S232 HN-220

26/6/09

HYDRAULIC NOTCHER

OPERATION MANUAL

AND

PARTS LIST

Model Type HN- 220

MANUFACTURED DATE: 2008 05
SERIAL NO. : 080959

HN-220 HYDRAULIC NOTCHER

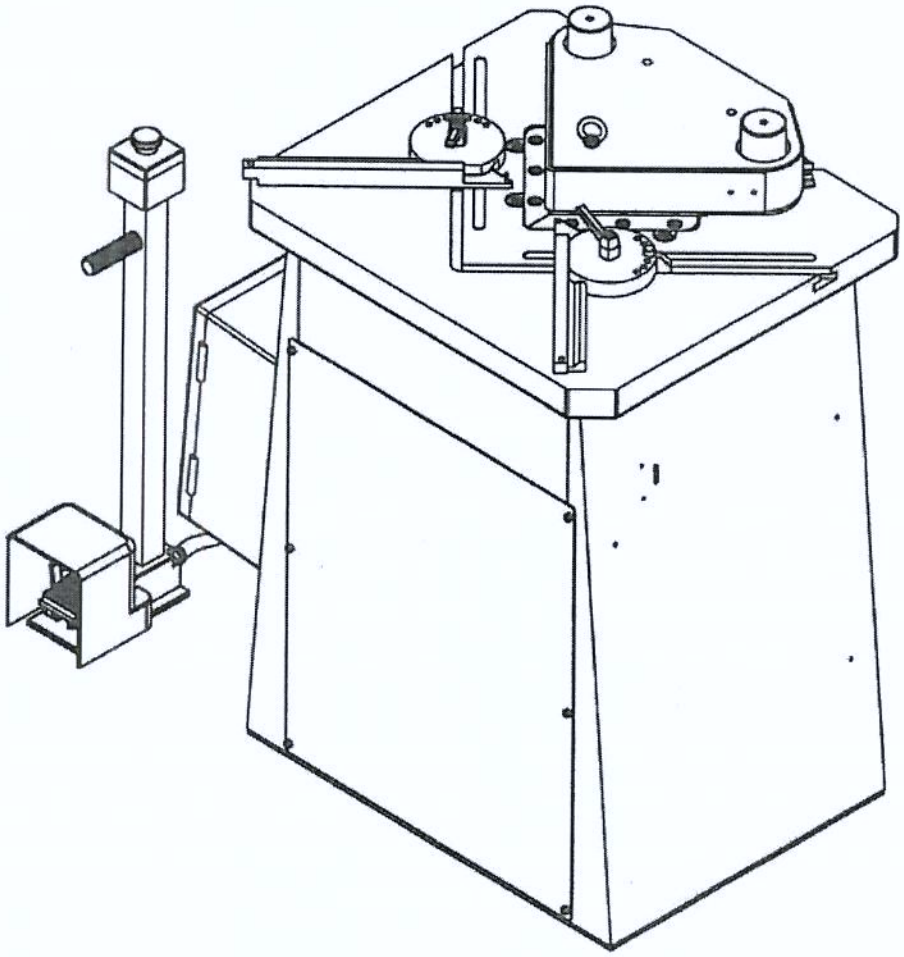
SPECIFICATION

Model	HN-220
Motor	3 HP
Blade Length	~~220 x 220 mm~~ 200 x 200
Table Size	650 x 650 mm
Strokes per minute	~~50~~ 40
Force	12 Tons
Hydraulic oil	35
Cutting Capacity: Mild Steel R=42 kg/mm^2 Mild Steel R=60 kg/mm^2	 4 mm / 9 GA 3 mm / 11 GA
Noise	70 dB
Overall Dimension	890 x 815 x 1016 mm
Shipping Weight	445 kgs

Note : Based on the necessity of improving the machine, the company reserve the rights to revise specifications and dimensions.

Hydraulic Notcher

Operational Manual & Parts List



ATTENTION

Operator must thoroughly read and understand this manual before operating machine. Care should be taken to follow all the safety rules and warning instructions – failure to do so may result in serious injury.

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WARNING!!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine and equipment. Failure to read, understand and follow the instructions given in this manual could result in serious personal injury, electrocution or death.

The operator is responsible for proper installation in a safe environment, proper inspection and maintenance, and manual availability. Operator should fully comprehend the application of safety devices and use personal protective equipment at all times.

ATTENTION

READ THIS MANUAL BEFORE OPERATION

SAVE THIS MANUAL FOR FUTURE REFERENCE

General Safety Instructions

1. Worker must carefully follow the recommended procedures and instructions for better use and preservation of the machine.
2. Only trained personnel should operate machine. Make sure operation instructions are clearly understood and followed.
3. Do not inhibit the safety locks installed on machine.
4. Before starting the machine, make certain that there are no dangerous conditions or circumstances around the machine. Make sure that there are no unauthorized objects that are left inside or above the machine.
5. Keep the bench and work area clean and tidy to avoid any hindrance on portions of already cut material.
6. Ensure that fixed hand protections are properly installed.
7. The use of gloves is highly recommended to avoid serious injuries.
8. Wear proper apparel. DO NOT wear loose fitting clothing, neckties, rings or jewelry that can catch in moving parts.
9. Do not force machine. Work with material for which the machine or accessory was designed.
10. Press the *RED* button for immediate power termination in case of emergency.
11. Disconnect the air supply and ensure that the main switch of the machine (found in the control box) is disconnected and locked to avoid accidental starting before carrying out any maintenance.
12. Be aware of all protruding parts to avoid any possible injuries.
13. Fill oil when installing – oil is not supplied in machine prior to installation.
14. Discard oil according to local laws – hydraulic oil is a dangerous pollutant.
15. Do not throw scraps away; give scraps to a company that is authorized to dispose of it.
16. Never operate machinery when tired or under the influence of drugs or alcohol. Be alert at all times when operating machine.
17. Keep Children and visitors away. Keep all children and visitors a safe distance away from the work area.
18. Never leave machine running unattended. Turn the power OFF and make sure all moving parts come to a complete stop before leaving machine unattended.
19. Keep work area clean and well lighted. Clutter and dark shadows may cause accidents.
20. Use a grounded extension cord rated for machine amperage. Grounded cords minimize shock hazards. Incorrect cord size may create excessive heat. Always replace damaged extension cords.

Grounding Instructions

Appliance must be grounded

- If there is a malfunction or breakdown, grounding provides a path of least resistance for the electric current thus reducing the risk of electric shock
- This appliance is equipped with a cord having equipment-ground conductor and grounding plug
- Plug must be inserted into appropriate outlet
- Outlet must be properly installed and grounded in accordance with all local codes and ordinances.

WARNING

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do NOT modify the plug provided with the appliance – if it does not fit into the outlet; have a proper outlet installed by a qualified electrician.

For grounded, cord-connected appliances:

- Appliance is for use on a circuit having a normal rating more that 120 Volts
- Is factory-equipped with a specific electric cord and plug to permit connection to a proper electric circuit.
- Ensure that appliance is connected to an outlet having the same configuration as plug.
- No adaptor should be used with this appliance
- If appliance must be reconnected for use on different type of electric circuit, qualified service personnel should make the reconnection

For a permanently connected appliance:

- Appliance must be connected to a grounded metal, permanent wiring system
- OR an equipment grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the appliance.

Technical Specifications

Motor	3 HP
Blades Length	200 x 200 mm
Maximum Cutting Thickness	3 mm (R=70 kg/mm²)
	4 mm (R=42 kg/mm²)
Air Stroke per minute	50
Noise	Cutting 3 mm –75dB @ 1 m
	Cutting 4 mm – 85dB @ 1 m
Table dimension	700 x 600 mm
Switch	Control Box
Overall Dimensions	890 x 815 x 1020mm
N.W	395 Kgs
G.W	445 Kgs
CUFT	32'

Installation

STEP 1:
Refer to Figure 1

- Consider existing and anticipated needs - minimum working clearances are specified in Fig. 1
- Check for damages or shortages.
- Place foot pedal control in best position for operation

Fill machine with oil at #32 or #64 and other hydraulic circuits before starting machine for the first time.
Machine is supplied WITHOUT oil.

Never operate the machine manually to avoid human injuries and damage to machine.

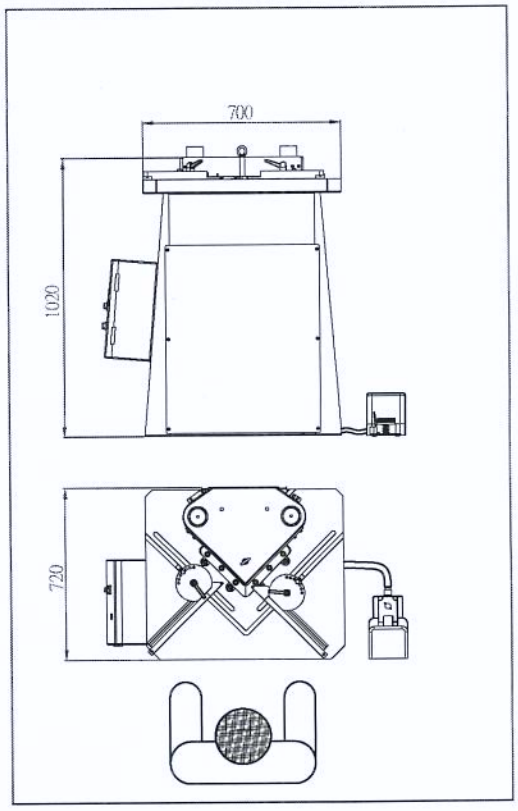


Figure 1

STEP 2:
Refer to Figure 2 & 3

- Remove the hex head tapping screws [No. 85]
- Lift machine out of pallet to set up at working position

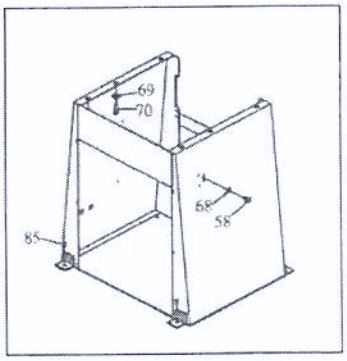


Figure 2

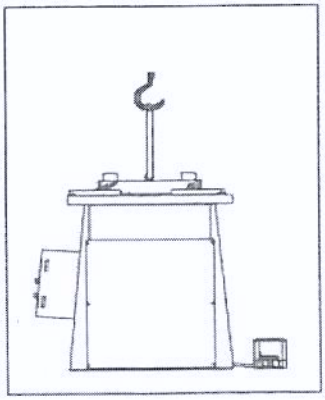


Figure 3

STEP 3

Refer to Figure 4

- Unscrew and remove the front cover to fill the hydraulic circuit oil into oil tank [No. 3]
- Fill in #32 or #64 hydraulic circuit oil (approx. 20L) to reach 4/5 position of oil indicator [no.2]
- Pressure gauge [no.4] is pre-set at 150 kg/cm² (approx 2100psi)

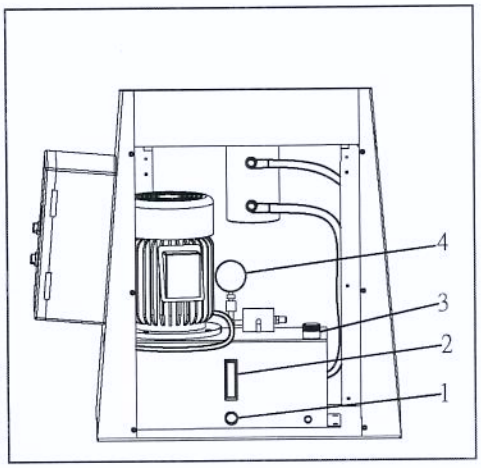


Figure 4

Do NOT modify without professional advice

STEP 4: Adjustment of blade gap tolerance

Refer to Figure 5

Disconnect the power supply

- Unscrew the screws [no.2] and remove safety cover [no.1]
- Loosen the bias screws [no.4] and blade screws [no.5] to measure the tolerance with 0.25mm thickness gauge [no.6]

- Adjust the upper and lower blades against the thickness gauge
- Make certain that the thickness gauge can be removed smoothly
- Re-tighten all the screws

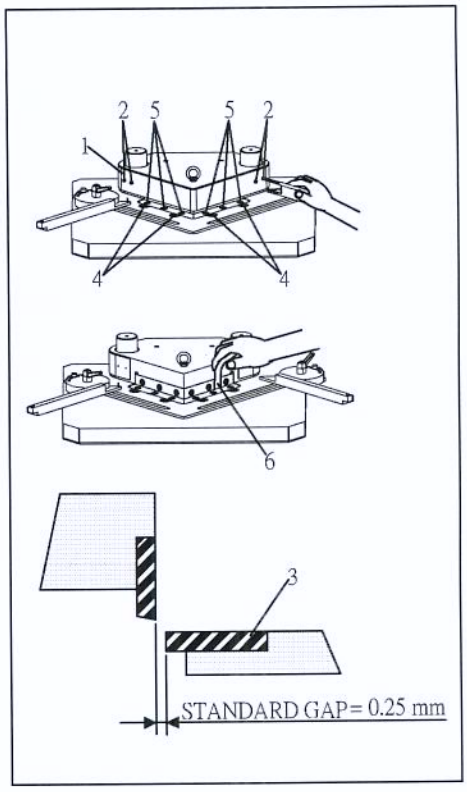
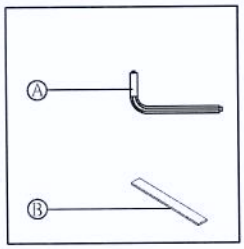


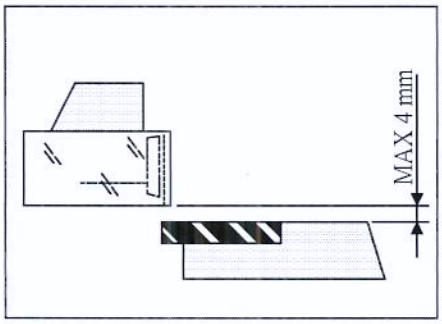
Figure 5

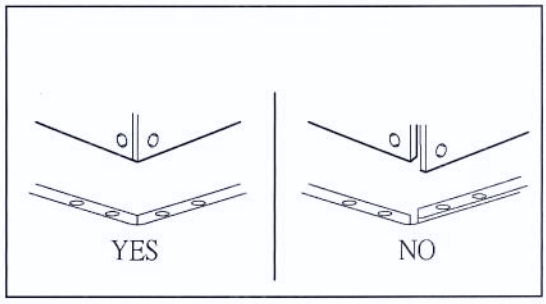


A – Allen wrench for blade screw

B – 0.25 mm thickness gauge

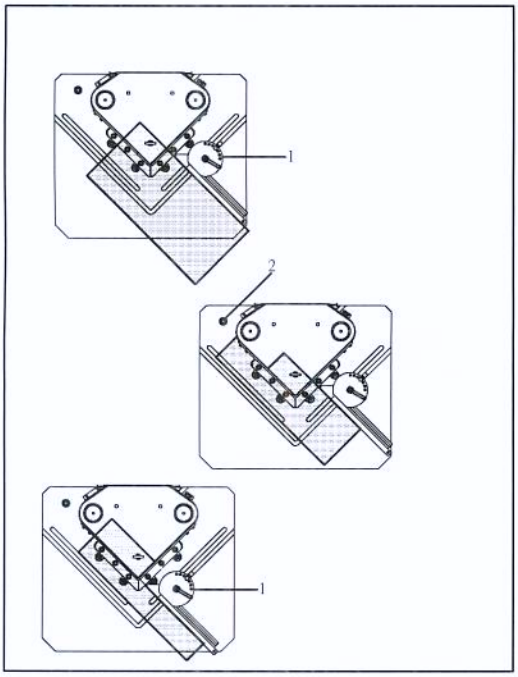
Maximum Cutting Thickness: 4 mm

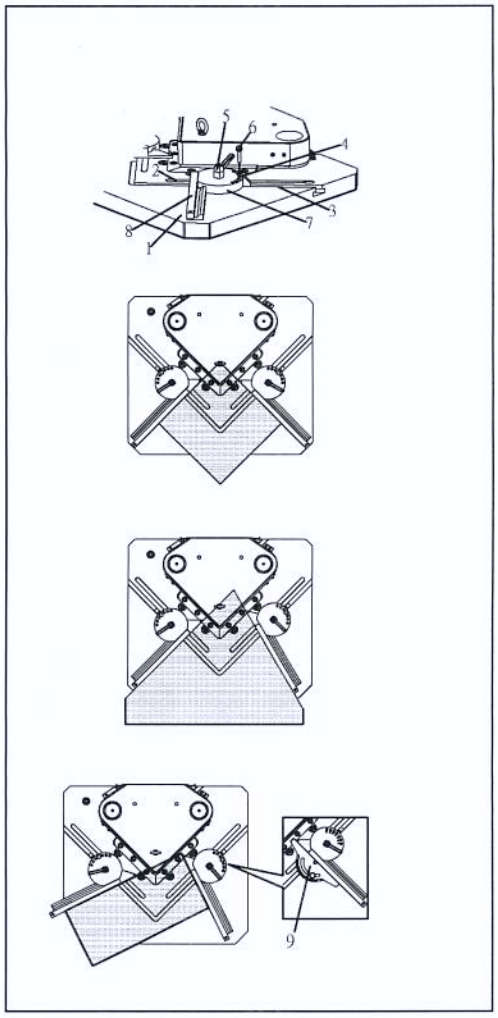




STEP 5: Adjustment of Mobile
Refer to Figure 6

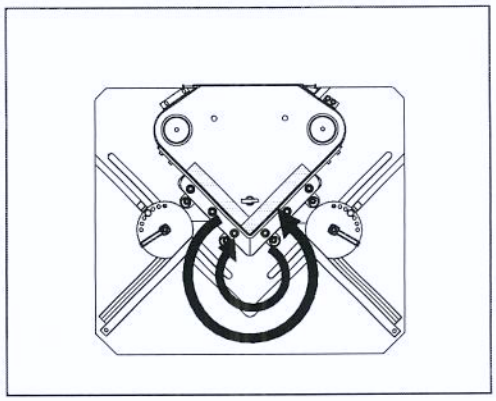
- Loosen the handle [no.5] to the length of the workpiece
- Take out the pin [no.6] – adjust to desired degree
- Adjust the left and right block [no.8] to match workpiece



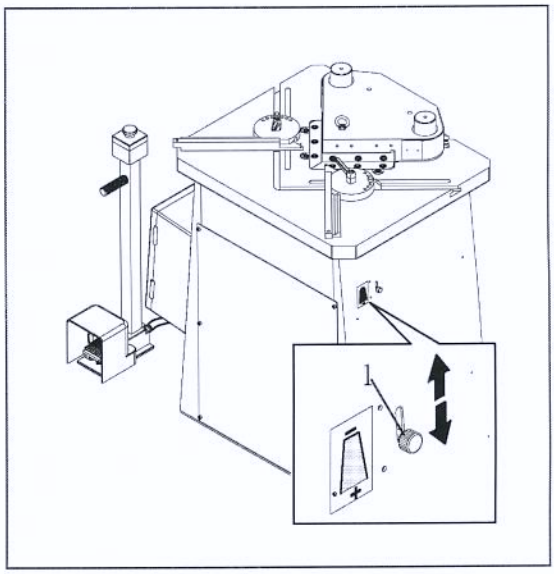


Operation Reference

- The 2 reference pointer sets can be adjusted for left and right - 45° each



- The knob can control the head-set cutting depth, time and speed
- MAX traveling distance is 20 mm



Cleaning

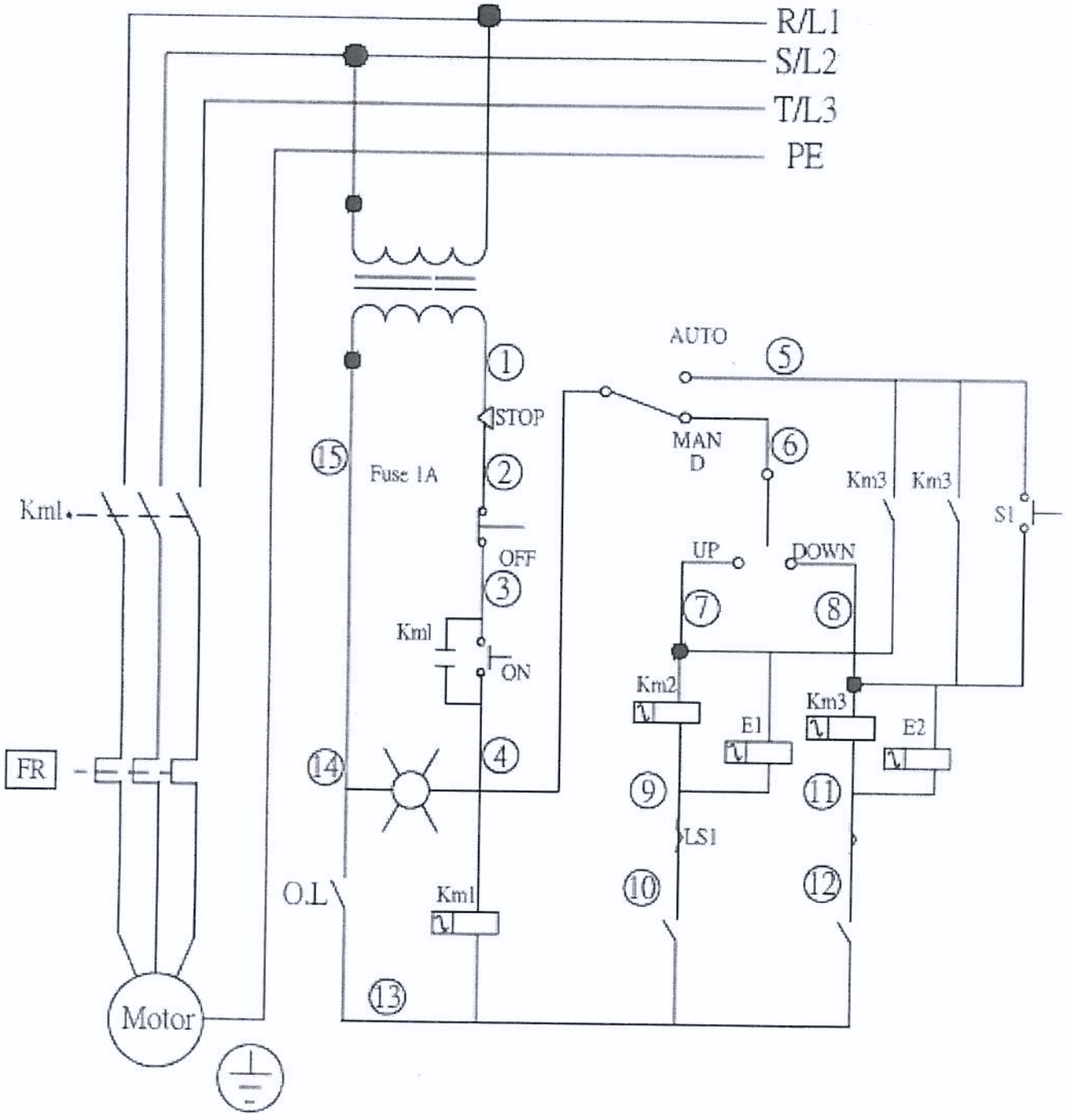
- Keep the work table clean
- Any foreign materials and fragments can cause damage to the machine, and injury to the operator

NEVER USE WATER JETS TO CLEAN MACHINE

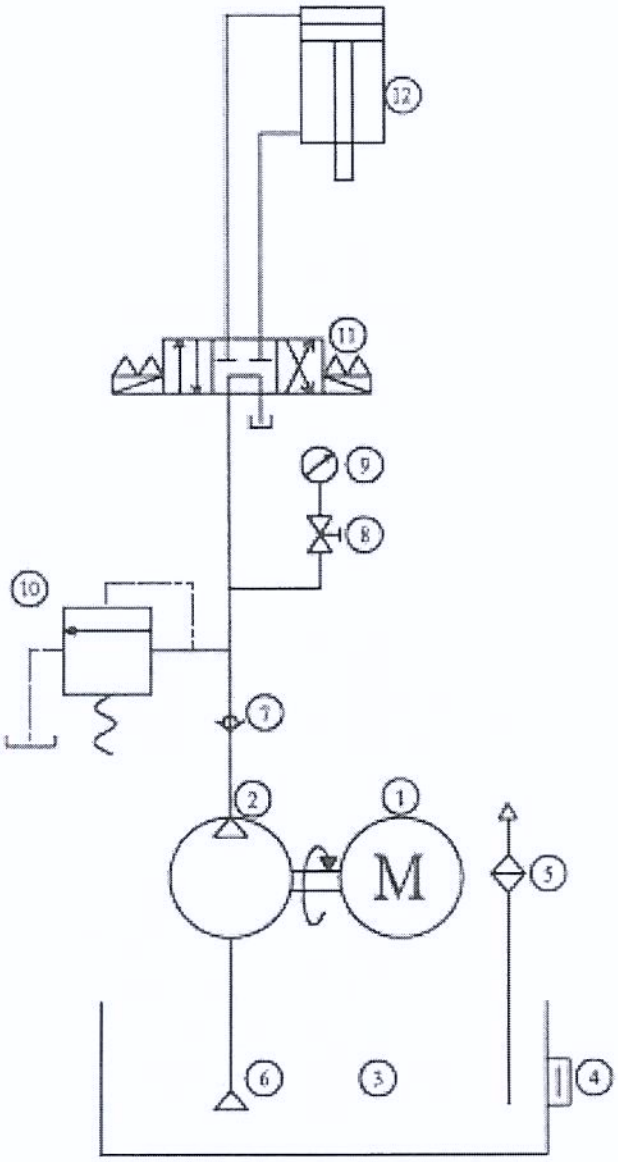
Hydraulic System

- The hydraulic circuit oil and filter needs to be replaced after the first 3000 hours and then after every 5000 hours of operation.

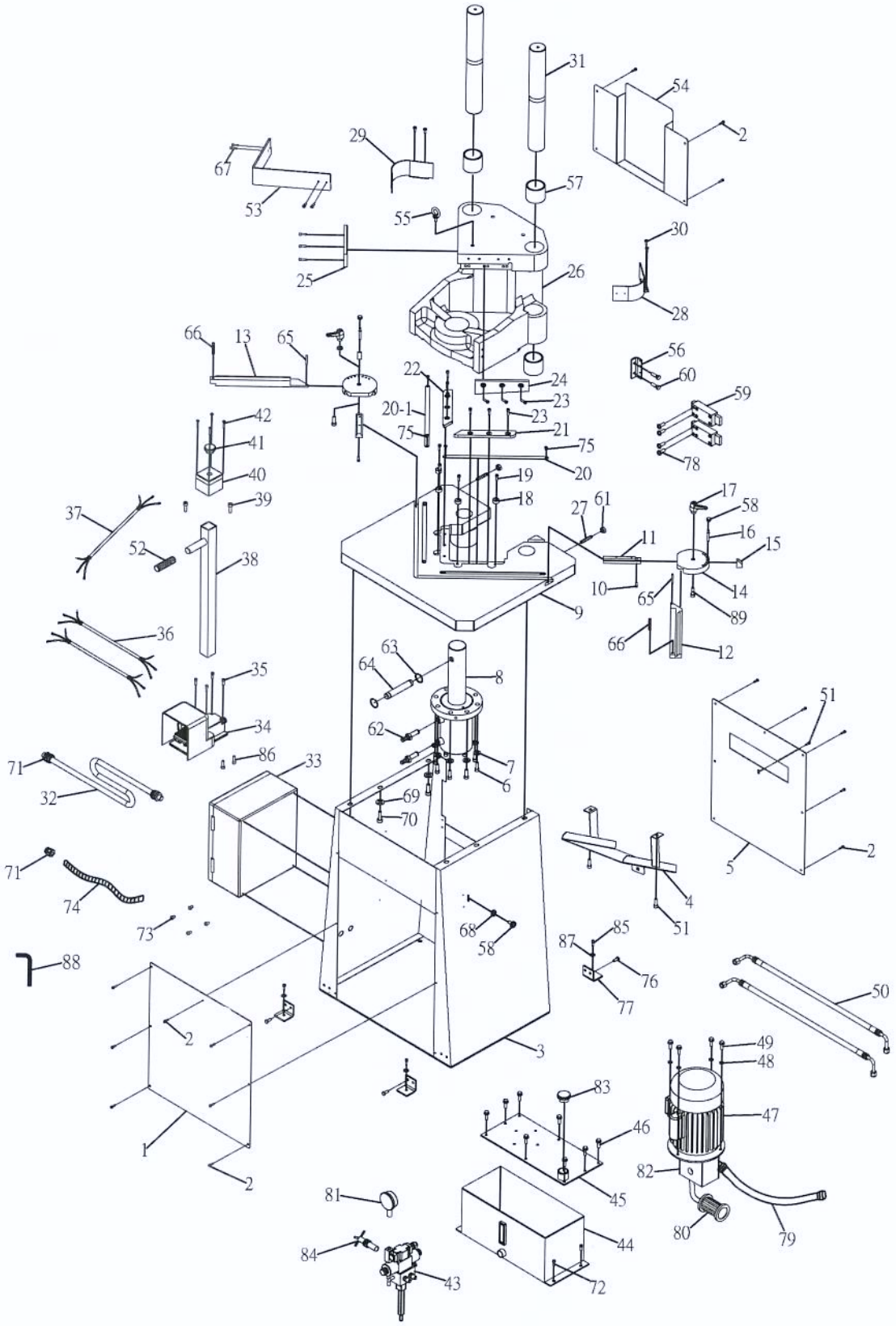
Wiring Diagram



Hydraulic Diagram



Exploded Diagram



Part List

NO.	Description	Specification	Q'TY
1	Front Cover		1
2	Button Head Screw	M6*8	17
3	Base		1
4	Scrap Discharge Chute		1
5	Rear Cover		1
6	Cap Screw	M14*50	8
7	Washer	ϕ14*ϕ28*2.5	8
8	Cylinder		1
9	Table		1
10	Cap Screw	M6*16	2
11	Adjustable Block		2
12	Left Block		1
13	Right Block		1
14	Reference Pointer		2
15	Block Key		2
16	Pin		2
17	Handle	M10	2
18	Bias Rod		4
19	Cap Screw	M8*16	4
20	Left Indicator		1
20-1	Right Indicator		1
21	Right Blade		1
22	Left Blade		1
23	Thin Cap Screw	M10*20	12
24	Upper Right Blade		1
25	Upper Left Blade		1
26	Head Set		1
27	Set Screw	M10*30	2
28	Right Head Set Cover		1
29	Left Head Set Cover		1
30	Button Head Screw	M5*10	4
31	Main Rod		2
32	Wire Tube	1/2*2M	1
33	Control Box		1
34	Foot Pedal Switch		1
35	Phillip Head Screw	M5*15	4
36	Power Cord	2.0*4C*120m/m	2
37	Emergency Stop Wire	0.5*2C*175m/m	1
38	Emergency Stop Tube		1
39	Phillip Head Screw	M4*8	2
40	Emergency Stop Switch Box		1
41	Emergency Stop Switch		1
42	Phillip Head Screw	M4*45	4

43	Electric Distributor		1
44	Oil tank		1
45	Oil Tank Top Cover		1
46	Flange Bolt	M8*16	8
47	Motor	3HP	1
48	Washer	ϕ10.3*ϕ19*1.9	4
49	Hex Head bolt	M10*25	4
50	Oil tube	90°*PT3/8	2
51	Cap Screw	M6*12	3
52	Plastic handle		1
53	Front Head Set Cover		1
54	Rear Head Set Cover		1
55	Hook	M14*28	1
56	Support Plate		1
57	Copper Rod		4
58	Knob	M6	3
59	Mini Switch	8104	2
60	Cap Screw	M6*16	2
61	Nut	M10	2
62	Connector	PT3/8" *3/8	2
63	C-Ring	S-22	2
64	Cylinder Fixing Pin	ϕ22*112	1
65	Spring Pin	ϕ3*18	2
66	Set Screw	M8*20	2
67	Button Head Screw	M4*12	4
68	Washer	ϕ6.3*ϕ18*1.5	1
69	Washer	ϕ13*ϕ35*3	6
70	Cap Screw	M12*25	6
71	Wire Tube Bushing	1/2" *PT1/2"	8
72	Cap Screw	M8*10	4
73	Button Head Screw	M5*10	4
74	Wire Tube	1/2" *120m/m	3
75	Flat Head Screw	M4*6	4
76	Hex head Bolt	M8*12	4
77	Fixing Plate		4
78	Phillip Head Screw	M3*30	4
79	Oil Tube		1
80	Filter		1
81	Oil Pressure Gauge		1
82	Pump		1
83	Oil Tank Cap		1
84	Pressure Regulator		1
85	Hex Head Tapping Screw	5/16"*3/4"	4
86	Flange Bolt	1/4" *1/2"	2
87	Flat Washer	5/16*23*2	4
88	Allen Wrench	7m/m	1
89	Fixing Pin		2