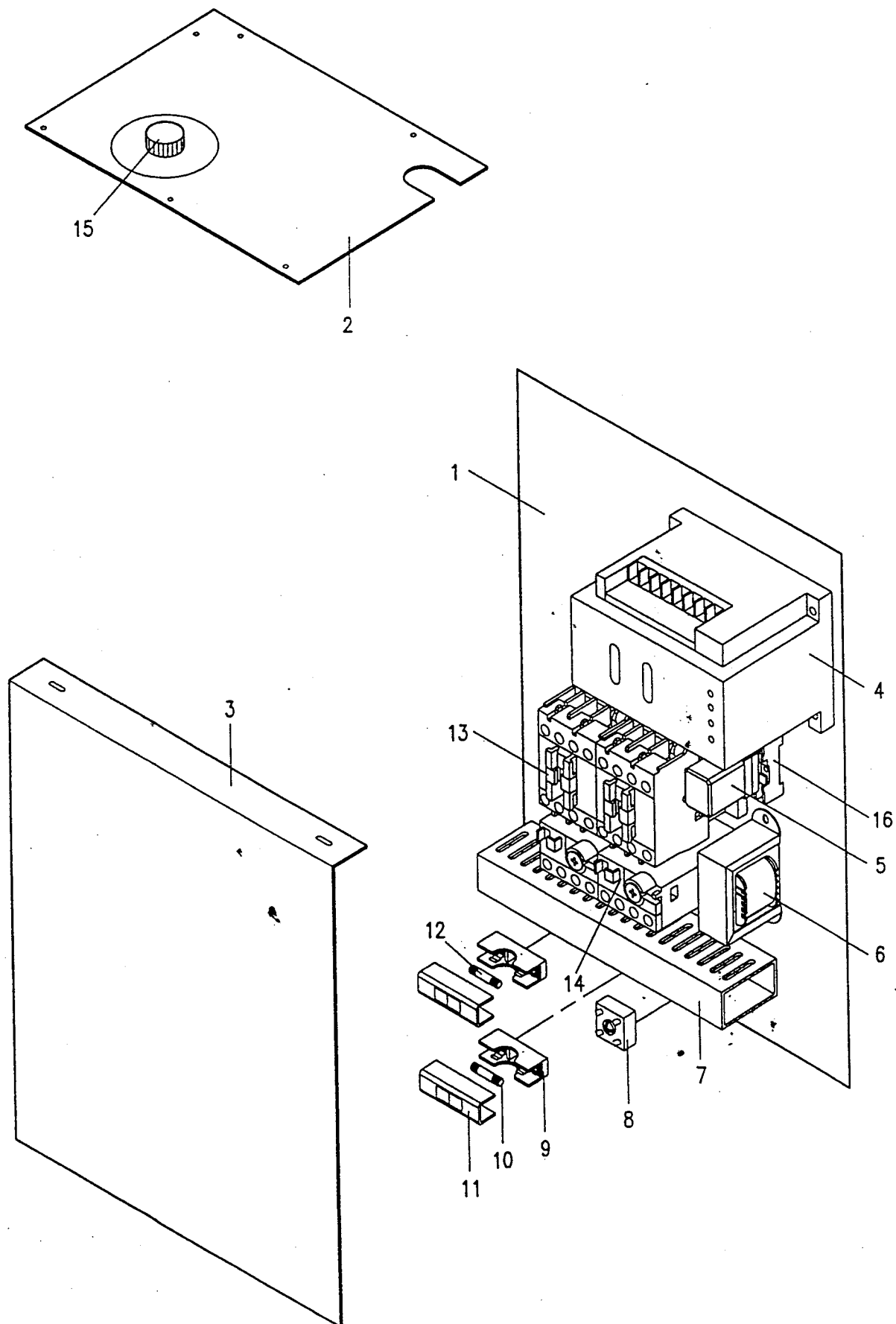


FIG. 14 CONTROL BOX UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	1401-13	1	Control Box Base Plate
2	1401-13-1	1	Control Box Top Cover
3	1401-13-2	1	Control Box Front Cover
4	1430-00	1	PLC A1-12MR
5	1427-06E	1	Relay 24V
6	1415-20	1	Transformer 28/220/380V
	KTF-TA-1	1	Transformer 28/110V
7	KAD-08-02	1	Wire Duct 25 mm x 45 mm
8	KTR-01-12	1	Rectifier SB-358
9	1424-00	2	Fuse Seat
10	KFS-2-20A	1	Fuse 20A 30 mm
11	1425-00	2	Fuse Cover
12	KFS-3-50A	1	Fuse 5A 30 mm
13	1403A-AS5	1	Magnetic Switch MSO-P11/AC24V/2E 3A1B/9-13A
14	1402A-AS1	1	Magnetic Switch AC-24V 1.6-2.6A with Thermal Relay
15	1419-AS2	1	Heater Temperature Adj. (220V)
	1419-AS1	1	Heater Temperature Adj. (110V)
16	1427-05	1	Relay Seat PF-085A

Fig. 15 DRIVE UNIT (85PS)

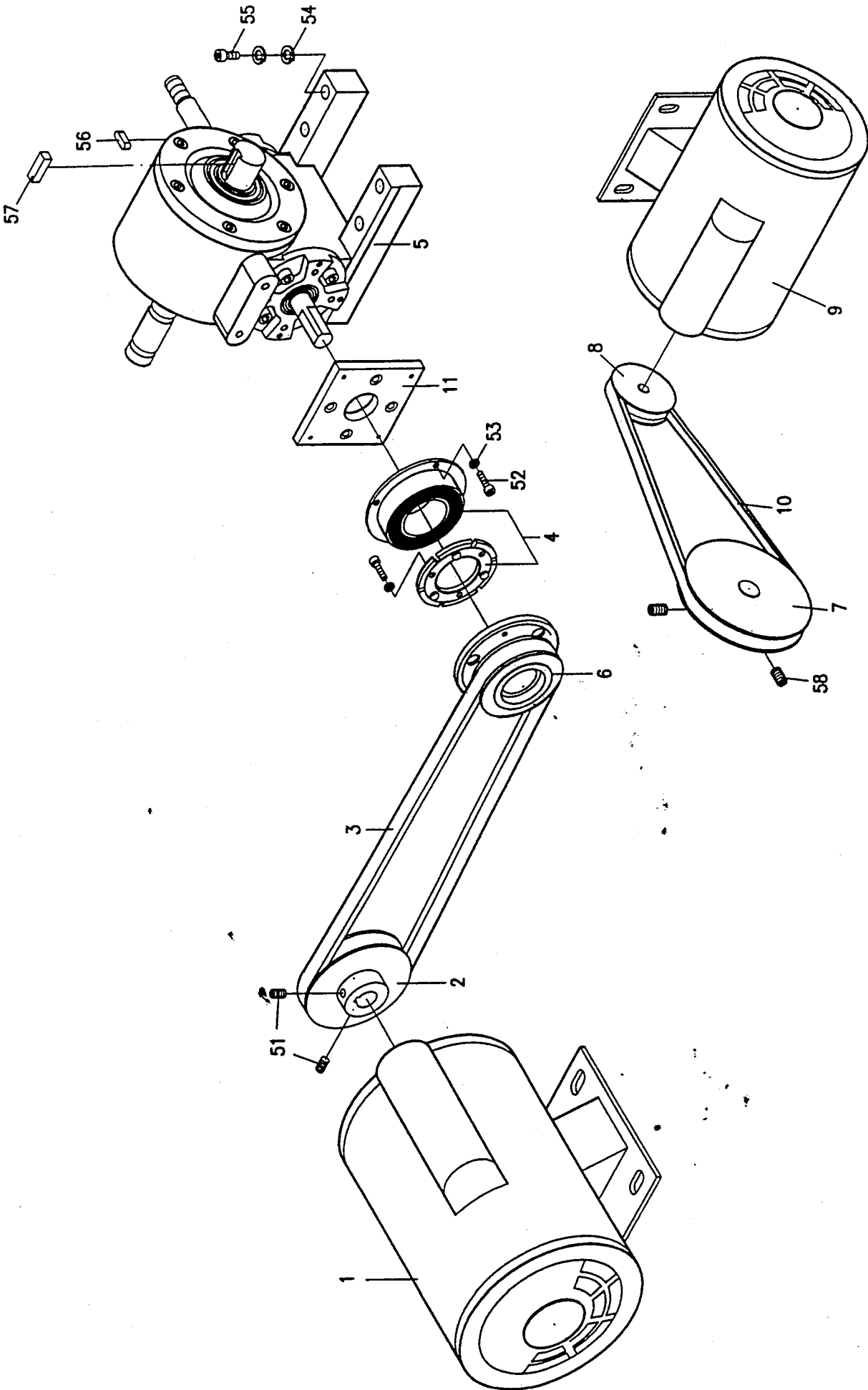


FIG. 15 DRIVE UNIT (85PS)

KEY	PARTS NO.	QTY	DESCRIPTION
1	1301-26	1	Motor 1PH 220V 50HZ 1/2HP
	1301-27	1	Motor 1PH 110/220V 60HZ 1/2HP
2	1302-01	1	Motor Pulley 14 ϕ A72 ϕ
3	0120-21A	1	Belt A-23 (J)
4	0113-01	1	Magnetic Brake 0.8K (T)
5	0119-00	1	Reduction Gear
6	0116-01	1	Reduction Gear Pulley A76 ϕ (60HZ)
7	0706-09	1	Feed Roller Pulley M-100 ϕ
8	1007-00	1	Pulley 14 ϕ M56 ϕ
9	1014-26	1	Motor 1PH 220V 50HZ 1/8
	1014-28	1	Motor 1PH 110/220V 60HZ
10	0120-07B	1	V-Belt M-24(J)
11	0113-00	1	Brake Seat
51	SAEM6X10	6	Flat Screw 6 x 10 x 1.0
52	SLCM5X12R	4	Socket Head Cap Screw 5 x 12
53	SSPWM5R	4	Spring Washer 5 mm
54	SWM8X18X2R	4	Plain Washer 8 ϕ x 18 ϕ
55	SLCM8X20R	4	Socket Head Cap Screw 8 X 25R
56	SSPWM8R	4	Spring Washer M8
57	KEY-7723	1	Key 7 x 7 x 23