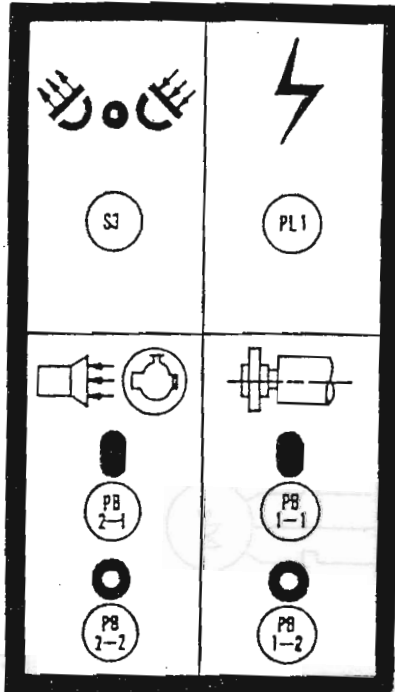


# 13. FUNCTION OF OPERATION SWITCHES

AGS618  
200 SERIES

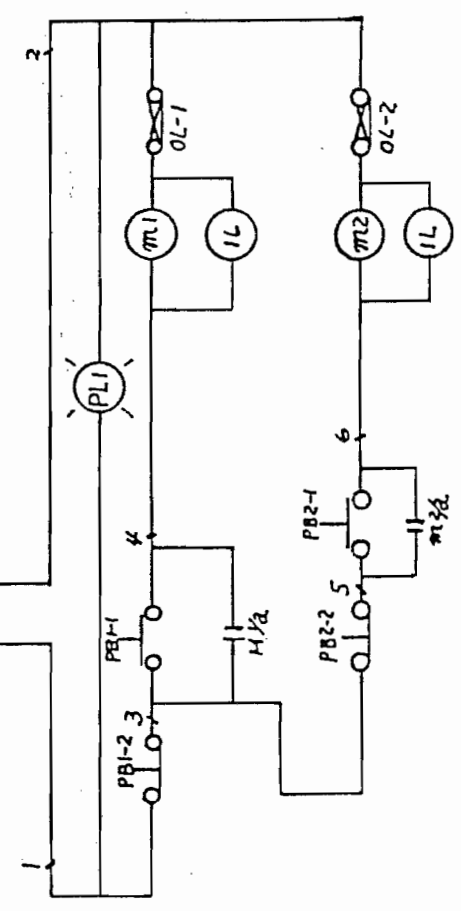
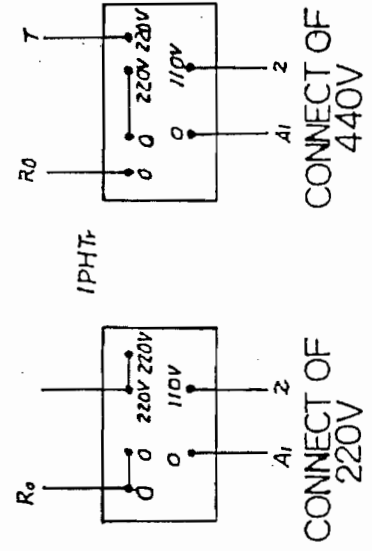
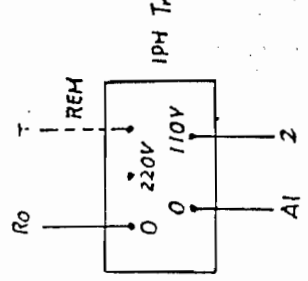
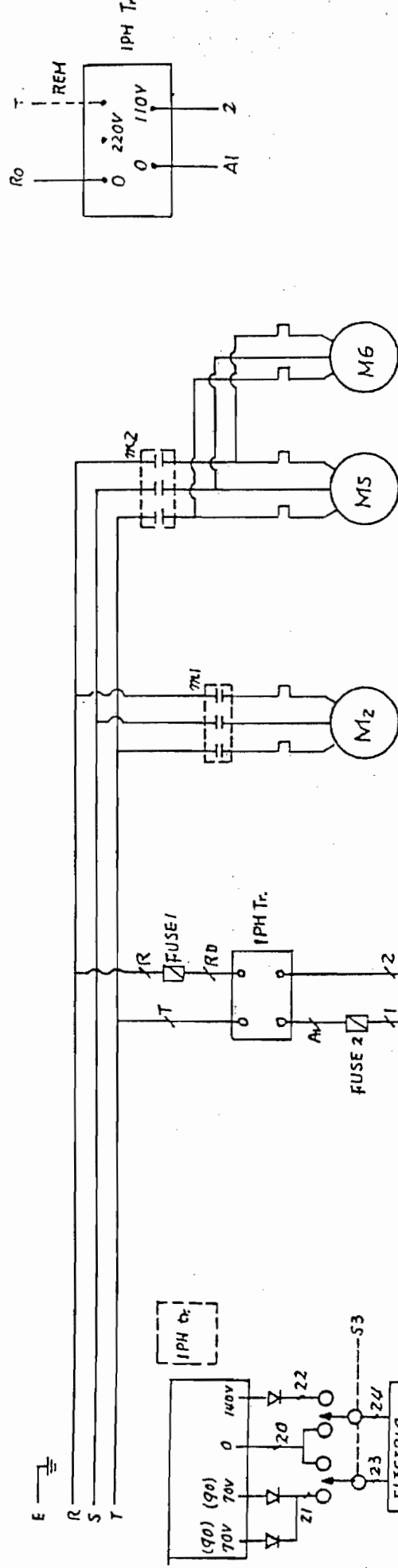
OPERATION PANEL



DESCRIPTION OF FUNCTION

PL1	PILOT LAMP OF ALL POWER SOURCE
S3	SWITCH OF ELECTRO-MAGNETIC CHUCK
PB1-1	PUSH BUTTON "ON" OF SPINDLE MOTOR WITH INDICATIVE LAMP
PB1-2	PUSH BUTTON "OFF" OF SPINDLE MOTOR
PB2-1	PUSH BUTTON "ON" OF COOLANT OR DUST-SUCTION WITH INDICATIVE LAMP
PB2-2	PUSH BUTTON "OFF" OF COOLANT OR DUST-SUCTION
M2	SPINDLE MOTOR
M5,M6	COOLANT PUMP OR DUST-SUCTION MOTOR
m1	MAGNETIC CONTACTOR OF SPINDLE MOTOR
m2	MAGNETIC CONTACTOR OF COOLANT OR DUST-SUCTION
OL1	OVERLOAD RELAY
OL2	
1PH	1PH TRANSFORMER FOR CONTROL CIRCUIT AND POWER
tr.	OF ELECTRO-MAGNETIC CHUCK

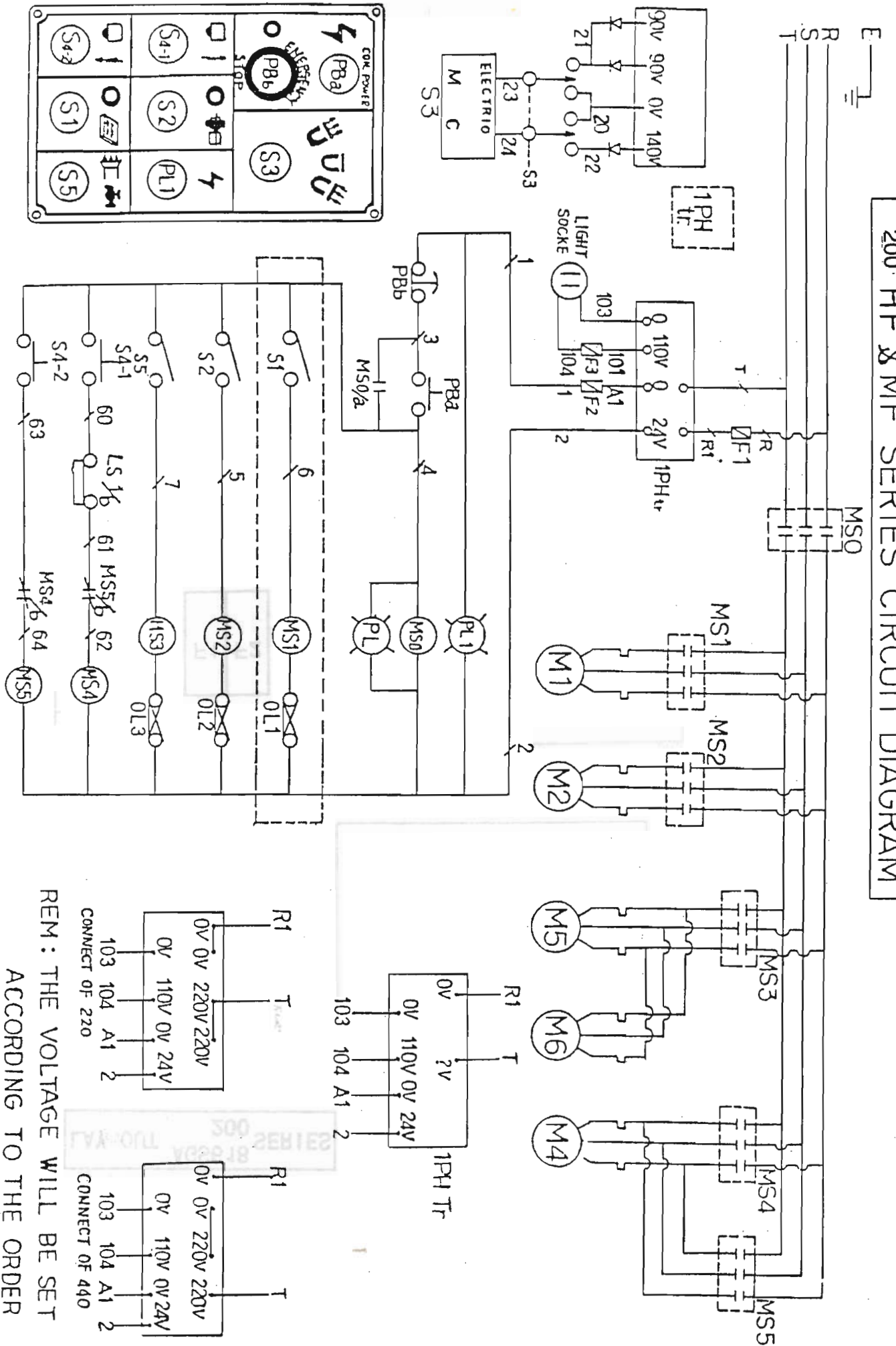
# 618 SERIES CIRCUIT DIAGRAM AGS 200



REM: THE VOLTAGE WILL BE SET ACCORDING TO THE ORDER OF CUSTOMER

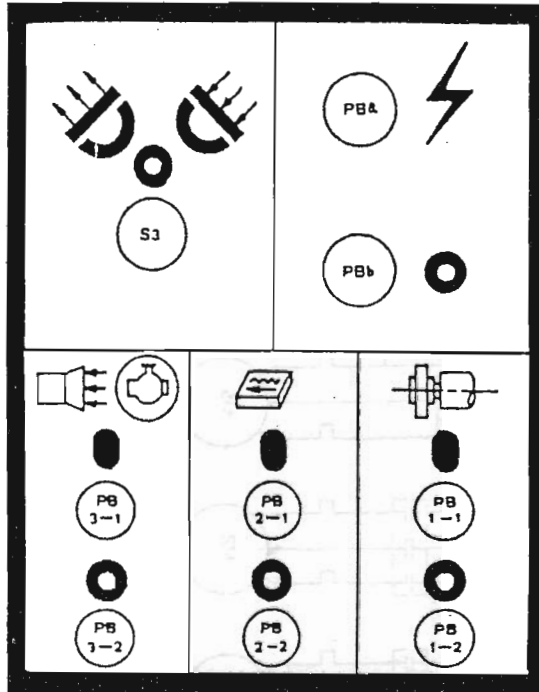


# 200 HF & MF SERIES CIRCUIT DIAGRAM



REM: THE VOLTAGE WILL BE SET ACCORDING TO THE ORDER OF CUSTOMER

Operation panel:

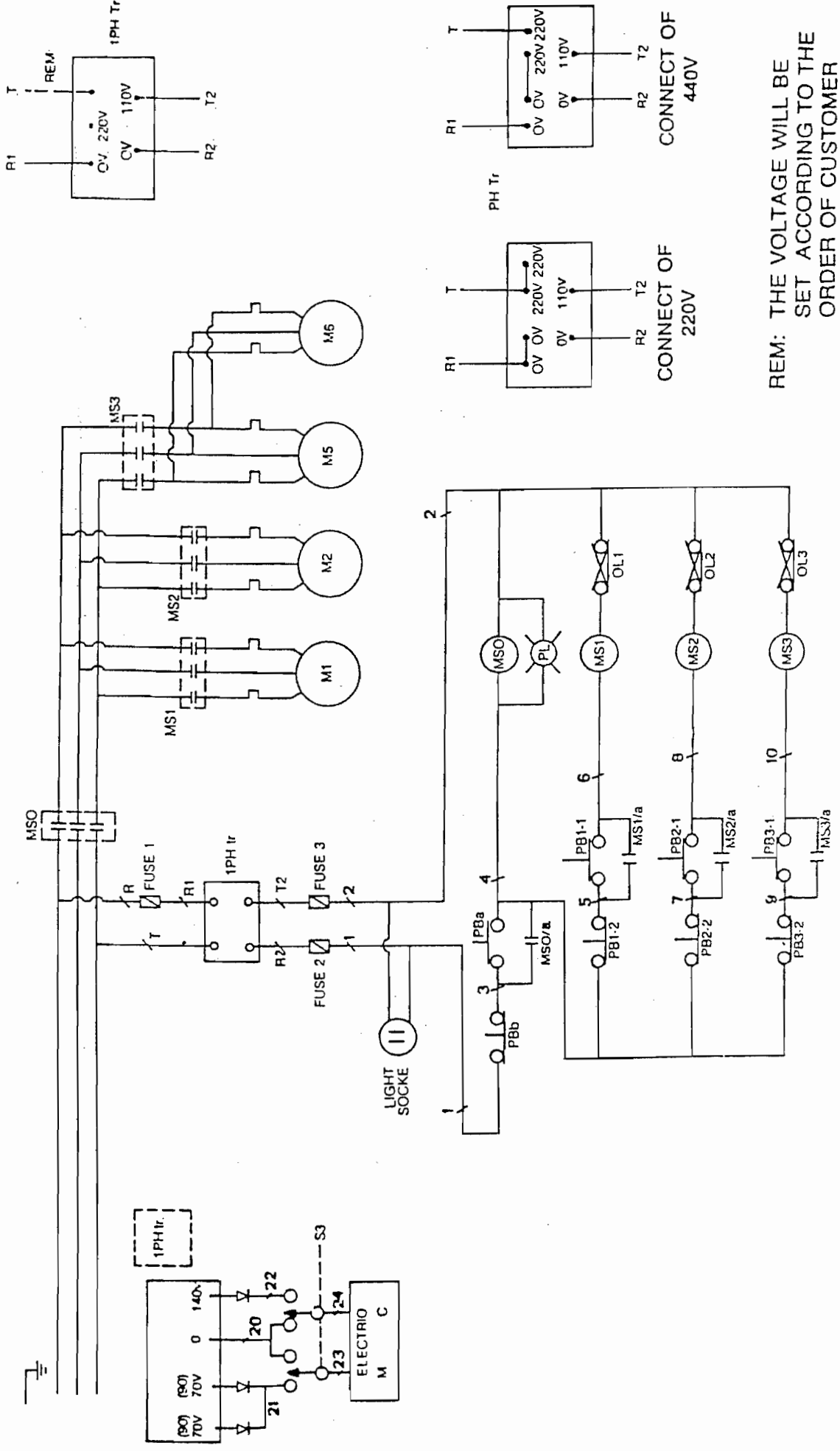


DESCRIPTION OF FUNCTION

PBa	PUSH BUTTON "ON" OF POWER SOURCE WITH PILOT LAMP
PBb	PUSH BUTTON "OFF" OF POWER SOURCE
S3	SWITCH OF ELECTRO-MAGNETIC CHUCK
PB1-1	PUSH BUTTON "ON" OF SPINDLE MOTOR
PB1-2	PUSH BUTTON "OFF" OF SPINDLE MOTEK
PB2-1	PUSH BUTTON "ON" OF HYDRAULIC MOTOR
PB2-2	PUSH BUTTON "OFF" OF HYDRAULIC MOTOR
PB3-1	PUSH BUTTON "ON" OF COOLANT OR DUST-SUCTION
PB3-2	PUSH BUTTON "OFF" OF COOLANT OR DUST-SUCTION
MS0	MAGNETIC CONTACTOR OF CIRCUIT POWER
MS1	MAGNETIC CONTACTOR OF HYDRAULIC MOTOR
MS2	MAGNETIC CONTACTOR OF SPINDLE MOTOR
MS3	MAGNETIC CONTACTOR OF COOLANT OR DUST-SUCTION
M1	HYDRAULIC MOTOR
M2	SPINDLE MOTOR
M5-M6	COOLANT PUMP OR DUST-SUCTION MOTOR
OL1 OL2 OL3	OVER LOAD RELAY
1PH tr.	1PH TRANSFORMER FOR CONTROL CIRCUIT AND POWER OF ELECTRO-MAGNETIC CHUCK

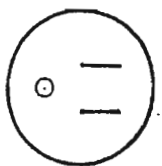
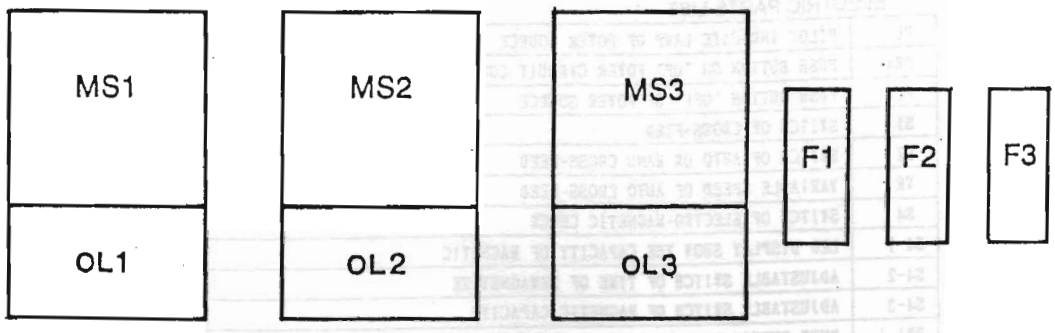
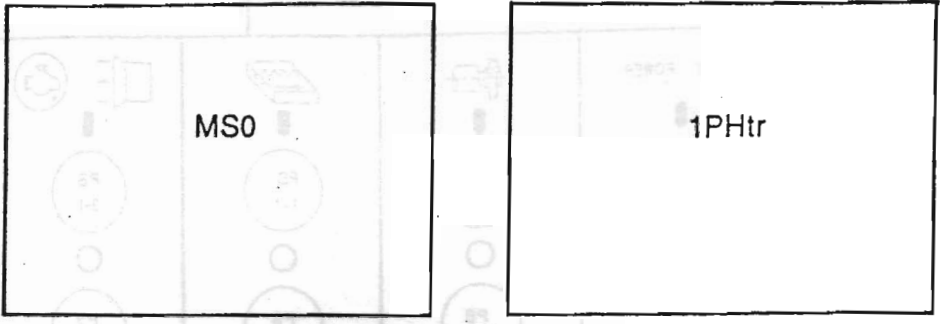
# 14. ELECTRIC DIAGRAM AND LAY OUT

## H SERIES CIRCUIT DIAGRAM

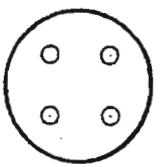


REM: THE VOLTAGE WILL BE SET ACCORDING TO THE ORDER OF CUSTOMER

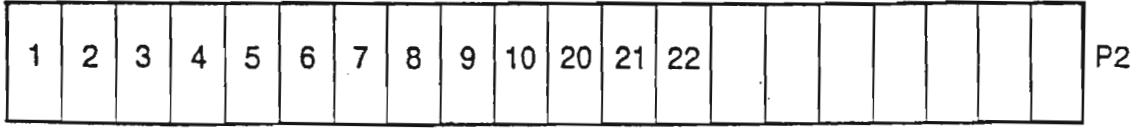
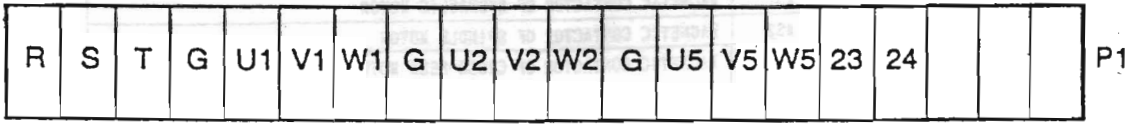
# LAY OUT (H SERIES)



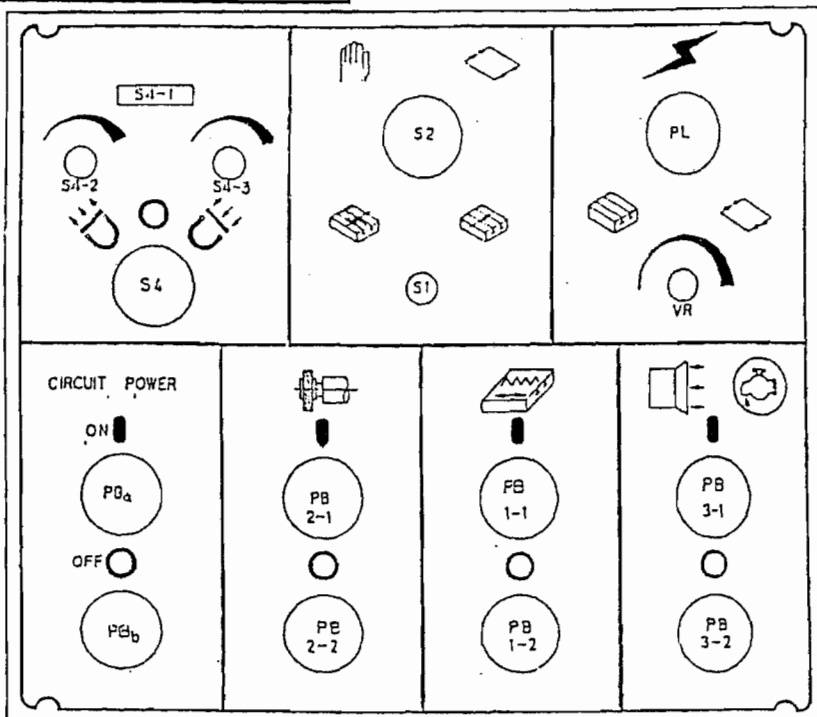
LIGHT  
SOCKET



HYDRULIC  
PUMP  
SOCKET



# 1020AH, 1224AH LAY OUT

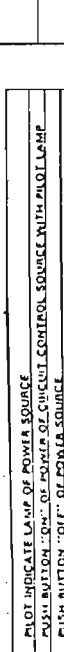
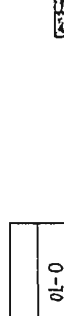
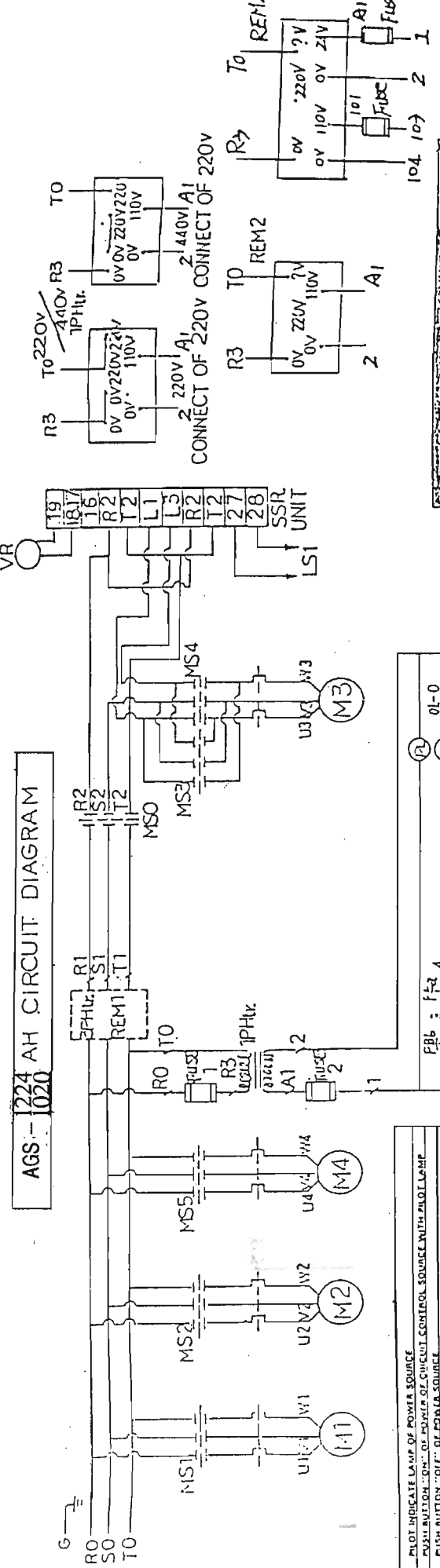


## ELECTRIC PARTS LIST

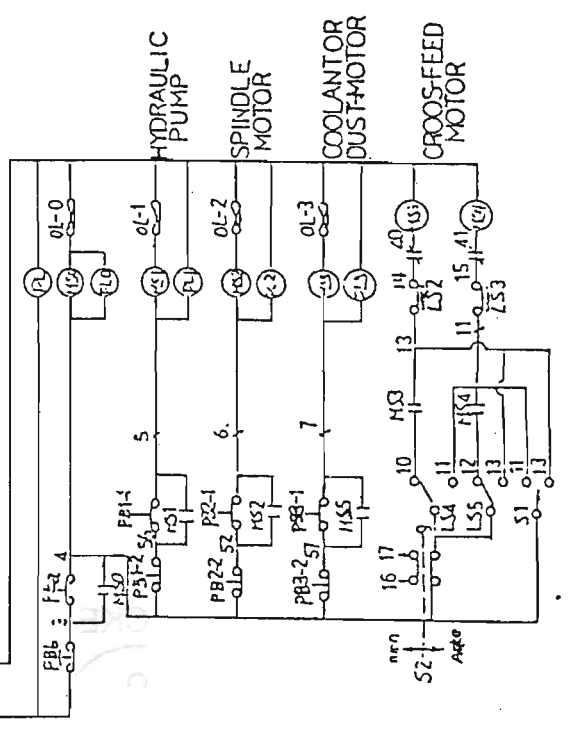
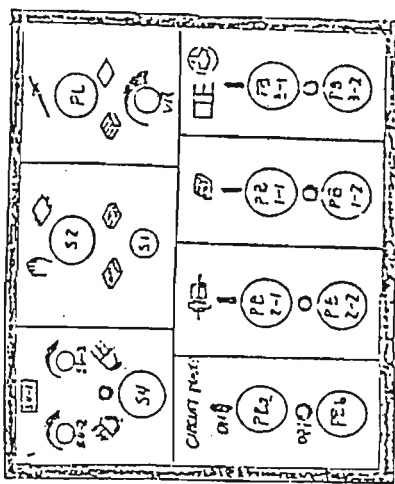
PL	PILOT INDICATE LAMP OF POWER SOURCE
PBa	PUSH BUTTON "ON" OF POWER CIRCUIT CONTROL SOURCE WITH PILOT LAMP
PBb	PUSH BUTTON "OFF" OF POWER SOURCE
S1	SWITCH OF CROSS-FEED
S2	SWITCH OF AUTO OR MANU CROSS-FEED
VR	VARIABLE SPEED OF AUTO CROSS-FEED
S4	SWITCH OF ELECTRO-MAGNETIC CHUCK
S4-1	LED DISPLAY SHOW THE CAPACITY OF MAGNETIC
S4-2	ADJUSTABLE SWITCH OF TIME OF DEMAGNETIZE
S4-3	ADJUSTABLE SWITCH OF MAGNETIC CAPACITY
PB1-1	PUSH BUTTON "ON" OF SPINDLE MOTOR WITH PILOT LAMP
PB1-2	PUSH BUTTON "OFF" OF SPINDLE MOTOR
PB2-1	PUSH BUTTON "ON" OF HYDRAULIC MOTOR WITH PILOT LAMP
PB2-2	PUSH BUTTON "OFF" OF HYDRAULIC MOTOR
PB3-1	PUSH BUTTON "ON" OF COOLANT OR DUST-SUCTION WITH PILOT LAMP
PB3-2	PUSH BUTTON "OFF" OF COOLANT OR DUST-SUCTION
MS0	MAGNETIC CONTACTOR OF CIRCUIT CONTROL POWER
MS1	MAGNETIC CONTACTOR OF HYDRAULIC MOTOR
MS2	MAGNETIC CONTACTOR OF SPINDLE MOTOR
MS3	MAGNETIC CONTACTOR OF CROSS-FEED MOTOR
MS4	
MS5	MAGNETIC CONTACTOR OF COOLANT OR DUST-SUCTION
M1	HYDRAULIC PUMP MOTOR
M2	SPINDLE MOTOR
M3	CROSS-FEED MOTOR
M4	COOLANT PUMP OR DUST-SUCTION MOTOR
M5	RAPID UP OR DOWN TRAVERSE MOTOR
LS1	LIMITED SWITCH FOR STROKING CROSS-FEED
LS2	LIMITED SWITCH FOR MAX. STROKE CONTROL OF CROSS-FEED
LS3	
LS4	LIMITED SWITCH FOR ADJUSTABLE STROKE CONTROL OF AUTO CROSS-FEED
LS5	
OL-1	OVER LOAD THERMAL RELAY OF HYDRAULIC PUMP MOTOR
OL-2	OVER LOAD THERMAL RELAY OF SPINDLE MOTOR
OL-0	OVER LOAD THERMAL RELAY OF CIRCUIT CONTROL (OR CROSS-FEED MOTOR)
1Ph.Tr.	1Ph TRANSFORMER FOR CONTROL CIRCUIT AND POWER OF ELE-MAGN CHUCK
3Ph.Tr.	3Ph TRANSFORMER FOR CROSS-FEED & RAPID UP OR DOWN TRAVERSE MOTOR
SSR UNIT	ELECTRIC EQUIPMENT FOR CONTROLLING CROSS-FEED MOTOR
MCC	ELECTRO-MAGNETIC CHUCK CONTROLLER



224 AH CIRCUIT DIAGRAM

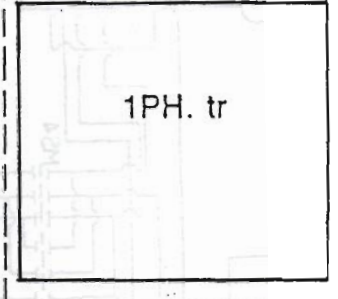
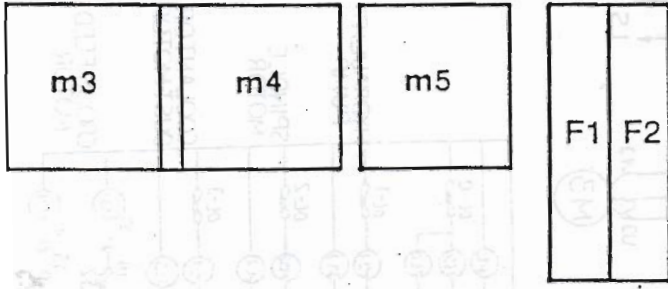
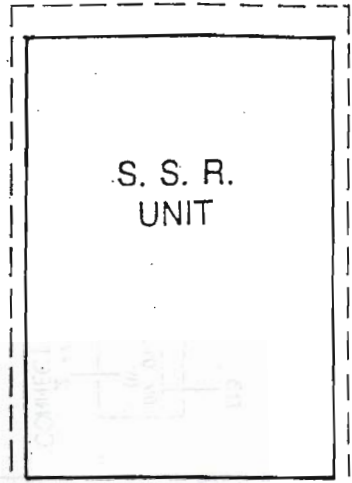
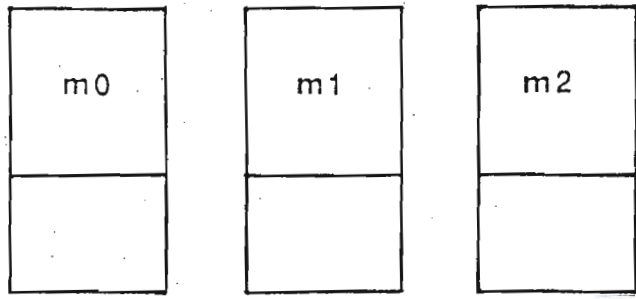
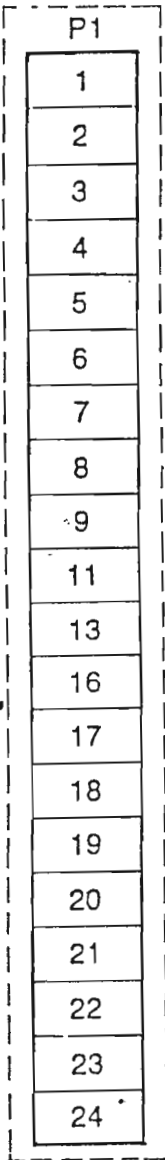


PL	PILOT INDICATE LAMP OF POWER SOURCE
PH	PUSH BUTTON "ON" OF POWER OF CIRCUIT CONTROL SOURCE WITH PILOT LAMP
PHL	PUSH BUTTON "OFF" OF POWER SOURCE
S1	SWITCH OF CROSS-FEED
S2	SWITCH OF AUTO OR MANUAL CROSS-FEED
S3	SWITCH OF FEEDING - MAGNETIC CHUCK
S4	VARIABLE SPEED OF AUTO CROSS-FEED
S5-1	SWITCH STOP ON THE TRAVEL
S5-2	SWITCH BACK ON THE TRAVEL
S5-3	SWITCH FORWARD ON THE TRAVEL
SP-1	SWITCH FORWARD ON THE TRAVEL
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SP-100	SWITCH FORWARD ON THE TRAVEL



PL	PILOT INDICATE LAMP OF POWER SOURCE
PH	PUSH BUTTON "ON" OF POWER OF CIRCUIT CONTROL SOURCE WITH PILOT LAMP
PHL	PUSH BUTTON "OFF" OF POWER SOURCE
S1	SWITCH OF CROSS-FEED
S2	SWITCH OF AUTO OR MANUAL CROSS-FEED
S3	SWITCH OF FEEDING - MAGNETIC CHUCK
S4	VARIABLE SPEED OF AUTO CROSS-FEED
S5-1	SWITCH STOP ON THE TRAVEL
S5-2	SWITCH BACK ON THE TRAVEL
S5-3	SWITCH FORWARD ON THE TRAVEL
SP-1	SWITCH FORWARD ON THE TRAVEL
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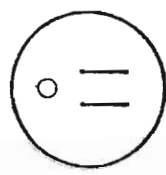
# LAY OUT (AH SERIES)



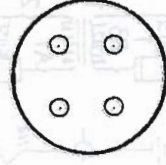
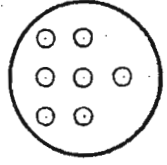
\* PART 2

\* PART 1

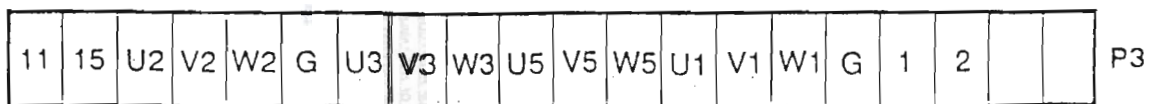
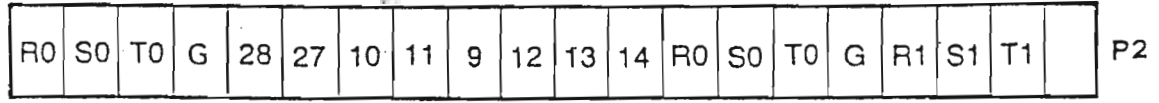
COOLANT  
OR  
DUST-SUCTION  
SOCKET



LIGHT  
SOCKET

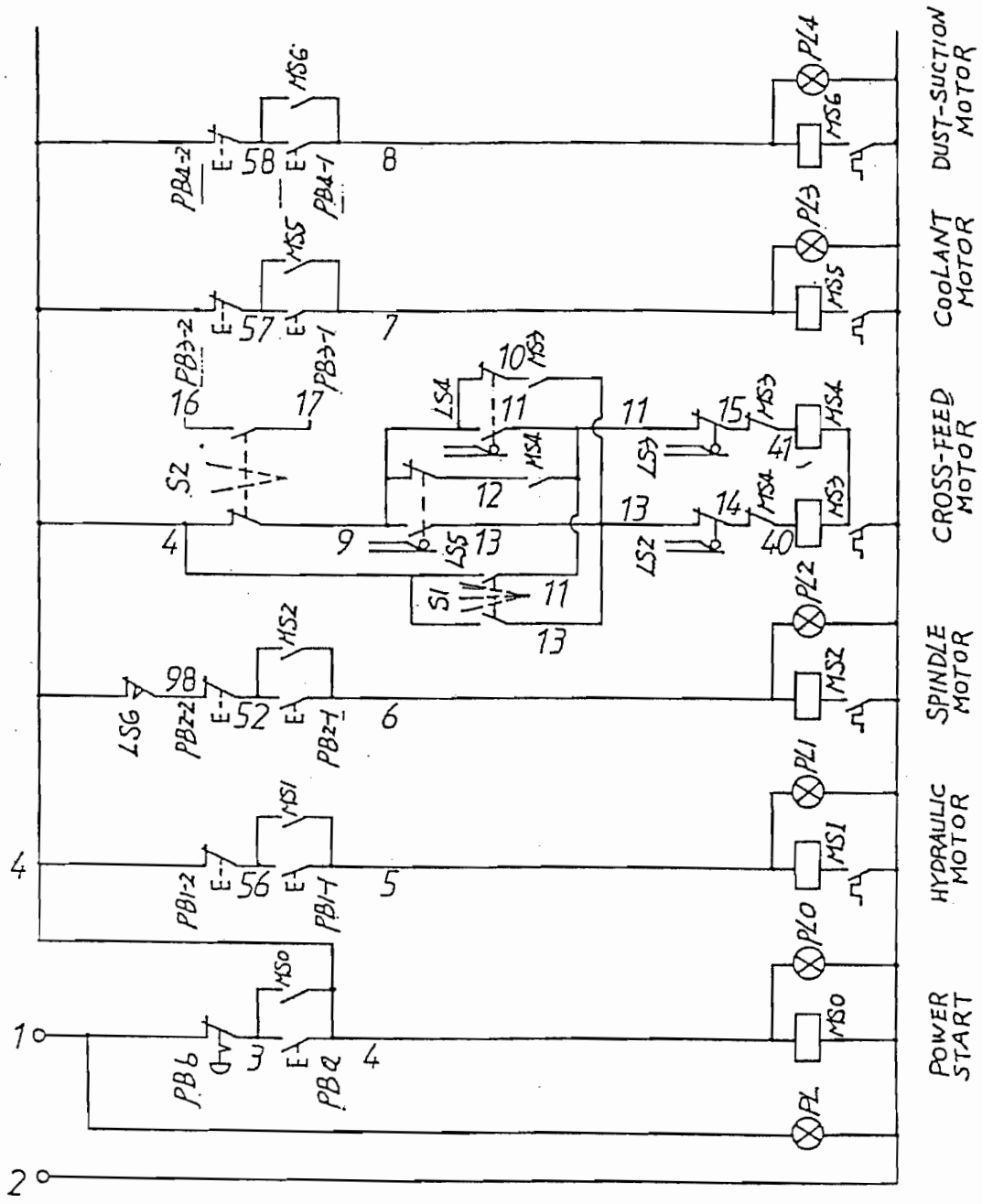


HYDRULIC  
PUMP SOCKET



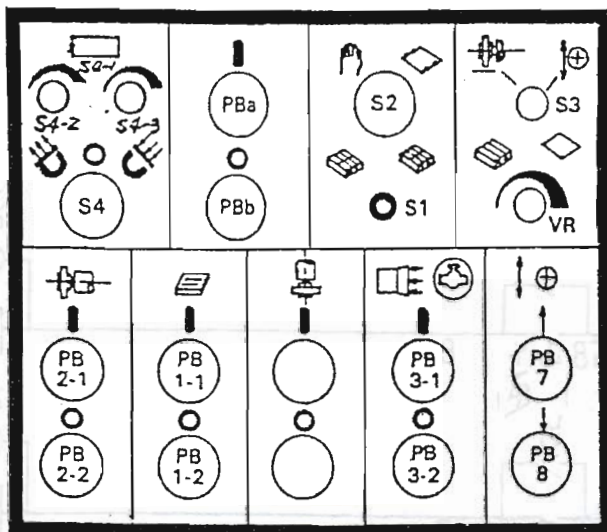
\* IF THE MODEL IS 1224 SERIES, THE POSITION OF PART 1 & PART 2 WILL BE REVERSED FROM EACH OTHER.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



1020AH 1224AH

CONTROL PANEL

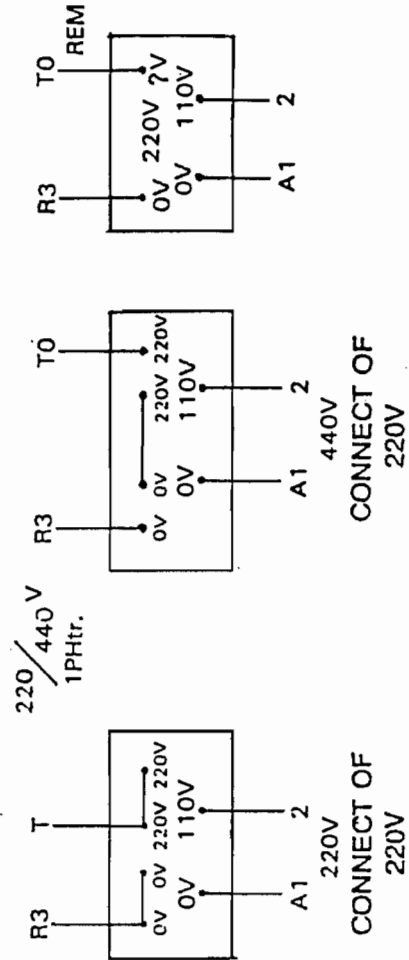
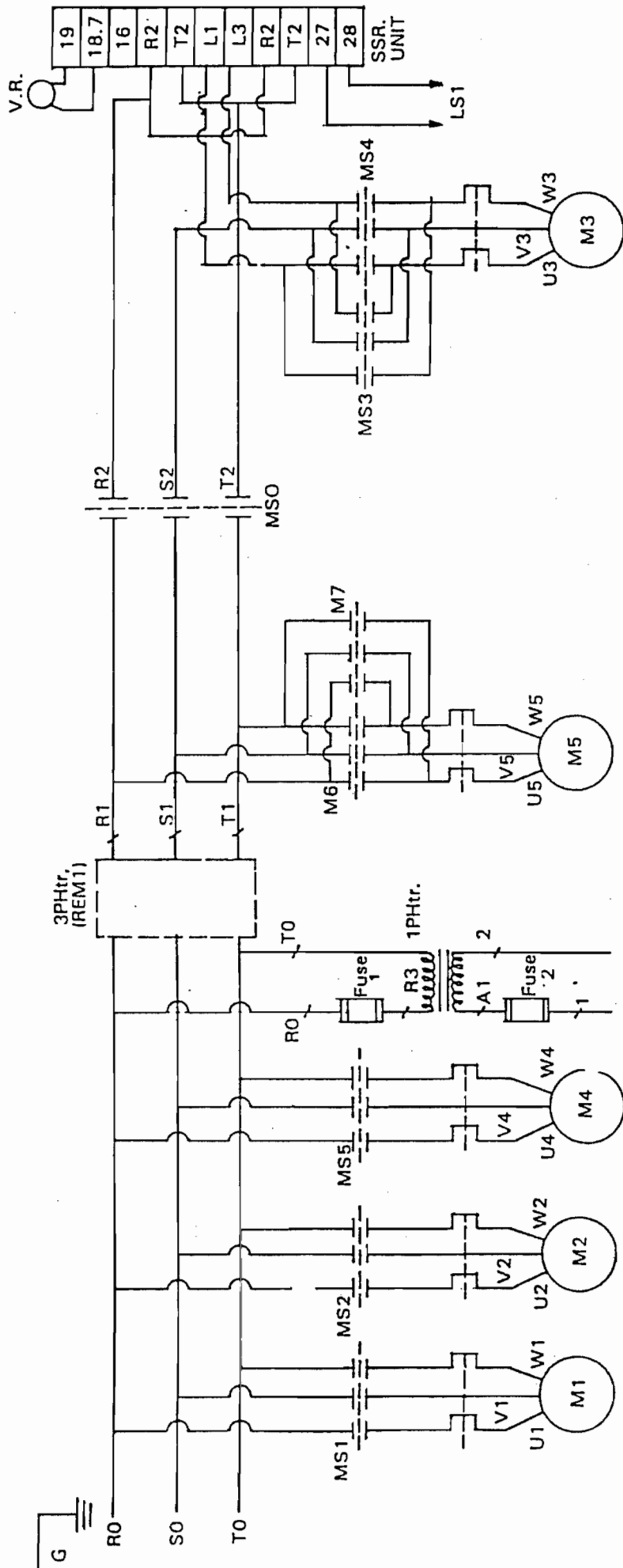


DESCRIPTION OF FUNCTION

PIL	PILOT INDICATE LAMP OF POWER SOURCE
PBa	PUSH BUTTON "ON" OF POWER OF CIRCUIT CONTROL SOURCE WITH PILOT LAMP
PBb	PUSH BUTTON "OFF" OF POWER SOURCE
S1	SWITCH OF CROSS-FEED
S2	SWITCH OF AUTO OR MANU CROSS-FEED
S3	SWITCH OF SELECTING (REM) OF GRINDING ACTIVITY OR UP-down TRAVERSE
S4	SWITCH OF ELECTRO-MAGNETIC CHUCK
VR	VARIABLE SPEED OF AUTO CROSS-FEED
PB1-1	PUSH BUTTON "ON" OF SPINDLE MOTOR WITH PILOT LAMP
PB1-2	PUSH BUTTON "OFF" OF SPINDLE MOTER
PB2-1	PUSH BUTTON "ON" OF HYDRAULIC MOTOR WITH PILOT LAMP
PB2-2	PUSH BUTTON "OFF" OF HYDRAULIC MOTOR
PB3-1	PUSH BUTTON "ON" OF COOLANT OR DUST-SUCTION WITH PILOT LAMP
PB3-2	PUSH BUTTON "OFF" OF COOLANT OR DUST-SUCTION
PB7	PUSH BUTTON OF WHEEL HEAD RAPID UP FEED (WHEN S3 CHIOSE ⊕, THE SWITCH IS WORKABLE.)
PB8	PUSH BUTTON OF WHEEL HEAD RAPID DOWN FEED (WHEN S3 CHIOSE ⊖, THE SWITCH IS WORKABLE.)
MS0	MAGNETIC CONTACTOR OF CIRCUIT CONTROL POWER
MS1	MAGNETIC CONTACTOR OF HYDRAULIC MOTOR
MS2	MAGNETIC CONTACTOR OF SPINDLE MOTOR
MS3	MAGNETIC CONTACTOR OF CROSS-FEED MOTOR
MS4	
MS5	MAGNETIC CONTACTOR OF COOLANT OR DUST-SUCTION
MS6	MAGNETIC CONTACTOR OF RAPID UP-DOWN TRAVERSE
MS7	MOTOR
M1	HYDRAULIC PUMP MOTOR
M2	SPINDLE MOTOR
M3	CROSS-FEED MOTOR
M4	COOLANT PUMP OR DUST-SUCTION MOTOR
M5	RAPID UP-DOWN TRAVERSE MOTOR
LS1	LIMITED SWITCH FOR STROKING CROSS-FEED
LS2	LIMITED SWITCH FOR MAX STROKE CONTROL OF CROSS-FEED
LS3	
LS4	LIMITED SWITCH FOR ADJUSTABLE STROKE
LS5	CONTROL OF AUTO CROSS-FEED
OL1	
OL2	OVERLOAD RELAY
OL3	
1PH	1PH TRANSFORMER FOR CONTROL CIRCUIT AND POWER
tr.	OF ELECTRO-MAGNETIC CHUCK
3PH	3PH TRANSFORMER FOR CROSS-FEED & RAPID UP-DOWN TRAVERSE
tr.	MOTOR (IF POWER SUPPLY IS ONLY 220V TYPE THIS 3PH tr WILL BE OMITTED)

\* REM: IF S3 IS SELECTED ⊕MODE THEN ALL OF PUSH BUTTONS (1-3) WILL NOT WORK EXCEPT PB7&PB8

# 1632 AH SERIES ELECTRIC CIRCUIT OF MOTOR CONTROL



REM1: THIS 3PH tr WILL BE OMITTED  
 IF POWER SUPPLY IS ONLY 220V TYPE  
 REM2: THE VOLTAGE WILL BE  
 SET ACCORDING TO THE  
 ORDER OF CUSTOMER



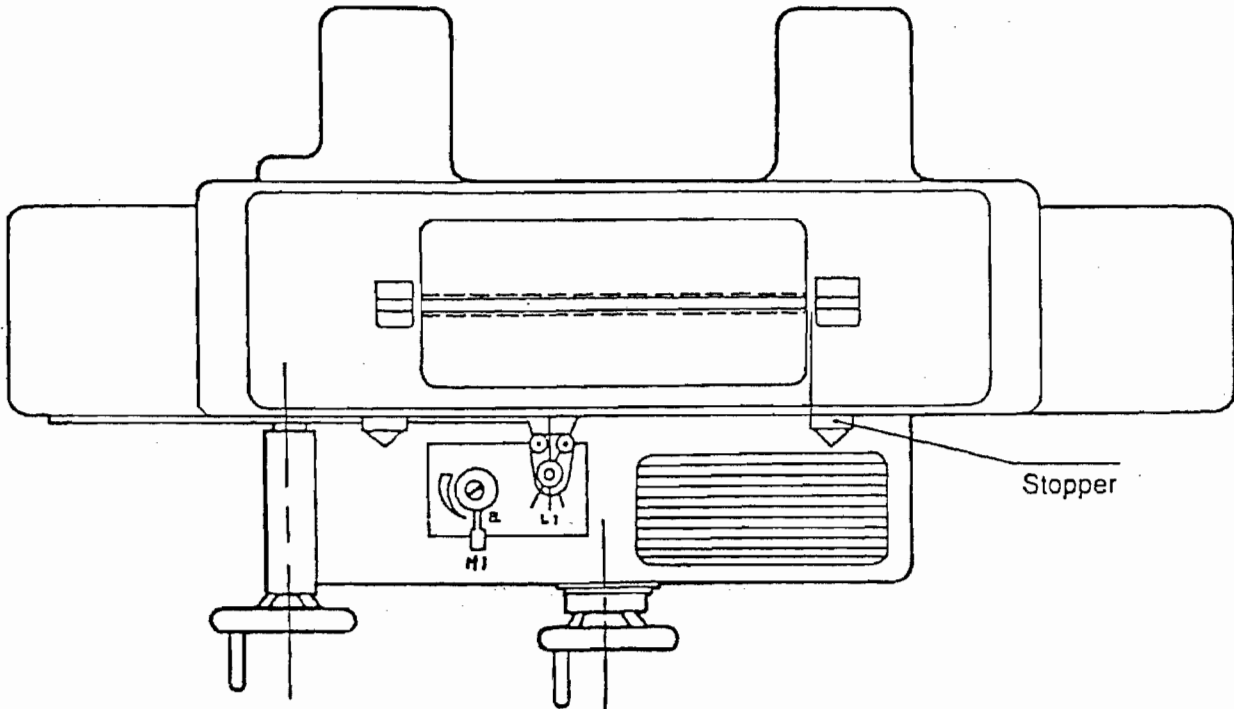




# OPERATION (AH)

(A) Please pay best attention to the following instruction before operate the machine:





1. The machine must be located on the vibration-proof ground.
2. Installation and levelling of the machine.
3. Lubrication.
4. The hydraulic tank must have adequate oil.
5. Lever "H1" of the hydraulic table traverse must be parallel to the crossfeed direction "a" (Ref. to drawing below).
6. Before starting the spindle motor, please do not install the wheel until you ensure it rotates at clockwise direction.



(B) Table Longitudinal Movement ( AGS 1020H & AH Series)

1. Switch on S2 for starting the hydraulic pump motor.
2. Turn the lever "H1" clockwise until the table starts slowly.
3. If the table unable to travel automatically, you can rotate an anti-direction "b.c." by hand, in this case; You can check the neutral point and set the right position "L1".

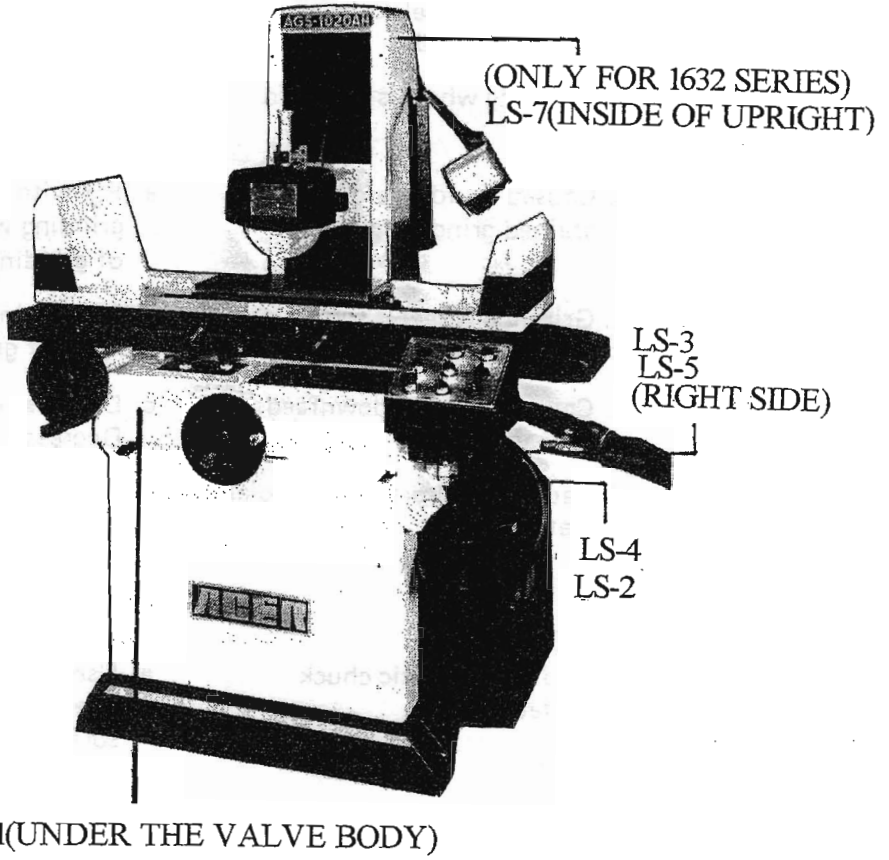
(C) Table crossfeed Movement (SGS-AH Series)

1. Switch S5 in position  = Manuel
2. Switch S5 in position  = Automatic  
Turn. Switch S4 in position  then sliding seat move away from the operator  
Switch S4 in position  then sliding seat move against the operator
3. The cross-traverse distance is controlled by the switch on the left side of the machine base.
4. Before starting the automatic feed, switch on S5 automatic position, then switch on S4 for backward or forward according to your need, and start automatic feed the amount of which is infinitely variable by the regulation knob "VR".
5. If after switch on S5 and S4, crossfeed unable to work, (or one of the switch is out of order). it means the switch below L1 is in wrong position and unable to contact the cam. In this case, adjustment is necessary.



# DISTRIBUTIVE DIAGRAM OF LIMITED SWITCHES

\* ONLY FOR AH SERIES



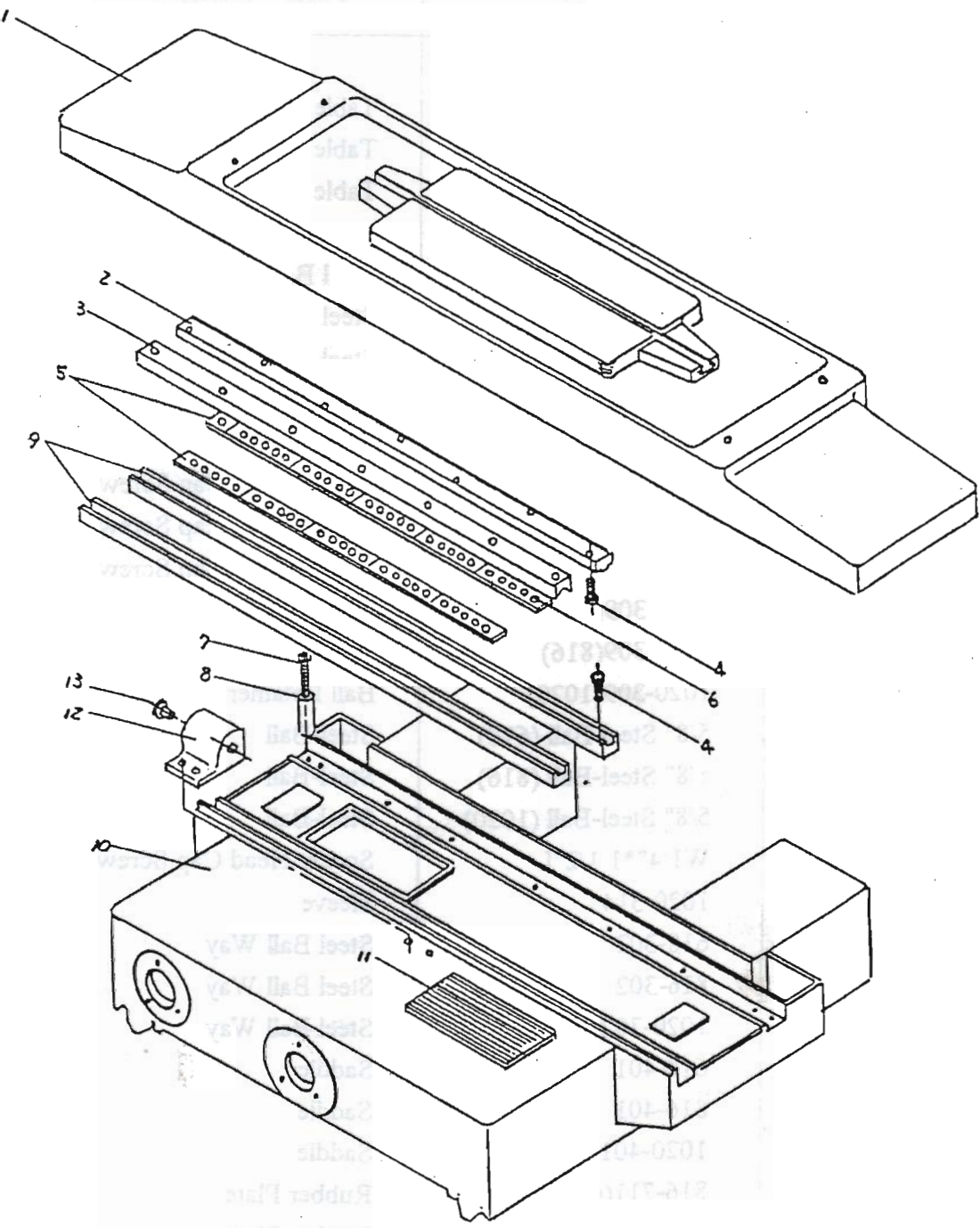
# 15. GRINDING BUGS AND ELIMINATIONS

## Grinding Bugs and Eliminations.

<u>Bugs style.</u>	<u>Reason</u>	<u>Corrective methods</u>
Vibrative waves	<ul style="list-style-type: none"> <li>a. Vibration.</li> <li>b. Grinding wheel surface loses its round.</li> <li>c. Grinding wheel is too hard</li> </ul>	<ul style="list-style-type: none"> <li>a. Keep machine in best condition and balance the grinding wheel certainly.</li> <li>b. Use sharp grinding wheel to dress grinding wheel surface again.</li> <li>c. Increase working table speed and fix with right grinding wheel.</li> </ul>
Burn on grinding surface of processed material.	<ul style="list-style-type: none"> <li>a. Caused by too hard or tiny grained grinding wheel.</li> <li>b. Grinding wheel is too blunt or coated with dusts.</li> <li>c. Caused by large downfeed capacity.</li> <li>d. Caused by shortage of coolant water.</li> </ul>	<ul style="list-style-type: none"> <li>a. Fix with softer or rougher grained grinding wheel, or decreased line speed of grinding wheel.</li> <li>b. Dress grinding wheel until it has rougher grained degree.</li> <li>c. Decrease downfeed capacity Decrease crossfeed capacity.</li> <li>d. Increase the discharge of coolant water. Refill clean coolant water. Use stronger coolant effect mixture.</li> </ul>
Work piece, lost parallel	<ul style="list-style-type: none"> <li>a. Bad on magnetic chuck surface.</li> <li>b. Precision of magnetic chuck surface is not good enough.</li> </ul>	<ul style="list-style-type: none"> <li>a. Use tiny grained grinding stone or oiled stone to polish the contact surface between magnetic chuck and work piece.</li> <li>b. Regrind magnetic chuck surface.</li> </ul>
Rough on glossy surface	<ul style="list-style-type: none"> <li>a. Feed is too much when you dress the grinding wheel.</li> <li>b. Caused by too big feed capacity in the final process.</li> </ul>	<ul style="list-style-type: none"> <li>a. Lightly dress by one or two times sparkingly dressing.</li> <li>b. Tiny feed and polish surface.</li> </ul>
Loading of grinding wheel	<ul style="list-style-type: none"> <li>a. Incorrect specification of grinding wheel.</li> <li>b. Inadequate coolant liquor.</li> <li>c. Working table speed is too low.</li> <li>d. Uncertainly dress of grinding wheel.</li> </ul>	<ul style="list-style-type: none"> <li>a. Use open style grinding wheel which has rougher grain and softer material.</li> <li>b. Guide coolant liquor to contact part and clean coolant liquor.</li> <li>c. Increase working table speed.</li> <li>d. Use sharp diamond dresser to adjust grinding wheel, rough grain is requested.</li> </ul>

# TABLE, SADDLE ASS'Y

(618,200)



# TABLE,SADDLE ASS'Y

(618,200)

Index No.	Parts No.	Parts Name	Q'ty
1.	618-301	Table	1
	816-301	Table	1
	1020-301	Table	1
2.	618-303	Steel Ball Way	1
	816-303	Steel Ball Way	1
	1020-303	Steel Ball Way	1
3.	618-304	Steel Ball Way	1
	816-304)	Steel Ball Way	1
	1020-304	Steel Ball Way	1
4.	W1/4"*3/4"L(618)	Socket Head Cap Screw	32
	W1/4"*3/4"L(816)	Socket Head Cap Screw	26
	W1/4"*3/4"L(1020)	Socket Head Cap Screw	28
5.	1020-309(618)	Ball Retainer	9
	1020-309(816)	Ball Retainer	8
	1020-309(1020)	Ball Retainer	11
6.	5/8" Steel-Ball (618)	Steel-Ball	43
	5/8" Steel-Ball (816)	Steel-Ball	39
	5/8" Steel-Ball (1020)	Steel-Ball	51
7.	W1/4"*1 1/2"L	Socket Head Cap Screw	4
8.	1020-314	Sleeve	4
9.	618-302	Steel Ball Way	2
	816-302	Steel Ball Way	2
	1020-302	Steel Ball Way	2
10.	618-401	Saddle	1
	816-401	Saddle	1
	1020-401	Saddle	1
11.	816-711(618,816)	Rubber Plate	1
	1020-711	Rubber Plate	1
12.	1020-315	Stroke Seat For L.&R.	1
13.	1020-316	Rubber Stop For L.&R.	2

# TABLE,SADDLE&BASE ASS'Y

(200H)

Index No.	Parts No.	Parts Name	Q'ty
1.	816-308	Splash Guard (Frame)	1
2.	816-308	Splash Guard (Plate)	4
3.	816-301	Table	1
4.	1020-725	Indication Plate	1
5.	816-401	Saddle	1
6.	1020-703	Lifting Bolt	1
7.	1020-711	Rubber Plate	1
8.	816-501	Base	1
9.	1020-704	Lifting Bolt	1
10.	1020-717	Levelling Screw	3
11.	1020-716	Levelling Pad	3
12.	W1/4"*1/4"	Socket Head Cap Screw	8
13.	1020-710	Side Cover	2

**TABLE,SADDLE&BASE ASS'Y**  
(1020 SERIES )

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-308	Splash Guard (Frame)	1
2.	1020-308	Splash Guard (Plate)	4
3.	1020-301	Table	1
4.	1020-725	Indication Plate	1
5.	1020-401	Saddle	1
6.	1020-703	Lifting Bolt	1
7.	1020-711	Rubber Plate	1
8.	1020-501	Base	1
9.	1020-704	Lifting Bolt	1
10.	1020-717	Levelling Screw	3
11.	1020-716	Levelling Pad	3
12.	W1/4"*1/4"	Socket Head Cap Screw	8
13.	1020-710	Side Cover	2

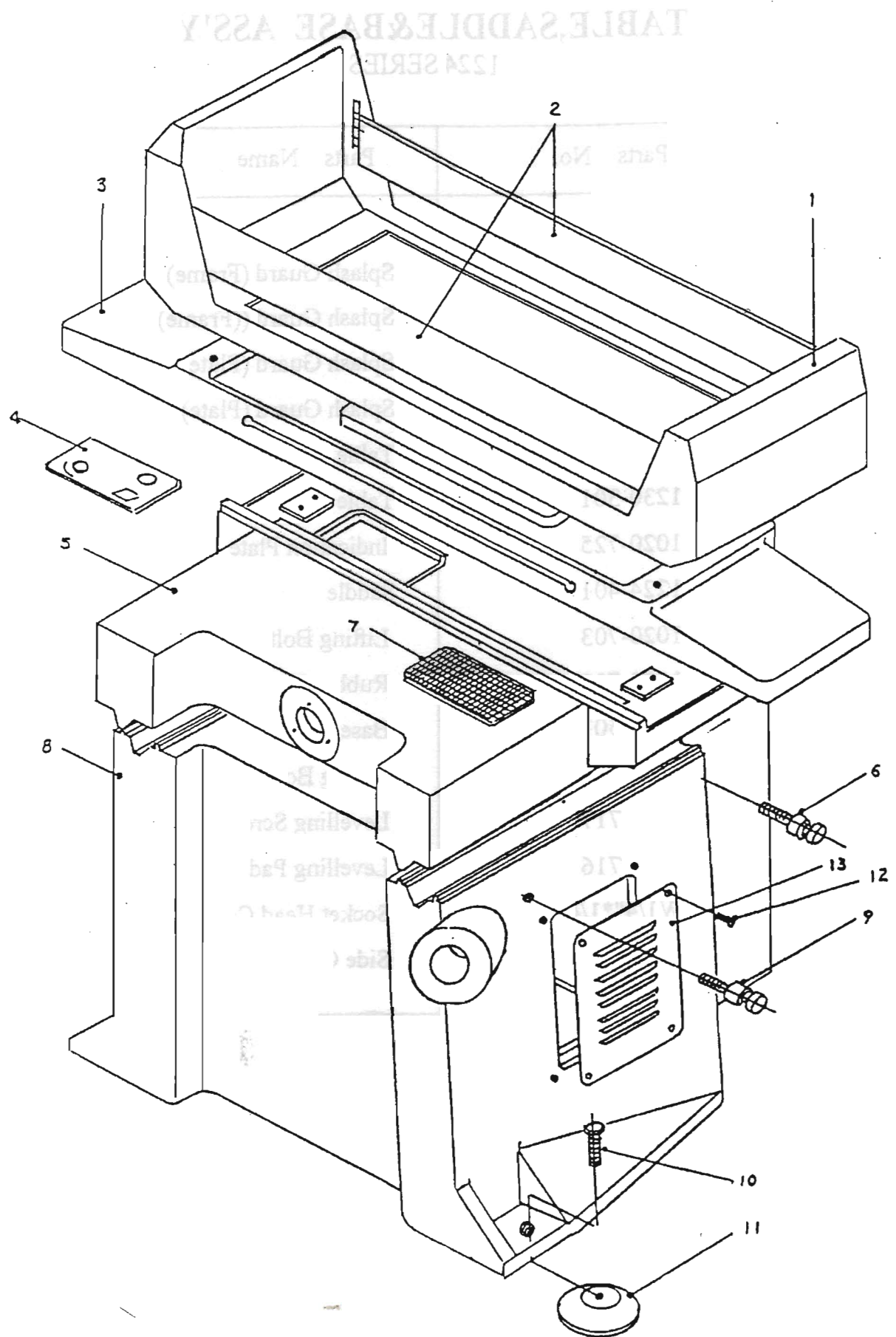
# TABLE, SADDLE & BASE ASS'Y

( 1224 SERIES )

Index No.	Parts No.	Parts Name	Q'ty
1.	1224-308	Splash Guard (Frame)	1
2.	1224-308	Splash Guard (Plate)	4
3.	N1224-301	Table	1
4.	1020-725	Indication Plate	1
5.	N1224-401	Saddle	1
6.	1020-703	Lifting Bolt	1
7.	1020-711	Rubber Plate	1
8.	N1224-501	Base	1
9.	1020-704	Lifting Bolt	1
10.	1020-717	Levelling Screw	3
11.	1020-716	Levelling Pad	3
12.	W1/4"*1/4"	Socket Head Cap Screw	8
13.	1020-710	Side Cover	2



# TABLE, SADDLE & BASE ASS'Y (1224, 1632 SERIES)





# TABLE,SADDLE&BASE ASS'Y

(1224 SERIES )

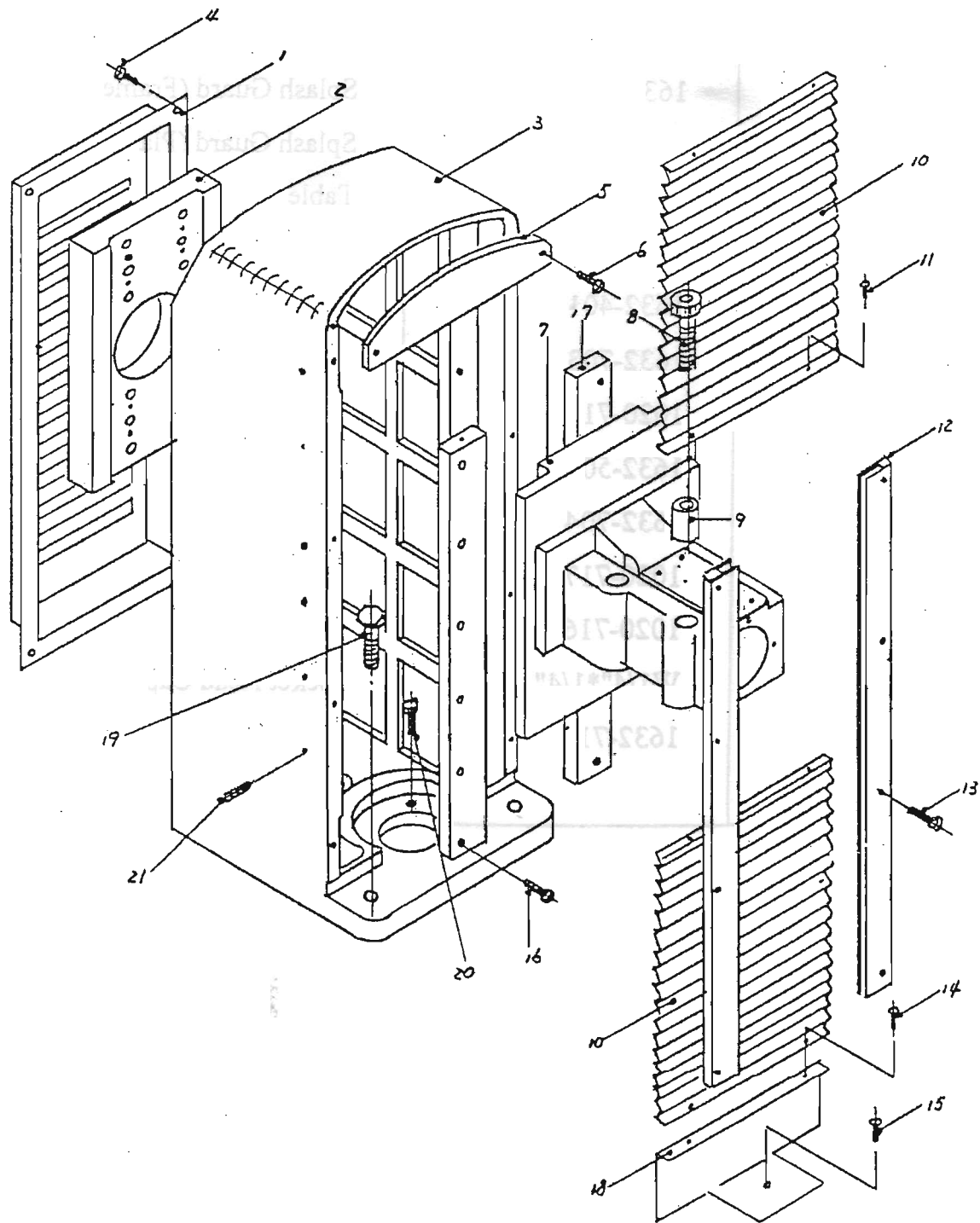
Index No.	Parts No.	Parts Name	Qty
1.	1224-308	Splash Guard (Frame)	1
	1230-308	Splash Guard ((Frame)	4
2.	1224-308	Splash Guard (Plate)	4
	1230-308	Splash Guard (Plate)	4
3.	1224-301	Table	1
	1230-301	Table	1
4.	1020-725	Indication Plate	1
5.	1224-401	Saddle	1
6.	1020-703	Lifting Bolt	1
7.	1020-711	Rubber Plate	1
8.	1224-501	Base	1
9.	1020-704	Lifting Bolt	1
10.	1020-717	Levelling Screw	5
11.	1020-716	Levelling Pad	5
12.	W1/4"*1/4"	Socket Head Cap Screw	8
13.	1020-710	Side Cover	2

# TABLE, SADDLE & BASE ASS'Y (1632 SERIES)

Index No.	Parts No.	Parts Name	Q'ty
1.	1632-308	Splash Guard (Frame)	1
2.	1632-308	Splash Guard (Plate)	4
3.	1632-301	Table	1
4.	1020-725	Indication Plate	1
5.	1632-401	Saddle	1
6.	1632-703	Lifting Bolt	2
7.	1020-711	Rubber Plate	1
8.	1632-501	Base	1
9.	1632-704	Lifting Bolt	2
10.	1020-717	Levelling Screw	5
11.	1020-716	Levelling Pad	5
12.	W1/4"*1/4"	Socket Head Cap Screw	8
13.	1632-710	Side Cover	2

# COLUMN ASS'Y

(618, 200, 1020, 1224, SERIES)



# COLUMN ASS'Y

(618,200)

Index No.	Parts No.	Parts Name	Qty
1.	816-205	Column Rear Cover	1
2.	618-102	Head B	1
	816-102	Head B	1
3.	816-201	Column	1
4.	W1/4"*1/4"L	Round Head Screw	6
5.	816-204	Upper Cover Of Column	1
6.	W1/4"*3/4"L	Socket Head Cap Screw	2
7.	618-101	Head A (618 serial)	1
	816-101	Head A (816 serial)	1
8.	W5/8"*3"L	Socket Head Cap Screw	2
9.	1020-112	Copper collar	2
10.	816-224	Dust Protection Fold Fabric	2
11.	W1/4"*1/4"L	Round Head Screw	4
12.	816-203A	Shield Dust Guide Rail	2
13.	W3/16"*3/8"L	Round Head Screw	8
14.	W1/4"*1/4"L	Round Head Screw	4
15.	W1/4"*1/4"L	Socket Head Cap Screw	1
16.	W3/8"*1"L	Socket Head Cap Screw	12
17.	816-202	Vertical Guide Rail	2
18.	816-207	Shield Dust	1
19.	W3/4"*2"L	Hexagonal Head Screw	4
20.	W1/2"*2 1/2"L	Socket Head Cap Screw	3
21.	W3/8"*1"L	Set screw	12

# COLUMN ASS'Y

(1020AH)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-205	Column Rear Cover	1
2.	1020-102	Head B	1
3.	1020-201	Column	1
4.	W1/4"*1/4"L	Round Head Screw	6
5.	1020-204A	Upper Cover Of Column	1
6.	W1/4"*3/4"L	Socket Head Cap Screw	2
7.	1020-101	Head A (1020 serial)	1
	N1224-101	Head A (N1224 serial)	1
8.	W5/8"*3"L	Socket Head Cap Screw	2
9.	1020-112	Copper collar	2
10.	1020-224	Dust Protection Fold Fabric	2
11.	W1/4"*1/4"L	Round Head Screw	4
12.	1020-203A	Shield Dust Guide Rail	2
13.	W3/16"*3/8"L	Round Head Screw	8
14.	W1/4"*1/4"L	Round Head Screw	4
15.	W1/4"*1/4"L	Socket Head Cap Screw	1
16.	W3/8"*1"L	Socket Head Cap Screw	12
17.	1020-202A	Vertical Guide Rail	2
18.	1020-207A	Shield Dust	1
19.	W3/4"*2"L	Hexagonal Head Screw	4
20.	W1/2"*2 1/2"L	Socket Head Cap Screw	3
21.	W3/8"*1"L	Set screw	12

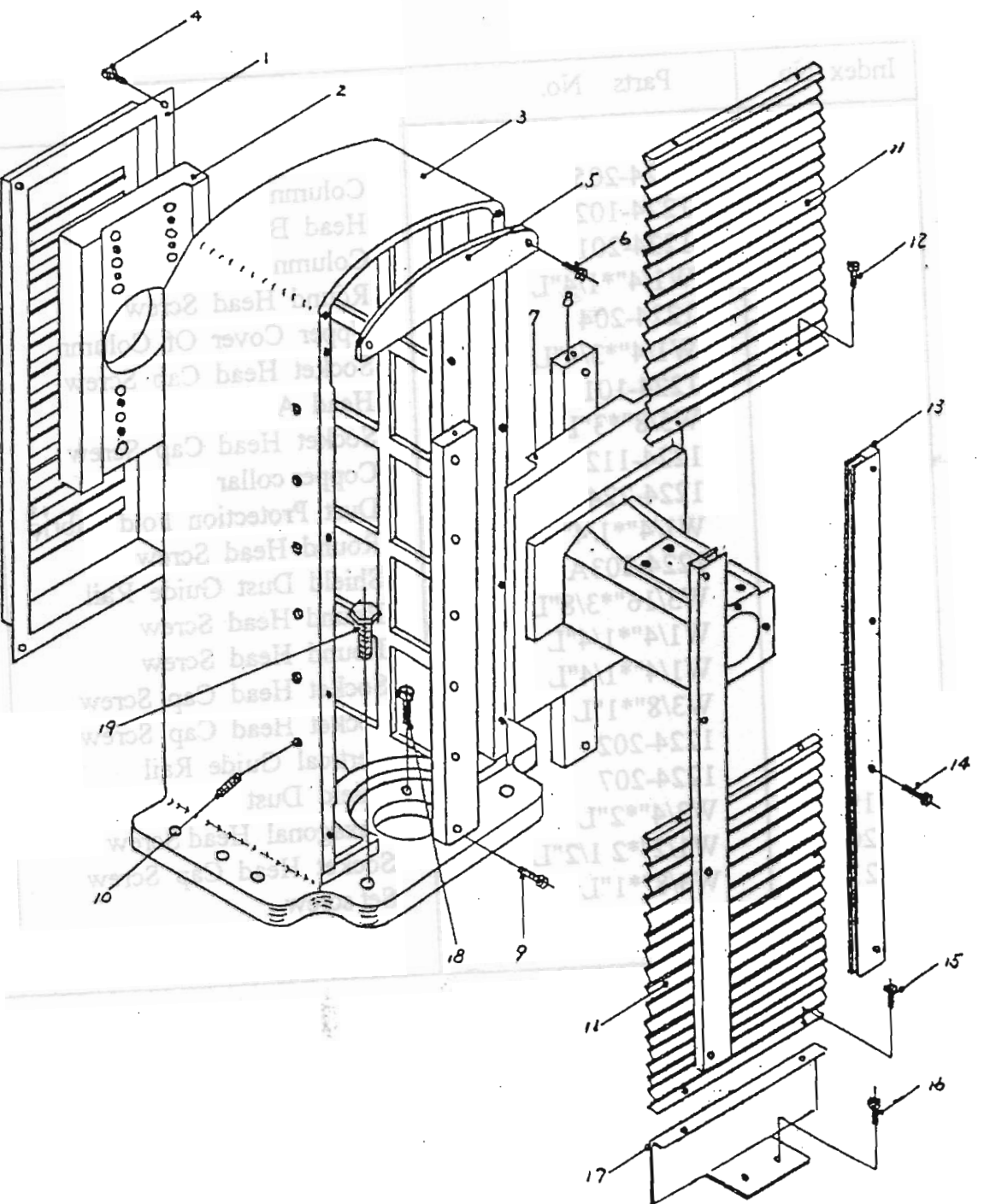
# COLUMN ASS'Y

(1224AH)

Index No.	Parts No.	Parts Name	Qty
1.	1224-205-1	Column Rear Cover	1
2.	1224-102	Head B	1
3.	1224-201	Column	1
4.	W1/4"*1/4"L	Round Head Screw	6
5.	1224-204	Upper Cover Of Column	1
6.	W1/4"*3/4"L	Socket Head Cap Screw	2
7.	1224-101	Head A	1
8.	W5/8"*3"L	Socket Head Cap Screw	2
9.	1224-112	Copper collar	2
10.	1224-224	Dust Protection Fold Fabric	2
11.	W1/4"*1/4"L	Round Head Screw	4
12.	1224-203A	Shield Dust Guide Rail	2
13.	W3/16"*3/8"L	Round Head Screw	10
14.	W1/4"*1/4"L	Round Head Screw	4
15.	W1/4"*1/4"L	Socket Head Cap Screw	1
16.	W3/8"*1"L	Socket Head Cap Screw	12
17.	1224-202	Vertical Guide Rail	2
18.	1224-207	Shield Dust	1
19.	W3/4"*2"L	Hexagonal Head Screw	4
20.	W1/2"*2 1/2"L	Socket Head Cap Screw	3
21.	W3/8"*1"L	Set screw	12



# COLUMN ASS'Y (1632 SERIES)



# COLUMN ASS'Y

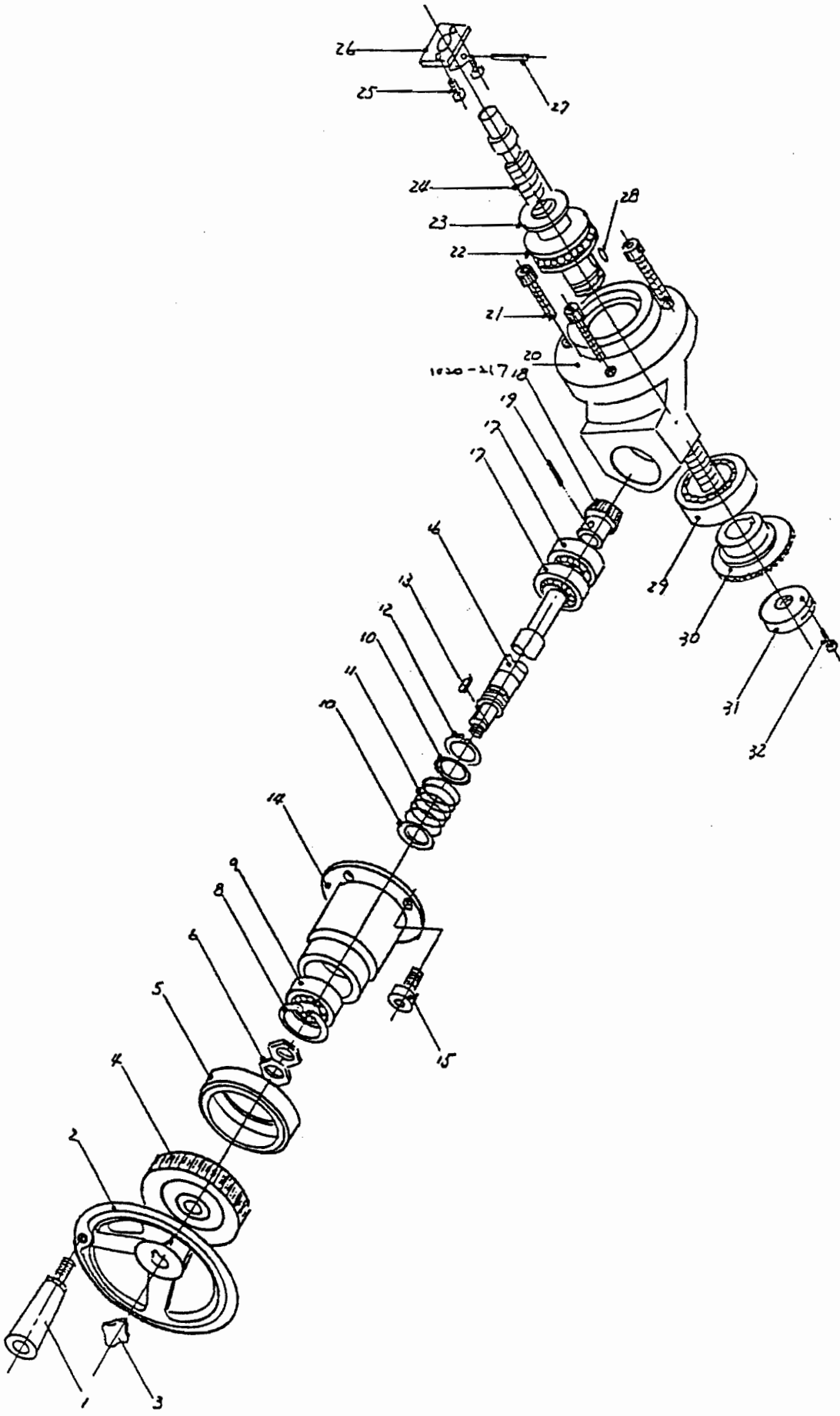
(1632AH,AHD)

Index No.	Parts No.	Parts Name	Qty
1.	1632-205	Column Rear Cover	1
2.	1632-102A	Head B	1
3.	1632-201	Column	1
4.	W1/4"*1/4"L	Round Head Screw	6
5.	1632-204	Upper Cover Of Column	1
6.	W1/4"*1"L	Socket Head Cap Screw	2
7.	1632-101	Head A	1
8.	1632-202	Vertical Guide Rail	2
9.	W1/2"*1 1/2"L	Socket Head Cap Screw	16
10.	W1/2"*1"L	Set Screw	16
11.	1632-206	Dust Protection Fold Fabric	2
12.	W3/16"*1/4"L	Round Head Screw	4
13.	1632-203	Shield Dust Guide Rail	2
14.	W3/16"*1/4"L	Round Head Screw	10
15.	W3/16"*1/4"L	Round Head Screw	4
16.	W3/16"*1/4"L	Round Head Screw	2
17.	1632-207	Shield Dust	1
18.	W1/2"*2 1/2"L	Socket Head Cap Screw	3
19.	W3/4"*2"L	Hexagonal Head Screw	8



# UPPER & LOWER TRANSMISSION ASS'Y

(618, 200, 1020AH, 1224AH, 1632AH)



# UPPER&LOWER TRANSMISSION ASS'Y

(618,200,1020AH,1224AH)

(1632AH)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-714	Handwheel	1
3.	1020-729	Cap Nut	1
4.	1020-505	Graduation Dial	1
5.	1020-504	Graduation Dial Holder	1
6.	1020-410	Hexagonal Nut	2
7.			
8.	R-52	Snap Ring	1
9.	# 1205	Ball Bearing	1
10.	1020-506	Washer	2
11.	1020-507	Spring	1
12.	S25	Snap Ring	1
13.	5*5*20L	Key	1
14.	1020-502	Bracket	1
15.	W5/16"*1"L	Socket Head Cap Screw	3
16.	618-503	Transmission shaft	1
	816-503	Transmission shaft	1
	1020-503	Transmission shaft	1
	N1224-503	Transmission shaft	1
	1224-503	Transmission shaft	1
17.	# 6204	Ball Bearing	2
18.	1020-217	Bevel Pinion	1
19.	φ 6*30L	Spring Pin	1
20.	1020-214	Gear Seat	1
21.	W1/2"*2"L	Socket Head Cap Screw	3
22.	# 51108	Ball Bearing	1
23.	1020-213	Upper&lower Lead Screw Socket	1
24.	618,816-212	Upper&lower Lead Screw	1
	1020,N1224-212	Upper&lower Lead Screw	1
	1224-212	Upper&lower Lead Screw	1
25.	W5/16"*3/4"L	Socket Head Cap Screw	2
26.	1020-218	Connect Bracket	1
27.	φ 6*30L	Spring Pin	1
28.	7*5*25	Key	1
29.	# 6011Z	Ball Bearing	1
30.	1020-216	Bevel Gear	1
31.	1020-215	Lock Nut	1
32.	W1/4"*1/4"L	Socket Head Cap Screw	1

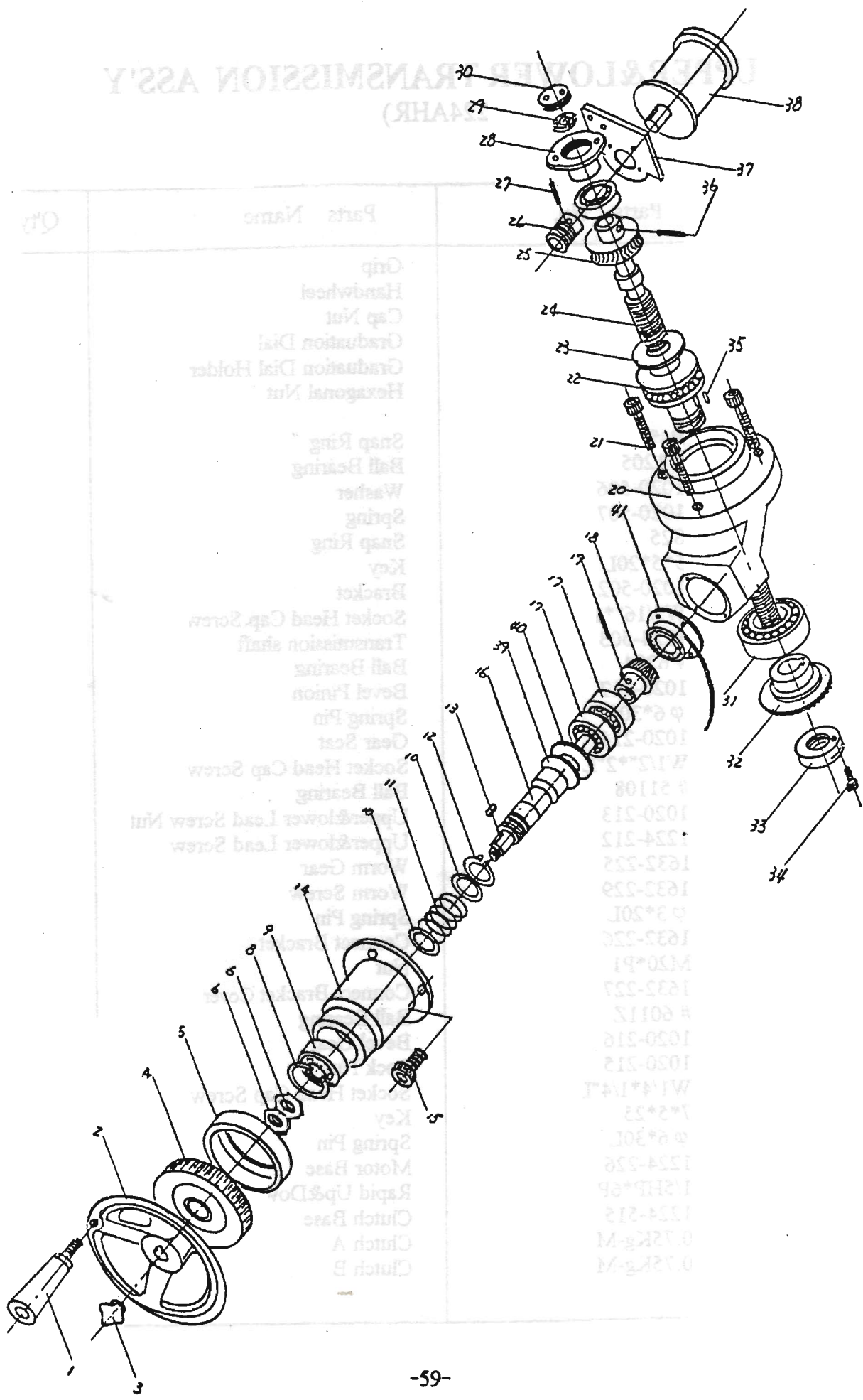
# UPPER&LOWER TRANSMISSION ASS'Y (1632AH)

Parts No

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-728	Grip	1
2.	1020-714	Handwheel	1
3.	1020-729	Cap Nut	1
4.	1020-505	Graduation Dial	1
5.	1020-504	Graduation Dial Holder	1
6.	1020-410	Hexagonal Nut	2
7.			
8.	R-52	Snap Ring	1
9.	# 1205	Ball Bearing	1
10.	1020-506	Washer	2
11.	1020-507	Spring	1
12.	S25	Snap Ring	1
13.	5*5*20L	Key	1
14.	1020-502	Bracket	1
15.	W5/16"*1"L	Socket Head Cap Screw	3
16.	1632-503	Transmission shaft	1
17.	# 6204	Ball Bearing	2
18.	1632-221	Bevel Pinion	1
19.	φ 6*30L	Spring Pin	1
20.	1632-223	Gear Seat	1
21.	W1/2"*2"L	Socket Head Cap Screw	3
22.	# 51110	Ball Bearing	1
23.	1632-213	Upper&lower Lead Screw Socket	1
24.	1632-212	Upper&lower Lead Screw	1
25.	W5/16"*3/4"L	Socket Head Cap Screw	2
26.	1632-218	Connect Bracket	1
27.	φ 6*30L	Spring Pin	1
28.	7*5*25	Key	1
29.	# 6213	Ball Bearing	1
30.	1632-222	Bevel Gear	1
31.	1632-215	Lock Nut	1
32.	W1/4"*1/4"L	Socket Head Cap Screw	1

# UPPER & LOWER TRANSMISSION ASS'Y

(1224AHR, 1632AHR)



# UPPER&LOWER TRANSMISSION ASS'Y

(1224AHR)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-714	Handwheel	1
3.	1020-729	Cap Nut	1
4.	1020-505	Graduation Dial	1
5.	1020-504	Graduation Dial Holder	1
6.	1020-410	Hexagonal Nut	2
7.			
8.	R-52	Snap Ring	1
9.	# 1205	Ball Bearing	1
10.	1020-506	Washer	2
11.	1020-507	Spring	1
12.	S25	Snap Ring	1
13.	5*5*20L	Key	1
14.	1020-502	Bracket	1
15.	W5/16"*1"L	Socket Head Cap Screw	3
16.	1224-503	Transmission shaft	1
17.	# 6204	Ball Bearing	2
18.	1020-217	Bevel Pinion	1
19.	φ 6*30L	Spring Pin	1
20.	1020-214	Gear Seat	1
21.	W1/2"*2"L	Socket Head Cap Screw	3
22.	# 51108	Ball Bearing	1
23.	1020-213	Upper&lower Lead Screw Nut	1
24.	1224-212	Upper&lower Lead Screw	1
25.	1632-225	Worm Gear	1
26.	1632-229	Worm Screw	1
27.	φ 3*20L	Spring Pin	1
28.	1632-226	Connect Bracket	1
29.	M20*P1	Nut	1
30.	1632-227	Connect Bracket Cover	1
31.	# 6011Z	Ball Bearing	1
32.	1020-216	Bevel Gear	1
33.	1020-215	Lock Nut	1
34.	W1/4*1/4"L	Socket Head Cap Screw	1
35.	7*5*25	Key	1
36.	φ 6*30L	Spring Pin	1
37.	1224-226	Motor Base	1
38.	1/5HP*6P	Rapid Up&Down Motor	1
39.	1224-515	Clutch Base	1
40.	0.75Kg-M	Clutch A	1
41.	0.75Kg-M	Clutch B	1

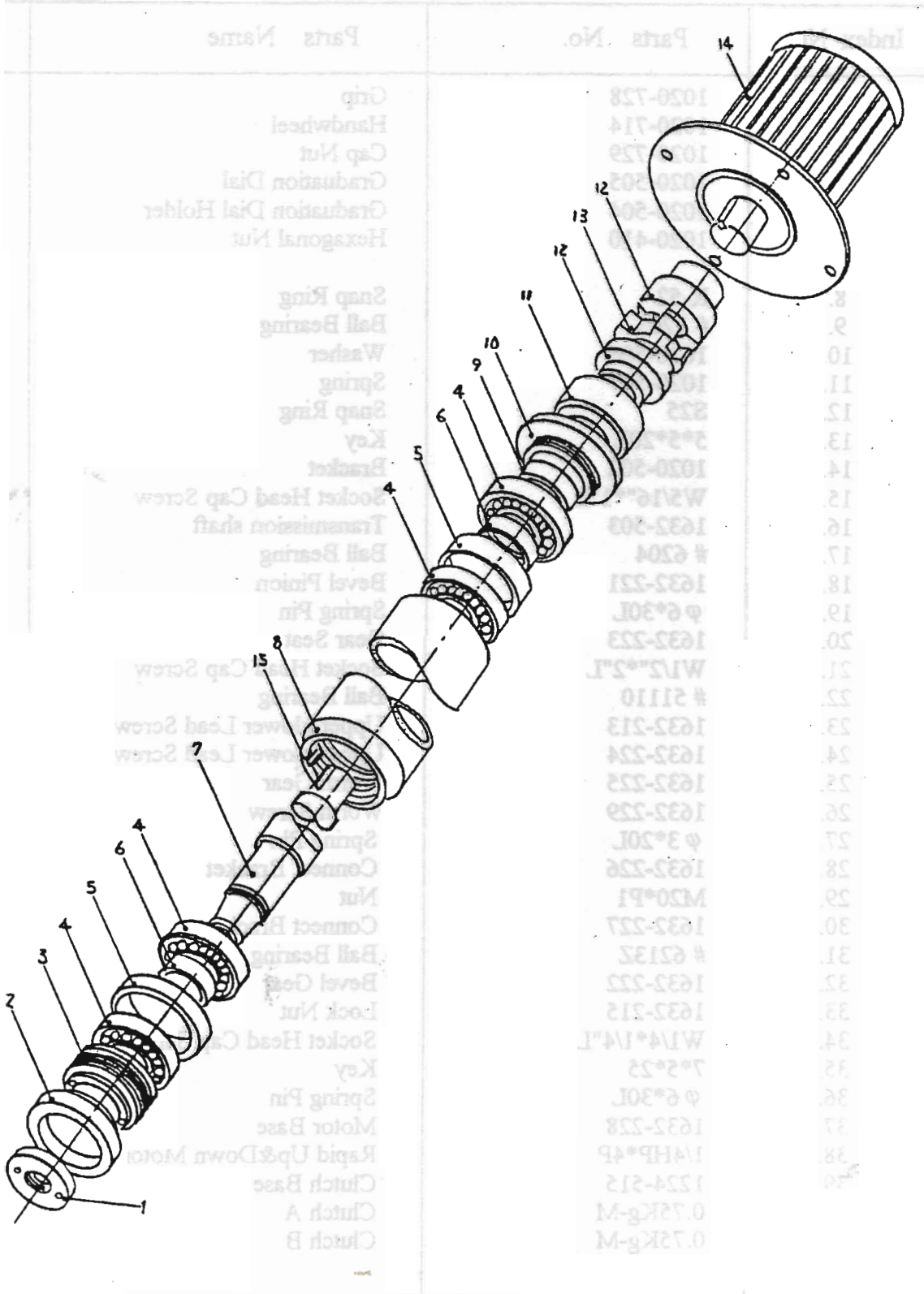


# UPPER&LOWER TRANSMISSION ASS'Y (1632AHR)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-728	Grip	1
2.	1020-714	Handwheel	1
3.	1020-729	Cap Nut	1
4.	1020-505	Graduation Dial	1
5.	1020-504	Graduation Dial Holder	1
6.	1020-410	Hexagonal Nut	2
7.			
8.	R-52	Snap Ring	1
9.	# 1205	Ball Bearing	1
10.	1020-506	Washer	2
11.	1020-507	Spring	1
12.	S25	Snap Ring	1
13.	5*5*20L	Key	1
14.	1020-502	Bracket	1
15.	W5/16"*1"L	Socket Head Cap Screw	3
16.	1632-503	Transmission shaft	1
17.	# 6204	Ball Bearing	2
18.	1632-221	Bevel Pinion	1
19.	φ 6*30L	Spring Pin	1
20.	1632-223	Gear Seat	1
21.	W1/2"*2"L	Socket Head Cap Screw	3
22.	# 51110	Ball Bearing	1
23.	1632-213	Upper&lower Lead Screw Nut	1
24.	1632-224	Upper&lower Lead Screw	1
25.	1632-225	Worm Gear	1
26.	1632-229	Worm Screw	1
27.	φ 3*20L	Spring Pin	1
28.	1632-226	Connect Bracket	1
29.	M20*P1	Nut	1
30.	1632-227	Connect Bracket Cover	1
31.	# 6213Z	Ball Bearing	1
32.	1632-222	Bevel Gear	1
33.	1632-215	Lock Nut	1
34.	W1/4*1/4"L	Socket Head Cap Screw	1
35.	7*5*25	Key	1
36.	φ 6*30L	Spring Pin	1
37.	1632-228	Motor Base	1
38.	1/4HP*4P	Rapid Up&Down Motor	1
39.	1224-515	Clutch Base	1
40.	0.75Kg-M	Clutch A	1
41.	0.75Kg-M	Clutch B	1

# SPINDLE ASS'Y

(618, 200, 1020, 1224, 1632)



Parts Name

Parts No.

Grip  
Handwheel  
Cap Nut  
Graduation Dial  
Graduation Dial Holder  
Hexagonal Nut  
  
Snap Ring  
Ball Bearing  
Washer  
Spring  
Snap Ring  
Key  
Bracket  
Socket Head Cap Screw  
Transmission shaft  
Ball Bearing  
Bevel Pinion  
Spring Pin  
Nut  
Socket Head Cap Screw  
Ball Bearing  
Washer  
Lower Lead Screw  
Lower Lead Screw  
Spring  
Connect Holder  
Nut  
Connect Holder  
Ball Bearing  
Bevel Gear  
Lock Nut  
Socket Head Cap Screw  
Key  
Spring Pin  
Motor Base  
Rapid Up&Down Motor  
Clutch Base  
Clutch A  
Clutch B

1020-728  
1020-714  
1020-729  
1020-803  
1020-300  
1020-430  
1020-500  
W516  
1632-303  
# 6204  
1632-221  
φ 6\*30L  
1632-223  
W12\*2.7L  
# 21110  
1632-213  
1632-224  
1632-225  
1632-229  
φ 3\*20L  
1632-226  
M20\*P1  
1632-227  
# 6213Z  
1632-222  
1632-215  
W14\*1/4"L  
7\*2\*25  
φ 6\*30L  
1632-228  
1/4HP\*4P  
1224-215  
0.75Kg-M  
0.75Kg-M

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# SPINDLE ASS'Y

(618,200,1020)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-106	Spindle Nut	1
2.	1020-105	Spindle Cover	1
3.	1020-107	Spindle Cover Bush	1
4.	# 7206 CP4	Angular Contact Bearing	4
5.	1020-109	Spacer	2
6.	1020-108	Spacer	2
7.	618-134	Spindle Shaft	1
	816-134	Spindle Shaft	1
	1020-144	Spindle Shaft	1
	N1224-144	Spindle Shaft	1
8.	618-103	Spindle Housing	1
	816-103	Spindle Housing	1
	1020-103	Spindle Housing	1
	N1224-103	Spindle Housing	1
9.	1020-110	Spindle Cover Bush	1
10.	1020-128	Spindle Cover	1
11.	1020-127	Spindle Nut	1
12.	1020-111	Coupling	2
13.	1020-113	Rubber Coupling	1
14.	2HP*2P	Spindle Motor	1

# SPINDLE ASS'Y

(1224 SERIES)

Index No.	Parts No.	Parts Name	Q'ty
1.	1224-106	Spindle Nut	1
2.	1224-105	Spindle Cover	1
3.	1224-107	Spindle Cover Bush	1
4.	# 7208 CP4	Angular Contact Bearing	4
5.	1224-109	Spacer (inner)	2
6.	1224-108	Spacer (outside)	2
7.	1224-104	Spindle Shaft	1
8.	1224-103	Spindle Housing	1
9.	1224-110	Spindle Cover Bush	1
10.	1224-128	Spindle Cover	1
11.	1224-127	Spindle Nut	1
12.	1224-111	Coupling	2
13.	1224-113	Rubber Coupling	1
14.	5 HP×2P	Spindle Motor	1

# SPINDLE ASS'Y

(1632 SERIES)

Index No.	Parts No.	Parts Name	Qty
1.	1632-112	Spindle Nut	1
2.	1632-105	Spindle Cover	1
3.	1632-106	Spindle Cover Bush	1
4.	# 7209 CP4	Angular Contact Bearing	4
5.	1632-109	Spacer	2
6.	1632-110	Spacer	2
7.	1632-104	Spindle Shaft	1
8.	1632-103	Spindle Housing	1
9.	1632-107	Spindle Cover Bush	1
10.	1632-108	Spindle Cover	1
11.	1632-115	Spindle Nut	1
12.	1632-111	Coupling	2
13.	1632-113	Rubber Coupling	1
14.	7 1/2HP*4P	Spindle Motor	1

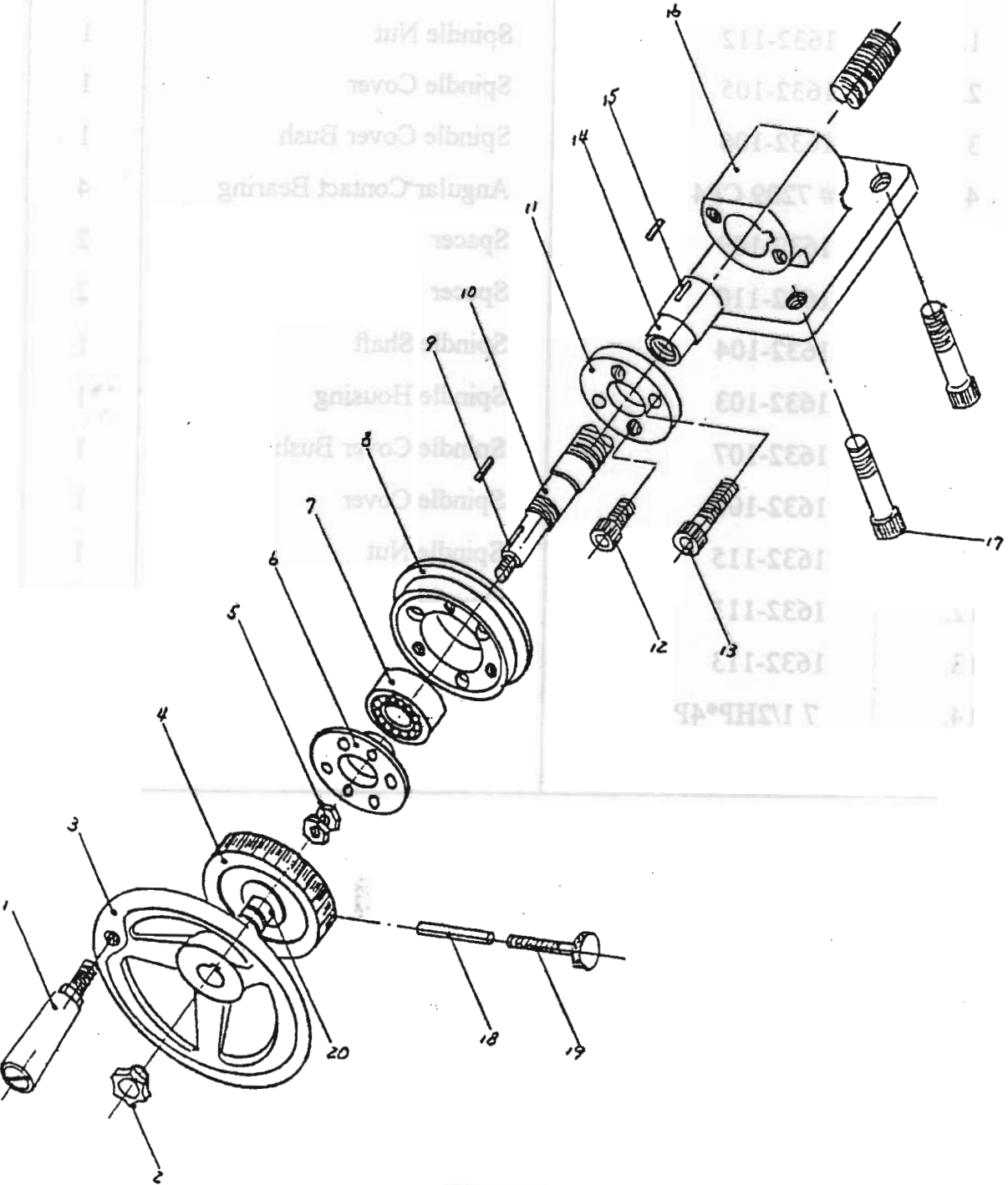


# CROSS FEED ASS'Y

(618,200)

(1632 SERIES)

Index No.	Parts No.	Parts Name	Qty
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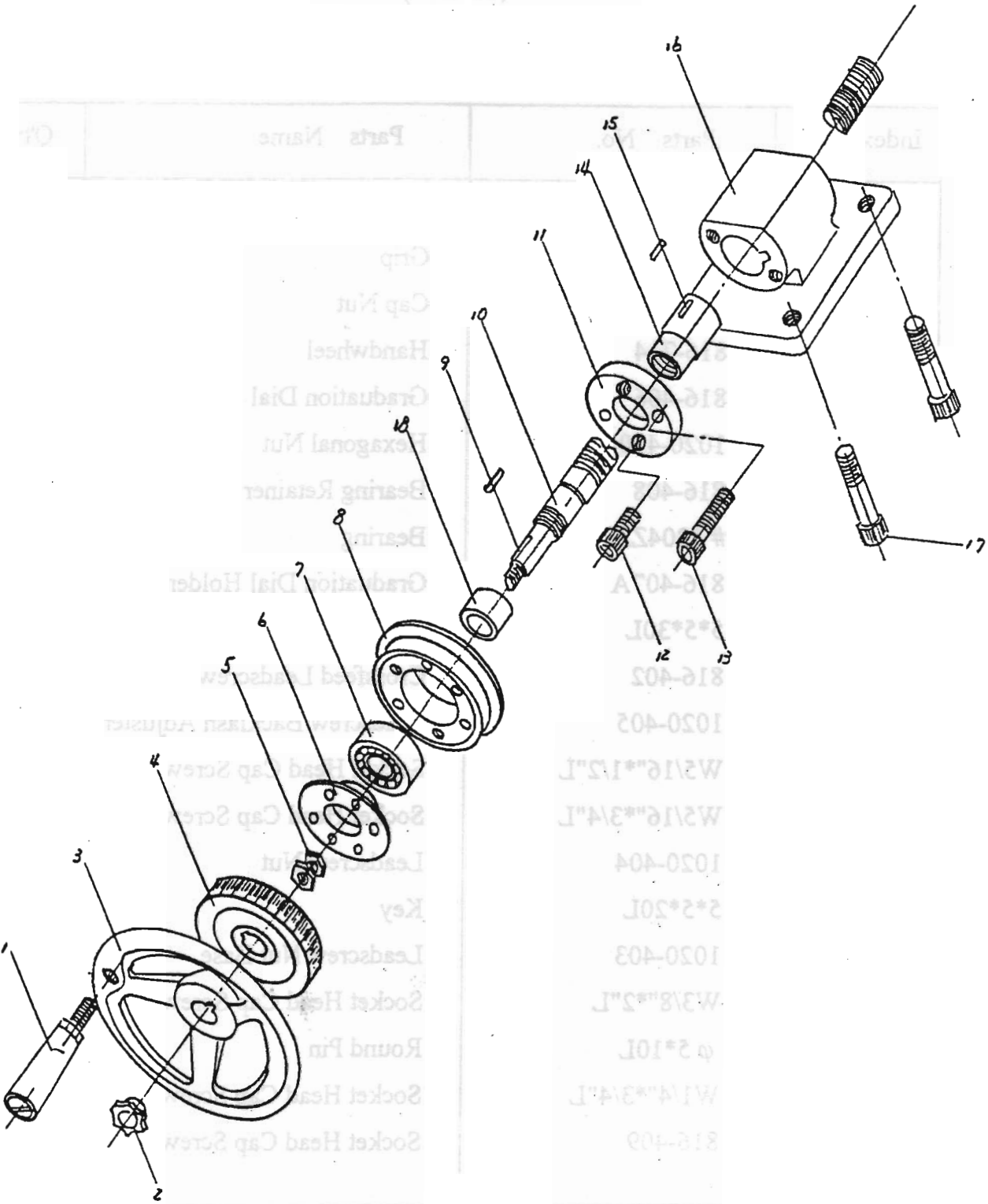
# CROSS FEED ASS'Y

(618,200)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	816-714	Handwheel	1
4.	816-406	Graduation Dial	1
5.	1020-410	Hexagonal Nut	2
6.	816-408	Bearing Retainer	1
7.	# 5204ZZ	Bearing	1
8.	816-407A	Graduation Dial Holder	1
9.	5*5*30L	Key	1
10.	816-402	Crossfeed Leadscrew	1
11.	1020-405	Leadscrew Backlash Adjuster	1
12.	W5/16"*1/2"L	Socket Head Cap Screw	2
13.	W5/16"*3/4"L	Socket Head Cap Screw	2
14.	1020-404	Leadscrew Nut	1
15.	5*5*20L	Key	1
16.	1020-403	Leadscrew Nut Base	1
17.	W3/8"*2"L	Socket Head Cap Screw	4
18.	φ 5*10L	Round Pin	1
19.	W1/4"*3/4"L	Socket Head Cap Screw	1
20.	816-409	Socket Head Cap Screw	1

# CROSS FEED ASS'Y

(1020)





# CROSS FEED ASS'Y

(1020)

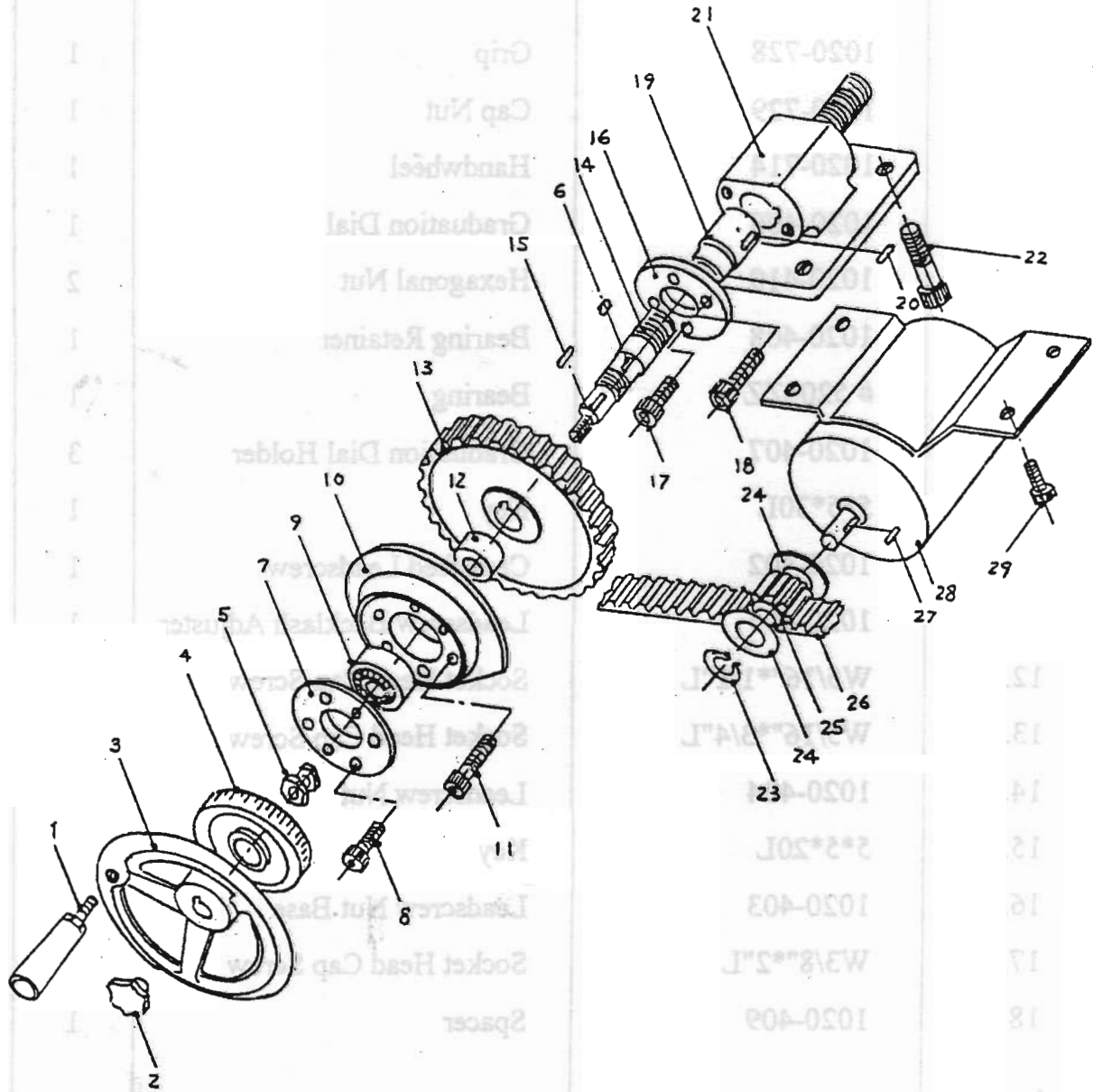
Index No.	Parts No.	Parts Name	Q'ty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	1020-406	Graduation Dial	1
5.	1020-410	Hexagonal Nut	2
6.	1020-408	Bearing Retainer	1
7.	# 5204ZZ	Bearing	1
8.	1020-407	Graduation Dial Holder	3
9.	5*5*30L	Key	1
10.	1020-402	Crossfeed Leadscrew	1
11.	1020-405	Leadscrew Backlash Adjuster	1
12.	W5/16"*1/2"L	Socket Head Cap Screw	2
13.	W5/16"*3/4"L	Socket Head Cap Screw	2
14.	1020-404	Leadscrew Nut	1
15.	5*5*20L	Key	1
16.	1020-403	Leadscrew Nut Base	1
17.	W3/8"*2"L	Socket Head Cap Screw	4
18.	1020-409	Spacer	1



# CROSS FEED ASS'Y

(1020AH)

Index No. Parts No. Parts Name Qty



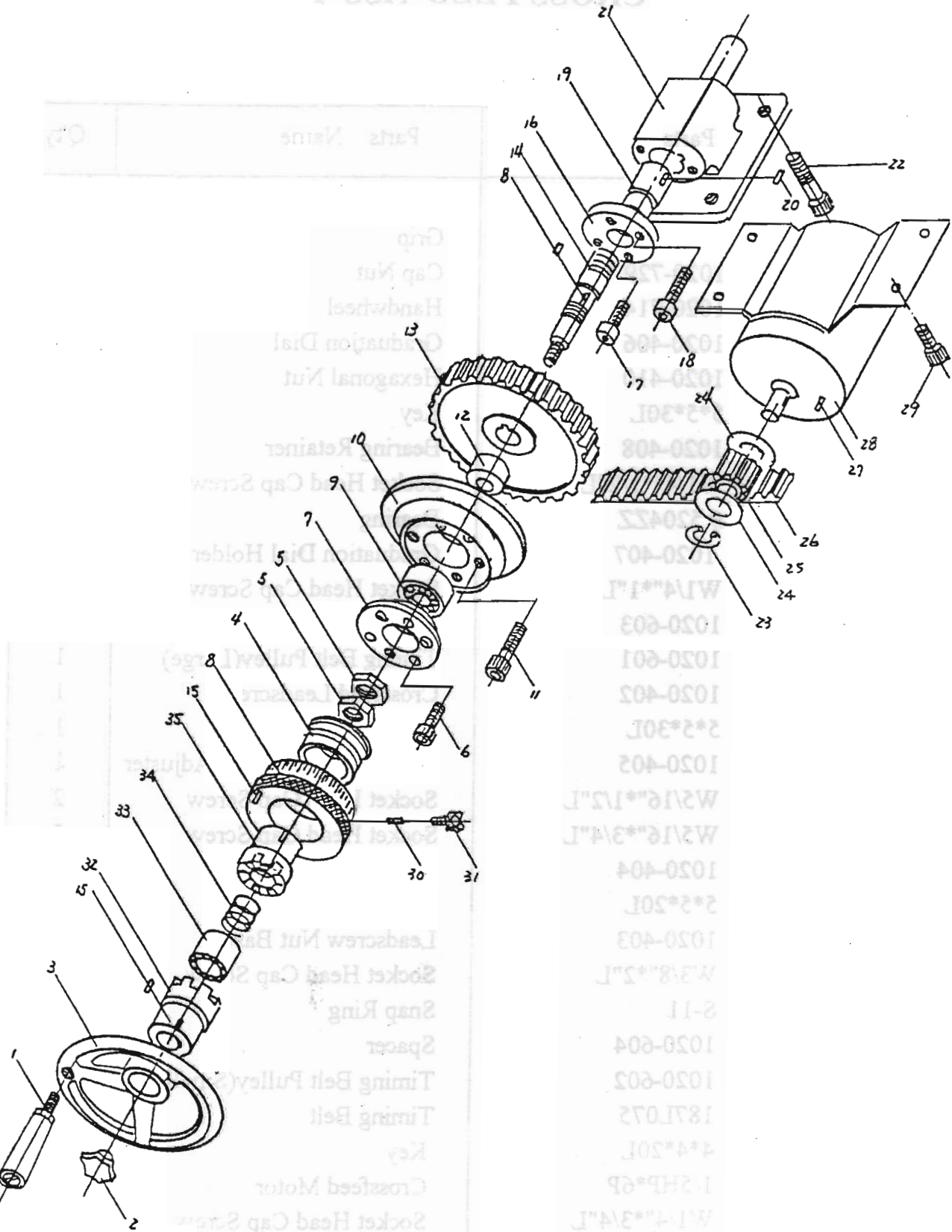
# CROSS FEED ASS'Y

(1020AH)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	1020-406	Graduation Dial	1
5.	1020-410	Hexagonal Nut	2
6.	5*5*30L	Key	1
7.	1020-408	Bearing Retainer	1
8.	W1/4"*1/2"L	Socket Head Cap Screw	3
9.	# 5204ZZ	Bearing	1
10.	1020-407	Graduation Dial Holder	1
11.	W1/4"*1"L	Socket Head Cap Screw	3
12.	1020-603	Spacer	1
13.	1020-601	Timing Belt Pulley(Large)	1
14.	1020-402	Crossfeed Leadscrew	1
15.	5*5*30L	Key	1
16.	1020-405	Leadscrew Backlash Adjuster	1
17.	W5/16"*1/2"L	Socket Head Cap Screw	2
18.	W5/16"*3/4"L	Socket Head Cap Screw	2
19.	1020-404	Leadscrew Nut	1
20.	5*5*20L	Key	1
21.	1020-403	Leadscrew Nut Base	1
22.	W3/8"*2"L	Socket Head Cap Screw	4
23.	S-11	Snap Ring	1
24.	1020-604	Spacer	2
25.	1020-602	Timing Belt Pulley(Small)	1
26.	187L075	Timing Belt	1
27.	4*4*20L	Key	1
28.	1/5HP*6P	Crossfeed Motor	1
29.	W1/4"*3/4"L	Socket Head Cap Screw	4

# CROSS FEED ASS'Y

(1224AH, 1632AH)



# CROSS FEED ASS'Y

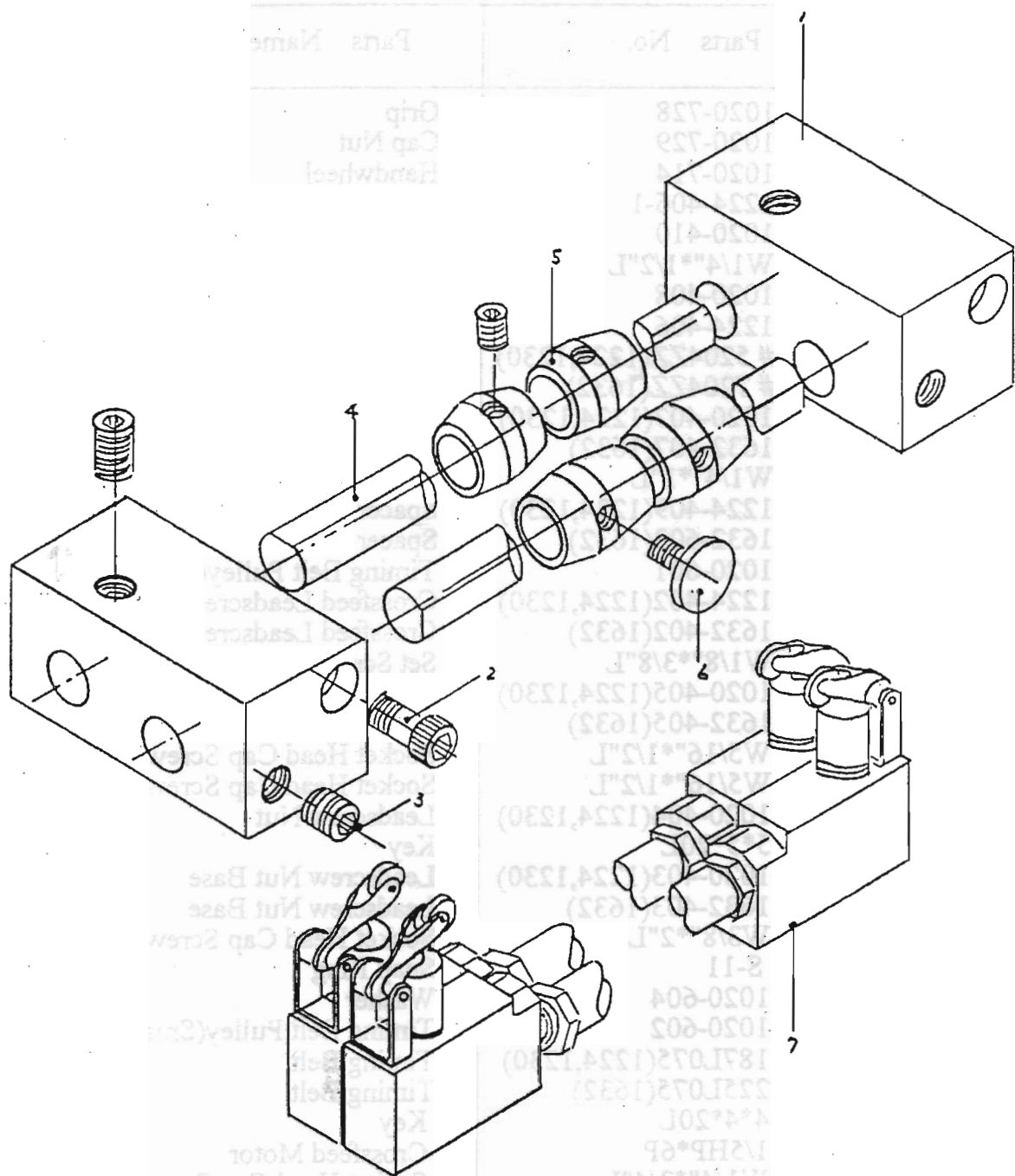
( 1224AH, 1632AH)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	1224-406-1	Graduation Dial Bush	1
5.	1020-410	Hexagonal Nut	2
6.	W1/4"*1/2"L	Socket Head Cap Screw	3
7.	1020-408	Bearing Retainer	1
8.	1224-406	Graduation Dial	1
9.	# 5204ZZ(1224,1230)	Bearing	1
	# 7204ZZ(1632)	Bearing	2
10.	1020-407(1224,1230)	Graduation Dial Holder	1
	1632-407(1632)	Graduation Dial Holde	1
11.	W1/4"*1"L	Socket Head Cap Screw	3
12.	1224-409(1224,1230)	Spacer	1
	1632-603(1632)	Spacer	1
13.	1020-601	Timing Belt Pulley(Large)	1
14.	1224-402(1224,1230)	Crossfeed Leadscre	1
	1632-402(1632)	Crossfeed Leadscre	1
15.	W1/8"*3/8"L	Set Screw	4
16.	1020-405(1224,1230)	Leadscrew Backlash Adjuster	1
	1632-405(1632)	Leadscrew Backlash Adjuster	1
17.	W5/16"*1/2"L	Socket Head Cap Screw	2
18.	W5/16"*1/2"L	Socket Head Cap Screw	2
19.	1020-404(1224,1230)	Leadscrew Nut	1
20.	5*5*20L	Key	1
21.	1020-403(1224,1230)	Leadscrew Nut Base	1
	1632-403(1632)	Leadscrew Nut Base	1
22.	W3/8"*2"L	Socket Head Cap Screw	4
23.	S-11	Snap Ring	1
24.	1020-604	Washer	2
25.	1020-602	Timing Belt Pulley(Small)	1
26.	187L075(1224,1230)	Timing Belt	1
	225L075(1632)	Timing Belt	1
27.	4*4*20L	Key	1
28.	1/5HP*6P	Crossfeed Motor	1
29.	W1/4"*3/4"L	Socket Head Cap Screw	4
30.	φ 5*10L	Round Pin	1
31.	W1/4"*3/4"L	Ajusting Screw	1
32.	1224-422	Clutch B	1
33.	TA1715	Nrrdle Bearing	1
34.	1224-425	Spring	1
35.	1224-424	Clutch A	1



# CROSSFEED CONTROL LIMIT SWITCH ASS'Y

(1020AH, 1224AH, 1632AH)



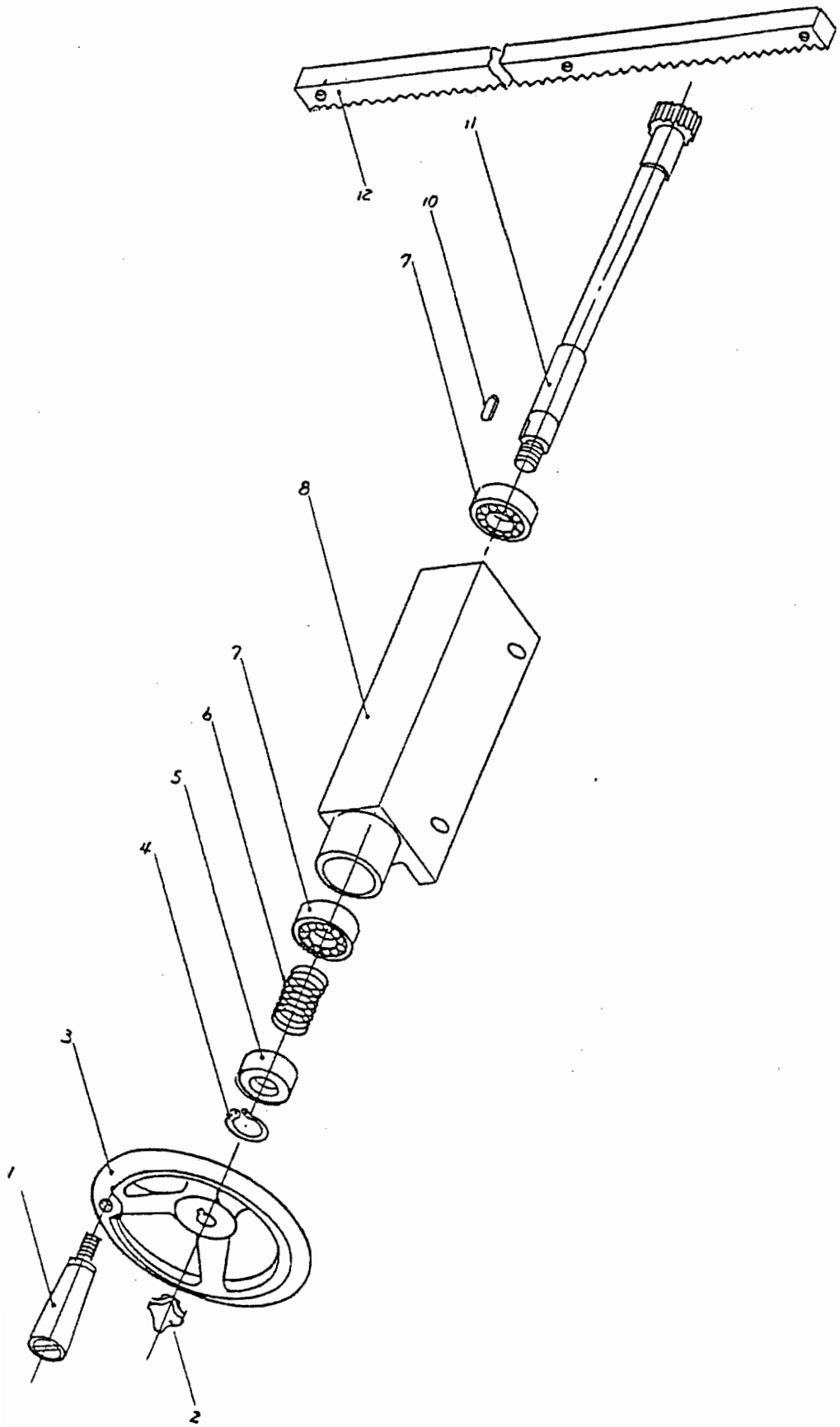
# CROSSFEED CONTROL LIMIT SWITCH ASS'Y

(1020AH, 1224AH, 1632AH)

Index No.	Parts No.	Parts Name	Qty
1.	1020-609-1	Mouting Block	2
2.	W1/4"*2 1/2"L	Socket Head Cap Screw	2
3.	W1/4"*5/8"L	Headless Socket Screw	4
4.	1020-607	Pad Rod	2
	1224-607	Pad Rod	2
	1632-607	Pad Rod	2
5.	1020-608	Dog	4
6.	1020-N808	Set Screw	2
7.	ZE-NA2-2	Limit Switch	4
8.	W1/4"*1/4"L	Headless Socket Screw	2

# LONGITUDINAL HAND FEED ASS'Y

(1020AH, 1224AH, 1632AH)





# LONGITUDINAL HAND FEED ASS'Y

(1020AH)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	S-17	Snap Ring	1
5.	1020-623	Bush	1
6.	1020-626	Spring	1
7.	# 6003ZZ	Ball Bearing	2
8.	1020-621	Frame	1
9.	R-35	Snap Ring	1
10.	5*5*15L	Key	1
11.	1020-622	Pinion Shaft	1
12.	1020-310	Gear Rack	1

# LONGITUDINAL HAND FEED ASS'Y

(1224AH)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	S-17	Snap Ring	1
5.	1020-623	Bush	1
6.	1020-626	Spring	1
7.	# 6003ZZ	Ball Bearing	2
8.	1224-621	Frame	1
9.	R-35	Snap Ring	1
10.	5*5*15L	Key	1
11.	1224-622	Pinion Shaft	1
12.	1224-310	Gear Rack	1
	1230-310	Gear Rack	1

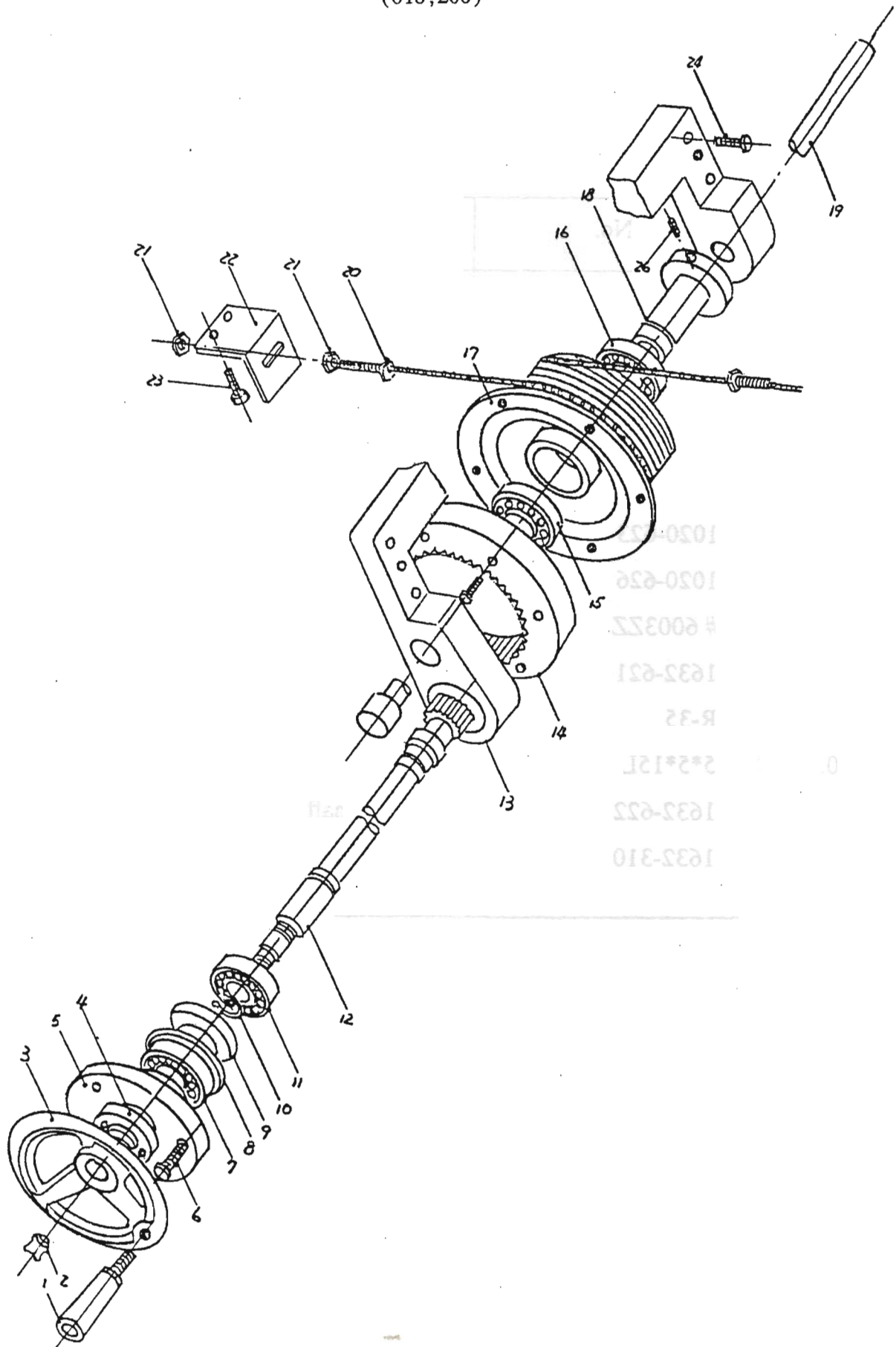
# LONGITUDINAL HAND FEED ASS'Y

(1632AH,AHD)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	S-17	Snap Ring	1
5.	1020-623	Bush	1
6.	1020-626	Spring	1
7.	# 6003ZZ	Ball Bearing	2
8.	1632-621	Frame	1
9.	R-35	Snap Ring	1
10.	5*5*15L	Key	1
11.	1632-622	Pinion Shaft	1
12.	1632-310	Gear Rack	1

# TABLE HAND FEED ASS'Y

(618,200)



# TABLE HAND FEED ASS'Y

(618,200)

Index No.	Parts No.	Parts Name	Qty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	1020-418	Screw Nut	1
5.	1020-419	Bearing Seat	1
6.	W1/4"*1/2"L	Socket Head Cap Screw	3
7.	# 6204ZZ	Ball Bearing	1
8.	R-47	Snap Ring	2
9.	1020-417	Cusion Socket Screw Nut	1
10.	S-20	Snap Ring	2
11.	#6004ZZ	Ball Bearing	1
12.	618-414	Gear Shaft	1
	816-414	Gear Shaft	1
13.	816-411	Drum Seat	1
14.	816-413	Annular Gear	1
15.	S25	Snap Ring	1
16.	# 6005ZZ	Ball Bearing	2
17.	816-412	Steel Wire Rope Drum	1
18.	1020-416	Drum Shaft Setting Seat	1
19.	1020-415	Drum Shaft	1
20.	618-411	Steel Wire	1
	816-422	Steel Wire	1
21.	W3/8"	Nut	4
22.	1020-311	Steel Wire Fixed Seat	2
23.	W1/4"*1/2"L	Socket Head Cap Screw	4
24.	W5/16"*3/4"L	Socket Head Cap Screw	4
25.	W1/4"*3/4"L	Socket Head Cap Screw	4
26.	W5/16"*1/2"L	Socket Head Cap Screw	1

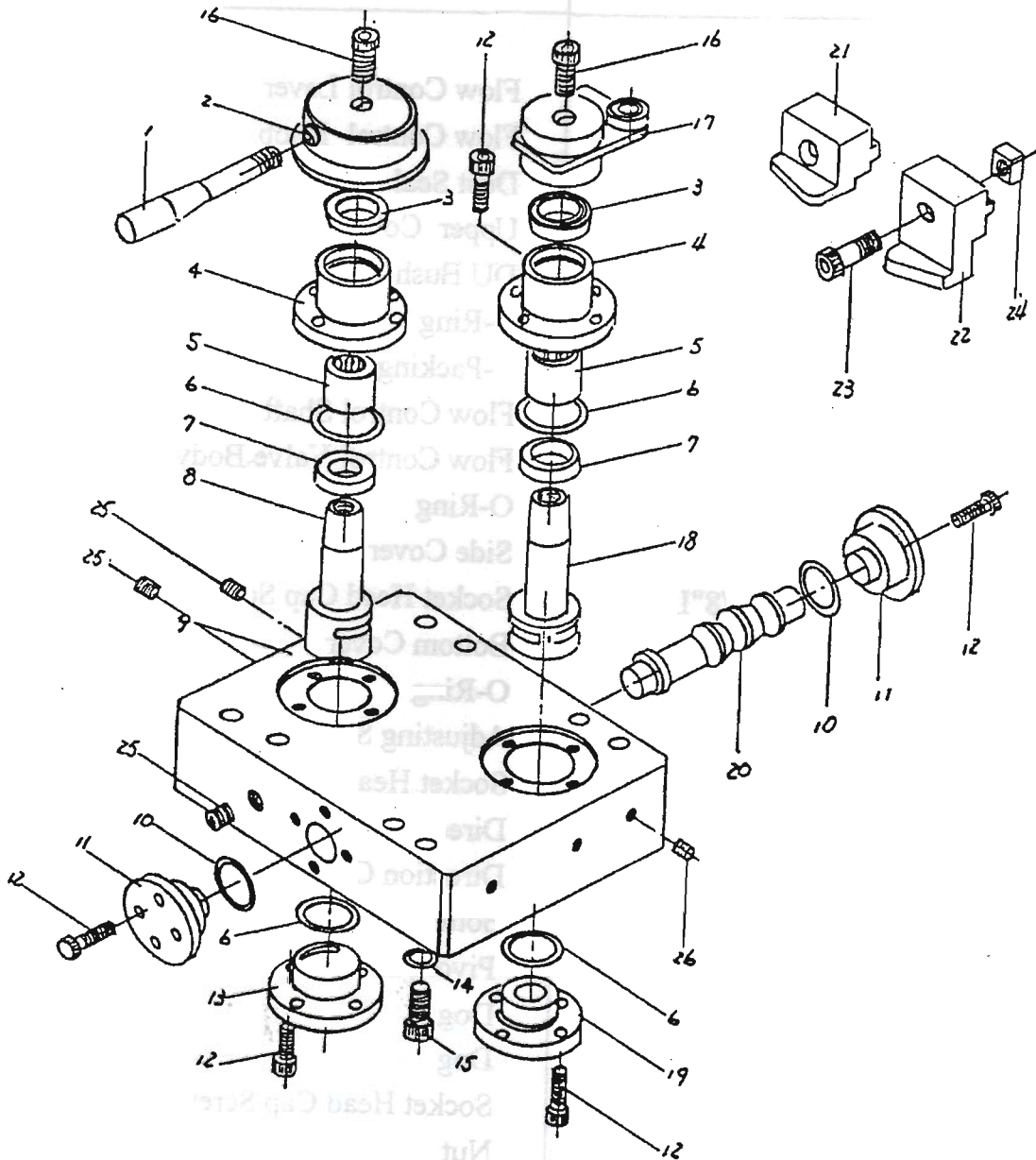
# TABLE HAND FEED ASS'Y

(1020M)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-728	Grip	1
2.	1020-729	Cap Nut	1
3.	1020-714	Handwheel	1
4.	1020-418	Screw Nut	1
5.	1020-419	Bearing Seat	1
6.	W1/4"*1/2"L	Socket Head Cap Screw	3
7.	# 6204ZZ	Ball Bearing	1
8.	R-47	Snap Ring	2
9.	1020-417	Cusion Socket Screw Nut	1
10.	S-20	Snap Ring	2
11.	#6004ZZ	Ball Bearing	1
12.	1020-414	Gear Shaft	1
13.	1020-411	Drum Seat	1
14.	1020-413	Annuiar Gear	1
15.	S25	Snap Ring	1
16.	# 6005ZZ	Ball Bearing	2
17.	1020-412	Steel Wire Rope Drum	1
18.	1020-416	Drum Shaft Setting Seat	1
19.	1020-415	Drum Shaft	1
20.	1020-422	Steel Wire	1
21.	W3/8"	Nut	4
22.	1020-311	Steel Wire Fixed Seat	2
23.	W1/4"*1/2"L	Socket Head Cap Screw	4
24.	W5/16"*3/4"L	Socket Head Cap Screw	4
25.	W1/4"*3/4"L	Socket Head Cap Screw	4
26.	W5/16"*1/2"L	Socket Head Cap Screw	1

# VALVE ASS'Y

(200H, 1020H)





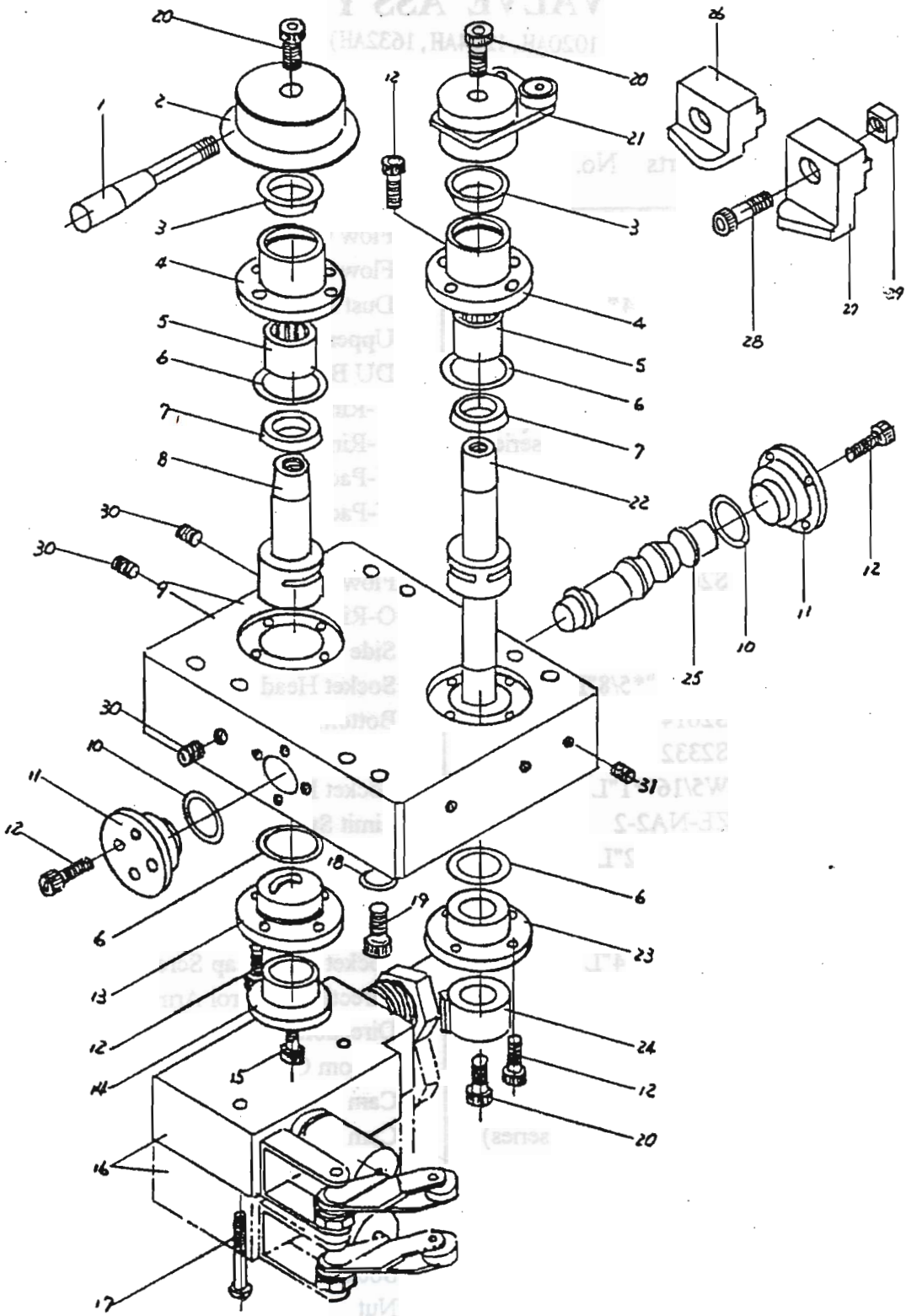
# VALVE ASS'Y

(200H, 1020H)

Index No.	Parts No.	Parts Name	Q'ty
1.	S2334	Flow Control Lever	1
2.	S2333	Flow Control Knob	1
3.	DH14*24*6	Dust Seal	2
4.	S2615	Upper Cover	2
5.	CB1512	DU Bush	2
6.	28.25*2.62	O-Ring	4
7.	UN15	U-Packing	2
8.	S2612	Flow Control Shaft	1
9.	S2611	Flow Control Valve Body	1
10.	P21	O-Ring	2
11.	S2619	Side Cover	2
12.	W3/16"*5/8"L	Socket Head Cap Screw	24
13.	S2614	Bottom Cover	1
14.	P8	O-Ring	4
15.	S2618	Adjusting Screw	1
16.	W1/4"*3/4"L	Socket Head Cap Screw	3
17.	S2335	Direction Control Arm	1
18.	S2616	Direction Control Shaft	1
19.	S2617	Bottom Cover	1
20.	S2620	Pivot Piston	1
21.	1020-617	Dog	1
22.	1020-618	Dog	1
23.	W5/16"*1/4"L	Socket Head Cap Screw	2
24.	1020-312	Nut	4
25.	W1/8PT	Set Screw	4
26.	W1/4"*5/16"L	Set Screw	5

# VALVE ASS'Y

(1020, 1224, 1632)



# VALVE ASS'Y

(1020AH, 1224AH, 1632AH)

Index No.	Parts No.	Parts Name	Qty
1.	S2334	Flow Control Lever	1
2.	S2333	Flow Control Knob	1
3.	DH14*24*6	Dust Seal	2
4.	S2615	Upper Cover	2
5.	CB1512	DU Bush	2
6.	28.25*2.62	O-Ring	4
	26.7*2.62 (1632 series)	O-Ring	4
7.	UN15	U-Packing	3
	VP15238 (1632 series)	U-Packing	3
8.	S2612	Flow Control Shaft	1
9.	S2611	Flow Control Valve Body	1
10.	P21 & 25*2	O-Ring	2&2
11.	S2619	Side Cover	2
12.	W3/16"*5/8"L	Socket Head Cap Screw	24
13.	S2614	Bottom Cover	1
14.	S2332	Limit Switch Fixed Seat	1
15.	W5/16"*1"L	Socket Head Cap Screw	1
16.	ZE-NA2-2	Limit Switch	1
17.	M4*2 1/2"L	Round Head Cap Screw	2
18.	P8	O-Ring	4
19.	S2618	Adjusting Screw	1
20.	W1/4"*3/4"L	Socket Head Cap Screw	3
21.	S2335	Direction Control Arm	1
22.	S2616	Direction Control Shaft	1
23.	S2617	Bottom Cover	1
24.	1020-605	Cam	1
	1632-605 (1632 series)	Cam	1
25.	S2620	Pivot Piston	1
26.	1020-617	Dog	1
27.	1020-618	Dog	1
28.	W5/16"*1/4"L	Socket Head Cap Screw	2
29.	1020-312	Nut	4
30.	W1/8PT	Set Screw	4
31.	W1/4"*5/16"L	Set Screw	5

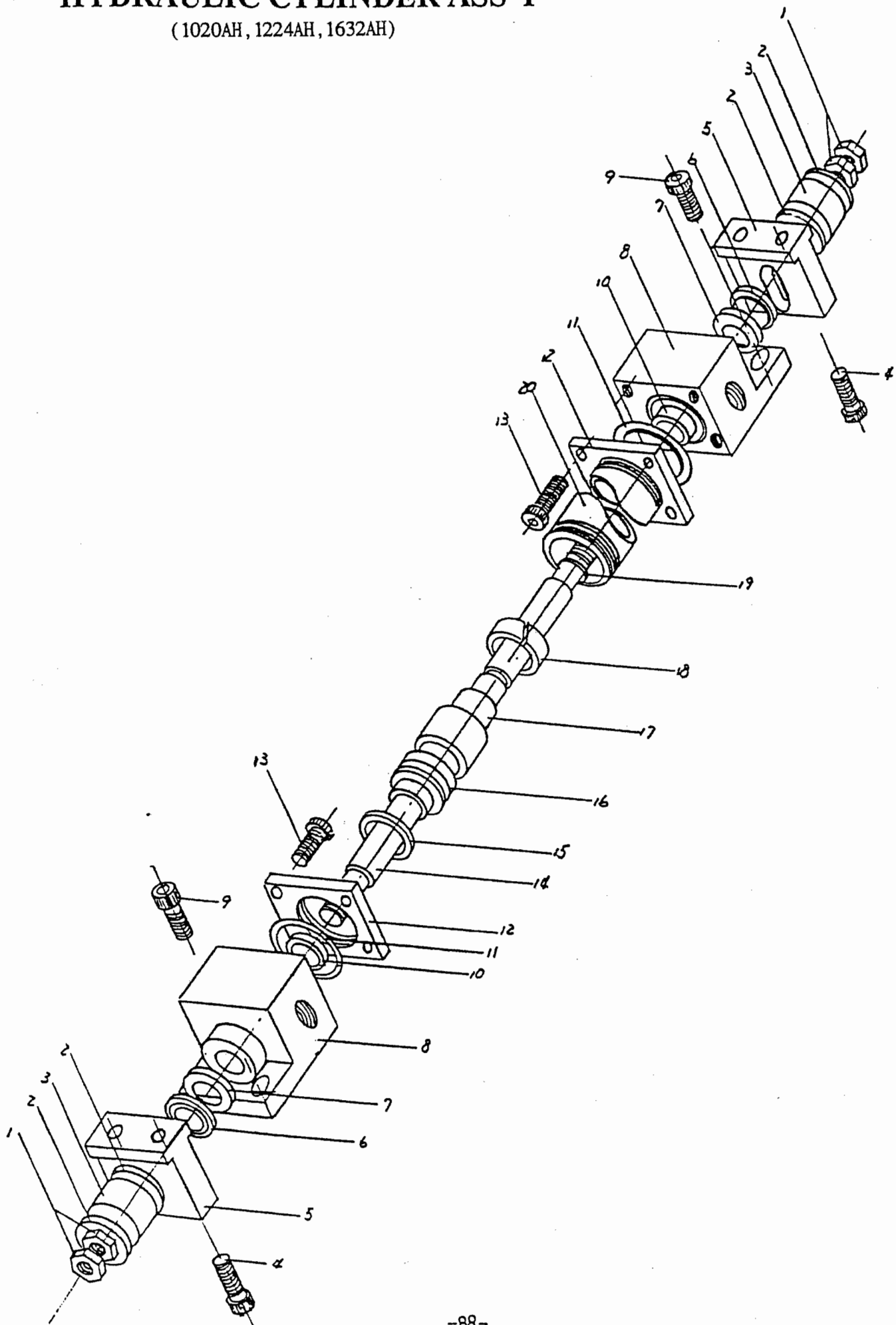
# VALVE ASS'Y

(1020AHD, 1224AHD, 1632AHD)

Index No.	Parts No.	Parts Name	Qty
1.	S2334	Flow Control Lever	1
2.	S2333	Flow Control Knob	1
3.	DH14*24*6	Dust Seal	2
4.	S2615	Upper Cover	2
5.	CB1512	DU Bush	2
6.	28.25*2.62	O-Ring	4
	26.7*2.62 (1632 series)	O-Ring	4
7.	UN15	U-Packing	3
	VP15238 (1632 series)	U-Packing	3
8.	S2612	Flow Control Shaft	1
9.	S2611	Flow Control Valve Body	1
10.	P21 & 25*2	O-Ring	2&2
11.	S2619	Side Cover	1
12.	W3/16"*5/8"L	Socket Head Cap Screw	24
13.	S2614	Bottom Cover	1
14.	S2332	Limit Switch Fixed Seat	1
15.	W5/16"*1"L	Socket Head Cap Screw	2
16.	ZE-NA2-2	Limit Switch	1
16.	Z-15GW2277B	Limit Switch	1
17.	M4*2 1/2"L	Round Head Cap Screw	2
18.	P8	O-Ring	4
19.	S2618	Adjusting Screw	1
20.	W1/4"*3/4"L	Socket Head Cap Screw	3
21.	S2335	Direction Control Arm	1
22.	S2616	Direction Control Shaft	1
23.	S2617	Bottom Cover	1
24.	1020-605	Cam	1
	1632-605 (1632 series)	Cam	1
25.	S2620	Pivot Piston	1
26.	1020-617	Dog	1
27.	1020-618	Dog	1
28.	W5/16"*1/4"L	Socket Head Cap Screw	2
29.	1020-312	Nut	4
30.	W1/8PT	Set Screw	4
31.	W1/4"*5/16"L	Set Screw	5

# HYDRAULIC CYLINDER ASS'Y

(1020AH, 1224AH, 1632AH)



# HYDRAULIC CYLINDER ASS'Y

(1020AH, 1224AH)

(DHA, HASSAD)

Index No.	Parts No.	Parts Name	Qty
1.	M10*P1.25	Hexagonal Nut	4
2.	1020-629	Washer	4
3.	1020-628	Rubber pad	2
4.	W3/8"*1 3/4"L	Socket Head Cap Screw	4
5.	1020-619	Drawing Seat	2
6.	LBH 20*28*4.5*6	Dust Seal	2
7.	USH 20*28*5	U-Packing	2
8.	1020-A4-06	End Cover	2
9.	W5/16"*3/4"L	Socket Head Cap Screw	4
10.	MB 2012	Du Bush	2
11.	SPG 21	O-Ring	2
12.	1020-A4-08	Fixed Plate	2
13.	W1/4"*1"L	Socket Head Cap Screw	4
14.	1020-A3-01	Piston Rod	1
15.	P24	O-Ring	1
16.	1020-A4-09	Piston A	1
17.	1020-A4-09-1	Piston B	1
18.	φ 6* φ 25*9.7W	Slide Ring	1
19.	P16	O-Ring	1
20.	1020-A3-02	Cylinder	1



# HYDRAULIC CYLINDER ASS'Y

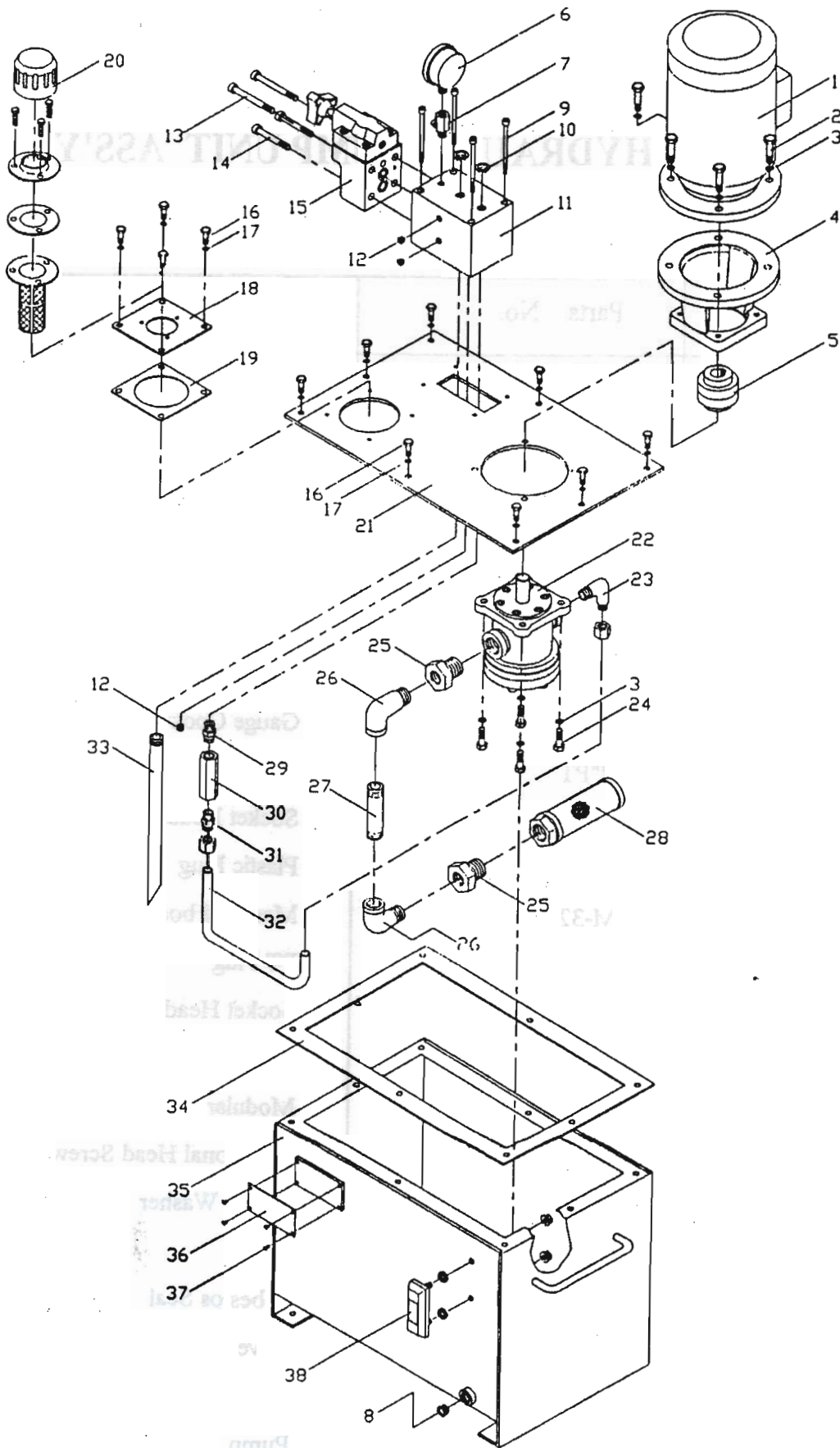
(1632AH,AHD)

Index No.	Parts No.	Parts Name	Q'ty
1.	M12*P1.25	Hexagonal Nut	4
2.	1632-629	Washer	4
3.	1632-628	Rubber pad	2
4.	W3/8"*1 3/4"L	Socket Head Cap Screw	4
5.	1632-619	Drawing Seat	2
6.	LBH 25*33*4.5*6	Dust Seal	2
7.	USH 25*33*5	U-Packing	2
8.	1632-A4-06	End Cover	2
9.	W5/16"*3/4"L	Socket Head Cap Screw	4
10.	1632-A3-03	Du Bush	2
11.	G 35	O-Ring	2
12.	1632-A4-08	Fixed Plate	2
13.	W1/4"*1"L	Socket Head Cap Screw	4
14.	1632-A3-01	Piston Rod	1
15.	P34	O-Ring	1
16.	1632-A4-09	Piston A	1
17.	1632-A4-09-1	Piston B	1
18.	φ 35* φ 40*9.7W	Slide Ring	1
19.	P21	O-Ring	1
20.	1632-A3-02	Cylinder	1



# HYDRAULIC PUMP UNIT ASS'Y

(1020AH)



# HYDRAULIC PUMP UNIT ASS'Y

(1020AH)

P. 10F2

Index No.	Parts No.	Parts Name	Q'ty
1.	1HP*6P	Motor	1
2.	M10*40L	Hexagonal Head Screw	1
3.	SWM10	Spring Washer	1
4.	EM-225	Flange	1
5.	E67	Coupling	1
6.	2 1/2"*70KG	Pressure Gauge	1
7.	1/4"PT	Gauge Cock	1
8.	1/2"PT	PT Plug	1
9.	M6*100L	Socket Head Cap Screw	1
10.	3/8"	Plastic Plug	1
11.	EM-323	Manifold board	1
12.	1/4"PT	PT Plug	1
13.	M12*90L	Socket Head Cap Screw	4
14.	M12*70L	Socket Head Cap Screw	8
15.	RF-G04-1	Modular Relief Valve	4
16.	M8*20L	Hexagonal Head Screw	1
17.	SWM8	Spring Washer	1
18.	EM-220	Cover	1
19.	EM-219	Asbestos Seal	1
20.	AB-1163	Cover Of Hydraulic Oil Filler	1
21.	EM-213	Cover Of Tank	14
22.	VPNC-F12.5	Pump	14
23.	3/4"PT* $\phi$ 15mm	LE Connector	1

# HYDRAULIC PUMP UNIT ASS'Y

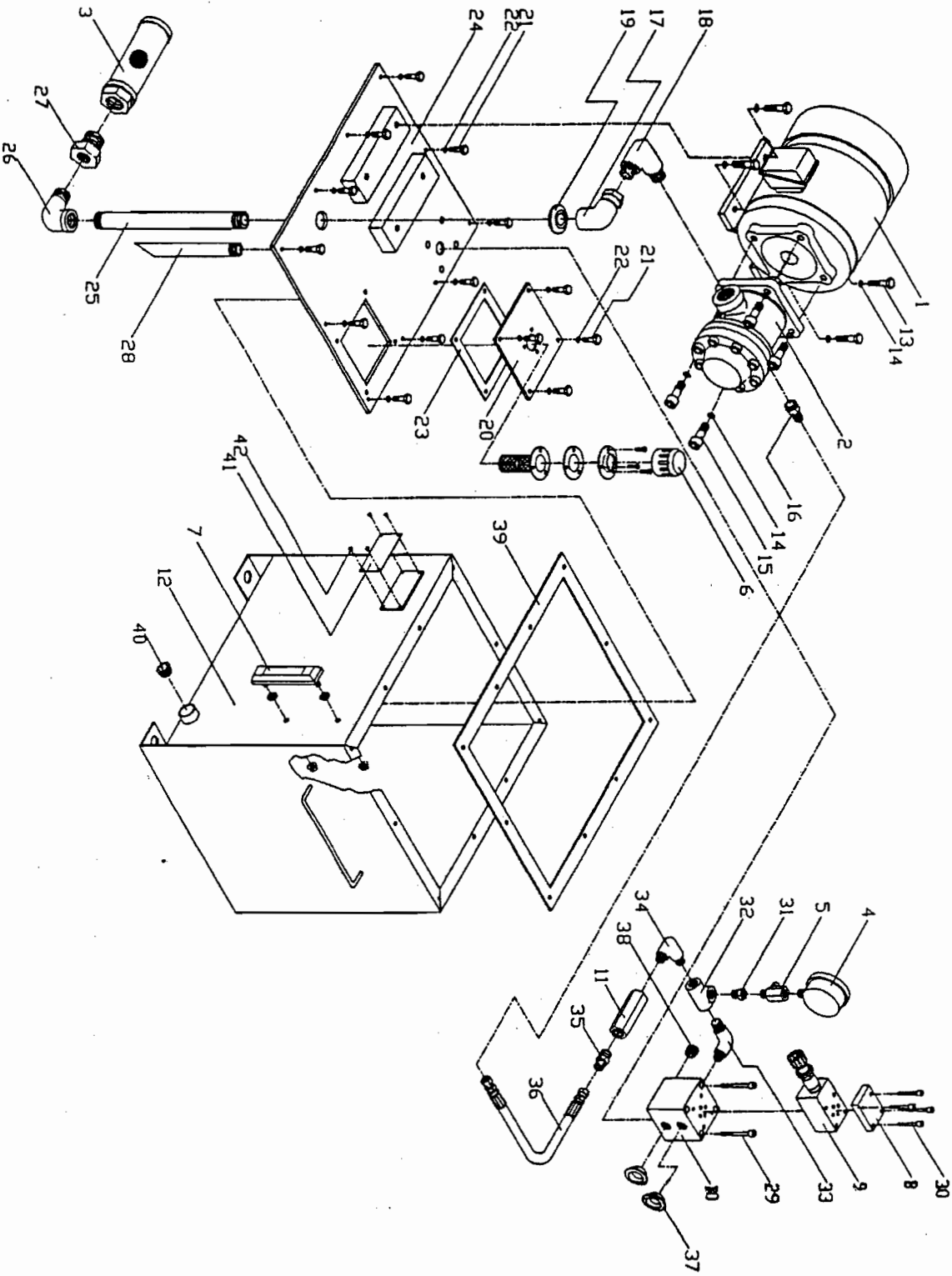
(1020AH)

P.2OF2

Index No.	Parts No.	Parts Name	Q'ty
24.	M10*30L	Socket Head Cap Screw	1
25.	3/4"PT(F)*1"PT(M)	Bushing	1
26.	3/4"PT(F)*3/4"PT(M)	Connector (90° Elbow)	2
27.	3/4"PT*110L	Zinc-Plate Pipe	1
28.	SS-1-100	Oil Filter	1
29.	1/2"PT*1/2"PT	Connector	2
30.	CI-T04-05	Check Valve	4
31.	1/2"PT* $\phi$ 15mm	LE Connector	1
32.	$\phi$ 15mm*2.0t	OST2 Pipe	1
33.	1/2"PT*210L	Zinc-Plate Pipe	1
34.	3/8"PT(F)	Asbestos Seal	1
35.	EM-213(540*350*350)	Hydraulic Tank	1
36.	NP-E01	Name Plate	1
37.	$\phi$ 2*6L	Rivet	1
38.	KS-3"	Oil Level Indicator	1

# HYDRAULIC PUMP UNIT ASS'Y

(1224AH)



# HYDRAULIC PUMP UNIT ASS'Y

(1224AH)

P. 1OF2

Index No.	Parts No.	Parts Name	Qty
1.	2HP*6P	Motor	1
2.	VPNC-F12-2-30	Pump	1
3.	SS-1-100	Oil Filter	1
4.	2 1/2"*70KG	Pressure Gauge	1
5.	1/4"PT	Gauge Cock	1
6.	AB-1163	Cover Of Hydraulic Oil Filler	1
7.	KS-5	Oil Level Indicator	1
8.	M02 P-A	Cover	1
9.	MRF-02P-0-K	Modular Relief Valve	1
10.	EM-143	Manifold board	1
11.	CI-T04-10	Check Valve	1
12.	EM214(560*500*460)	Hydraulic Tank	1
13.	M10*30L	Hexagonal Head Screw	4
14.	SWM10	Spring Washer	8
15.	M10*30L	Socket Head Cap Screw	4
16.	3/4"PT*3/8"PS	Connector	1
17.	3/4"PT(F)*3/4"PS(M)	Connector (90° Elbow)	1
18.	1"PT*3/4"PS	Connector (90° Elbow)	1
19.	ST-06	Dust Rubber	1
20.	CP-01	Cover	1
21.	M8*20L	Hexagonal Head Screw	14
22.	SWM8	Spring Washer	14
23.	SS-C01	Asbestos Seal	1
24.	CT-C01	Cover Of Tank	1
25.	3/4"PT*420L	Zinc-Plate Pipe	1

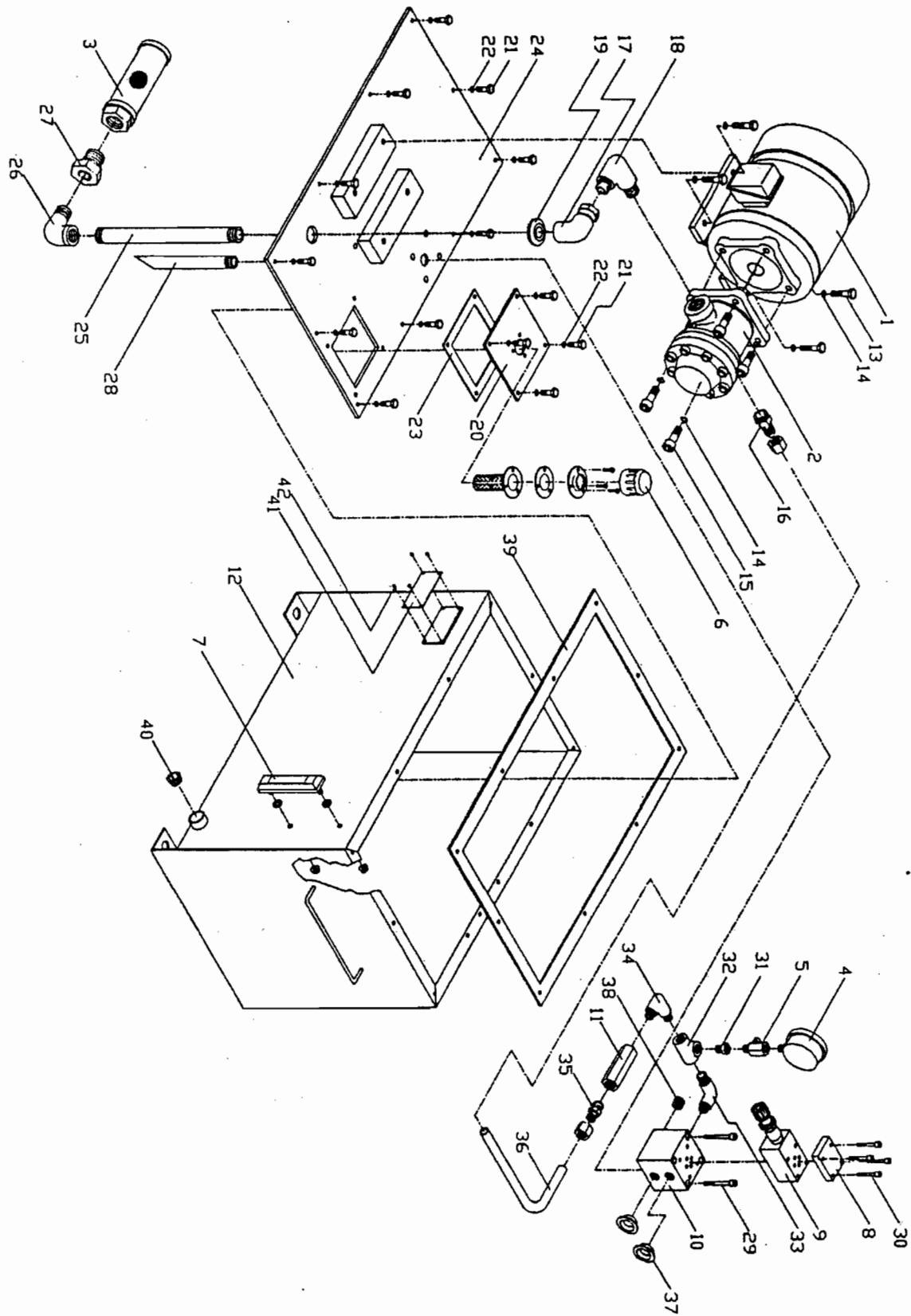
# HYDRAULIC PUMP UNIT ASS'Y

(1224AH)

P. 20F2

Index No.	Parts No.	Parts Name	Q'ty
26.	3/4"PT(F)*3/4"PT(M)	Connector (90° Elbow)	2
27.	3/4"PT(F)*1"PT(M)	Bushing	1
28.	1/2"PT*420L	Zinc-Plate Pipe	1
29.	M6*65L	Socket Head Cap Screw	2
30.	M5*60L	Socket Head Cap Screw	4
31.	1/4"PT*3/8PT	Socket	1
32.	3/8"PT(F)	Connector (3 ways)	1
33.	3/8"PT*3/8"PT	Connector (90° Elbow)	1
34.	3/8"PT*1/2"PT	Connector (90° Elbow)	1
35.	1/2"PT*3/8"PS	Connector	1
36.	3/8"PS*3/8"PS*290L	High Pressure Tube	1
37.	3/8"	Plastic Plug	2
38.	3/8"PT	PT Plug	1
39.	SS-C02	Asbestos Seal	1
40.	1/2"PT	PT Plug	1
41.	NP-C01	Name Plate	1
42.	φ 2*6L	Rivet	4

# HYDRAULIC PUMP UNIT ASS'Y (1632AH)





# HYDRAULIC PUMP UNIT ASS'Y (1632AH)

P. 1OF2

Index No.	Parts No.	Parts Name	Qty
1.	2HP*6P	Motor	1
2.	VPNC-F12-2-30	Pump	1
3.	SS-1-100	Oil Filter	1
4.	2 1/2"*70KG	Pressure Gauge	1
5.	1/4"PT	Gauge Cock	1
6.	AB-1163	Cover Of Hydraulic Oil Filler	1
7.	KS-5	Oil Level Indicator	1
8.	M02 P-A	Cover	1
9.	MRF-02P-0-K	Modular Relief Valve	1
10.	EM-143	Manifold board	1
11.	CI-T04-10	Check Valve	1
12.	EM214(800*550*340)	Hydraulic Tank	1
13.	M10*30L	Hexagonal Head Screw	4
14.	SWM10	Spring Washer	8
15.	M10*30L	Socket Head Cap Screw	4
16.	3/4"PT* $\phi$ 15mm	LE Connector	1
17.	3/4"PT(F)*3/4"PS(M)	Connector (90° Elbow)	1
18.	1"PT*3/4"PS	Connector (90° Elbow)	1
19.	ST-06	Dust Rubber	1
20.	CP-02	Cover	1
21.	M8*20L	Hexagonal Head Screw	14
22.	SWM8	Spring Washer	14
23.	SS-D02	Asbestos Seal	1
24.	CT-D02	Cover Of Tank	1
25.	3/4"PT*360L	Zinc-Plate Pipe	1

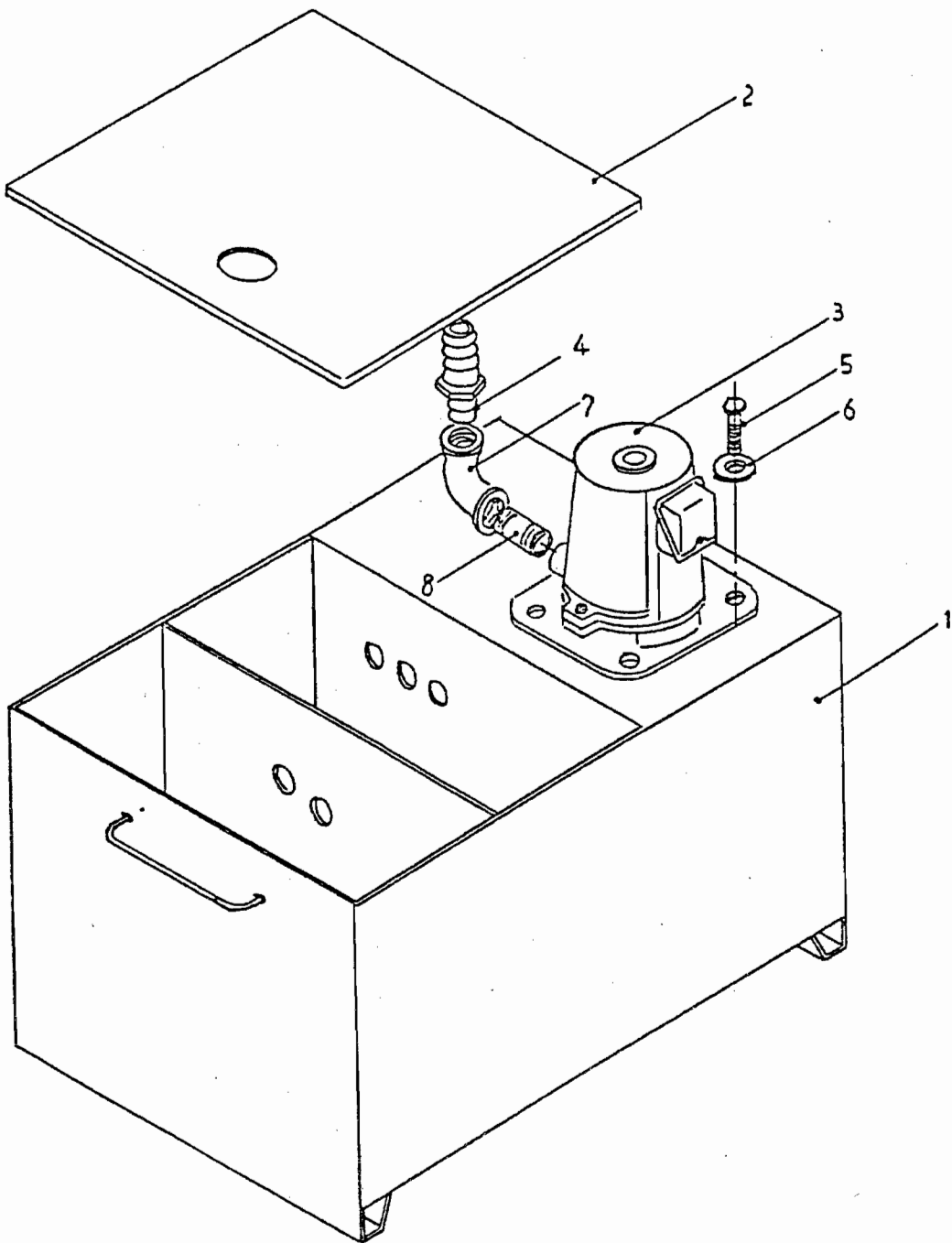
# HYDRAULIC PUMP UNIT ASS'Y

(1632AH)

P.2OF2

Index No.	Parts No.	Parts Name	Q'ty
26.	3/4"PT(F)*3/4"PT(M)	Connector (90° Elbow)	2
27.	3/4"PT(F)*1"PT(M)	Bushing	1
28.	1/2"PT*210L	Zinc-Plate Pipe	1
29.	M6*65L	Socket Head Cap Screw	2
30.	M5*60L	Socket Head Cap Screw	4
31.	1/4"PT*3/8PT	Socket	1
32.	3/8"PT(F)	Connector (3 ways)	1
33.	3/8"PT*3/8"PT	Connector (90° Elbow)	1
34.	3/8"PT*1/2"PT	Connector (90° Elbow)	1
35.	1/2"PT* $\phi$ 15mm	LE Connector	1
36.	$\phi$ 15mm*2.0t	OST2 Pipe	1
37.	3/8"	Plastic Plug	2
38.	3/8"PT	PT Plug	1
39.	SS-D02	Asbestos Seal	1
40.	1/2"PT	PT Plug	1
41.	NP-D01	Name Plate	1
42.	$\phi$ 2*6L	Rivet	4

# COOLANT SYSTEM ASS'Y

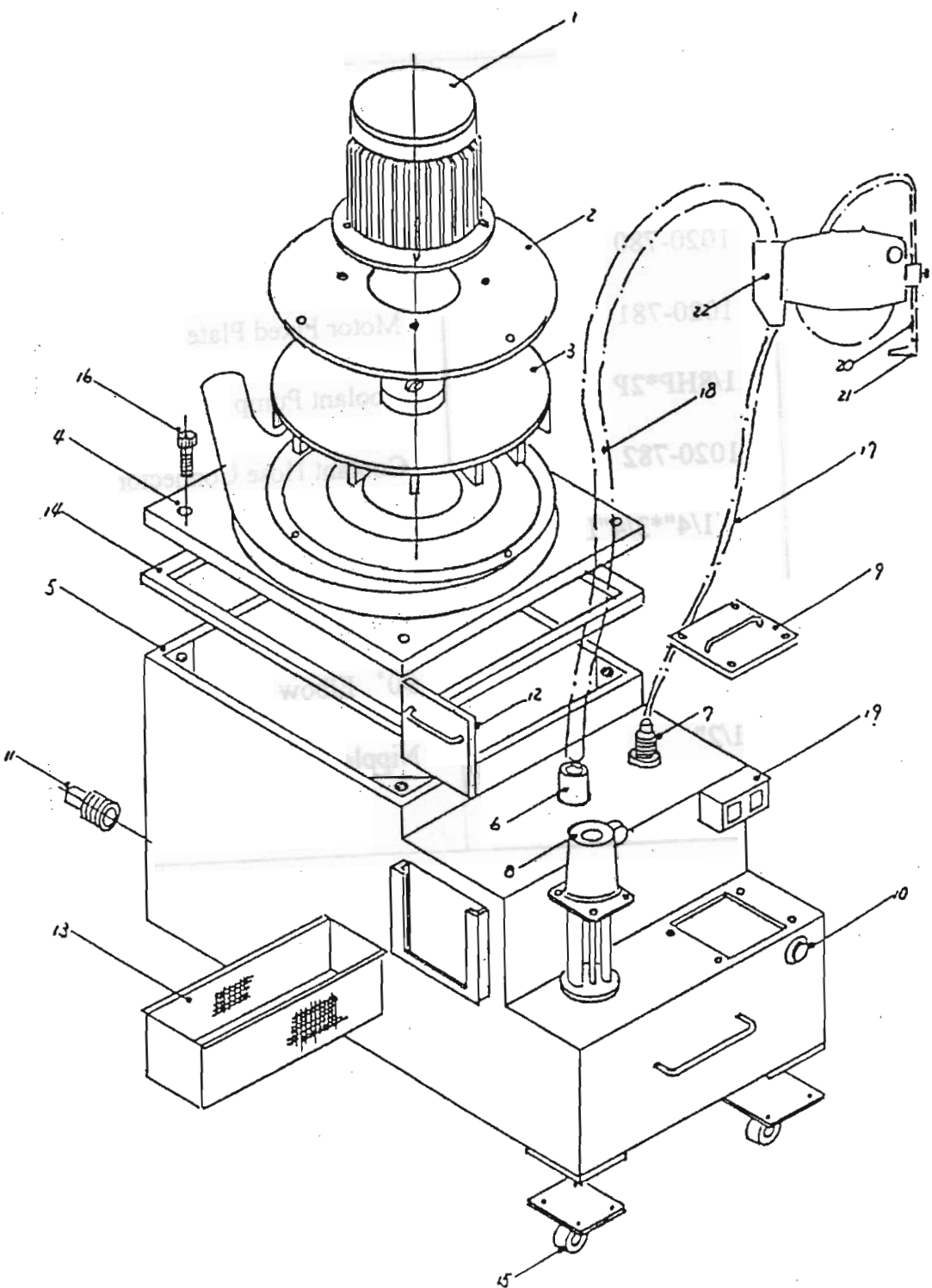


# COOLANT SYSTEM ASS'Y

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-780	Coolan Tank	1
2.	1020-781	Motor Fixed Plate	1
3.	1/8HP*2P	Coolant Pump	1
4.	1020-782	Coolant Hose Connector	1
5.	W1/4"*3/4"L	Hexagonal Head Screw	4
6.	1/4"	Washer	4
7.	1/2"	90° Elbow	1
8.	1/2"	Nipple	1

# DUST-SUCTION COOLING SYSTEM ASS'Y

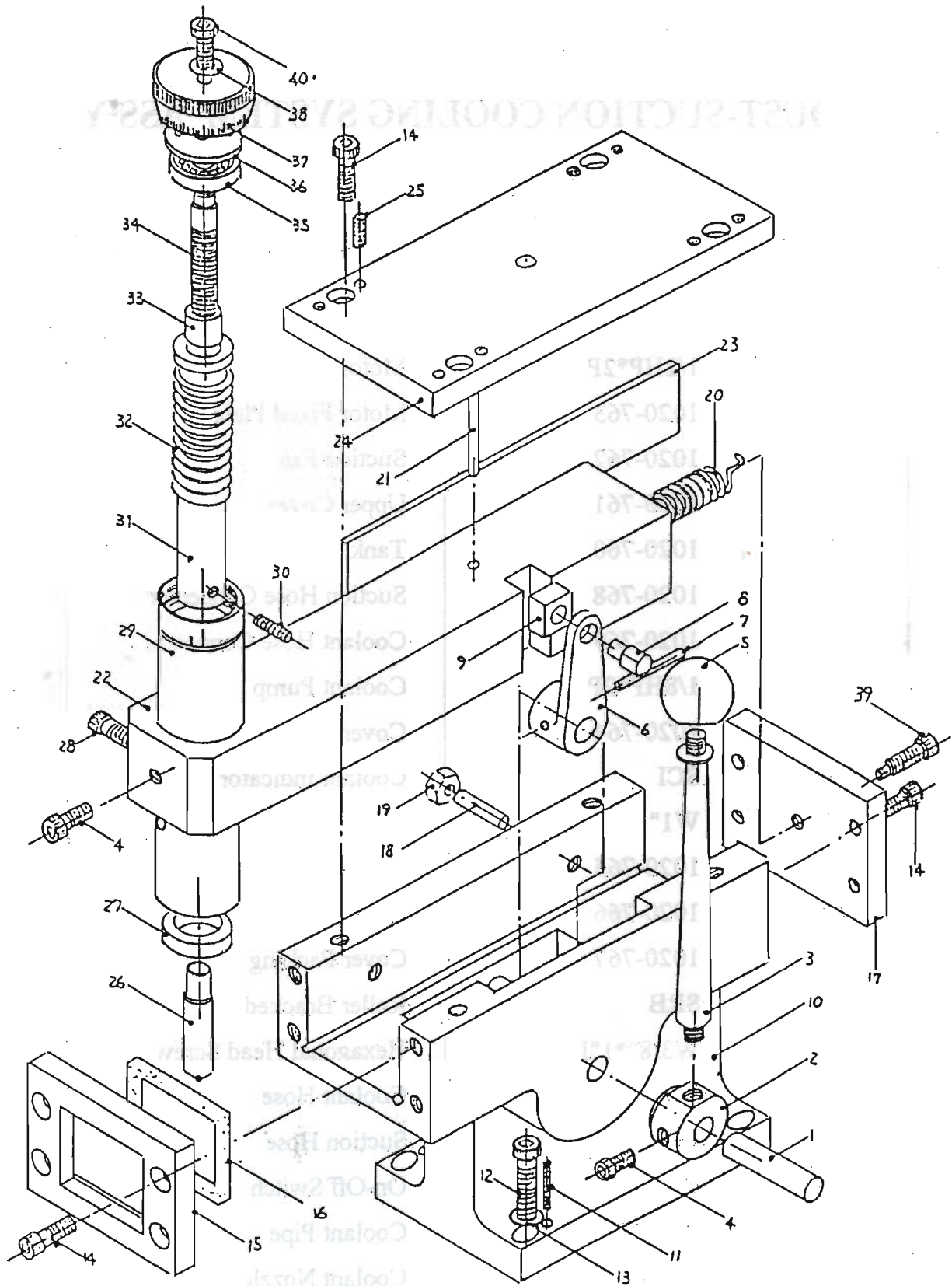
COOLANT SYSTEM ASS'Y



# DUST-SUCTION COOLING SYSTEM ASS'Y

Index No.	Parts No.	Parts Name	Q'ty
1.	1/2HP*2P	Motor	1
2.	1020-763	Motor Fixed Plate	1
3.	1020-762	Suction Fan	1
4.	1020-761	Upper Cover	1
5.	1020-760	Tank	1
6.	1020-768	Suction Hose Connector	1
7.	1020-769	Coolant Hose Connector	1
8.	1/8HP*2P	Coolant Pump	1
9.	1020-764	Cover	1
10.	SCI	Coolant Indicator	1
11.	W1"	Plug	1
12.	1020-765	Filter Cover	1
13.	1020-766	Filter	1
14.	1020-767	Cover Packing	1
15.	SRB	Roller Bracked	4
16.	W3/8"*1"L	Hexagonal Head Screw	4
17.	SCH	Coolant Hose	1
18.	SSH	Suction Hose	1
19.	SS	On-Off Switch	1
20.	1020-770	Coolant Pipe	1
21.	1020-708	Coolant Nozzle	1
22.	1020-771	Dust-Collector	1

# PARALLEL DRESSER ASS'Y





PARALLEL DRESSER (Optional Accessory)

Index No.	Parts No.	Parts Name	Q'ty
1.	1020-07-037	Lever Shaft	1
2.	1020-07-038	Shaft Bushing	1
3.	1020-07-039	Lever	1
4.	W1/4"x 1/2"L	Socket Head Cap Screw	2
5.	1020-07-040	Knob	1
6.	1020-07-041	Arm	1
7.	φ 4× 20L	Pin	1
8.	1020-07-042	Pin Shaft	1
9.	1020-07-043	Slid Block	1
10.	1020-07-030	Parallel Dresser Base	1
11.	W1/4"x 3/8"L	Set Screw	2
12.	W1/4"x 1 1/2"L	Socket Head Cap Screw	4
13.	W1/4"	Washer	4
14.	W3/8"x 1/2"L	Socket Head Cap Screw	12
15.	1020-07-33	Front Cover	1
16.	1020-07-035	Oil-Immersed Pad	1
17.	1020-07-034	Rear Cover	1
18.	W1/4"x 1/2"L	Set Screw	3
19.	W1/4"	Nut	3
20.	1020-07-044	Spring	1
21.	φ 5× 24L	Pin	1
22.	1020-07-031	Slider	1
23.	1020-07-036	Gib	1
24.	1020-07-032	Upper Cover	1
25.	W1/4"x 3/8"L	Socket Head Cap Screw	8
26.	1020-07-045	Diamond Tip	1
27.	RZ-20	U-Packing	1
28.	W3/8"x 1"L	Socket Head Cap Screw	1
29.	1020-07-046	Adapter	1
30.	1020-07-047	Set Screw	1
31.	1020-07-048	Diamond Tip Holder	1
32.	1020-07-049	Spring	1
33.	1020-07-050	Copper bush	1
34.	1020-07-051	Leadscrew	1
35.	# 6200ZZ	Bearing	1
36.	1020-07-052	Cover	1
37.	1020-07-53	Graduation dial	1
38.	1020-07-054	Washer	1
39.	1020-07-055	Spring Fix Screw	1
40.	W3/8"x 1/2"L	Socket Head Cap Screw	1