



FORCE 150 Ton Press

INSTRUCTION MANUAL

220V/440V



⚠ WARNING! Read and understand all instructions and responsibilities before operating. Failure to follow safety instructions and labels could result in serious injury.

Dake Corporation
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DAKE Standard Limited Warranty

Finished Machines

- Dake warrants to the original purchaser the finished machine manufactured or distributed by it to be free from defects in material and workmanship under normal use and service within **1 year (12 months) from the delivery** date to the end user.

Parts

- Dake warrants to the original purchaser the component part manufactured or distributed by it to be free from defects in material and workmanship under normal use and service within **30 days** from the delivery date to the end user.
- The standard limited warranty includes the replacement of the defective component part at no cost to the end user.

Sale of Service (Repairs)

- Dake warrants to the original purchaser the component part repaired by Dake Corporation at the manufacturing facility to be free from defects in material and workmanship under normal use and service within 90 days from the return date to the end user, as it pertains to the repair work completed.
- The standard limited warranty includes repair of the defective component part, at no cost to the end user.

Warranty Process

- Subject to the conditions hereinafter set forth, the manufacturer will repair or replace any portion of the product that proves defective in materials or workmanship. The manufacturer retains the sole right and option, after inspection, to determine whether to repair or replace defective equipment, parts or components. The manufacturer will assume ownership of any defective parts replaced under this warranty.
- All requested warranty claims must be communicated to the distributor or representative responsible for the sale. Once communication has been initiated, Dake Customer Service must be contacted for approval:
 - **Phone:** (800) 937-3253
 - **Email:** customerservice@dakecorp.com
 -

When contacting Dake, please have the following information readily available:

- Model #
- Serial #
- Sales Order #



Purchasers who notify Dake within the warranty period will be issued a Case number and/or a Return Material Authorization (RMA) number. If the item is to be returned per Dake's request, the RMA number must be **clearly** written on the exterior packaging. Any item shipped to Dake without an RMA will not be processed.

Warranty Exceptions

The following conditions are not applicable to the standard limited warranty:

- (a) Part installation or machine service was not completed by a certified professional, and is not in accordance with applicable local codes, ordinances, and good trade practices.
- (b) Defects or malfunctions resulting from improper installation or failure to operate or maintain the unit in accordance with the printed instructions provided.
- (c) Defects or malfunctions resulting from abuse, accident, neglect, or damage outside of prepaid freight terms.
- (d) Normal maintenance service or preventative maintenance, and the parts used in connection with such service.
- (e) Units and parts which have been altered or repaired, other than by the manufacturer or as specifically authorized by the manufacturer.
- (f) Alterations made to the machine that were not previously approved by the manufacturer, or that are used for purposes other than the original design of the machine.



Return & Refund Policy

- Thank you for purchasing from Dake! If you are not entirely satisfied with your purchase, we are here to help.

Returns

- All Dake manufactured / distributed machines, parts and couplings include a 30-day return option. These policies are valid from the date of final shipment to the end user. To be eligible for a return, the item must be unused and in the same condition as received. All requested warranty claims must be communicated to the distributor or representative responsible for the sale. Once communication has been initiated, Dake Customer Service must be contacted for approval:
 - **Phone:** (800) 937-3253
 - **Email:** customerservice@dakecorp.com
- Once the return request has been approved by Customer Service, a representative will supply a Return Material Authorization (RMA) number.
- The returned item must have the provided RMA number clearly marked on the outside packaging. Any item received without an RMA number clearly visible on the packaging will not be processed.
- An RMA number can only be provided by the Dake Customer Service team and must be obtained prior to the return shipment.

Refunds

- Once the item has been received and inspected for damages, a representative will notify the requestor referencing the provided RMA number. If the return is approved, a refund will be issued to the original method of payment, less a 20% restocking fee.
- The restocking fee may be waived if an order is placed at the time of return with like-value merchandise. Transportation costs are the responsibility of the end user and will not be credited upon return approval.
- Any item that is returned after the initial 30 days or has excessive/obvious use will not be considered for a full refund.



SAFEGUARDING THE POINT OF OPERATION

ANSI B11.2 – Hydraulic Power Presses

Safety Requirements for Construction, Care and Use

It is important that Dake press users have a clear understanding of their responsibility involving the care and use of their Dake hydraulic press, including point-of-operation safeguards. Dake strongly recommends that Dake press users obtain a copy of the current American National Standard Institute (ANSI) B11.2 standard, for a more complete understanding of their responsibilities.

ANSI B11.2 states the following, relative to point of operation safeguarding:

“Normally, only the employer (press user) can determine the requirements of the press productions system components, including the dies and methods for feeding. Therefore, the employer is ultimately responsible to designate and provide the point-of-operation safeguarding system”.

The standard also discusses additional responsibilities of the employer. Some of the key responsibilities are:

The employer is responsible for the safety, use and care of the hydraulic power press production system.

The employer is responsible to consider the sources of hazards for all tasks to be implemented on the hydraulic power press production system.

The employer is required to eliminate, or control identified hazards in the scope of their work activity.

The employer is responsible for the training of personnel, caring for, inspecting, maintaining, and operating hydraulic press production systems to ensure their competence.

The employer is responsible to provide and ensure that point-of-operation safeguarding is used, checked, maintained and where applicable, adjusted on ever production operation performed on a press production system.

A complete and current copy of the ANSI B11.2 standard can be obtained by contacting the following:

American National Standards Institute
1430 Broadway

New York, NY 10018

AMT – The Association for Manufacturing Technology
7901 Westpark Drive
Mclean, VA 22102



Specifications

Product Features:

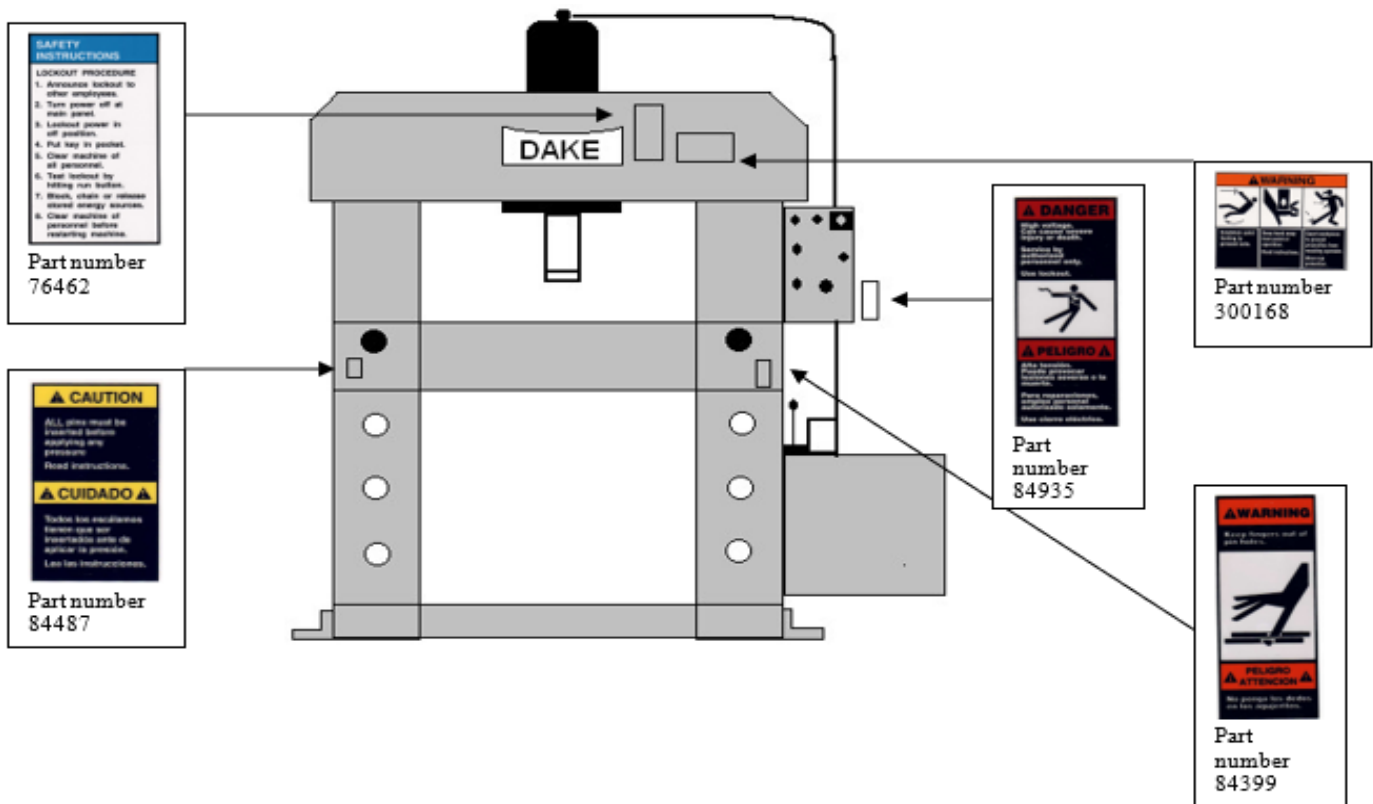
- Double acting cylinder, utilizes the pulling force to raise and lower the table via chains, eliminating the need for hoist assemblies.
- Fast, quiet, dependable, economical price, smooth operating press that is very simple to operate.
- Heavy adjustable table can be set to a comfortable work height. Massive table pins keep table securely in place during the pressing operations.
- Pressure preset and locked out at factory for maximum pressing, Pressure can be increased or decreased to suit user's needs but can never be set to exceed max tonnage.
- The motor is a powerful 4 HP submerged type that runs 3 centrifugal pumps for steady quiet oil flow.
- CE approved controls located in convenient locations are all low voltage, with overload protection and low-tension coils. Joystick operation for easy machine operation.
- Rapid advance of the ram to the work piece, when contact is made the machine shifts into the pressing mode.
- Remove standard nosepiece and install your own custom fixturing.
- Five-piece Dowdy Polypak piston seals

Machine Specifications:

150 Force 3 Phase Press	
<u>Item</u>	<u>Specification</u>
Machine Type	H – Frame Hydraulic Powered
Capacity	150 – Tons
Maximum Operating Pressure	360 Bar
Minimum Operating Pressure	15 Bar
Ram Diameter	140mm (5.512 Inches)
Bore Diameter	230mm (9.055 Inches)
Ram Travel	19 Inches
Ram Rapid Advance Speed	49 ipm
Ram Pressing Speed	7 ipm
Horsepower (HP)	4 HP
Hydraulic Pump	3 Centrifugal Pumps
Controls	Panel Mounted 24-Volt CE Approved with Joystick Operation
Filter Type	Cartridge / External Access
Weight	5,711 lbs
Overall Height	106 Inches
Base	98 x 47 Inches

Width Between Uprights	59 Inches
Width Between Table Channels	14 Inches
Maximum Ram to Table	35 Inches
Minimum Ram to Table	14 Inches
Voltage	<ul style="list-style-type: none"> - Available 220 – Volt 3 Phase - Available 440 – Volt 3 phase <p>Machines must be wired to main service by a qualified electrician.</p>
AMP	<ul style="list-style-type: none"> - 9.7 – amp Service for 220 – Volt Machine - 6.6 – amp Service for 440 – Volt Machine

Safety Labels



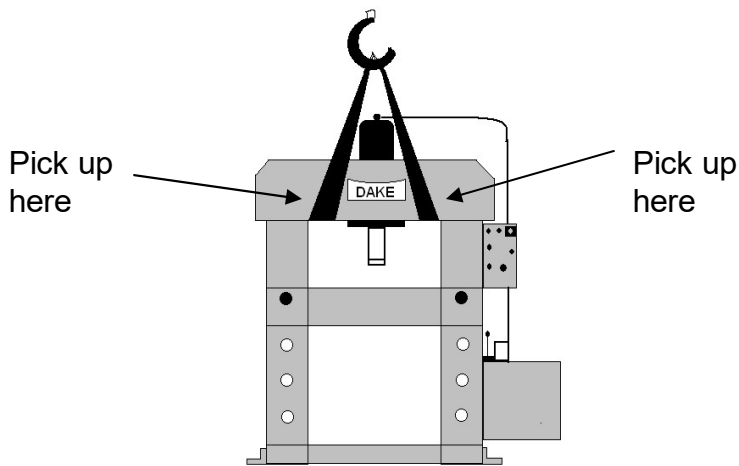
⚠ WARNING! Read and understand all instructions and responsibilities before operating. Failure to follow safety instructions and labels could result in serious injury.

Machine Procedures

Loading and Unloading Machine:

WARNING!

- **Be sure the maximum capacity of each strap is greater than the total weight of the press.**
- Do not make sudden movements when transporting the machine.
- The manufacturer is not responsible for damage to the machine while loading or unloading the press.



Filling Oil Pump Reservoir:

- Required Oil is DTE 24 Hydraulic Oil.
- To fill the pumping unit, use exclusively the oils indicated in the table on the next page or equivalent. The environmental conditions must be considered before purchasing oil. To transfer the oil from the container to the tank use an external filter as shown in Figure 2 preventing the introduction of foreign material or liquids at the time of filling.
- OIL CAPACITY IS 22.5 US GALLONS.

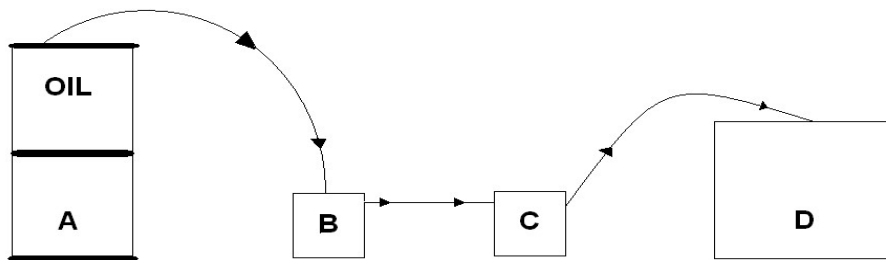


Figure 2

Pump Rotation:

- After making the electrical connections to the press it is necessary to make a visual check on the direction of rotation of the electric motor.
- Before checking the direction of rotation of the pump, fill the reservoir with oil see Fig. 6
 1. Unscrew the inspection cap.
 2. Identify a reference point on the drive shaft.
 3. Power up the motor for Max. 1-2 seconds.
 4. Check that the rotation of the shaft coincides with that of the arrow shown on the top of the unit shown in figure 7.
 5. Screw down inspection cap.

NOTE: If the motor rotates in the wrong direction: See your electrician. Any damage caused by wrong electrical connection is not covered by warrant

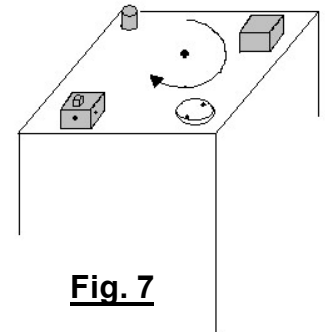


Fig. 7

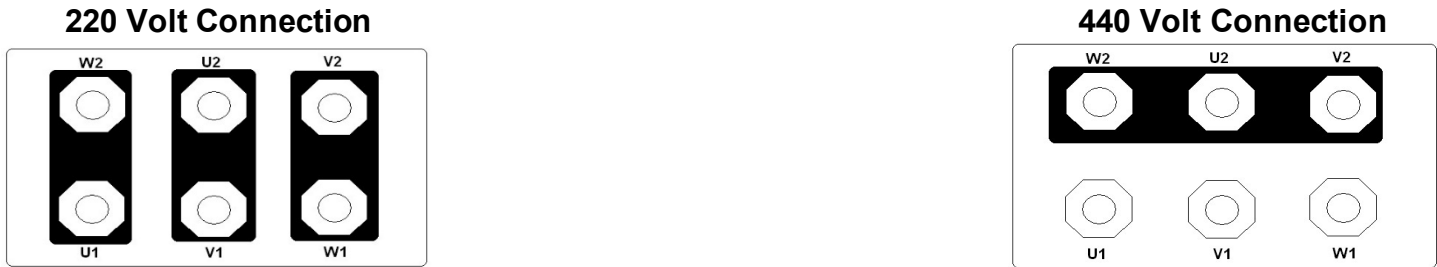
Electrical Connections (220V/440V):

- This machine is dual voltage 220 3 phase / 440 3 phase. The amp rating on these machines are 9.7 amps on 220 Volt 3 phase and 5.6 amp on 440 Volt 3 phase.
- For proper operation it is necessary to ensure constant voltage and it must not exceed or be lower than 5% of the rated value
- Before making any electrical connection confirm voltage rating of the machine. There is a black plastic box mounted on top of the reservoir
- Remove the two mounting screws that hold this box in place. Under this box you will see one of the following possibilities in Fig. 5. After confirming or changing this to the correct voltage mount the cover with the two screws. Now, open the electrical panel on the transformer be sure it is set for the correct output voltage.

NOTE:

- **Only a certified electrician that follows local and state laws is authorized to perform any type of electrical connection on this machine. The electrical power supply voltage must be made in compliance with local and state laws.**
- **Be sure there is no power to the machine before checking the following connections. It may be necessary to lock out the machine for proper power disconnection.**

Figure 5

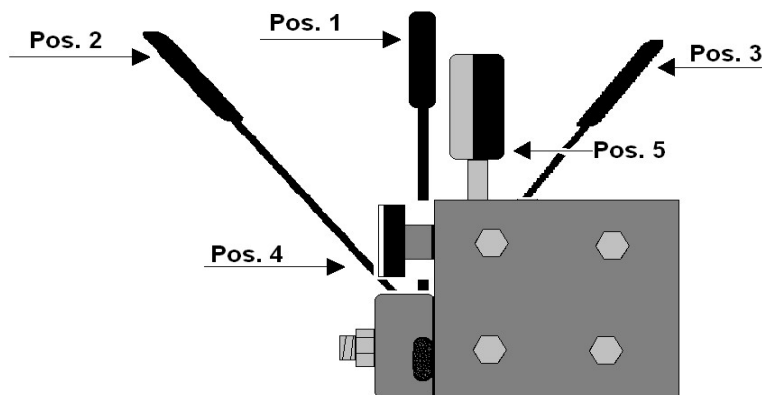


First Start Up:

- After filling the reservoir through the fill cap, it is necessary to prime the pump. Check that all the valves and distributors are in the rest position, at the time of starting do not operate any movement.
- To prime, jog the start button (electric motor). When the unit emits a dull sound with no jumps and the sound of the pump is constant. An uneven “tinny” noise indicates there is air in the pump.
- The oil in the reservoir may fall on start up. Therefore, it is necessary to top off the level of oil bringing it up to the correct height, by checking the level gauge. The level should be about halfway up the stick.

Joystick Operation:

- **Pulling** - the lever toward the operator (Pos. 2) the piston rod lowers.
- **Pushing** - the lever from the opposite side to the operator (Pos. 3) the piston rod will go up.
- **Releasing** - the lever will return to the neutral position stopping the ram from moving (Pos. 1).

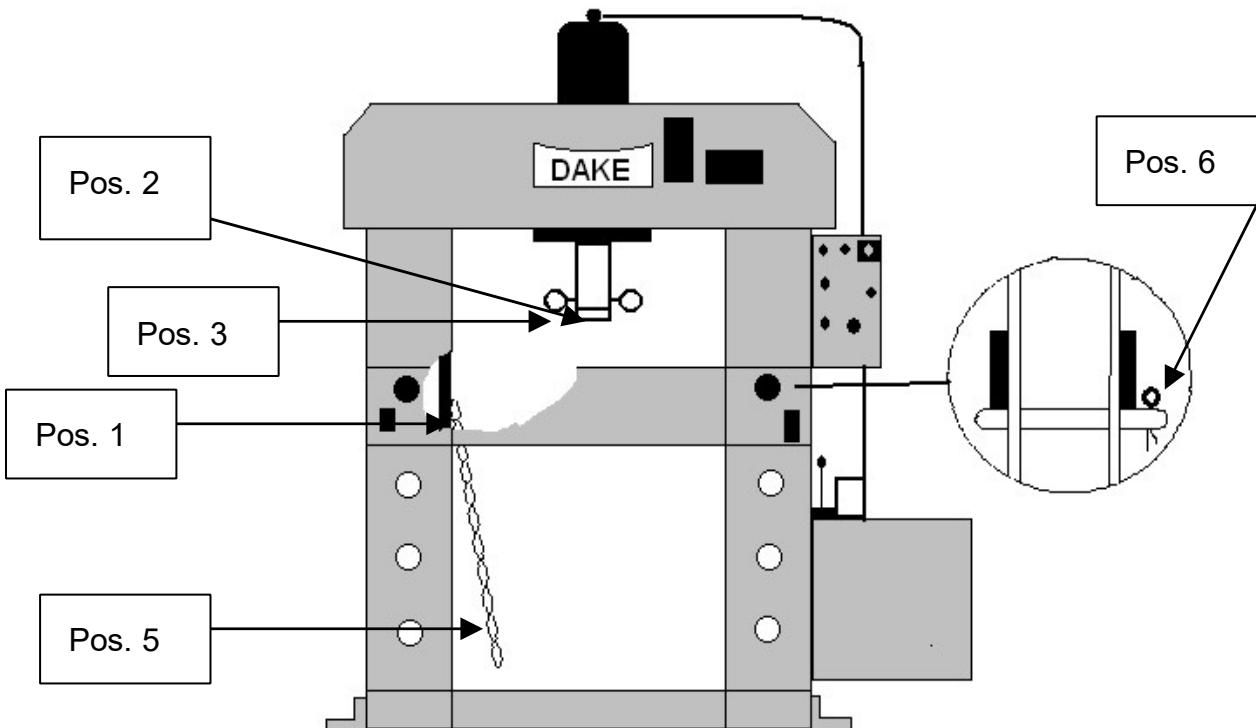


Worktable Height Adjustment:

- To optimize the use of the press it is necessary to set the worktable at a convenient height in relation to the operation to be carried out and to the equipment to be used.
- Before proceeding to lift the mobile table, check that:
 1. The eyebolts fixed to the worktable are fully tightened (Pos. 01).
 2. The eyebolt support (nose piece) is properly screwed onto the cylinder ram (Pos. 2).
 3. The eyebolts fixed to the nose piece are fully tightened.

Procedure

1. Hook the chains (Pos. 5) to the respective eyebolts and lift the cylinder ram until the chains are set under tension but, do not lift the table.
2. Check the chain connections to all eyebolts to ensure a safe secure connection.
3. When the connection is safe, lift the table just above the desired table height.
4. Take the split pins (Pos. 6) off the pins then remove the pins.
5. Insert the pins to the desired work table height pin location then, insert the split pins.
6. Slowly move the table down until it rests on the table pins.
7. Check to be sure the position and the assembly of the pins are correct.
8. Unhook the chains and leave them hang in a downward position (Pos. 5).



Trouble Shooting Issues

Question: Foam forms in the fluid?

Solution: Fluid level too low. Fluid unsuitable. Fittings or joints let air inside the hydraulic system. Bring back up to correct level. Replace with suitable fluid. Replace or tighten fittings. Discharge the remaining air from the system

Question: Pump delivers little to no fluid?

Solution: The pump is worn or damaged. Replace and recondition pump to solve.

Question: Ram moves in the neutral position?

Solution: 4-way valve is not functioning correctly. Test the 4-way valve for proper function

Question: Machine will not build desired pressure.

Solution: Relief valve needs to be reset. Remove octane cap from back of manifold and adjust set screw to correct pressure

Question: Oil leaks around the ram?

Solution: Cylinder seals are worn or damaged. Replace the cylinder seals.

Question: Oil leaks around holes other than the ram?

Solution: Bolts need to be tightened. Tighten the bolts around the ram to fix this issue.

Question: The ram will not exceed the full true maximum length.

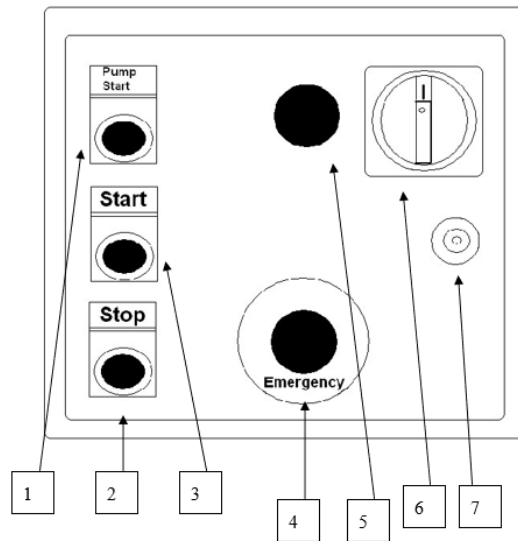
Solution: Check the oil in the reservoir. If the oil is low, refill the reservoir with the correct fluid (DTE 24 Hydraulic Oil).

Question: The hydraulic gauge will not read pressure?

Solution: There is a good possibility that the mechanical pressure gauge has failed. Replace the gauge.

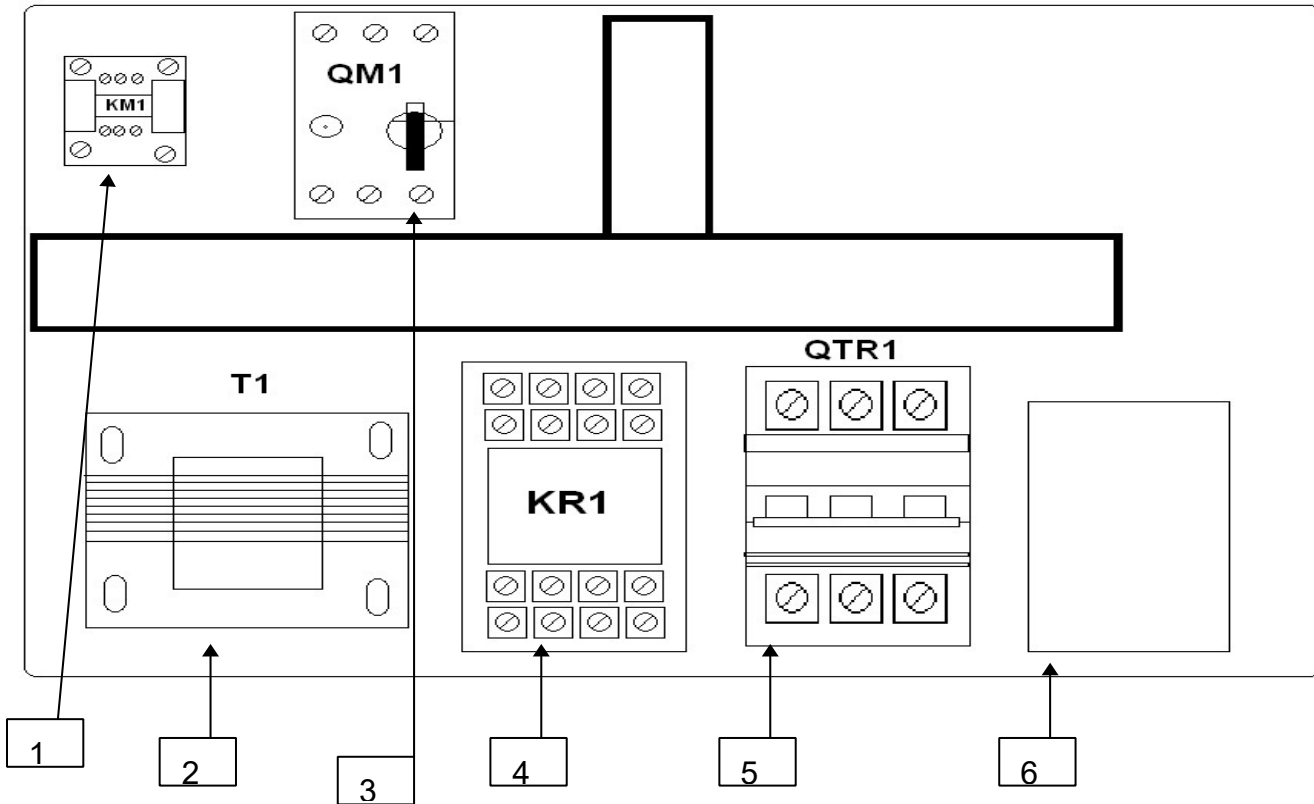
Parts List

Electrical Box:



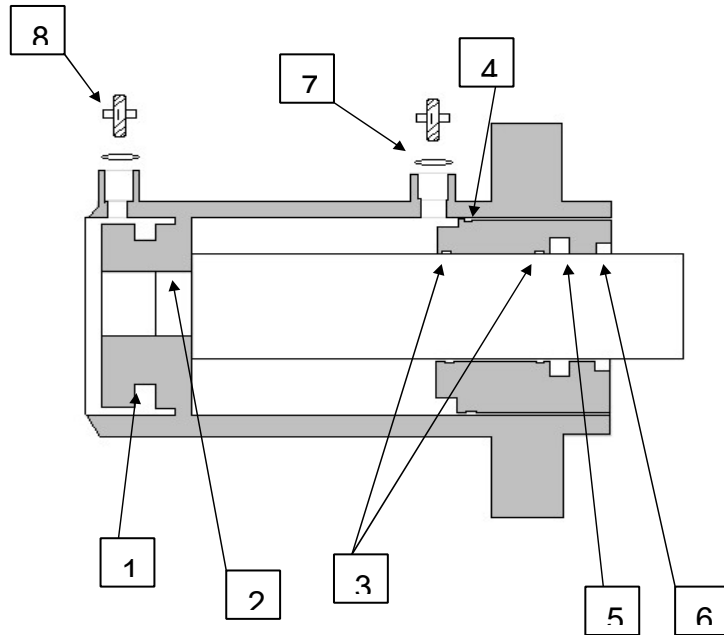
Item #	Part Name	Part number	QTY
1	Pump Start Button	716542	1
2	Stop Button	716539	1
3	Start Button	716556	1
4	Emergency Button	716538	1
5	Power Light	300298	1
6	Main Power Switch	302169	1
7	Elect. Box Lock	300628	
7A	Door Key	80511	1
N/A	Male Plug	301547	1
N/A	Electrical Box w/ All Components	300387	1
N/A	Electrical Box w/ No Components	300389	1
N/A	Power Switch Shaft	302729	

Electrical Box Components:



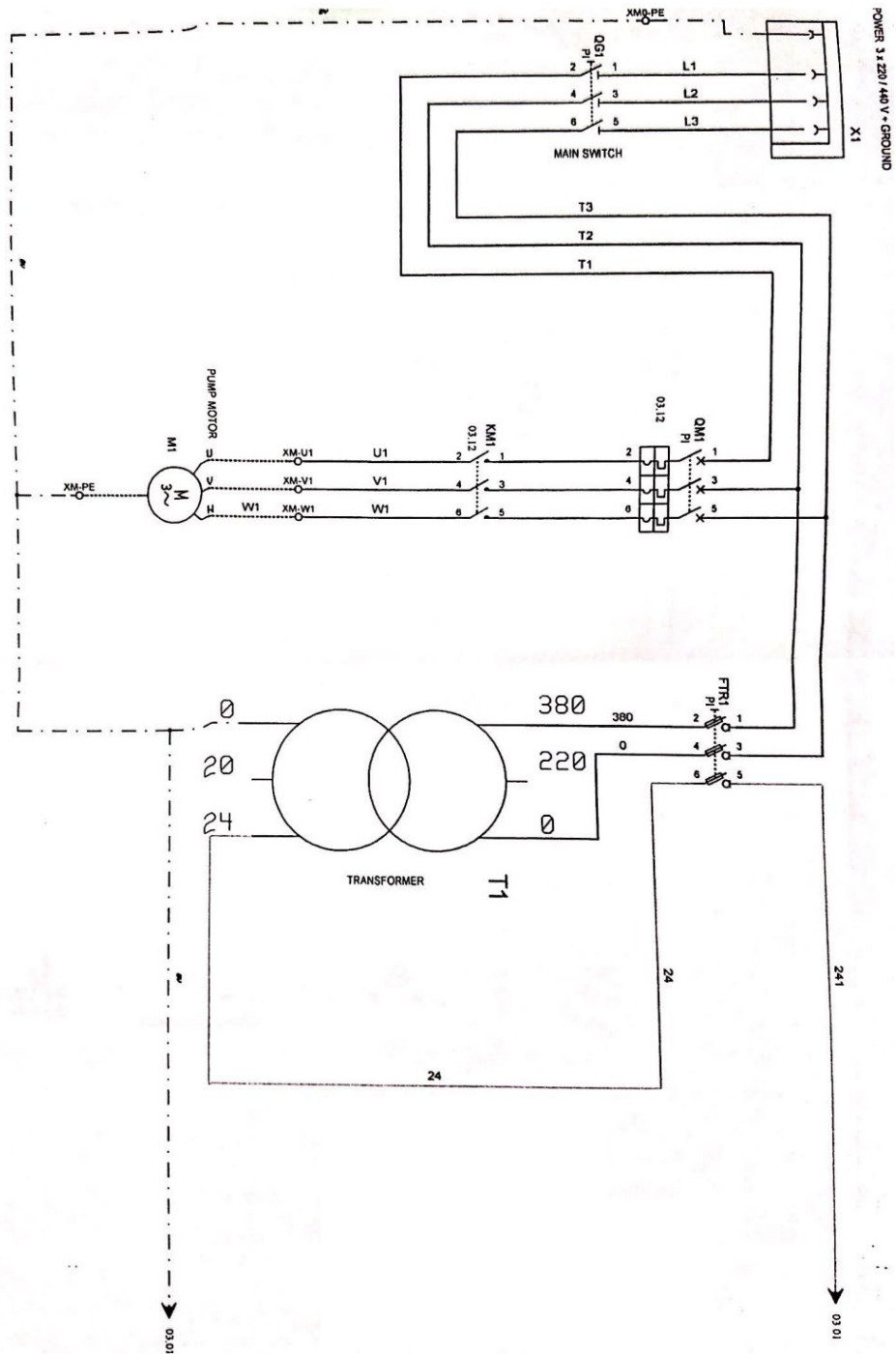
Item #	Part Name	150 Ton	QTY
1	Contactor		1
2	Transformer		1
3	Overload 220 volt		1
3	Overload 440 volt		1
3A	N.O. Contact Block		1
4	Relay		1
5	Fuse Block		1
5B	Fuse 2 Amp		3
6	Terminal Block Ground		2
6A	Terminal Block Black		3
	On-Off Switch Body		1

Cylinder Breakdown:



Item #	Part Name	Part# 150 Ton	QTY
1	Piston Gasket		1
2	Piston O-ring		1
3	Head Guide Rings		1
4	Head O-ring		1
5	Head Gasket		1
6	Head Scraper		1
N/A	Repair Kit		
7	Washer		2
8	Hose Fitting Top	302922	2
8A	Hose Fitting Bottom	302922	2
NOT SHOWN	Gauge	303360	1

Electrical Diagram





Dake Corporation
1809 Industrial Park Dr
Grand Haven, MI 49417
www.dakecorp.com

Order Information

- *Please contact factory for current prices*
- Parts are available for direct purchase from Dake or through a distributor. When placing a parts order, you will need to provide the part number, name of part, and model number. All parts shipped F.O.B. Factory in Grand Haven, MI.
- If a customer has any questions or concerns regarding a Dake product that was purchased, please email customer service at customerservice@dakecorp.com