INSTRUCTION MANUAL

S L – 2 0 T

S L – 2 5 T

MARUNAKA TEKKOSHO INC.

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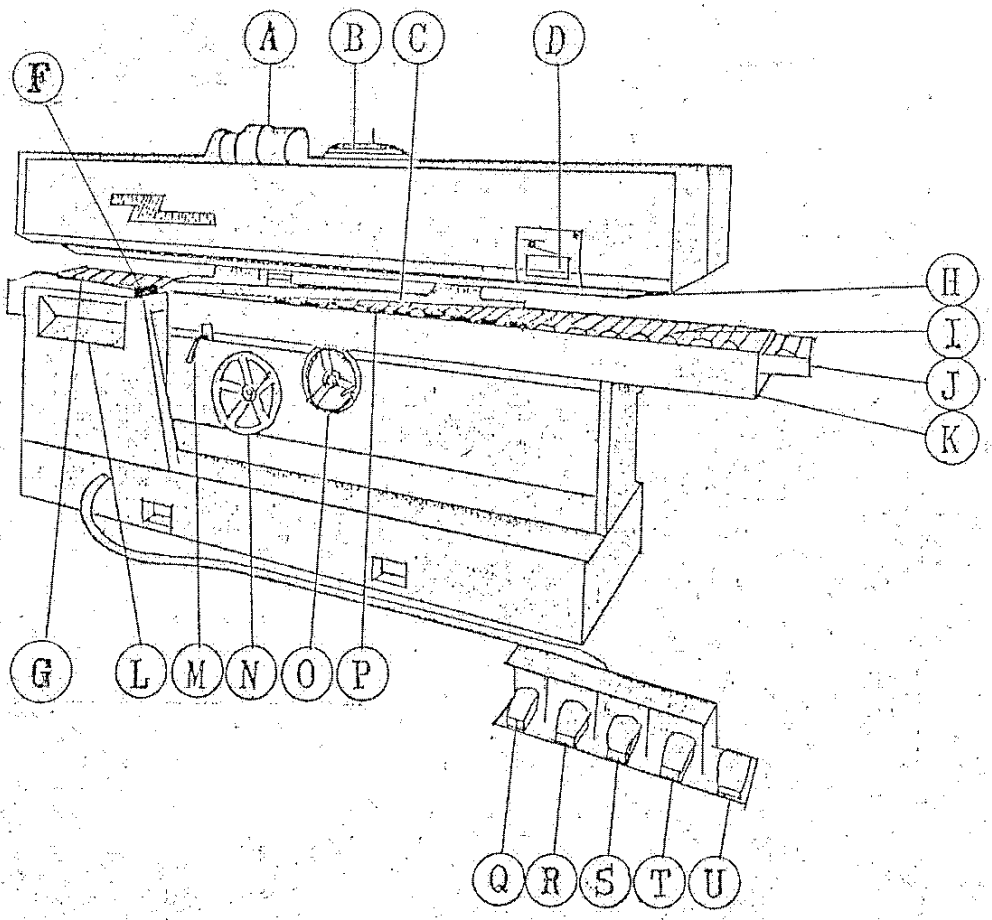
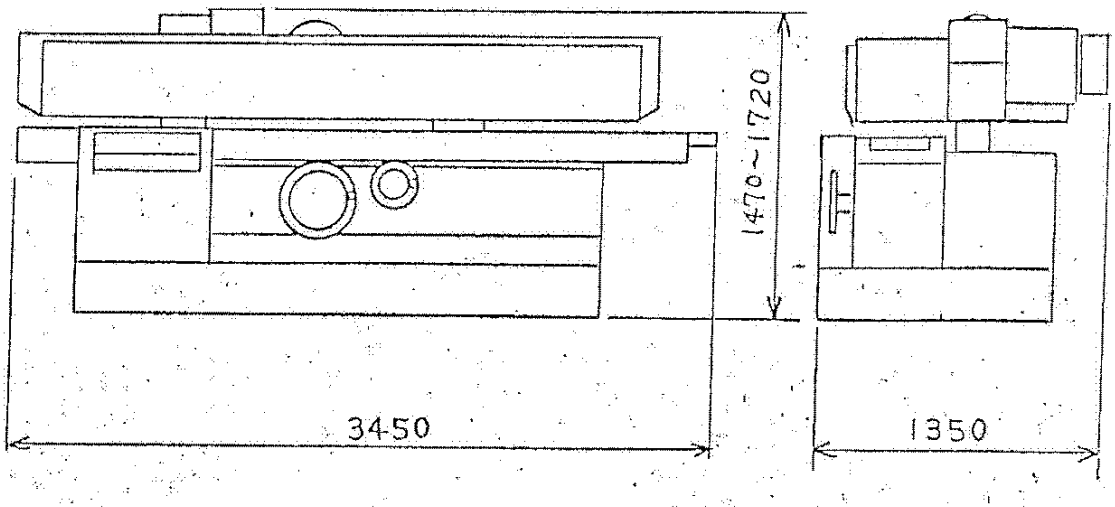
(1) NAMES OF MACHINE PARTS

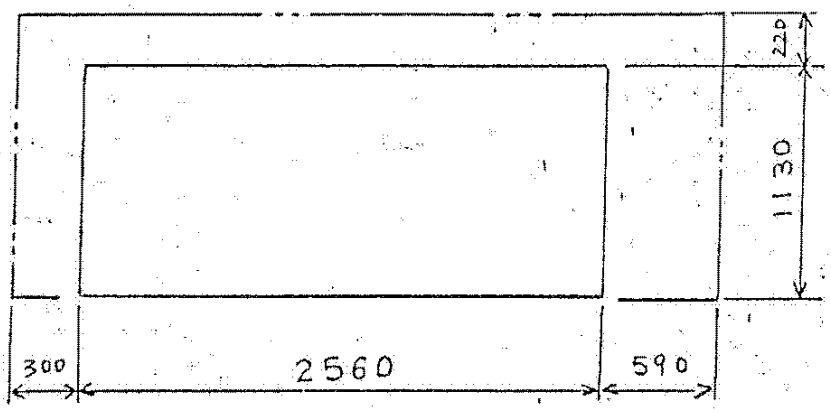


A	HEAD ELEVATION GEARED MOTOR	L	SWITH PANEL
B	FEED MOTOR	M	FIXING KNOB FOR FRONT TABLE
C	KNIFE	N	HAND WHEEL FOR FRONT TABLE UP-DOWN
D	LIMIT SWITCH FOR THICKNESS GAUGE	O	HAND WHEEL FOR FRONT TABLE FRONT-BACK
F	PHOTO SWITCH FOR A.T.C. ONE ACTION	P	GUIDE ROLLER
G	REAR TABLE	Q	HEAD UP
H	FEED BELT	R	HEAD DOWN
I	TABLE ROLLER	S	A.T.C. ONE ACTION
J	WATER TANK	T	FEED ON
K	FRONT TABLE	U	EMERGENCY STOP

(2) DIMENSIONAL DRAWING



(3) INSTALLATION DRAWING



(4)

●Specifications

Model	SL-20T
Feed motor	15KW/4P
Head elevation motor	0.75KWX4P
Work capacity	(flitch size)
max.width	200mm
max.height	250mm
Max.silcing thickness	13mm(depend on material)
Knife bias angle	80°
Table height	830mm
Machine size(W×L ×H)	1400×3000×1750mm
Max.weight	5000kg

Model	SL-25T
Feed motor	18.5KW/4P
Head elevation motor	0.75KW×2/4P
Work capacity	(flitfch size)
max.width	250mm
max.height	250mm
Max.slicing thickness	13mm(depend on material)
Knife bias angle	80°
Table height	900mm
Machine size(W×L ×H)	1350×3450×1470~1720mm
Max.weight	6500kg

(5) Standard Accessories

Ratchet wrench	19×19	1 pc
Special wrench	19	1 pc
Box wrench,30		1 pc
Offset wrench,30		1 pc
Double ended wrench,19×24, 17×19, 19×24		1 pc
Dial gauge with magnet base(unit: 0.01mm)		1 set
Screw driver(+ & -)		2 pcs
L wrench(2.5-10)		1 set
Silicone spray		1 pc
Water stone		1 pc
King stone		1 pc
King Deluxe		1 pc
Tool box		

(6) Lubrication Instructions
The machine must be oiled before operation. Be careful that wood chips or dust are not mixed in the oil.

1) Reduction Gear
Prior to shipment, oil is enough supplied for operation.
If not enough, add gear oil up to the level indecated on the oil gauge. The first oil change should be done after 500 hours operation. Hereforth, oil should be changed every 2,500 hours or after every 6 months' operation. When changing the oil, clean the reduction gear with a cleaning solvent to provide the machine with longer life and higher performance for a long period. The grease for input shaft of the reduction gear is replenished in advance. Grease replenishment is necessary once a year.

	Lubicating Oil			Grease
Atomospheric temp	-1 °C-10 °C	11 °C-35 °C	36 °C-55 °C	-10 °C-55 °C
JIS	Gear Type2 #3	Gear Type2 #4	Gear Type2 #5,#6	Roller Bearing2 #2
Esso	Pen-o-Red EP-2	Pen-o-Red EP-2	EP-3,EP-4	Nebula EP-2
Idemitsu Kosan	Daphne CE Compound #65	Daphne CE Compound #75	Daphne CE Compoud #85-90	Coronex Grease NO.2
Mitsubishi Sekiyu	Diamond #630	Diamond #640	Diamond #650,#660	Diamond-multi-purpose GreaseNO.2
Mobil oil	Mobil Compound BB	Mobil Compound BB	Mobil Compound DD,EE	Mobilux Grease NO.2
Nihon Sekiyu	Bonnoc Lubuicant #2	Bonnoc Lubricant #2	Bonnoc Lubricant #3,#4	Epinoc Grease #2
Shell Oil	Shell Macoma Oil #68	Shell Macoma Oil #69	Shell Macoma Oil#72 #73-#75	Shell Alvania Grease NO.2

2) Geared Motor for Head up-down

The reduction gear of the geared motor, located at the headsupport, is of Grease lubricateion system which requires no replenishment. (The grease should be replanced every 4-5 yeas, or after 10,000 hour's operation.)

3) Column Lubrication

Oil supply port for column is located at the center of head support. Lubricate the column about once a month.

4) Table up-down

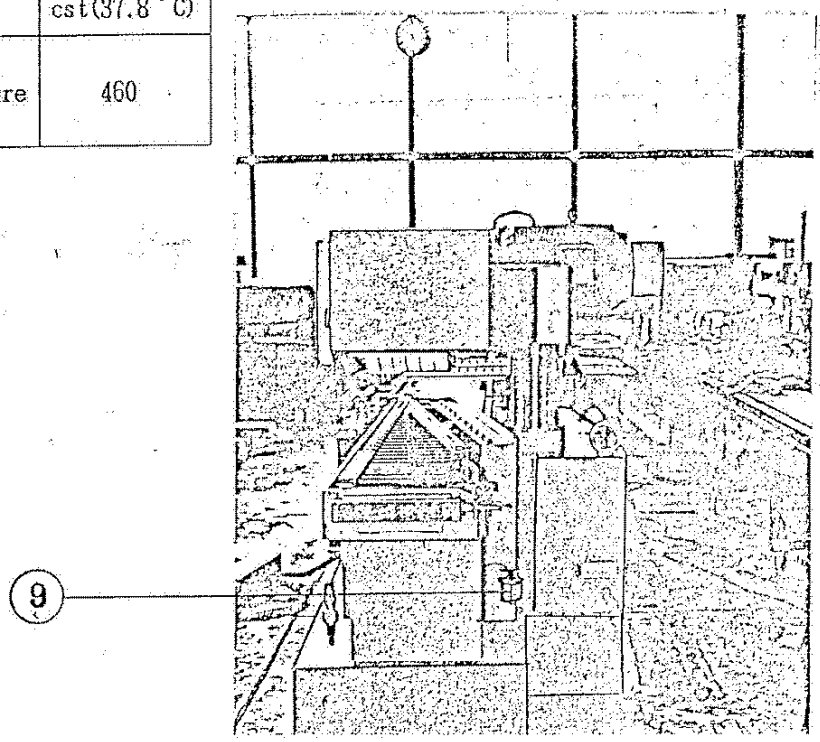
Take off stainless plate, then replenish grease at inner screw and gear.

5) Front-back movement of front table

Oil supply is done by the oil pump at the located back of machine supply enough oil before operation.

6) Lubricate to the screw of head up & down.(9)
Oil supply to the up & down screw, located between the colums is done by the oil-pump, located at the back of machine.
Supply enough oil before operation, otherwise the screw will cause a tuouble of wear and tear.

Specified oil	cst(37.8 °C)
Gear oil incl. extreme pressure additive.	460



(7) Preparation for Oparation

Prior to operation, preparation must be done in the following order. When the machine is used after a long period of non-operation, trial run is recommeded.

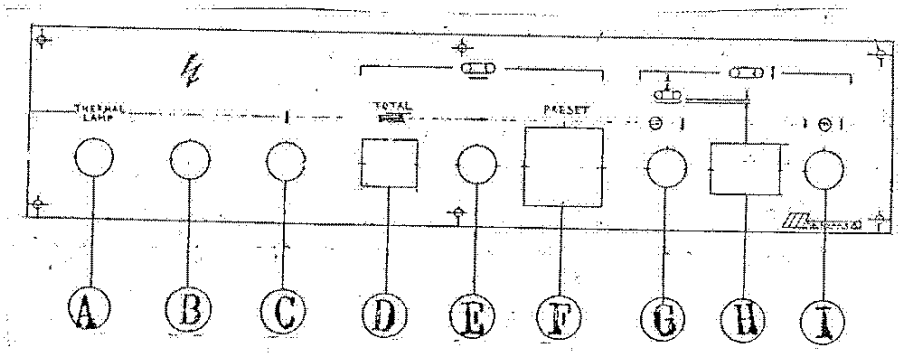
7-1. Preparation for Trial Operation

1 Earth the green lead wire.
2 Connect the lead wire to the power souce.
3 Check the proper insulation.
4 Turn on the switch and check to see the head moves up-down correctly by pressing foot switch.
5 Clean the table and machine.
6 Check the amount of specified lubricant in the reduction gear.
7 Check the feed belt(endless rubber belt) for proper tension.

7-2. Daily Preparation for Operation

1 Keep all tools and materials clear off the machine.
2 Oil all lubrication points.
3 Check the feed belt for proper tension and friction of its surface.
4 Check the proper knife setting and inspect the knife edge for sharpness and for nicks.

(8) Machine Adjustment & Operation



A	Thermal lamp
B	Emergency stop
C	Power on
D	Total counter
E	Reverse switch
F	Rreset counter
G	Index auto-manual switch
H	Index cycle counter
I	Head up-down switch

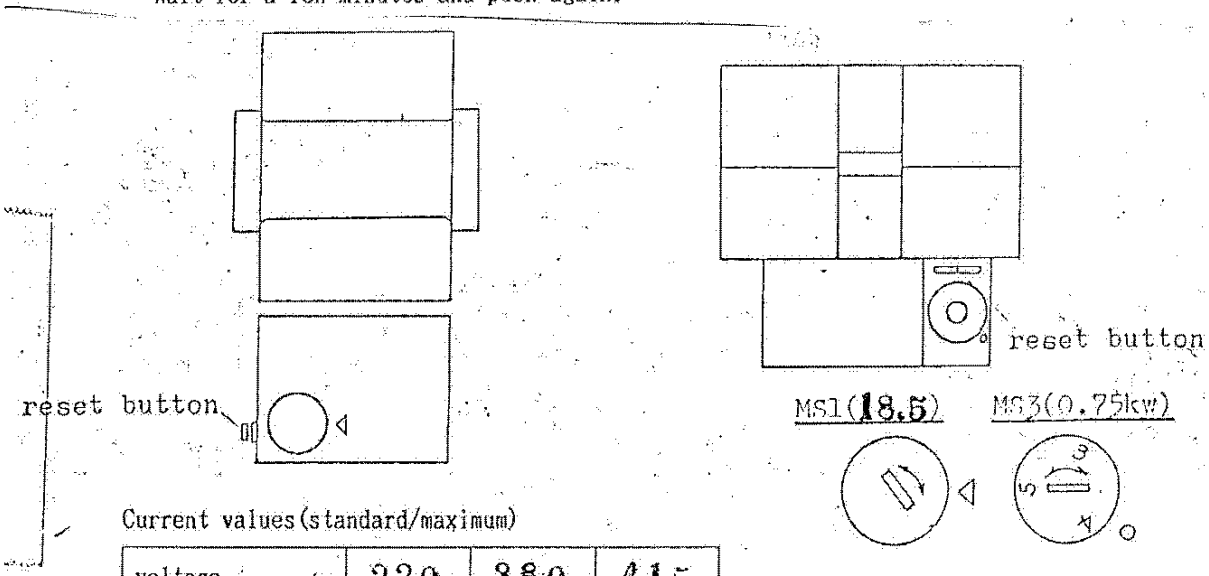
8-1 Switch panel and display device

1) Power source switch(C)
Power source switch located at the panel, when it is push on the lamp(C) is lighted and the machine can be operated. The blown fuse or filament of lamp cause the lamp off. In such case,check the power source,switch amplifer.

2) Emergency Stop Button(B)
Red push button with key is pressed when something abnormal happens during operation or when the operation is to be stopped. When this button is pressed strongly, emergency button is locked. The machine can not be operated again unless the lock is released.

3) Reverse to feed button(E)
Workpiece is reversed to feed with this button(E) pressed. When released, reversing feed belt is stopped. Button(e) must not be pressed during the feed belt is forwarding or during operation. Make sure to press this button after pressing stop button.

4) Thermal Work Lamp(A)
While the thermal work lamp(A) is lighted, either the motor for feed or for the head up-down movement, or the both of them will not work due to over-heating.
Remove the cover of control box at the back side of the case and push the white thermal relay button below the magnet switch.
When the white button is pushed several times and the lamp is still lighted wait for a few minutes and push again.



Current values(standard/maximum)

voltage		220	380	415
Hz		60	50	50
current	0.75KW	3.3	1.9	1.8
	18.5	62	34	33

Remarks; Thermal relay works when the ampere comes up to a set value in white disk of magnet switch.

5) Preset counter(F)
Set this counter according to numbers of flitch to be sliced.
ex.3 flitches Set this counter at 3, then head goes down at every 3 passes - one cycle.
In case flitch number 1, 2, 4, 5, set this counter same way 1, 2, 4, 5.

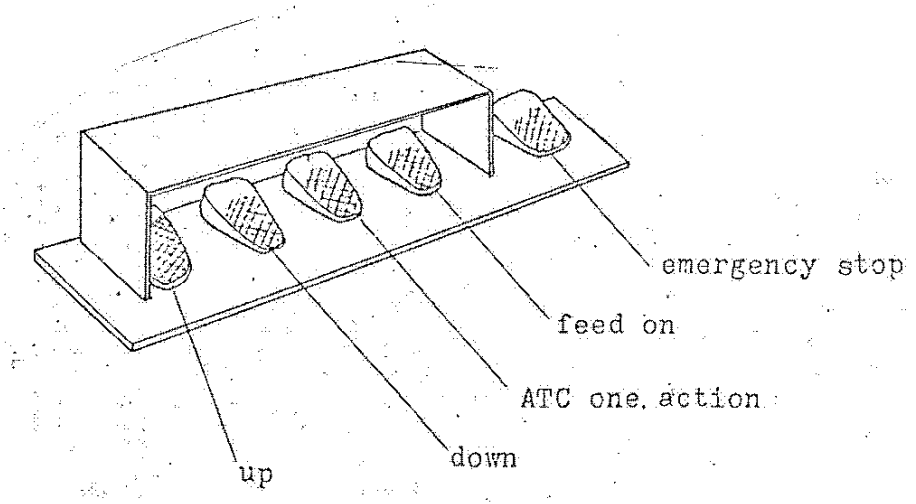
6) Select switch for head down. Auto-Manual.(G)
If this switch set to Auto, head goes down automatically by decided indexing value after the flitch goes through the slicer. If set this to manual, head never goes down.

7) Head indexing set counter (H)
When the select switch for head down is set auto, head goes down automatically by this decided indexing value after flitch go through the slicer machine.
ex. Veneer thickness 3mm. Set this counter 3.0mm then head goes down 3mm automatically after the flitch is sliced.

8) Head up-down switch(I)
Turn this switch left, head goes down and if turn to right head goes up.
This is used at knife replacement.

*Two limit switches are used for head up limit and down limit.

8-2 Foot Switch



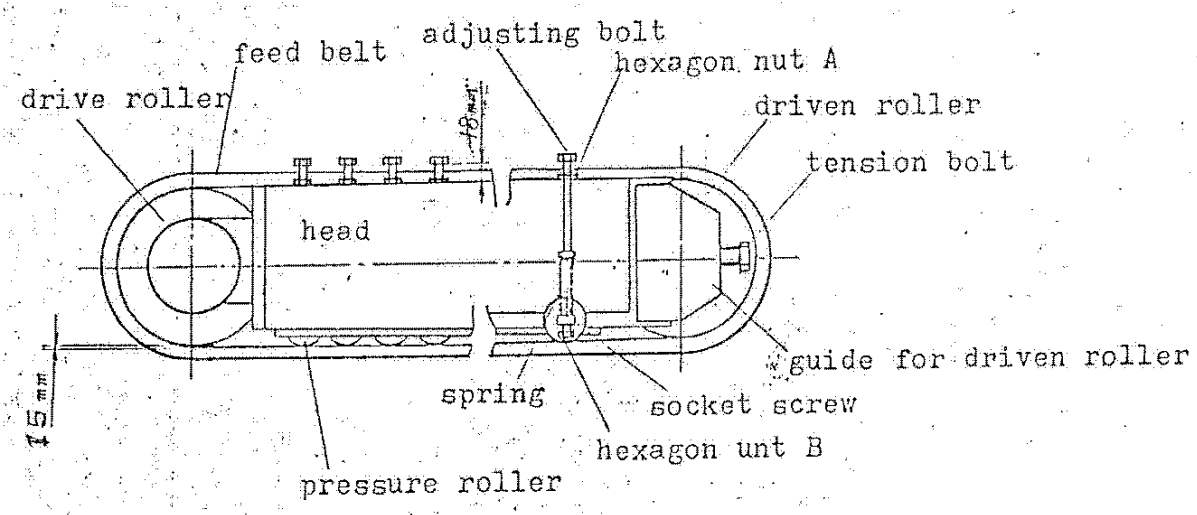
1) "Up" and "Down"
These foot switches control the up and down movements of the head.
It will act during the footswitch is pressed. Limit switch acts at the top and bottom position.

2) ATC(automatic thickness control) One Action
This foot switch, separated from the automatic thickness control, is used for individual thickness control. The head will only drop to a set value of the upper cycle counter on switch panel.
This is used for especially "Manual operation".

3) Feed On
This switch is used to operate the feed belt. To stop, use the "emegency stop" foot switch or emergency stop button on switch panel.

4) Emergency Stop
This foot switch functions the same as the energency stop button on switch panel. Everything will stop by pressing this foot switch.

8-3 Adjustment of Pressure Rollers



To keep the belt surface flat and to press the workpiece evenly, pressure rollers are provided between the drive and the driven rollers. To adjust the pressure rollers, though the adjustment is done prior to the shipment, pay attention under mentioned.

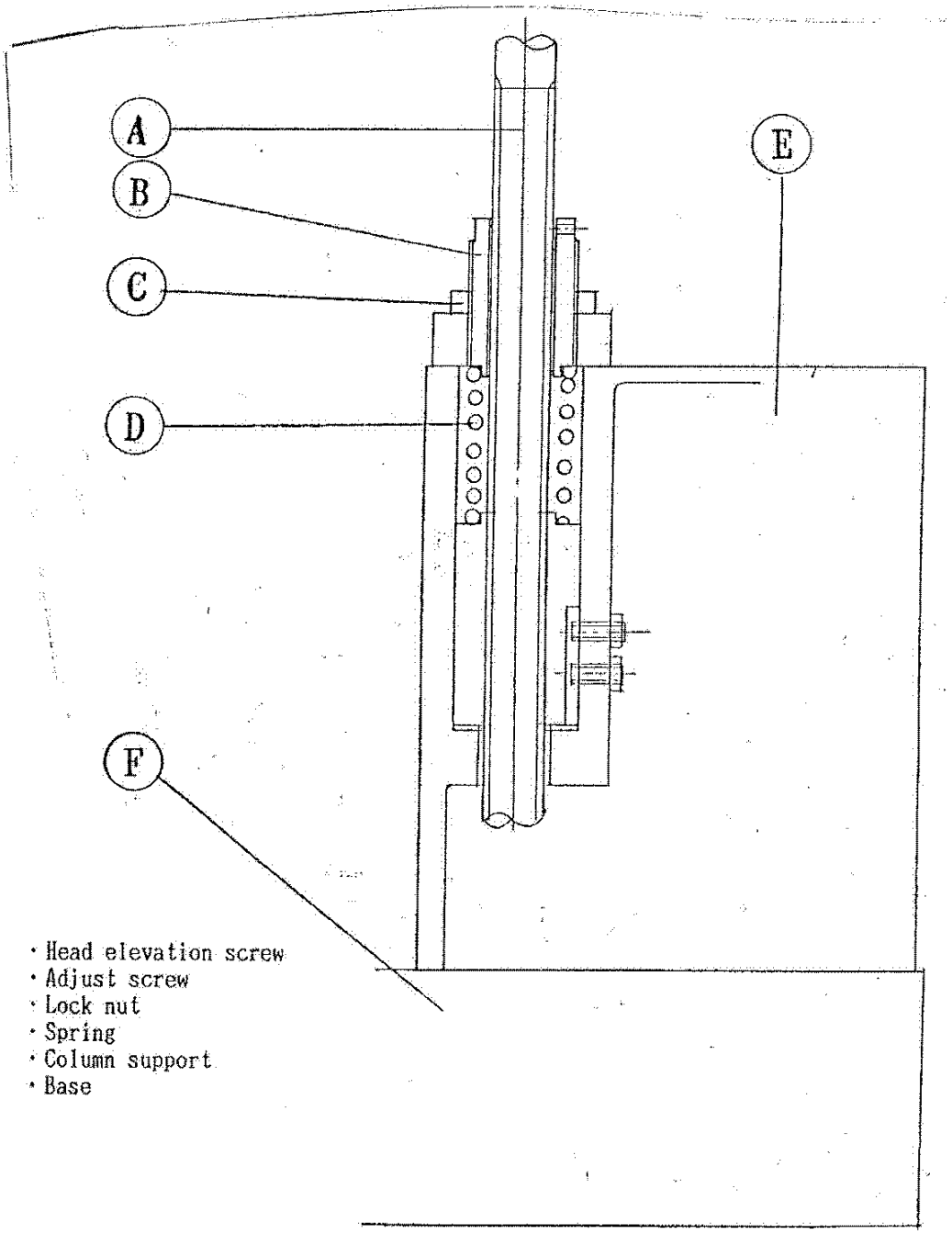
1) Cushion Adjustment of Pressure Rollers
These pressure rollers are held respectively with springs so that the belt will cushion against the workpiece of uneven thickness. To adjust the spring tension, loosen the hexagon nut(A) and turn the adjusting bolt. Clockwise turn is for tightening, and the reverse is for loosening. The proper tension will be obtained when the head of adjusting bolt is 18 mm above from the top of the head. Repeat this on each spring of the rollers and when finishing the adjustment, retighten the hexahon nut(A).

8-4 Head Cushion

Head is supported by spring so that it cushions against the flitch.

So this prevents excess load to the knife. Rigidly supported by two columns, the buffer action on head side operates smoothly without any relation to the weight of flitch.

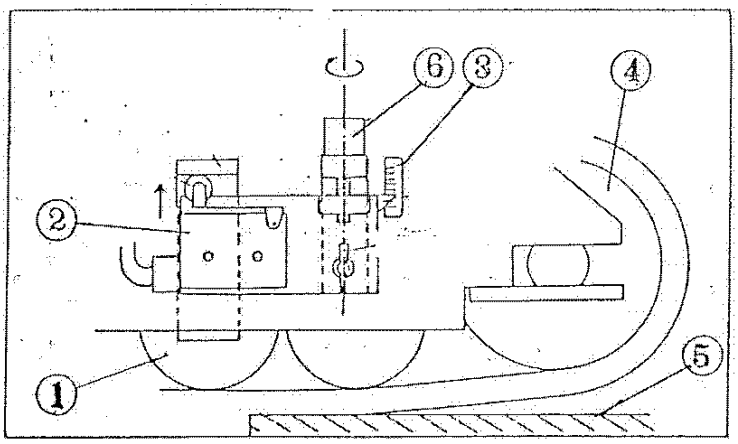
Head cushion can be adjusted by adjusting screw. Clockwise turn makes spring heavy, and counter clockwise turn makes the head cushion light.



A ・Head elevation screw
B ・Adjust screw
C ・Lock nut
D ・Spring
E ・Column support
F ・Base

8-5 Limit Switch For Cushion(Thickness Gauge)

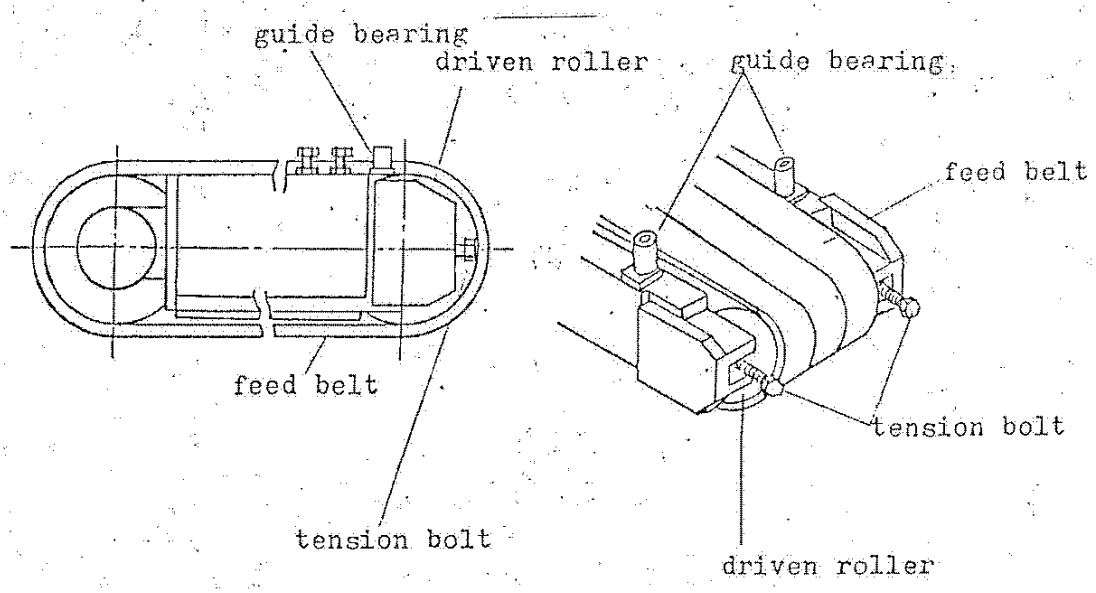
Before operation for proper head cushion, place flitch under the pressure roll(1), then head down until this limit switch works.



1 Pressure rollers
2 Limit switch
3 Scale
4 Driven roller
5 Flitch
6 Adjusting bolt for pressure

8-6 Feed Belt

The feed belt used on this machine is of specially made endlessbelt, composed of the beltcore of synthetic fiber, the outer peripheral of friction proof elastic rubber-and-inner peripheral of wear proof synthetic rubber.



1) Adjusting Feed Belt Tension

The feed belt tension is adjusted with tension bolts on both sides, while belt is operating. The proper tension is obtained when all of the pressure rollers touch the inside surface of the feed belt and begin rotating. The guide bearings are provided on both sides of the drive and driven rollers and its periphery lightly touches the feed belt. This prevent the belt from slipping off and keeps it between the bearings.

2) Correction of the Feed Belt Position

The feed belt should always run true between the guide bearings. When the belt is one-sided to the right, correct it by clockwise turn of the tension bolt located at the right side of the driven roller, and when one-sided to the left, correct it with clockwise turn of the tension bolt at the left side.

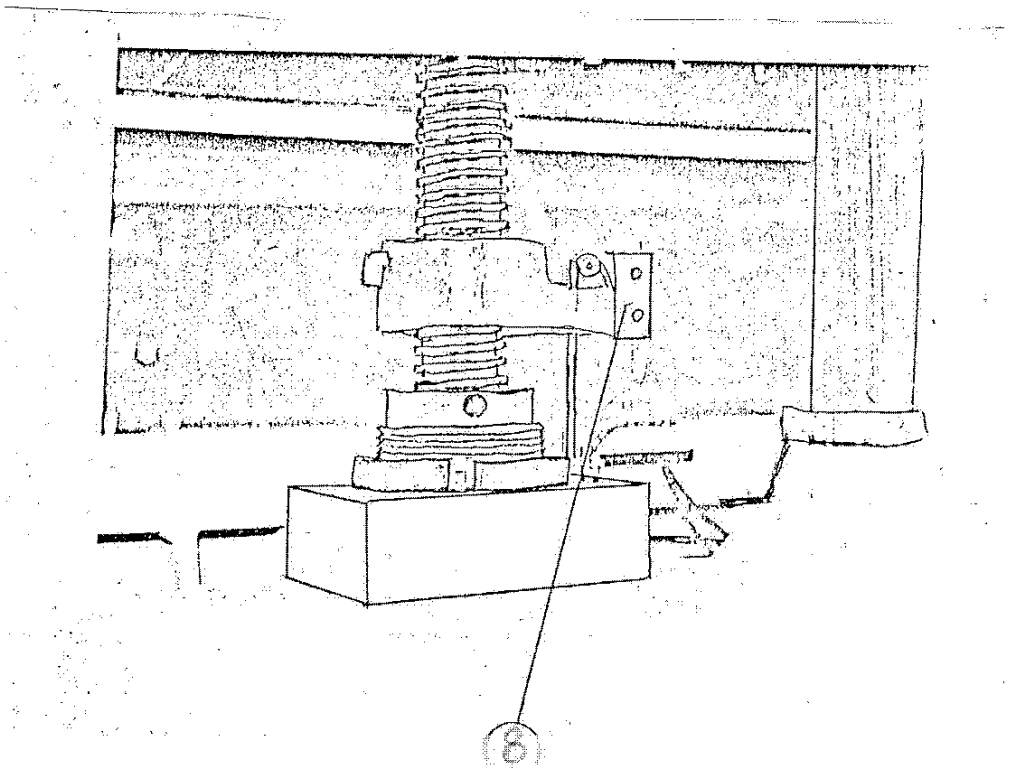
Do it while the belt is operating and adjust the belt tension.

3) Exchange the Feed Belt

To exchange the worn-out feed belt, first remove the left side tension bol t (completely loose right side tension) and push the driven roller towards the driven roller towards the drive roller. In this way, the feed belt can easily be removed. When doing this, be sure to turn off the power source switch.

8-7 Limit Switch for Head Protection(8)

This limit switch works to prevent from head going down when head gives to much pressure against the flitch during operation.

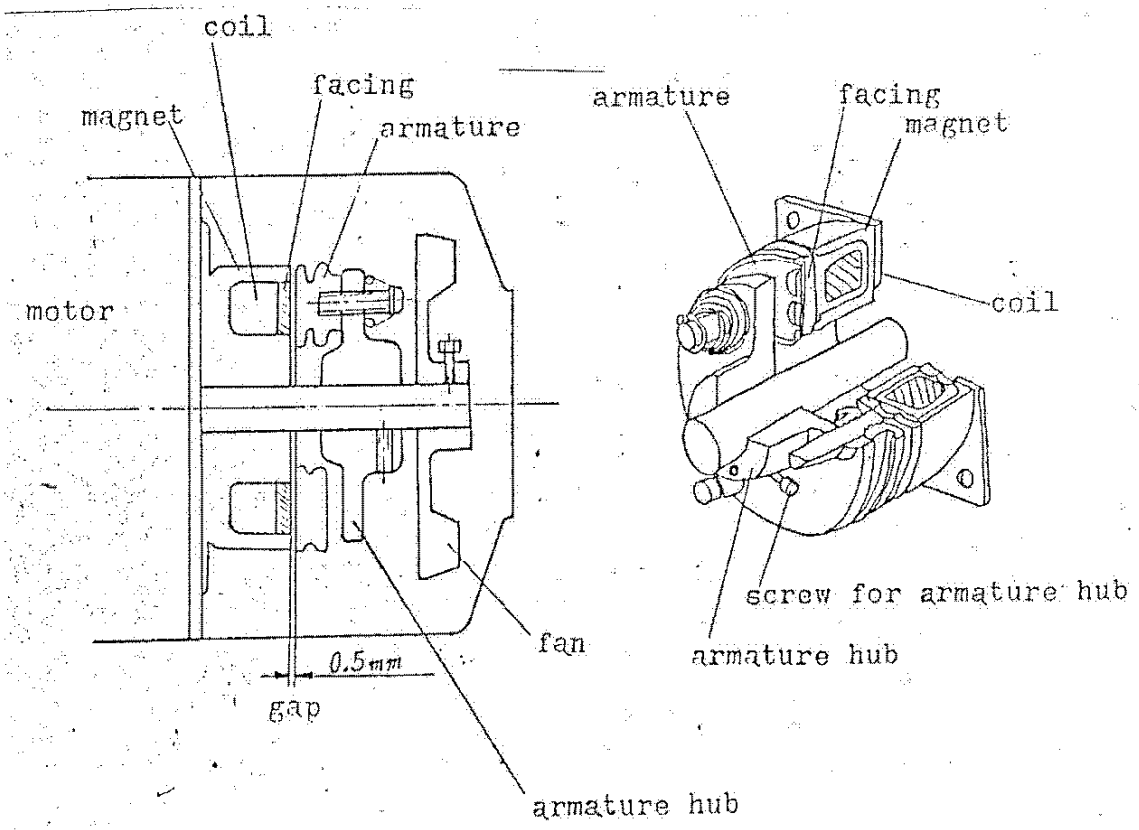


8-8 Brake Adjustment

1) Brake for Head up-down

By removing the motor cover, the brake(as shown on fig. 21)is mounted between the fan and the motor. This brake is used for accurate thickness control and the head is moved to the appointed position.

The gap between the armature and the magnet facing is held 0.2mm. The brake facing and armature will cause friction and the both surface will wear out, the gap will be widening So the brake's effectiveness will decrease gradually. Therefore, after a certain period, or when the intertia of the head becomes great, loosen the screw for the armature hub insert clearance gauge and lightly tap the armature hub so that the gap is adjusted to 0.5 mm. Be sure tighten the screw, after the adjustment is completed.



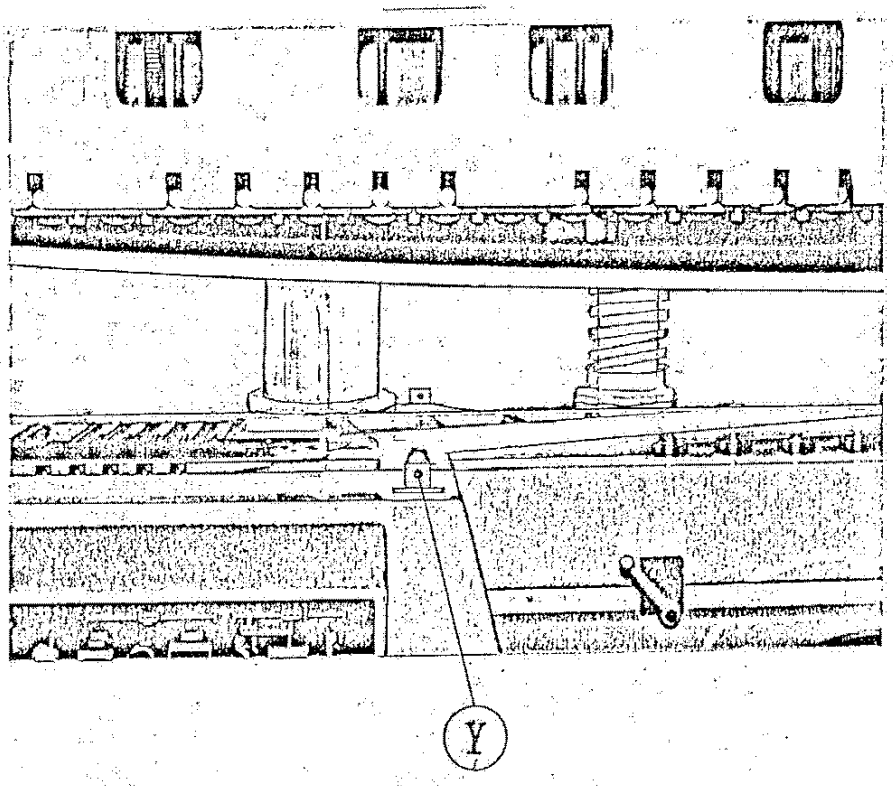
8-9 Adjustment of Workpiece Detector

One set of photoelectric switch is installed to detect the passage of the workpiece.
Unless this works, feed belt does not reverse and workpiece passes through the table.

Adjustment of photo switches is done as follows:

1) One set of photo switch consists of the two switches, light source and receiver.
The former is connected by red shield cable and fixed to the scale on the table.
While the latter connected by gray shield cable is located on the rear table side, and adjustable to up and down and right and left side.

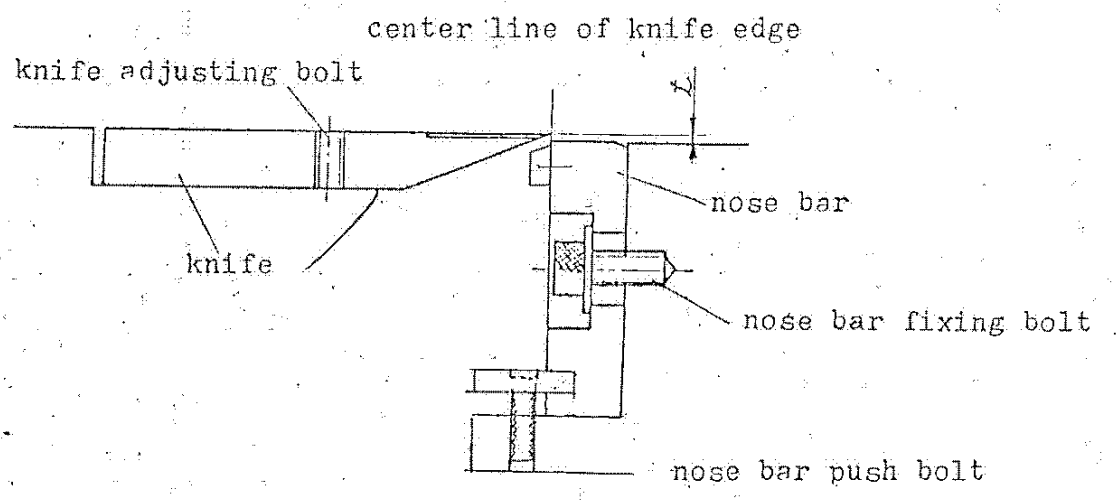
2) Be the optical axis of the photo switches (Y) in a straight line by adjusting the position of the receiver.



9. Knife Handling Instruction

9-1 Knife Setting

fig. 25



To produce fine sheets, knife setting is done as follows.

1) Set so the knife and the nose bar are parallel.

2) Fix the knife lightly with pipe shaped special wrench.

3) Set the highest part of knife edge to the same level with the edge of nose bar by turning handwheel for front table up-down.

4) Level up the lower part of knife edge with the edge of nosebar by knife adjusting bolt. At the same time, knife edge should be set the same level with rear table.

5) Adjust the scale to " 0 " which is located at the side of handwheel (Loosen wing bolt and set the scale " 0 " to the mark.)

6) Turn left the handwheel for front table a little bit lower than the thickness " T " of sliced sheet desired. Then, turn it a little bit right and adjust the scale to " T ".

7) Set the right sided upper cycle counter(H) on switch panel to the thickness " T ".

8) Slice the workpiece and measure the thickness of sliced sheet.
Then adjust the thickness by turning handwheel (minimum measurement is 0.01 mm)
If the sliced sheet has different thickness within one sheet, the thinner part of the knife is moved up by knife adjusting bolt upward and level the knife.
Or if the sliced sheet has interlocked grain(against grain), adjust the gap between knife and nose bar by moving forward the nose bar.

9-1-2 Knife Exchange

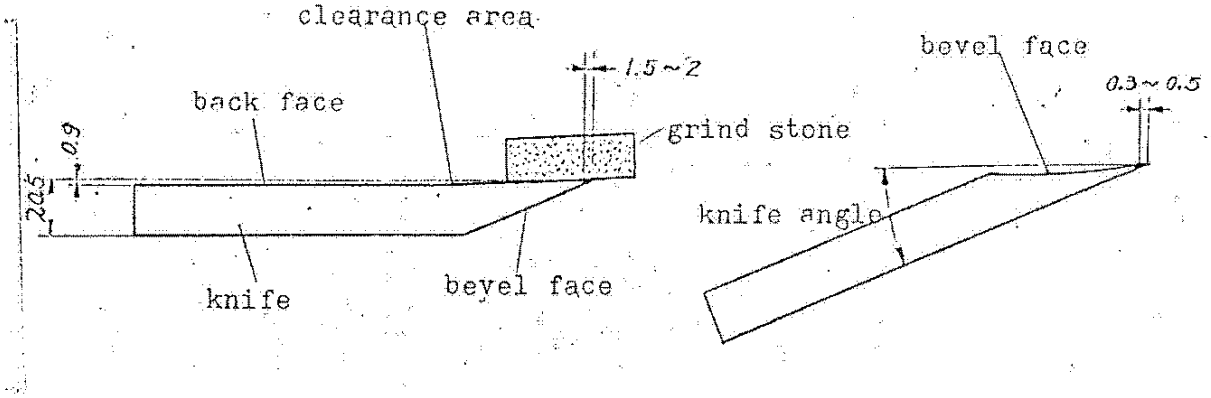
Knife exchange is done as in the following order.

1) Move away the nose bar from the knife edge.

2) Remove the knife fixing bolts.

3) Exchange the knife by lifting the knife. When doing this, be careful to protect knife edge and do it slowly.

9-2 Knife Grinding



To obtain accuracy, the knife should be carefully ground before the setting. Follow the grinding instructions below.

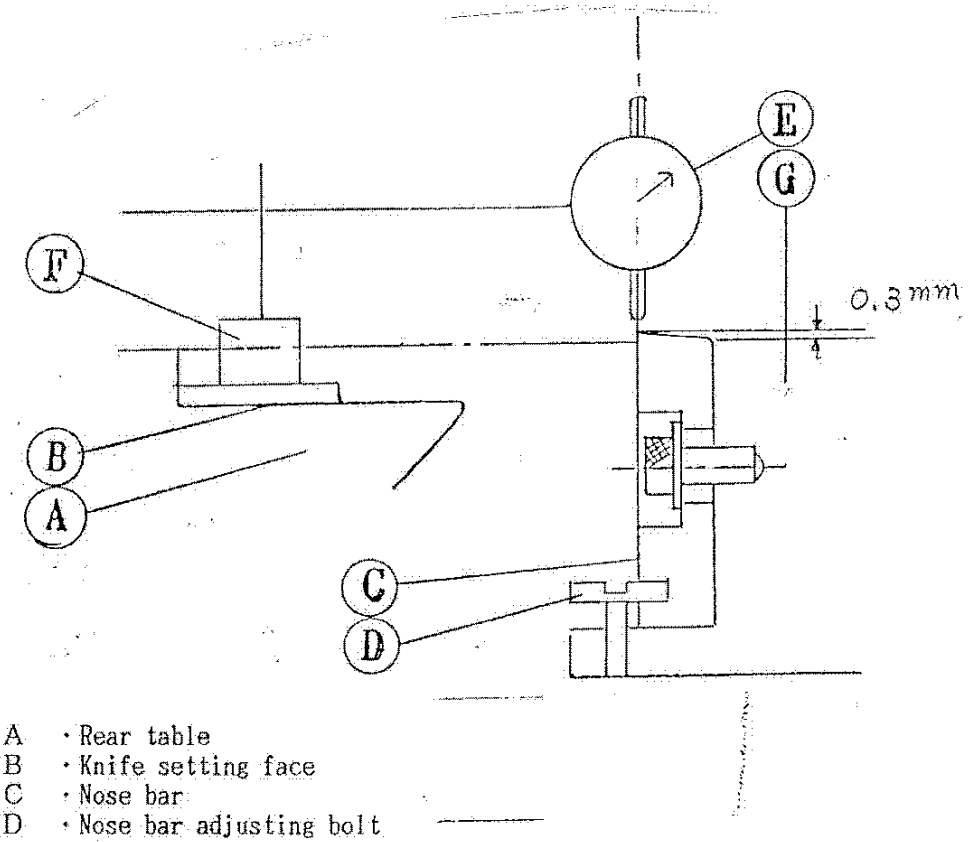
1) Back Face Lapping
Roughly whet the back face along its clearance area with attanced King Deluxe(grind stone), then whet there manually with a water stone. When doing this, be careful not leave grind marks in the area of 1.5 - 2.0 mm in width from the cutting edge.

2) Bevel Face Lapping
Next, the bevel face is worked by the grinding wheel, in case of knife angle 22 °, incline the knife setting bed of grinder to 22 ° and grind the knife so the center of the grinding wheel should be coincided with the center of bevel face. (It is the best way to be in accordance with the previous bevel face. However, the center of bevel face might be changeable accordings to the quality of workpieces.)

3) Bevel Face Lapping Finishing
Finally, lap the bevel edge so that the lapping area becomes 0.3 - 0.5 mm in width and slants at 22 ° to the knife back face. The standard slicing knife angle is specified to 18 °, however,15 °, 22 °,and 28 ° slicing knife angles are available upon request.

9-3 Nose Bar Adjustment

1) When the nose bar edge protrudes, allowable limitation is 0 - 0.3 mm.

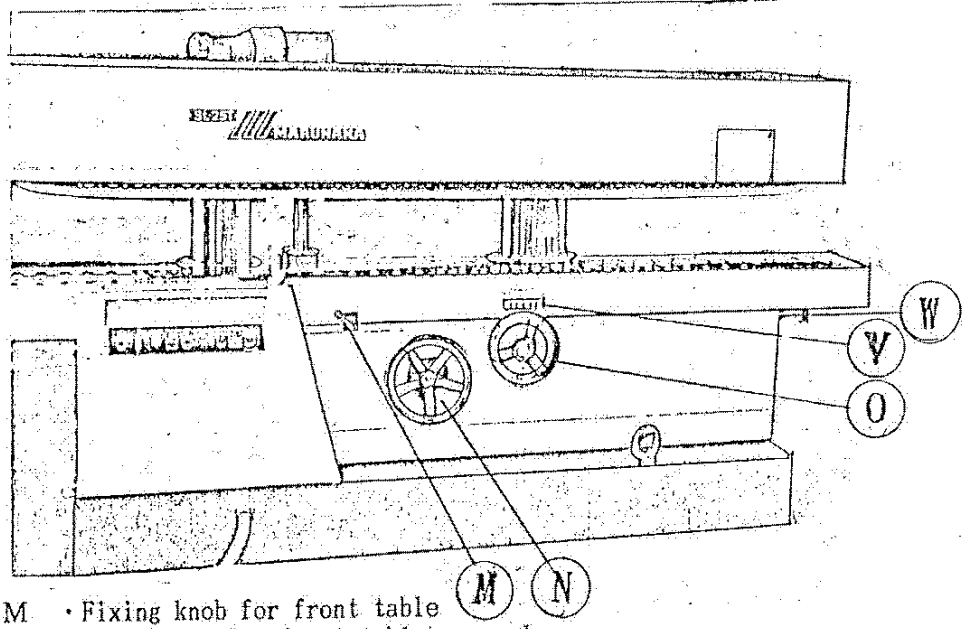


A ・Rear table
B ・Knife setting face
C ・Nose bar
D ・Nose bar adjusting bolt
E ・Dial gauge
F ・Magnetic base
G ・Front table

Nose bar edge should be parallel or slightly protrude in respect to the table face. When the nose bar surface wears out, adjust it by using the adjusting bolt the allowable limitation.
The parallel between the knife setting face and nose bar surface is checked prior to the shipment. When adjusting, the tolerance should be within 0.3 mm.

9-4 Adjustment of Clearance between knife and Nose Bar

The clearance between knife edge and nose bar is adjusted according to material, preprocess of workpiece and slicing thickness.



M · Fixing knob for front table
N · Hand wheel for front table up - down
W · Stopper bolt
V · Scale for nose bar front - back
O · Hand wheel for front table front - back

1) The position of scale(V) means that there is no clearance between knife edge and nose bar when the knife without use is set.

2) To set the nose bar beneath the knife edge, turn the handwheel right(O). Generally this setting prevent the sliced sheet from interlocked grain (against grain).

3) To set the nose bar having clearance with knife edge, turn the handwheel left(O). Generally the feeding smoothness becomes better, while the surface of sliced sheet becomes rough.

Operation Method

1) Move the nose bar beneath the knife. (Handwheel for front table up - down is turned left). (N)

2) Loosen razor fixing knob. (M)

3) Turn the front - back handwheel to the position desired. (N)

4) Work stopper bolt by tightening nut.

5) Tighten the razor.

Note: Usually, set the knife at the position of scale " 0 " .
After setting the knife, lower the table and forward the table, then let the nose bar under the knife. Aim at the stopper bolt and fix the table of advanced position.

10. Bearing Used

Driven roller	6311 ZZ	2 pcs.
Free roller	6216 ZZ 6218 ZZ	1 pc. 1 pc.
Head elevation	6002 ZZ 6009 ZZ 51109 51209	2 pcs. 1 pc. 1 pc. 1 pc.
Guide for feed belt	6301 ZZ	16 pcs.
Pressure foller	6205 ZZ	72 pcs.
Guide on the table	6005 LLU	26 pcs.
Table elevation	51104 51204	3 pcs. 4 pcs.

No.	MARK	MAME	TYPE	MAKER	
1	PROS1	Proximity switch	SH-D12/12	SAMU	1
2	CB1	Breaker	CP-B2PAIM3A	MITSUBISHI	1
3	MB1	Breake	BA-08	NISSEI	1
4	PF1	Power module	HD-110M2	OHSAKI	1
5	SA1-4	Surge suction	UA-SA21	MITSUBISHI	4
6	SA5,9,10	Surge suction	ERZ-C10DK361	MATSUSHITA	3
7	SA6-8	Surge suction	UA-SA21	MITSUBISHI	3
8	SA11,12	Surge suction	ERZ-C10DK361	MATSUSHITA	(2)
9	PB1	Push button	AXW401-R	IZUMI	1
10	PB2	Push button	AH22-GL1W10M	FUJI	1
11	PB3	Push button	AH22-PB10	FUJI	1
12	PL1R	Pilot lamp	AH22-ZRM	FUJI	1
13	SS1	Select switch	AH22-P6B11	FUJI	1
14	SS2	Select switch	AH22-P2B10	FUJI	1
15	LS1-4	Limit switch	D4MC2020	TATEISHI	4
16	FTS1-4	Foot switch	SFL-1 S341103	KOKUSAI	4
17	TB-1	Terminal box	KT80*7+KT15*7+ KT15N*58	YOSHIDA	1
18	TB-1	Trans	PT-3 200V/100V	GOMI	1
19		Digicollar	CLX-002	MUTOU	1

No.	MARK	MAME	TYPE	MAKER	
1	MS1,3	Magnet switch	S-K80	MITSUBISHI	2
2	MS2	Magnet switch	MSO-K80 18.5KW AC200V	MITSUBISHI	1
3	MS4,5	Magnet switch	MSO-KR11 0.75KW AC200V 2*1a2b	MITSUBISHI	1
4	MS6,8	Magnet switch	S-KR11 2*1a2b AC200V	MITSUBISHI	1
5	MS7	Magnet switch	S-K10 AC200V	MITSUBISHI	1
6	CR1,2	Relay	MY-2 AC200V	TATEISHI	2
7	CR3,4	Relay	MY-2 AC200V	TATEISHI	(2)
8	PC1	Programmable control	E-28HR AC200V	HITACHI	1
9	CTR1	Counter	KCB-3N	KOUYOU	1
10	CTR2	Counter	CL-42P AC200V	IZUMI	1
11	CTR3	Counter	MC4-DS	FUJI	(1)
12	PH1	Photo switch	OPE-A	TATEISHI	1
13	PHS1	Photo switch	OPE-S100	TATEISHI	1
14	DIGS1,2	Digital switch	A4PS-206	TATEISHI	2
15	DIGS3	Digital switch	A7PS-206S01	TATEISHI	1

12. Repair and Adjustment

12-1 Bad Feeding

Condition	Cauce	Trouble shooting
A) Stop of the motor	1. The thermal relay is acting The red thermal lamp is lighted. 2. The fuse is blown. The power lamp is off though the electric power is on. 3. The motor roars owing to single phase operation. 4. The motor roars owing to over - loaded.	· Push the termal relay reset button. · Exchange the fuse with new one(3A). · Turn the power source off and check the wiring. · Reduce the slicing load.
B) Slip of the belt	1. The workpiece slips on the feed belt. (Black traces are on the workpiece). 2. The drive roller slip inside the feed belt. 3. The motor rotates but the reduction gear does not act. 4. The motor and the reduction gear act but the drive roller does not rotate.	· Tense the feed belt. Add the pressure. Reduce the slicing load. · Tense the feed belt. Reduce the slicing load. · Tense the V-belt. · Check the chain coupling.
C) Head Cushion	1. The head hardly cushions. (The feed belt is too high). 2. The head cushions excessively. (The feed belt is too low).	· Enlarge the pressure to the workpiece. · Reduce the pressure to the workpiece.
D) Cushion of the head spring	The whole weight of the head falls on the spring because of over-tightening the adjusting screw.	Loosen the adjusting screw, reducing the head weight.
E) Cushion of the pressure rollers spring	The pressure follers slip because the adjusting bolt is not tightened enough.	Tighten the adjusting bolt and intensify the cushion of the pressure rollers.
F) Head traverse	The head does not traverse well.	Clean the columns and lubricate them.
G) Feed belt	1. The belt is likely to slip because its surface is dengenerated and hardened. 2. The feed belt is not adjusted flat. 3. The friction of the belt becomes smaller because of exhaustion of the belt.	· Wipe the surface with a thinner. Grind the surface with a sand paper. · Adjust the belt to be flat · Sand the surface of the belt. Exchange the belt.

H) Troubles with the knife or with setting the knife	1. The blade has " burrs " 2. The blade is chipped. 3. The gap between the blade and the nose bar is too small.	・Grind it again. Exchange the knife. ・Grind it again. Exchange the knife. ・Adjust the gap according to the thickness and the quality of the workpiece. (the thicker, the wider)
I) Inferior workpiece	1. The workpiece has curves or distortions. 2. The workpiece has knots.	Exchange with a superior workpiece.

12-2 Interior Product

Condition	Cause	Trouble shooting
A) The thickness of the product is not even	1. The pressure of the head is irregular. 2. The pressure rollers cushion excessively.	The thickness workpiece is not even. Be careful to get proper pressure. Reset the dial when the product is too thick. Loosen the adjusting bolt of the pressure rollers and weaken the cushion of them.
B) The left & The right parts of the product are diffrent in thickness	Height of knife edge is not even. Nose bar is worn-out.	Adjust the knife projection evenly. Replace with new nose bar.
C) The front and rear parts of the product are different in thickness.	The front part is usually thicker than the rear part.	Weakin the head cushion. (Raise the head) Weaken the head spring cushion. (Tighten the adjusting screw).
D) The product is thicker than the setting on the dial.	1. " 0 "mark of scale for table up-down is not coincide with knife edge. 2. There is a mistake in setting the handle for head up-down movement to " 0 ". 3. Backlash in table up-down. 4. The knife is not suitable for the workpiece. This occurs especially in case of thick slicing of soft-wood.	The indicator and scale are to be coincided. Loosen the bolt and reset graduation to " 0 ". When adjust the table, lower it more than desired values. Then raise it up to the set values. Choose the suitable knife for the quality and thickness of the workpiece. Raise the front table a little.
E) The product has cracks.	1. The edge of the knife is chipped. 2. The blade has " burr ". 3. Waste wood or resin is stuck to blade.	Exchange or grind the knife Remove the dust and sand from the workpiece. Remove them from the knife.
F) Interlocked grain(against grain)	1.The workpiece is too dry. 2.The pre-treatment is unsatisfactory. 3.The knife is not suitable for the workpiece. 4.Poor knife setting.	Treat th workpiece enough in advance of the slicing. Choose the proper knife. Choose prper knife slant angle Adjust the gap between knife and nose bar.

12-3 Troubles with the electric system

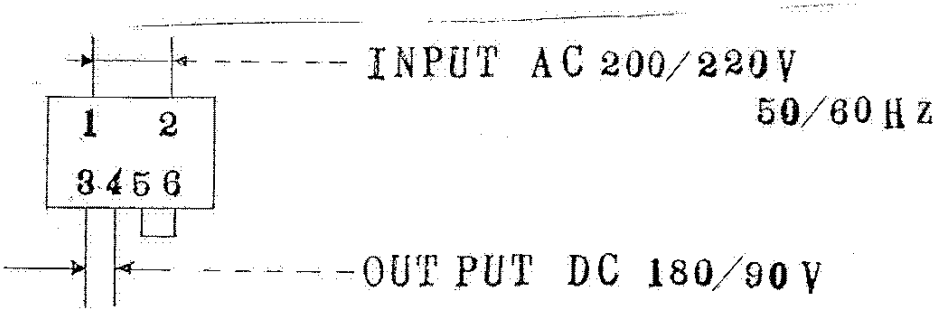
Condition	Cause	Truoble shooting
A) Thickness control does not act at all.	1. The motor for the head up-down movement does not work. 2.Photo switches do not work. 3.The machine works properly when"Auto"operation, but it does not work in case of ATC one action of foot switch. 4. Picking up noise in the power line.	Check the wiring (incl. brake) Check the position of limit switch and wiring. Check the wiring. Exchange the foot switch. Provide the earth.
B) Thickness control does not act in case of particular thickness.	1. The connection of the cycle counter(H) is detached 2. The wiring on the back of theterminal holder furnished with cycle counter is disconnected. 3. Poor diode.	Take the switch panel off and solder the connection. Take the wiring off and solder the disconnected part. Exchange the diode.
C) Thicker slicing than the setting on the counter. (Tolerance is±0.1mm)	1. The workpiece is sliced 2-4mm thicker. (The brake does not act) 2. The brake does not act well. 3. The workpiece is always sliced 0.2-0.3mm thicker than the setting on the dail	Check the wiring. Adjust the brake clearance. Exchange the brake. Check the brake voltage.(DC90V) Adjust the brake clearance. Check the power source voltage Cool the brake. Set the counter reducing the extra thickness.
D) The head descends but does not stop.	1. The red lamp of the cycle counter remains on when the head is moved up and down. 2. There is a trouble with the relay to check the completion of thickness control. 3. Troubles in proximity switch.(Input lamp of cycle counter is not lighted. Check this by moving the head up-down) 4. Bad connection of the socket of cycle counter.	Exchange the cycle couner. Exchange the relay R6. Exchange the proximity switch. Solder the connection.

12-4 Other trouble likely to happen

Condition	Cause	Trouble shooting
A) The feed belt is worn out.	1. The feed belt is worn out partially. 2. The out-side of the feed belt is worn out easily. 3. The in-side of the feed belt is worn out easily.	Supply the workpiece evenly. Change the feeding side of the belt. Tense the belt. Increase the pressure of belt. Exchange the inferior belt. Tense the belt. Hardness of the belt is poor
B) The front table is not on the same level as the blade when the handle is set to the graduation"0		Loosen the wing bolt and adjust the graduation of the handle.

13. Measurement of the Source Voltage

(1) Brake for head up-down movement



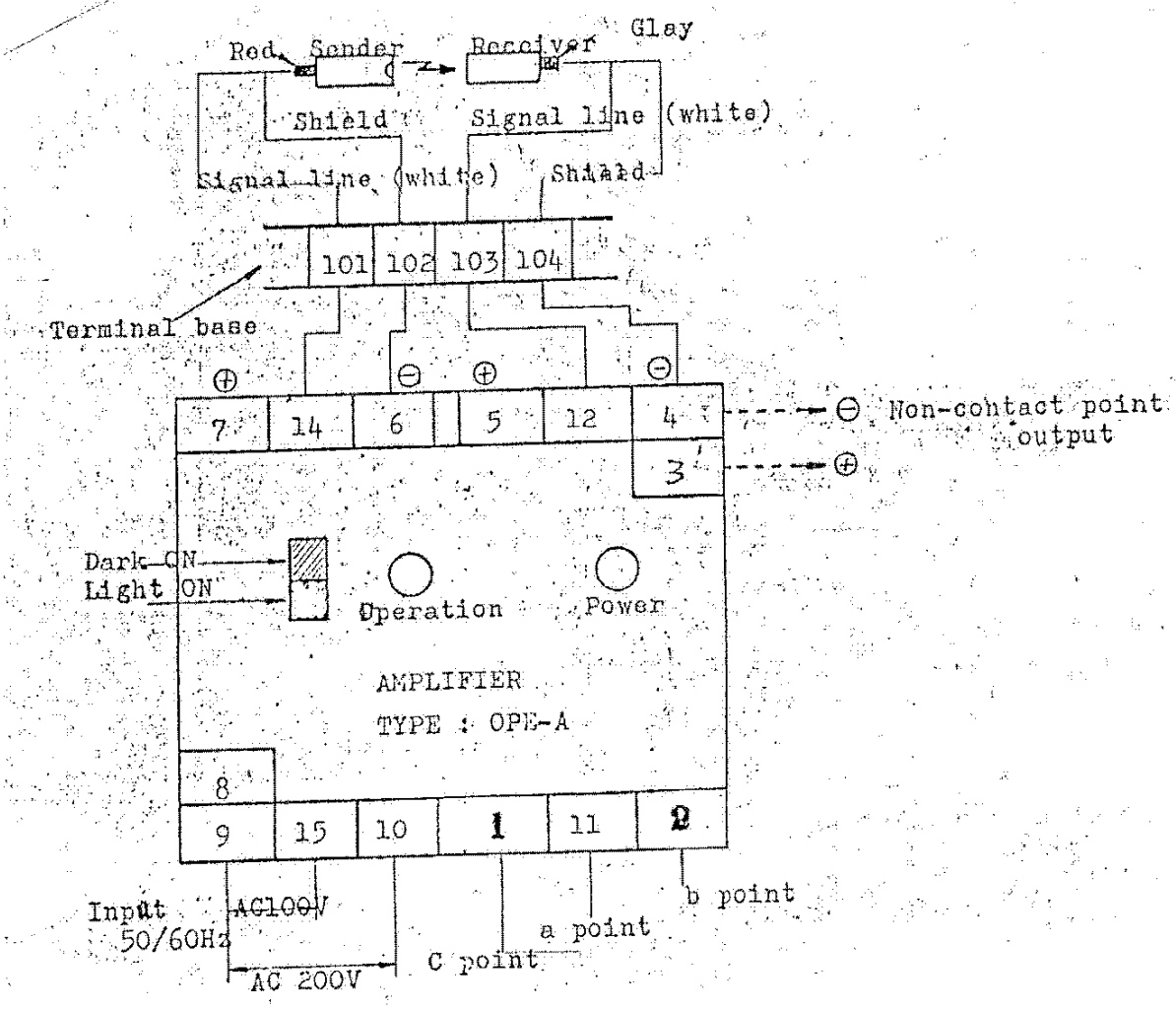
When you measure the output voltage, connect the wire NO.5 to NO.6, (It may go up to DC 180V momentarily).

(2) Amplifier for the photo-electric switch.

1) Maintenance of photo switch
Be careful that dust or oil are not sticked on the surface of the lens. Clean away the dust or oil with soft cloth when it is sticked. (When doing this, be sure to turn off the power source switch)

2) Inspection of photo-electric switch and Amplifier

Open the door located rear side of the base and check the photo-electric switch.



The change-over switch is set to DARK ON (the upper side) as the above. When the power source is on, the power lamp is lighted. In case the OPERATION lamp is also on, its reasons are as follows:

i) There is a workpiece before the photo electric switch, which shades the beam.

ii) The optical axes of the two photo electric switched are not in alignment.

iii) Troubles with the photo electric switch, namely arise from the snapping and short -circuiting of the singnal line of the shielding wire.

(3) How to adjust the optical axes.

The adjustment of optical axes of photo electric switch is very important compornent in order to operate correctry both the photo electric switch and the machine.
The more adjust the optical axes, the more endure against the dust and voltage fluctuation.

Adjust the axes, of photo electric switch in the following way.

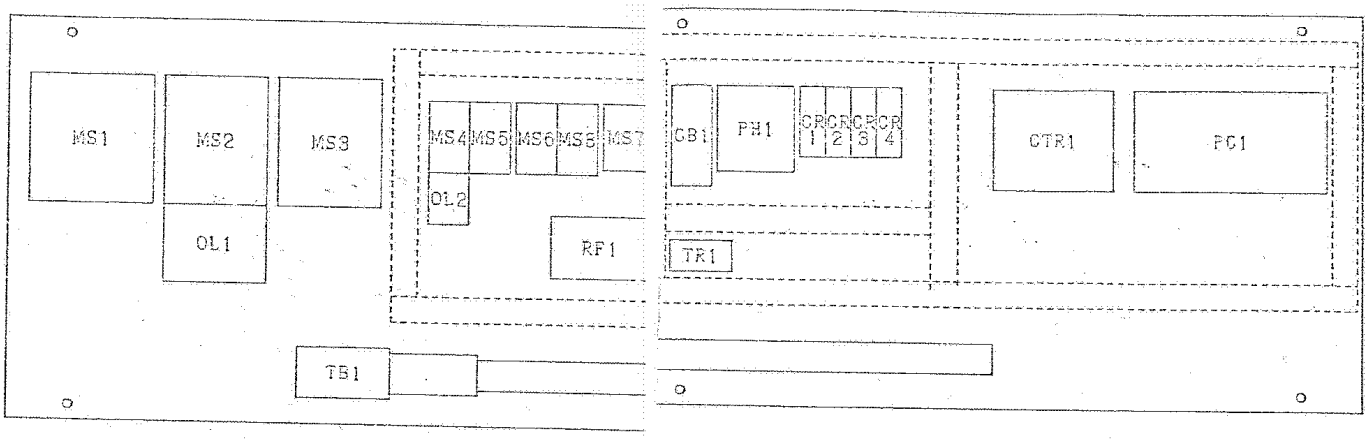
I)Adjust the height and direction of the sender & receiver to the proper position with eye measurement.

II)Set the terminal NO.7(or NO.5)to plus and the terminal NO.6(or NO.4) to minus. (Set the scale of tester to DC 10V range)

III)Adjust the receiver in the direction of up and down and right and left, then fixed the position when the amplifier of tester became maximum. The voltage of tester is about 5.5V-7.5V. Incase the tester dose not vibrate during the adjustment of receiver, adjust the sender again.(5.5V-7.5V is desirable even if more than the half part of the lens is shaded.)

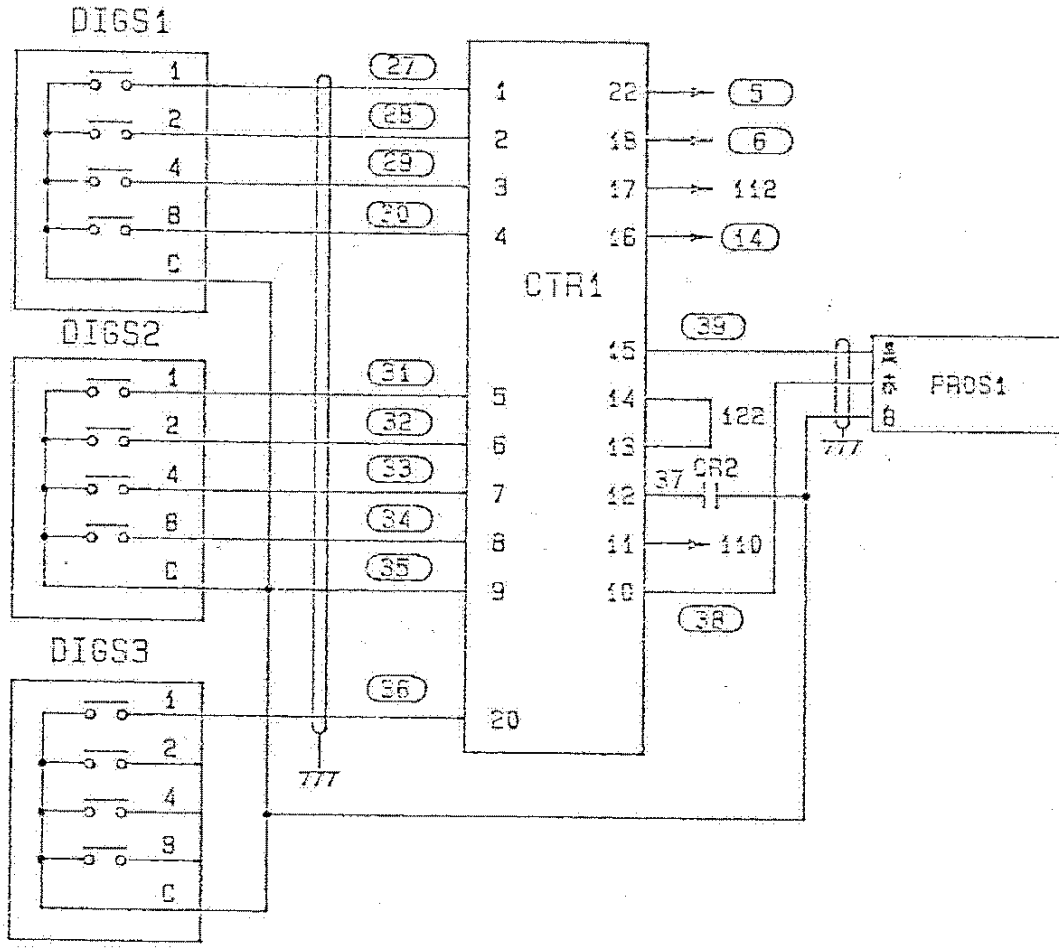
IV)When the surface of sender or the surfac e of receiver is shaded gradually, the index if the tester descend gradually and the OPERATION lamp of amplifier is turn off at approximately 1.8V.

V)When the lens is shaded gredually,the OPERATION lamp is turn off before the index tester does not change, the following causes are thinkable.
a.The wiring became loose. ; Check the wiring
b. The lead wire is likely to snap. ;



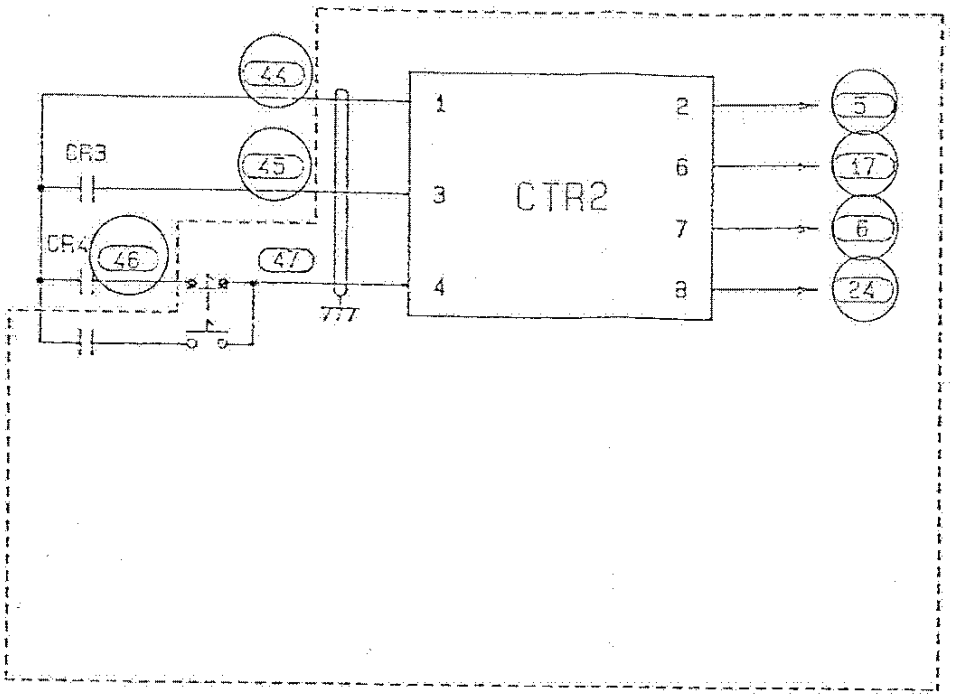
MS1 Magnet switch
MS2 Magnet switch
M3 Magnet switch
M4 Magnet switch
M5 Magnet switch
M6 Magnet switch
M7 Magnet switch
M8 Magnet switch
PF1 Power module(HD110M2)
CB1 Breaker

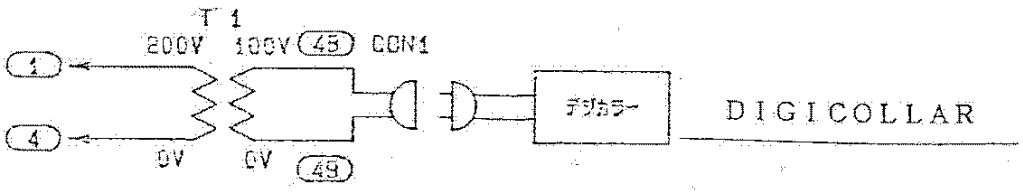
PH1 Photo switch
CR1 Relay
CR2 Relay
CR3 Relay
CR4 Relay
TR1 Trans
CTR1 Counter
PC1 Programmable control
OL1 Thermal
OL2 Thermal
TB1 Terminal box



1 PHOTO SWITCH - [LIGHT SOURCE]

2 PHOTO SWITCH - [RECEIVER]



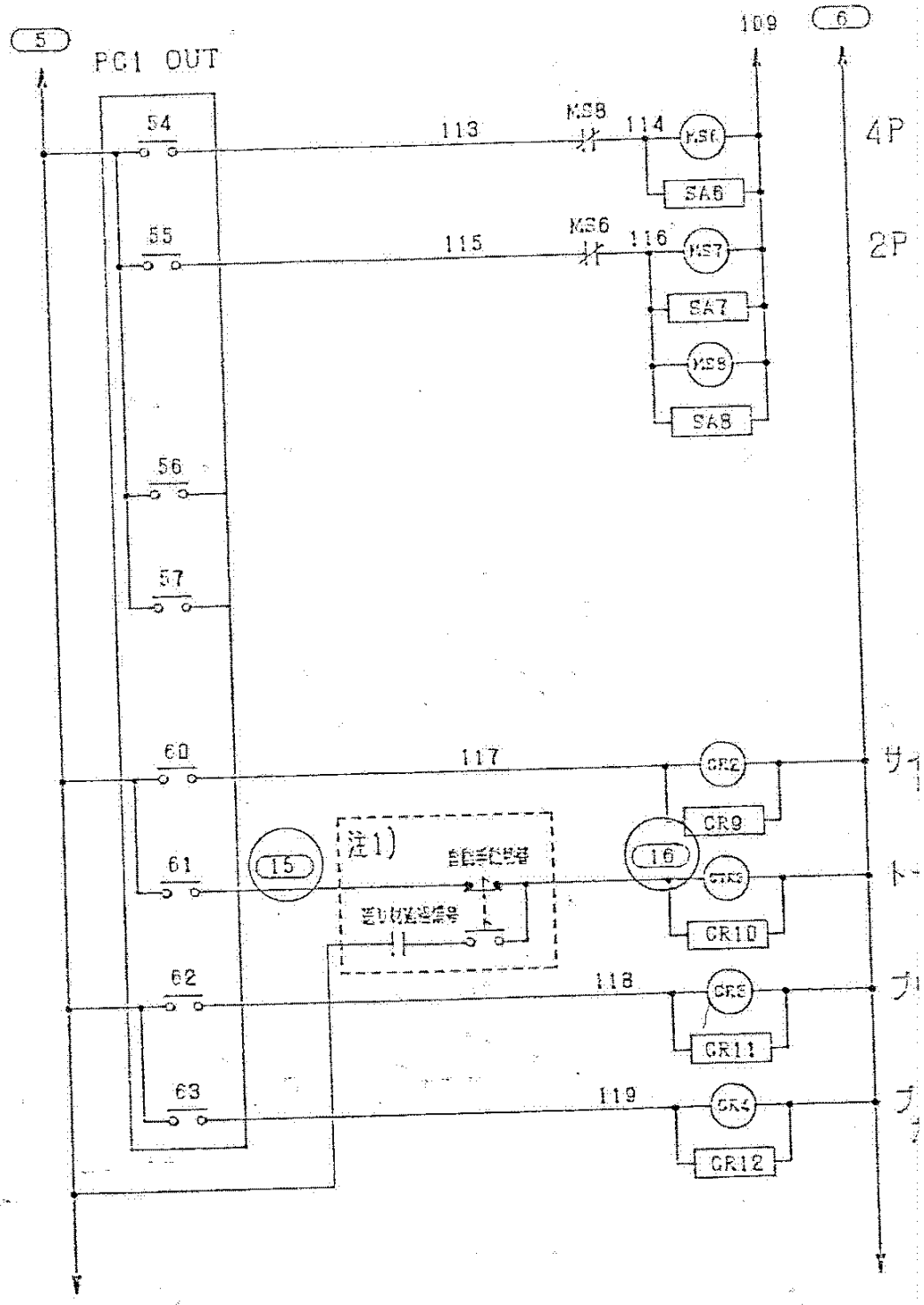


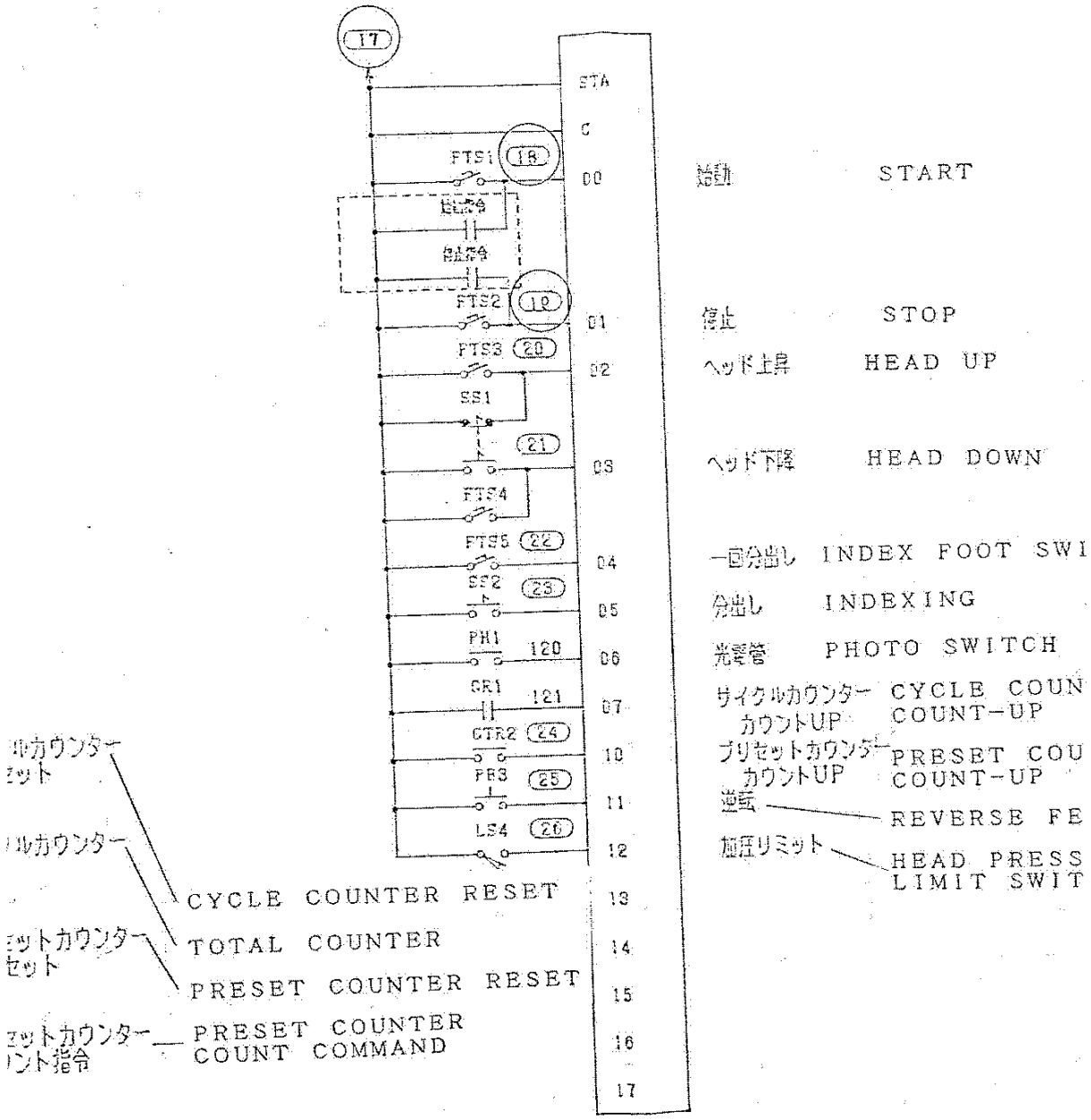
注1) 搬送機付仕様の場合 [ ] は、搬送機側配線を示す。

注2) プリセットカウンター付の場合は、CTR2をスライサーに取り付け 46 と 47 をショートする。

1 WITH CONVEYOR, [ ] INDICATES WIRING OF CONVEYOR

2 IN CASE WITH PRESET COUNTER, PUT CTR2 ON SLICER, THEN CONNET 46 WITH 47


5
PC1 OUT
109
6
54
113
MS5
114
MS5
4P
SA6
55
115
MS6
116
MS7
2P
SA7
MS8
SA8
56
57
60
117
CR2
CR9
61
15
(注1)
16
CR3
CR10
62
118
CR3
CR11
63
119
CR4
CR12



注1) [ ] 内は、搬送機制御盤を示す。

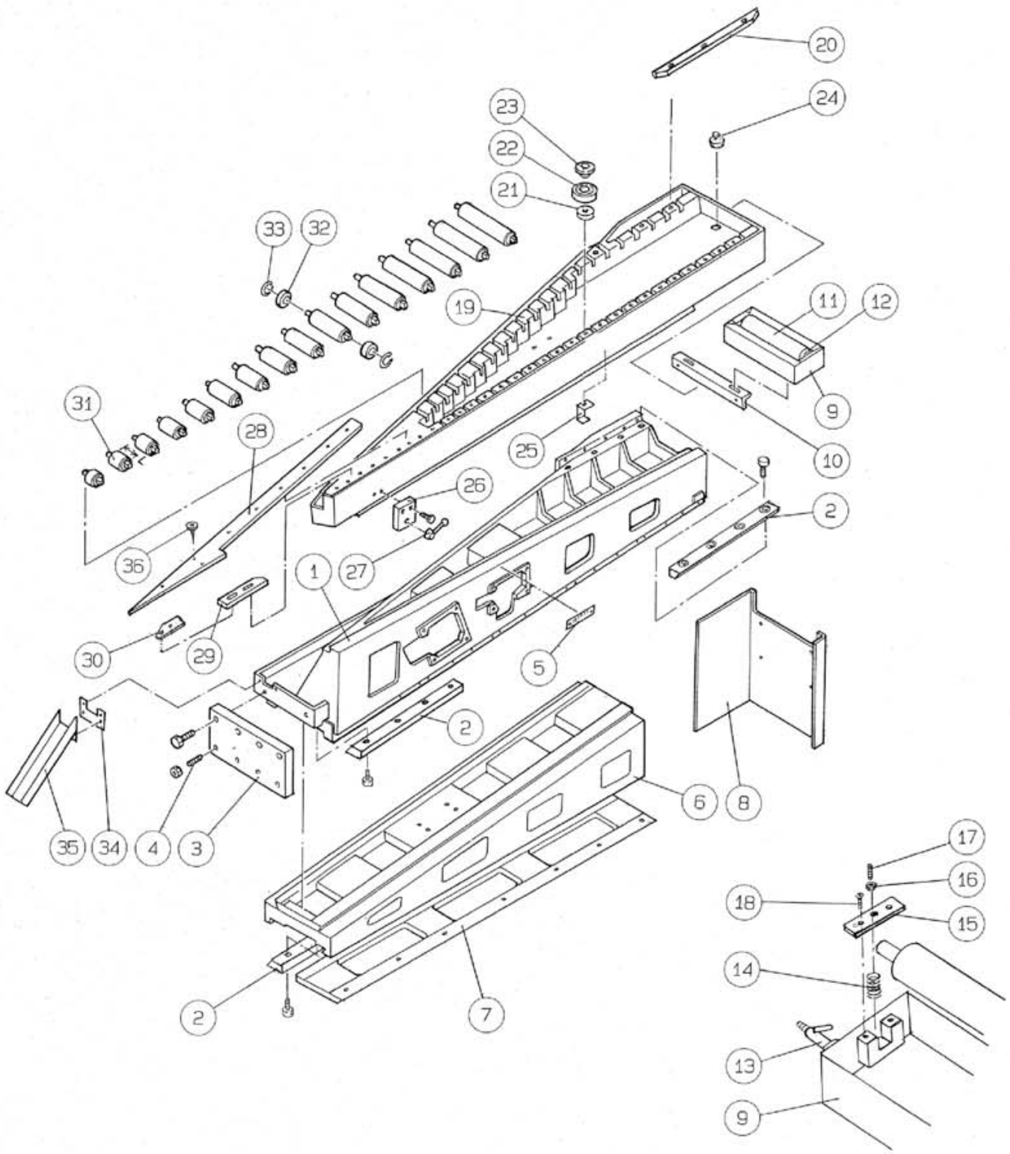
注2) 搬送機付仕様以外の場合は、(15) と (16) をショートする。

INDICATESWIRING OF

PARTS LIST

SLICER SL-25T

MARUNAKA TEKKOSHO INC.



C	B	A	NO.	PARTS DRAWING NO.		PARTS	
			60				
			59				
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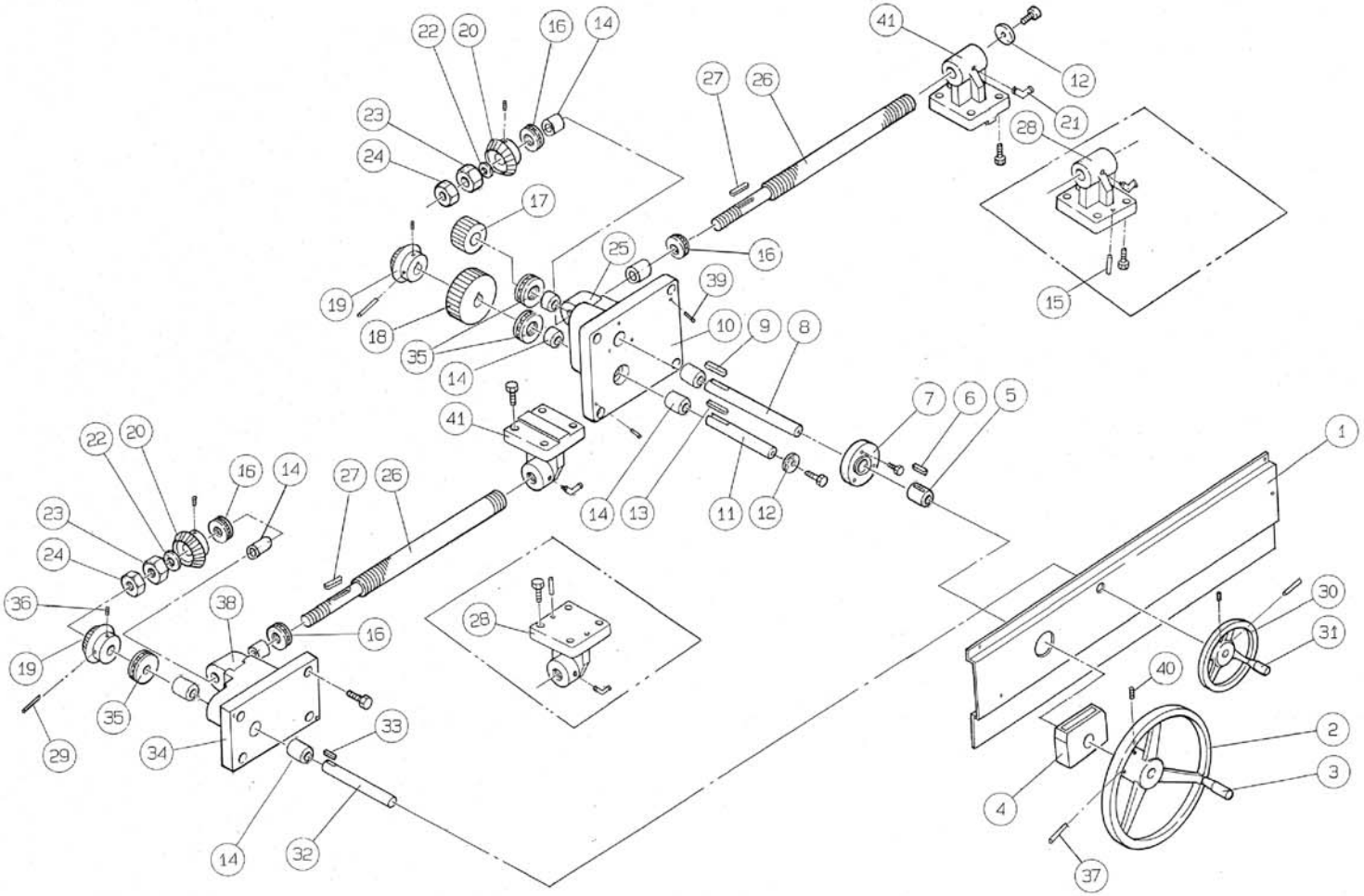
			38				
			37				
		8	36			SCREW	六角穴付ﾎﾞﾙﾄ M6x12ｽﾃﾝ
		1	35	424578	1	DRAIN	ﾄﾞﾚｰﾝ
		1	34	424579	1	DRAIN PLATE	ﾄﾞﾚｰﾝｺﾞﾑｲﾀ
		46	33			STOP RING	Cﾄﾒﾜ S-25
		46	32			BEARING	BB6205LLU
		23	31	306017	1~16	ROLLER (L=37.5~256)	ｶﾌﾞﾛｰﾙ
		1	30	426787	1	PLATE	ｼｷｲﾀA
		1	29	425163	1	PLATE	ｼﾞｮｳｷﾞｲﾀA
		1	26	306071	1	STAINLESS PLATE	ｽﾃﾝｲﾀA
		1	27			LEVER	ｸﾗﾝﾌﾟﾚﾊﾞｰ
		1	26	424192	1	LOCK SUPPORT	ﾛｯｸｻﾎﾟｰﾄ
		1	25	424353	1	INDICATOR	ｼｼﾝ
		1	24			COCK	ｺﾞﾑｾﾝ
		26	23	425150	1	COLLAR	ｶﾗｰ
		26	22			BEARING	BB6005LLU
		26	21	425151	1	COLLAR	ｶﾗｰ
		1	20	332473	1	SCALE	ｼﾞｮｳｷﾞ
		1	19	202612	1	FRONT TABLE	ﾌﾛﾝﾄﾃｰﾌﾞﾙ
		4	18			SCREW	ﾅﾍﾞ小 M5x12ｽﾃﾝ
		2	17			SCREW	HS M6x16ｽﾃﾝ
		2	16			NUT	NT M6ｽﾃﾝ
		2	15	422766	1	STOPPER	ｽﾄｯﾊﾟ
		2	14	422765	1	STAINLESS SPRING	ｽﾃﾝﾚｽｽﾌﾟﾘﾝｸﾞ
		1	13			COCK	ｺｯｸ
		1	12	422345	1	ROLLER SHAFT	ﾛｰﾗｼﾞｸ
		1	11	422344	2	ROLLER	ﾌﾟﾗｽﾁｯｸﾛｰﾗｰ
		1	10	424577	1	PLATE	ﾀﾝｸｳｹ
		1	9	320358	1	WATER TANK	水ﾀﾝｸ
		1	8	425269	1	COVER	ﾏｴｶﾊﾞｰ
		1	7	305989	1	RAIL	ﾚｰﾙ
		1	6	101404	1	WEDGE	ｸｻﾋﾞ
		1	5	424354	1	SCALE	ﾒﾓﾘ
		4	4			SCREW	HS M16x45
		1	3	425189	1	SLIDEWAY SUPPORT	ｶﾐｿﾘｻﾎﾟｰﾄ
		8	2	421586	1	SLIDEWAY	ｶﾐｿﾘA
		1	1	101403	1	TABLE BASE	ﾃｰﾌﾞﾙﾀﾞｲ

MACHINE NO	MARUNAKA TEKKOSHO 株式会社 丸仲鐵工所		APPROVAL	DRAWING
			NISHIMURA	IKEDA
	TYPE	DRAWING NAME	DRAWING NO.	
	SL-25T	FRONT TABLE ASS.	220126	

220127



C	B	A	NO.	PARTS DRAWING NO.		PARTS	
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			42				
	2	X	41	325524	2	FEMALE SCREW	φ30メネジ
	2	2	40			SCREW	HS M8X18
	2	2	39			TAPER PIN	TP 6X35
	1	1	38	443779	2	HOLDER	φ20ジクウケ
	2	2	37			TAPER PIN	TP 6X55
	4	4	36			SCREW	HS M5X10
	3	3	35			BEARING	BB51104
	1	1	34	325523	1	HOLDER	イドウジクウケ
	1	1	33			KEY	キー 6x8x24
	1	1	32	423246	1	HANDLE AXIS	ハンドルジク
	1	1	31			GRIP	ニギリ
	1	1	30	425208	1	HANDLE	φ250ハンドル
	2	2	29			PIN	SP6X50
	X	2	28	304451	2	FEMALE SCREW	φ30メネジ
	2	2	27			KEY	リョウマルキー 6x8x22
	2	2	26	423249	2	SPINDLE	テーブルヨウネジ
	1	1	25	443779	1	HOLDER	φ20ジクウケ
	2	2	24			NUT	ナット 2種 M20
	2	2	23			NUT	ナット 2種 M20
	2	2	22	423247	1	WASHER	サガネ
	2	2	21			OIL JOINT	ツギテ
	2	2	20	424278	2	BEVEL GEAR	ベベルギア
	2	2	19	424278	1	BEVEL GEAR	ベベルギア
	1	1	18	423243	2	GEAR	ヒラハグルマ
	1	1	17	423243	1	GEAR	ヒラハグルマ
	4	4	16			BEARING	BB51204
	X	4	15			TAPER PIN	テーパピンBX40
	10	10	14			BUSH	ブッシュ BCB203020
	1	1	13			KEY	キー 6x6x44
	2	2	12	423299	1	WASHER	サガネ
	1	1	11	423245	1	SUB AXIS	チュウカンジク
	1	1	10	325522	1	HOLDER	クサビジクウケ
	1	1	9			KEY	キー 6x8x18
	1	1	8	423244	1	HANDLE AXIS	クサビハンドルジク
	1	1	7	424277	1	PLATE	デジカラートリックバン
	1	1	6			KEY	キー 3x3x10
	1	1	5	423273	1	COLLAR	カラー
	1	1	4			DIGICOLLAR	デジカラー NCL-3009ヨウ 0.2
	1	1	3			GRIP	ニギリ
	1	1	2	424518	1	HANDLE	φ315ハンドル
	1	1	1	306070	1	PANEL	ハンドルパネル

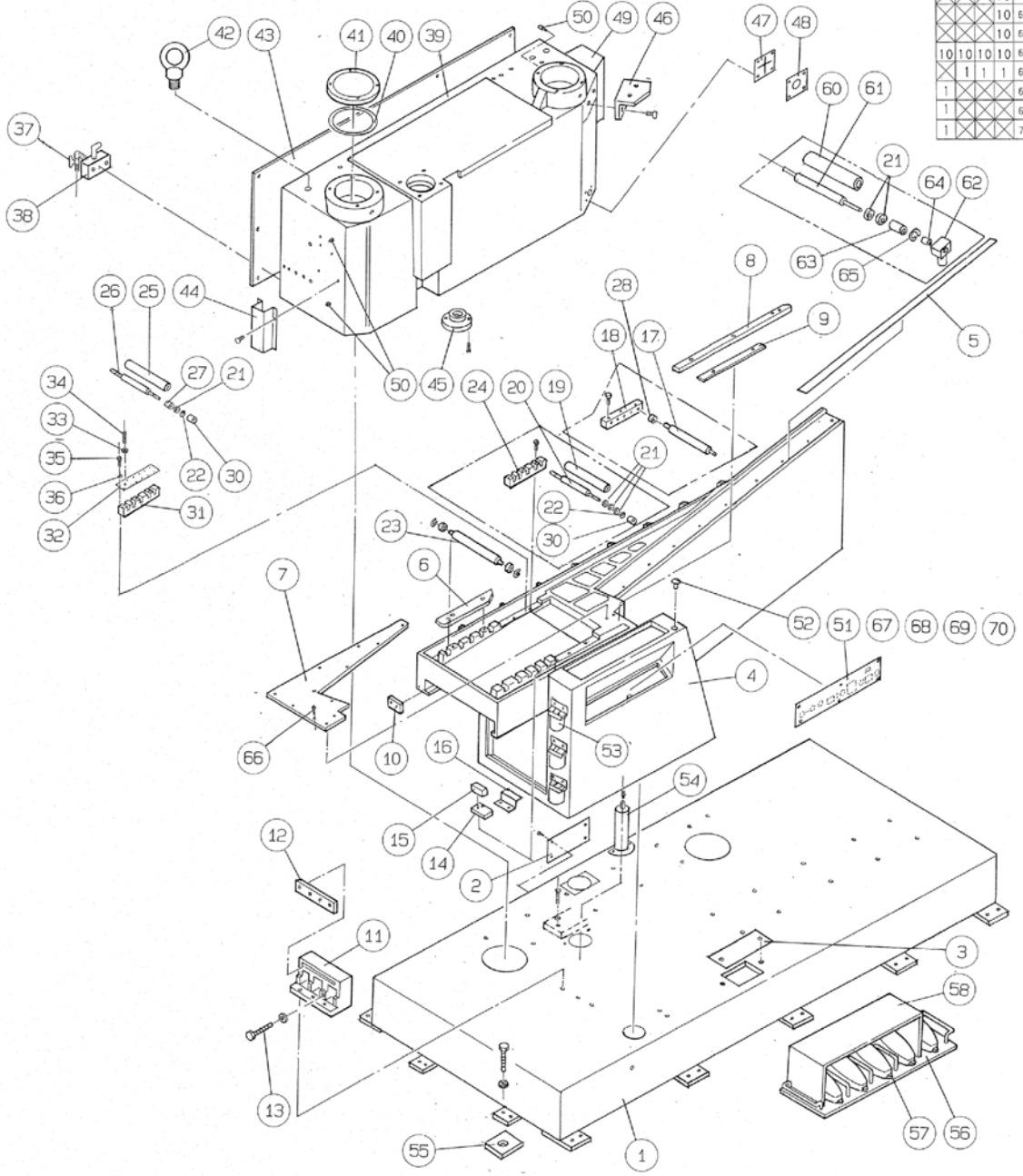
MACHINE NO. NO. 1001~1027 NO. 1028~

MARUNAKA TEKKOSHO 株式会社 丸仲鐵工所

APPROVAL	DRAWING
NISHIMURA	IKEDA

TYPE	DRAWING NAME	DRAWING NO.
SL-25T	TABLE UP-DOWN ASS.	220127

220128



D	C	B	A	NO.	PARTS DRAWING NO.		PARTS	
			5	61	428358	1	SHAFT	ｼﾞｸ
			10	62	428359	1	METAL	ｼﾞｸｳｹ
			10	63		1	NEEDLE BEARING	ﾆｰﾄﾞﾙﾍﾞｱﾘﾝｸﾞ NA4901LL
			10	64	428360	1	WASHER	ｶﾝｻﾞ
			10	65		1	STOP RING	ﾄﾒﾜ BR24
10	10	10	10	66		1	SCREW	六角穴付ボルト M6X12ステン
	1	1	1	67	202394	1	SWITCH PANEL	(NO. 1001~1020)
1				68	325767	1	SWITCH PANEL	(NO. 1021)
1				69	325808	1	SWITCH PANEL	(NO. 1022)
1				70	330873	1	SWITCH PANEL	(NO. 1025, 1026)

				NO.	PARTS DRAWING NO.		PARTS	
			5	60	428357	1	ROLL	φ30ロール
	1			59	428418	2	ROLL SUPPORT	φ30ロールウケ
1	1	1	1	58	404616	2	COVER	カバー
1	1	1	1	57			FOOT SW	フットSW SFEL-1
5	5	5	5	56	404617	1	BASE	フットSWダイ
15	10	10	10	55	420022	1	ANCHOR PLATE	キソイタ
1				54	330964	2	OIL TANK	オイルタンク
3	3	3	3	53			OIL POMP	オイルポンプ EA-3
1	1	1	1	52	431352	1	BUSH	メクラセン
1	1	1	1	51	328203	1	SWITCH PANEL	スイッチパネル
6	6	6	6	50			GREASE NIPPLE	グリスニップル
1	1	1	1	49			BREAKER	ブレーカ
1	1	1	1	48	423323	1	PLATE	トメガネ
1	1	1	1	47	423324	1	GUM PLATE	ハイカンゴムイタ
1	1	1	1	46	427745	1	SUPPORT	サポート
1				45	447834	1	BUSH	アブラトメ
1	1	1	1	44	427748	1	DOG COVER	ドックカバー
1	1	1	1	43	421637	1	COVER	カバー
4	4	4	4	42			EYE BOLT	アイボルト M36
2	2	2	2	41	403505	1	COVER	カバー
2	2	2	2	40			RUBBER RING	スクレーパSDR-180
1	1	1	1	39	101405	1	COLUMN SUPPORT	コラムサポート
1				38	471655	1	VALVE SUPPORT	バルブウケ
1				37			VALVE	バルブ
28				36			WASHER	M5
28				35			BOLT	BT M5x12
10				34			SCREW	トメネジ HS M5x5ステン
10				33			NUT	ナット3種 M6
2				32	447579	1	PLATE	アテイタ
2				31	447578	1	ROLL SUPPORT	φ30ロールウケ
10	10			30	447552	1	COLLAR	カラー
		1		29	306604	2	ROLL SUPPORT	φ30ロールウケ
		10		28			OILLESS BEARING	SPF1320
10				27			NEEDLE BEARING	ニードルベアリング NA4901R
5				26	447551	1	ROLL AXIS	φ30ロールジク
5				25	447550	1	ROLL	φ30ロール
	1			24	428418	1	ROLL SUPPORT	φ30ロールウケ
5	5	5	5	23	306017	16	ROLL	カブロール
10	10			22			OILESEAL	オイルシール TC-15257
10	30		20	21			BEARING	BB6901LLU
	5			20	428416	1	ROLL AXIS	φ30ロールジク
	5			19	428415	1	ROLL	φ30ロール
		1		18	306604	1	ROLL SUPPORT	φ30ロールウケ
		5		17	426785	1	ROLL	φ30ロール
2	2	2	2	16	424626	1	COVER	カバー
1	1	1	1	15			PHOTO SWITCH	光電スイッチ E3R-5E4
2	2	2	2	14	429331	1	PLATE	コウデンスイッチプレート
1	1	1	1	13	422595	1	STOPPER BOLT	ストッパボルト
1	1	1	1	12	421685	1	SLIDEWAY	ヒラカミゾリ
1	1	1	1	11	306023	1	WEDGE STOPPER	クサビストッパ
1	1	1	1	10	427721	1	STOPPER	ストッパ
1	1	1	1	9	426788	1	BASE PLATE	シキイタB
1	1	1	1	8	426786	1	GUIDE	ジョウキ
1	1	1	1	7	426789	1	STAINLESS PLATE	ステンイタB
1	1	1	1	6	332475	1	REAR GUIDE	リアジョウキ
1	1	1	1	5	431651	1	BASE PLATE	ハモノシキイタ
1	1	1	1	4	104428	1	REAR TABLE	リアテーブル
1	1	1	1	3	473625	1	BASE COVER	ベースカバーB
1	1	1	1	2	473624	1	BASE COVER	ベースカバーA
1	1	1	1	1	106184	1	BASE	ベース
D	C	B	A	NO.	PARTS DRAWING NO.		PARTS	

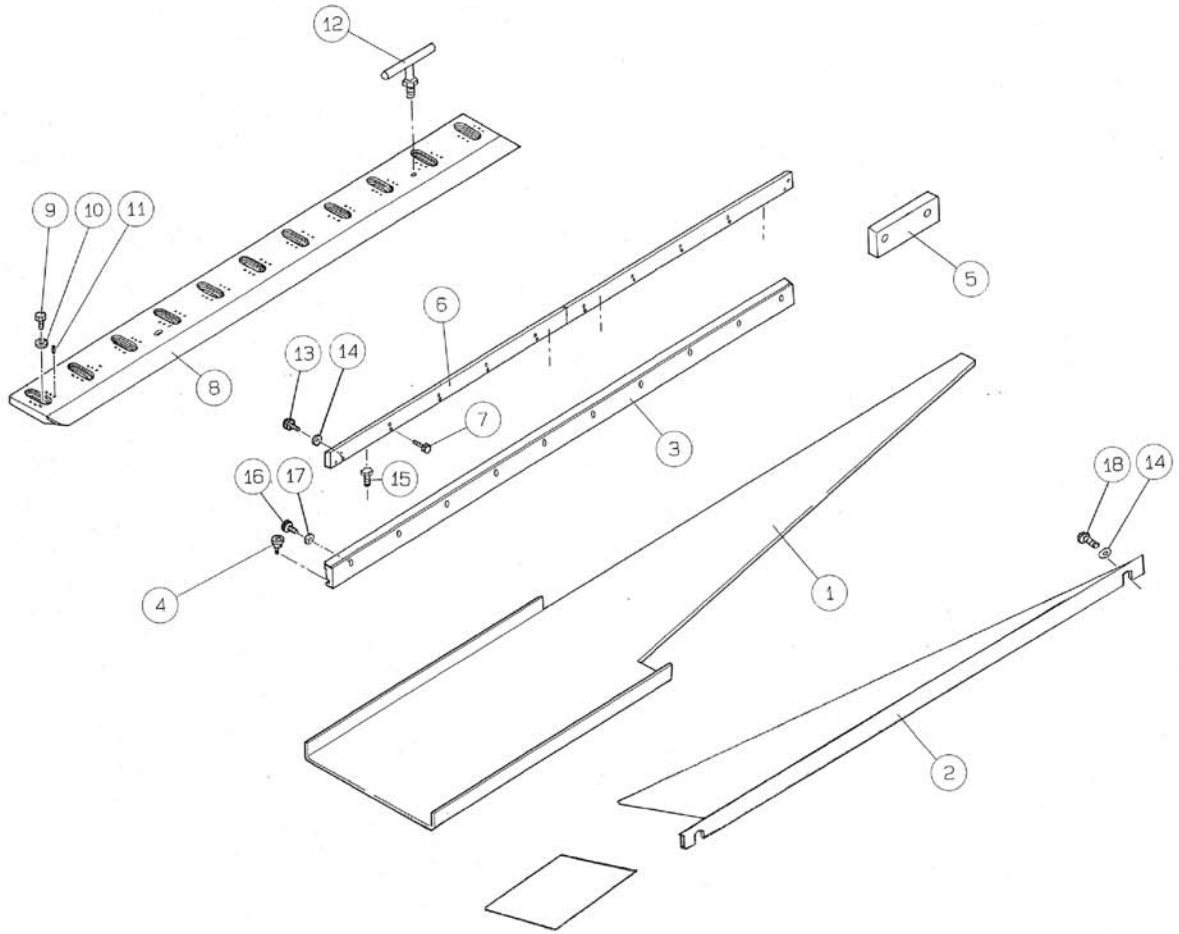
NO. 1021~	NO. 1009~1020	NO. 1002~1026	NO. 1001	MACHINE NO.

MARUNAKA TEKKOSHO
株式会社 丸仲鐵工所

APPROVAL	DRAWING
NISHIMURA	IKEDA

TYPE	DRAWING NAME	DRAWING NO.
SL-25T	REAR TABLE ASS.	220128

220129



C	B	A	NO	PARTS DRAWING NO.		PARTS	
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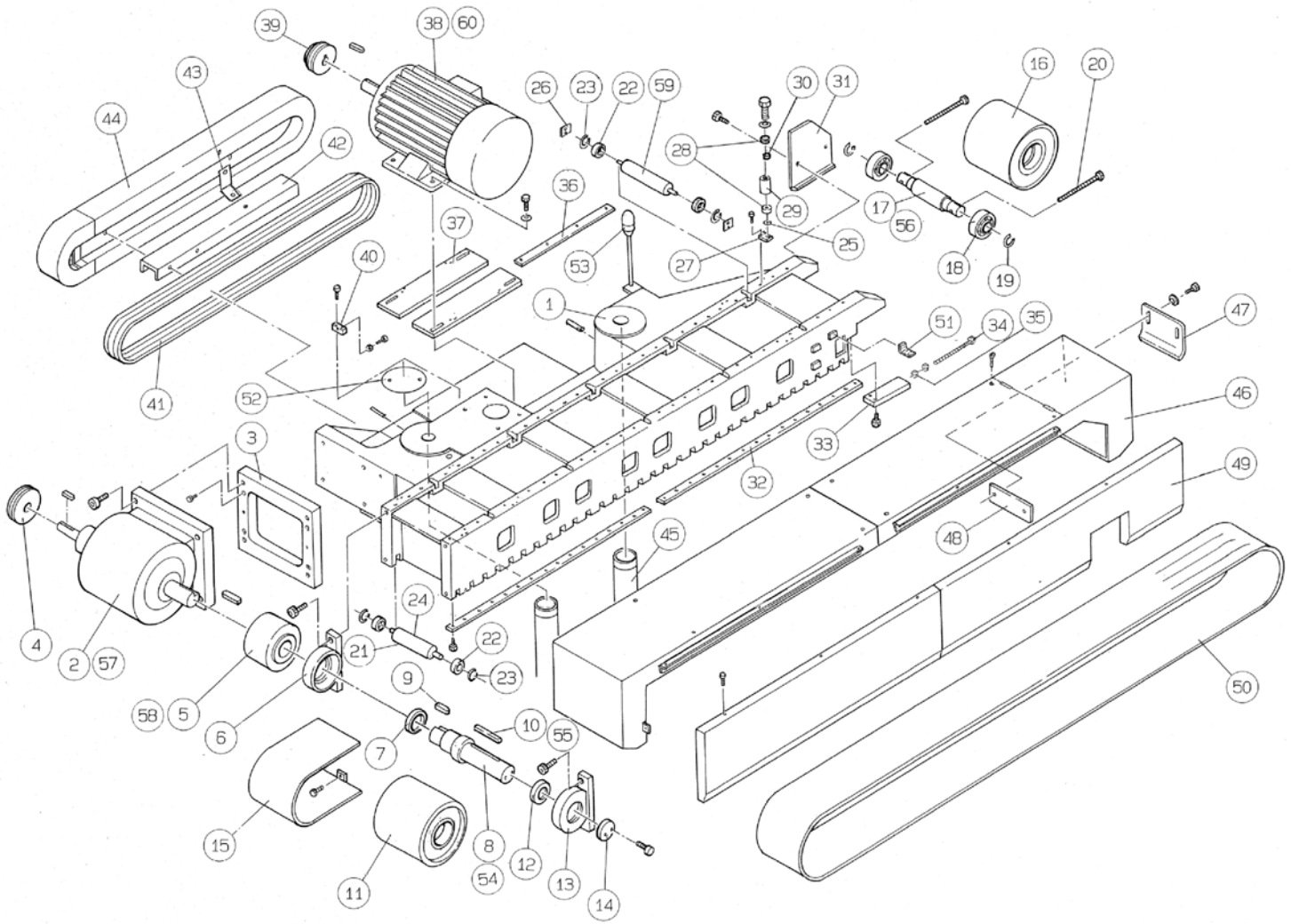
		2	18			BOLT	BT M8X14ステン
		10	17			WASHER	M12ステン
		10	16			BOLT	CB M12X30ステン
		4	15			BOLT	BT M10X30ステン
		12	14			WASHER	M8ステン
		10	13			BOLT	CB M8X20ステン
		2	12	420003	1	TOOL	ハモノホジョコウグ
		22	11			SCREW	HS(ヒラ) M8x18ステン
		11	10	401209	1	WASHER	サガネ
		11	9	401208	1	BOLT	ハモノヨウボルト
		1	8	300452	1	KNIFE	ハモノ
		10	7			SCREW	CB M4x6ステン
		1	6	425154	1	PLATE A, B	ランド
		1	5	425152	1	NOSE BAR	ホジョハグチ
		10	4	408536	1	BOLT	ツキアゲボルト
		1	3	425162	1	NOSE BAR	ハグチ
		1	2	307610	1	COVER	キョウセイバン
		1	1	202349	1	GUIDE	ナガシ

MARUNAKA TEKKOSHO
株式会社 丸仲鐵工所

APPROVAL	DRAWING
NISHIMURA	IKEDA

MACHINE NO.	TYPE	DRAWING NAME	DRAWING NO.
	SL-25T	KNIFE ASS.	220129

220130



C	B	A	NO.	PARTS DRAWING NO.		PARTS	
	1		80			MOTOR (AIR BRAKE) 4P18.5KW (TOSHIBA)	(NO. 1021, 1022, 1023)
	5	X	59	305995	3	PRESSURE ROLL	カアツロール
	X	1	58	306000	1	COUPLING	チェーンカップリング
	X	1	57			REDUCTION GEAR	減速機構 FD-206SM 1/25 (シフコ)
	X	1	56	305998	1	DRIVEN SHAFT	ジュウドウジク
	X	1	55			KEY	キー22X14X170
	X	1	54	305999	1	DRIVE SHAFT	クドウジク
	1	X	53			PATLIGHT	パトライト RUP-220Y
	2	2	52	437103	1	COVER	マルカバー
	1	1	51	424731	1	PLATE	ローラーキャッチトメガネ
	1	1	50	305990	1	ENDLESS BELT	エンドレスベルト
	1	1	49	202628	1	COVER	カバーB
	1	1	48	429334	1	PLATE	ウライタ
	1	1	47	429333	1	COVER	アンセンカバー
	1	1	46	101567	1	COVER	ジョウブカバーA
	2	2	45	409645	1	COLUMN	コラム
	1	1	44	306649	1	COVER	プーリカバー
	1	X	43	472723	3	PLATE	トメカナグ
	1	1	42	306632	1	HOLDER	プーリカバートリツケダイ
	1	1	41			V-BELT	Vベルト(ハウスクラム) 4x3V-1180
	1	1	40	421779	1	METAL	テンションメタル
	1	1	39			MOTOR PULLEY	モータプーリ
	1	1	38			MOTOR	モータ4P18.5KW
	2	2	37	426833	1	MOTOR BASE	モータベース
	1	1	36	426831	1	PLATE	スライドカナグ
	2	2	35			NUT	NT M12
	2	2	34			BOLT	BT M12x180
	2	2	33	426832	1	PLATE	アテガネ
	4	4	32	425155	1	PLATE	アテガネ
	1	1	31	431101	1	COVER	ホジョカバー
	8	8	30	424526	1	COLLAR	カラー
	8	8	29	424525	1	ROLLER	ベルトヨセローラ
	16	16	28			BEARING	BB6301LLU
	8	8	27	401128	1	PLATE	ベルトヨセローラサエ
	10	10	26	426646	1	PLATE	マワリドメ
	8	8	25			WASHER	M12
	1	1	24	305995	2	PRSSURE ROLL	カアツロール
	72	72	23			STOP RING	CトメワS-25
	72	72	22			BEARING	BB6205LLU
	30	35	21	305995	1	PRSSURE ROLL	カアツロール
	2	2	20	425184	2	BOLT	テンションボルト
	2	2	19			STOP RING	CトメワS-55
	2	2	18			BEARING	BB6311LLU
	1	X	17	306633	1	DRIVEN SHAFT	ジュウドウジク
	1	1	16	305992	1	DRIVEN ROLL	ジュウドウロール
	1	1	15	306019	1	COVER	カップリングカバー
	1	1	14	425157	1	PLATE	クドウジクアテガネ
	1	1	13	305993	2	HOLDER	クドウジクウケ
	1	1	12			BEARING	BB6216LLU
	1	1	11	305991	1	DRIVE ROLL	クドウロール
	1	X	10			KEY	キー 22x14x200
	1	1	9			KEY	キー 22x14x83
	1	X	8	306636	1	DRIVE SHAFT	クドウロールシク
	1	1	7			BEARING	BB6218LLU
	1	1	6	305993	1	HOLDER	クドウジクウケ
	1	X	5	306631	1	COUPLING	チェーンカップリング
	1	1	4			PULLEY	ケンソクキプーリ
	1	1	3	426830	1	GEAR BASE	ケンソクキダイ
	1	1	2			REDUCTION GEAR	減速機構 R107BT-1/25 (SEW)
	1	1	1	103660	1	HEAD	ヘッド

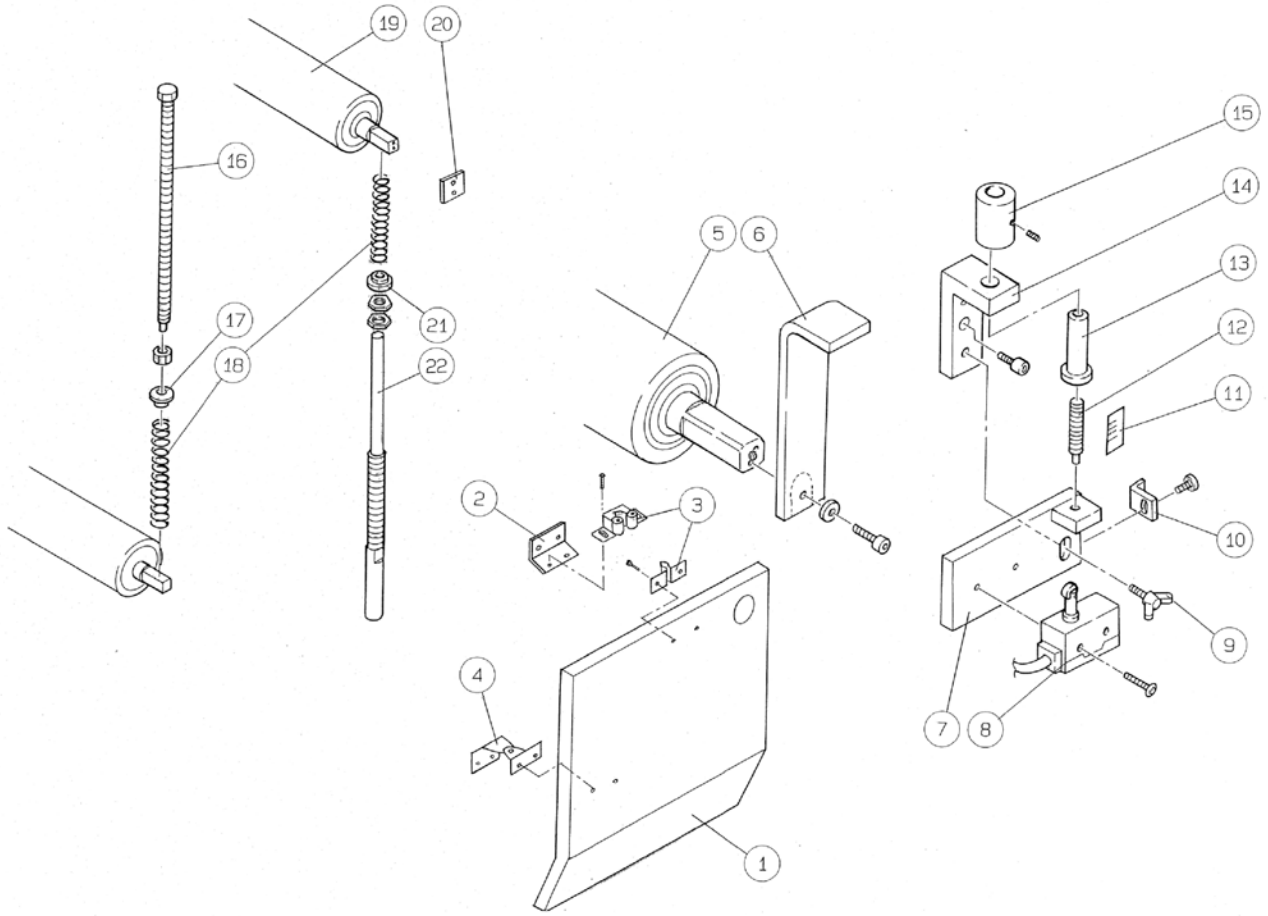
MARUNAKA TEKKOSHO 株式会社 丸仲鐵工所

APPROVAL	DRAWING
NISHIMURA	IKEDA

TYPE	DRAWING NAME	DRAWING NO.
SL-25T	FEED ASS.	220130

MACHINE NO. NO. 1001 NO. 1002~

220131



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		10	22	425159	1	SHAFT	オクリテンションジク	
		10	21	428495	1	HOLDER	スプリングウケD	
		10	20	426646	1	PLATE	マワリトメ	
		5	19	305995	3	ROLL	テンションロール	
		62	18	400978	1	SPRING	スプリング	
		52	17	400976	1	HOLDER	スプリングウケC	
		52	16	425185	2	BOLT	スプリング調整ボルト	
		1	15	424512	1	KNOB	ゲージツマミ	
		1	14	422056	1	GUIDE	プタショウガイド	
		1	13	422099	1	FEMALE SCREW	ゲージメネジ	
		1	12	422100	1	MALE SCREW	ゲージオネジ	
		1	11	425414	1	SCALE	アツミゲージメモリ	
		1	10	425413	1	INDICATOR	シシン	
		1	9		1	BOLT	チョウボルト	
		1	8		1	LIMIT SW	リミットスイッチ D4M-5020 (オムロン)	
		1	7	422564	1	PLATE	リミットダイ	
		1	6	425153	1	GAUGE DOG	ゲージドック	
		1	5	305995	2	ROLL	加圧ロール	
		1	4		1	HINGE	キヒ゛ネットヒンジ B-105T-2 (タキゲン)	
		1	3		1	ROLLER CATCH	ローラキャッチ C-51-1 (タキゲン)	
		1	2	424731	1	CLASP	ローラキャッチトメガネ	
		1	1	424730	1	COVER	ゲージカバー	
C	B	A	NO.	PARTS DRAWING NO.		PARTS		

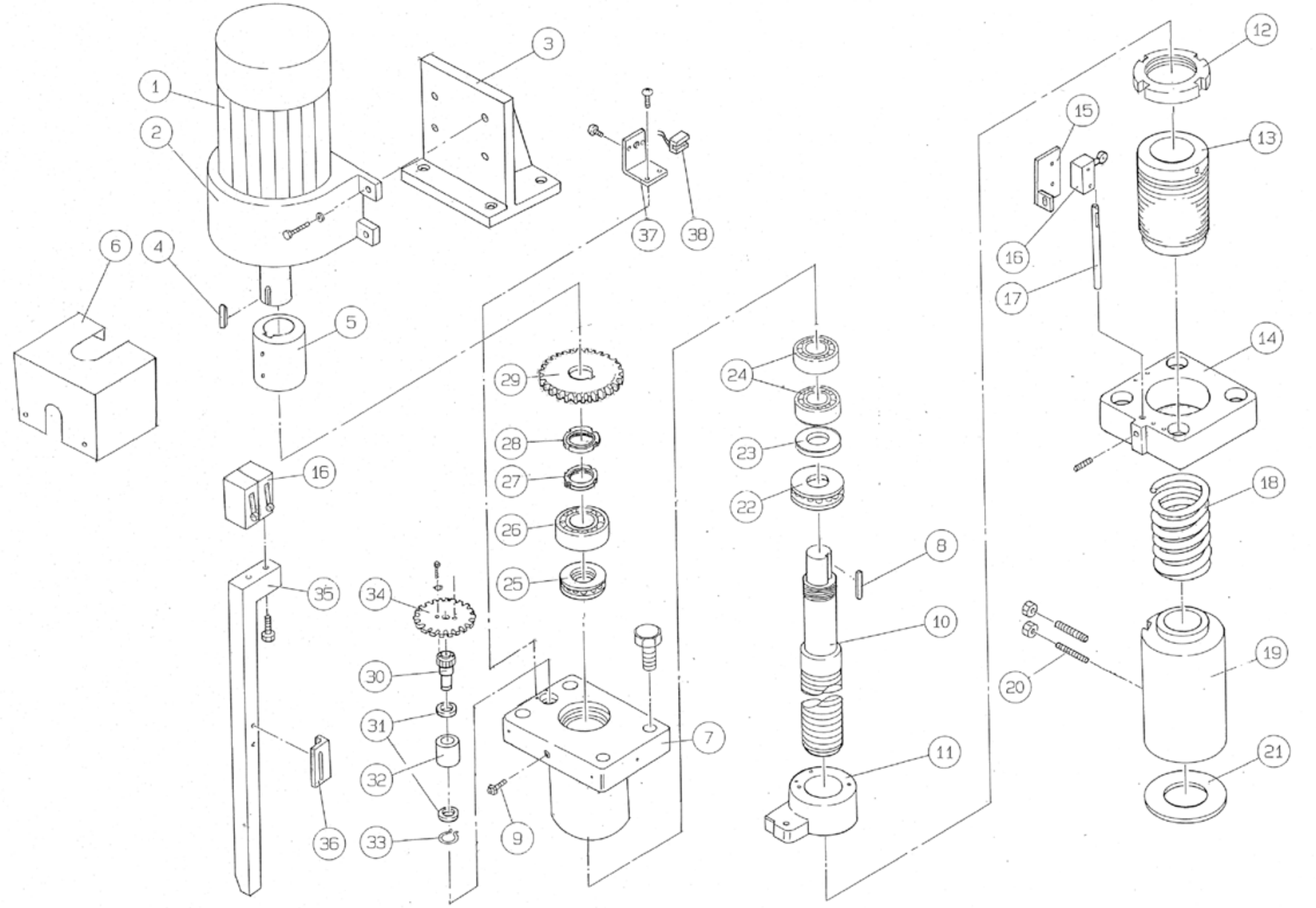
MACHINE NO.

MARUNAKA TEKKOSHO
株式会社 丸仲鐵工所

APPROVAL	DRAWING
NISHIMURA	IKEDA

TYPE	DRAWING NAME	DRAWING NO.
SL-25T	THICKNESS GAUGE ASS.	220131

220132



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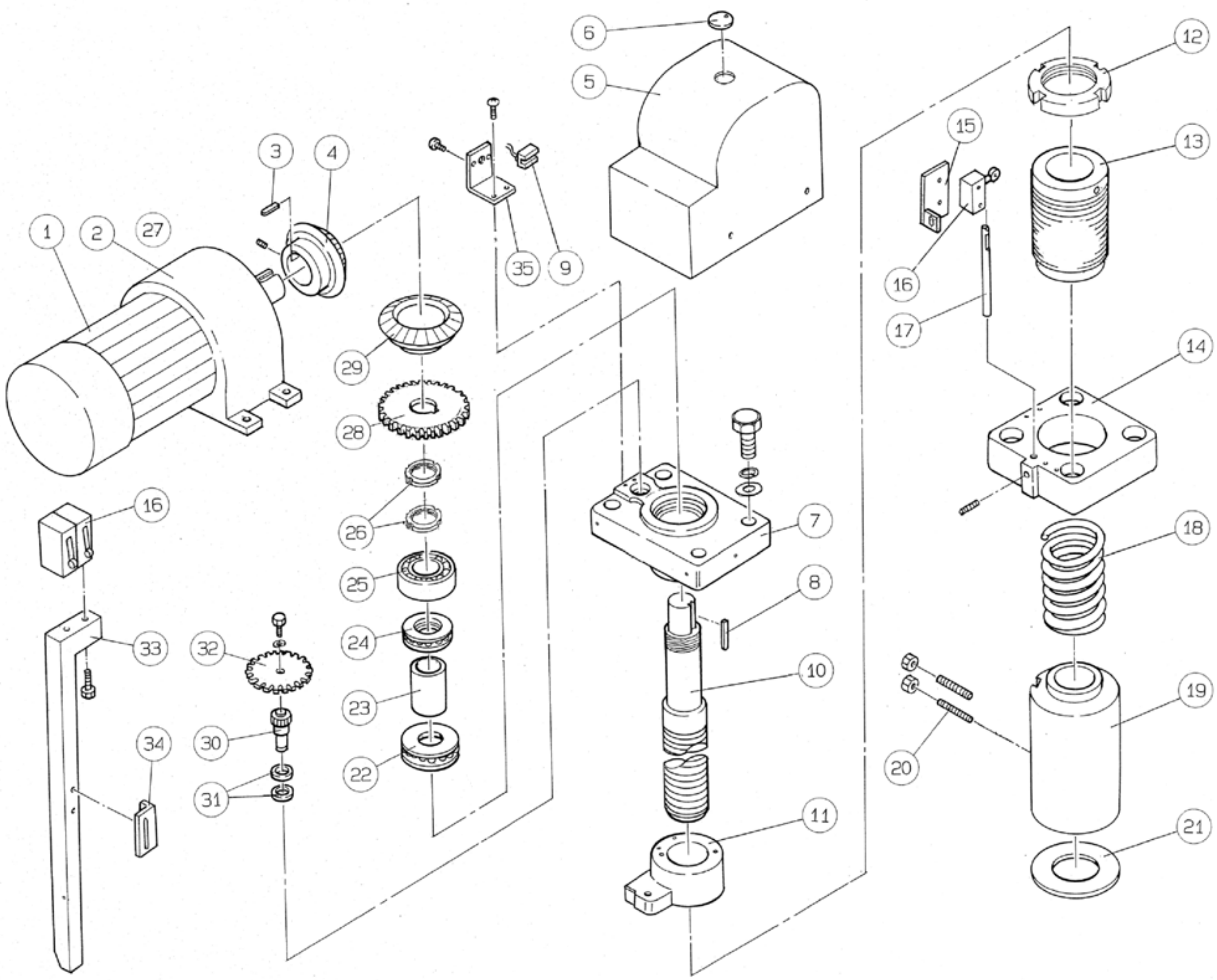
		1	38			SWITCH	近接SW SHE-0001(サムタク)
		1	37	420652	2	PLATE	センサダイ
		1	36	409696	1	DOG	ドックB
		1	35	425149	1	DOG	ドックA
		1	34	473600	1	SLIT PLATE	スリットバン
		1	33			STOP RING	Cトメワ S-15
		1	32	473670	1	WASHER	カンザ
		2	31			BEARING	BB6002ZZ
		1	30	473599	1	SHAFT	スリットジク
		1	29	409644	1	GEAR	ヒラハグルマ
		1	28			NUT	Uナット FU-09SC
		1	27			NUT	ナット AN09
		1	26			BEARING	BB6009ZZ
		1	25			BEARING	BB51109
		2	24			BEARING	BB6909ZZ
		1	23	473487	1	WASHER	カンザ
		1	22			BEARING	BB51309
		1	21	425160	1	WASHER	ゴムザガネ
		2	20	430237	1	BOLT	ストッパボルト
		1	19	425142	1	FEMALE SCREW	メネジ
		1	18	425161	1	SPRING	バネ
		1	17	425158	1	ROD	マワリドメ
		3	16			LIMIT SW	リミットSW D4MC2020(オムロン)
		1	15	422407	1	PLATE	リミットSWダイ
		1	14	425140	1	HOLDER	ホルダ
		1	13	425139	1	MALE SCREW	アジャストネジ
		1	12			NUT	ナット AN20
		1	11	425141	1	FEMALE SCREW	アンゼンメネジ
		1	10	332468	1	MALE SCREW	ショウコウネジ
		1	9			NIPPLE	グリスニップル
		1	8			KEY	片マルキー 10x8x45
		1	7	332467	1	SCREW BASE	ジクウケ
		1	6	332347	1	COVER	カバC
		1	5	332265	1	COUPLING	カップリング
		1	4			KEY	片マルキー 10x8x35
		1	3	332266	1	BRACKET	ブラケット
		1	2			REDUCTION GEAR	S型減速機 63LS-40-100-025(B型)
		1	1			MOTOR	モータ(レイシ ブレーキ付)0.75KW NLA0085P-12/4P(フジ)

MACHINE NO.	NO. 1025, 1026, 1030~
	MARUNAKA TEKKOSHO 株式会社 丸仲鐵工所
APPROVAL	NISHIMURA
DRAWING	IKEDA
TYPE	SL-25T
DRAWING NAME	HEAD UP-DOWN ASS. (1)
DRAWING NO.	220132



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	1	1	35	420652	1	PLATE	センサダイ
	1	1	34	409696	1	DOG	ドッグB
	1	1	33	425149	1	DOG	ドッグA
	1	1	32	403449	1	SLIT PLATE	スリットバン
	2	2	31			BEARING	BB6002ZZ
	1	1	30	420653	1	SHAFT	スリットジク
	1	1	29	433518	3	BEVEL GEAR	ベベルギア
	1	1	28	409644	1	GEAR	ヒラハグルマ
	X	1	27				[illegible]
	2	2	26			NUT	ナット AN09
	1	1	25			BEARING	BB6009ZZ
	1	1	24			BEARING	BB51109
	1	1	23			OILES	BCB455550
	1	1	22			BEARING	BB51209
	1	1	21	425160	1	WASHER	ゴムザガネ
	2	2	20	430237	1	BOLT	ストッパボルト
	1	1	19	425142	1	FEMALE SCREW	メネジ
	1	1	18	425161	1	SPRING	バネ
	1	1	17	425158	1	ROD	マワリドメ
	3	3	16			LIMIT SW	リミットSW D4MC2020 (オムロン)
	1	1	15	422407	1	BASE	リミットSWダイ
	1	1	14	425140	1	HOLDER	ホルダ
	1	1	13	425139	1	MALE SCREW	アジャストネジ
	1	1	12			NUT	ナット AN20
	1	1	11	425141	1	FEMALE SCREW	アンゼンメネジ
	1	1	10	425188	1	MALE SCREW	ショウコウネジ
	1	1	9			SWITCH	近接SW SHE-0001 (サムタク)
	1	1	8			KEY	片マルキー 10x8x45
	1	1	7	304457	1	BASE	ギアジクウケ
	1	1	6	402269	1	COVER	給油カバー
	1	1	5	305720	1	COVER	ギアカバー
	1	1	4	433518	1	BEVEL GEAR	ベベルギア
	1	1	3			KEY	片マルキー 10x8x35
	1	X	2			REDUCTION GEAR	S型減速機 G3LS-40-100-075 [illegible]
	1	X	1			MOTOR	[illegible] MLA8085P-T2/4P [illegible]

MACHINE NO.		
NO. 1001~1026		
NO. 1027, 1028, 1029		

MARUNAKA TEKKOSHO
株式会社 丸仲鐵工所

APPROVAL	DRAWING
NISHIMURA	IKEDA

TYPE	DRAWING NAME	DRAWING NO.
SL-25T	HEAD UP-DOWN ASS. (2)	220133

220133