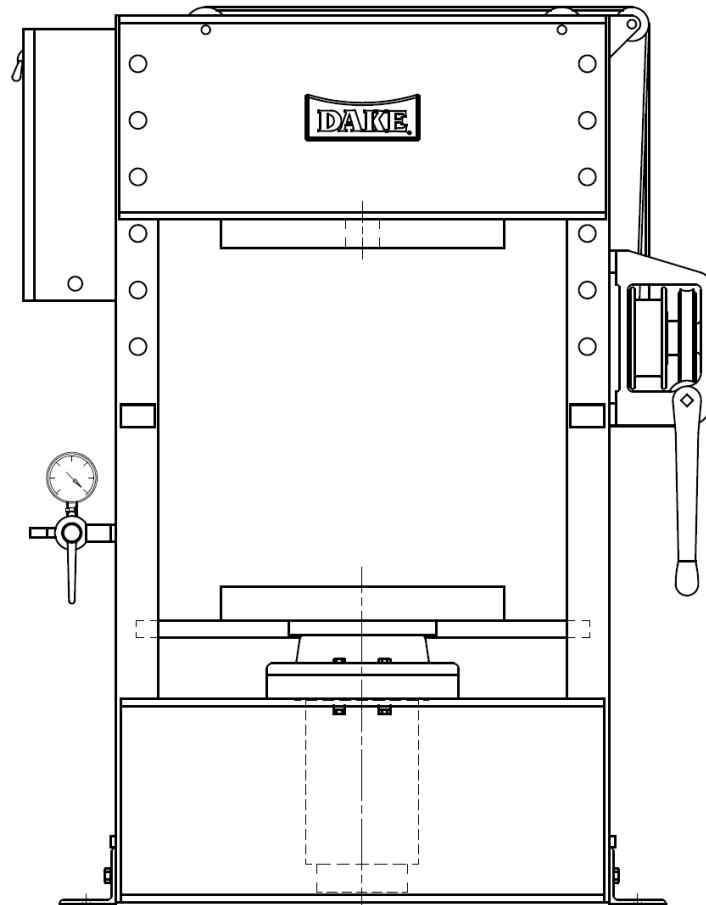




## 150 TON ELECTRIC TIRE PRESS

# Model 33-493

INSTRUCTIONAL MANUAL



### WARNING!

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

Dake Corporation  
1809 Industrial Park Dr  
Grand Haven, MI 49417

Phone: 800.937.3253

[www.dakecorp.com](http://www.dakecorp.com)

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## **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 safe guards. 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 every production operation performed on a press production system.

A complete and current copy of the ANSI B.11.2 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


<b>Model Number</b>	933493
<b>Capacity</b>	150 Ton
<b>Horsepower</b>	2 HP
<b>Voltage</b>	220V/440V 3-Phase
<b>Ram Travel</b>	12"
<b>Width between Uprights</b>	36"
<b>Max Daylight</b>	30"
<b>Platen Diameter</b>	25"
<b>Pressing Speed</b>	2-3/4 IPM
<b>Return Speed</b>	Gravity
<b>Base</b>	57" x 43"
<b>Height</b>	80"
<b>Weight</b>	3,000 lbs.

In the space provided record the serial number and model number of the machine. This information is only found on the black and gold Dake tag shown below. If contacting Dake this information must be provided to assist in identifying the specific machine.



<b>Serial No.</b>	
<b>Model No.</b>	
<b>Install Date:</b>	

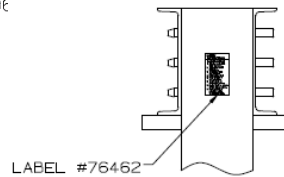
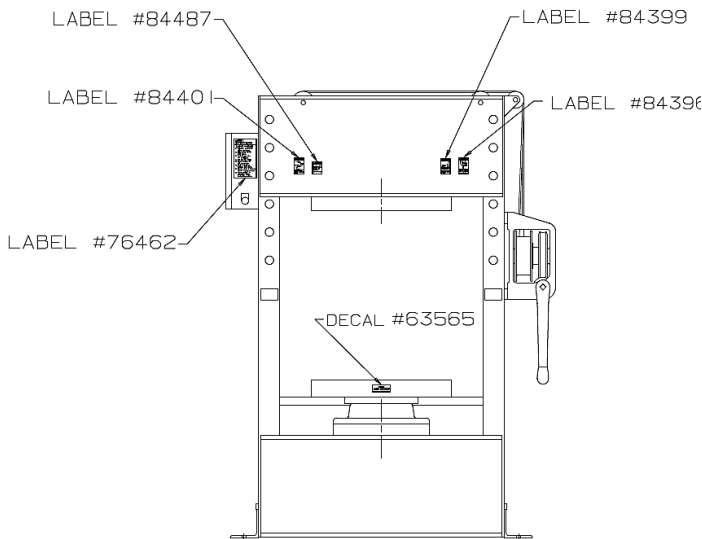
# SAFETY

 **This is the safety alert symbol.** When you see this symbol on your press be alert to the potential for personal injury.

Employer is responsible to perform a hazard/PPE assessment before work activity.

**Follow recommended precautions and safe operating practices.**

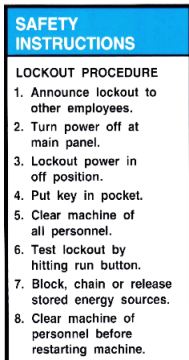
- **Carefully read all safety messages in these instructions and on your press safety signs.** Keep safety labels in good condition. Replace missing or damaged safety labels.
- Do not alter this press from its original design.
- Do not make repairs or adjustments to any hydraulic system unless you are competent or working under competent supervision.
- Only use Dake original parts.
- This machine is intended to be operated by one person. This person should be conscious of the press ram movement not only for themselves but also for persons in the immediate area of the machine.



Label Part No. 63565



Label Part No. 84396



Label Part No. 76462



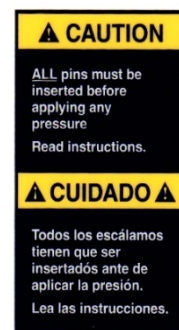
Label Part No. 84399



Label Part No. 84401



Label Part No. 84395



Label Part No. 84487

## SET UP

1. Anchor press to floor using 11/16" holes on the base angles of the press.
2. Fill press with oil. We recommend DTE Mobil 24 or equivalent hydraulic oil.
3. Oil Capacity: 7 Gallons


 **CAUTION: Strainer or filter should be used to make sure no contaminants get into reservoir.**

## OPERATION

### HOIST

Press is equipped with hoist and hoist handle to raise and lower the upper platen to desired working height.

To change the vertical position of the upper platen sufficient tension must be applied to the hoist cable to permit removal of the table pins, then the upper platen may be moved to desired working position and all the table pins must be reinserted.

 **Be sure all table pins are on place before applying any pressure. Also make sure there is slack in the hoist cable before pressing. It is advisable to lower the upper platen opposed to running the ram and lower platen to the limit of its stroke.**

### RAM MOVEMENT

- To raise ram/platen, turn the release valve handle clockwise to close.
- Press "Raise" button to raise ram, ram will stop when button is released.
- After the work is contacted the press will build pressure until maximum tonnage or stroke is reached or the button is released.
- To release pressure and lower ram, turn release valve counterclockwise to open. Platen will return to its starting position.

## MAINTENANCE

### LUBRICATION


- Keep all working parts of the press well-oiled for easier operation.
- Keep a light film of oil over the entire surface of the ram to prevent rust.

### REPLACING HYDRAULIC OIL

*Recommended to replace hydraulic oil every 6 months of machine use.*

*\*Amount needed may vary dependent on machine use\**

## TROUBLESHOOTING

 **When performing any maintenance make sure proper lockout procedure is followed. When disconnecting any parts of this machine be extremely careful that all parts are clean to prevent entrance of dirt in the hydraulic system.**

### A. Oil leaks around the piston.

1. Oil above the Piston Seal or Leather: If rated stroke of the press is exceeded repeatedly by running the piston past rated stroke, bypass hole in the side of the cylinder run bypass line that connects above the piston leather. Eventually enough oil may accumulate so that when the piston is raised to the top of its stroke, oil is forced out between the piston and piston guide.  
This can be remedied by disconnecting the bypass tube line from the cylinder, then raising the piston slowly, about 2-1/2" less than it's rated stroke (rated stroke: 18") allowing the oil above the piston cap to overflow out the bypass hole into a clean bucket. Replace tube line. Oil may be put back into reservoir by removing the fill plug on the top of the reservoir.
2. Check Valve not Seated: On the first presses made with rapid advance the bypass oil was returned through a check valve at the bottom of the reservoir. This has been changed since so that the oil is returned to the top of the reservoir, above the oil level. Previously, if the check valve failed to seat properly when the press was operated at rapid advance speed oil was forced back through the bypass line causing leakage around the piston. These oldstyle rapid advance presses can be improved by relocating the check valve in the inspection cover so that the oil from the bypass line discharges above oil level.

### B. Press does not hold pressure.

1. Loose tube Connection: Check all connections and tighten any loose tube nuts.
2. Dirt under Release Valve Ball: Remove release valve stem, packing nut, packing, and ball. Clean out valve seat. Reseat valve ball using a brass rod as a drift and hit with significant force 2-3 times to reset ball. Reassemble valve. If this occurs frequently the oil should be drained from the reservoir and the reservoir should be flushed out. Fill reservoir with clean oil.
3. Worn Leather Cup or Piston Seal: If neither of the previous conditions seem to be the cause of the press not holding pressure the trouble may be that the piston leather or T-ring & backers are worn out or damaged. To inspect remove lower platen and remove cap screws which bolt piston guide to the cylinder flange. Piston and guide may now be lifted out of the cylinder and inspected or replaced if necessary. Be careful not to damage the lip of the leather cup or T-ring as it enters the cylinder.

### C. Press does not develop rated tonnage.

1. Dirt under Release Valve Ball: See section above.
2. Worn Leather Cup or Piston Seal: See section above.
3. Relief Valve was tampered: The relief valve has been set at the factory to bypass oil back to the reservoir when the press reaches its rated capacity. If however the press does not develop its rated tonnage and the above two conditions have been checked, the relief valve may need readjusting. To do this first remove the 1/4" pipe plug in the connector block. Now the valve adjustment screw can be reached with a 7/32" hex wrench. To increase the setting, turn the adjustment screw clockwise. Be careful not to adjust the valve over its rated tonnage or maximum operating pressure of 6000PSI.

**D. No ram movement.**

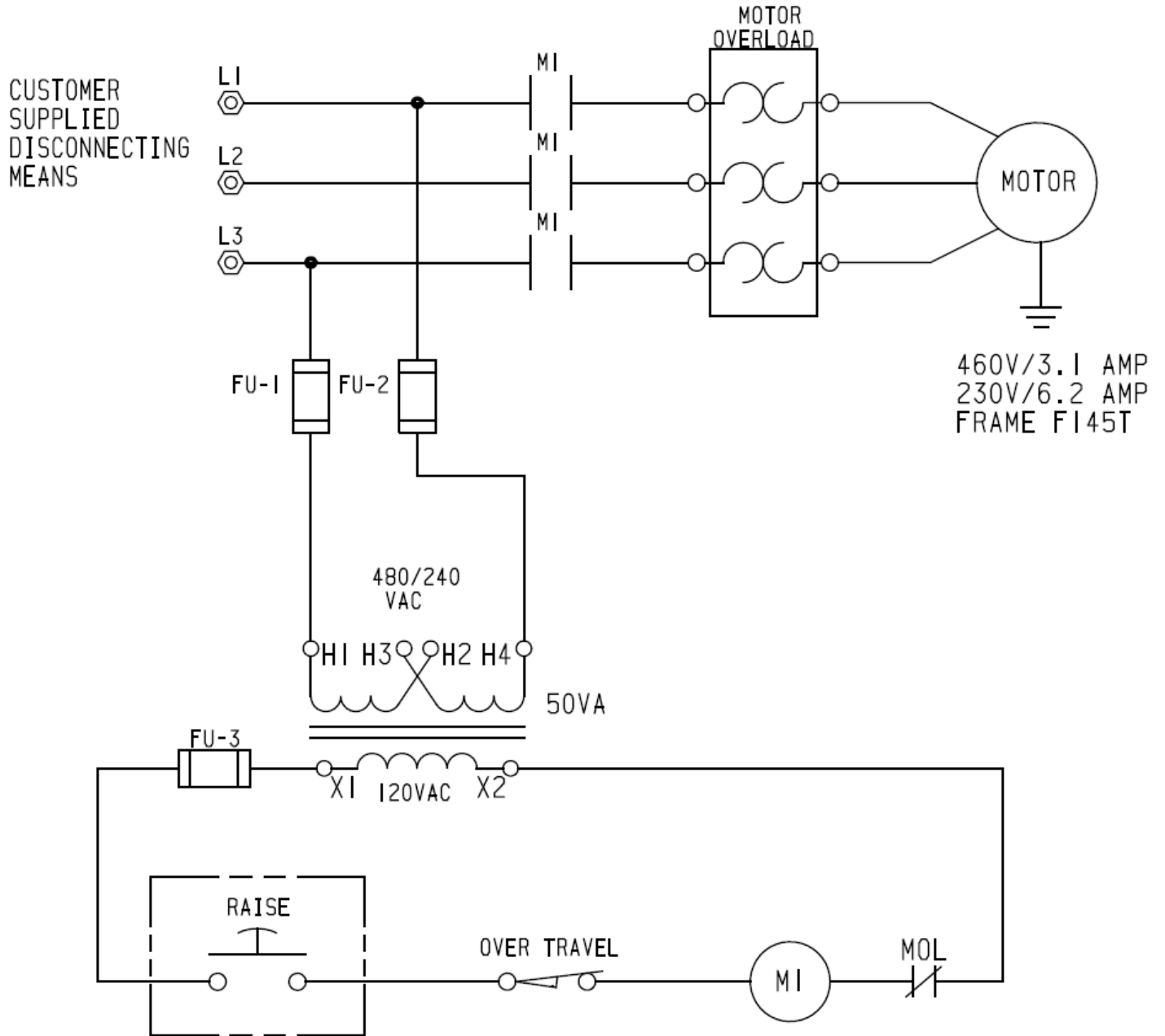
1. Release Valve is open: Be sure release valve is firmly closed.
2. Insufficient oil: This is not a likely to be the issue on a tire press but if the press will only make a fraction of its rated stroke and no more, check the oil level in the reservoir. With the ram down the oil should be about 4" from the top of the reservoir.
3. Pump loses its prime: Make sure all pump intake connections are tight.
4. Repaired Improperly: If press has had any maintenance in the past it is possible that a check valve spring or check ball got missed in the repairs.

**E. Press is too slow.**

1. Wrong oil: Oil that is too heavy will slow the pressing speed. DTE Mobil 24 or equivalent hydraulic oil

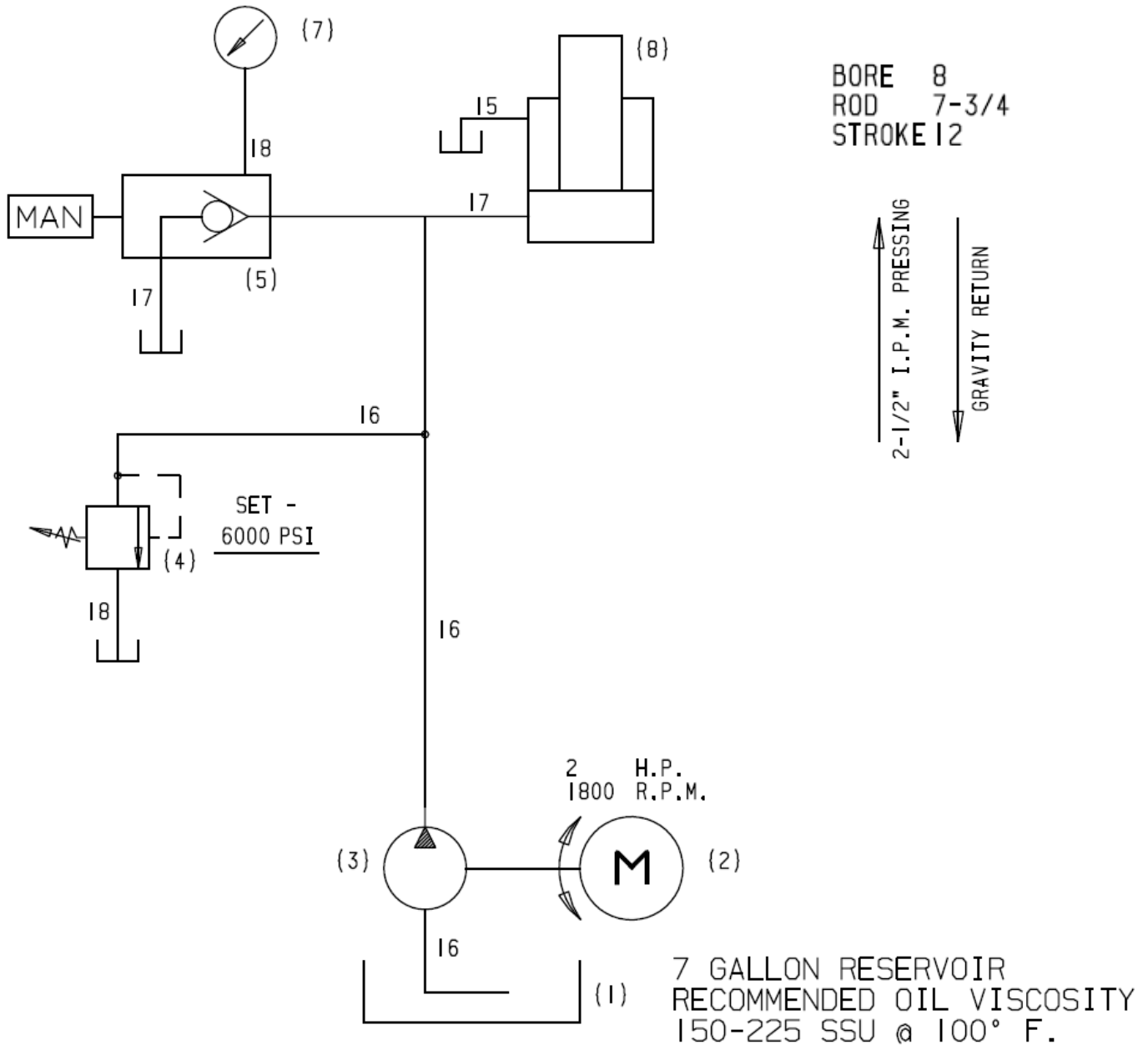


# ELECTRICAL DIAGRAM



Drawing: #61062

# HYDRAULIC DIAGRAM



Drawing: #59600

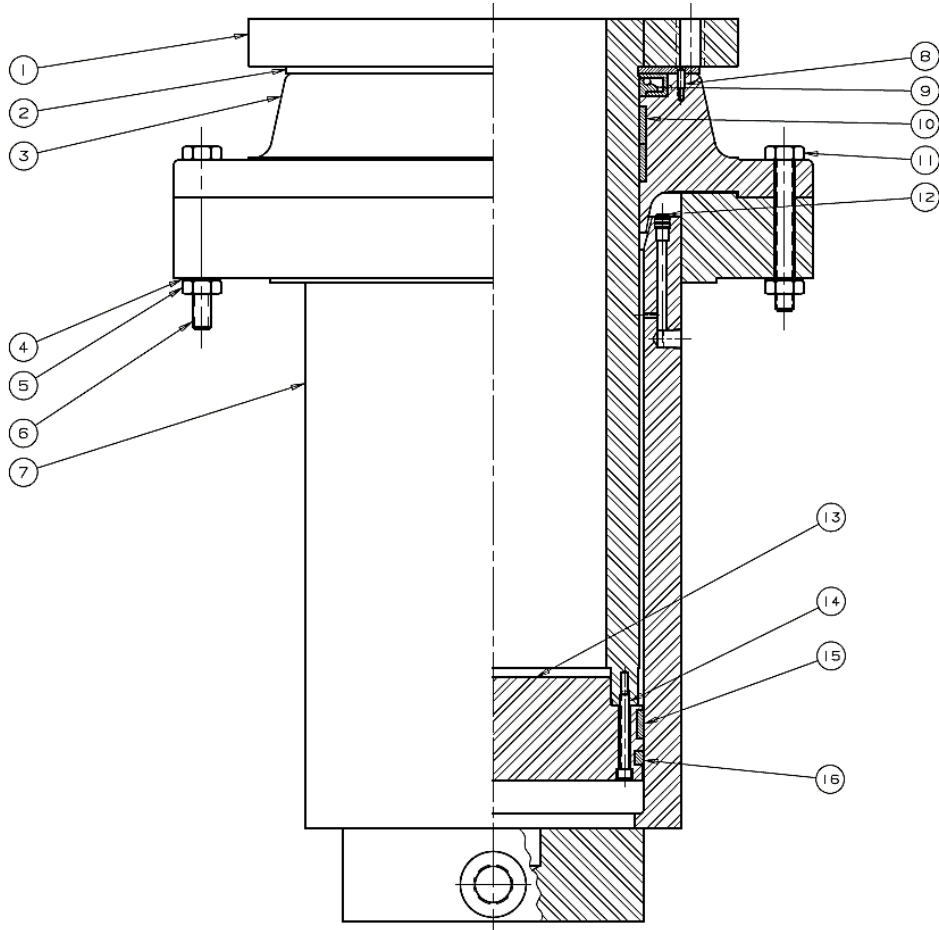
Item	Part No.	Description	Qty
1	47343P	Reservoir	1
2	301800	Motor	1
3	301756	Pump	1
4	29650	Relief Valve	1
5	710557	Release Valve	1
6	-	-	-
7	71268	Gauge	1
8	707070A	Workhead	1

## PARTS LISTS

<b>MAIN ASSEMBLY</b>		
<b>Qty</b>	<b>Part No.</b>	<b>Description</b>
1	75151	Connector, Cord
1	63565	Decal, Tire Press
1	710458	Frame Assembly
1	300168	Ganged Warning Label
3	66243	Heater Overload – <b>Voltage Specific</b>
1	710459	Hydraulic Control Assembly
1	710444	Hydraulic Pumping Unit
1	84487	Label, Caution
1	84395	Label, Danger
1	76462	Label, Lockout Procedure
1	76936	Label, Made In U.S.A.
1	84399	Label, Warning
1	57794	Legend Plate
1	35941	Limit Switch Assembly, Micro
1	46743	Limit Switch Lever, Micro
3	43643	Lock Washer (1/4")
1	75257	Locknut, Conduit, 1/2 In.
1	44066	Pipe, Reducer Bushing
1	76868	Pushbutton Unit, AB
3	43301	Screw (1/4-20 x 1/2)
1	77353	Starter Enclosure – <b>Voltage Specific 220V</b>
1	77354	Starter Enclosure – <b>Voltage Specific 440V</b>
1	79956	Tag, No Oil in Reservoir
6	43647	Washer, Lock (1/2")
1	707070	Workhead
2	1551P	Base Angle
19'	45930	Cable (1/4")
4	583	Clamp, Cable (1/4")
1	36863	Decal, Tire Press
1	47411P	Frame
1	61063L	Guide Angle - Left
1	61063R	Guide angle - Right
2	1812P	Head Channel
1	701653	Hoist Crank Assembly
1	607	Label, Model Number
1	81003	Name Plate, Dake
2	43916	Nut, Hex (1/2-13)
8	43919	Nut, Hex (3/4-10)
8	43917	Nut, Hex (5/8-11)
6	77271	Pin, Spring (3/8" Dia. x 2-1/2")
6	7205P	Pin, Table
1	1798P	Platen, Lower
1	1813P	Platen, Upper
2	1563P	Pulley
2	1809P	Pulley Cable
6	43978	Ring, Retaining (3/4" Shaft Size)

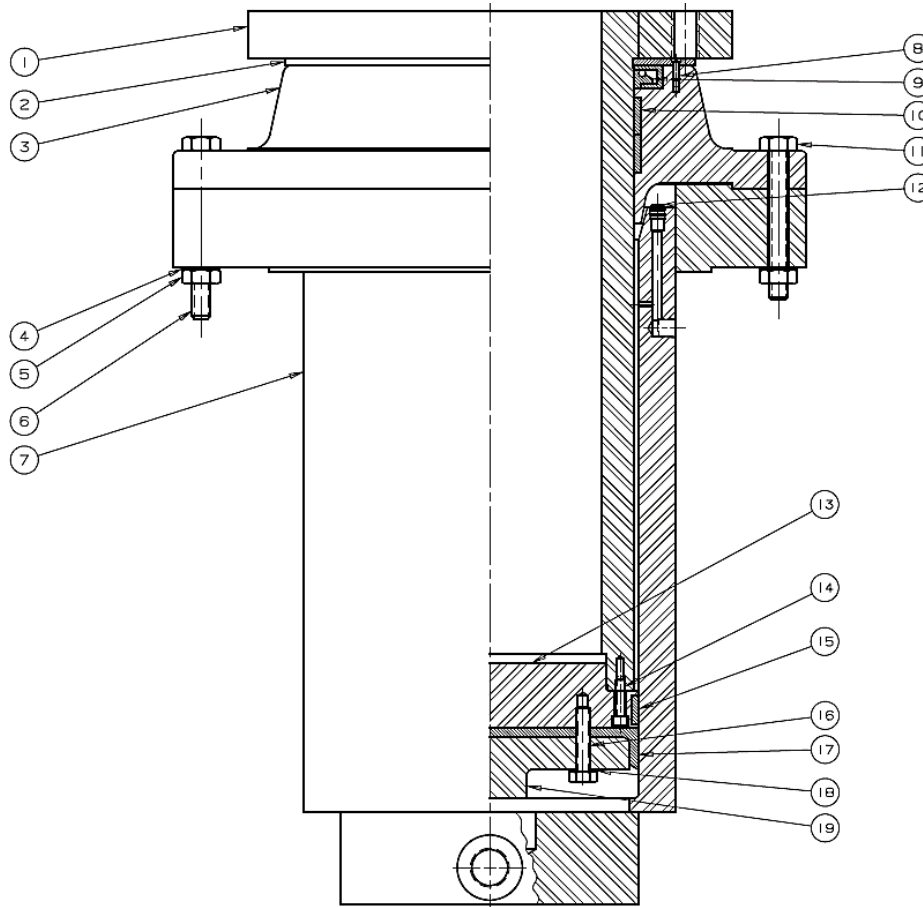
<b>MAIN ASSEMBLY</b>		
<b>Qty</b>	<b>Part No.</b>	<b>Description</b>
6	302816	Safety Pin
4	43365	Screw (5/8-11 x 1-3/4)
6	70277	Screw, Drive (#4 x 5/16")
2	43349	Screw, Hex Cap (1/2-13 x 1-1/2)
4	43373	Screw, Hex Cap (3/4-10 x 2)
4	43326	Screw, Hex Cap (3/8-16 x 3/4)
8	43348	Screw, Machine (1/2-13 x 1-1/4)
4	24569	Screw, Soc Cap (3/4-10 x 3-1/4)
1	1810P	Shaft, Cable Pulley
2	1811P	Shaft, Cable Pulley
4	1819P	Stop Block
1	700111-S	Table Hoist Sub Assembly
4	1553P	Table Spacer
4	1553P	Table Spacer
10	43647	Washer, Lock (1/2")
12	43649	Washer, Lock (3/4")
4	43645	Washer, Lock (3/8")
4	43648	Washer, Lock (5/8")

<b>710444 HYDRAULIC PUMPING UNIT</b>		
<b>Qty</b>	<b>Part No.</b>	<b>Description</b>
1	588	Pipe Plug (3/8 NPTF)
2	1567	Pipe Plug (1/4 NPTF)
1	1745	Pipe Plug (3/4 NPTF)
4	2248	Washer, Neoprene
1	23764	Fitting, Tube, 37 Deg. (Straight Thd Straight O-Ring, SAE 6-8)
1	29571	Filter Breather
1	29650	Valve, Relief
1	36509AP	Pump & Motor Base
4	43314	Screw, Hex Cap (5/16-18 x 3/4)
4	43315	Screw (5/16-18 x 1)
4	43330	Screw, Hex Cap (3/8-16 x 1-1/4)
8	43644	Washer, Lock (5/16")
4	43645	Washer, Lock (3/8")
4	43846	Screw (#10-24 x 3/8)
1	47343P	Reservoir
1	53721	Pipe, Cross,
2	58227	Fitting, Pipe, Straight (3/4" Male Pipe Nipple with Hex)
1	72052	Fitting, Tube, 37 Deg. (90 Deg. Elbow, 1/2 x 3/4 NPTF)
1	73458	Fitting, Tube, 37 Deg. (Straight Thd Elbow SAE O-Ring 8-12)
1	301756	Pump
1	301757	Adapter, Pump to Motor
1	301762	Coupling Assembly
1	301800	Motor
1	712016	Tube Assembly – Intake Line
1	712017	Tube Assembly – Pump to Relief Valve
-	<b>710444</b>	<b>Hydraulic Pumping Unit (Includes all items in table)</b>



**707070A Workhead Assembly – New Style**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>
1	1796P	Piston	1
2	52478P	Retainer	3
3	31871	Guide, Piston	1
4	43647	Washer, Lock (1/2")	10
5	43419	Screw, Soc Cap (1/4-20 x 2)	4
6	43359	Screw, Hex Cap (1/2-13 x 4-1/2)	4
7	1793P	Cylinder	1
8	43817	Screw, Fl. Hd. Slot Mach. (#10-24 x 1/2)	3
9	1871	Oil Seal,	1
10	31400	Wear Ring	2
11	43358	Screw, Hex Cap (1/2-13 x 4)	6
12	589	Pipe Plug (1/8 NPTF)	2
13	87611P	Piston Cap	1
14	43916	Hex Nut, (1/2-13)	10
15	31399	Wear Ring	1
16	37052	1-T-ring, 2-backers	1
-	707070A	Workhead Assembly (Includes Items: 1-3, 5-16)	-
-	703922	Workhead Repair Kit (For 707070 & 707070A) Includes Items : 9, 10, 15 & 16.	-



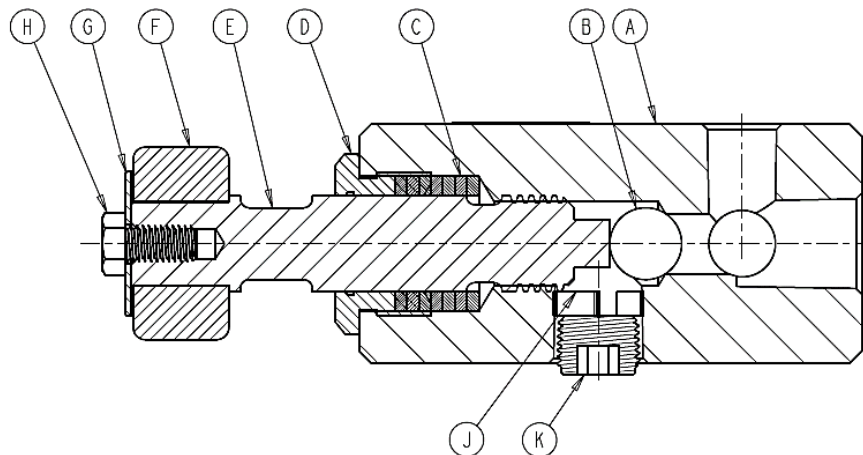
### 707070 Workhead Assembly – Old Style

<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty</u>
1	1796P	Piston	1
2	52478P	Retainer	3
3	31871	Guide, Piston	1
4	43647	Washer, Lock (1/2")	10
5	43916	Screw, Soc Cap (1/4-20 x 2)	10
6	43359	Screw, Hex Cap (1/2-13 x 4-1/2)	4
7	1793P	Cylinder	1
8	43817	Screw, Fl. Hd. Slot Mach. (#10-24 x 1/2)	3
9	1871	Oil Seal,	1
10	31400	Wear Ring	2
11	43358	Screw, Hex Cap (1/2-13 x 4)	6
12	589	Pipe Plug (1/8 NPTF)	2
13	30425P	Piston Cap	1
14	43417	Screw, Soc Cap (1/4-20 x 1-1/2)	4
15	31399	Wear Ring	1
16	43332	Screw (3/8-16 x 1-3/4)	8
17	1538	Piston Leather	1
18	43645	Washer, Lock (3/8")	8
19	1536	Ring, Supporting	1
N/A	1567	Pipe Plug (1/4 NPTF)	2
-	707070	Workhead Assembly (Includes all items above)	-
-	703922	Workhead Repair Kit (For 707070 & 707070A) Includes Items : 9, 10, 15 & 17.	-

### 710459 HYDRUALIC CONTROL ASSEMBLY

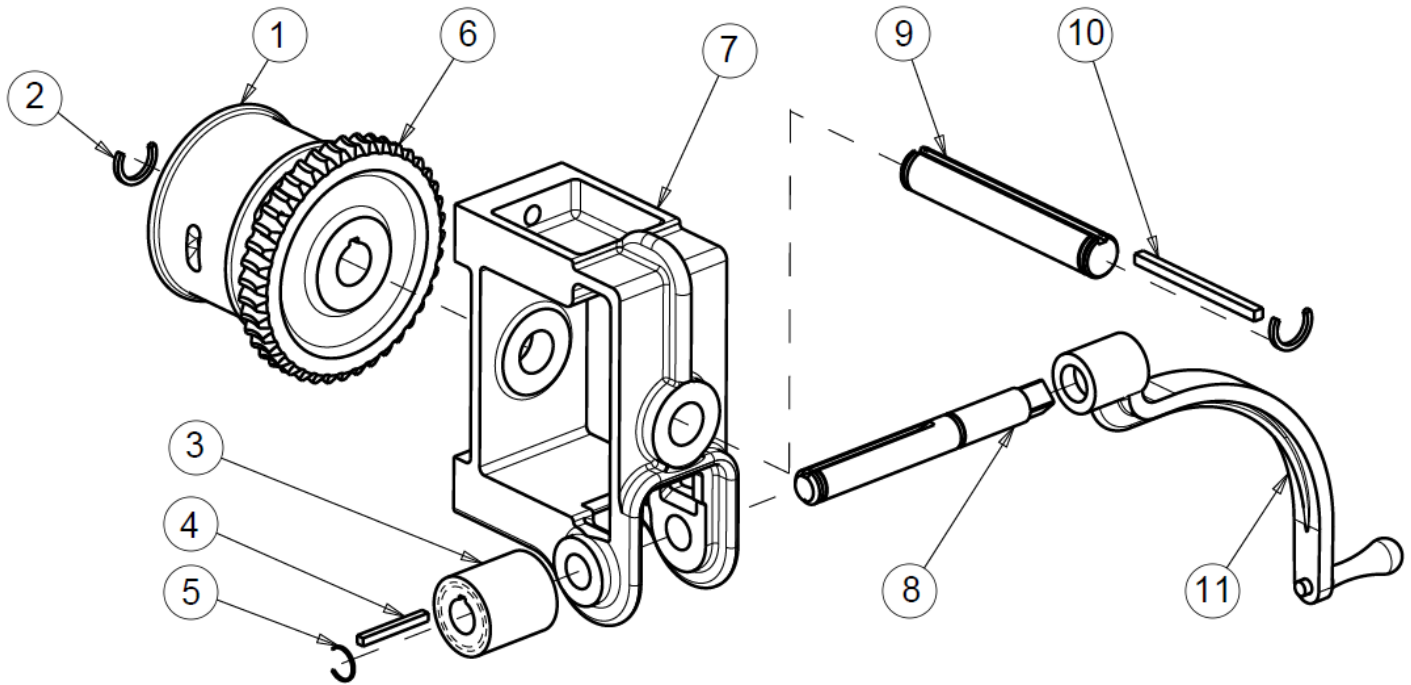
<u>Qty</u>	<u>Part No.</u>	<u>Description</u>
1	71268	Gauge
1	710557	Release Valve Assembly
1	47947P	Release Valve Rod Stop
1	43334	Screw, Hex Cap (3/8-16 x 2-1/4)
1	47948P	Spacer Release Valve
1	712019	Tube Assembly – Release Valve to Reservoir
1	712020	Tube Assembly - Bypass
1	712018	Tube Assembly – Relief Valve to Release Valve
1	707474	Tube Assembly – Release Valve to Cylinder
2	43645	Washer, Lock (3/8")

### 710557 RELEASE VALVE ASSEMBLY



<u>Item</u>	<u>Part No.</u>	<u>Qty</u>	<u>Description</u>
A	1752P	1	Release Valve Block
B	1936	1	Valve, Ball
C	1937	8	Washer, Valve Rod Packing
D	1931P	1	Packing Nut
E	47946P	1	Release Valve Rod
F	2230A	1	Handle, Release Valve
G	348	1	Spindle Washer (1-1/2" OD x .40" ID x 1/16 Thick)
H	43326	1	Hex Cap Screw (3/8-16 x 3/4)
J	1935	1	Ball, Retainer
K	596	1	Pipe Plug (1/2 NPTF)

### 700111-S TABLE HOIST



<u>Item</u>	<u>Part No.</u>	<u>Description</u>	<u>Qty</u>
1	740	Cable Drum	1
2	43983	Ring, Retaining (1-1/4" Shaft Size)	2
3	744	Worm,	1
4	746	Worm Shaft Key (1/4 x 1/4 x 3-7/16)	1
5	43982	Ring, Retaining (1" Shaft Size)	2
6	743	Gear, Worm	1
7	739	Hoist Frame	1
8	742	Worm Shaft	1
9	741	Drum Shaft	1
10	745	Drum Shaft Key (5/16 x 5/16 x 4)	1
11	701653	Ratchet Handle Assembly	1
N/A	45954	Cable, 1/4 Dia.	19ft
-	700111-S	Hoist Assembly (Parts 1-10)	-

## ORDERING 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.