

***SYKES-PICKAVANT MODELS***

***15 TON PRESS 53436010***

***20 TON PRESS 53436210***

***30 TON PRESS 53436410***

***50 TON PRESS 53436510***



**CONTENTS**

1. INTRODUCTION .....	3
1.1. WARRANTY TERMS .....	3
1.2. SECURITY .....	4
1.3. SPECIAL WARNINGS .....	4
1.4. PRECAUTIONS .....	5
2. PRESS DESCRIPTION .....	5
2.1 MAIN PARTS .....	5
2.2 TECHNICAL DATA .....	6
2.3 IDENTIFICATION PLATE .....	7
3. TRANSPORTATION, ASSEMBLING AND OPERATION .....	8
3.1. TRANSPORTATION .....	8
3.2. ASSEMBLING .....	8
3.3. OPERATION .....	11
3.4. TESTING .....	11
4. PRESS USE .....	12
4.1 PRESS BED HEIGHT ADJUSTMENT .....	12
4.2 PISTON POSITION ADJUSTMENT .....	12
4.3 PRESSING OPERATION .....	13
4.4 PISTON ROD RETURN .....	14
5. MAINTENANCE .....	15
5.1 GENERAL VISUAL CHECK .....	15
5.2 PLATE CHECK .....	15
5.3 PLATE CHECK .....	15
5.4 PLATE CHECK .....	15
5.5 MOVING PARTS LUBRICATION .....	16
5.6 NUTS TIGHTENING CHECK .....	16
5.7 NUTS TIGHTENING CHECK .....	16
6. FAILURE CAUSES AND FIXES .....	16
7. DISPOSAL .....	17
7.1 PRESS STORAGE .....	17
7.2 DISPOSAL .....	17
8. HYDRAULIC CIRCUIT .....	18
9. SPARE PARTS .....	19

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## 1. INTRODUCTION

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The purpose of this manual is to provide the user with all the information necessary for the use and maintenance of the press, so as to best ensure the safety of operators who use the machine and to reduce the dangers arising from use.

For proper use of the equipment, it is strongly recommended and it is considered necessary that all instructions in this manual are followed and inspections / maintenance provided in the manual are performed.

Any use of the press, which does not comply with the specifications of this manual has to be considered improper.

Sykes-Pickavant Ltd will not be held in any way responsible for damage or injury that occurred due to improper use of the equipment.

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### 1.1. WARRANTY TERMS

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Warranty and liability for personal injury and / or material decay in the case where at least one of the following points occurs:

- a ) Misuse
- b ) Assembly and / or commissioning incorrectly
- c ) Missed or faulty maintenance and inspection of the equipment
- d ) The press being used while having one or more parts malfunctioning or damaged
- e ) Not following the instructions with regard to handling, assembly, maintenance and use
- f ) Non replacement of parts subject to wear and / or deterioration
- g ) Damage due to agents and / or external causes or natural events

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## 1.2. SECURITY

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Unqualified people are not to use this product and people who do not know how to operate, or have not read this operating manual before use.

The operator using the press must be aware of basic safety standards.

Observe all local health and safety rules in addition to those for this workshop press.

For safe use of the press it is essential to observe the following points:

- a) Read this manual carefully and then work safely.
- b) The press must only be used for the purposes for which it was designed.
- c) Defects, non-compliance, malfunctions should be reported and corrected immediately.
- d) If you find defects, non-compliance or malfunction, the press should not be used until these have been rectified and / or repaired.
- e) Make sure that the press is functioning properly after assembly and initial operation.
- f) Before using the press, ensure that it is stable and well-supported and / or secured to the floor so that it cannot tip over.
- g) When the press is not used ALWAYS bring the piston to the rest position (i.e. with rod returned).
- h) Ensure that the use of the press does not cause damage to other people.
- i) Do not change the setting of the pressure safety limiter valve on the pump.
- j) Only qualified people can perform repairs on the press.
- k) During the use of the press, the operator must wear shoes and protective gloves.
- l) Always wear PPE – e.g dust mask and / or goggles.
- m) Use only original spare parts.

It is mandatory for operators who use the press to be informed about the work safety, prevention of risks, the operation of the press and to have read, understood and accepted in all its parts, the instructions outlined in this manual.

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## 1.3. SPECIAL WARNINGS

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Before starting any maintenance or repairs to the hydraulic system, make sure that it is not under pressure. In the event of pressure, open the discharge valve to return the cylinder in the rest position, i.e. with the piston completely retracted.

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## 1.4. PRECAUTIONS

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The operating instructions given in this manual must be stored in a place near the area of use of the press and accessible at any time.

In support of the operating instructions and safety rules, operators must observe all other local health and safety rules that apply in the workplace.

It is recommended to check that the operator is using the press in compliance with safety regulations and that they are using all the safety devices required.

Ensure all the safety instructions are present on the press, and are clearly legible.

Do not make changes to the press without the approval of the manufacturer.

Use only original spare parts.

Perform periodic inspections as provided in the manual.

In case of detected malfunctions, bring the cylinder in rest position and make sure that the press cannot be used. Repair it as soon as possible.

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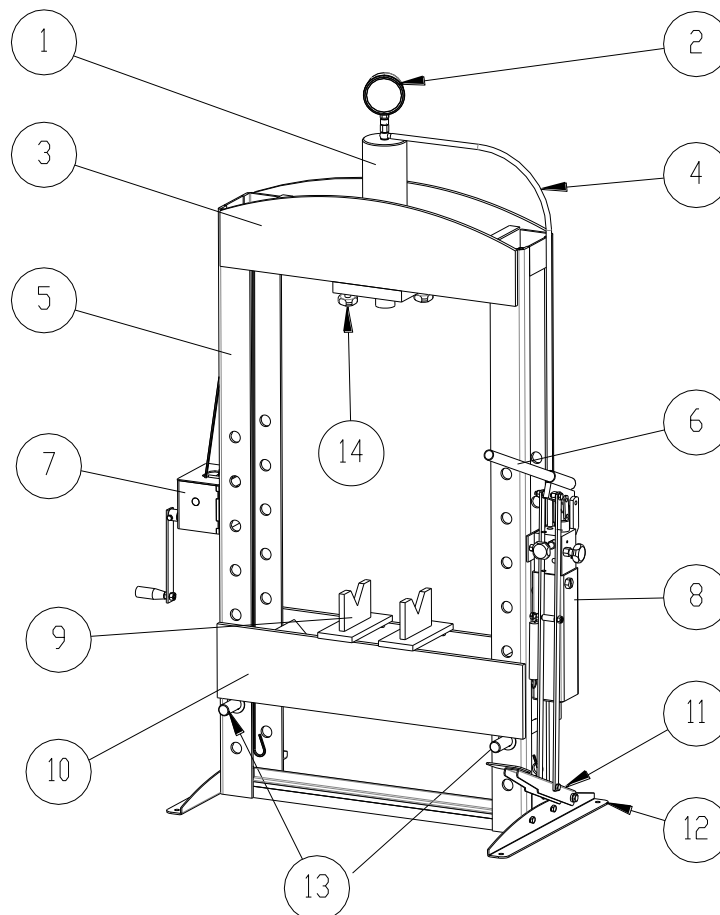
## 2. PRESS DESCRIPTION

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### 2.1 MAIN PARTS

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1	HYDRAULIC CYLINDER
2	GAUGE
3	UPPER BEAM
4	OIL PIPE
5	UPRIGHT
6	LEVER PUMP
7	WINCH GEAR
8	HYDRAULIC PUMP
9	REVERSIBLE PRESS BLOCKS
10	PRESS BED
11	FOOT SUPPORT
12	OPTIONAL PEDAL DRIVE PUMP - USER FIT ONLY
13	PRESS BED SUPPORT PINS
14	PISTON MOUNTING BOLTS

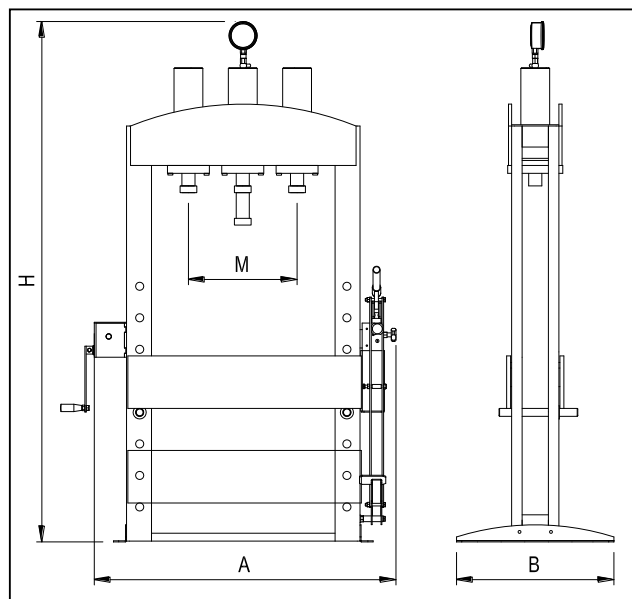
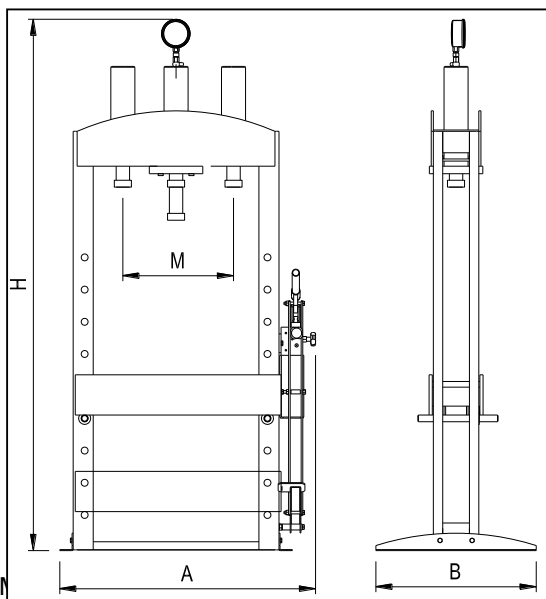
## 2.2 TECHNICAL DATA

### DESCRIPTION

### PRESS MODEL

		53436010	53436210	53436410	53436510
Capacity	ton	15	20	30	50
Weight	kg	113	114	179	320
Dimensions (AxBxH)	mm	790x500x1980	960x500x1980	1150x600x1940	1210x600x2100
Cylinder movement (M)	mm	340	420	520	510
Cylinder diameter	mm	90	90	115	145
Maximum pressure	bar	380	380	380	380
Pump oil quantity	kg	1.2	1.2	1.5	2.4

\* Data is indicative. Sykes-Pickavant reserves the full possibility to change without notice, the information in the table above. For more detailed information, please contact Customer Services.



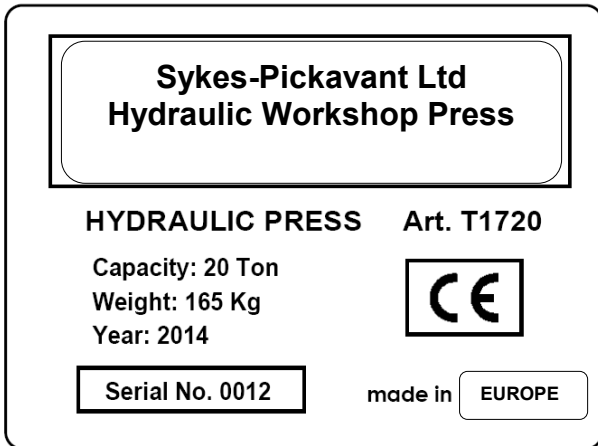
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## 2.3 IDENTIFICATION PLATE

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On the press there is a plate with the following info:

- Press Model
- Weight
- Value of the maximum capacity press



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### 3. TRANSPORTATION, ASSEMBLING AND OPERATION

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#### 3.1. TRANSPORTATION

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The press is delivered packaged in a single package placed on press beds and protected with stretch film and bubble wrap.

The press must be handled only through the use of forklift trucks or workshop cranes of suitable capacity (see table of weights in paragraph 2)

Inside the packaging you will find:

- 1) The main body consisting of: frame, press bed, hydraulic cylinder, hydraulic pump, oil pipe, winch ( for models that qualify )
- 2) Pins support press bed
- 3) Feet
- 4) Lever Winch ( for models that qualify the winch )
- 5) Pressure gauge
- 6) Vent tank pump
- 7) Prisms
- 8) Screws

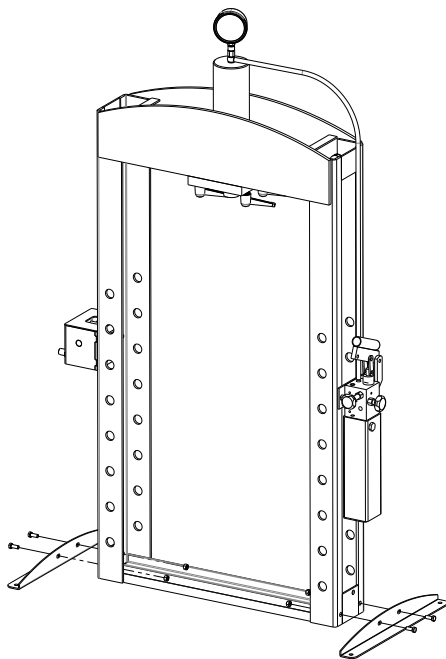
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#### 3.2. ASSEMBLING

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The assembly of the parts must be made according to the following scheme.

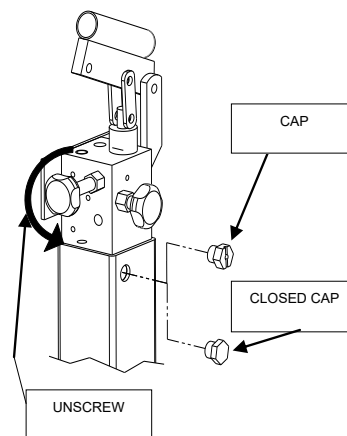
##### STEP 1



Secure the feet as shown, with screws and nuts

##### STEP 2

- a) Replace the sealed cap on the tank of the hydraulic pump with the perforated cap, to ensure the venting necessary for the proper operation of the press.
- b) Unscrew the hand wheel to make sure that all the oil goes into the tank



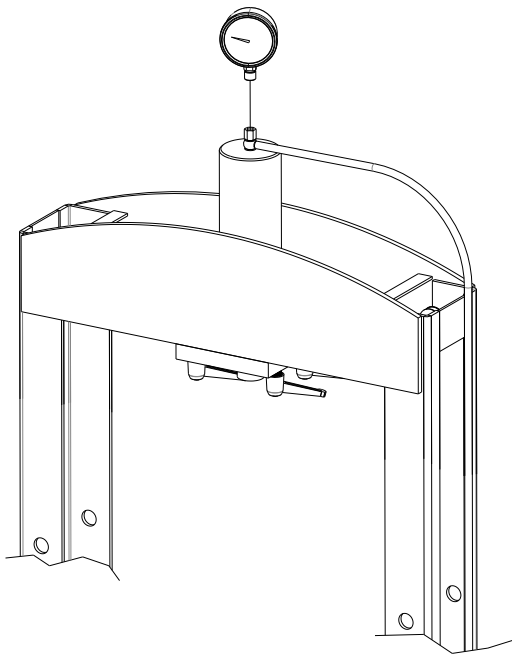


### STEP 3

#### ATTENTION !

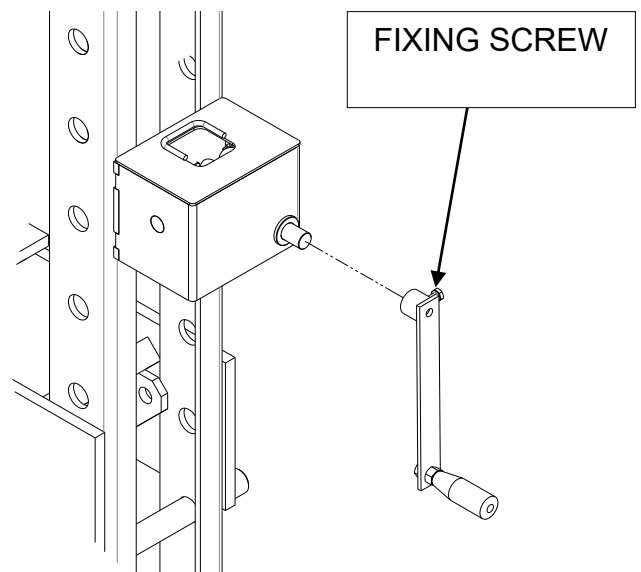
**Before performing this step unscrew the hand wheel for the return of the piston, so that the hydraulic system is not pressurised !!**

- a) Make sure that the piston rod is fully retracted.
- b) Unscrew the bolt securing the hydraulic hose to the cylinder.
- c) Apply PTFE tape to the banjo bolt that secures the pressure gauge supplied to the press.
- d) Make sure the pressure gauge is screwed on and that there are no leaks.



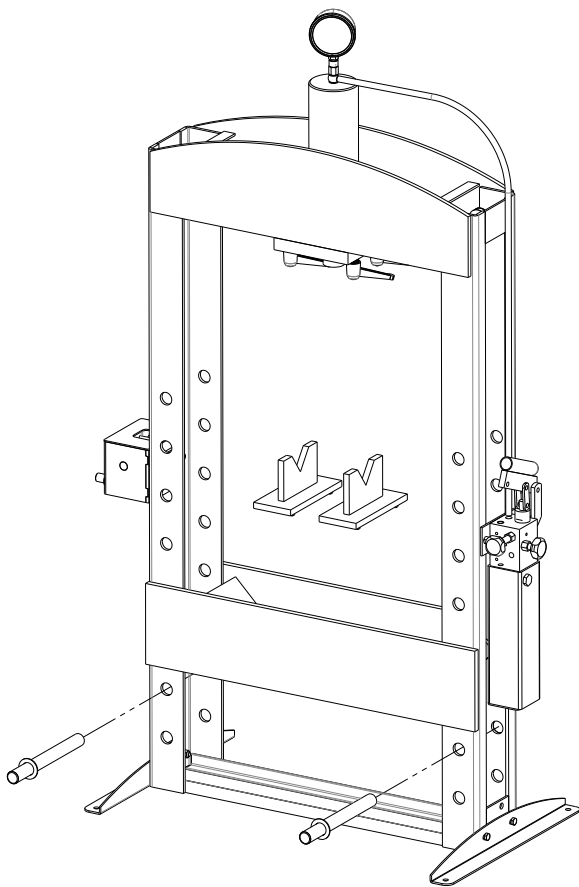
### STEP 4

- a) Insert the handle provided in the pin handling winch.
- b) Tighten the screw and make sure that the handle remains in the home.



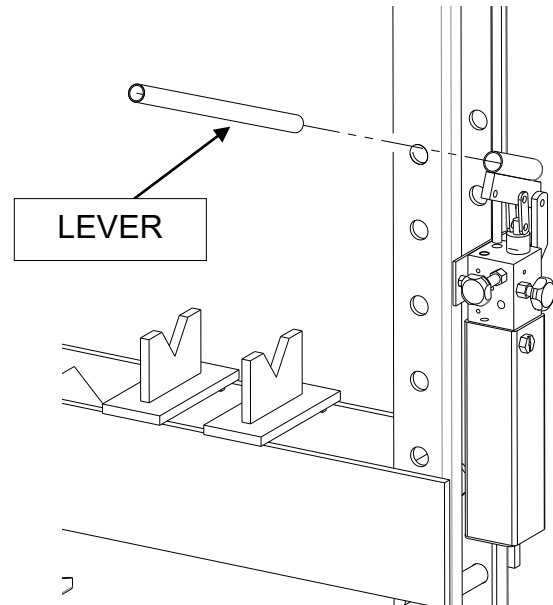
## STEP 5

- a) If the press is equipped with a winch, operate the winch only to lift the press bed and take it to the desired position; never use with working load on the winch cables. If the press is equipped with a winch, the press bed must be lifted manually ( operation to be performed by two people )
- b) Insert the support pins of the press bed and make sure the washer is in contact against the bed of the press.
- c) Lower the bed until it rests completely on the support pins.
- d) If the press is equipped with a winch ensure that the steel cables are not used to support any working load.
- e) Place the reversible blocks above the press bed.



## STEP 6

- a) Insert the lever to operate the pump



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### 3.3. OPERATION

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Position where the press has to be placed must have the following characteristics:

- 1) The floor surface should be flat and hard
- 2) The floor must have a load capacity sufficient to sustain the sum of the following weights:
  - Weight of the press (see table of weights in paragraph 2)
  - Weight of the operator
  - Variable weights depending on the use for which the press is intended
- 3) Ensure there is sufficient free space around the area free of any obstacles
- 4) The environment should be well lit

The press must be fixed to the floor with suitable fixings to ensure safety & stability.

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### 3.4. TESTING

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It's important to perform an initial inspection before using the press in the location where it is installed.

The items to be checked are:

- 1) General visual check of the machine to identify any damage, lack of parts and appropriate assembly.
- 2) Check the stability of the press
- 3) Check the operation of the piston vacuum cycles. Check that the piston extends and returns fully.
- 4) Make sure there is no leakage of oil, check the hydraulic hose for wear or damage and that the connections are tight.
- 5) Check that the piston can move horizontally when the piston mounting bolts are slightly loosened.

If you experience damage, lack of parts, lack of stability, incorrect assembly, oil leaks, etc., provide a restore / repair the differences before using the machine.



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## **4. PRESS USE**

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### **4.1 PRESS BED HEIGHT ADJUSTMENT**

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Before moving the press bed make sure that the hydraulic circuit is not pressurised, that the press bed is free and there is nothing placed on it.

To move the press bed, proceed as follows:

- 1) Lift the press bed
- 2) Remove the support pins
- 3) Insert the pins into the first free hole under the beam of the press bed
- 4) Make sure that the pins are fully inserted (washers rest against the frame of the press bed)
- 5) Lower the bed until it rests above the inserted support pins.
- 6) Make sure the bed is well supported and secure before use.

Always use the press bed in a horizontal position, the support pins at the same level; and **DO NOT EVER** use the press bed at an angle.

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### **4.2 PISTON POSITION ADJUSTMENT**

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The press is equipped with a system that allows the piston to move horizontally along the upper beam.

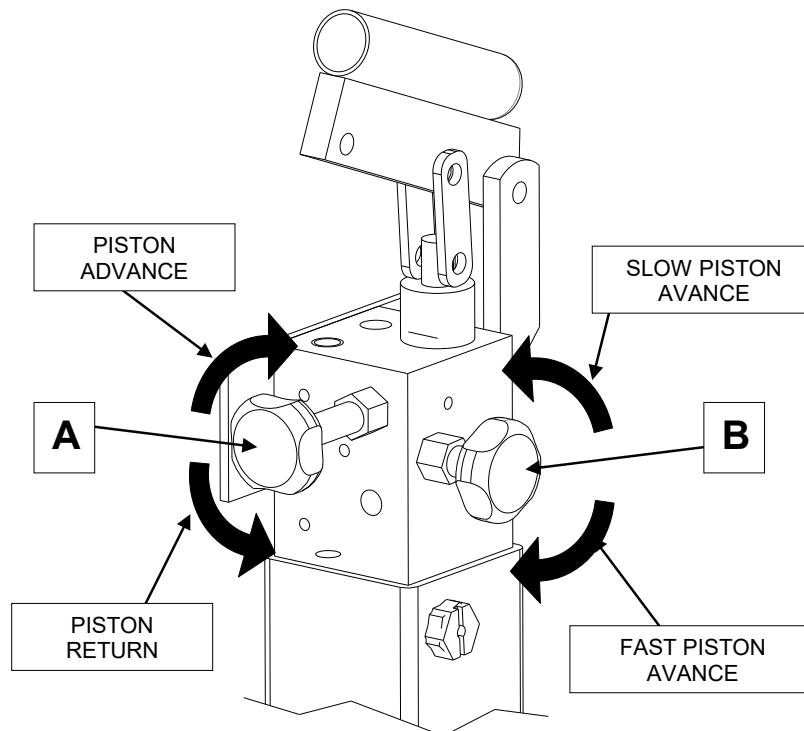
To move the piston, proceed in the following way:

- 1) Make sure that the hydraulic system is not under pressure (the pressure gauge must be zero) and that the piston rod is fully retracted.
- 2) If tight, slightly loosen the bolts used to lock the piston body.
- 3) Manually move the piston horizontally and bring it to the desired location.
- 4) Tighten the locking / securing bolts to ensure that the piston does not move freely. Do not overtighten these bolts; they are only to prevent unwanted movement of the piston when in work. Excessive tightening may affect correct operation of the press.
- 5) Ensure that when moving the cylinder hose circuit, this does not touch or come close to cutting surfaces or heat sources that can cause damage.

### 4.3 PRESSING OPERATION

The hydraulic circuit of the press is equipped with a pump with two types of advancement of the rod: one fast and one slow. The fast speed allows for rapid piston rod movement – but does not allow the press to exert high forces onto a workpiece; while the slow speed allows slow movement of the piston rod and for the creation of high forces to be generated onto the workpiece. To apply force with the press – use as follows:

- 1) Turn in the control knob A, clockwise until closed.
- 2) Turn in the control knob B, clockwise until closed to select fast movement of the piston rod.
- 3) Operate the pump by moving the lever up and down, to bring the base of the piston rod close to the workpiece being pressed; and exert the desired pressure.
- 4) To exert higher forces, turn out the control knob B anti-clockwise for a few complete rotations.
- 5) Operate the pump by moving the lever up and down to extend the piston rod
- 6) Gauge the amount of force exerted by the press by comparing the value indicated on the pressure gauge with the conversion table located on the upper beam of the press.



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#### **4.4 STEM RETURN**

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To retract the piston rod, turn out control knob A anti-clockwise for about 3 or 4 complete rotations, and wait until piston rod is fully retracted into the hydraulic cylinder

When the piston is fully retracted, tighten control knob A.

**WARNING!!** If the control knob is not screwed in, the hydraulic circuit will not pressurise and the piston will not operate correctly.

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## 5. MAINTENANCE

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To maintain the press in a good state of service, and to ensure the safety of the operators & those nearby, it is necessary to perform periodic inspections.

Before performing any maintenance:

Make sure that maintenance is performed only by qualified personnel



### **ATTENTION!**

#### **1 ) Make sure the hydraulic circuit is NOT under pressure**

2 ) Make sure that there is no load on press bed

Please refer to maintenance duties as below:

	ACTION	WHEN			
		DAILY	WEEKLY	6 MONTHS	2 YEARS
1	General visual inspection	X			
2	control plates	X			
3	Check no hydraulic leaks	X			
4	general cleaning		X		
5	Greasing moving parts			X	
6	Check tightness of bolts			X	
7	Changing the oil of the hydraulic pump				X

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### 5.1 GENERAL VISUAL CHECK

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Check the status of the press and the presence of any damaged or missing parts.

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### 5.2 PLATE CHECK

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Check the identification label of the model is readable.

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### 5.3 PLATE CHECK

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Check that there is no leakage of oil from the hydraulic circuit .

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### 5.4 PLATE CHECK

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Clean the machine from the accumulation of dust, dirt, grease or oil. Use appropriate cleaning detergents.

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## 5.5 MOVING PARTS - LUBRICATION

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Lubricate moving parts of the pump and the pedal (if present ). Lubricate the sliding guides for the horizontal motion of the piston, the gears of the winch, the pulleys of the cable winch and the winch cable.

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## 5.6 NUTS TIGHTENING CHECK

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Check bolts for mounting feet, pump, the pedal and winch (if present) are tight.

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## 5.7 NUTS TIGHTENING CHECK

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Make sure that the piston rod is fully retracted, unscrew the cap on the tank and remove the used oil from the pump reservoir. Add new oil through the filling hole (oil plug) to the level of the hole. Use hydraulic oil with a viscosity of 22 ° to 25 °. Refer to the table in paragraph 2 for the required amount of oil. If in doubt use a multi-purpose hydraulic grade oil.

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## 6. FAILURE CAUSES

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The failure of the press or its operation may be due to some simple reasons. Please see table below showing the main reasons for failure / malfunction.

If it is impossible to determine the cause of failure, please contact our technical department.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
The piston does not move when operating the pump	Return control knob valve open	Close the return valve stem by turning the knob A clockwise (see section 4.3)
	Tank vacuum pump	Fill the master cylinder reservoir.
	Oil leak from the hydraulic circuit	Use hydraulic oil with a viscosity of between 22 ° and 25 °
The piston moves very slowly when operating the pump	Set to slow operational speed.	Close the selector valve speed by turning the knob B clockwise (see section 4.3)
	Oil leak from the hydraulic circuit	Find the leak and restore the hydraulic circuit.
The piston slides horizontally or scrolling is difficult	The locking bolts are tightened	Loosen the locking bolts
	The sliding guides are not well lubricated	Lubricate the slides with grease
	There is accumulation of dust or dirt between the sliding guides and the support bushings of the piston	Clean the slide guides
The press is not stable	The side foot bolts are loose	Tighten the bolts
	The press is not fixed to the ground	Ensure the press in an upright position and tighten the bolts of the side feet
The press bed is not stable or does not fit snug on the support pins	The pins are not well inserted	Check the position of the pins
	The winch cables are under tension	Operate the winch so that the press bed is lowered fully onto the pins.
The pedal for actuating the pump does not function	The return spring is disconnected	Reconnect the return spring
	The pedal bolts are not tight	Tighten the bolts
Winch not working	The winch lever is not secure	Tighten the lever
	The steel winch cable has slipped out of the pulley support rollers	Turn the winch handle to loosen the cable. Correctly position the cables on the pulley rollers
	The steel cable is sliced	Replace steel cable



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## **7. DISPOSAL**

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### **7.1 PRESS STORAGE**

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Before placing the press into storage:

- 1) Make sure that the hydraulic system is not under pressure
- 2) Remove any objects from the press bed
- 3) Protect the moving parts with grease and / or lubricant
- 4) Protect the unpainted parts with anti-corrosion protective liquid

Store the press in a dry place away from dust and atmospheric agents

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### **7.2 DISPOSAL**

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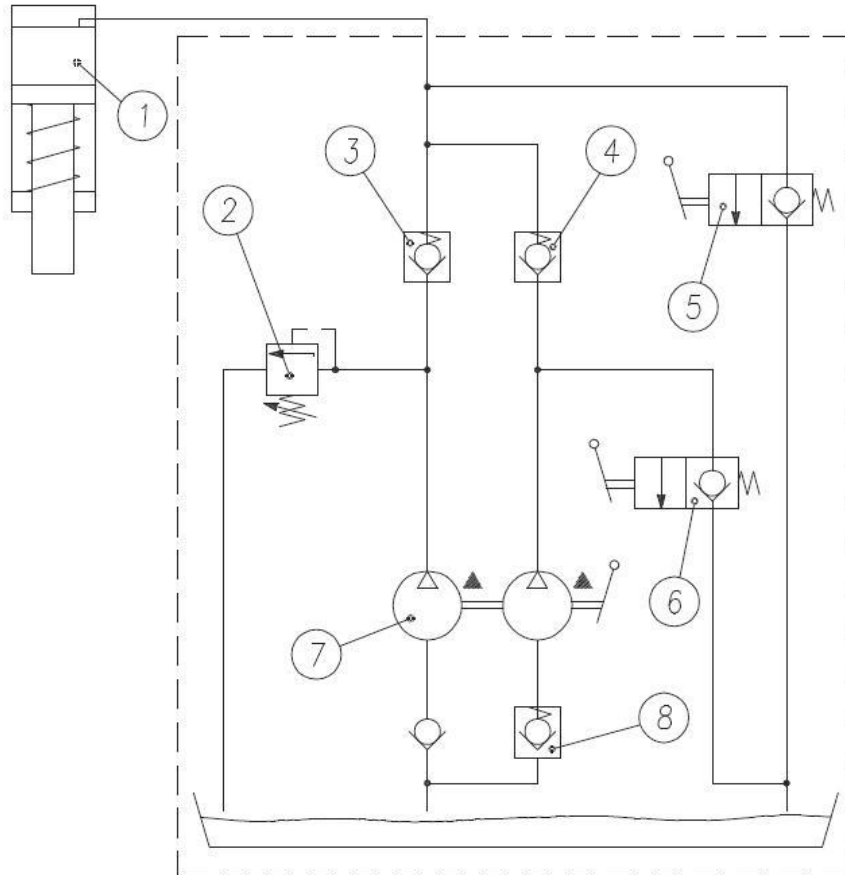
When the press has reached the end of life, disposal of parts must be done in the correct way.

The rubber hoses, fluids and waste oil must be disposed of according to law.

Appropriate measures must be taken to dispose of the press and its component parts in accordance with local environmental regulations; failure to do so may result in prosecution relating to your breaching localised rules. If in any doubt – contact your local authorities for disposal advice.

Sykes-Pickavant Ltd shall not be responsible for your non-compliance in this matter.

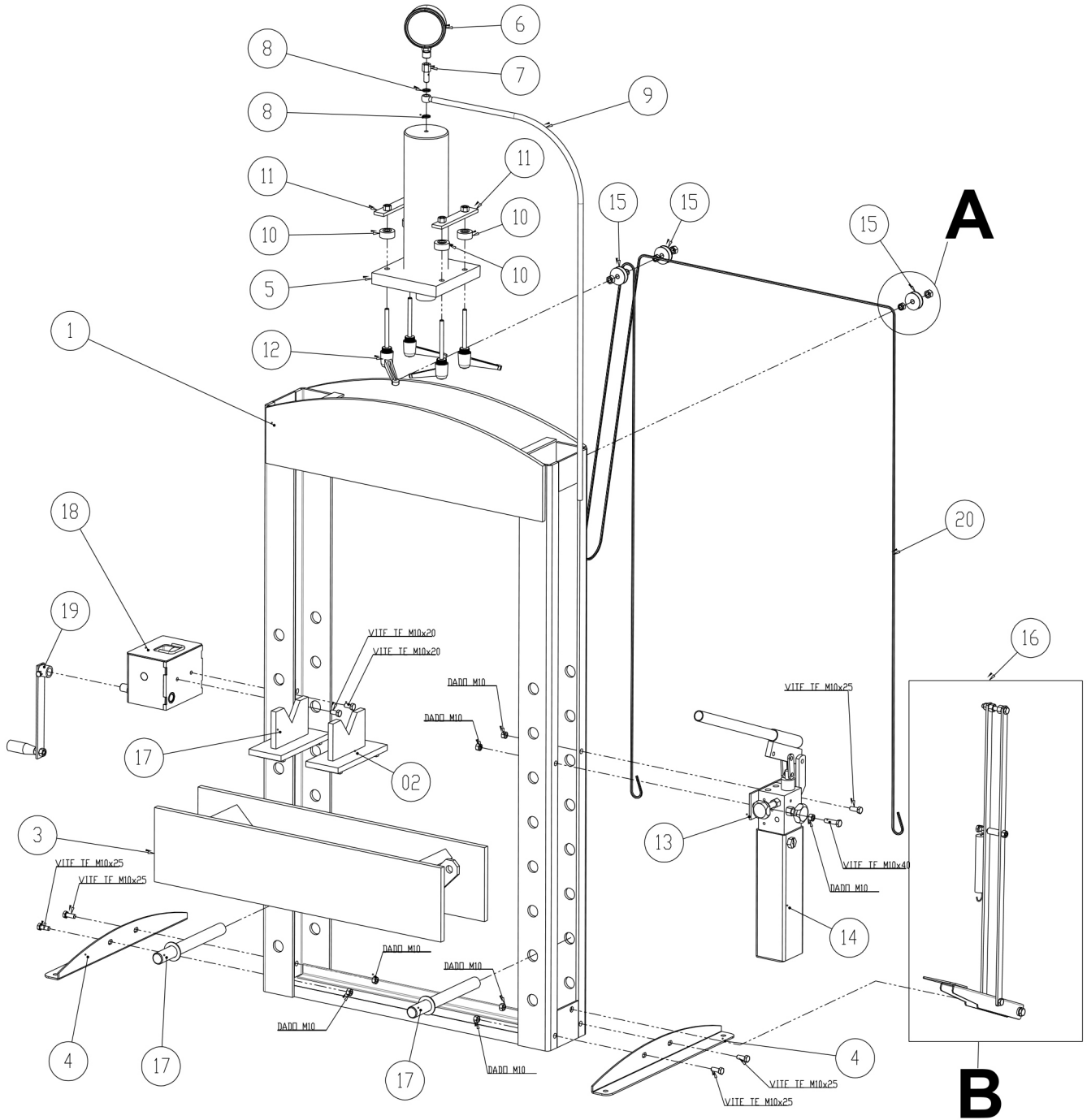
## 8. HYDRAULIC CIRCUIT



### DESCRIPTION

1	Cylinder
2	Pressure limiting valve
3	Valve outlet
4	Valve outlet
5	Control valve exhaust / return rod
6	Regulating valve stem forward speed
7	Manual pump
8	Check valve inlet

**9. SPARE PARTS**



Winch cable & roller schematic

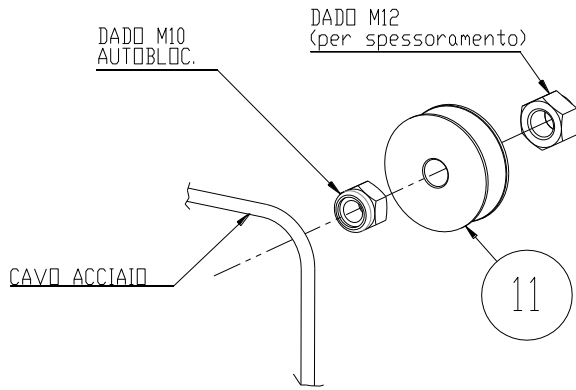


Image A

Accessory pedal kit – schematic.  
Not factory fit – user fit only.

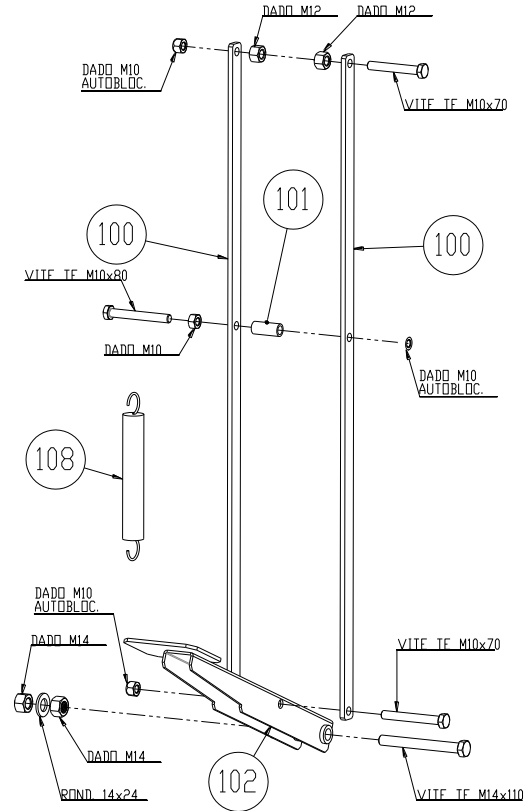


Image B

	Part Number				Description	QTY
	15 TON	20 TON	30 TON	50 TON		
1	534360-01E	534362-01E	534364-01E	534365-83E	PRESS FRAME WITH PERSONALIZED ENGRAVING	1
	534360-01	534362-01	534364-01	534365-50	PRESS FRAME STD	
02	534362-02	534362-02	534364-02	534365-02	V BLOCK	2
3	534360-03	534362-03	534364-03	534365-03	MOBILE CROSS PRESS 30T	1
4	534362-04	534362-04	534365-04	534365-04	FOOT PRESS	2
5	534360-05	534362-05	534364-05	534365-05	CYLINDER	1
6	534362-06	534362-06	534362-06	534362-06	GAUGE	1
7	534362-07	534362-07	534362-07	534362-07 & 534365-07	PRESS GAUGE FITTING ADAPTOR	1
8	534362-08	534362-08	534362-08	534362-08 & 534365-08	PRESSURE SEAL	2
9	534362-09	534362-09	534364-09	534365-09	HIGH PRESSURE OIL PIPE	1
10	534360-10	534360-10	534364-10	534364-10	SLIDING CYLINDER SPACER	4
11	534360-11	534360-11	534364-11	534365-11	CYLINDER SLIDING PLATE	2
12	534362-12	534362-12	534362-12	534362-12	CYLINDER LOCKING HANDWHEEL	2
	534360-12	534360-12	534365-12	534365-12	SNAP LEVER	4
13	534362-13	534362-13	-	-	PUMP HOOKING PLATE	1
14	534362-14	534362-14	534364-14	534365-14	PUMP	1
15	-	-	534365-15	534365-15	PULLEY FOR WINCH CABLE TRANSMISSION	3
16	534360-16	534360-16	534360-16	534362-16	PEDAL KIT	1
17	534362-17	534362-17	534364-17	534365-17	MOBILE TRANSFER SUPPORT PIN	2
18	-	-	534365-18	534365-18	MANUAL WINCH	1
19	-	-	534365-19	534365-19	COMPLETE LEVER WINCH	1
20	-	-	534365-20	534365-76	STEEL CABLE DIAMETER 5mm	1