Clarke®

STRONG-ARM



10T HYDRAULIC BENCH PRESS

MODEL NO: CSA10BC

PART NO: 7614021

OPERATION & MAINTENANCE INSTRUCTIONS

UK CA | CE

DL0726

INTRODUCTION

Thank you for purchasing this CLARKE 10 Tonne Hydraulic Bench 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 affect your statutory rights.

SAFETY SYMBOLS

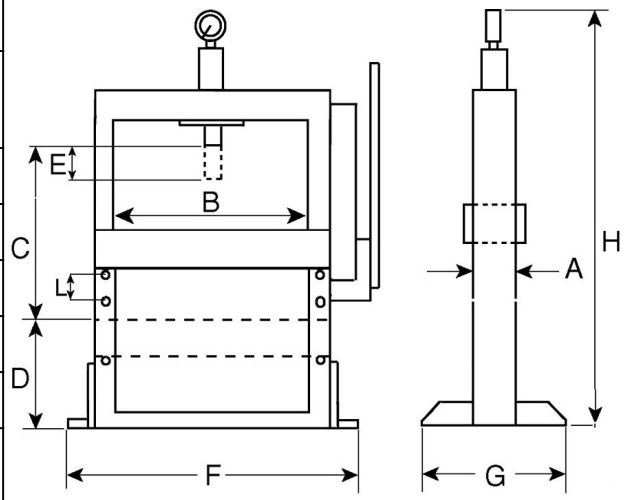
	Hazard: shattered workpiece		Hazard: crushed hands
	Wear Safety Shoes		Wear safety glasses
	Read instruction manual before use		Wear protective gloves

The above safety symbols appear on the product.

SAFETY PRECAUTIONS

- Due to the weight of the press, lifting equipment and the help of an assistant will be required during installation. Secure the press to a firm level bench using suitable anchor bolts (not supplied).
- Before starting work, check for cracked welds, loose or missing bolts, a damaged screen (if fitted), or any structural damage. **DO NOT** operate if any of these conditions exist. Have repairs made only by your service centre.
- Before work, always ensure that hydraulic hoses and couplings are completely sound.
- **NEVER** tamper with the press components or modify them. The safety valve is calibrated and sealed at the factory; do not attempt to change the setting.
- Use only the recommended hydraulic oil, CLARKE HP 32 Hydraulic Oil, Part No. 3050830
- 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.
- Before applying pressure, ensure the workpiece is firmly secure and stable.
- **ALWAYS** clean up spills of hydraulic oil immediately as this can be dangerous in a workshop environment.
- **DO NOT** let any person who is unfamiliar with hydraulic presses use the press unless they are under direct supervision.
- Keep children and unauthorised personnel away from the work area.
- **ALWAYS** position the (optional) safety screen directly front of the workpiece.
- **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.
- **ALWAYS** ensure the workpiece is properly supported by the press bed.
- When using accessories such as pressing plates, be certain they are centered below the ram and are in full contact with the bed.
- 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.
- **Keep hands and fingers away from parts that may pinch or shift.**
- **NEVER** use extension tubes to increase the length of the pump handle. Excessive effort can cause damage and/or accidents.
- Wear approved impact safety goggles and heavy duty work gloves.
- Failure to heed these warnings may result in damage to the equipment, or serious personal injury.

TECHNICAL SPECIFICATIONS

Rated Load	10 Tonne
Ram Shaft Diameter	40 mm
Net Weight	48 kg
Ram travel per stroke	1.04 mm
No of strokes to full extension	230
Pressure Gauge type	Oil Filled (Accuracy class 2.5)
Length of Handle	470 mm
Pump Oil Capacity	1000ml (HP 32)
Dimensions	
A - Frame Width - 109 mm	
B - Operating Width - 377 mm	
C - Top of Bed at Lowest Position - 388 mm	
D - Top of Bed to the Ground - 165 mm	
E - Ram Travel - 178 mm	
F - Width of the Base - 550 mm	
G - Depth of the Base - 495 mm	
H - Height - 1060 mm	
I - Distance Between Holes in the Centre - 85 mm	

UNPACKING

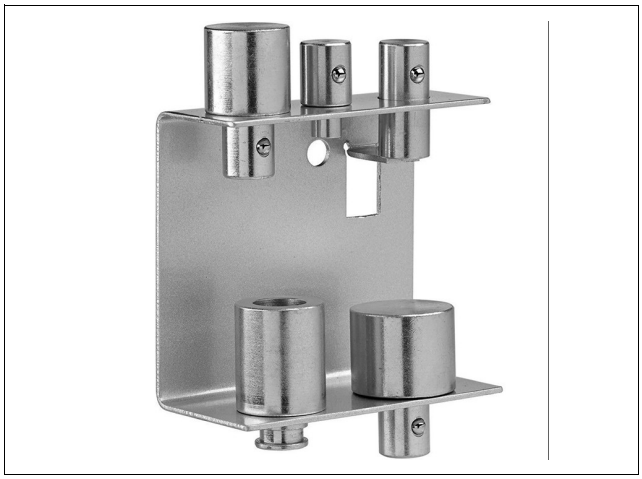
Ensure the press and its components suffered no damage during transit and that all components are present. Should any loss or damage become apparent, please contact your CLARKE dealer immediately.

TOOLS REQUIRED

- Spanners to suit M8 and M10 nuts/bolts, or an adjustable wrench.
- PTFE tape

ACCESSORIES

- 7-piece mandrell (adaptor) kit for CSA12FB Press: part no 7615065.



INVENTORY

1 x Frame		**1 x Pump**
2 x Base Supports		**1 x Pump Handle**
1 x Ram with Locking Collar		**1 x Hose (attached to pump)**
1 x Pressure Gauge		**1 x Press Bed (Frame)**
2 x Bed Support Pins		**2 x Bed blocks (V-blocks)**
1 X Upper & lower ram plate		**1 x Ram plate collar**
1 x Fixing Kit containing bolts, washers, nuts & pin retaining clips		

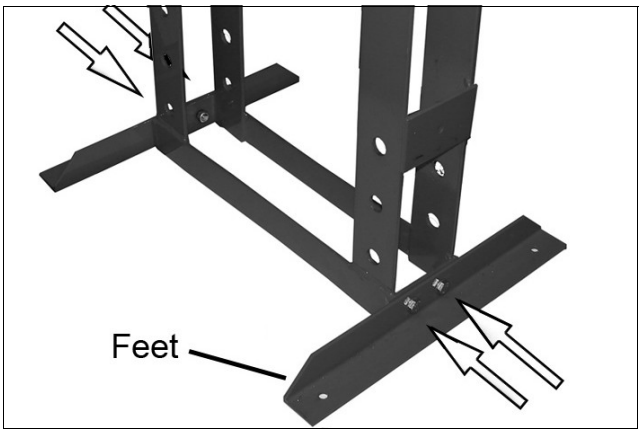
ASSEMBLY

IMPORTANT: Due to the weight of the press components, it is required that you get assistance during assembly.

IMPORTANT: We strongly recommend that the press be firmly secured to a firm and level bench using suitable bolts (not supplied).

IMPORTANT: Do not locate your press where it will be open to the elements, Severe weather conditions will damage the hydraulic components.

1. Attach the feet to the frame, using the nuts, bolts and washers.
2. With the help of an assistant, lift the frame assembly upright and manoeuvre it to its intended location on the workbench.



- It is strongly recommended that the press be firmly secured to a firm and level bench using suitable bolts (not supplied)

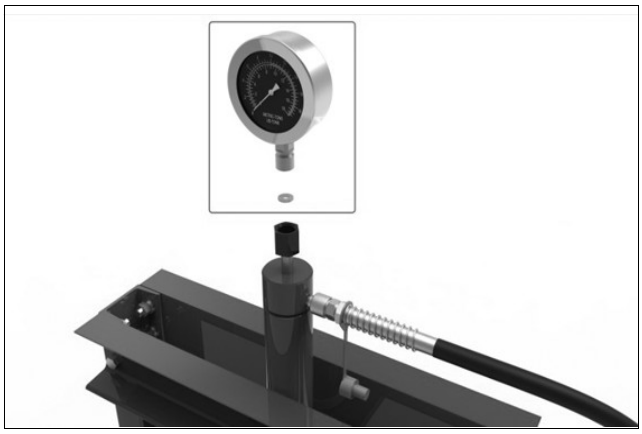
3. Insert the ram through the hole in the base plate and secure in position using the locking collar.



4. Using two spanners, unscrew the transportation cap from the top of the press cylinder as shown.



5. Place the washer and pressure gauge in the top of the press cylinder.

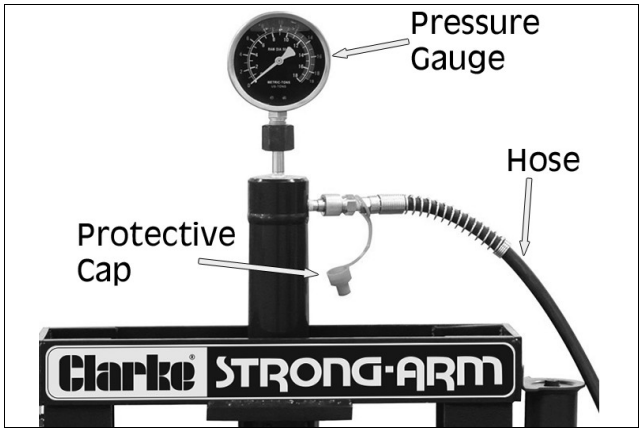


6. Making sure the gauge faces the front of the press, using two spanners, tighten the gauge nuts as shown.



7. Unfasten the protective end cap and screw the hose to the threaded connection of the hydraulic ram.

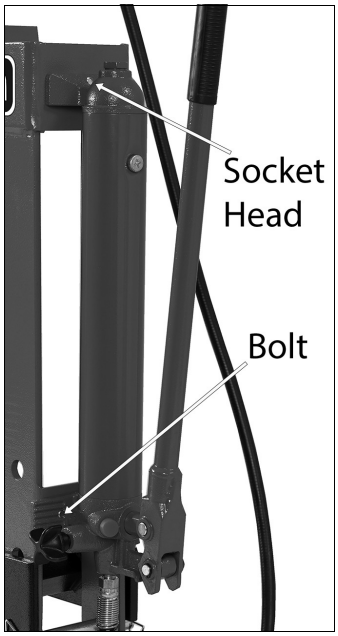
- We recommend sealing the thread with PTFE tape. Take care not to let any oil escape while connecting the hose.



8. Attach the pump assembly to the frame using the fixing bolts and washers. Fit one bolt first to bear the weight and use the adjustment provided by the upper bolt.

- The pump can be installed on either side of the frame but will usually be assembled for a right-handed press operator.

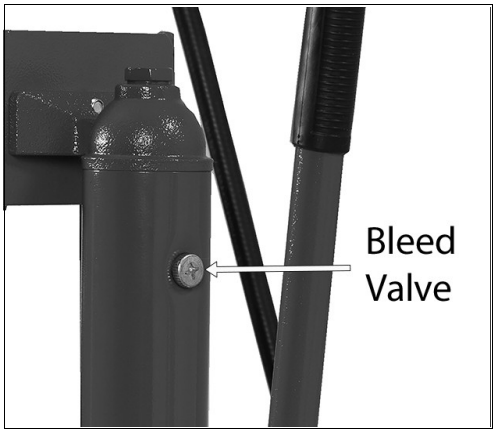
9. Screw the pump handle into the pump actuating lever.



10. Unscrew the filler plug and check that the pump is filled with hydraulic oil.

- If empty, the total capacity is 630ml.

NOTE: Hydraulic oil sold separately, CLARKE part no.: 3050830



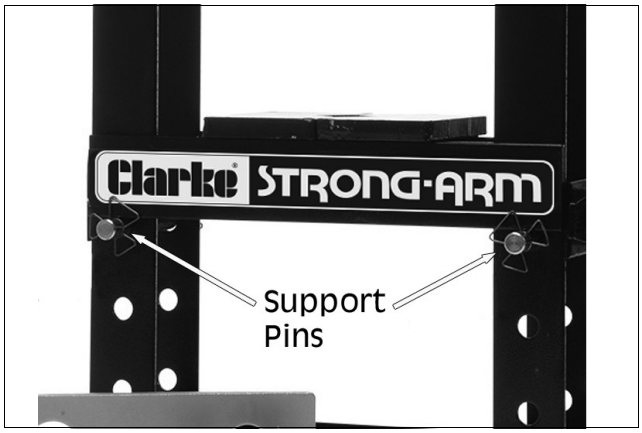
11. If obtained, bolt the mandrel storage bracket to the side of the frame using the bolts supplied.

NOTE: Mandrel Set sold as a separate item, CLARKE part no.: 7615065

12. Store the mandrels including the adaptor, in their positions on the bracket.



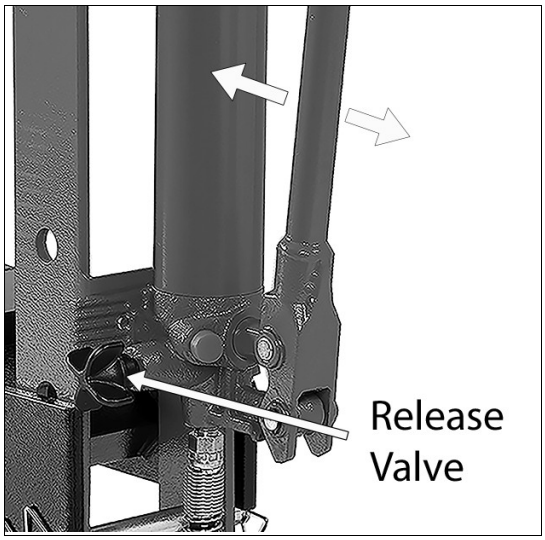
13. Insert the bed support pins into the holes in the columns at the required position. Then set the bed frame in position on the pins.



HYDRAULIC PUMP/RAM OPERATION

1. Before using the press, purge any air from the system by opening the release valve by turning it anti-clockwise and pumping several full strokes to eliminate any air bubbles. Tighten the release valve before continuing.
2. Check all parts are secure and correctly aligned before using the press.

The press is now ready for use.



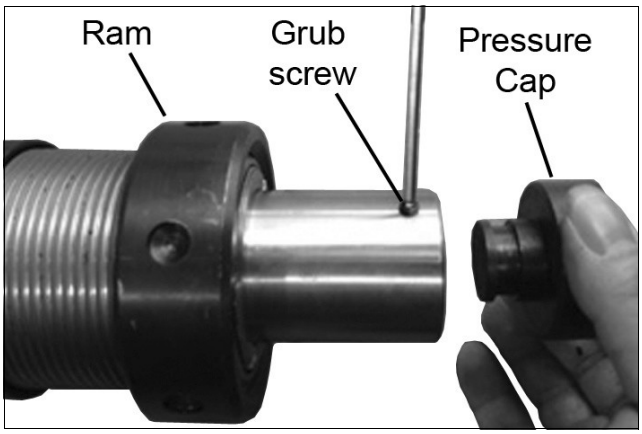
POSITIONING THE BED

1. Position the bed at the desired height, so it will be as close as possible to the ram when the workpiece is mounted on it.

FITTING THE MANDRELS OR PRESSURE CAP

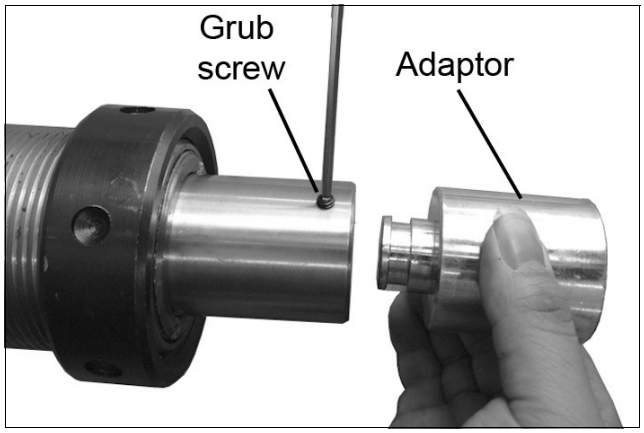
Mandrels are available as an adaptor kit, any of which may be connected to the end of the ram using the adaptor.

Alternatively, the basic ram pressure cap can be fitted as shown. Secure the pressure cap by tightening the grub screw with a suitable hex key.



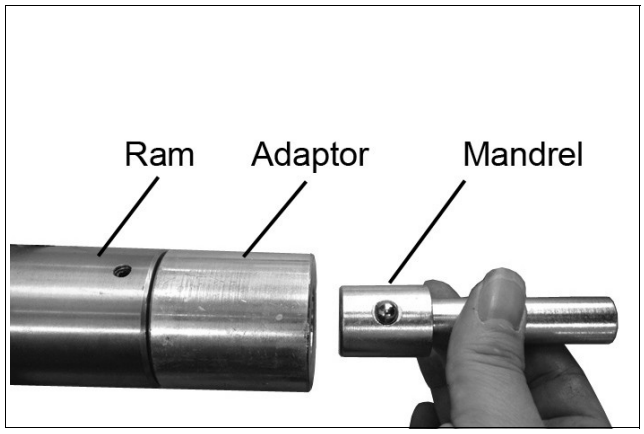
If one of the mandrels is required, the adaptor must be fitted instead of the pressure cap. Secure the adaptor by tightening the grub screw with a suitable hex key.

Select your mandrel depending upon the size of the workpiece bearing surface.



The mandrel can then be pushed into the adaptor where the built-in spring clip will hold it in place.

Store the mandrels in their positions on the mounting bracket when not in use.



OPERATION

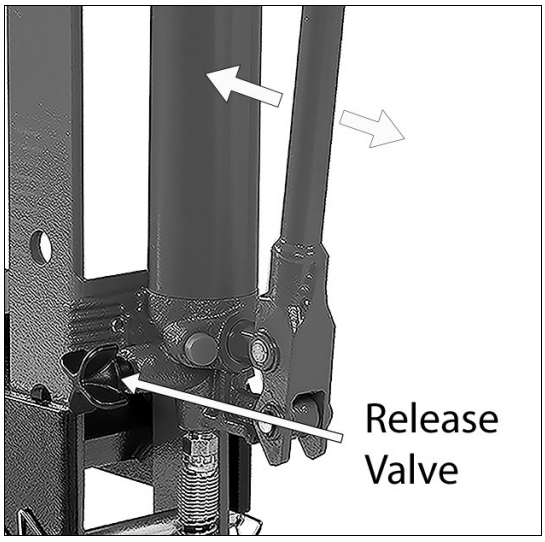
WARNING: FAILURE TO HEED THE WARNINGS ON PAGE 4 MAY RESULT IN DAMAGE TO THE EQUIPMENT, OR FAILURE RESULTING IN PROPERTY DAMAGE OR PERSONAL INJURY.

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

CAUTION: DO NOT POINT LOAD THESE 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 it clockwise until tightly closed.
3. Pump the handle to bring the ram very lightly into contact with the workpiece.
4. Manoeuvre the workpiece so that the desired point of contact is directly beneath the centre of the ram.
5. When satisfied that the workpiece is correctly aligned and is completely stable in that position, slowly pump the handle so that the ram begins to exert pressure on the workpiece. Continue to pump the handle whilst standing to the side. **DO NOT** stand directly in front of the work and constantly monitor the process and pressure gauge, ensuring the ram and work remain completely in line and there is no risk of slipping.



6. When the process is complete, turn the release valve anticlockwise in small increments to release ram pressure and allow removal of the workpiece.



WARNING: NEVER USE EXTENSIONS TO THE RAM PUMPING HANDLE.

MAINTENANCE

A visual inspection must be made before each use of the press, checking for leaking hydraulic fluid and damaged, loose, or missing parts.

Owners and/or users should be aware that repair of this equipment requires specialized 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.

Any press which 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 and the operating handle in the lowered position to protect the moving parts.

PERIODICALLY

Check the press frame to make sure all bolts are tight and inspect for cracked welds, bent, loose or missing 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 at the end of the unit. 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.

DE-COMMISSIONING THE PRODUCT

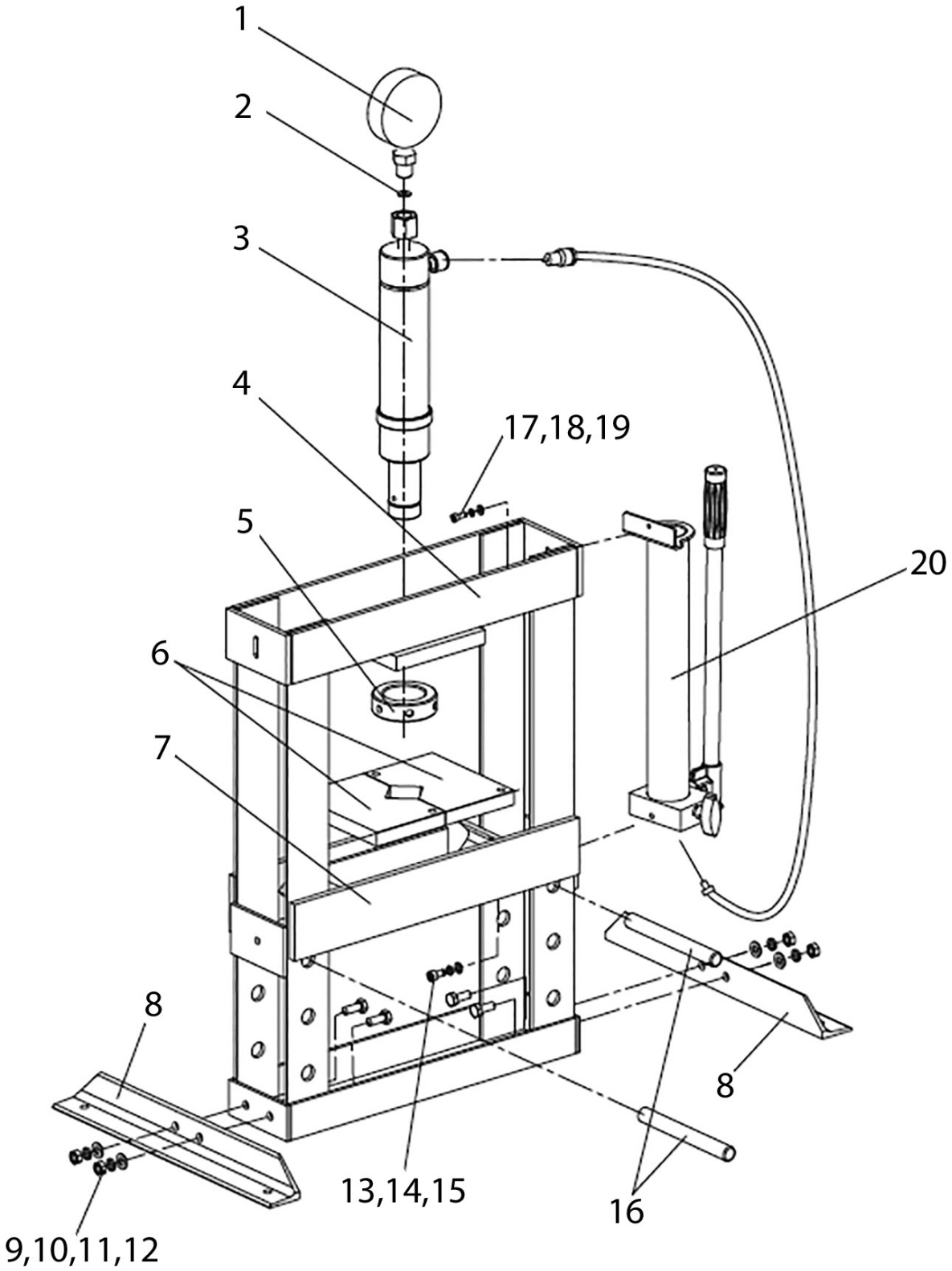
Should the product become completely unserviceable and require disposal, draw off the oil into an approved container and dispose of the product and the oil according to local regulations.

TROUBLESHOOTING

Problem	Probable Cause	Remedy
Pump unit will not work	Dirt on valve seat/warn seals	Bleed pump unit or have unit overhauled with new seals
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.

If the remedy fails to solve the problem, contact the CLARKE service department for more information.

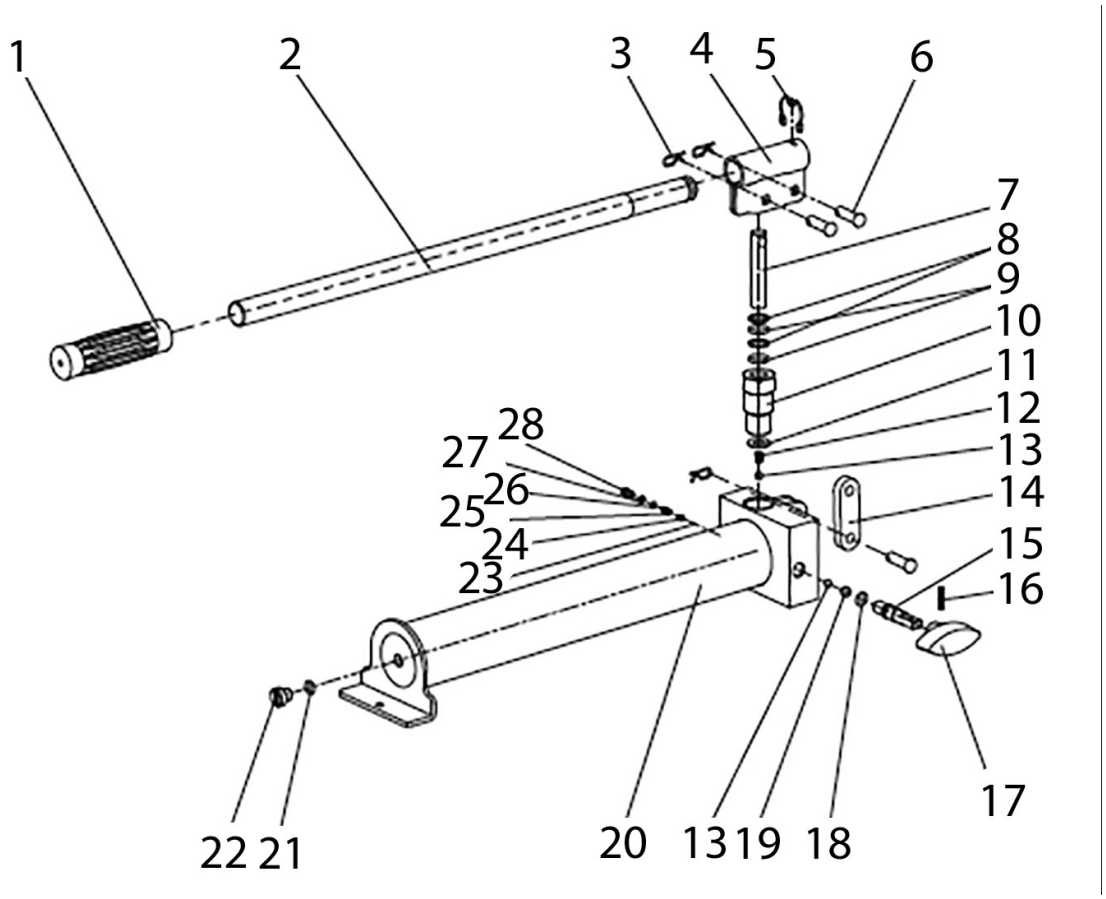
FRAME PARTS DIAGRAM



NO	DESCRIPTION
1	Pressure Gauge
2	Nylon Ring
3	Ram Assembly
4	Frame
5	Locking Collar
6	Heel Block x 2
7	Bed Flat
8	Base Section x 2
9	M10 x 25 Bolt x 4
10	Washer 10 x 4

NO	DESCRIPTION
11	Spring Washer 10 x 4
12	M10 Nut x 4
13	M8 x 16 Bolt
14	Spring Washer 8
15	Washer 8
16	Rod x 2
17	M6 x 16 Bolt
18	Spring Washer 6
19	Hosing Fitting
20	Press Assembly

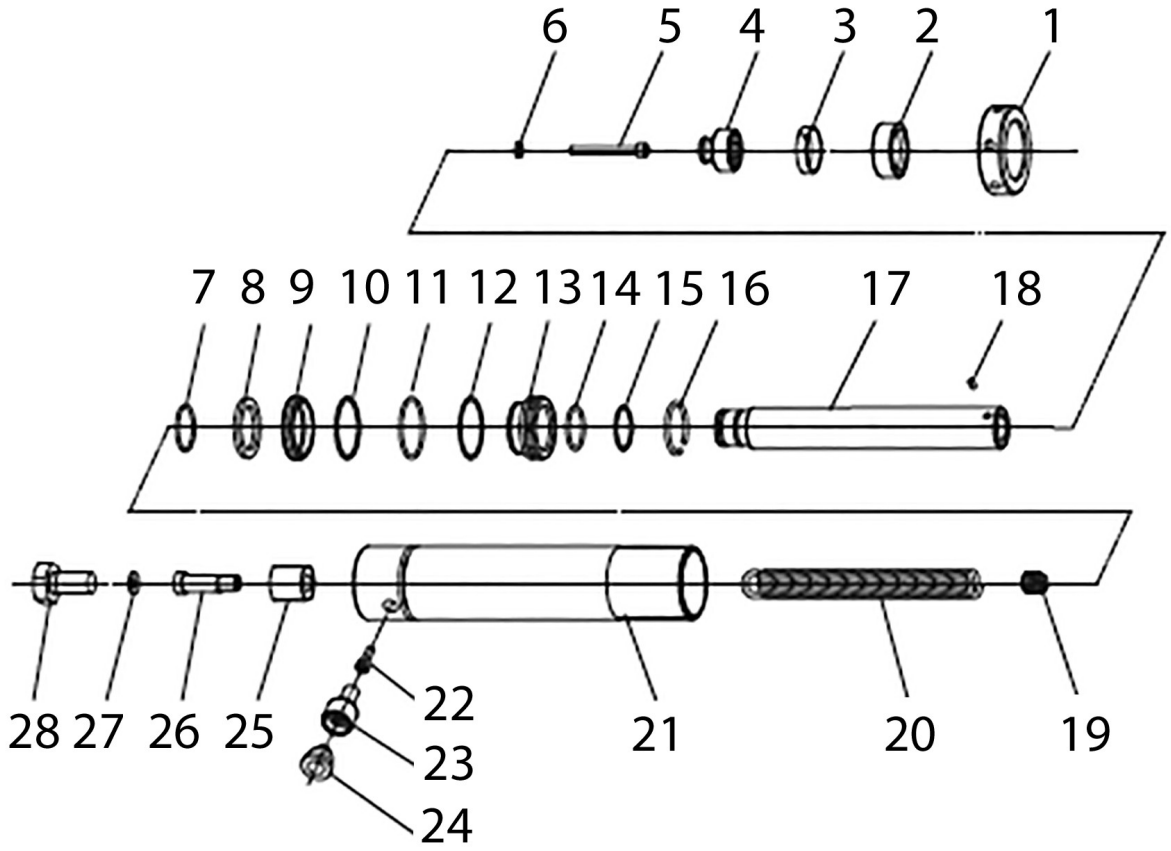
PUMP PARTS DIAGRAM---OK



NO	DESCRIPTION
1	Handle Grip
2	Handle
3	Torsional Spring Latch
4	Socket
5	Socket Spring
6	Pin
7	Piston
8	Seal
9	O Ring
10	Clamping Nut
11	Copper Pad
12	Spring
13	6mm Steel Ball x 2
14	Connecting Rod

NO	DESCRIPTION
15	Release Valve Stem
16	3 x 20 Pin
17	Release Valve Stem Handle
18	O Ring
19	8mm Steel Ball
20	Cylinder Body
21	8.5 x 2.65G O Ring
22	Seal Screw Cap
23	2mm Steel Ball
24	Spring Plate
25	Spring
26	O Ring
27	Seal
28	Pressure Adjusting Screw

RAM PARTS DIAGRAM--OK



NO	DESCRIPTION
1	End Cap
2	Upper Collar
3	Threaded Ring
4	Guide Ring
5	M8 x 70 Bolt
6	Washer
7	Circlip
8	Circlip
9	Ring
10	Y Ring
11	Sealing Ring
12	Ring
13	Retaining Ring
14	Threaded End

NO	DESCRIPTION
15	Ring
16	Retaining Ring
17	Circlip
18	Ram Piston
19	Spring Nut
20	Spring
21	Cylinder Body
22	M8 x 30 Hex Socket Bolt
23	Connector
24	Dust Cap
25	Gauge Coupling
26	Connecting Insert
27	Sealing Washer
28	M20 x 25 Bolt

DECLARATION OF CONFORMITY - UKCA

UK CA

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 legislation:

2006/42/EC *Machinery Directive*

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

EN ISO 16092-1:2018, EN ISO 16092-3:2018

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

The UKCA mark was first applied in: 2025

Product Description:	Hydraulic Press
Model Number(s):	CSA10BC
Serial/Batch Number:	Refer to product/packaging label
Date of Issue:	03/12/2025

Signed:

J.A Clarke

Director

CSA10BC UKCA Clarke DOC 120325

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DECLARATION OF CONFORMITY - CE

CE

Clarke®
INTERNATIONAL

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

DECLARATION OF CONFORMITY

This is an important document and should be retained.

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

2006/42/EC *Machinery Directive*

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

EN ISO 16092-1:2018, EN ISO 16092-3:2018

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

The CE mark was first applied in: 2025

Product Description:	Hydraulic Press
Model Number(s):	CSA10BC
Serial/Batch Number:	Refer to product/packaging label
Date of Issue:	03/12/2025

Signed:

J.A Clarke

Director

CSA10BC CE Clarke DOC 120325

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A SELECTION FROM THE VAST RANGE OF

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