Clarke®

STRONG-ARM

12 TONNE HYDRAULIC PIPE BENDER

MODEL NO: CHV12B

PART NO: 7610901

OPERATION & MAINTENANCE INSTRUCTIONS

CE

ORIGINAL INSTRUCTIONS

GC1219 - ISS 1

INTRODUCTION

Thank you for purchasing this CLARKE 12 Tonne Pipe Bender which is designed for bending STEEL PIPE ONLY, either galvanised or black finish.

IMPORTANT: This tool is NOT designed to bend thin wall tube - for example copper pipe.

This bender is able to be used in both horizontal and vertical positions.

Before attempting to use the pipe bender 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 product giving you long and satisfactory service.

TECHNICAL SPECIFICATIONS

Capacity	12 Tonne
Pump oil capacity	500 ml
Net Weight	36 kg
Dimensions D x W x H	610 x 160 x 530 mm
Length of Handle	550 mm
No of strokes to full extension	157
Range of bending	0-90^{O}

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 PRECAUTIONS

- Due to the weight of the pipe bender the help of an assistant may be beneficial during unpacking or when moving it around.
- ALWAYS operate on a suitably strong bench with adequate light.
- ALWAYS check for signs of cracked welds or any other structural damage before starting work. Do not operate if any of these conditions exist. Have repairs made only by a CLARKE service centre.
- NEVER tamper with the hydraulic components. The safety valve is calibrated and sealed at the factory; - do not attempt to change the setting.
- Use only the recommended CLARKE hydraulic oil.
- The components of this pipe bender are designed to withstand the rated capacity. Do not substitute any other components or exceed the rated capacity.
- ALWAYS ensure the workpiece is secure before applying pressure.
- ALWAYS clean up any spillage of hydraulic oil immediately as this can be dangerous in a workshop environment.
- Do not allow anyone who is unfamiliar with hydraulic tools to use the pipe bender unless they are under direct supervision.
- ALWAYS ensure the work piece is properly positioned.
- ALWAYS 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.
- Failure to heed these warnings may result in damage to the equipment, or serious personal injury.

UNPACKING

Ensure the product suffered no damage during transit and that all items are present. Should any loss or damage become apparent, please contact your CLARKE dealer immediately. The following items are supplied.

- 1 x Frame
- 6 x Bending Dies:
  - 1 x ½" (15 mm)
  - 1 x ¾" (20 mm)
  - 1 x 1" (25 mm)
  - 1 x 1¼" (32 mm)
  - 1 x 1½ "(40 mm)
  - 1 x 2" (50 mm)
- 1 x Handle
- 2 x Rollers c/w roller pins & 4 x R-clips (all supplied fitted)

METHOD OF USE

The pipe bender is provided with six bending dies in order that the following sizes of British Standard Pipe, (to BS1387), may be bent to any angle up to 90 degrees.

1. Consult the following chart to ensure the correct die for the corresponding pipe is used. If the wrong die is used, the quality of bend will be severely compromised.

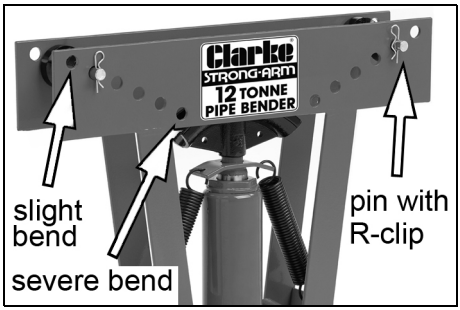
Die to be used	Nominal pipe size	Inside Diameter (Bore)				Outside Diameter	
		Medium		Heavy		Medium/Heavy	
		mm	inch	mm	inch	mm	inch
15 mm	1/2"	16.2	0.65	15.0	0.59	21.4	0.84
20 mm	3/4"	21.7	0.85	20.5	0.81	26.9	1.06
25 mm	1"	27.4	1.08	25.8	1.02	33.8	1.375
32 mm	1-1/4"	36.1	1.42	34.5	1.36	42.5	1.68
40 mm	1-1/2"	42.0	1.65	40.4	1.59	48.4	1.9
50 mm	2"	53.1	2.09	51.3	2.02	60.3	2.375

2. Install the rollers on their support pins at one of the hole positions according to the extent of the bend required. The tighter the bend, the closer the rollers will be to the centre of the pipe bender.

3. Secure the roller pins in position using the R-clips.

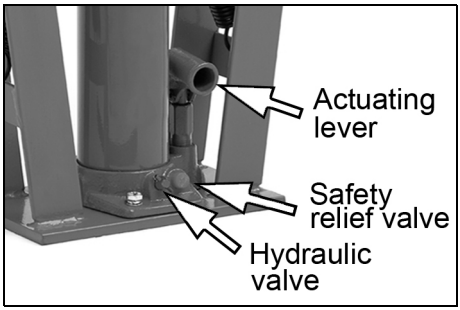
4. Choose your die, based on the chart and set it in position on the ram.

5. Use the tip of the handle to open the hydraulic valve by turning it anticlockwise. (The ram will retract under spring tension).



- If using for the first time, purge any air from the ram by opening the hydraulic valve (turning anti-clockwise) inserting the handle into the actuating lever and pumping several full strokes to eliminate any air bubbles.

6. Close the hydraulic valve by turning it clockwise.



7. With the ram in its lowest position rest your workpiece between the die and the rollers. Position the workpiece so that the point of contact with the die is directly above the centre of the ram.

8. When satisfied that the workpiece is correctly positioned and is completely stable, slowly pump the handle so that the ram begins to exert pressure on the workpiece.

9. Continue to pump the handle and constantly monitor the bending process.

10. For best results, bend the pipe progressively. A good technique is to set the guide rollers wide apart to begin with, bringing them closer together as the degree of bend increases.

WARNING: NEVER USE EXTENSIONS TO THE RAM PUMPING HANDLE

11. When completed, open the hydraulic valve and the ram will lower, allowing the work to be removed.
12. To separate the die from the work, a short sharp tap with a hammer and brass drift should be all that is required. TAKE CARE when removing...NEVER hammer directly on the edges of the die.

CARE AND MAINTENANCE

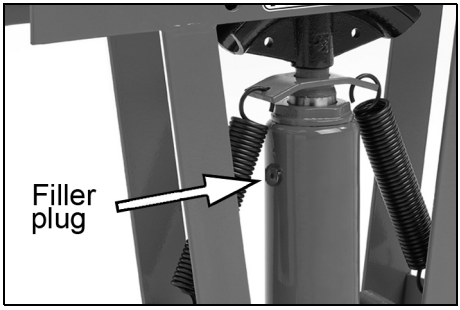
This tool requires no maintenance except for keeping it clean.

Always inspect before each use to ensure no welds are cracked or broken and that the tool is in good general condition. If it is damaged or if in doubt as to its serviceability, consult your CLARKE dealer immediately.

ALWAYS store in an upright position with the ram in its lowest position (retracted). DO NOT lay on its side as air could enter the system resulting in poor performance and the need to bleed before further use.

If the ram fails to operate satisfactorily, it should be bled by turning the release valve anti-clockwise and pumping the handle several times to expel any air.

If this is not successful, close the release valve (turn it clockwise), then remove the filler plug on the cylinder. Pump the handle several times to expel all air, then replace the filler plug.



Owners and/or users should be aware that repair of this equipment requires specialised knowledge and facilities and that any defective parts be replaced with genuine CLARKE parts.

Ensure that any defective hydraulic components are replaced before using. In the event of leaking seals, oil can be topped up via the filler plug on the ram. Oil should be level with the bottom of the hole. If necessary top up with CLARKE hydraulic oil, Part No. 3050830 (1 litre). 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

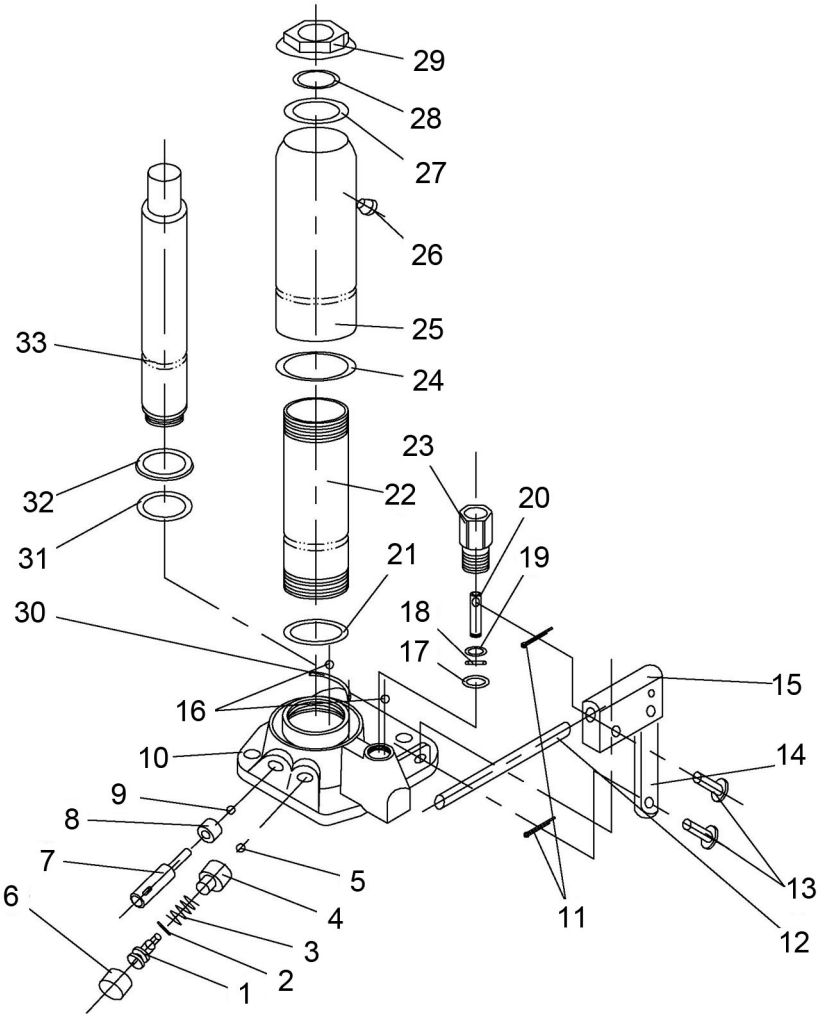
One of the most damaging sources of environmental pollution is oil products. Never throw away used oil with domestic refuse or flush it down a sink or drain. Collect any oil in a leak proof container and take it to your local waste disposal site.

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.

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.
Pump will not lower completely	Air-lock	Release air by removing the filler plug

RAM PARTS DIAGRAM

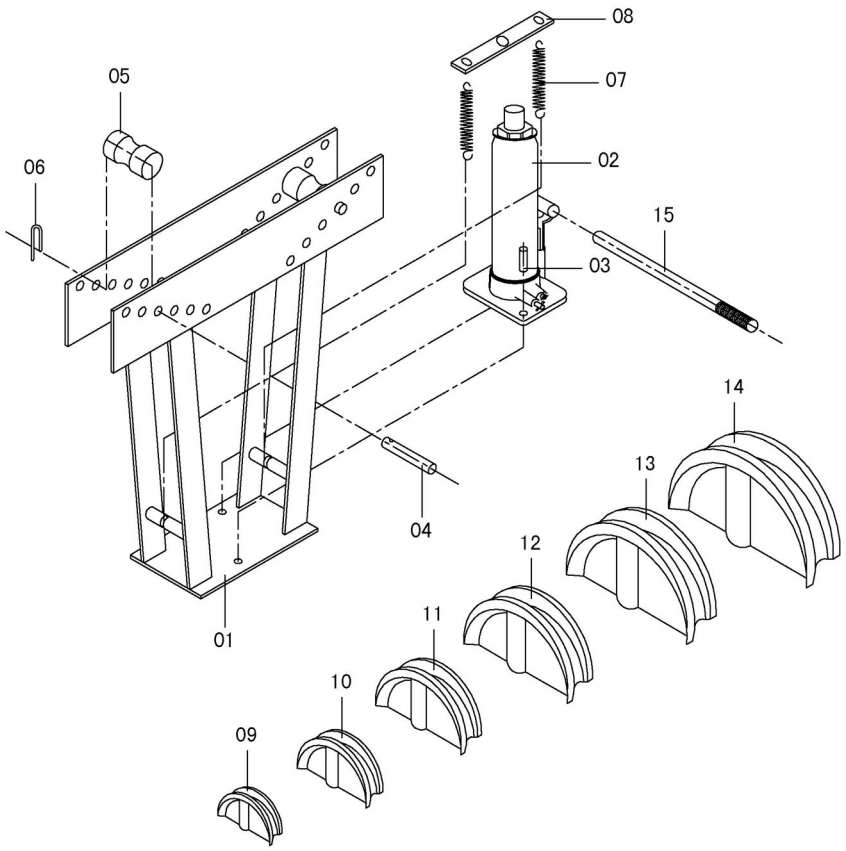


RAM PARTS

NO	DESCRIPTION
1	Screw
2	O-ring
3	Spring
4	Ball cup
5	Steel ball
6	Screw cover
7	Relief valve
8	Bush
9	Steel ball
10	Base
11	Pin
12	Handle
13	Pin shaft
14	Connecting bar
15	Handle sleeve
16	Steel ball
17	Washer

NO	DESCRIPTION
18	O-ring
19	Shield ring
20	Pump core
21	Washer
22	Hydraulic cylinder
23	Pump body
24	Seal ring
25	Oil reservoir
26	Oil plug
27	Sealing ring
28	O-ring
29	Top nut
30	Tubing
31	O-ring
32	Bowl washer
33	Piston

FRAME ASSEMBLY PARTS



NO	DESCRIPTION
1	Frame
2	12 tonne bottle jack
3	Hex bolt
4	Roller pin
5	Guide roller
6	R-clip
7	Return Spring
8	Spring plate

NO	DESCRIPTION
9	1/2" (15mm) bending die
10	3/4" (20mm) bending die
11	1" (25mm) bending die
12	1-1/4" (32mm) bending die
13	1-1/2"(40mm) bending die
14	2" (50mm) bending die
15	Jack handle

DECLARATION OF CONFORMITY

CE

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):

EN 693:2001+A2:2011.

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: 2019

Product Description:	12T Hydraulic Pipe Bender.
Model number(s):	CHV12B
Serial / batch Number:	N/A
Date of Issue:	22/11/2019

Signed:

J.A. Clarke
Director

D O C 12T Hydraulic Pipe Bender (16-0481) Page 1 of 1

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