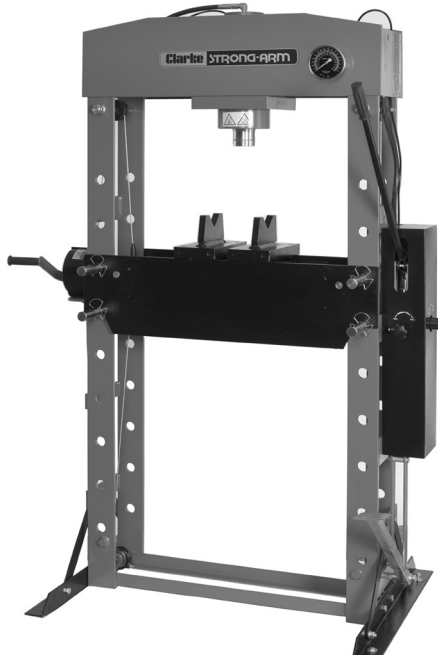


Clarifire® STRONG-ARM



50 TONNE HYDRAULIC PRESS MODEL NO: CSA50FP

PART NO: 7615202

OPERATION & MAINTENANCE INSTRUCTIONS



WARNING: Read these instructions before using the press

GC0516

INTRODUCTION

Thank you for purchasing this CLARKE 50 Tonne Hydraulic Press.

Before attempting to operate the machine, it is essential that you read this manual thoroughly and carefully follow all instructions given. In doing so you will ensure the safety of yourself and that of others around you, and you can also look forward to the press giving you long and satisfactory service.

GUARANTEE







This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

SAFETY SYMBOLS

	Read instruction manual before use		Wear safety glasses
	Wear Safety Shoes		Hazard;-shattered workpiece
	Hazard:- crushed hand		s

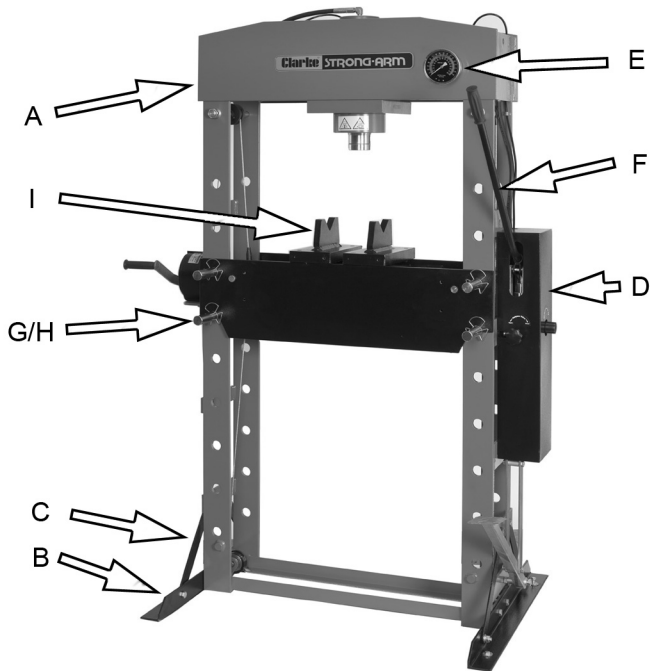
The above safety symbols appear on the product.

SAFETY PRECAUTIONS

1. Due to the weight of the press, lifting equipment and the help of an assistant will be required during installation. Fix the press to the floor using suitable anchor bolts.
2. Before starting work, check for signs of cracked welds, loose or missing bolts, damaged screen, or any other damage. Do not use if any of these conditions exist. Have repairs made only by authorised service centre.
3. Before work, always ensure that hydraulic hoses and couplings are completely sound.
4. Never tamper with the press components or modify them. The safety valve is set and sealed at the factory; do not attempt to adjust the setting.
5. Use only the recommended hydraulic oil.
6. The components of this press are designed to withstand the rated load. Do not substitute any other components or exceed the rated load of the press.
7. Before applying pressure, ensure the workpiece is firmly secure and stable.
8. Always clean up spills of hydraulic oil immediately as this can be dangerous in a workshop environment.
9. Do not allow any person who is unfamiliar with hydraulic presses, to use the press unless they are under direct supervision.
10. Keep children and unauthorised personnel away from the work area.
11. Always position the safety screen directly front of the workpiece.
12. Always apply the load under the centre of the ram. Offset loads can damage the ram and may cause the work piece to be ejected.
13. Always ensure the work piece is properly supported by the press bed.
14. When using accessories such as pressing plates, be certain they are centered below the ram and are in full contact with the bed.
15. Parts being pressed may shatter or be ejected from the press. Always use adequate guards and wear eye protection and protective clothing when using this press.
16. Keep hands and fingers away from parts that may pinch or shift.
17. Never use extension tubes to increase the length of the pump handle. Excessive effort can cause damage and/or accidents.
18. Wear ANSI approved impact safety goggles and heavy duty work gloves.
19. Failure to heed these warnings may result in damage to the equipment, or serious personal injury.

UNPACKING & INVENTORY

Ensure the press and its components suffered no damage during transit and that all components are present. Should any loss or damage become apparent, please contact your CLARKE dealer immediately. The following items should be present in their packages.



A	1 x Frame with ram and carriage attached & lifting winch connected	G	4 x Bed Support Pins
B	2 x Base Supports	H	8 x Pin retaining spring clips
C	4 x Stay Bars	I	2 x Bed blocks (V-blocks)
D	1 x Pump (with hose attached) & pump cover		1 x Protective Screen assembly
E	1 x Pressure Gauge		2 x Screen mounting brackets
F	1 x Pump Handle		1 x Fixing Kit (nuts/bolts/washers)

ASSEMBLY



WARNING: DUE TO THE WEIGHT OF THE PRESS, LIFTING EQUIPMENT OR THE HELP OF AN ASSISTANT WILL BE REQUIRED DURING INSTALLATION.

TOOLS REQUIRED

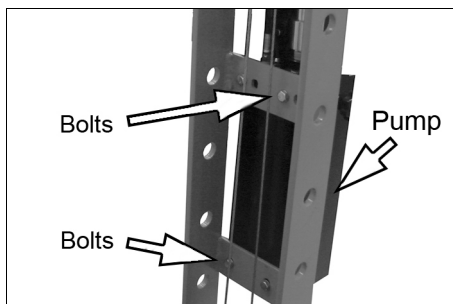
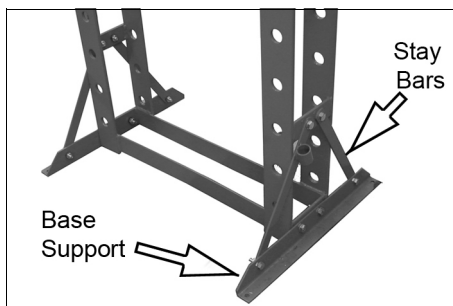
- Wrench/Socket Set
- PTFE tape
- Hex Keys

ASSEMBLY PROCEDURE

IMPORTANT: *The press must be firmly secured to a firm and level floor using expansion bolts (not supplied). Holes are provided in the feet for this purpose.*

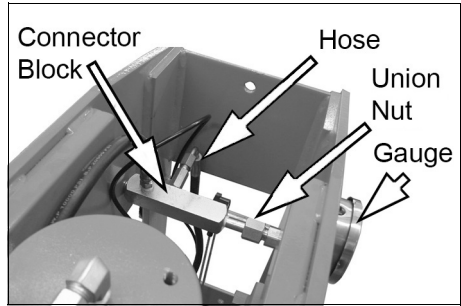
IMPORTANT: *Do not locate your press where it will be open to the elements, as severe weather conditions will damage the hydraulic parts.*

1. With the help of an assistant, attach the base supports to the frame using the nuts, bolts and washers.
2. Add the stay bars to each side and bolt into place.
3. Using suitable lifting equipment if required, lift the frame assembly upright and manoeuvre it to its intended location in the workshop.
4. Bolt the hydraulic pump into position on the side of the frame using the fixing bolts and washers.



5. Unfasten the protective hose cap (not shown here) and screw the hose onto the connector block.

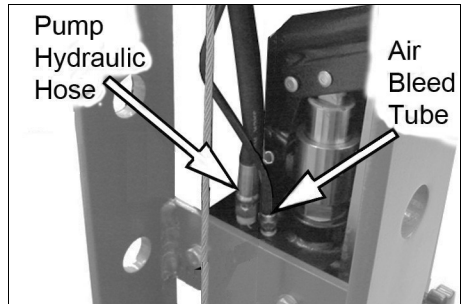
- We recommend sealing the thread with PTFE tape. Take care not to let any oil escape while connecting the hose.



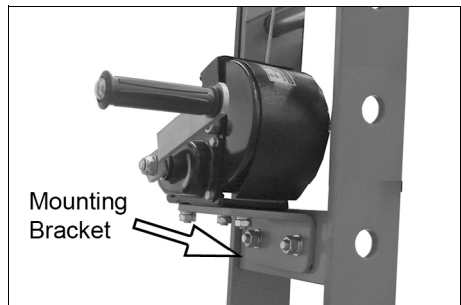
6. Fit the pressure gauge to the union nut on the inside of the frame. Check the gauge face is upright before tightening the union nut.

7. The air bleed tube is connected to the ram at one end. Connect the free end to the pump, using an open wrench and sealing the thread with PTFE tape (not supplied).

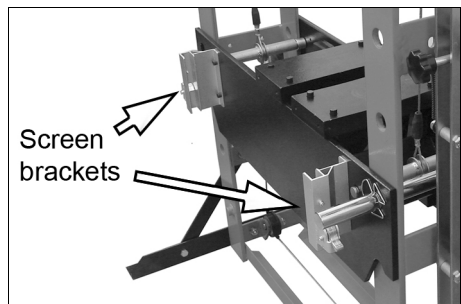
- The winch is supplied disconnected from the frame but connected to the lifting cable ready for use. The handle will be pointing towards the middle of the packing crate during transit.



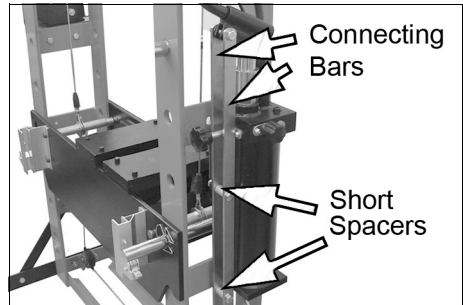
8. Fit the winch as shown with the handle facing away from the press before securing it to the frame with the mounting bracket, nuts, bolts and washers.



9. Bolt the protective screen brackets to the pressing bedplate.

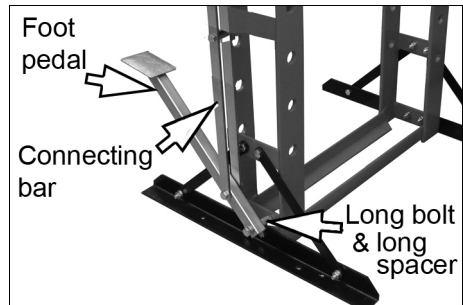


10. Bolt the connecting bars to the operating arm of the pump. Bolt them together as a pair fitting the short spacers in both positions as shown.

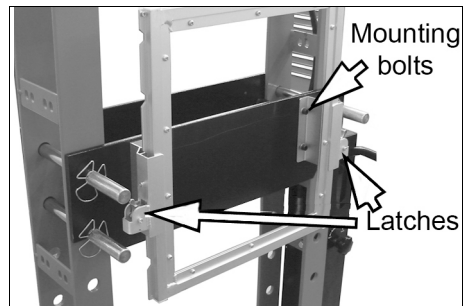


11. Bolt the foot pedal to the frame using the long bolt, long spacer, nut and washers.

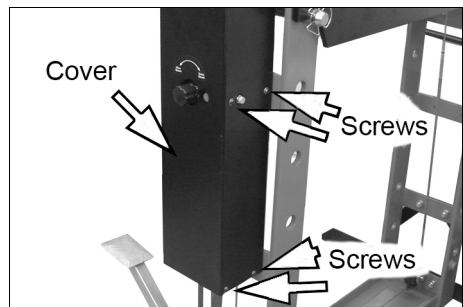
12. Connect the lower end of the connecting bars to the foot pedal.



13. Fit the protective screen assembly to the brackets and ensure it can be set in one of the available positions using the latches on each side.



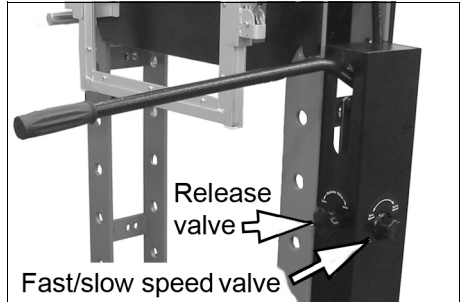
14. Use the screws supplied to fit the protective cover over the pump assembly.



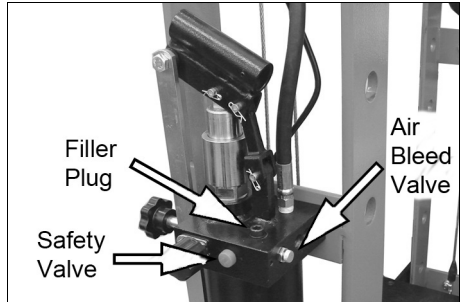
PREPARATION FOR USE

PURGING THE HYDRAULIC SYSTEM

1. Open the release valve by turning anti-clockwise.
2. Pump the handle or foot pedal several full strokes to eliminate any air bubbles from the system.
3. Close the release valve, turning clockwise.

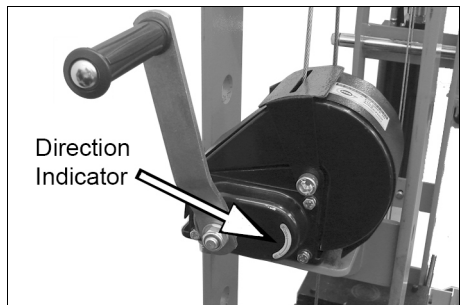


4. Air can subsequently be bled from the system at any time using the bleed valve on the side of the pump.
5. Turn anti-clockwise to release and listen for air escaping before re-tightening.
6. Top up the hydraulic oil to the lower level of the filler plug with CLARKE hydraulic oil, Part No. 3050830.

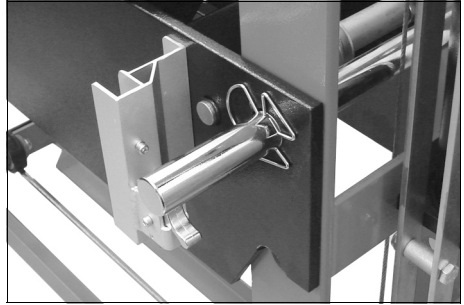


POSITIONING THE PRESSING BED

1. Use the winch to raise the pressing bed into a suitable position.
 - The arrows on the winch indicate the direction of movement.
 - The pressing bed should be as close as possible to the ram when the workpiece is mounted on it.

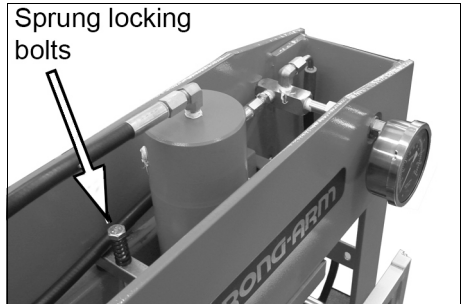


2. When satisfied that the bed is at the correct height insert the locking pins into their positions and secure with the spring clips.



POSITIONING THE RAM

1. Slide the carriage along the cross-beam.
2. Lock it in position with the four sprung locking bolts.
 - Always position the ram directly above the workpiece.

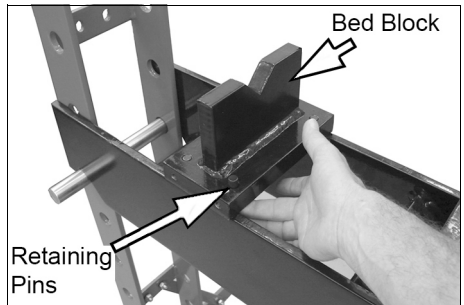


POSITIONING THE PRESSING BED BLOCKS

The bed blocks can be placed on the bed with either the flat face or the V-supports facing upwards.

They are prevented from slipping out of position by the retaining pins which drop down within the confines of the bed side members.

Check all parts are secure and correctly aligned before using the press.



OPERATION

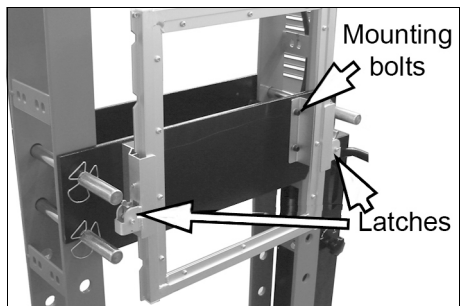
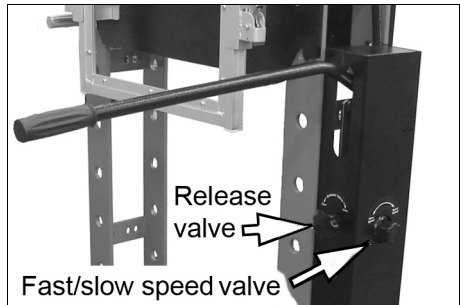
1. Place the workpiece on the bed. It must be completely stable and supported by packing or shims where required. Pressing plates (bed blocks) are supplied, which locate on the bed. Place the workpiece on these to give it stability.



CAUTION: DO NOT POINT LOAD SUCH ACCESSORIES AS THEY ARE NOT DESIGNED TO TAKE THE FULL FORCE OF THE RAM IN ONE SPOT. ENSURE THEY ARE ADEQUATELY SUPPORTED.

NOTE: Any packing pieces or shims used *MUST* be capable of withstanding the pressure that will be brought to bear, and *MUST* be of sufficient size with sufficient surface area, so as to avoid the possibility of slipping or springing out. Mating surfaces *MUST* be horizontal so that the force being exerted will *NOT* be at an angle.

2. Close the release valve by turning clockwise until tightly closed.
3. Select either SLOW SPEED or FAST SPEED using the knob on the side of the pump cover.
 - Fast speed allows faster movement but greater effort will be required.
4. Pump the handle or foot pedal to bring the ram very lightly into contact with the workpiece.
5. Manoeuvre the workpiece or slide the ram to one side so that the desired point of contact is directly beneath the centre of the ram.
6. When satisfied that the workpiece is correctly aligned and is completely stable in that position, slide the protective screen into position before starting any pressing.
 - The latches will support the screen in a selection of positions.



7. Slowly pump the handle or foot pedal so that the ram begins to exert pressure on the workpiece.
8. Continue to pump the handle and constantly monitor the pressing, ensuring the ram and work remain completely in line with no risk of slipping.
9. Observe the reading on the pressure gauge and take care not to exceed the rated working pressure of the press.
 - The scale from 50 metric tonnes upward is highlighted in red, indicating pressure is being applied above the rated maximum working pressure.
10. When the pressing process is complete, turn the release valve control knob anticlockwise in small increments to release ram pressure and allow removal of the workpiece and lower the protective screen.

TROUBLESHOOTING

Problem	Probable Cause	Remedy
Pump will not work	Dirt on valve seat/worn seals.	Bleed pump unit or have unit overhauled with new seals by your Clarke dealer.
Pump will not produce pressure Pump feels hesitant under load Pump will not lower completely	Air-lock.	Open the release valve and remove the oil filler plug. Pump the handle a couple of full strokes and close the release valve. Replace the filler plug.
Pump will not deliver pressure	Reservoir could be over filled or have low oil level.	Check oil level by removing the filler plug and topping up to the correct level.
Pump feels hesitant under load	Pump cup seal could be worn out.	Have the cup seal replaced by your Clarke dealer.
Pump will not lower completely	Air-lock.	Release air by removing the filler plug.

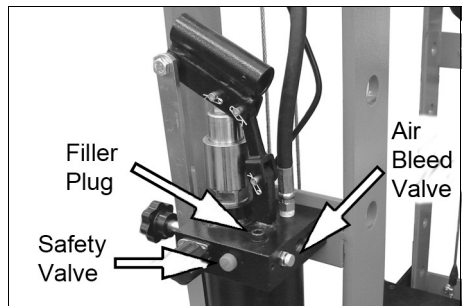
MAINTENANCE

ROUTINELY

- A visual inspection must be made before each use of the press, checking for leaking hydraulic fluid and damaged, loose, or missing parts. Clean off any foreign material from the ram carriage. Keep the protective screen clean at all times.
- If the press appears to be damaged in any way, is found to be badly worn, or operates abnormally **SHOULD BE REMOVED FROM SERVICE** until the necessary repairs are made.
- If the press is not to be used for any length of time, store it with the ram piston withdrawn to protect the surface of the moving parts.

PERIODICALLY

- Check the press to make sure all bolts are tight and inspect for cracked welds, bent, loose or missing parts.
- Owners and/or users should be aware that repair of this equipment requires specialised knowledge and facilities. It is recommended that a thorough annual inspection of the press be made and that any defective parts be replaced with genuine Clarke parts.
- Check the hydraulic connections for leaks. Replace or properly repair any damaged or leaking hydraulic components before using. In the event of leaking seals. Oil can be topped up via the filler plug on the top of the pump after removing the pump cover.
- Oil should be level with the bottom of the hole. If necessary top up with CLARKE hydraulic oil, Part No. 3050830. **This task is carried out with the ram fully retracted.**
- If any rust is apparent it must be removed completely and the paint restored.



DISPOSAL OF UNWANTED MATERIALS

One of the most damaging sources of environmental pollution is oil products. Never throw away used oil with domestic refuse or flush it down a sink or drain.

Collect any oil in a leak proof container and take it to your local waste disposal site.

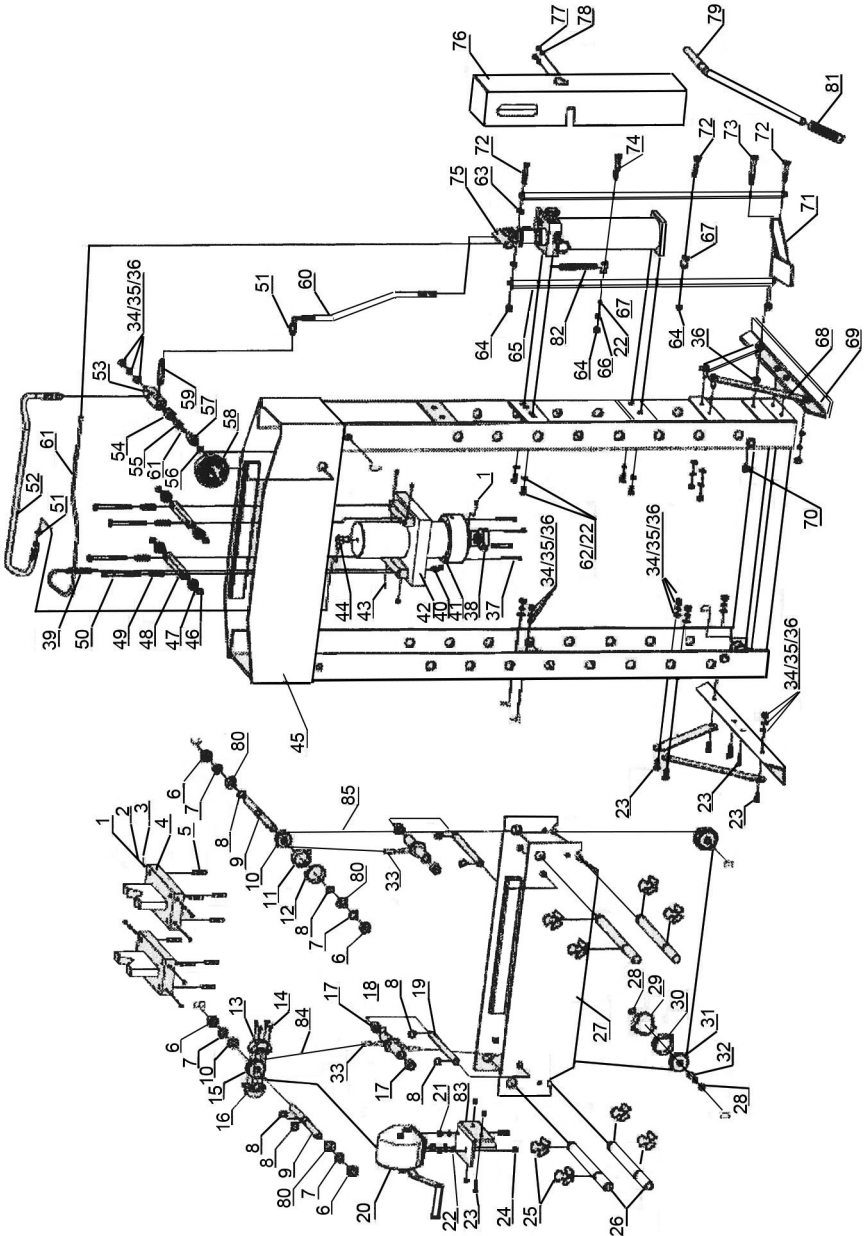
Should hydraulic components become completely unserviceable and require disposal, draw off the oil into an approved container and dispose of the product and the oil according to local regulations.

When requesting spare parts, please quote the prefix XXCSA50FP followed by the number on the diagrams/parts lists here.

TECHNICAL SPECIFICATIONS

Rated Load	50 Tonne
Operating Pressure	10,000 Mpa
Bursting Pressure	20,000 Mpa
Ram Travel	203 mm
Ram Shaft Diameter	68 mm
Net Weight	298 kg
Dimensions D x W x H	800 x 1325 x 1870 mm
Throat Width	725 mm
Throat Depth (Ram to pressing plate)	Platform at highest;- 34 mm Platform at lowest;- 1014 mm
No of bed positions	8 @ 140 mm centres)
Ram travel per stroke	3 mm
No of strokes to full extension	74
Pressure Gauge type	Accuracy class 2.5
Length of Handle	600 mm

FRAME ASSEMBLY PARTS DIAGRAM



FRAME ASSEMBLY PARTS LIST

NO	DESCRIPTION
1	Screw
2	Spring
3	Steel Block
4	Pressing Block
5	Screw
6	Nut
7	Lock Washer
8	Circlip
9	Axle
10	Small Cable Roller
11	Safe Guard 3
12	Safe Guard 4
13	Safe Guard
14	Screw
15	Wire Roller
16	Safe Guard 2
17	Bush
18	Bush Assembly
19	Bed Lifting Beam
20	Winch
21	Nut
22	Washer
23	Bolt
24	Bolt
25	Retaining Spring Clip
26	Bed Locating Pin
27	Pressing Bed
28	Circlip
29	Safe Guard 2
30	Safe Guard 1
31	Large Wire Roller
32	Roller Pin
33	Protective Cable Sleeve
34	Washer

NO	DESCRIPTION
35	Lock Washer
36	Nut
37	Screw
38	Collar
39	Spring
40	Joint
41	Ram Assembly
42	Ram Mounting Plate
43	Screw
44	Elbow
45	Frame
46	Circlip
47	Bearing
48	Positioning Beam
49	Spring
50	Bolt
51	O-Ring
52	Hydraulic Hose (Ram)
53	Connecting Block
54	Union Nut (gauge)
55	Screw
56	Nylon Ring
57	Gauge Fitting
58	Pressure Gauge
59	Direct Joint
60	Hydraulic Hose (Pump)
61	PU Hose
62	Bolt
63	Bush
64	Nut
65	Connecting Rod
66	Bush
67	Spacer Tube
68	Stay Bar

NO	DESCRIPTION
69	Base Support
70	Nut
71	Foot Pedal
72	Bolt
73	Bolt
74	Bolt
75	Pump Assembly
76	Pump Guard
77	Hex Head Machine Screw

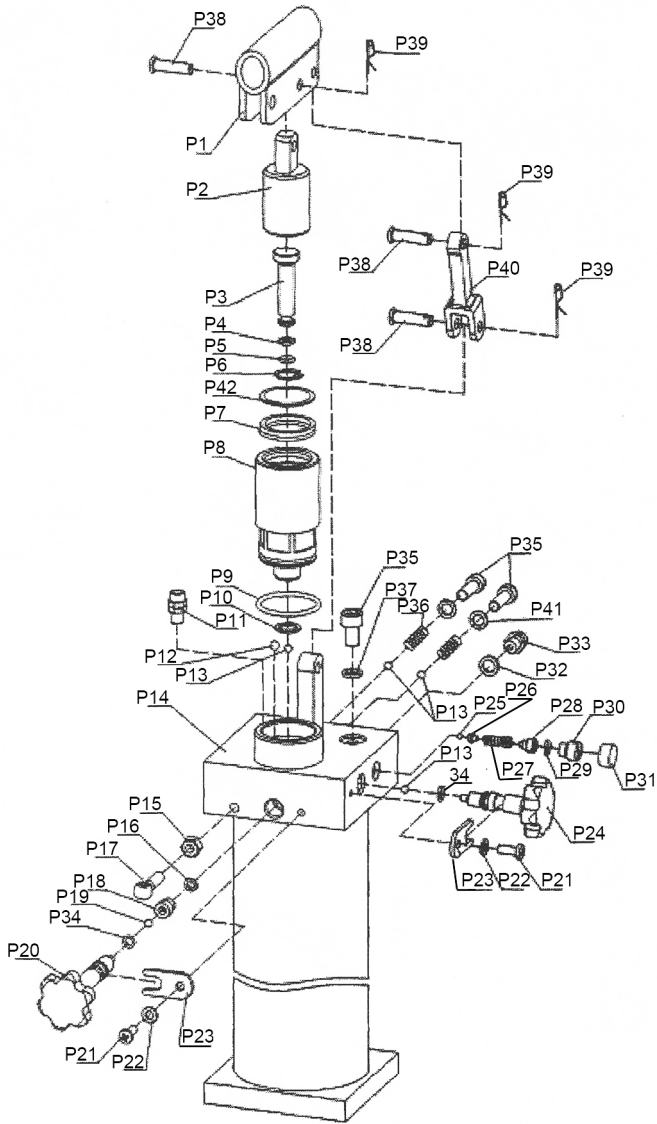
NO	DESCRIPTION
78	Washer
79	Handle
80	Washer
81	Handle Grip
82	Spring
83	Winch Mounting Plate
84	Wire Rope
85	Wire Rope

PUMP PARTS LIST

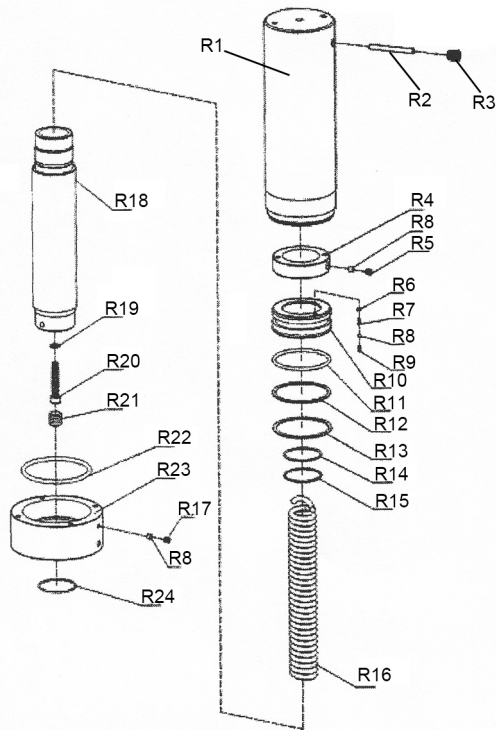
NO	DESCRIPTION
P1	Handle Socket
P2	Big Pump Core R-clip
P3	Small Pump Core Clevis Pin
P4	PTFE Washer
P5	O-Ring
P6	Retaining Ring
P7	O-Ring
P8	Retaining Ring
P9	Sealing Ring
P10	Copper Washer
P11	Hose Connector
P12	Ball
P13	Ball
P14	Pump Assembly
P15	Nut
P16	Copper Washer
P17	Bolt
P18	Release Valve Seat
P19	Ball
P20	Long Release Valve
P21	Screw

NO	DESCRIPTION
P22	Lock Washer
P23	U-Limit Ring
P24	Short Release Valve
P25	Ball
P26	Ball Seat
P27	Spring
P28	Screw
P29	O-Ring
P30	Safety Valve Screw
P31	Safety Valve Plastic Cover
P32	Nylon Ring
P33	Air Bleed Valve
P34	Copper Washer
P35	Filler Plug
P36	Spring
P37	Composite Gasket
P38	Pin
P39	R-Clip
P40	Connecting Rod
P41	O-Ring
P42	PTFE Washer

PUMP PARTS DIAGRAM



RAM PARTS DIAGRAM



NO	DESCRIPTION
R1	Cylinder
R2	Pin
R3	Screw
R4	Nut
R5	Nylon Block
R6	Screw
R7	Spring
R8	Ball
R9	Valve Core
R10	Piston Cap
R11	O-Ring
R12	PTFE Washer

NO	DESCRIPTION
R13	Nylon Ring
R14	O-Ring
R15	PTFE Washer
R16	Spring
R17	Screw
R18	Piston Rod
R19	Copper Washer
R20	Screw
R21	Screw
R22	O-Ring
R23	Base Nut
R24	O-Ring

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

2006/42/EC Machinery Directive.

The following standards have been applied to the product(s):

BS EN1494:2000+A12008, EN ISO12100:2010.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2014

Product Description: 30 & 50 Tonne Floor Shop Press
Model number(s): CSA30FP/CSA50FP
Serial / batch Number: N/A
Date of Issue: 30/03/2016

Signed:

J.A. Clarke
Director

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