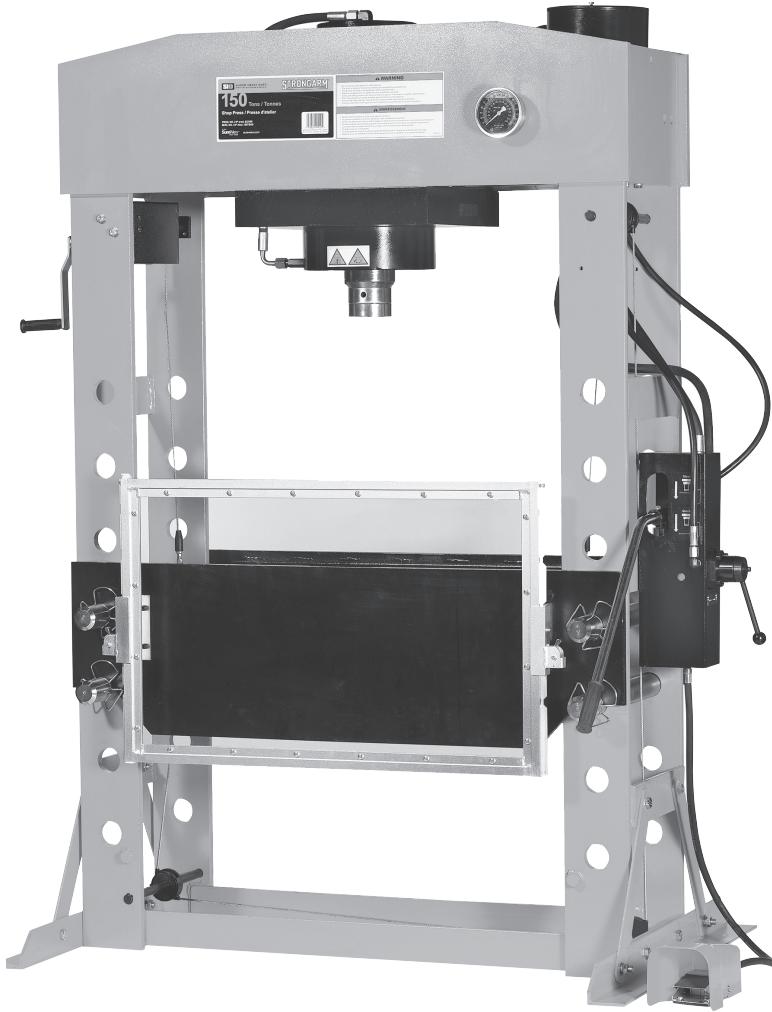


150 Ton Shop Press Owner's Manual

PROD. NO. 032188
MOD. NO. 150TSHD



WARNING:
Read all instructions and safety warnings before
operating this equipment. Failure to follow the
instructions and safety warnings may result in
personal injury or property damage.



HAZARD SYMBOLS USED IN THE MANUAL

This manual includes the hazard symbols defined below when the operations or maintenance job involves a potential danger. These symbols describe the level of danger involved in performing a job on the tool and the precautions to take to avoid the hazard.

Term	Sign	Description
Danger Label		Danger Labels indicate an imminently hazardous situation that if not avoided, WILL result in death or serious injury.
Warning Label		Warning Labels indicate a potentially hazardous situation, which if not avoided, COULD result in death or serious injury.
Caution Label		Caution Labels indicate a potentially hazardous situation, which if not avoided, MAY result in minor or moderate injury.
Note	NOTE:	Short piece of additional information with the purpose of adding or emphasizing important points in the text.

SAFETY REQUIREMENTS

Important: Make sure to read, understand, and strictly follow all safety related instructions before operation or maintenance of this equipment.

Intended Users

This manual is to be made available to all persons who are required to install, configure or service equipment described herein, or any other associated operation.

Application Area

The machinery described is intended for machinery production and assembling spare parts. It is used to press, size, assemble, rivet small parts in process and not for other use.

Personnel

Installation, operation and maintenance of the equipment should be carried out by qualified personnel. A qualified person is someone who is technically competent and familiar with all safety information and established safety practices with the installation process, operation and maintenance of this equipment; and with all the hazards involved.

Hazards

Personnel safety must have top priority. Thoroughly read this owner's manual to completely understand proper procedures before maintenance or inspection work.

Basic Safety Instructions

Failure to comply with the following could result in serious injury or death.

IMPORTANT: This press is shipped with a removable guard. Determine if the included guard is appropriate for the application. Due to the wide variety of pressing / bending applications, it is impossible to incorporate one guard that will apply to all applications. ALWAYS ENSURE THAT THE OPERATOR AND BYSTANDERS ARE PROPERLY GUARDED FROM THE POSSIBILITY OF FLYING DEBRIS.

1. Periodic inspections or maintenance work must be carried out by two or more persons.
2. Attach visible signs on the equipment so that everyone recognizes and understands that maintenance or inspection is ongoing.
3. Post a list with emergency phone numbers near the working area.
4. Operator should be aware of what to do in case of an emergency. Know the location of the first-aid kit, and the location of the fire extinguisher. Also learn how to use a fire extinguisher.
5. Alert anyone around the equipment whenever planning to operate it during maintenance or inspection work.
6. Always use proper hand tools and jigs during maintenance or inspections. Before operating the machine, check for any hand tools or jigs left inside it. For your own safety, **NEVER** try to remove them with the machine under operation. Consider **SAFETY FIRST**.
7. The operator must wear protective clothes, gloves, safety helmet, shoes and ear protection during operation.
8. To prevent back injury, heavy parts (or units) must be moved by two or more persons.
9. Before powering the equipment, alert the persons around it.
10. Be careful not to get pinched by moving parts.
11. Use **ONLY** the **CARRIER** specified for the equipment, and set it in a correct position.
12. To avoid accidents, always be aware of any ongoing work on the equipment. Also, always stay focused on the job to be done.

SAFETY INSTRUCTION AND WARNINGS

DANGER

- Before performing maintenance on pressurized parts in the equipment, you **MUST** release the pressure in the pressurized system. At the same time, **DO NOT** stand in the direction facing the charger, the operator should be on the opposite side. And remember: **DO NOT** strike, press or transfer until it is discharged.
- When it is necessary to exchange the die after running, operators should wear gloves or use tools to operate and avoid injury.

NOTE: Immediately stop operating the equipment if not working properly. Contact certified technical support engineers for repair. The equipment must not be operated without approval from the certified technical support engineer.

Prohibited Dangerous Actions WARNING

This section describes examples of dangerous actions not only during equipment operation, but also during maintenance and inspections. To avoid accidents, thoroughly read and understand the instructions below regarding dangers related to each mechanism prior to any maintenance or inspection work.

1. Use a qualified person to keep the lift in good condition. Keep it clean for best and safest performance.
2. The maximum load is 150 tons, **DO NOT** exceed this rated capacity. Never apply excessive force to a work piece and always use the pressure gauge to accurately determine the applied load. Burst hazard exists if hose or connection pressure exceeds rated pressure.
3. Shop presses are designed for automotive, truck, implement, fleet, and industrial repair shops where pressing, bending, straightening, forming or holding is required. Each press includes a cylinder, a pump, and lifting bar which provides a safe way to raise and lower the bed frame, and a pressure gauge for monitoring the applied press force.
4. Keep children and unauthorized persons away from the work area.
5. Remove loose fitting clothing. Remove ties, watches, rings and other loose jewellery, and contain long hair.
6. Wear ANSI approved impact safety goggles, full-face impact safety shield and heavy-duty work gloves when operating the press.
7. Keep proper balance and footing, wear nonskid footwear and do not overreach.
8. Only use this press on a surface that is stable, level, dry and not slippery, and capable of sustaining the load. Keep the surface clean, tidy and free from unrelated materials and ensure there is adequate lighting.
9. Inspect the press before each use. Do not use if bent, broken, cracked, leaking or otherwise damaged, any suspect parts are noted or it has been subjected to a shock load.

10. Check to ensure that all applicable bolts and nuts are firmly tightened.
11. Ensure that work piece is center-loaded and secure.
12. Keep hands and feet away from bed area at all times.
13. Do not use the shop press to compress spring or any other item that could disengage and cause a potential hazard. Never stand directly in front of loaded press and never leave loaded press unattended.
14. Do not operate the press when you are tired or under the influence of alcohol, drugs or any intoxicating medication.
15. Do not allow untrained persons to operate the press.
16. Do not make any modifications to the press.
17. Do not use brake fluid or any other improper fluid and avoid mixing different types of oil when adding hydraulic oil. Only good quality hydraulic jack oil can be used.
18. Do not expose the press to rain or any other kind of bad weather.
19. If the press needs repairing and/or there are parts that need to be replaced, have it repaired by authorized technicians and only use the replacement parts supplied by the manufacturer.

WARNING

The warnings, cautions and instructions discussed in this owner's 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.

Environmental Pollution: If the substances you use come under the ordinances concerning environmental pollution, follow the ordinances to discharge and dispose of such substances. If you commission industrial waste companies, you should confirm the way of final processing.

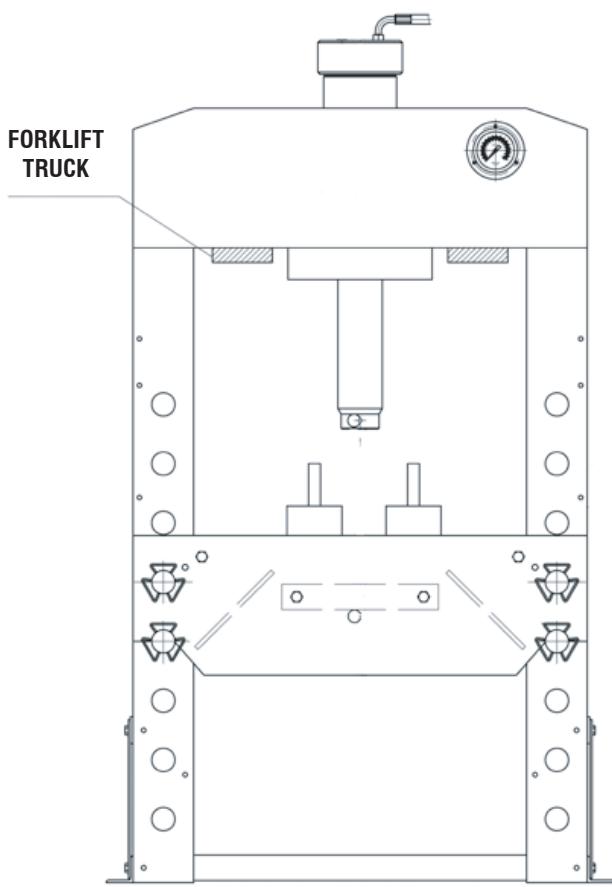
WARNING

Check for the safety of people working around the equipment, before powering it.

WARNING LABELS

Drawings below show warning labels attached to the machine.

1		Hand crush force from above
2		Read owner's manual
3		Consult technical manual for proper service procedures
4		Must wear protective clothes
5		Must wear protective gloves
6		Must wear safety helmet
7		Must wear protective shoes
8		Must wear ear protector



TECHNICAL SPECIFICATIONS

Item	Unit	Value
Capacity	Ton	150
Stroke	mm	350
Pressure of Hydraulic System	MPa	57.7
Working Range	mm	68 - 889
Air Inert Fitting	NPT	1/4"
Air Pressure	PSI	120 - 200
Bed Size Width	mm	1,000

Prepare Before Using

DANGER

The units are generally too heavy to be moved by hand. Therefore, use the correct transport and lifting equipment. The weights and dimensions of this press are shown in the chart above.

When moving the machine, please use the proper lifting equipment and follow the instructions as follows.

Working Area Conditions

Users should provide enough space for the equipment and the environment should be clean, non-flammable, corrosive and dust free.

CAUTION

A working area of 10 m is to be kept free both in front of and behind the machine while it is in operation so that it is always easily accessible.

Unpacking CAUTION

When opening the packaging, make sure to use the proper tools, wear protective clothing, gloves, safety helmet. Make sure that the product and parts in the box are complete and identical to the parts list. If not, contact the manufacturer immediately.

Disposal of the packaging

The packaging of these machines consists of PVC film and plywood case. The proper disposal of the packaging is the responsibility of the customer.

Installation CAUTION

The machine must only be installed and commissioned by qualified personnel! All relevant safety regulations must be strictly adhered to!

Prior to First Use CAUTION

- Before the first use, fix the machine to the floor by anchor bolt. Ensure the standing surface of the machine site is firm and horizontal, and that sufficient lighting is provided.
- Clean the machine thoroughly. Before first use of this product, pour a teaspoon of good quality, air tool lubricant into the air supply inlet of the lift control valve, connect to air supply and operate for 3 seconds to evenly distribute lubricant.

IMPORTANT WARNING

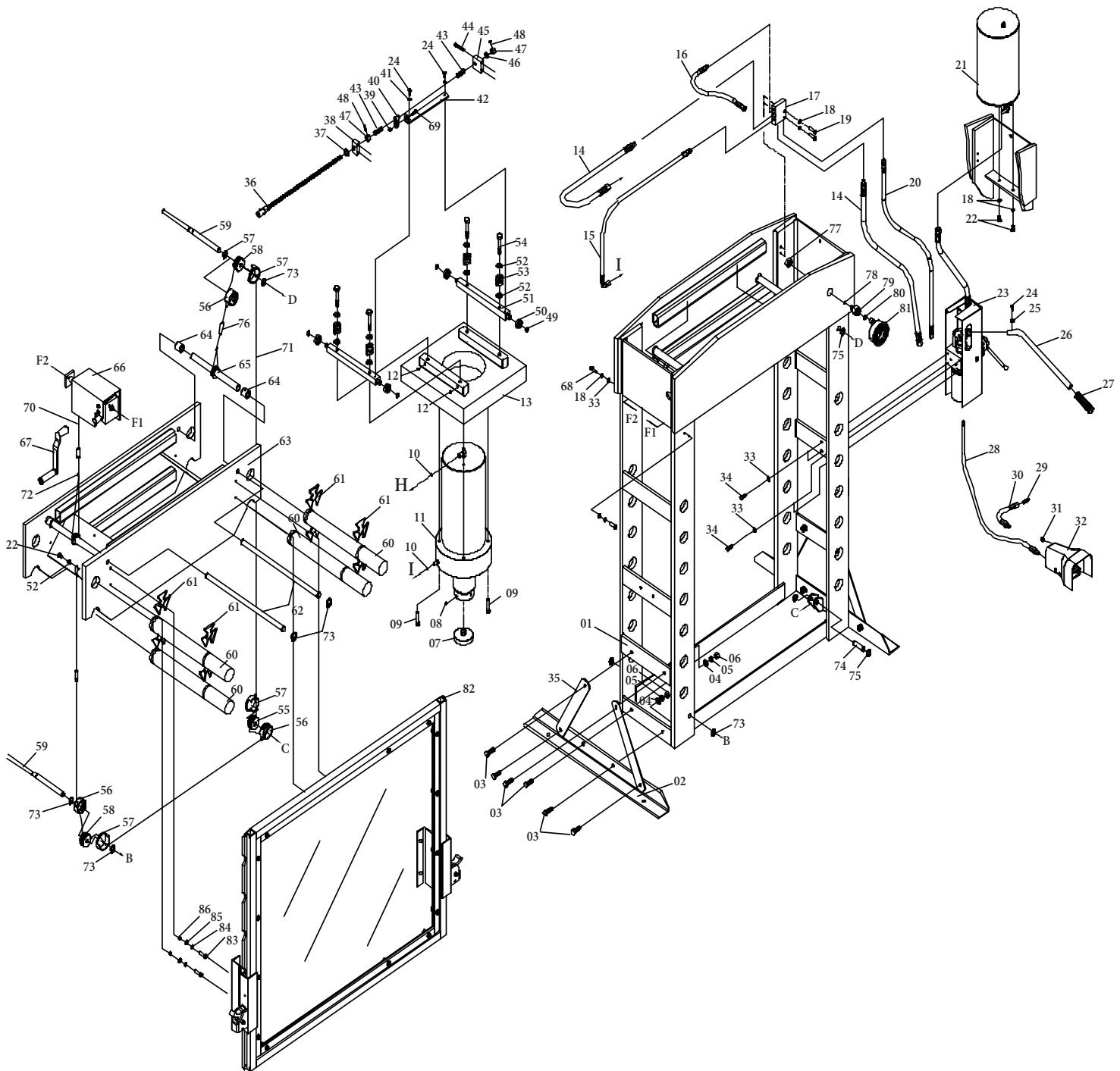
This press is shipped with a removable guard. Determine if the included guard is appropriate for the application; Due to the wide variety of pressing / bending applications, it is impossible to incorporate one guard that will apply to all applications. **ALWAYS ENSURE THAT THE OPERATOR AND BYSTANDERS ARE PROPERLY GUARDED FROM THE POSSIBILITY OF FLYING DEBRIS.**

CAUTION

This press is shipped with a pressing adapter set, which includes various size and capacity pressing adapters.

- **EACH ADAPTER HAS A MAXIMUM CAPACITY BASED ON ITS SIZE.**
- **DO NOT USE ADAPTER BEYOND RATED CAPACITY.**

Parts Breakdown of Shop Press

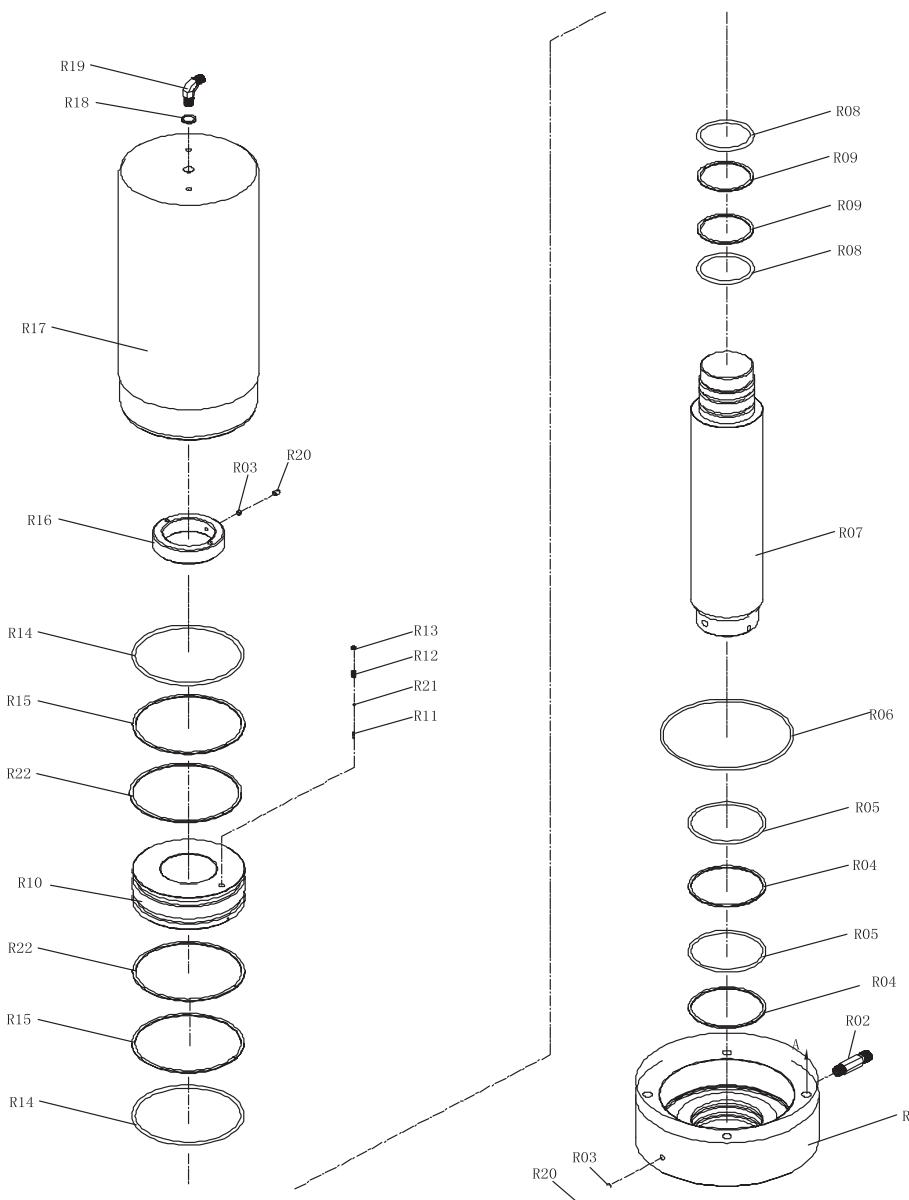


Parts List of Shop Press

Part No.	Description	Req.
1	Welded Frame	1
2	Bracket	2
3	Bolt	12
4	Washer	12
5	Lock Washer	12
6	Nut	12
7	Saddle	1
8	Screw	1
9	Bolt	4
10	O-Ring	2
11	Ram	1
12	Screw	4
13	Ram Plate	1
14	Oil Hose 1	2
15	Oil Hose 2	1
16	Oil Hose	1
17	Joint Connector	1
18	Lock Washer	10
19	Bolt	2
20	Oil Hose 1	1
21	Oil Tank	1
22	Bolt	3
23	Pump	1
24	Bolt	3
25	Washer	1
26	Handle	1
27	Handle Cover	1
28	Air Hose	1
29	Air Hose Connector	1
30	Air Hose	1
31	Screw	1
32	Foot Pedal	1
33	Washer	6
34	Bolt	4
35	Bracket Support	2
36	Bolt	1
37	Washer	1
38	Bolt Base1	1
39	Nut	1
40	Joint Nut	1
41	Lock Washer	2
42	Connector Bean	1
43	Spring	2

Part No.	Description	Req.
44	Screw	4
45	Bolt Base 2	1
46	Washer	1
47	Nut	2
48	Screw	2
49	Retainer Ring	4
50	Bearing	4
51	Square Steel	2
52	Spring Cap	9
53	Spring For Ram	4
54	Bolt	4
55	Big Roller	1
56	Protection 1	3
57	Protection 2	3
58	Roller 3	2
59	Pin	2
60	Pin	4
61	Retainer Ring	8
62	Lifting Roller	2
63	Frame Bed	1
64	Pipe	4
65	Pipe Assy	2
66	Hand Wrench	1
67	Handle For Wrench	1
68	Bolt	4
69	Bolt	1
70	Cable	1
71	Cable	1
72	Cable Connector	3
73	Retainer Ring	12
74	Roller 2	1
75	Retainer Ring	2
76	Cable Protection	3
77	Nut For Pressure Gauge	1
78	O-Ring	1
79	Connector For Pressure Gauge	1
80	Nylon Ring	1
81	150 T Pressure Gauge	1
82	Grid Gauge	1
83	Screw	4
84	Lock Washer	4
85	Washer	4
86	Nut	4

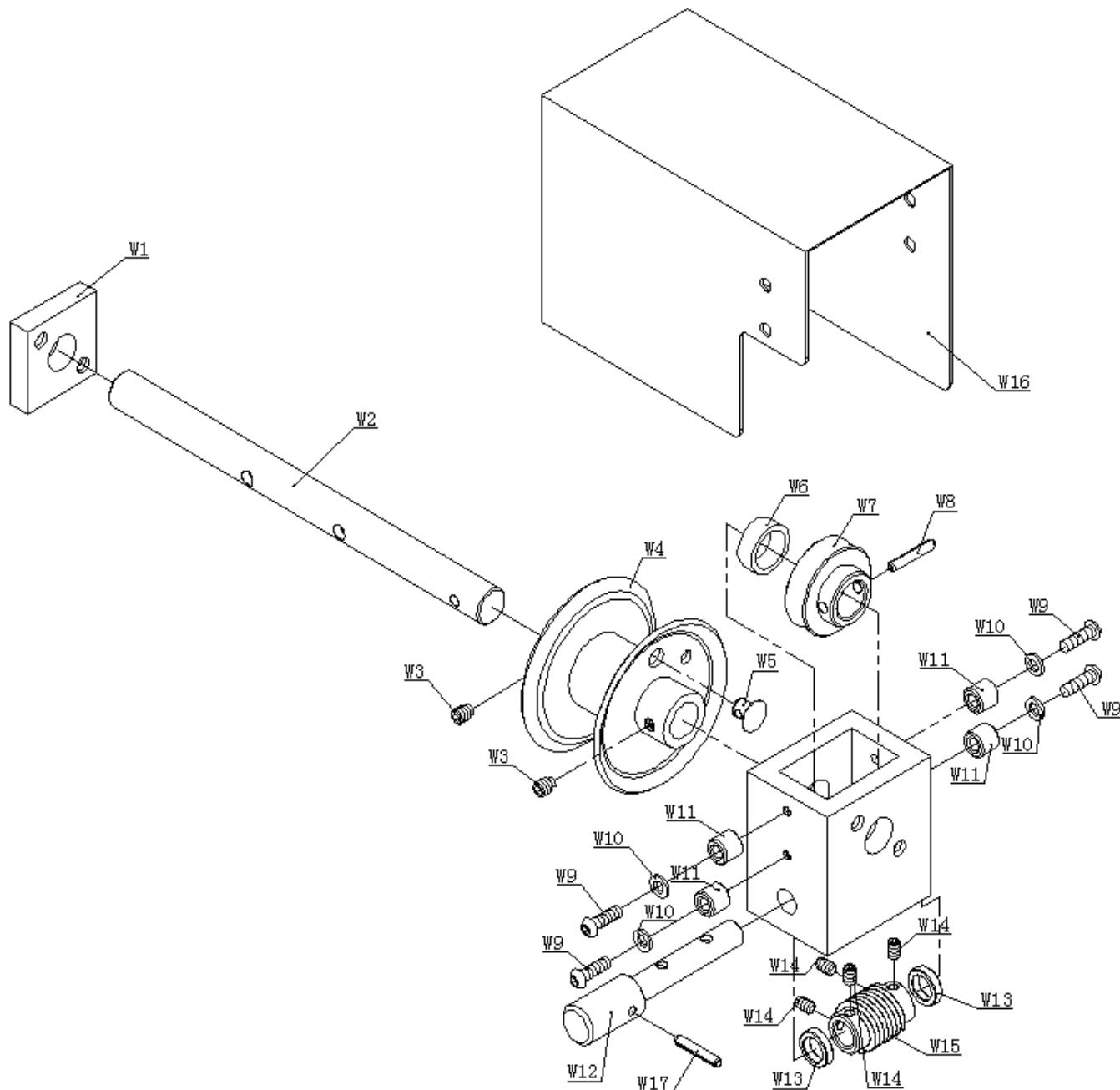
Parts Breakdown and List of Ram



Part No.	Description	Req.
R01	Round Nut	1
R02	Lengthen Connector	1
R03	Nylon Block	2
R04	Washer	2
R05	O-Ring	2
R06	O-Ring	1
R07	Piston Rod	1
R08	O-Ring	2
R09	Washer	2
R10	Piston	1
R11	Limited Valve Core	1

Part No.	Description	Req.
R12	Spring	1
R13	Screw	1
R14	O-Ring	2
R15	Washer	2
R16	Nut	1
R17	Ram	1
R18	Copper Washer	1
R19	Bend Connector	1
R20	Screw	2
R21	Steel Ball	1
R22	Nylon Washer	2

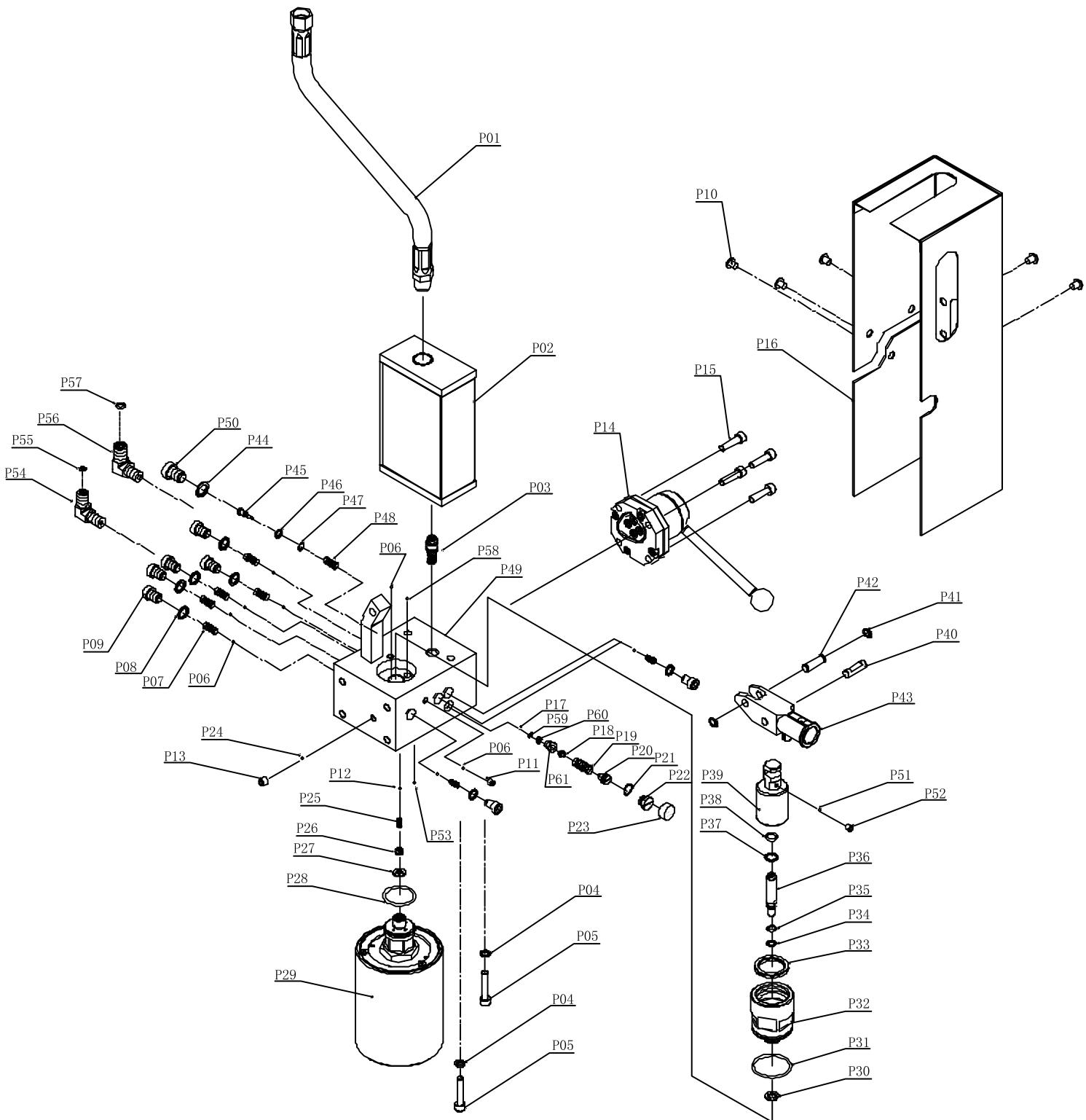
Parts Breakdown and List of Bed Winch Mechanism



Part No.	Description	Req.
W1	Support Plate	1
W2	Worm Shaft	1
W3	Hexagon Screw M8*10	2
W4	Winch	1
W5	Rivet	1
W6	Worm Pad	1
W7	Worm	1
W8	Spring Pin Dia. 6*30	1
W9	Hexagon Screw 6*20	4

Part No.	Description	Req.
W10	Washer Dia. 10	4
W11	Washer	4
W12	Worm Shaft	1
W13	Worm Washer	2
W14	Hexagon Socket Set Screw M6*10	4
W15	Worm	1
W16	Winch Cover	1
W17	Spring Pin Dia. 5*30	1

Parts Breakdown of Pump



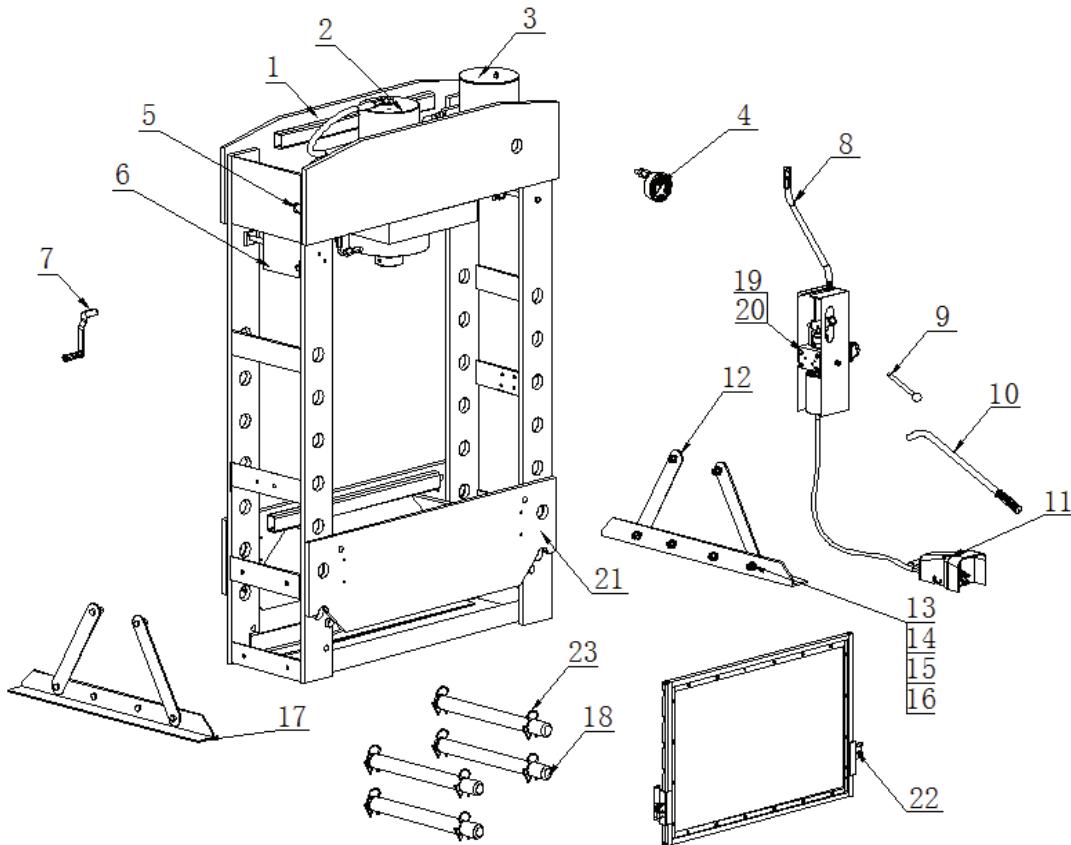
Parts List of Pump

Part No.	Description	Req.
P01	Oil Hose	1
P02	Small Oil Tank	1
P03	Connector	1
P04	Lock Washer	2
P05	Screw	2
P06	Steel Ball	11
P07	Spring	8
P08	Copper Washer	8
P09	Screw	8
P10	Screw	5
P11	Screw	2
P12	Steel Ball	1
P13	Screw	1
P14	Selector	1
P15	Screw	4
P16	Pump Cover	1
P17	Valve Ball	1
P18	Steel Ball Base	1
P19	Spring	1
P20	Screw	1
P21	O-Ring	1
P22	Screw	1
P23	Cap	1
P24	Steel Ball	1
P25	Spring	1
P26	Spring Base	1
P27	Copper Washer	1
P28	O-Ring	1
P29	Air Motor	1
P30	Copper Washer	1
P31	O-Ring	1

Part No.	Description	Req.
P32	Pump Core Base	1
P33	U-Ring	1
P34	O-Ring	1
P35	Washer	1
P36	Small Pump Core Base	1
P37	Washer	1
P38	O-Ring	1
P39	Big Pump Core Base	1
P40	Pin	1
P41	Retainer Ring	2
P42	Pin	1
P43	Handle Base	1
P44	Copper Washer	1
P45	Valve Core	1
P46	O-Ring	1
P47	Washer	1
P48	Spring	1
P49	Pump	1
P50	Screw	1
P51	Steel Ball	1
P52	Screw	1
P53	Steel Ball	1
P54	Connector	1
P55	O-Ring	1
P56	Bend Connector	1
P57	O-Ring	1
P58	Steel Ball	1
P59	Copper Washer	1
P60	Washer	1
P61	Screw	1

UNPACKING THE PLYWOOD CASE

- To avoid any damage to the machine or personal injury, remove the small parts packed in case first.
- Remove the polybag covering the press.
- Use a fork lift to take the press out of case.
- Double check parts to ensure they are all there. The parts should include press body frame, pump, base, support, hardware kits, etc. (For details refer to the following parts list below).



Part No.	Description	Req.
1	Welded Frame	1
2	Ram	1
3	Oil Tank	1
4	Pressure gauge	1
5	Moving Components	1
6	Hand Wrench	1
7	Handle for Wrench	1
8	Pump Assy	1
9	Selector Valve Handle	1
10	Handle for Pump	1
11	Foot Pedal	1
12	Bracket Support	4

Part No.	Description	Req.
13	Bolt M14*40	12
14	Washer Dia.14	12
15	Lock Washer Dia.14	12
16	Nut M14	12
17	Foot Base	2
18	Pin	4
19	Bolt M10*30	4
20	Washer Dia.10	4
21	Frame Bed	1
22	Grid Guard	1
23	Retainer Ring	8

ASSEMBLING THE SHOP PRESS

Base Assembly

- Assemble the base to the body frame by bolt M14*40 (03), washer 14 (04) and lock washer 15 (05) (refer to Fig. 1).
- Fix the 4 pcs supports (35) to the body frame part B and C by using bolt M14*40 (03), washer 14 (04), lock washer 14 (05) and nut M14 (06) (refer to Fig. 2).

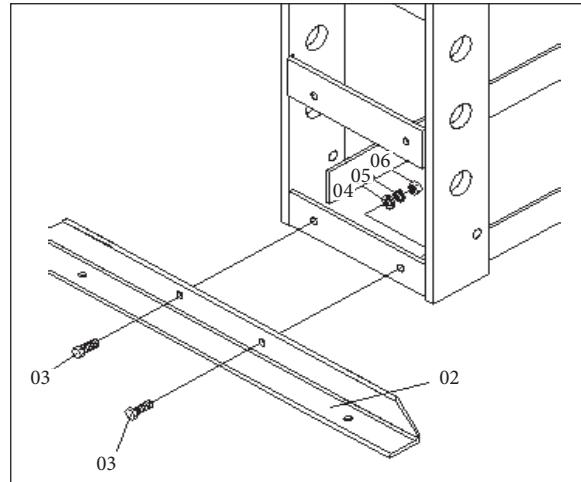


Fig. 1

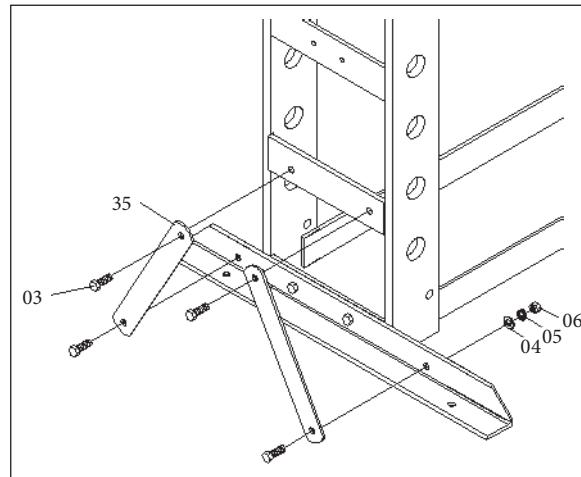


Fig. 2

Pressure Gauge Assembly

- Take off the plunger from oil hose (16), pay attention to the O-ring should keep in oil hose (16).
- Unscrew the nut (77) from pressure gauge (81).
- Tighten the pressure gauge (81) to the frame (90) by using nut (77).
- Tighten the oil hose (16) and pressure gauge (81) (refer to Fig. 3).

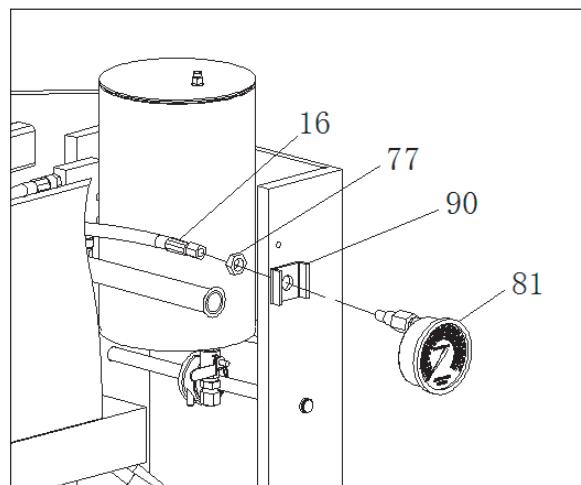


Fig. 3

Pump Assembly

- Fix the pump assy. (23) to the body frame by using bolt (34) and lock washer 10 (33). (refer to Fig. 4).
- Take off the plunger (P62) from the oil hose (P01) (refer to Fig. 5).
- Take off the plunger (88) from valve (87) Avoid the O-ring fall down from valve (87) (refer to Fig. 6).
- Assemble oil hose (P01) to the valve (87) (Avoid the O-ring fall down from valve (87) (refer to Fig. 7).
- Assemble the O-ring (P57) to bend connector (P56) then connect the oil hose (14) to bend connector (P56) and tighten it.
- Assemble the O-ring (P55) to bend connector (P54), then connect the oil hose (20) to the bend connector (P54), and tighten it (refer to Fig. 8).
- Take out the handle for selector (89) and assemble it to the selector (23) (refer to Fig. 9).

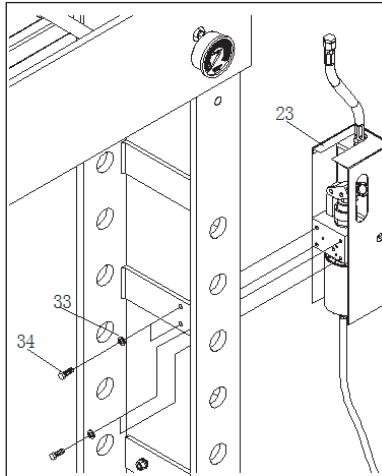


Fig. 4

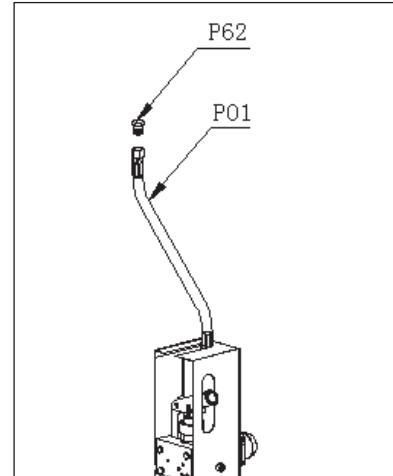


Fig. 5

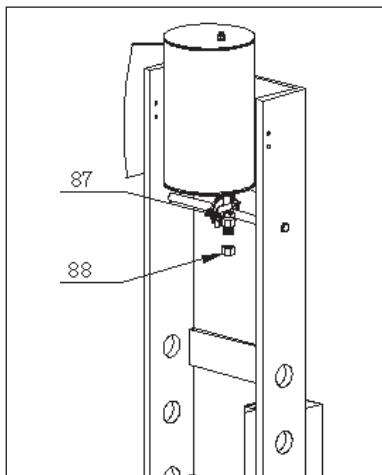


Fig. 6

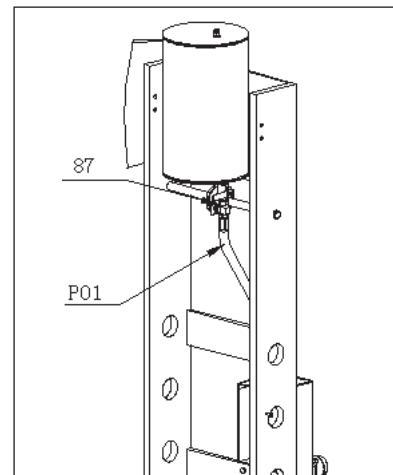


Fig. 7

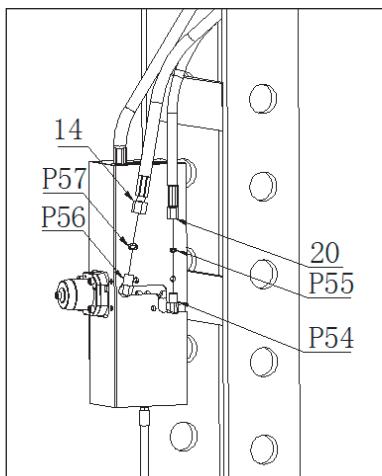


Fig. 8

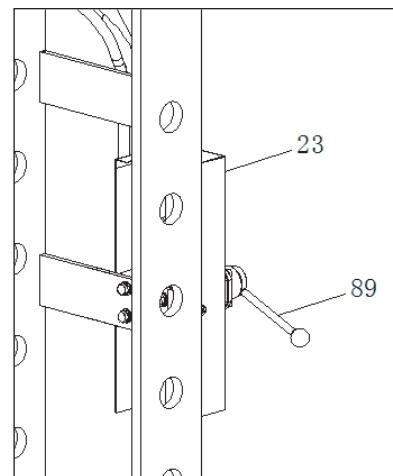


Fig. 9

Pin Assembly

- Take out the pin (60) and retainer ring (61). Insert the pin (60) to the hole on the frame, then fix the retainer ring (61) (refer to Fig. 10).

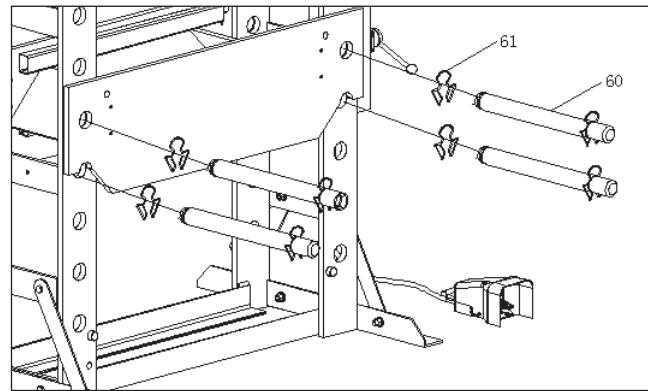


Fig. 10

Grid Guard Assembly

- Take out screw M8*45 (83), washer 8 (84), lock washer 8 (85) and nut 8 (85), assemble the slide (92/93) to the frame, and tighten it. Then insert the grid guard (82) (refer to Fig. 11).

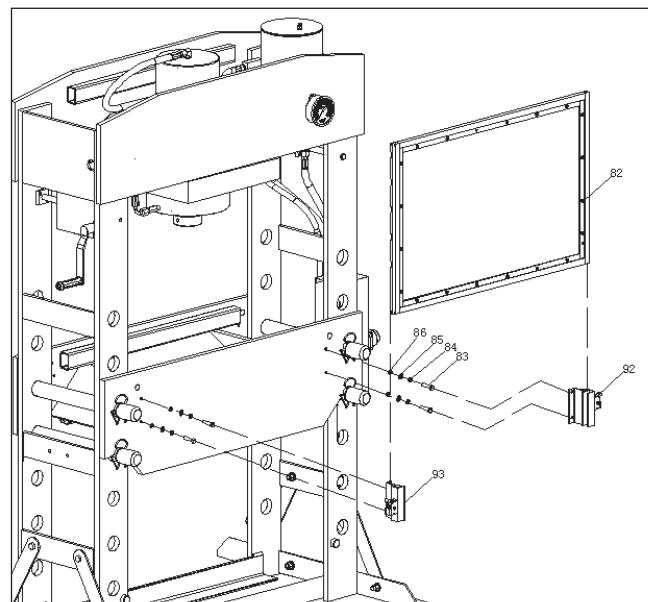


Fig. 11

MOVING THE RAM

- Insert the handle (12) to the worm connecting shaft (M1).
- Turn the handle clockwise, and the ram moves left (Direction A).
- Turn the handle (12) anti-clockwise, and the ram moves right (direction B)(refer to Fig. 12).

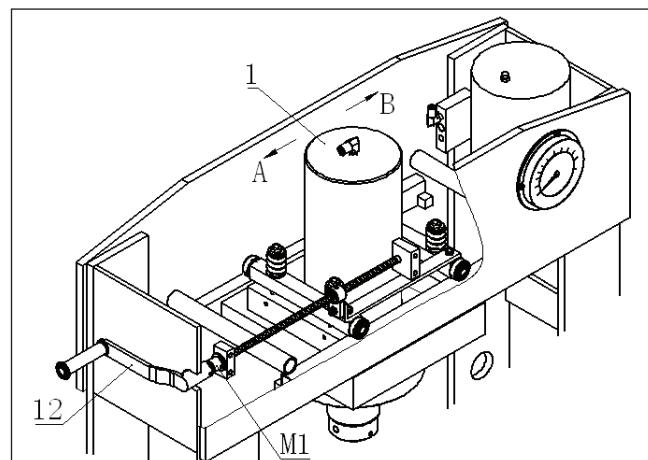
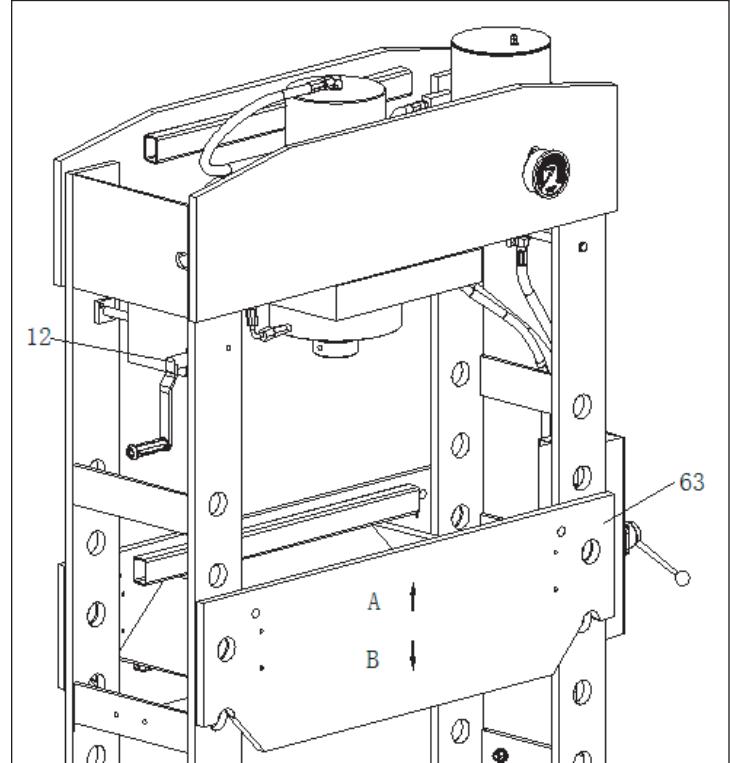


Fig. 12

BED ADJUSTMENT

- Assemble the handle (12) to hand wrench.
- Turn the handle (12) clockwise, then the bed frame (63) will move up (A).
- Turn the handle (12) anticlockwise, the bed frame (63) will move down (B) (refer to Fig. 13).



BEFORE USING

- Open the valve (87) by turning it anticlockwise to position A (refer to Fig. 14).
- Loosen the exhaust screw by turning it anticlockwise (refer to Fig. 15).

CONNECT TO THE AIR SOURCE

- Connect foot pedal to the air source, make sure that the air pressure from the source is between 7.5 Bar and 8.5 Bar (refer to Fig. 16).

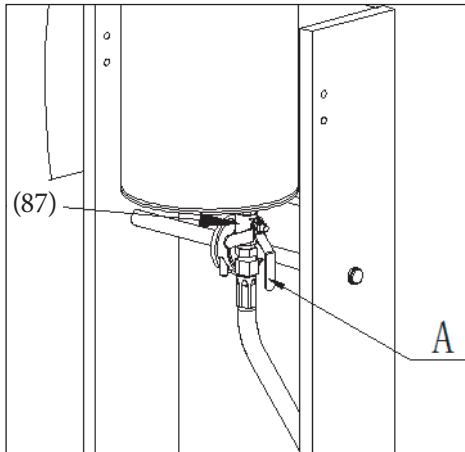


Fig. 14

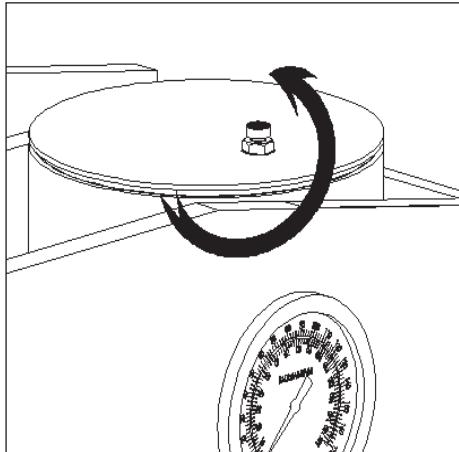


Fig. 15

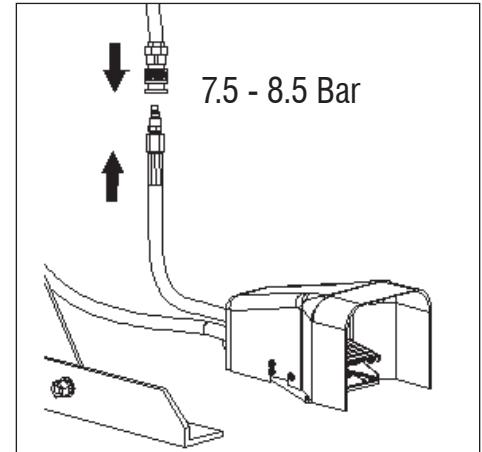


Fig. 16

AIR PURGE

Before purging the air, make sure that the above assembly steps have been finished.

Air purge for air pump

- After connecting to the air source, turn the selector to position 2, and press the foot pedal for 30 seconds.
- Turn the selector to position 3, press the foot pedal, and the piston rod will move down; after the piston rod has run out totally, turn the selector to position 1, to make the piston rod run back.

Air purge for manual pump

- Turn the selector to position 2, operate the handle 30 times fast.

Repeat air purge

- Repeat the above steps 3 times to make sure the air has been purged.

PISTON EXTENSION & RETRACTION

Extending the ram can be done either manually or by air.

Operating by air:

- Connect the air hose of air foot valve to the air source. (Fig. 16)
- Turn the handle lever of selector valve to position 3. (Fig. 17)
- Depress the air foot valve (32). When the piston rod is not under load, the piston rod extends quickly. When the piston rod is under load, the piston rod extends slowly.

Operating manually:

- Insert the handle (26) to the handle base (P43), Turn the handle lever of socket valve to position 3. (Fig. 17). When the piston rod is not under load, the piston rod extends quickly. When the piston rod is under load, the piston rod extends slowly.

Retracting the ram can be done either manually or by air.

Operating by air:

- Connect the air hose of air foot valve to the air source. (Fig. 16)
- Turn the handle lever of selector valve to position 1. (Fig. 17)
- Depress the air foot valve (32), then the piston rod returns quickly.

Operating manually:

- Insert the handle (26) into the handle base (P43), pumping the handle to return the piston rod quickly.
- The operator can retract the piston rod either by air or manually
- To stop the movement of the piston rod: stop pumping the handle tube (26) or release the air foot valve (32); the piston rod will stop moving. Then turn the handle lever of selector valve to position 2. (Fig. 17)

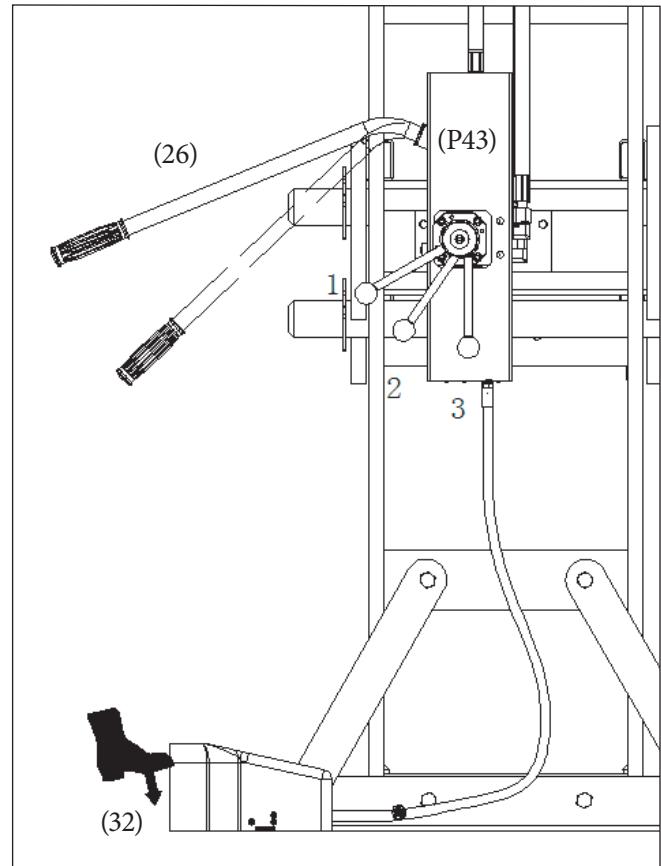


Fig. 17

OPERATION

- Turn the handle lever of selector valve to position 3, then depress the air foot valve (32); the piston rod will extend quickly. When the saddle gets close to the work piece, change to manual operation (refer to Fig. 18).
- Insert the handle tube into the handle base (P43) and pump the handle tube; the piston rod will extend slowly. Make sure that the work piece and piston rod are aligned properly.
- After adjusting the position of the work piece, operator can press by air, or manually.
- To release the pressure: turn the handle lever of selector valve to position 2, the pressure on the piston rod will release automatically.
- Remove the work piece.
- When complete, disconnect the air hose from the compressor and clean the machine.

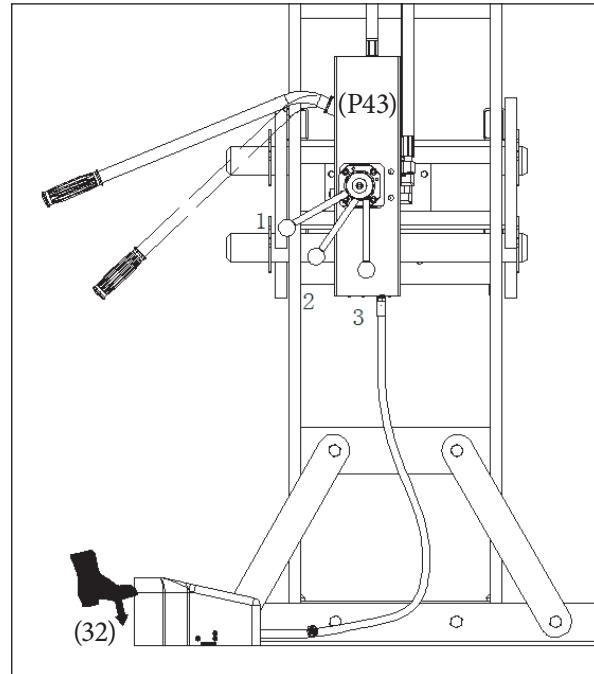


Fig. 18

MAINTENANCE

- Use clean and dry cloth to clean the press surface, and grease the connecting part and moving part periodically.
- When the press is not in use, fully return the piston rod and stock in dry place.
- When the press' working efficiency is reduced, purge the air in the hydraulic system.

Oil volume check

- The operator can check if the oil volume is sufficient by pumping the handle tube to check if the piston rod can extend fully (300 mm).
- If the oil volume is low, add hydraulic oil to the oil tank as follows: remove the screw (95) on the oil tank, add hydraulic oil then tighten the screw (95) again. After adding the oil, perform air purge according to process. (Refer to Fig. 19)

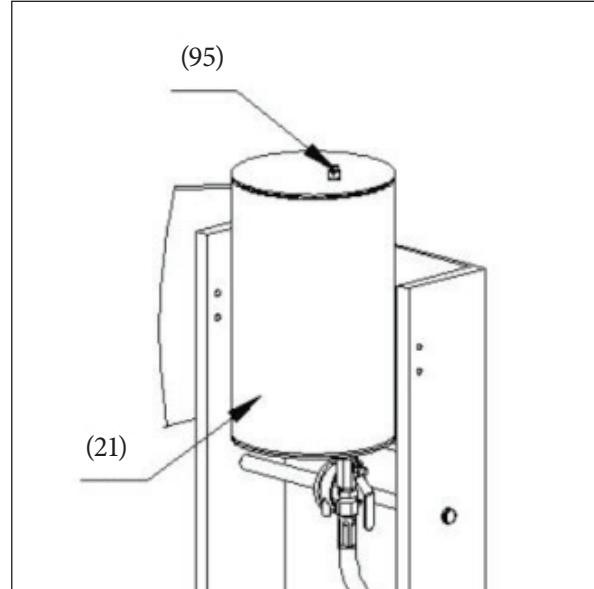


Fig. 19

NOTES:

STRONGARM®