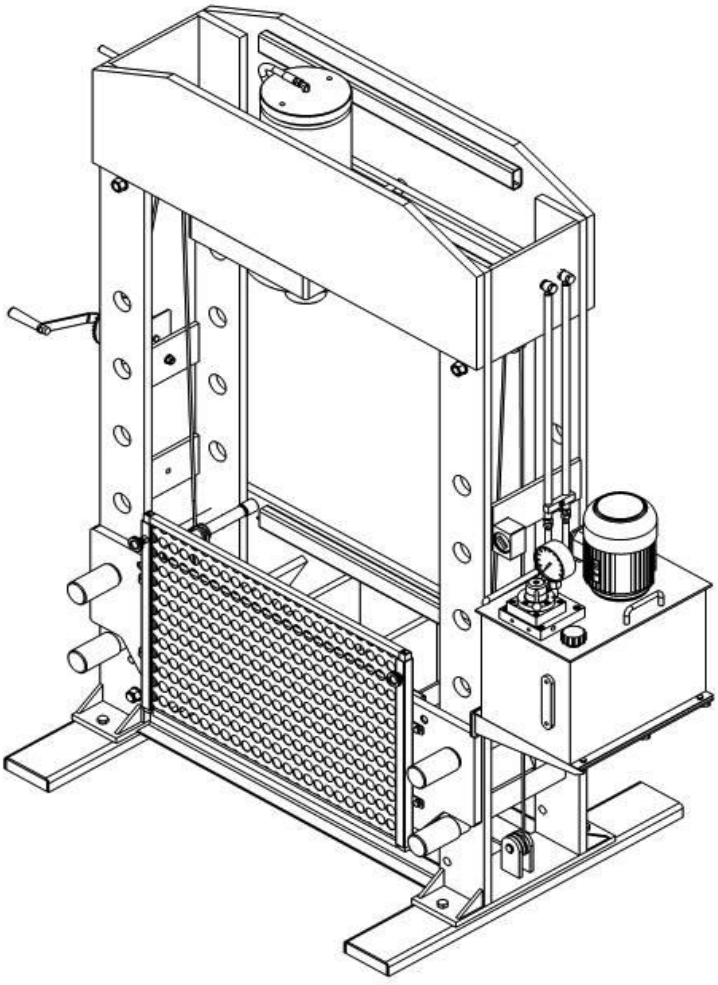
TMG™ INDUSTRIAL

PRODUCT MANUAL

150 Ton Electric Hydraulic Shop Press

Model: TMG-SP150



⚠ WARNING

- Please read the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly

Missing parts or questions on assembly?
Please call: 1-877-761-2819 or email: cs@tmgindustrial.com
Do not return the product to dealer, they are not equipped to handle your requests

INTENDED USE

This Shop Press is designed for automotive, truck, implement, fleet, and industrial repair shops where pressing, bending, straightening and forming, is required. Typical applications include installation and removal of alternator and power steering pump bearings, axle bearings, transmission bearings, seals, u-joints and many other jobs.

TECHNICAL SPECIFICATIONS

	Description
Model:	**TMG-SP150**
Capacity	150 Ton
Working press(Ton)	150-165
Max. work range（in.）	37″
Stroke length(in.)	13-3/4″
Working width(in.)	39-3/8″
Cylinder left-right movement	13”
Carriage pin diameter	2-3/16”
Power Unit	115 Volt, 60Hz, 2HP
Hydraulic tank capacity	8Gallon
Dimensions L x W x H	77-1/2” x 39-3/8”x 82-1/2″

Safe Operating Temperature is between -20°F – 105°F (-28°C - 41°C)

GENERAL SAFETY RULES

 **WARNING: Read and understand all instructions.** Failure to follow all instructions listed below may result in serious injury.

 **CAUTION: Do not allow persons to operate or assemble this Shop Press until they have read this manual and have developed a thorough understanding of how the Shop Press works.**

 **WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could 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

IMPORTANT SAFETY CONSIDERATIONS

SHOP PRESS USE AND CARE

- **Do not modify the Shop Press in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the **Shop Press** was designed.
- **Always check of damaged or worn out parts before using the Shop Press.** Broken parts will affect the **Shop Press** operation. Replace or repair damaged or worn parts immediately.
- **Store idle Shop Press.** When **Shop Press** is not in use, secure it out of the reach of children. Inspect it for good working condition prior to storage and before re-use.
- **Not for use by children** or people with reduced mental capacity.
- **Do not use under the influence of drugs or alcohol.**
- **Ensure children and other bystanders** are kept at a safe distance when using press.

INSPECTION

- Inspect the press carefully before each use. Ensure the press is not damaged, excessively worn, or missing parts.
- Do not use the press unless it is properly lubricated.
- Using a press that is not in good clean working condition or properly lubricated may cause serious injury.
- Inspect the work area before each use. Make sure it is free and clear of any potential hazards.

GENERAL SAFETY INSTRUCTIONS

DO NOT OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL.

To maintain the Shop Press and user safety, the responsibility of the owner is to read and follow these instructions. Inspect the service shop press for proper operation and function. Keep instructions readily available for equipment operators. Make certain all equipment operators are properly trained; understand how to safely and correctly operate the unit. Allow unit operation only with all parts in place and operating properly. Use only genuine replacement parts. Service and maintain the unit only with authorized or approved replacement parts negligence will make the shop press unsafe for use and void the warranty. Carefully inspect the unit on a regular basis and perform all maintenance as required. Store these instructions in the handle of your shop press. Keep all decals on the unit clean and visible.

SAFETY

Always follow safety precautions when installing and operating this shop press. Keep all decals on the unit clean and visible. Before proceeding that you fully understand and comprehend the full contents of this manual. Failure to operate this equipment as directed may cause injury or death. The distributor is not responsible for any damages or injury caused by improper use or neglect

SAFETY MARKINGS

WARNING:

1. Study, understand, and follow all instructions before operating the device.
2. Do not exceed rated capacity.
3. Prior to use, make sure the press is securely anchored.
4. The press shall be installed and operated in accordance with federal (OSHA), state, and local safety standards.
5. Ensure the work area is clean and free of any hazards before operation.
6. Operators and observers shall wear eye protection that meets ANSI Z87.1 and OSHA standards.
7. Keep hands, arms, feet, and legs out of the work area. Accidental slippage can result in personal injury.
8. Use appropriate guarding to contain any pieces that may break or fly apart when applying force.
9. Use only press accessories having a capacity rating equal to or greater than the capacity of the press.
10. Verify lift cables are slack before pressing on the bolster.
11. Avoid off-center loads.
12. No alterations shall be made to the product.
13. Do not use this press for any use other than the manufacturer specified usage.
14. Failure to heed and understand these instructions and markings may result in personal injury, property damage, or both.

PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFETY INSTRUCTIONS AND WARNING. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE OF WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE TO PROPERTY AND/OR SERIOUS PERSONAL INJURY. PLEASE KEEP THIS INSTRUCTION MANUAL SAFE FOR FUTURE USE.

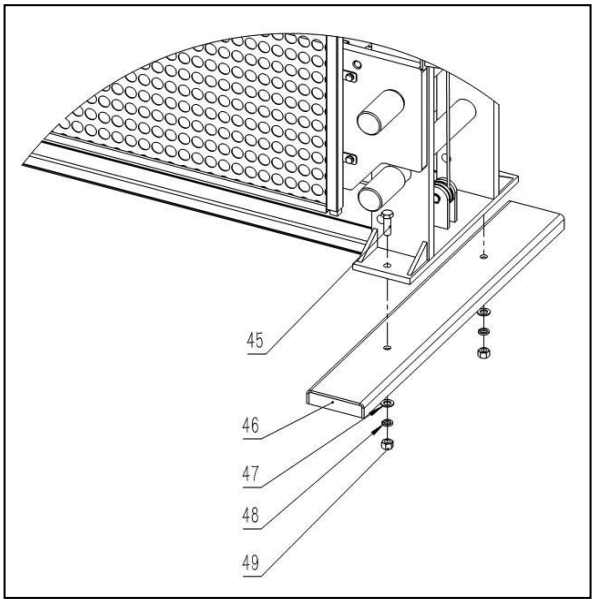
We've done all we can to assure this press offers the utmost in safety, but you have to do your part. No amount of warning can take the place of your good judgment, so make sure it's the first thing you bring to any job. Beyond that here are some obvious tips:

- Steel and other materials can shatter, so always use protective eye-wear that complies with the appropriate ANSI code.
- If you detect anything that may indicate imminent structural failure, stop using the press immediately and inspect it thoroughly.
- Bolt the press to the floor if it is to be used on bulky or unstable items.
- Do not use press to compress springs or any other item that could disengage and cause a potential flying hazard.
- Use this press for the purpose for which it is intended. Do not use it for any other purpose it is not designed to perform.
- Keep children and unauthorized persons away from the work area.
- Remove loose fitting clothing. Remove ties, watches, rings and other loose jewelry and contain long hair.
- Wear ANSI approved impact safety goggles, full-face impact safety shield and heavy-duty work gloves when operating the press.
- Keep proper balance and footing, do not over-reach and wear nonskid footwear.
- 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 form unrelated materials and ensure that there is adequate lighting.
- Inspect the press before each use. Do not use if bent, broke, cracked, leaking or otherwise damaged. Any suspect parts are noted or it has been subjected to a shock load.
- Check to ensure that all applicable bolts and nuts are firmly tightened.
- Ensure that work piece is center-loaded and secure.
- Keep hands and feet away from bed area at all times.
- 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.
- Do not operate the press when you are tired or under the influence of alcohol, drugs or an intoxicating medication.
- Do not allow untrained persons to operate the press.
- Do not make any modifications to the press.
- 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.
- Do not expose the press to rain or any other kind of bad weather.
- If the press needs repairing and/or there are any parts that need to be replaced, have it repaired by authorized technicians and only use the replacement parts supplied by the manufacturer.

ASSEMBLY

All numbers in parenthesis ()refer to the index number from the parts breakdown.

1.Attach the two base support sections (46) to the base with bolt (45),washer (47)&（48）and nuts (49).

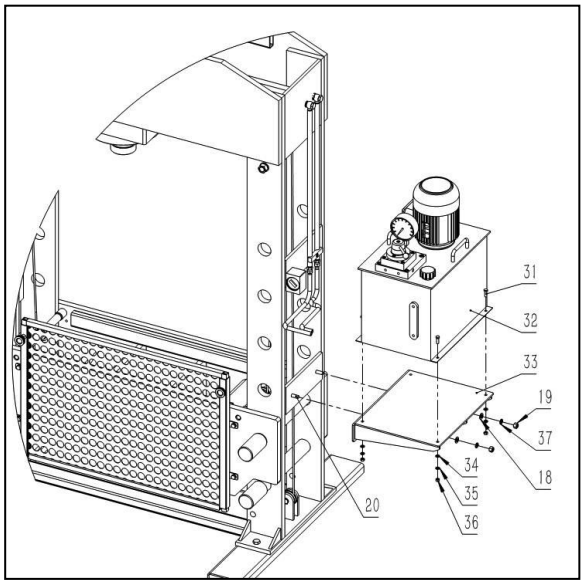


2.Attach the pallet (33) to the right frame with bolt (20).and washer (18) and (37) and (37)and nut(19).

Attach the power unit(32) to the pallet with bolt (31).and washer (34) and (35) and nut(36).

- ELECTRICAL INSTALLATION – Motor nameplate volt- age must be available at the motor when it is operating. Choose a site that avoids long power cord runs. Voltage drop increases with the length of power cord. Larger wire diameter may be required.
- When wiring the motor, follow all local electrical and safe- ty codes as well as the National Electric Code (NEC) and Occupational Safety and Health Act (OSHA).
- Ensure that the power unit is securely installed.

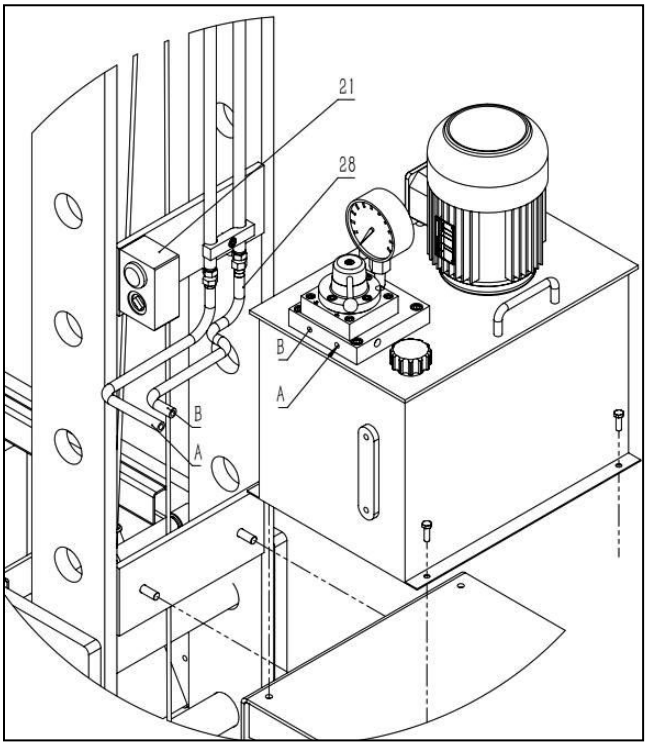
CAUTION:DO NOT OPERATE UNITS WITHOUT PROPER GROUNDING.



Note: This hydraulic power unit is designed for vertical mount with reservoir feet down and reservoir breather up. Choose a flat mounting surface to bolt reservoir base to.

CAUTION:The reservoir for this family of units is internally plumbed for vertical mounting as noted above. Mounting the unit in an inclined plane or any other position will greatly reduce available usable oil in the reservoir. This can cause oil foaming, erratic move- ment of hydraulic components, and pump failure.

3.Attach the power switch (21) to the frame with screw,then attach the hydraulic hose(28)"A"to"A" and "B to B"

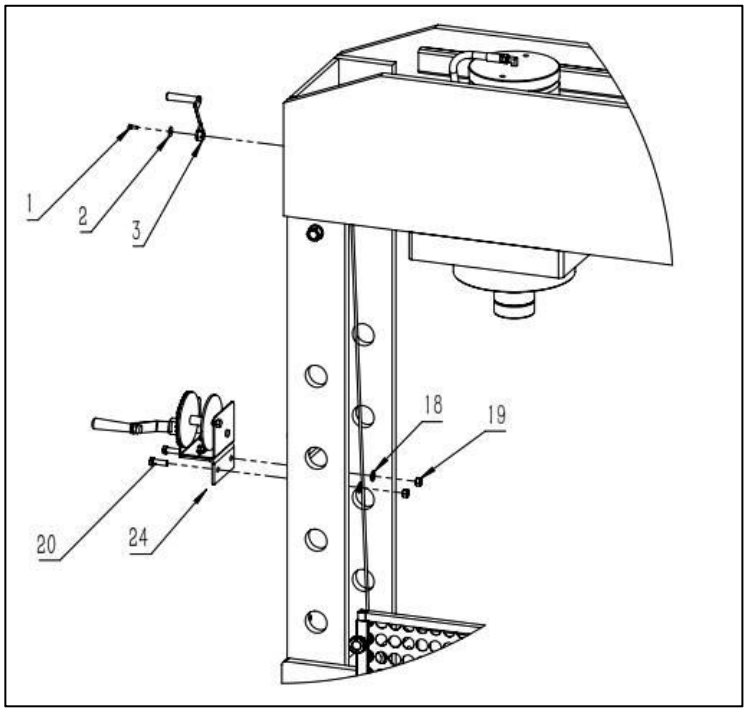


Note: DO NOT make the hydraulic hose joints are installed incorrectly !Check that power unit is secure before using the power unit.

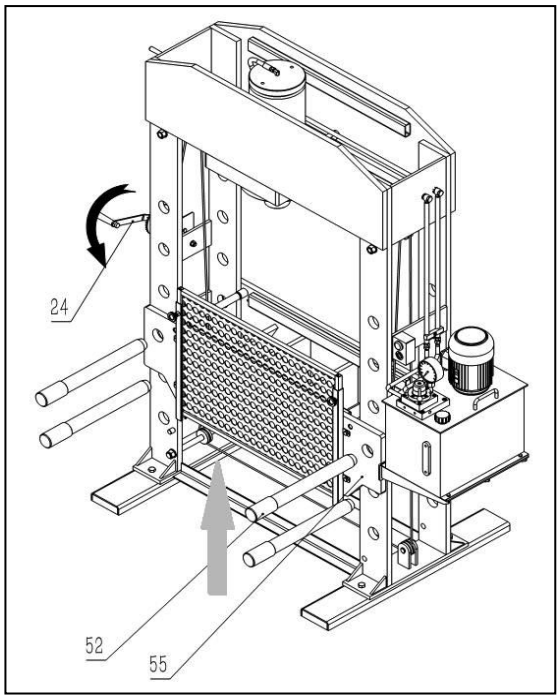
CAUTION:Do not use teflon tape on NPTF Ports! This unit is equipped with both SAE O-ring and NPTF type ports.

CAUTION:Do not overtighten fittings.

5.Attach the handle winch (24) to the frame with bolt(20)and washer (18) and nut(19)，Attach the handle (3) to the driving screw with bolt(1)and washer (2)



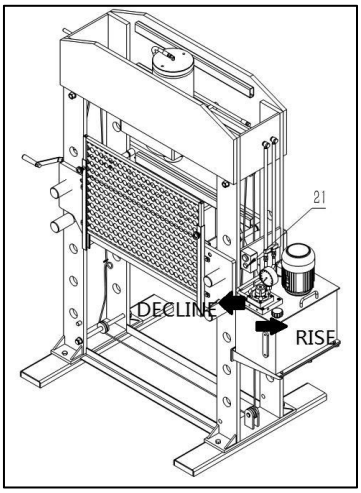
6. Raise the joined press bed frame (55) to the desired height and insert the bed frame pins (52) into the holes on the frames



CAUTION: Press bed frame is heavy and could cause a potential hazard. Raise press bed frame with 2 or more people.

7.Verify that all bolts and screws have been tightened and The power line is grounded safely and firmly

8.When operating the equipment, be familiar with the operating gear of the reversing valve handle, so as to avoid misoperation and unnecessary accident risks.

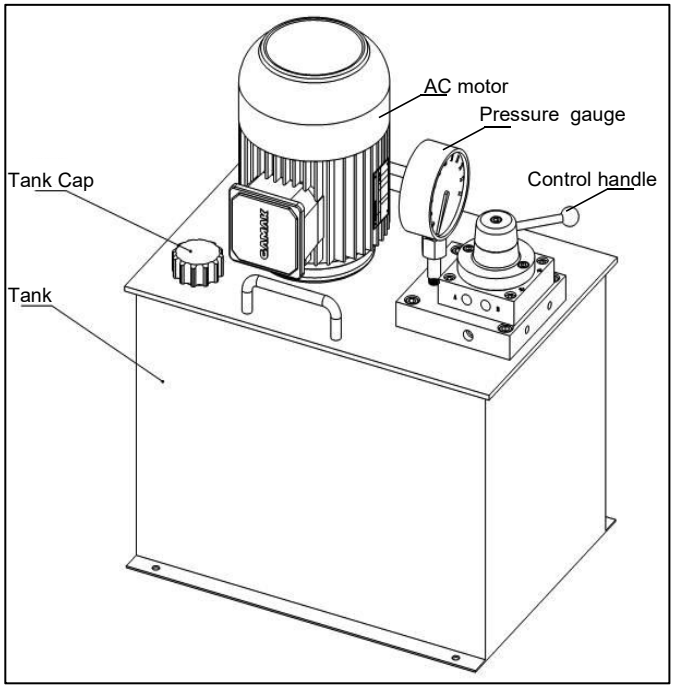


9.The press is now ready for use.

NOTE:Select the matching socket to ensure the power line connection is safe and firm.

When operating the equipment,in case of sudden failure ,turn off the power supply quickly in case of failure .so as to prevent the accident from happening again! Operate again after troubleshooting.

Power Unit



Specifications:

High pressure	8500psi
Low pressure	1450psi
High flow	0.45GPM
Low flow	2.10GPM
Hydraulic Oil	32# anti wear hydraulic oil
Tank capacity	8Gallon
AC motor	115V/60Hz, 2HP 1750RPM

- Totally enclosed fan cooled motors
- Motors have continuous horsepower ratings
- Adjustable relief valve preset at factory
- Reservoirs plumbed for vertical mount
- 8 gallon rectangular reservoir

General Safety Information:

1.Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occu- pational Safety and Health Act (OSHA).

2.For Single Phase Motors use 3-wire cords with 3-prong grounding type plugs.

3.Make certain that wire size is adequate for horsepower requirements.

NOTE: Voltage drop increases with the length of power cord. Larger wire diameter may be required.

4.Nameplate voltage must be available at the motor when it is operating under load. Avoid voltage drop by using adequate wiring.

5.Replace or repair damaged or worn power cord imme- diately.

6.The use of 3-prong single phase adapters in Canada is prohibited by the Canadian Electrical Code.

7.DOUBLE CHECK ROTATION! Motor rotation is clock- wise facing fan end of motor.

8.On start-up, jog the motor to prime the pump to insure adequate lubrication. After inlet line is full, motor may be operated at full speed.

⚠ CAUTION:Never run the pump dry.

9.Keep all lines as short as practical.

10.Never exceed the maximum operating pressure.

11.Do not overtighten fittings, bolts, etc., as this can dam- age the units.

12.Provide adequate cooling for the hydraulic oil so as not to allow oil and/or component damage due to excessive temperatures. Excessively high operating temperatures can be hazardous and may cause property damage and/or personal injury.

Maintenance

1. Keep the reservoir filled with hydraulic fluid. Use a good quality automatic transmission fluid (ATF). To fill the reservoir with clean oil, use a clean funnel fitted with a fine mesh wire screen. Do not use a cloth strainer. Most pump/fluid motor failures, valve malfunctions, and short unit life can be traced directly or indirectly to dirt or other foreign materials (water, chips, lint, etc.) entering or already in the hydraulic system.
2. Make frequent inspection of hydraulic fluid and change if contaminated.
3. Regularly inspect hydraulic hoses and fittings for wear or leakage.
4. Keep the unit clear of dirt and foreign materials.
5. Keep electrical connections clean.

BEFORE USE

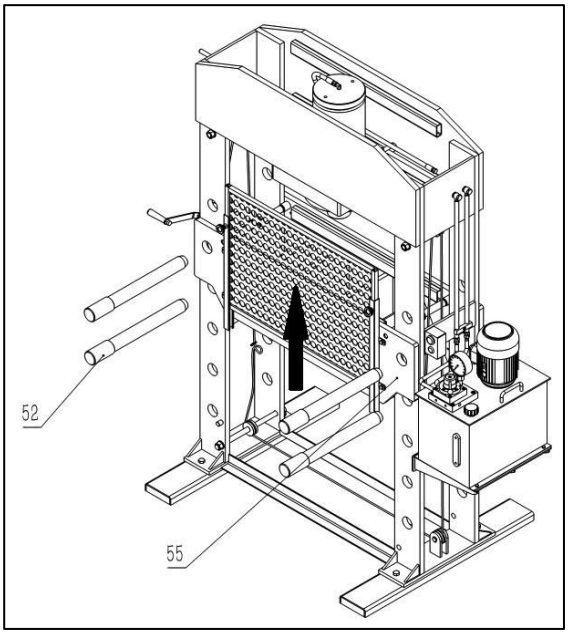
1.Before using this product, read the owner's manual completely and familiarize yourself thoroughly with the product and the hazards associated with its improper use.

2. Inspect before each use. Do not use if bent, broken or cracked components are noted.

OPERATION

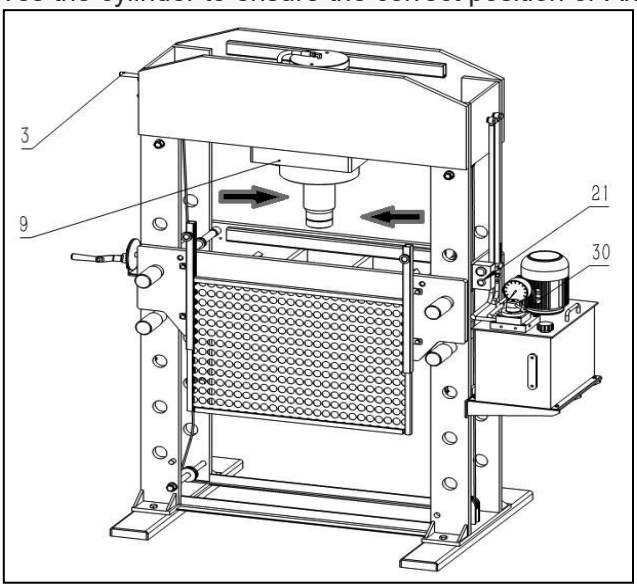
All numbers in parenthesis()refer to the index number from the parts breakdown.

1. Insert the bed frame pins(52)to desired height, then lover the bed frame(55).Ensure bed frame is fully rested on the bed frame pins.



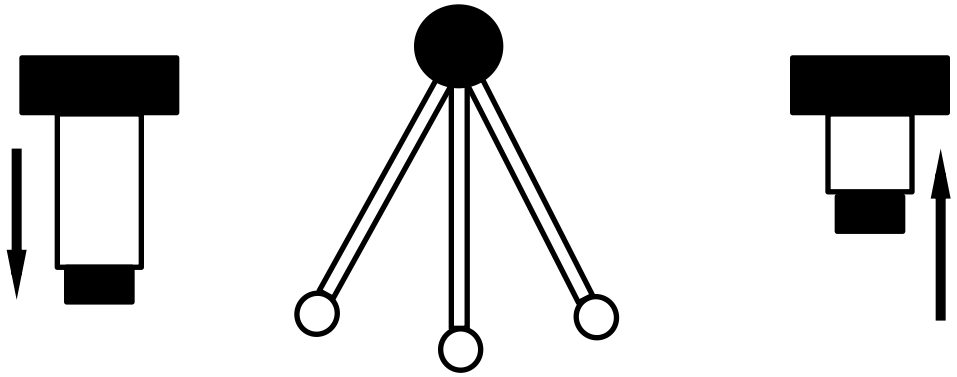
2. Place work piece on the bed frame , use every precaution necessary to ensure safety and to prevent accidents. Position work piece in a manner which not allow it to inadvertently fall from the bed frame or pressing block

3. The operating handle (3) moves the cylinder to ensure the correct position or Angle of the workpiece.



4. Align ram and work piece to ensure center-loading. Do not overload work piece.

5. Turn on the power, start the rotary switch (21), and operate the valve stem (30) to ***left*** as required to meet the dressing, disassembly or assembly requirements.



Prior to operation:

1.Double check all hydraulic and electric connections.
2.Confirm that reservoir is filled with hydraulic fluid.
3.Put all equipment guards in place.
4.Clear all persons from work area.
5.Check for loose tools, equipment, or anything that might interfere with operation of equipment.

OPERATION:

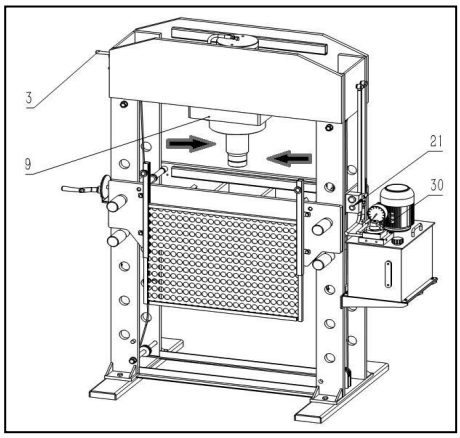
1. Start Up – When initially starting unit up, be sure to jog the unit (intermittently run unit) several times. This will prime the pump and fill the hydraulic lines.

⚠ **CAUTION:Check motor fan rotation at this time to avoid damaging pump or pump shaft seal.**

2. After hydraulic lines have been filled, check reservoir for sufficient oil level. Replenish oil level if necessary.

6. When work is completed, Turn the control stem to the right, to middle and then to ***right*** until ram is free from work piece.

When the workpiece needs to hold pressure, turn the handle to the middle position and turn off the power. Then turn the handle to Position A and B and start the motor.



7. Once ram has fully retracted, remove workplace from bed frame.

Cautiously remove work piece from press.

8. Turn off the power, turn the stem to the middle, and clean and wipe the equipment.

MAINTENANCEINSTRUCTIONS

If you use and maintain your equipment properly, it will give you many years of service. Follow the Maintenance instructions carefully to keep your equipment in good working condition. Never perform any Maintenance on the equipment while it is under a load.

Inspection

You should inspect the product for damage, wear, broken or missing parts(e.g.: pins) and that all Components function before each use. Follow lubrication and storage instructions for optimum product Performance.

Binding

If the product binds while under a load, use equipment with equal or a larger load capacity to lower the Load safely to the ground. After unbinding; clean, lubricate and test that equipment is working properly. Rusty components, dirt, or worn parts can be causes of binding Clean and lubricate the equipment as Indicated in the lubrication section. Test the equipment by lifting without a load. If the binding continues Contact Customer Service.

Cleaning

If the moving parts of the equipment are obstructed, use cleaning solvent or another good degreaser to Clean the equipment. Remove any existing rust, with a penetrating lubricant.

Lubrication

This equipment will not operate safely without proper lubrication. Using the equipment without proper Lubrication will result in poor performance and damage to the equipment. Some parts in this equipment Are not self-lubricating inspect the equipment before use and lubricate when necessary. After cleaning, Lubricate the equipment using a high grade light penetrating oil or lubricating spray.
-For light duty use lubrication once a month.
-For heavy and constant use lubrication recommended every week.
-NEVER USE SANDPAPER OR ABRASIVE MATERIAL ON THESE SURFACES!

Rust Prevention:

-Check rams and pump plungers on the power unit assemblies daily for any signs of rust or corrosion. Without a load on the equipment extended hydraulic rams to check if signs of rust are visible clean as Needed.

How the Ram Operates

With release valve closed, an upward stroke of the handle draws oil from the reservoir tank into the Plunger cavity. Hydraulic pressure holds the valve closed, which keeps the oil in the plunger cavity. A Downward stroke of the handle releases oil into the cylinder, which forces the ram out. This extends the ram. When the ram reaches maximum extension, oil is bypassed back into the reservoir to prevent an Over extended ram stroke and possible damage to the ram. Opening the release valve allows oil to flow Back into reservoir. This releases hydraulic pressure on the ram, which results in lowering the ram.

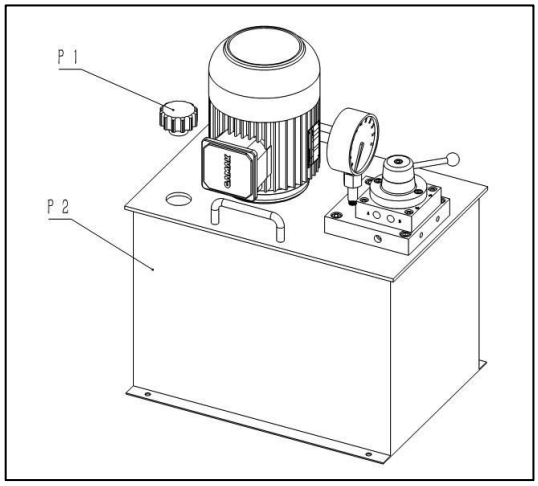
Storing the Ram

1.Fully Retract Ram after use.
2.Place the handle in the middle.
3.Store in a dry location, recommended indoors.
Note: If the press is stored outdoors, be sure to lubricate all parts before and after use to ensure the Press stays in good working condition.

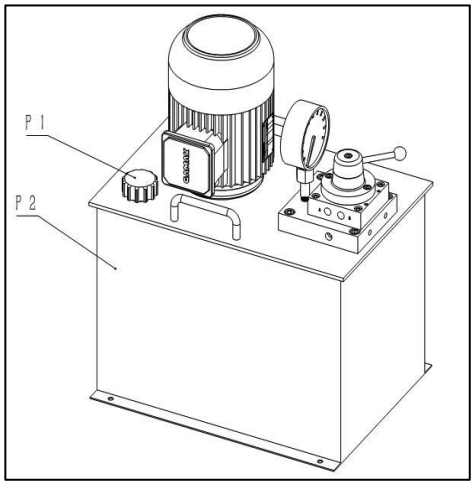
TO ADD OIL:

The hydraulic cylinder assembly contains hydraulic fluid that must be kept at approximately 80% full at all times for proper operation. To check the oil level and to fill remove oil filler plug

1. Fully retract the hydraulic ram.
2. Unscrew the oil plug.(P1)



4.Screw the oil plug.



3.Fill the oil case.

KEEP DIRT AND OTHER MATERIAL CLEAR WHEN POURING.

ADDITIONAL WARNINGS:

1.DO NOT USE MOTOR OIL IN THE JACK.

2.ONLY USE ANTI-FOAMING JACK OIL.

3.ALWAYS USE A GOOD GRADE HYDRAULIC JACK OIL.

4.DO NOT USE HYDRAULIC BRAKE FLUID, AALCOHOL,GLYCERINE,DETERGENT,MOTOR OIL OR DIRTY OIL.

5. USE OF A NON-RECOMMENDED FLUID CANCAUSE DAMAGE TO A JACK.

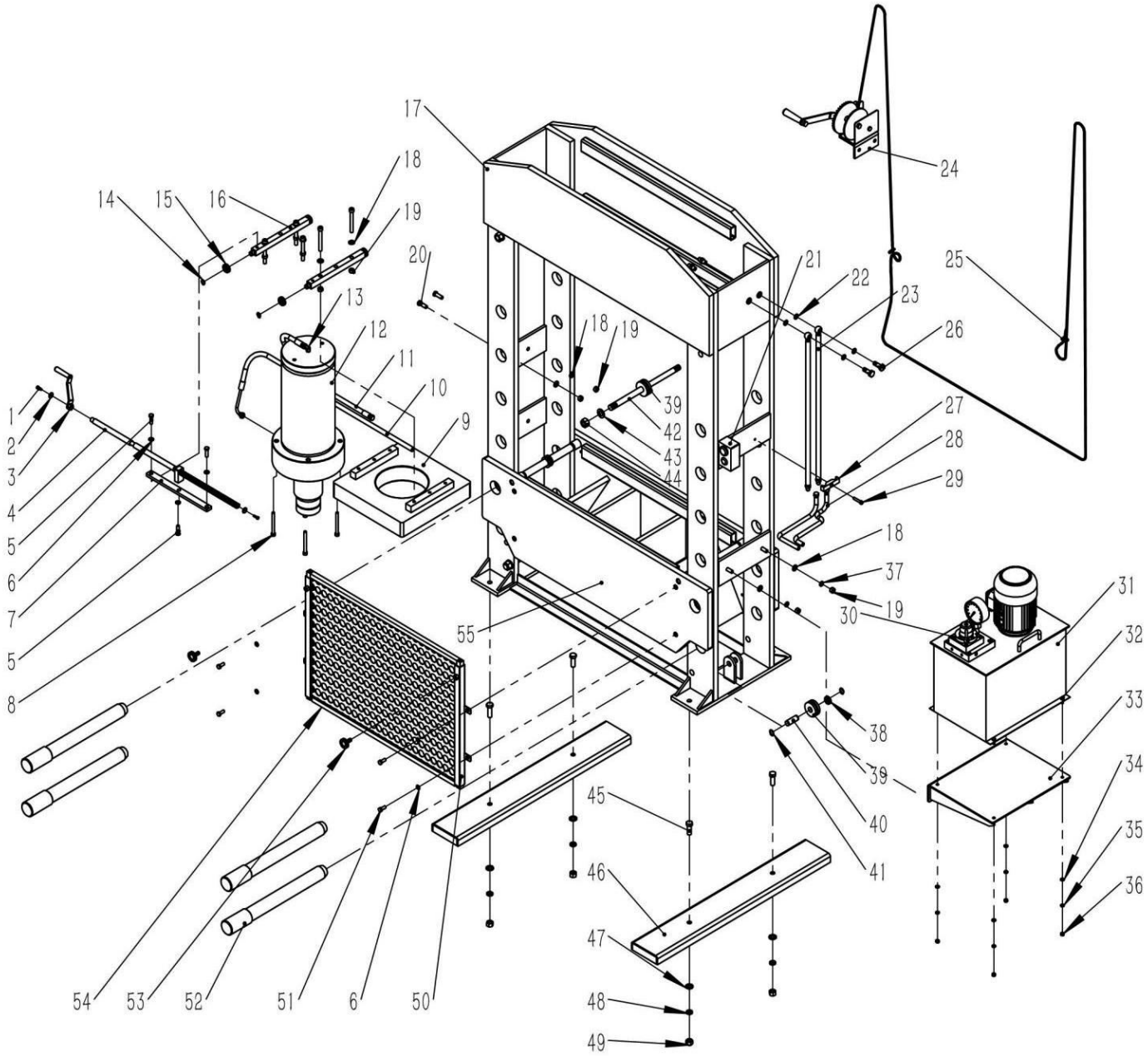
6. AVOID MIXING DIFFERENT TYPES OF FLUID AND NEVER USE BRAKE FLUID,TURBINE OIL, TRANSMISSION FLUID,MOTOR OIL OR GLYCERIN.IMPROPER FLUID CAN CAUSE PREMATURE FAILURE OF THE JACK AND THE POTENTIAL FOR SUDDEN AND IMMEDIATE LOSS OF LOAD.

7. DISPOSE OF HYDRAULIC FLULD IN ACCORDANCE WITH LOCAL REGULATIONS.

TROUBLESHOOTING

RAM WILL NOT PRESS LOAD	RAM BLEEDS OFF AFTER PRESS OPERATION	RAM WILL NOT RETRACT AFTER UNLOADING	POOR LIFT PERFORMANCE	RAM WILL NOT EXTEND TO FULL EXTENSION	CAUSES AND SOLUTIONS
X	X		X		Release valve not tightly closed Ensure release valve tightly closed
X					Overload condition Remedy overload condition
X	X		X		Power unit malfunctioning Replace the power unit
		X	X		Reservoir overfilled Remove pump. then drain fluid to proper level
		X			Linkage binding Clean and lubricate moving parts
X				X	Fluid level low Ensure proper fluid level
X			X	X	Air trapped in system Purge air from system

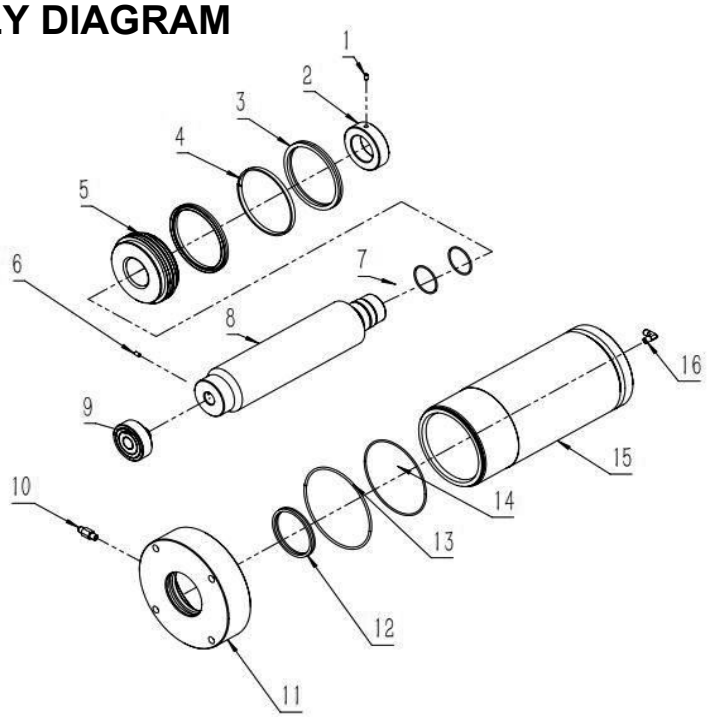
ASSEMBLY DIAGRAM



PARTS LIST

Index#	Part No.	Qty.	Index#	Part No.	Qty.
1	Screw	2	29	Screw M8X30	1
2	Big washer	2	30	Valve handle	1
3	Handle	1	31	Power Unit	1
4	Driving screw	1	32	Bolt M8x25	4
5	Bolt-M 10x35	5	33	Install the plate	1
6	Washer-10	9	34	Washer-8	4
7	Connecting plate	2	35	Lock Washer-8	4
8	Bolt-M12x100	10	36	Nut-M 8	4
9	Ram fixup assembly	1	37	Lock Washer-12	2
10	Outlet tube	1	38	Bearing 61804	8
11	Return tube	1	39	Roller	4
12	Ram assembly	1	40	Pin 20	1
13	Right-Angle Connect	1	41	Shaft ring 20	2
14	Shaft ring 17	4	42	Connecting shaft	3
15	Bearing 16003	4	43	Washer-20	6
16	Sliding axle	2	44	Nut-M 20	6
17	Frame	1	45	Bolt-M 16x50	4
18	Washer-12	8	46	Base	2
19	Nut-M 12	10	47	Washer-16	4
20	Bolt-M12x40	4	48	Lock Washer-16	4
21	Mains switch	1	49	Nut-M 16	4
22	Compound gasket	4	50	Grille	2
23	Pipeline	2	51	Bolt-M 10x20	4
24	Hand winch	1	52	Bed Frame pin	4
25	Wire clasp	2	53	Adjusting screw	2
26	Oil screw	2	54	Protective screening	1
27	The fixed button	1	55	Bed Frame	1
28	Hydraulic hose	2			

RAM ASSEMBLY DIAGRAM



PARTS LIST

Index#	Part No.	Description	Qty.
1	Screw M8X10		1
2	Piston Nuts		1
3	Y-Ring-180x160x12		2
4	Wear ring		1
5	Piston Head		1
6	Screw M8X10		1
7	O-Ring-68x3.5		2
8	Piston Rod		1
9	Pressure head		1
10	Straight joint		1
11	Cylinder nut		1
12	Y-Ring-130x117x10		1
13	O-Ring-210x5.3		1
14	O-Ring-195x4		1
15	Cylinder Assembly		1
16	Right-Angle Connect		1

ELECTRIC CIRCUIT DIAGRAM

Motor：115V/60Hz 1Phase
2HP 1750RPM