



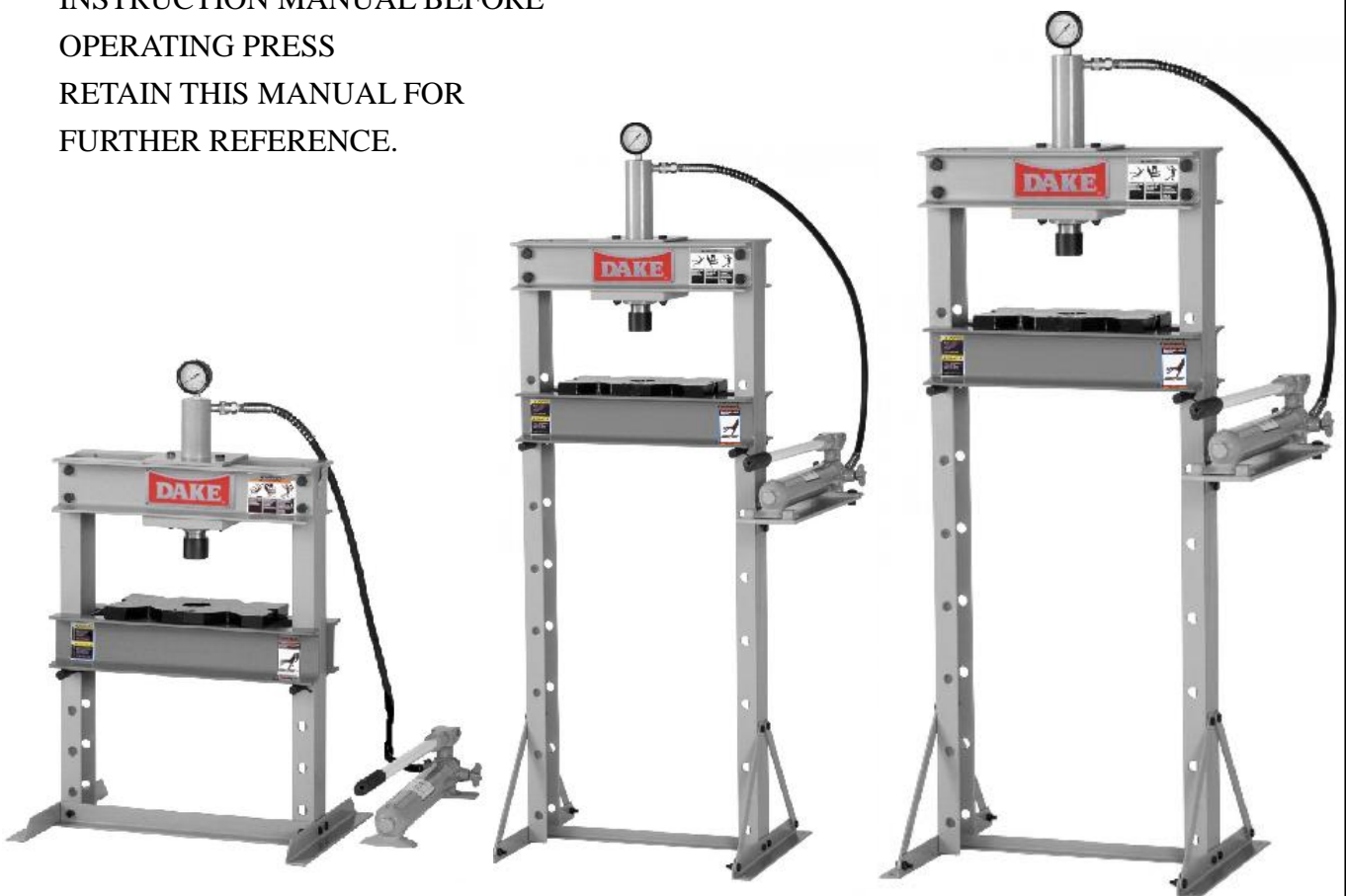
# 10 & 20 TON UTILITY PRESS

## OWNERS MANUAL

BENCH AND FLOOR MODEL PRESSES

10 & 20 Ton single acting manual hydraulic press

FOR YOUR OWN SAFETY AND  
OPTIMUM OPERATION READ  
INSTRUCTION MANUAL BEFORE  
OPERATING PRESS  
RETAIN THIS MANUAL FOR  
FURTHER REFERENCE.



10 TON BENCH PRESS  
# 972200

10 TON FLOOR PRESS  
#972210

20 TON FLOOR PRESS  
#972220


## **TABLE OF CONTENTS**

• Model specifications & Placement of press .....	page 2
• Safety points .....	page 3
• Warning labels .....	page 4
• Safeguarding .....	page 5
• Assembly instructions .....	page 6
• Assembly instructions .....	page 7
• Assembly instructions .....	page 8
• Operation instructions .....	page 9
• Maintenance .....	page 10
• Trouble shooting .....	page 11
• Parts list for bench press .....	page 12
• Exploded diagram for bench model .....	page 13
• Parts list for floor press .....	page 14
• Exploded diagram for floor model .....	page 15
• Parts list for 20-ton floor press .....	page 16
• Exploded diagram for 20-ton floor model .....	page 17
• Adding oil to pumping unit.....	page 18

## MACHINE SPECIFICATIONS

Machine Specifications	10 Ton Bench	10 Ton Floor	20 Ton Floor
Press Type	Manual 10-ton Bench	Manual 10-ton Floor	Manual 20-ton floor
Cylinder Type	Single Acting	Single Acting	Single Acting
Max. Press Capacity	10 Ton	10 Ton	20 Ton
Ram Diameter	1- 1/2"	1- 1/2"	2"
Ram Stroke	6"	6"	8"
Head Travel	Left / Right of center	Left / Right of center	Left / Right of center
Ram Travel Per Stroke	1/8" approx.	1/8" approx.	3/16" approx.
Width Between Uprights	16-3/4"	16-3/4"	23"
Width Between Channels	3"	3"	4"
Max. Ram to Table	16"	38"	39"
Overall Height	36"	60"	74"
Weight	132 lbs.	149 lbs.	283 lbs.

### 1. INSTALLATION PLACEMENT:

<p style="text-align: center;"><b>INSTALLATION OF PRESS</b> <b><u>PRESS PLACEMENT SELECTION</u></b></p>	 <p style="font-size: 1.2em; font-weight: bold; margin: 0;">CAUTION</p>
<ol style="list-style-type: none"> <li>1. Location of press should be in a well-lit area that will not interfere with other machines or operations.</li> <li>2. Carefully unbox machine components from shipping carton. Inspect all packing as not to throw out any parts or manuals.</li> <li>3. When transporting the machine please use caution. If using a sling have someone steady the machine while transporting it.</li> <li>4. Install your press on a sturdy level floor surface, or work bench. The machine <u>must</u> be anchored to the floor or workbench securely.</li> <li>5. After installing the press, use a degreasing product to clean off the anti-rust oil which was applied at the factory. Then wipe machined surfaces (such as ram) with a light coating of lubricant oil.</li> <li>6. Read rest of the owner's manual before operating this machine. Review and understand all safety instructions.</li> </ol>	

- **SAFETY POINTS**

**BEFORE USE, ALL SAFETY POINTS MUST BE READ AND UNDERSTOOD!**

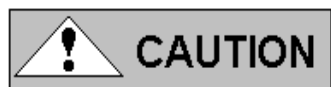
Before the PRESS is used, the instruction manual with this machine must be read and understood. This manual offers safe operation instructions. Offered below are safety instructions designed for the press and general safety instructions that apply to most machinery.



Operation of the press incorrectly, or in a dangerous fashion can result in serious injury or death.



Operation of the press incorrectly, or in a dangerous fashion can result in damage to machine or it's components and to the cutting tool.



Instructions for safe press use.

This machine is intended to be operated by one person. This person should be conscious of the press ram movement not only for himself but also for persons in the immediate area of the machine. Caution is required when operating the press because it can be dangerous due to the high pressures exerted from the ram. Operation hazards such as pinching, ejection of parts are always present. Please think about the safety warnings in the instruction manual before operating the machine.

Misuse of this machine will void warranty and cause unsafe working conditions.

## 2. FOR SAFE OPERATION

For your own safety read the instruction manual before operating your single acting hydraulic press.



1. Keep hands out of point of operation.
2. Never hold part while pressing.
3. Always wear the eye protection.
4. Clamp work piece or brace when pressing.
5. Never place fingers in pin holes.
6. Always use nose piece when pressing. Never press using the end of the ram, damage to ram or threads can occur.
7. Never use a press that is not fastened securely to the floor or workbench.
8. Always used table pins and accessories furnished with press.
9. Always have firm footing when operating press.
10. Do not use press if parts are damaged or missing. (Hoses, structural components)

**3. WARNING LABELS:**

**READ AND UNDERSTAND THESE WARNING LABELS PLACED ON THIS MACHINE BEFORE OPERATING. MAKE SURE ALL PERSONS IN THE AREA OF THE PRESS ARE AWARE OF THESE WARNINGS.**

**UNDER NO CIRCUMSTANCES SHOULD THESE LABELS BE REMOVED!**



Establish solid footing  
To prevent falls

Keep hands away  
from point of  
operation

Guard workpiece  
to prevent projectiles  
from reaching operator

**WEAR EYE PROTECTION**



All pins must be inserted before  
applying any pressure



Keep finger out of pin holes

# **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. There fore, 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

#### 4. ASSEMBLY INSTRUCTIONS:

##### FOR DAKE MODEL MECHANICS UTILITY 10 & 20 TON BENCH AND FLOOR MODEL PRESSES.

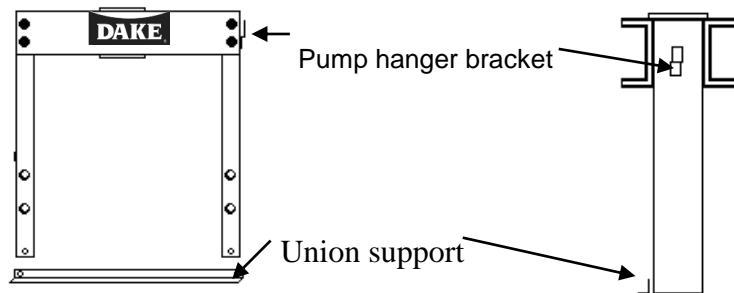
Your new Dake Press has been packaged in a manner to prevent damage to any critical components, some assembly will be required. All parts in the accessory box are critical to the function of your press. Please review the parts breakdown to insure you have all components required. Please refer to the parts breakdown and exploded diagrams on pages 12-17 of this owner's manual.

Your press head frame, uprights and head traverse ram plate has been pre-assembled at the factory. You will be required to install the worktable, ram, pumping unit and base angles. Follow the simple instructions below for quick assembly. Assembly may be made easier if the frame is laid down flat with the front facing upward.

##### STEP 1: Bench model:

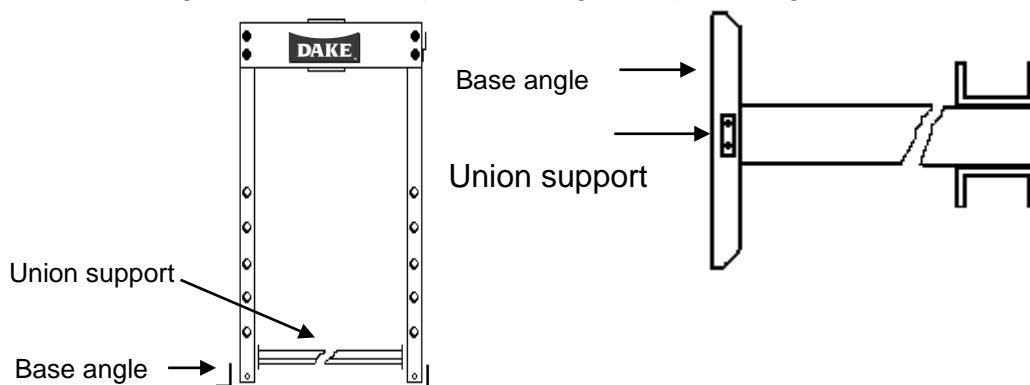
Using (2) M8 x 20mm bolts, nuts and washers install the union support to the bottom from of the upright channels. (Pump hanger bracket on the right-hand side of the upright.) Angle is to face outward see drawing below on right.

Hand tighten.



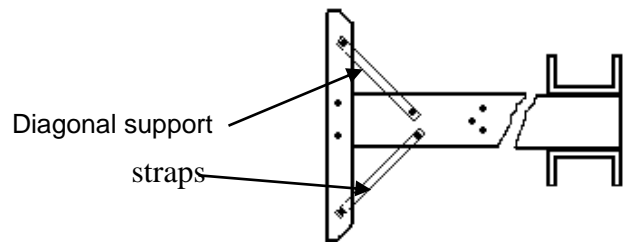
##### STEP 1. Floor models:

Install the union support to the inside of the upright channels and base angles, using the 4 of the M8 x 25mm bolts, nuts and washers provided. Place union support in-between the channels, and install the 2 base angles to the frame through the union support and install nuts. Base angles face outward (See drawing below) Hand tighten.



**STEP 2.** Floor models: (Bench model skip this step)

Install the diagonal support straps. Using 4 M8 x 25mm bolts, nuts and washers. Install the support straps to the inside of the base angles then to the frame as shown. Finger tighten.



**STEP 3:**

Carefully stand the unit upright. Making sure all components are square to each other, tighten all nuts and bolts securely.

**STEP 4:** Floor model: (Bench model skip this step)

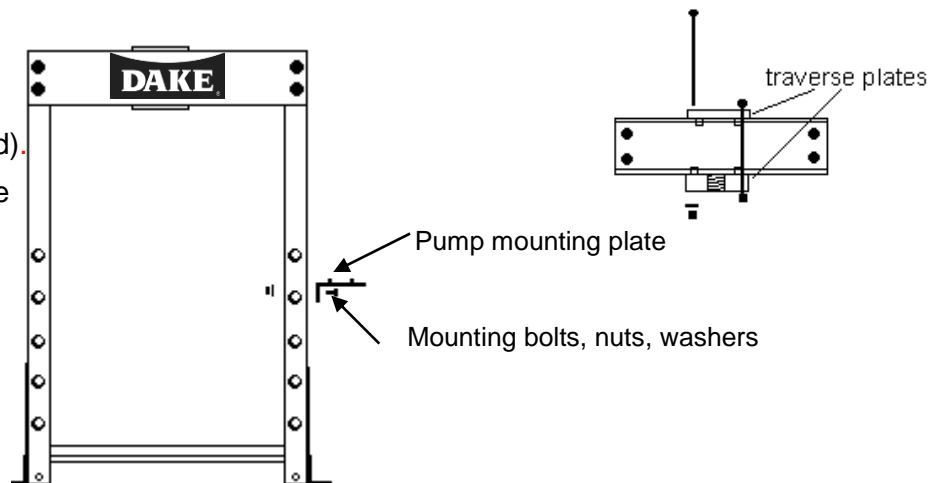
Install pump mounting plate on the side of the upright channel using the 3 M10 x 25mm bolts, nuts and washers.

**STEP 5:**

(20-ton model skip this step, plate is pre-installed).

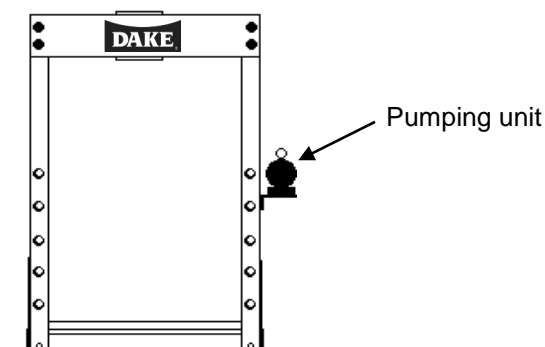
Mount Head ram traverse plates. The side with two bars welded to them go inside the frame, with the thick threaded plate on the bottom.

Using two 10mm x 120 mm bolts, washers and nuts snug only enough To allow plate to travel



**STEP 6.** Floor models: (Bench model skip this step)

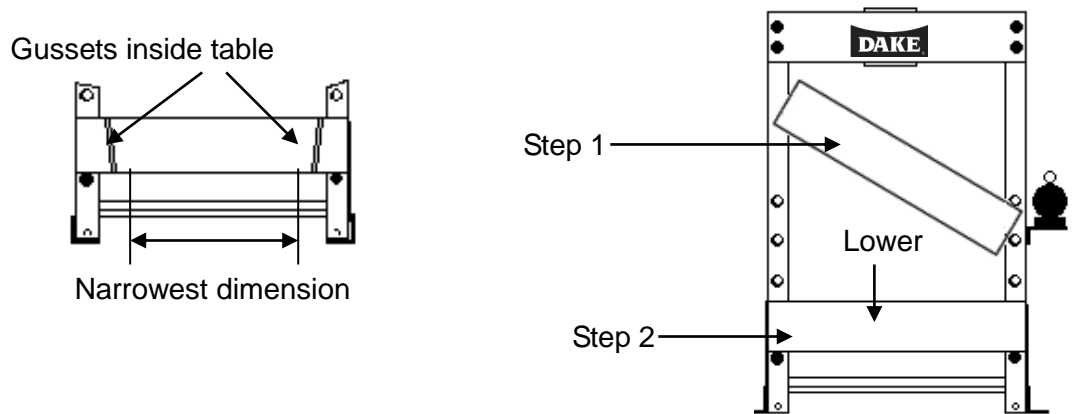
Install the pumping unit to the mounting plate using 2 M10 x 25mm bolts, nuts and washers. Make sure pump is centered on this mounting plate.





**STEP 7:**

With press standing upright and all bolts tightened install the worktable. Insert two table pins in the two lowest holes. Take the worktable and tilt it at a sharp angle and insert it in the uprights. (NOTE: The gussets welded to the table are at slight angles. The narrowest dimension of these gussets go down. See drawing) (Step 1) Once worktable is in the uprights turn it level and lower down and set it on the table pins. (Step 2) Take care when doing this, a helper would be advised.

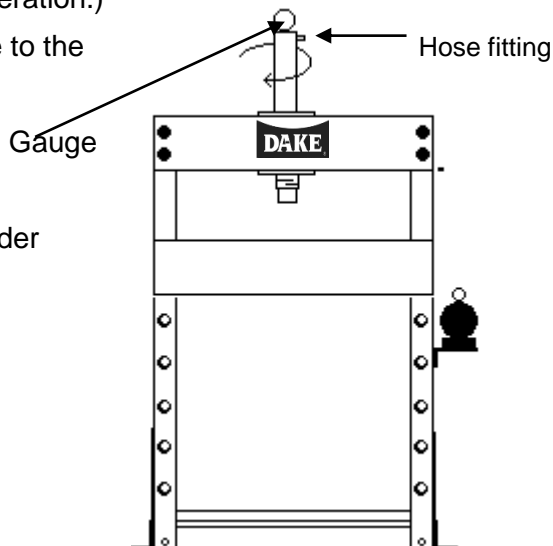


**STEP 8:**

Locate the cylinder and remove the plastic protective cap on the end of the ram. (If applicable) Carefully screw the cylinder from the top into the head traverse ram plate. Screw this in as tight as possible while keeping the cylinder's hydraulic hose fitting facing to the right or pump side. (Cylinder may not be totally tight while keeping the fitting facing this way, but it will not effect the presses operation.)

Using Teflon tape install the gauge to the top of the cylinder facing forward.

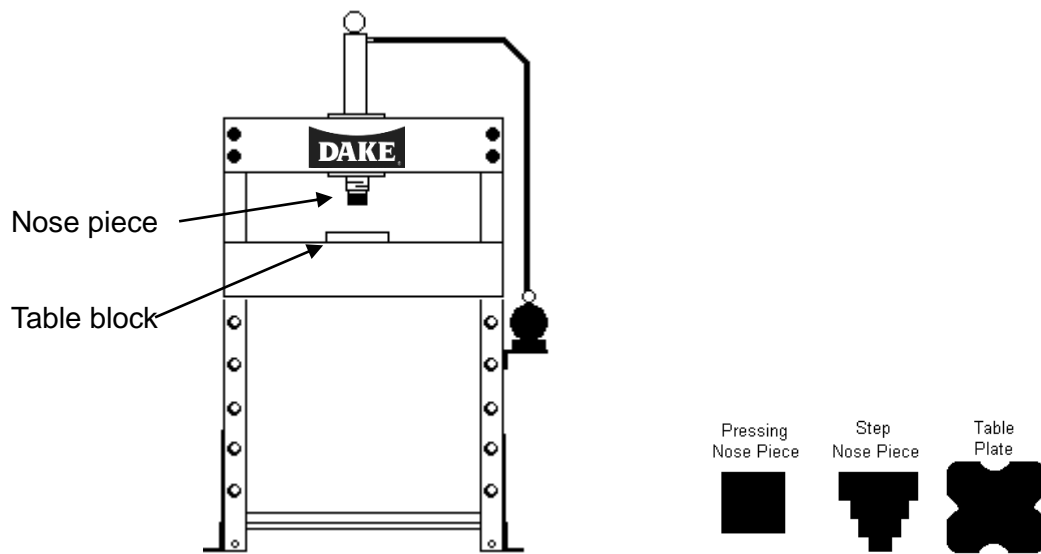
When gauge and hose fittings are in correct position install the spanner nut on the bottom of cylinder and snug up.



**STEP 9:**

On the bench model hang the pumping unit in its holder bracket on the side of the frame. Remove the plastic protective cap from the end of the hydraulic hose. Screw the hydraulic hose onto the cylinder hose fitting. The fitting has a knurled collar that you can tighten by hand. (Do not use a wrench because damage may occur to the fitting) The hose has a check valve that prevents oil from escaping so if hose is ever removed air will not get in the system.

Install a nose piece and use table blocks when operating this machine.



**NOTE:**

System is filled with oil and may take a few pumps to fill all lines. Close the pump valve and pump to check for piston action, and for leaks. If air appears to be in the system, open the valve handle and pump vigorously about a dozen times. Close valve and try again.

**STEP 10:**

Chose location placement as described on page 2. Mount the press securely. You are now ready to use the press.

**5. OPERATION (PROCEDURE)**

Always use the supplied nose pieces. The flat nose piece will be good for most pressing and flattening operations. The step style nose piece will work well for pressing bearing, bushing and parts that have a hole that the nose piece will fit into. This nose piece will help support or hold the piece during pressing operations.

There are two table plates that should always be used as a backing plate during pressing operations. You will find notches in these table plates to allow you to use the press as a straightening press for axles, shafts, etc and most round stock.

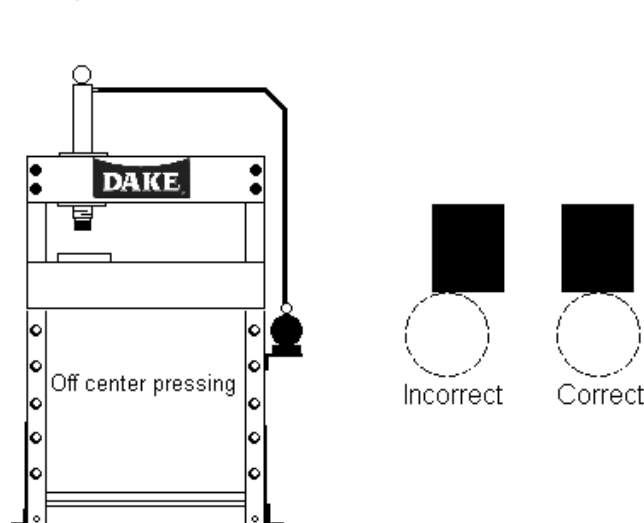
When using your press always use the highest table setting to minimize the stroke distance of the ram. **Note:** Only use supplied table pins. Do not weld or pin table. Once a part is put in the press and is clamped or braced securely, close the pumping unit release valve handle. (Clockwise). Pump the handle to lower the ram. Pump until pressing operation is completed. If you need to maintain pressure leave the valve on the pumping unit closed. When operation is complete, turn the valve counter-clockwise to release pressure and raise the ram. Once the ram has been raise just above the work close valve again and repeat

operation on the next part. There is no need to raise the ram all the way to the top each time.

If pressing application requires a certain tonnage, press until the gauge reads the appropriate tonnage then stop. Release pressure and repeat operation.

NOTE: Never pump the ram down fully and dead head the ram in the cylinder. Only build pressure when using the table plates or a part is being pressed. Failure to do this may cause ram seal damage and leaking.

If the application requires off center pressing, loosen the head ram traverse plate bolts and slide head left or right to the area where pressing is required. You may now proceed with the operation. When head is returned to the center position snug these bolts up to prevent unexpected movement.




The diagram shows a DAKE press with a label 'Off center pressing' on the side. To the right, two diagrams illustrate ram placement: 'Incorrect' shows a black rectangular ram partially overlapping a dashed circle representing the workpiece, while 'Correct' shows the black rectangular ram fully centered over the dashed circle.

**CAUTION**

Always make sure you are pressing with the whole ram. Center ram over the work, do not press with only the edge of the nose piece. This can cause injury by ejecting the part, or damage to the ram.

## 6. MAINTENANCE OF MACHINE

<b>MAINTENANCE!</b>	 <b>CAUTION</b>
<ol style="list-style-type: none"><li>1. On a regular basis wipe the entire press. Keep ram free from debris and abrasive materials (Frequency depends on environment the machine is in)</li><li>2. A light oil applied to the ram will help to keep the surface clean.</li><li>3. If the hydraulic hose or table pins are worn or cut, or damaged in any way, have it replaced immediately.</li><li>4. If oil is ever needed, remove plug from the top of the pumping unit and add hydraulic jack oil. Bleed the system by pumping the handle repeatedly about a dozen times with the valve open. Close valve and check that air has been bled.</li><li>5. <b>WARNING:</b> Never make adjustments to the pressure setting adjustment. Never remove the red plastic cap covering this adjustment screw. Serious machine damage or physical injury may occur.</li></ol>	

## 7. TROUBLE SHOOTING:

<b>Problem</b>	<b>Solution</b>
Oil leaking around ram.	Put ram under full pressure for 1 hour. Bad seal
Ram is jerky or sluggish	With valve open repeatedly pump the handle to bleed air from lines.
Ram does not return fully	Open and close valve several times. Return spring broken.
Pump will not pump	Make sure valve is fully closed. Low oil level. Add oil and bleed (Last page)
Leaking by gauge	Place Teflon tape to threads and reinstall.
Leaking by hoses	Check all fittings, make sure they are tight. Look for a hole or abrasions.
Will not reach max. tonnage	Check that the valve is closed fully. Bleed system.
Will not hold pressure	Some bleed off will occur over time. Check if valve is closed fully

<b>Gauge Conversion 10 Ton</b>		
45MM Bore = 1.785		
10 Ton	551 Bar	7992 PSI
5 Ton	275 Bar	3996 PSI
4 Ton	220 Bar	3196 PSI
3 Ton	165 Bar	2397 PSI
2 Ton	110 Bar	1598 PSI
1 Ton	55 Bar	799 PSI

<b>Gauge Conversion 20 Ton</b>			
65MM Bore = 2.559			
1 Ton	388.86 psi	4,277.51 psi	11 Ton
2 Ton	777.73 psi	4,666.38 psi	12 Ton
3 Ton	1,166.59 psi	5,055.25 psi	13 Ton
4 Ton	1,555.46 psi	5,444.11 psi	14 Ton
5 Ton	1,944.32 psi	5,832.97 psi	15 Ton
6 Ton	2,333.19 psi	6,221.84 psi	16 Ton
7 Ton	2,722.055 psi	6,610.70 psi	17 Ton
8 Ton	3,110.92 psi	6,999.57 psi	18 Ton
9 Ton	3,499.78 psi	7,388.43 psi	19 Ton
10 Ton	3,888.65 psi	7,777.30 psi	20 Ton

## 8. PARTS LIST

### 10 TON BENCH UTILITY PRESS PARTS LIST

Ref #	Dake Part #	Description	Qty.
1	301139	Frame upright channel	2
2	301138	Head frame channel	2
3 / 19	301137 / 301133	Head ram traverse plates	1 upper & lower
4	301136	Bolt M12 x 110mm	6
5	301135	Lock washer 12mm	6
6	301134	Nut M12 x 4	6
7	301132	Union support	1
8	301131	Base angle	2
9	301130	Bolt M8 x 20	6
10	301129	Lock washer 8mm	6
11	301128	Nut M8	6
12	301127	Flat nose piece	1
13	301126	Step nose piece	1
14	301125	Table pin	2
15	301124	Table plate	2
16	301123	Work table	1
17	301122	Ram / Cylinder	1
17A	302382	Cylinder spring	1
18	301121	Pumping unit	1
20	301150	Bolt M10 x 140	2
21	302277	Washer 10mm	2
22	301149	Lock washer 10mm	2
23	301141	Nut 10mm	2
24	301120	Gauge	1
25	302276	Ring	1
		<b>Items not shown</b>	
	302318	Cylinder Seal kit	
	302382	Spring for cylinder	
	302310	Fitting Nipple	
	302309	Fitting Coupler	
	302554	Pump repair kit	
	302508	Hydraulic hose w/Coupling	

**Spare seals should be stored in safe location out of direct sunlight.**

When ordering, parts have model and date of purchase information ready.

For assistance call Dake Customer Service at 1-800-937-3253 or fax to 1-800-846-3253  
e-mail to [customerservice@dakecorp.com](mailto:customerservice@dakecorp.com)



### 10 TON FLOOR UTILITY PRESS PARTS LIST

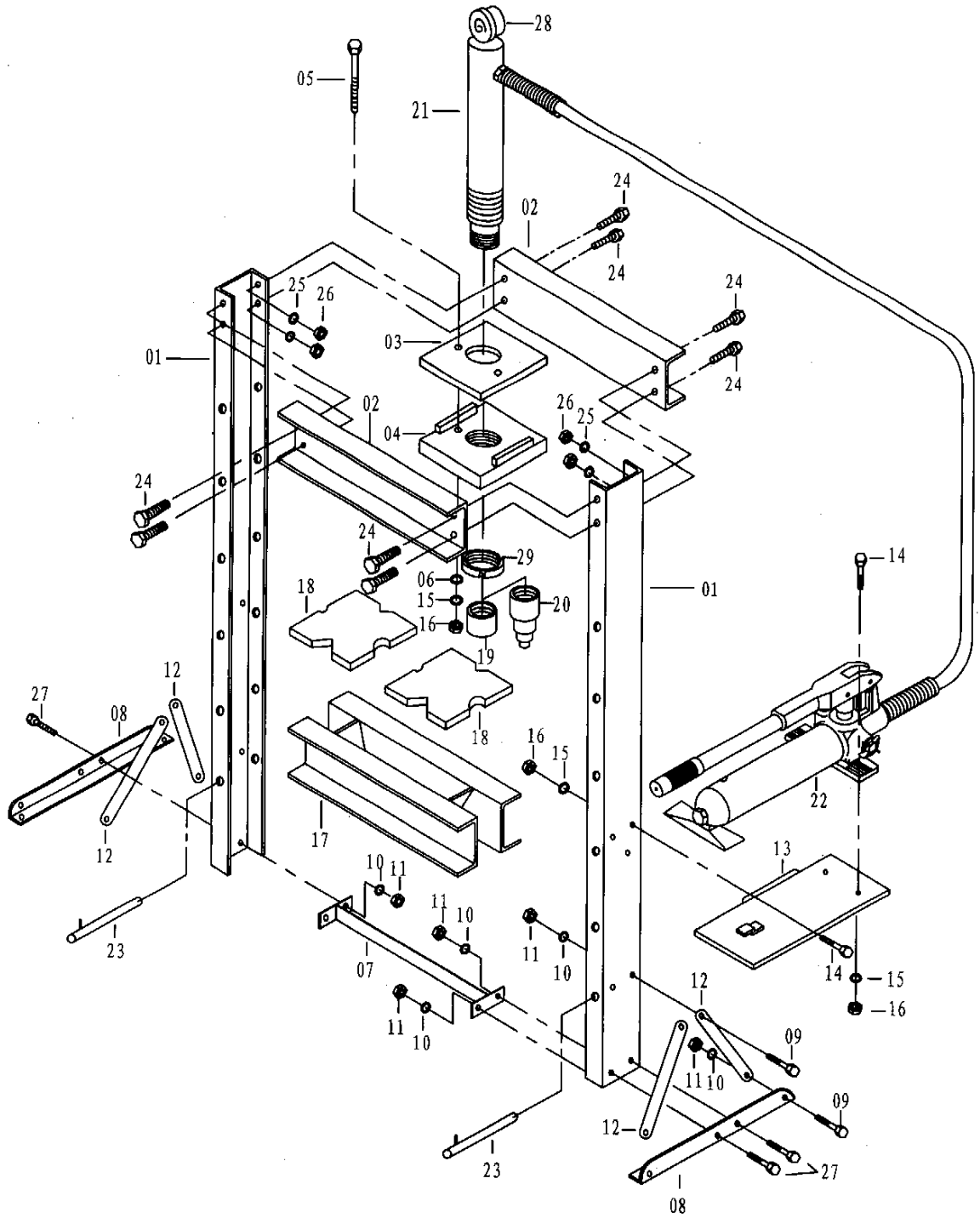
Ref #	Dake Part #	Description	Qty.
1	301154	Frame upright channel	2
2	301153	Head frame channel	2
3 / 4	301152 / 301151	Head ram traverse plates	1 upper & lower
5	301150	Bolt M10 x 120mm	2
6	301149	Lock washer 10mm	2
7	301148	Union Support	1
8	301147	Base angle	2
9	301146	Bolt M8 x 25	12
10	301129	Lock washer 8mm	12
11	301128	Nut M8	12
12	301145	Angle support strap	4
13	301144	Pump support bracket	1
14	301143	Bolt M10 x 25	5
15	301142	Lock washer 10mm	4
16	301141	Nut M10	4
17	301123	Work table	1
18	301124	Table plate	2
19	301127	Flat nose piece (1-5/8 – 12)	1
20	301126	Step nose piece (1-5/8 – 12)	1
21	301140	Ram / Cylinder	1
21A	302383	Cylinder spring	1
22	301121	Pumping unit	1
23	301125	Table pin	2
24	301136	Bolt M12 x 110mm	4
25	301135	Lock washer 12mm	4
26	301134	Nut M12	4
27	302274	Bolt M8 x 25	4
28	301120	Gauge	1
29	302275	Ring	1
<b>Items not shown</b>			
	302318	Seal kit	
	302383	Cylinder spring	
	302310	Fitting Nipple	
	302309	Fitting Coupler	
	302554	Pump repair kit	
	302508	Hydraulic hose w/Coupling	

**Spare seals should be stored in safe location out of direct sunlight.**

When ordering, parts have model and date of purchase information ready.

For assistance call Dake Customer Service at 1-800-937-3253 or fax to 1-800-846-3253  
e-mail to [customerservice@dakecorp.com](mailto:customerservice@dakecorp.com)

# 10 TON FLOOR UTILITY PRESS





## 20 TON FLOOR UTILITY PRESS PARTS LIST

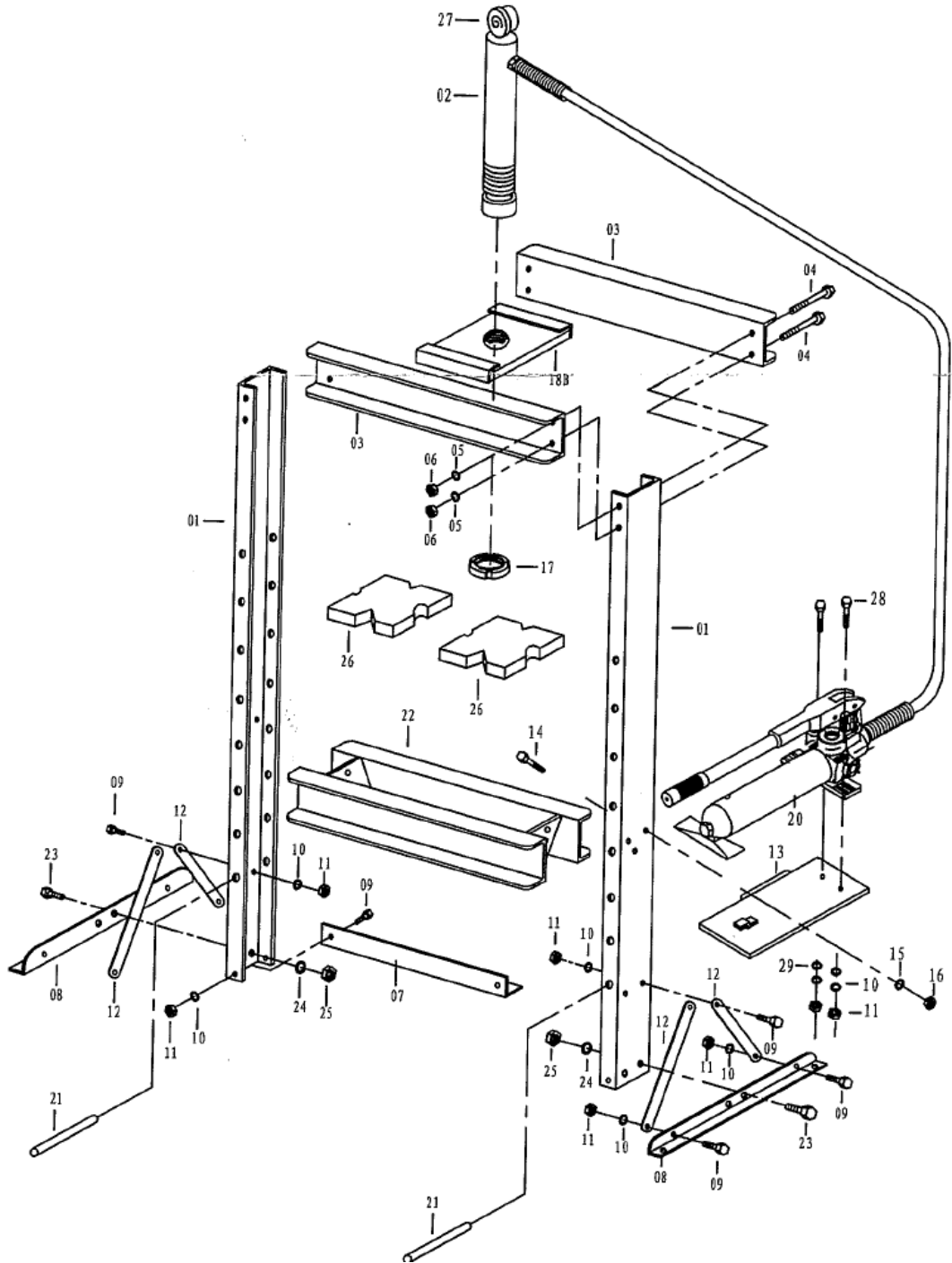
Ref #	Dake Part #	Description	Qty.
1	303183	Frame upright channel	2
2	303184	Ram Cylinder	1
3	303208	Head frame channel	2
4	303204	Bolt M18 x 140mm	4
5	303203	Lock washer 18mm	4
6	303205	Nut 18mm	4
7	303186	Union support	1
8	303207	Base angle	2
9	301146	Bolt M8 x 25mm	10
10	301129	Lock washer 8mm	12
11	301128	Nut 8mm	12
12	301145	Angle support strap	4
13	301144	Pump support bracket	1
14	301143	Bolt M10 x 25mm	3
15	301142	Lock washer 10mm	3
16	301141	Nut 10mm	3
17	303187	Spanner nut	1
18B	303202	Head traverse plate	1
20	303192	2 Stage pumping unit	1
21	303194	Table pin	2
22	303197	Table	1
23	78754	Bolt M12 x 30mm	4
24	301135	Washer 12mm	4
25	301134	Nut 12mm	4
26	303193	Pressing plates	2
27	303198	Gauge	1
28	78786	Bolt M8 x 30mm	2
29	303206	Washer 8mm	2
		<b>Items not shown</b>	
	303199	Seal kit	
	303200	Cylinder spring	
	302508	Fitting Nipple	
	302309	Fitting Coupler	
	303201	Pump repair kit	
	302508	Hydraulic hose w/Coupling	
	303191	Flat nose piece	
	303190	Stepped nose piece	

**Spare seals should be stored in safe location out of direct sunlight.**

When ordering, parts have model and date of purchase information ready.

For assistance call Dake Customer Service at 1-800-937-3253 or fax to 1-800-846-3253  
e-mail to [customerservice@dakecorp.com](mailto:customerservice@dakecorp.com)

# DAKE 20 TON FLOOR UTILITY PRESS



## Adding oil to pumping unit.

Retract the ram that is connected to the pump.

Remove and place the pump so the pump is horizontal as shown. (Do not disconnect ram from the pump)

Remove filler plug (small plug on the top) (See below figure 1) also lift the pump unit up  $3/8'' - 3/4''$ , and add hydraulic oil until the oil weeps out of this hole. (Figure 2) Replace plug

Remount the unit back on the pump plate (floor models)

Open valve and pump repeatedly until the system is bled of air.

**Pumping unit horizontal for filling**

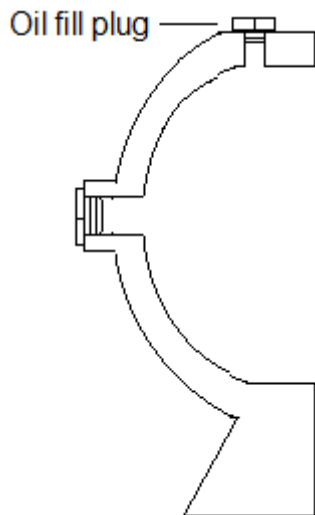
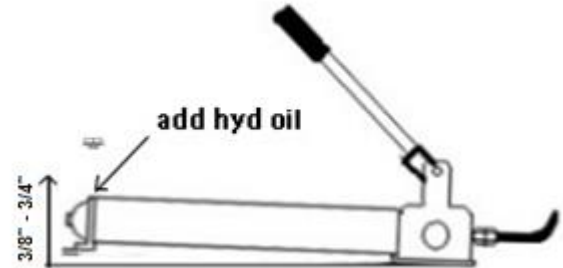


Figure 1

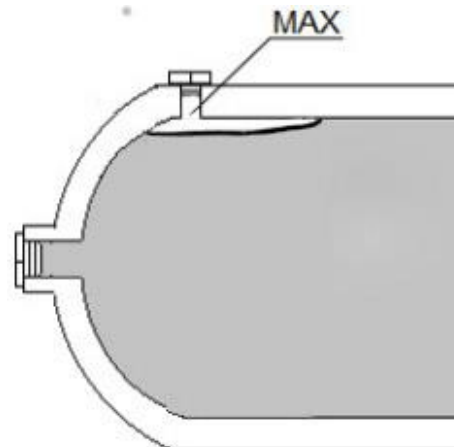


Figure 2