

10 Ton Hydraulic Pipe Bender - With Super Grade Formers 15 To 50mm

- 10 Ton Heavy Duty Hydraulic Unit based on military jack design
- Robust construction with quick bending and release action
- Designed to bend pipe with excellent results.
- Simple set up and operation produces accurate bend every time.
- Pipes do not require heating and it is portable – thus saving time.
- Concealed pressure relief valve minimises the possibility of damaging working parts
- Comes complete with six formers made from S.G. (Ductile) iron
- Applications – water services, gas services, handrails, gates, framework etc.
- For bending ERW, galvanised, gas, water & steam pipes
- Size of former relates to inside diameter of pipe
- Formers have 36mm diameter hole to take 35mm diameter hydraulic ram



PART NO.	ITEM	WT KG
62168	PIPE BENDER - SET COMPLETE	63.0
67043	HYDRAULIC UNIT AND HANDLE	18.6
67086	FRAME	14.0
67087	PIPE SUPPORT PIN(2)	0.8
67088	PIPE SUPPORT	5.0
67080	15 MM FORMER	2.2
67081	20 MM FORMER	2.4
67082	25 MM FORMER	3.2
67083	32 MM FORMER	4.5
67084	40 MM FORMER	5.1
67085	50 MM FORMER	7.2

Operating Instructions

When fitting the hydraulic unit to the pipe bender frame, ensure that the carry handle on the hydraulic unit is in the upright position (top). The unit has been tested and is filled with OM33 Hydraulic Oil ready to use.

Select size of former required. Fit former to the ram on hydraulic unit. Locate pipe support and pins in the holes on frame bearing the same number as the size of the former selected. If the pins holding the pipe support are located in the wrong holes, the former would possibly get damaged. Care must be taken to see that the pins pass through the top and bottom plates of the frame. The centre of the former should contact the pipe at the centre of the proposed bend.

To make bend

Close release valve on hydraulic unit and operate handle until the ram has travelled sufficient distance to give the desired bend. Owing to the spring reflex of the pipe it is necessary to travel a little more than the actual bend, but with a little practice the operator will soon become proficient in making excellent bends.

To remove bend

Open the release valve partially (approximately 1 turn) on the hydraulic unit and push the ram down. If difficulty is experienced in removing the bend from the former, insert a lever between bend and the former. A small quantity of grease placed on the pipe or the former will also assist.

PIPE SIZE		MINIMUM WALL THICKNESS MM	CENTRE LINE RADIUS	
I.D.	O.D.		MM	RATIO TO O.D.
15	21.3	3.15	80	3.8
20	26.9	3.45	100	3.7
25	33.7	4.35	140	4.2
32	42.4	5.2	190	4.5
40	48.3	4.15	225	4.7
50	60.3	5.15	300	5.0

Pipe Bender Stand (Sold Separately)

Extremely rigid and durable, this lightweight portable stand is easily set up and taken down, saving operators valuable time and effort. This stand will also accommodate the Dawn pipe vices, and up to a 100mm Engineers' vice.

PART NO.	DESCRIPTION	WT KGS
62151M	FOLDING VICE STAND	19.0

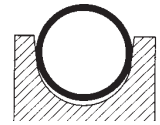
Pipe Bender Stand



Technical data

"Elliptical" profile formers

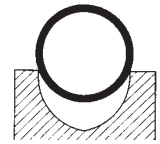
Sizes 20, 25, 32 and 40 mm formers have elliptical profile. The pipe sits close to, but not on, the bottom of the former. This gives good side support for extra light gauge pipes.



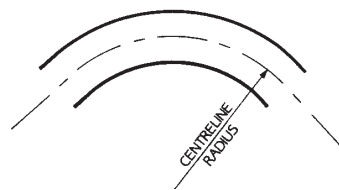
Elliptical

"Cathedral" profile formers

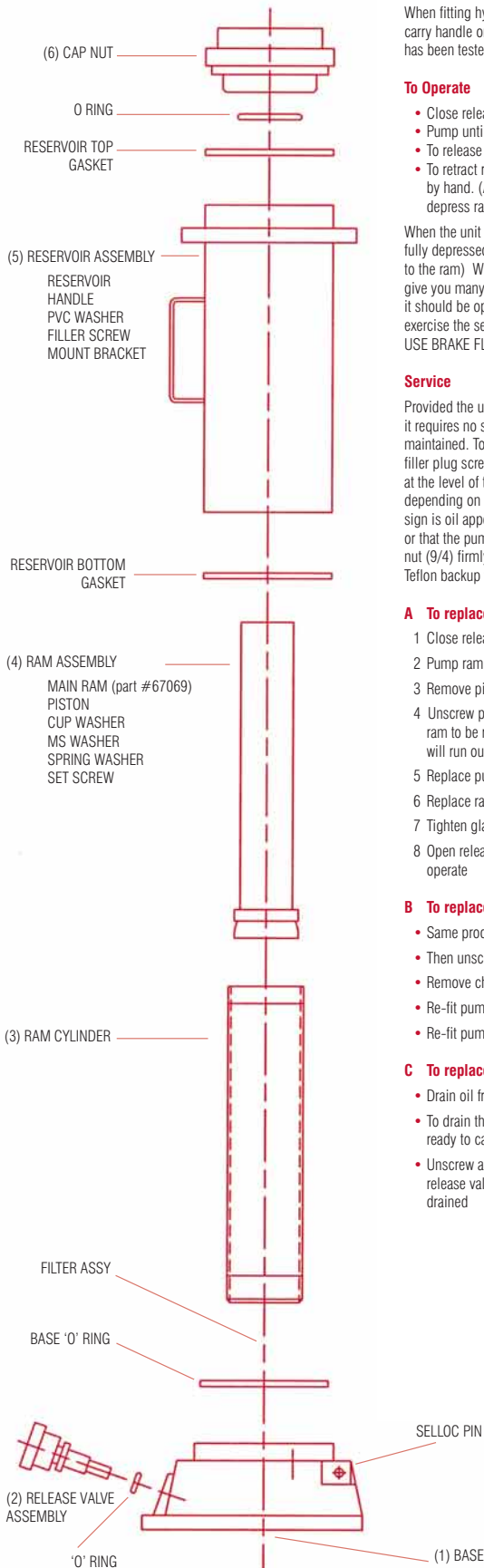
Sizes 15 and 50 mm formers have cathedral profile. The Cathedral profile is a registered design of Dawn. The pipe sits on the entry to the former and will move to the bottom when bending starts. The former squeezes the sides of the pipe, allowing lighter gauge pipes to be bent at tighter radii. The former also supports the pipe through the bending process, giving a more aesthetic rounded appearance.



Cathedral



HYDRAULIC UNIT (67043) MAINTENANCE INSTRUCTIONS



When fitting hydraulic unit to the pipe bender frame, ensure that the carry handle on the hydraulic unit is in the upright position. The unit has been tested and is filled with OM33 Hydraulic Oil ready to use.

To Operate

- Close release valve firmly
- Pump until desired stroke is reached
- To release pressure open release valve (approx. 1 turn)
- To retract ram to its closed height position, push the ram down by hand. (An extra turn on the release valve will make it easier to depress ram.)

When the unit is not in use or being stored, always ensure the ram is fully depressed to its closed height. (This will prevent any damage to the ram) With proper use and care the Dawn Hydraulic Unit will give you many years of service. If the unit is not frequently used, it should be operated a few times approx. every 3 to 4 months to exercise the seals. Use only OM33 Mineral Hydraulic Oil – DO NOT USE BRAKE FLUID.

Service

Provided the unit is kept clean and the ram is not damaged, it requires no service other than checking that the oil level is maintained. To check oil level, stand the unit upright, unscrew the filler plug screw on the side of the cylinder and the oil should be at the level of the filler hole. However, over a period of time and depending on the workload, the seals will wear. Generally the early sign is oil appearing around the pump piston. This can be seal wear or that the pump gland nut just requires tightening. Tighten the gland nut (9/4) firmly. If oil persists then replace the pump 'O' ring and Teflon backup washer (9/2 & 9/3)

A To replace pump seals

- 1 Close release valve
- 2 Pump ram to its full extension
- 3 Remove pin at bottom of pump link
- 4 Unscrew pump gland nut enough to allow pump handle and pump ram to be removed from pump body. Note: a small amount of oil will run out (the balance of oil is contained in the ram cylinder)
- 5 Replace pump 'O' ring and Teflon backup washer
- 6 Replace ram into pump body and reconnect link
- 7 Tighten gland nut
- 8 Open release valve to allow ram to retract. Unit is now ready to operate

B To replace Check Valve

- Same procedure as per (A) items 1 to 4
- Then unscrew pump body
- Remove check valve and replace (if necessary)
- Re-fit pump body using Lockite on the threads
- Re-fit pump as per (A) items 6,7, & 8

C To replace Ram Cup Washer

- Drain oil from jack
- To drain the oil, pump ram to its full extension. (Have container ready to catch the oil)
- Unscrew and remove release valve and let oil escape through release valve hole, pushing ram down gently to ensure all oil is drained

- Unscrew cap nut and remove
- Pull ram from cylinder being careful not damage the ram
- Replace cup washer. Re-fit ram to cylinder and re-assemble, checking reservoir seals and cup nut 'O' ring are satisfactory (replace if necessary)
- Re-fill oil and test

D Release Valve

- To replace 'O' ring lay jack on its side
- Unscrew release valve and replace 'O' ring
- Re-fit valve to base

The above service instructions enable you to replace any of the seals as shown in the exploded assembly drawing.

You can just replace the appropriate seals causing the problem, but it is prudent to replace all seals and components whilst you have the unit down for service so ensuring trouble-free operation in the future.

Seal Kits which contain all the seals and components, excluding the pump check valve, are supplied as a kit. (part number 67068)

TROUBLESHOOTING GUIDE

Fault:

Unit fails to operate.

Ram not holding load.

Ram not fully extending.

Ram not returning or jammed

Remedy:

Check release valve is closed

Check release valve
Fouled check valve (remove and clean or replace)
Ram piston faulty.

Oil low.

Release valve not open.
Fouled check valve (remove and clean or replace)
Ram may be damaged.
Re-align unit in frame.

