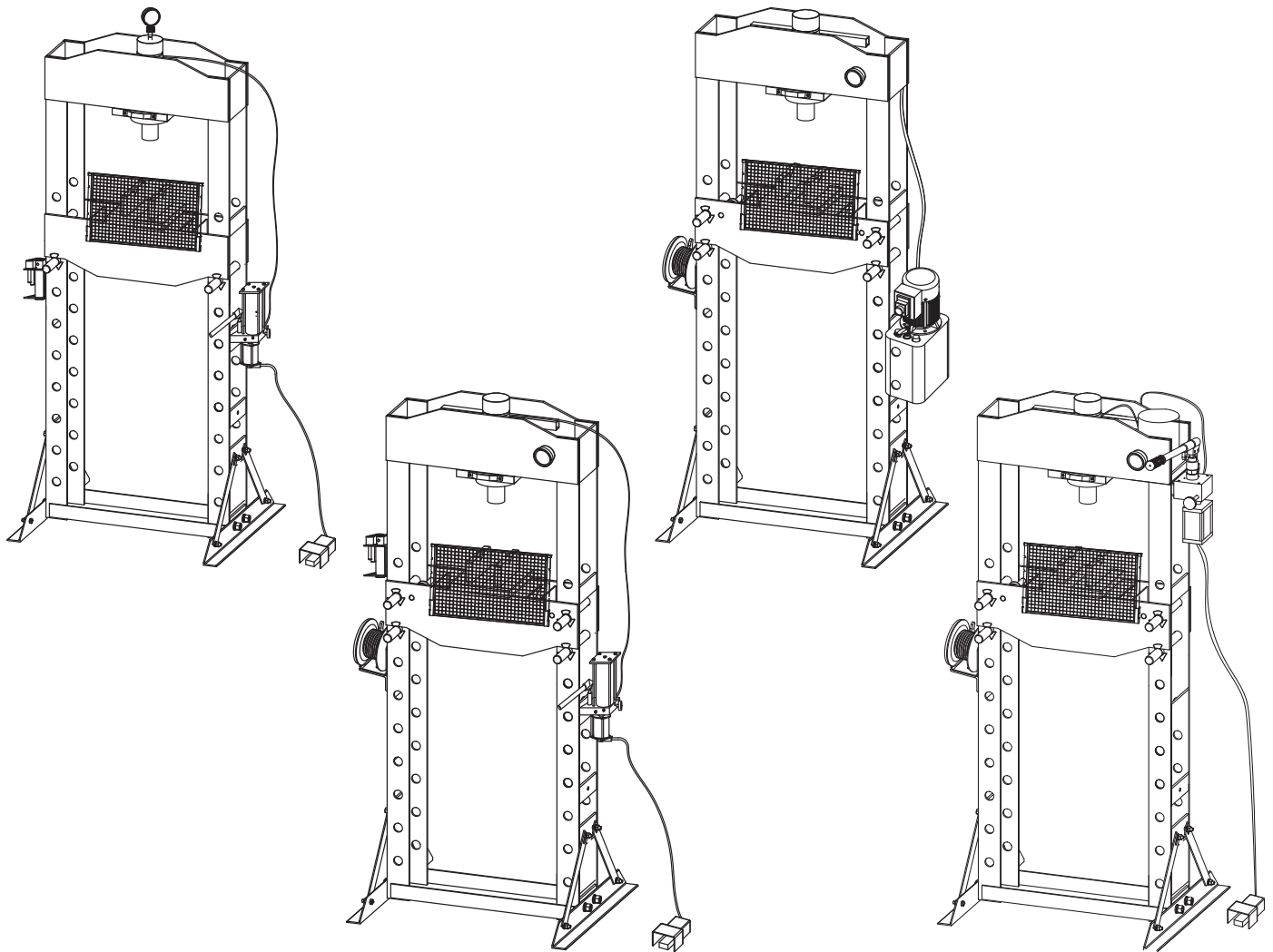


HEAVY DUTY SHOP PRESS 20 & 30 & 50 & 75 & 100 Ton

MODEL: HSP20 / HSP30 / HSP50 / HSP75 / HSP75E / HSP100 / HSP100E



Operator's Manual

MechMaxx

www.mechmaxx.com

TABLE OF CONTENTS

TABLE OF CONTENTS	1	USER-MAINTENANCE INSTRUCTIONS	11
WARNING SYMBOLS AND DEFINITIONS	2	PARTS DIAGRAM (HSP20)	12
IMPORTANT SAFETY INFORMATION	3	PARTS LIST (HSP20)	13
Work area	3	PARTS DIAGRAM (HSP30 / HSP50)	14
Personal safety	3	PARTS LIST (HSP30 / HSP50)	15
Tool use and care	3	PARTS DIAGRAM (HSP75E / HSP100E)	16
Service	3	PARTS LIST (HSP75E / HSP100E)	17
Specific Safety Rules	4	PARTS DIAGRAM (HSP75 / HSP100)	18
SPECIFICATIONS	5	PARTS LIST (HSP75 / HSP100)	19
HYDRAULIC SHOP PRESS ASSEMBLY INSTRUCTIONS	6	TROUBLESHOOTING	20
HYDRAULIC SHOP PRESS	6		
ELECTRIC SHOP PRESS ASSEMBLY INSTRUCTIONS	8		
ELECTRIC SHOP PRESS	8		
OPERATING INSTRUCTIONS	10		
BLEEDING THE PUMP	10		
GENERAL OPERATING INSTRUCTION	10		

WARNING SYMBOLS AND DEFINITIONS



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE
CAUTION**

Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION



Read all safety warnings and instructions. Failure to heed these markings may result in personal injury and/or property damage.

Save all warnings and instructions for future reference.

The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Work area

1. Keep the work area clean and well lighted. Cluttered benches and dark areas increase the risk of injury to persons.
2. Keep bystanders and children away while operating the tool. Distractions can result in loss of control of the tool.

Personal safety

1. Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool increases the risk of injury to persons.
2. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair increases the risk of injury to persons as a result of being caught in moving parts.
3. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
4. Use safety equipment. Wear safety goggles and heavy-duty work gloves during use.

Tool use and care

1. Do not force the tool. Use the correct tool for the application. The correct tool will do the job better and safer at the rate for which the tool is designed.
2. Store the tool when it is idle out of reach of children and other untrained persons. A tool is dangerous in the hands of untrained users.
3. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that affects the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
4. Use only accessories that are identified by the manufacturer for the specific tool model. Use of an accessory not intended for use with the specific tool model, increases the risk of injury to persons.
5. Avoid off-center loads. If the Pump seems unusually hard to operate, immediately stop. Adjust the Ram to eliminate or diminish an off-center load.
6. Protect the Hose. Do not drop heavy objects on the Hose. Avoid kinks in the Hose. Maintain proper clearance to avoid damage to the Hose and Couplers.
7. Inspect repair before using machine. Repairs to structural or frame members must be inspected by a qualified technician to ensure that the structure is still strong enough to safely fulfill its function.

Service

1. Tool service must be performed only by qualified repair personnel.
2. When servicing a tool, use only identical replacement parts. Use only authorized parts.
3. Use only the lubricants supplied with the tool or specified by the manufacturer.

Specific Safety Rules

1. Keep hands away from Arbor Plates and Press Pin during use.
2. Do not move workpiece while compressed.
3. Release load before service or maintenance.
4. Bolt to floor before use.
5. Keep area under Arbor Plates clear. If Arbor Plates rest on obstruction (i.e. bolt, debris, etc.), it creates an uneven press, causing excess stress and possible breakage.
6. Avoid off-center loads. Do not operate if workpiece tilts or binds during compression.
7. STOP and release compression if you suspect imminent structural failure. If safe, inspect thoroughly and reposition before proceeding.
8. Do not compress springs or other elastic objects. They could disengage hazardously.
9. Wear safety goggles, heavy-duty work gloves, and steel-toe work boots during set up and/or use.
10. Keep bystanders out of work area.
11. Do not stand directly in front of the press when loaded. Do not leave the press unattended when loaded.
12. Do not operate the hydraulic ram beyond rated capacity.
13. Inspect before every use; do not use if parts are loose or damaged.
14. Ram service must be performed Service or maintenance performed by unqualified personnel could result in a risk of injury. only by qualified repair personnel.
15. When servicing a Ram, use only identical replacement parts- refer to attached, product-specific parts list and diagram. Follow instructions in the "User Maintenance Instructions" section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury.
16. Only use with accessories rated to handle the forces exerted by this tool during operation. Other accessories not designed for the forces generated may break and forcefully launch pieces.
17. Use only with Ram included with this Press.
18. Industrial applications must follow OSHA requirements.
19. This product is not a toy. Keep it out of reach of children.
20. Maintain labels and nameplates on the Shop Press. These carry important safety information. If unreadable or missing, contact service center for a replacement.
21. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS

SPECIFICATIONS

PNEUMATIC & HAND PUMP (MODEL:HSP20 / HSP30 / HSP50 / HSP75 / HSP100)

Model	Capacity (Ton)	Assembled size (H x D x W)	Ram Stroke	Working Range	Bed Height	Bed Depth	Internal Width	Ram Range of Movement
HSP20	20	65.5 x 23.6 x 29.9 in	5.7 in	2.3 – 40.1 in	6.7 in	5.5 in	21.3 in	7.1 in
HSP30	30	72.4 x 29.6 x 30.7 in	5.9 in	6.5 – 44.3 in	8.3 in	7.1 in	21.3 in	7.9 in
HSP50	50	75.6 x 29.6 x 40.6 in	8.7 in	3.5 – 42.0 in	9.1 in	8 in	28.8 in	9.6 in
HSP75	75	79.2 x 29.6 x 44.9 in	9.8 in	6.7 – 39.4 in	10.2 in	9.5 in	31.5 in	10.2 in
HSP75E	75	79.2 x 29.6 x 56.7 in	9.8 in	6.7 – 39.4 in	10.2 in	9.5 in	31.5 in	10.2 in
HSP100	100	75.6 x 29.6 x 40.6 in	11.8 in	3.5 – 33.1 in	11.8 in	8 in	30.9 in	9.1 in
HSP100E	100	75.6 x 29.6 x 52.4 in	11.8 in	3.5 – 33.1 in	11.8 in	8 in	30.9 in	9.1 in

ELECTRIC HYDRAULIC PUMP (MODEL:HSP75E/HSP100E)

Pump Type	ONE WAY
Voltage	110V/60Hz, 1 Phase
Power	2 HP (1.5 KW)
Revolutions Per Minute	1800 RPM
Working Pressure (Low Pressure Stage)	725 psi
Working Pressure (High Pressure Stage)	9137 psi
Flow Rate (Low Pressure Stage)	1.74 GPM
Flow Rate (High Pressure Stage)	0.48 GPM
Usable Oil Capacity	7.93 Gal
Oil Tank Capacity	10.04 Gal
Dimensions	11.8 x 15 x 24.4 in


WARNING

1. Do not overextend the Ram. (Do not extend past the warning line on the Ram piston.)
2. Do not exceed the rated capacity.
3. Do not attempt to operate the pump unless the breather valves on both the pump and the gauge are open.
4. Do not press unless the Hand Winch is released.

HYDRAULIC SHOP PRESS ASSEMBLY INSTRUCTIONS



Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this document including all text under subheadings therein before setup or use of this product.

Inspect the tool before use, looking for damaged, loose, and missing parts. If any problems are found, do not use tool until repaired.

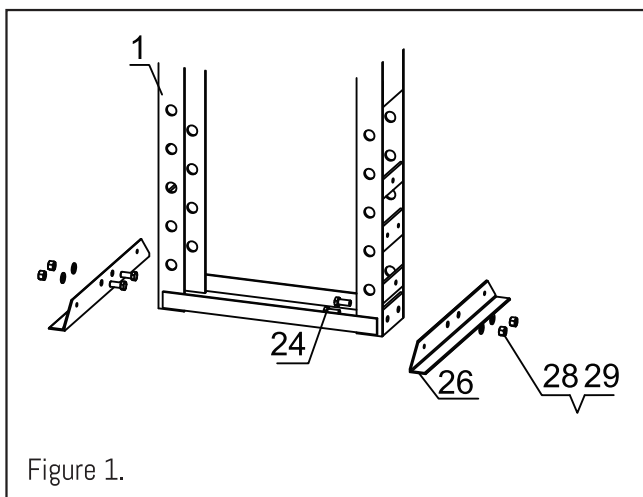
Components of this Shop Press are heavy. You will need a helper to safely assemble this product.

According to the Parts List and Assembly Drawings at the end of this manual, lay out and identify all components before starting assembly.

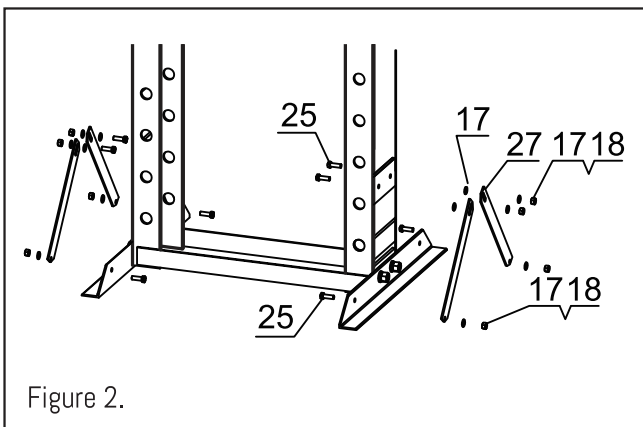
HYDRAULIC SHOP PRESS

1. Put on safety glasses, heavy-duty work gloves, and safety shoes.

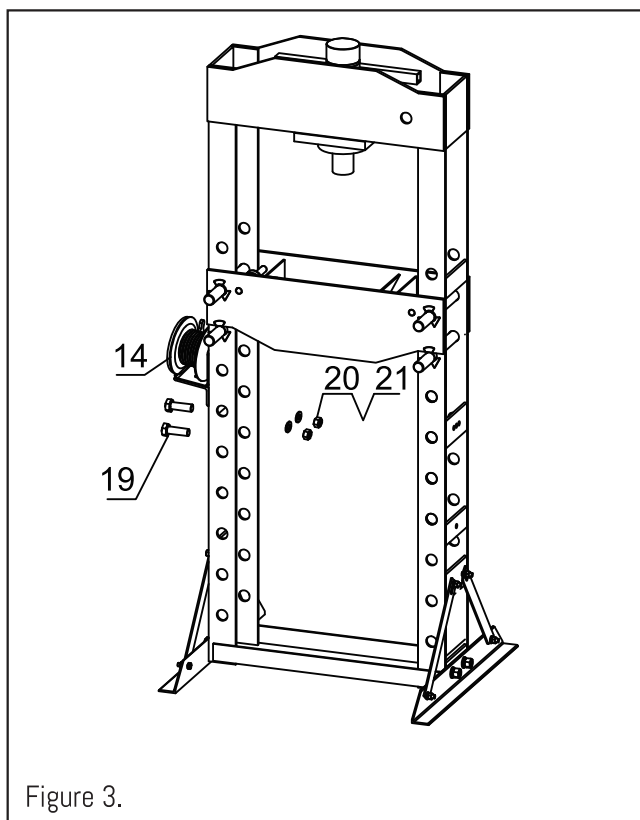
2. Place the Frame (1) in the upright position. Slide each Base Support (26) under the Frame. Line up the bolt holes and insert the Bolts (24) through the Frame and Base Support, then secure in place with the Washers (28) and Nuts (29). See Figure 1.



3. Attach the Base Side Supports (27) to the Frame and Base Support using the Bolts (25), Washers (17), and Nuts (18). See Figure 2.



4. Attach the Winch (14) to the Frame using the Bolts (19), Washers (20), and Nuts (21). See Figure 3.



5. Attach the Pump (41) to the Frame using the Bolts (19) and Washers (20). See Figure 4.

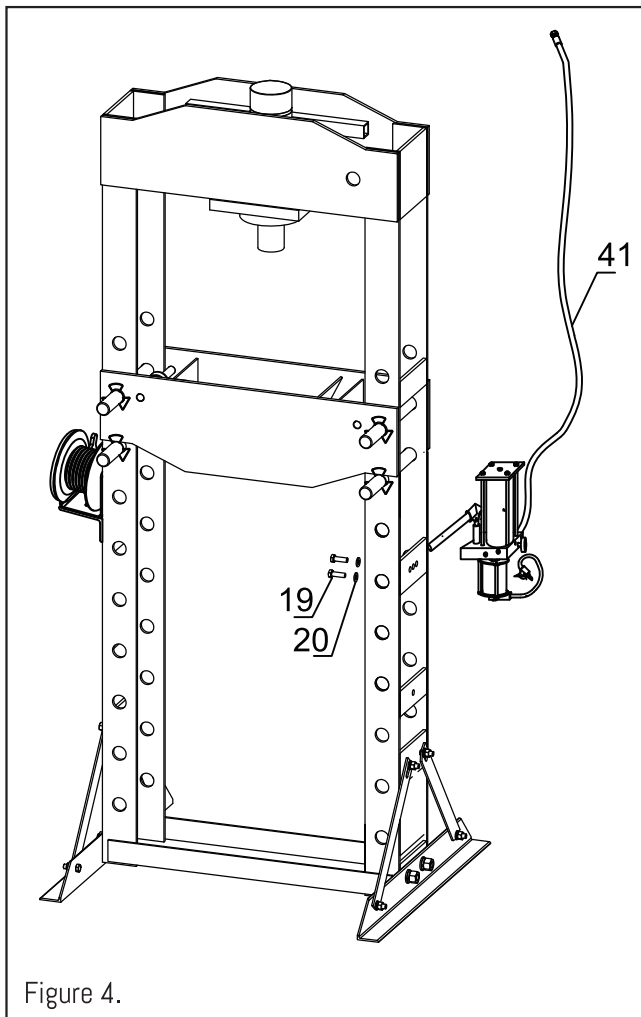


Figure 4.

6. Attach the Hose to the Tee Coupler using O-Ring (31). Then attach the Gauge (40) using O-Ring (37). Place the Arbor Plates (12) on the Press Table. See Figure 5.

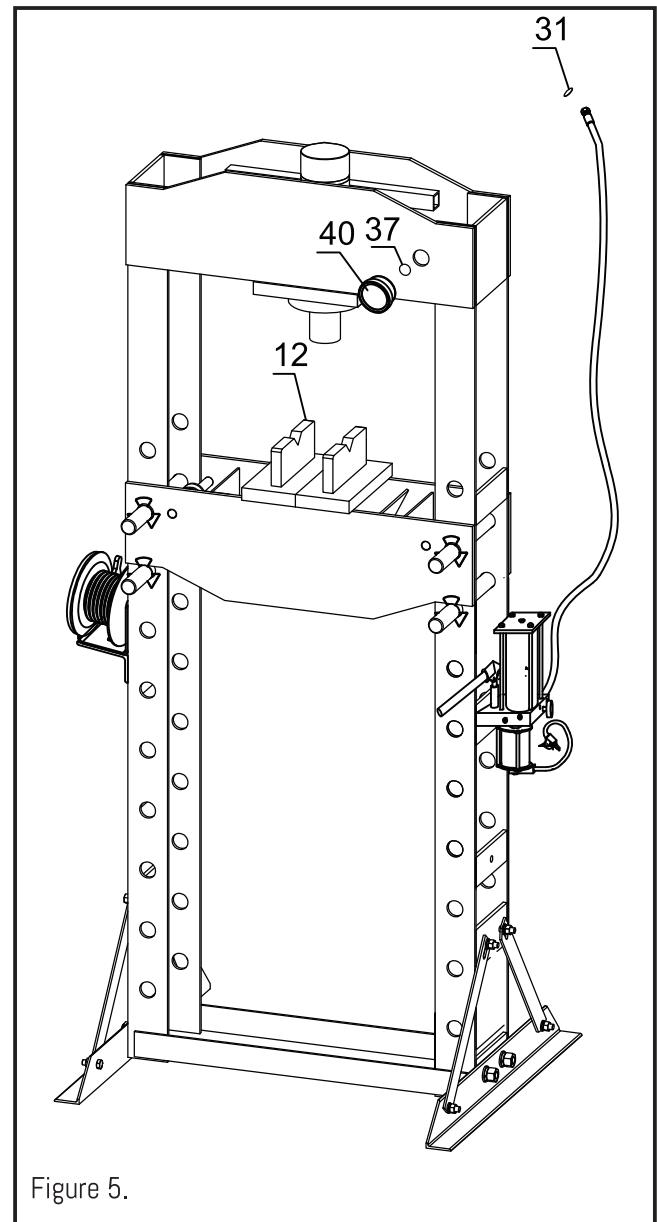


Figure 5.

ELECTRIC SHOP PRESS ASSEMBLY INSTRUCTIONS



Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this document including all text under subheadings therein before setup or use of this product.

Inspect the tool before use, looking for damaged, loose, and missing parts. If any problems are found, do not use tool until repaired.

Components of this Shop Press are heavy. You will need a helper to safely assemble this product.

According to the Parts List and Assembly Drawings at the end of this manual, lay out and identify all components before starting assembly.

ELECTRIC SHOP PRESS

1. Put on safety glasses, heavy-duty work gloves, and safety shoes.

2. Place the Frame (1) in the upright position. Slide each Base Support (26) under the Frame. Line up the bolt holes and insert the Bolts (25) through the Frame and Base Support, then secure in place with the Washers (17) and Nuts (18). See Figure 6.

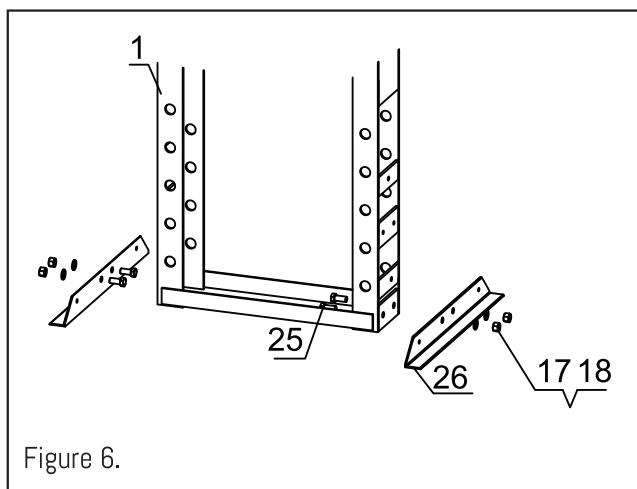


Figure 6.

3. Attach the Base Side Supports (27) to the Frame and Base Support using the Bolts (25), Washers (17) and Nuts (18). See Figure 7.

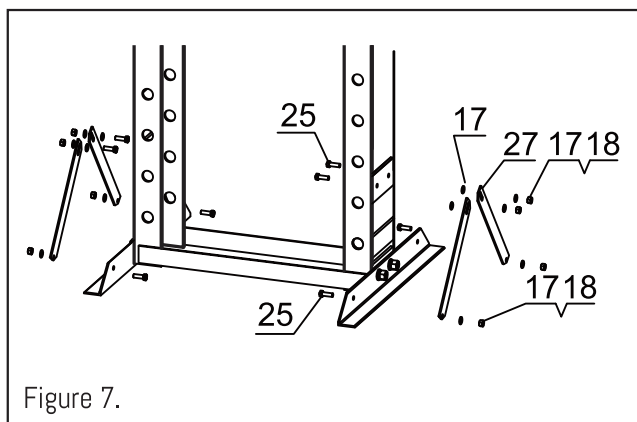


Figure 7.

4. Attach the Winch (14) to the Frame using the Bolts (19), Washers (20), and Nuts (21). See Figure 8.

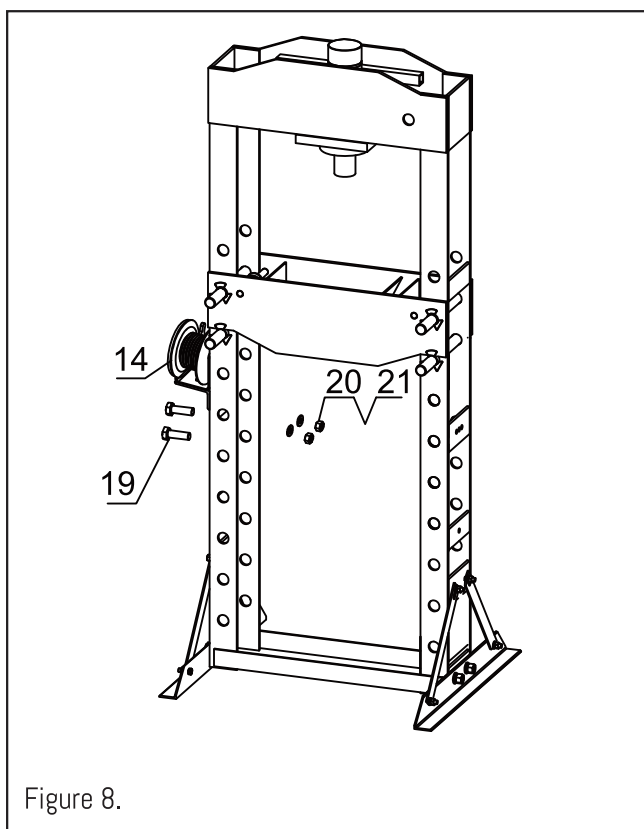


Figure 8.

5. Attach the Pump (24) to the Frame using the Bolts (19) and Washers (20). See Figure 9.

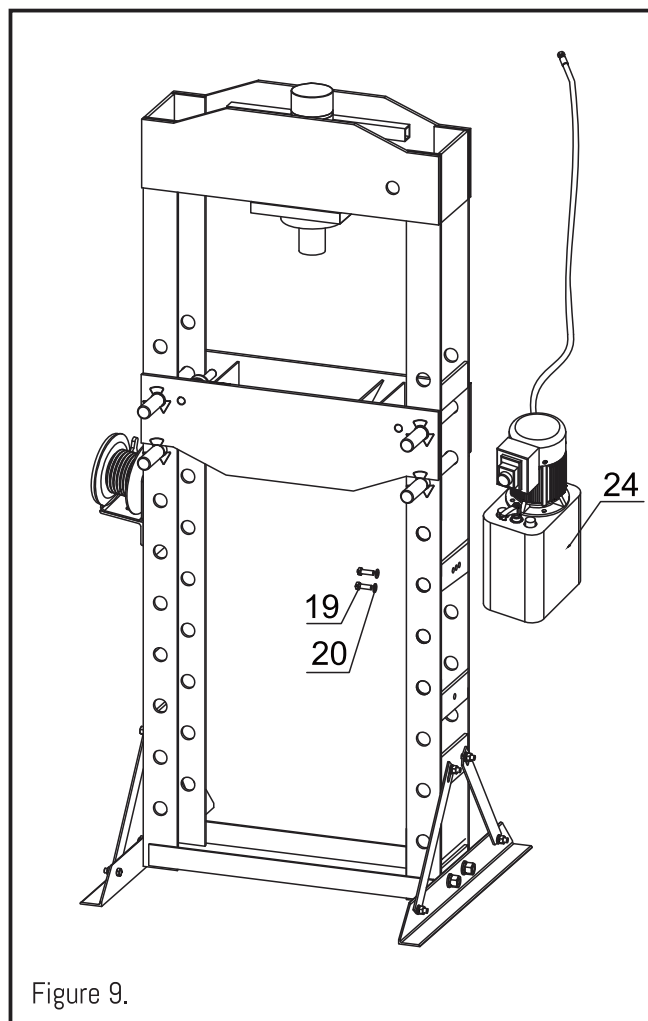


Figure 9.

6. Attach the Hose to the Tee Coupler. Then attach the Gauge (29) using O-Ring (30). Place the Arbor Plates (12) on the Press Table. See Figure 10.

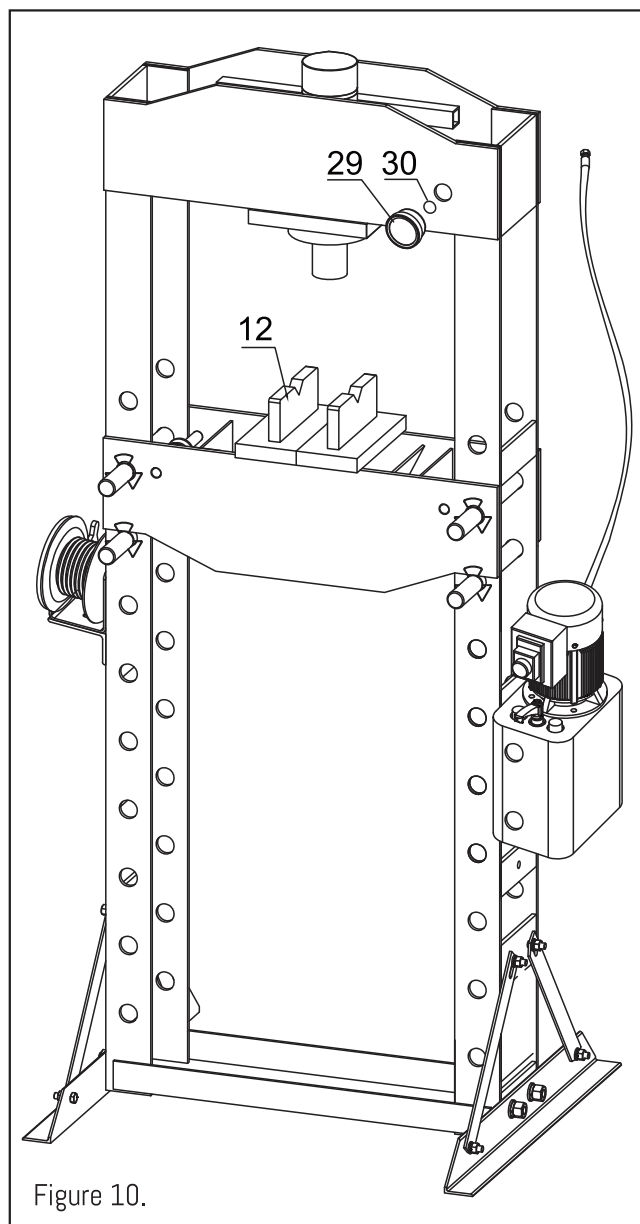


Figure 10.

OPERATING INSTRUCTIONS



Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

BLEEDING THE PUMP

IMPORTANT! Before first use, check for proper hydraulic oil level in the Pump. Then thoroughly test the Ram and Pump for proper operation prior to its actual use. If the Pump operation feels spongy, or the Ram lowers while the Release Valve is closed, there may be air in the Pump. Bleed the Pump as follows:

1. Remove the Oil Fill Screw. The Seal Ring should come off with it.
2. The fluid level should be near the bottom of the opening. If required, add high grade hydraulic fluid.
3. Make sure the Seal Ring is still in place around the Oil Fill Screw and thread the Fill Screw into the Pump securely. Do not use thread seal tape.
4. Follow the steps in page 20 (air in the pump).

GENERAL OPERATING INSTRUCTION

1. Use the Hand Winch (14) to adjust the height of the Press Table (13).

Note: The Press Table should be in the highest position possible with the workpiece as close as possible to the ram.

2. Place the item to press on the Arbor Plates (12). Turn the Arbor Plates to support the stationary part of the workpiece.

WARNING! Make sure there is no obstruction (such as a stray bolt or debris) under the Arbor Plates. Such items create an uneven surface which can cause the Arbor Plates to break under pressure.

WARNING! When pressing two items together, the items must be lined up vertically. If not, one item may forcefully eject itself sideways from the unit.

3. Open the Release Valve, ram will get down quickly. When pressing two items together, make sure that they are in vertical alignment. Continue to operate the Pump Handle to press the work piece.

4. After the task is completed, be careful when releasing Pump pressure. For safety, remove the Pump Handle, then slowly turn the Release Valve on the Pump, allowing the ram come back.

WARNING! During the release process the ram may rise quickly. Stay clear.

USER-MAINTENANCE INSTRUCTIONS



Procedures not specifically explained in this manual must be performed only by a qualified technician.



TO PREVENT SERIOUS INJURY FROM TOOL FAILURE: Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

1. Before each use, inspect the general condition of the Shop Press, Ram and Pump. Check for broken, cracked, or bent parts, loose or missing parts, and any condition that may affect the proper operation of the product. If a problem occurs, have the problem corrected before further use.

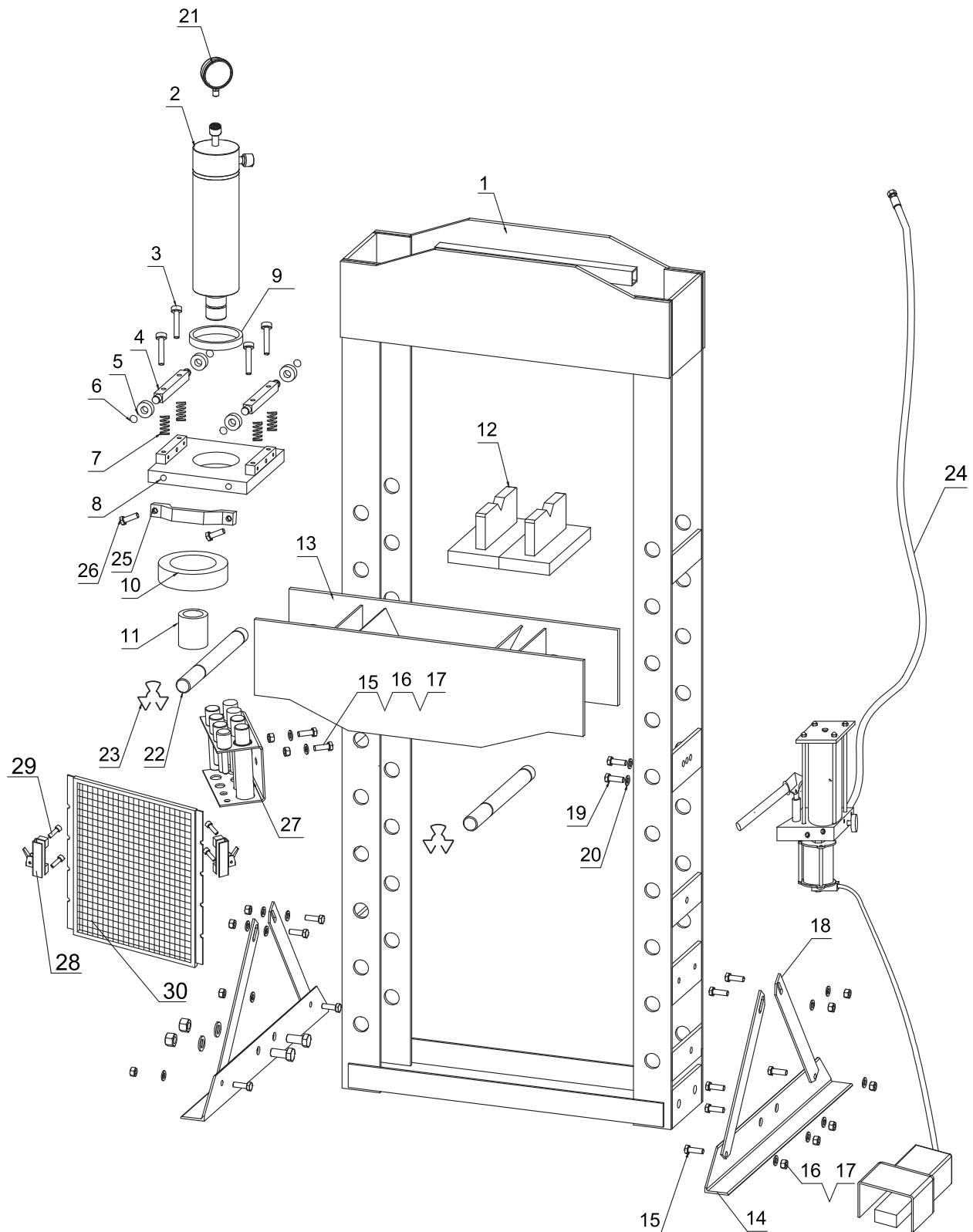
Do not use damaged equipment.

2. Before each use, thoroughly test the Ram (2) and Pump (24) for proper operation prior to its actual use. If the Pump appears not to be working properly, follow Bleeding the hydraulic fluid instructions.

3. Change the hydraulic oil at least once every year. To change the hydraulic oil:

- a. With the Ram fully lowered, remove the Pump from the Frame (1).
- b. Remove the Oil Filler Screw.
- c. Tip the Pump to allow the old hydraulic oil to drain out of the unit completely, and dispose of the old hydraulic oil in accordance with local regulations.
- d. Completely fill the unit with a high quality hydraulic oil (not included) until the oil just begins to run out of the Oil Fill Hole.
- e. Reinstall the Oil Filler Screw.
- f. Clean with a clean cloth using a detergent or mild solvent.
- g. Replace the Pump onto the Frame Post (See step 5 under Assembly Instructions).

PARTS DIAGRAM (HSP20)

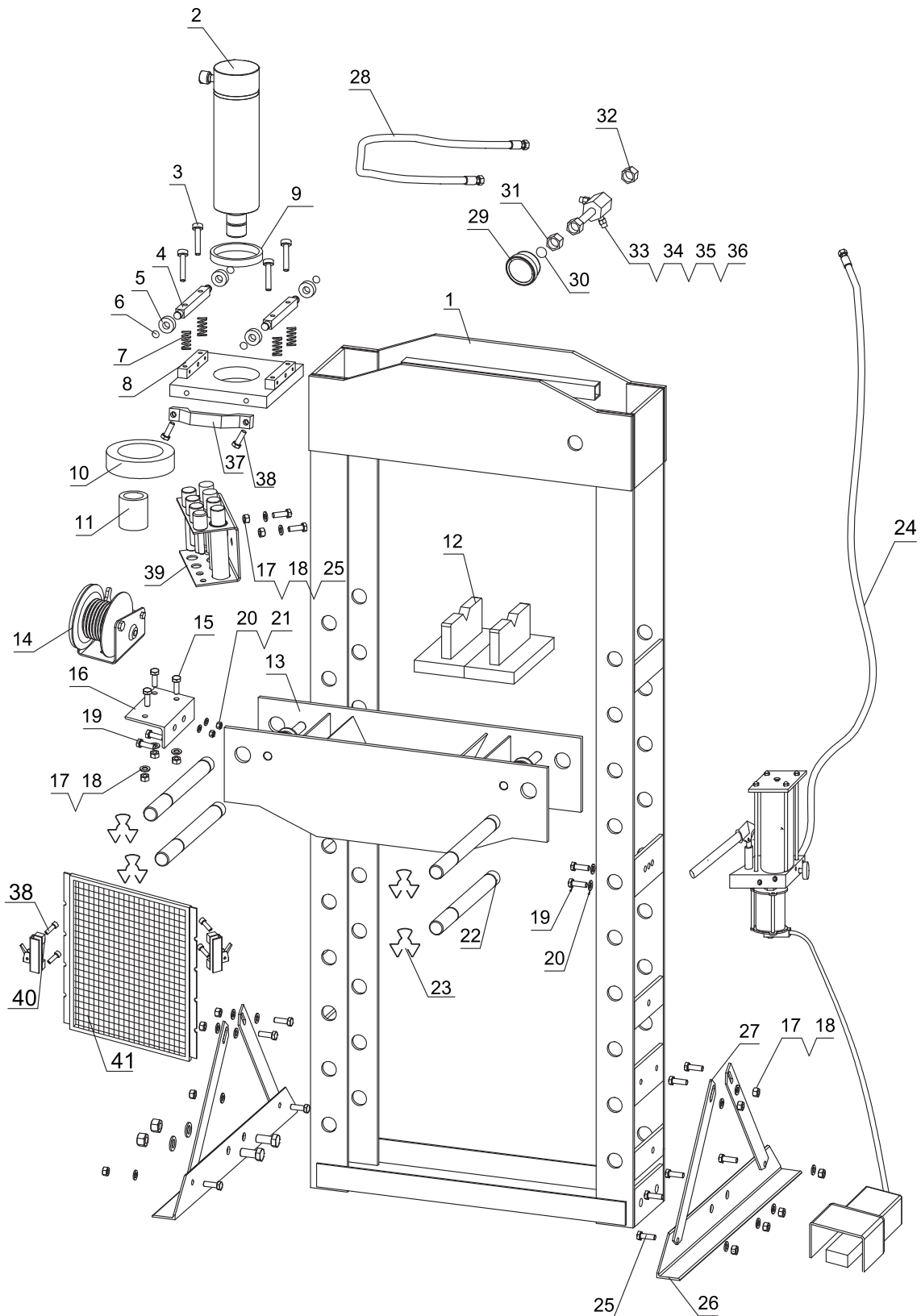


PARTS LIST (HSP20)

No.	DESCRIPTION	Qty
1	Frame	1
2	Cyliner	1
3	Bolt	4
4	Upper roller plate	2
5	Bearing	4
6	Retaining ring	4
7	Compression spring	4
8	Cyliner support plate	1
9	Small nut	1
10	Large nut	1
11	Press head	1
12	V Block	2
13	Middle cross beam	1
14	Bottom angle iron	2
15	Bolt	14
16	Flat washer	14
17	Nut	14
18	Diagonal brace	4
19	Bolt	2
20	Flat washer	2
21	Pressure gaugae	1
22	Cylindrical pin	2
23	Plum coupling	4
24	Pneumatic pump	1
25	Handle	1
26	Bolt	2
27	PP press pin	1
28	Safty Guard slide	2
29	Bolt	4

No.	DESCRIPTION	Qty
30	Safty Guard	1

PARTS DIAGRAM (HSP30 / HSP50)

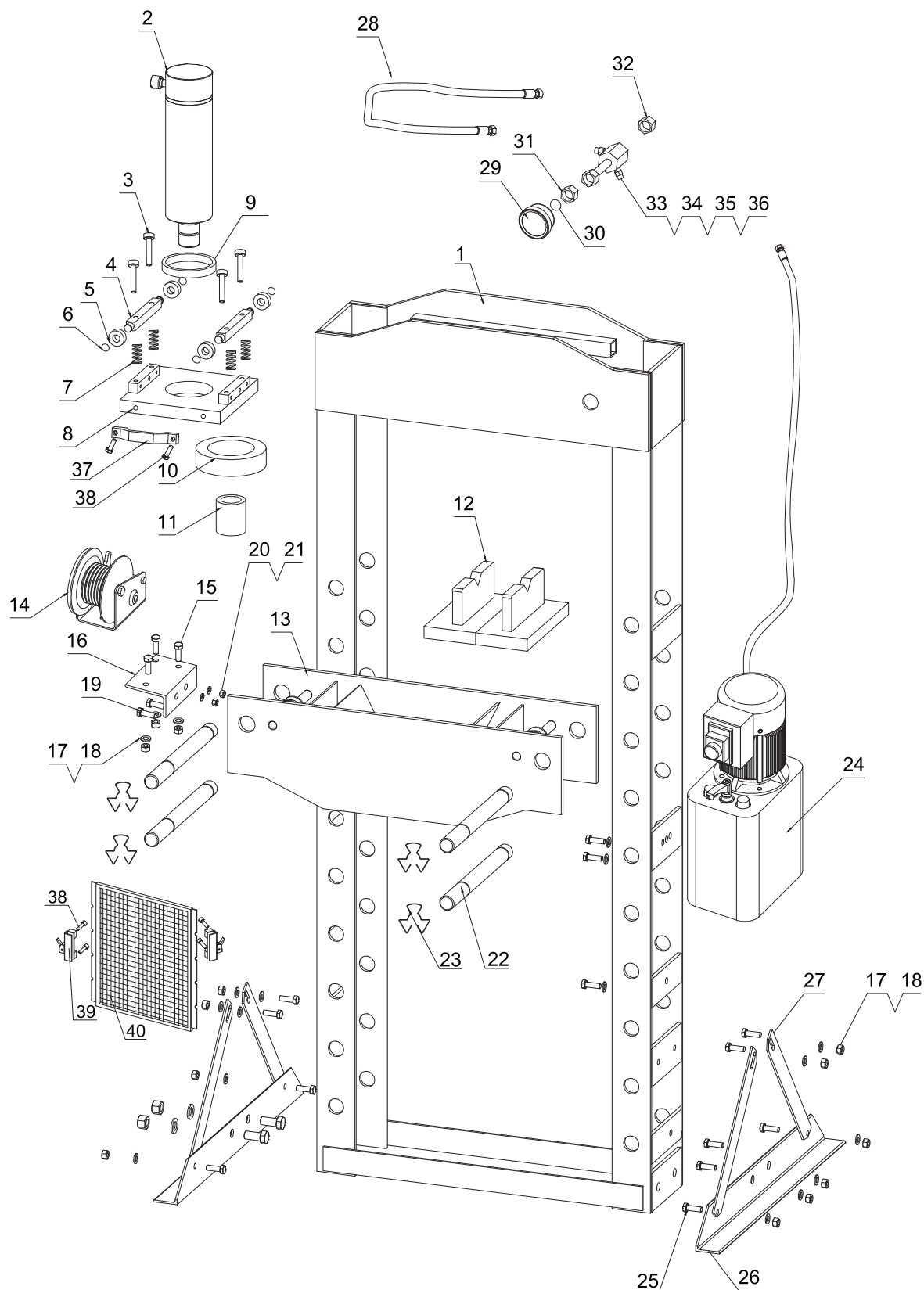


PARTS LIST (HSP30 / HSP50)

No.	DESCRIPTION	Qty
1	Frame	1
2	Cylinder	1
3	Bolt	4
4	Upper Roller Plate	2
5	Bearing	4
6	Retaining Ring	4
7	Compression Spring	4
8	Cylinder Support Plate	1
9	Small Nut	1
10	Large Nut	1
11	Press Head	1
12	V Block	2
13	Middle Cross Beam	1
14	Winch	1
15	Bolt	3
16	Winch Mounting	1
17	Flat Washer	17
18	Nut	17
19	Bolt	4
20	Flat Washer	4
21	Nut	2
22	Cylindrical Pin	4
23	Butterfly Washer	8
24	Pump	1
25	Bolt	14
26	Base support	2
27	Base side support	4
28	Hose	1
29	Pressure Gauge	1

No.	DESCRIPTION	Qty
30	Washer	1
31	Bolt	1
32	Nut	1
33	Tee Connector	1
34	Connector	2
35	Bolt	1
36	Nut	1
37	Handle	1
38	Bolt	6
39	Press Pin	1
40	Safety Guard slide	2
41	Safety Guard	1

PARTS DIAGRAM (HSP75E / HSP100E)

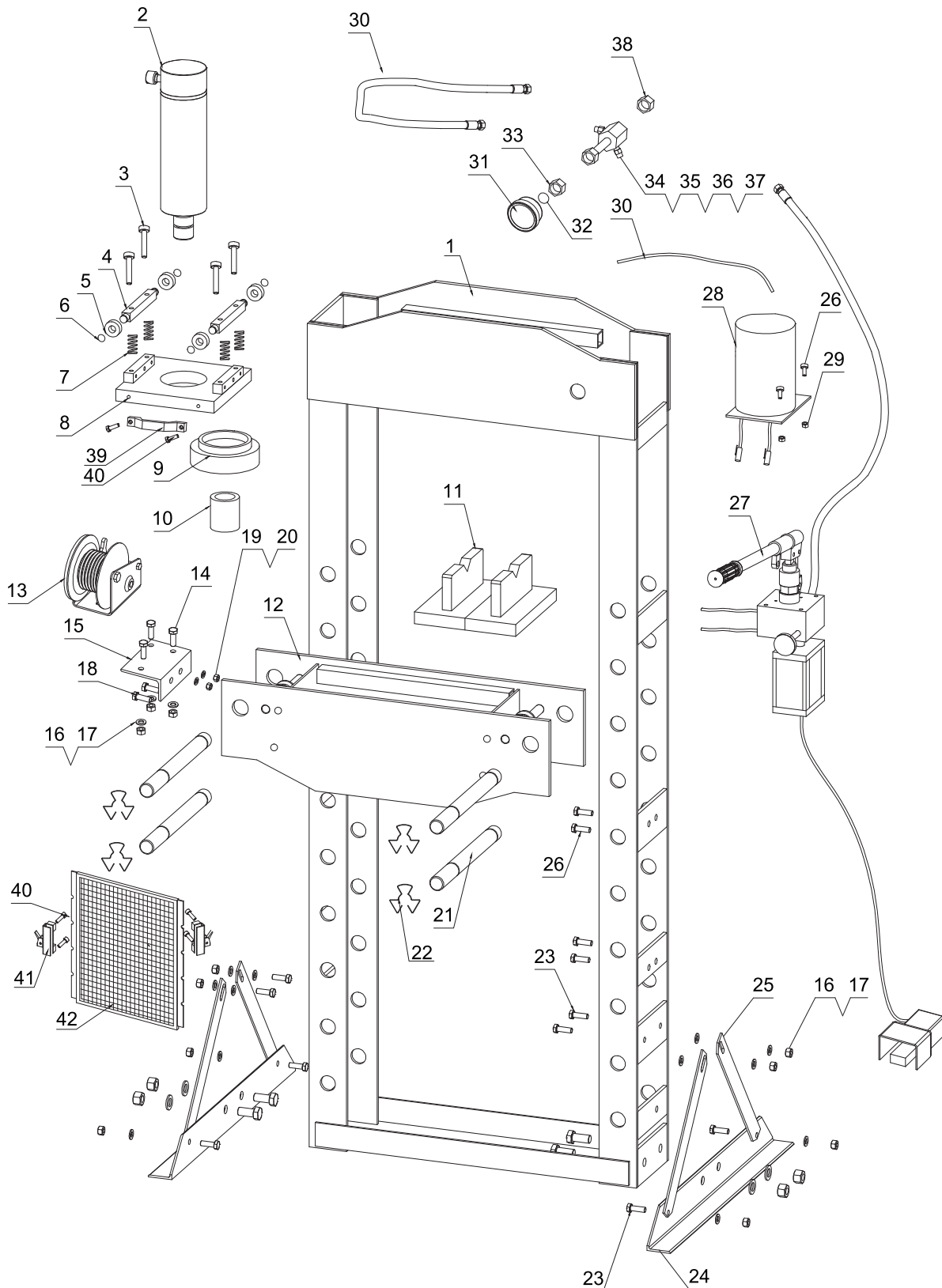


PARTS LIST (HSP75E / HSP100E)

No.	DESCRIPTION	Qty
1	Frame	1
2	Cylinder	1
3	Bolt	4
4	Upper Roller Plate	2
5	Bearing	4
6	Retaining Ring	4
7	Compression Spring	4
8	Cylinder Support Plate	1
9	Small Nut	1
10	Large Nut	1
11	Press Head	1
12	V Block	2
13	Middle Cross Beam	1
14	Winch	1
15	Bolt	3
16	Winch Mounting	1
17	Flat Washer	15
18	Nut	15
19	Bolt	4
20	Flat Washer	4
21	Nut	2
22	Cylindrical Pin	4
23	Butterfly Washer	8
24	Electric Pump	1
25	Bolt	12
26	Base support	2
27	Base side support	4
28	Hose	1
29	Pressure Gauge	1

No.	DESCRIPTION	Qty
30	Washer	1
31	Bolt	1
32	Nut	1
33	Tee Connector	1
34	Connector	2
35	Bolt	1
36	Nut	1
37	Handle	1
38	Bolt	6
39	Safety Guard slide	2
40	Safety Guard	1

PARTS DIAGRAM (HSP75 / HSP100)



PARTS LIST (HSP75 / HSP100)

No.	DESCRIPTION	Qty
1	Frame	1
2	Cylinder	1
3	Bolt	4
4	Upper Roller Plate	2
5	Bearing	4
6	Retaining Ring	4
7	Compression Spring	4
8	Cylinder Support Plate	1
9	Flange	1
10	Press Head	1
11	V Block	2
12	Middle Cross Beam	1
13	Winch	1
14	Bolt	3
15	Winch Mounting	1
16	Flat Washer	15
17	Nut	15
18	Bolt	2
19	Flat Washer	2
20	Nut	2
21	Cylindrical Pin	4
22	Butterfly Washer	8
23	Bolt	12
24	Base support	4
25	Base side support	4
26	Bolt	4
27	Pump	1
28	Oil reservoir	1
29	Nut	2

No.	DESCRIPTION	Qty
30	Hose	1
31	Pressure Gauge	1
32	Washer	1
33	Bolt	1
34	Tee Connector	1
35	Connector	2
36	Bolt	1
37	Nut	1
38	Nut	1
39	Handle	1
40	Bolt	6
41	Safety Guard slide	2
42	Safety Guard	1

TROUBLESHOOTING



TO PREVENT SERIOUS INJURY:

Use caution when troubleshooting a malfunctioning jack. Completely resolve all problems before use. If the solutions presented in the Troubleshooting guide do not solve the problem, have a qualified technician inspect and repair the jack before use.

After the Ram and Pump are repaired: Test it carefully without a load by raising it and lowering it fully, checking for proper operation, BEFORE RETURNING THE PUMP TO OPERATION.

Problem	Cause	Remedy
Ram does not operate when handle is pumped	Release valve not tightly closed	Firmly close the release valve
	Air in the pump	Please follow the steps: 1.Open the release valve by turning it counter-clockwise, pump up the handle 10-15 times 2.Close the release valve by turning it clockwise, pump up the handle 5-10 times 3.Repeat step 1 and 2 for about 3 times
	The steel ball is immersed inside for too long time	
Ram will not hold load	Release valve not tightly closed	Firmly close the release valve
	Malfunction in pump such as dirt inside valve mechanism	Please follow the steps: 1.Open the release valve by turning it counter-clockwise, pump up the handle 10-15 times 2.Close the release valve by turning it clockwise, pump up the handle 5-10 times 3.Repeat the step 1 and 2
Ram reluctant to lower when load removed	Oil reservoir overfilled	Drain oil to correct level
	Piston binding	Clean and lubricate moving parts
	Overextend the ram	Replace ram
Ram will not extend to full range of stroke	Low oil level	Add hydraulic oil to the reservoir
Ram tries to tilt to one side	Incorrect of connection or unbalance of the footing	Stop work and re-position ram and base, ensuring it is well supported and as close to perpendicular to the repair as possible

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