

Bramley 024 Manual Hydraulic Pipe Bender

The 024 Hydraulic Pipe Bender uses a 2-speed, manual hydraulic pump.

The control valve pushes against a ball valve (6mm steel ball). When the control valve is fully screwed in, oil is sent from either primary piston to the main cylinder.



Oil is leaking from the pump block

The primary cylinders screw into top of pump block.

The pistons inside them are retained by caps that serve as piston guides.

If these guides/caps work loose, excessive play can cause oil to leak from the top of the primary cylinders.

The cylinders need to be removed to get to the ball valve under them. These are tight and will require a socket to remove. Do not use an open-end spanner as you will likely damage them.



Cylinders need to be removed to access pistons below. There is a screwed cap and ball located in the block under each piston.



Pistons removed from cylinders. Check O-ring and seal condition.



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Oil leaking from front of unit

First check carefully, the source of oil leak may be from between the outer nut and the front pivot mount block

There is an O-ring between the tank end cap and front pivot mount block.

To remove the front pivot block, unscrew the outer nut only. Pivot block will slide off the cylinder

If oil is leaking from between the ram and the cylinder, the main ram seal will need to be replaced. These units have a ram seal only, there are no other seals or wear rings on the assembly.

To remove the ram, undo the inner nut only on the front of the ram, this can be done without draining the oil – *outer ram nut retains the pivot mount block and does not need to be removed in this application.*

Behind this nut is a retaining ring/ram guide.

To remove the ram, it must first be detached from the return spring.

Remove the grubscrew from the end of the ram then fully undo the spring tensioning cap screw located in the ram.

The ram can now be withdrawn

Care must be taken re-assembling the main ram into the cylinder as it is easy to damage the ram seal.



Outer nut retaining pivot block.



Outer nut removed from the cylinder.



O-ring location.



Inner nut on ram undone with ram guide exposed.

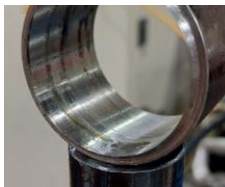


Undoing spring tension grub screw



Ram seal for replacing.

(Note this pic has the outer nut and pivot mount block removed, this is not necessary for removing the ram.)



Seal compression tool.



Re-installing the ram.



Re-install spring tension cap screw

A seal compression guide tool (similar to a piston ring compression installing tool) should be used when reinstalling the ram into the cylinder. This will compress the seal and allow it to move into the cylinder without damage.

Lubricate the seal with hydraulic oil before assembly.

Wind the spring tensioning cap screw all the way until it is tight.

Put a smear of sealant on the grubscrew and install.

Re fit the ram guide, the inner nut and re-tighten the inner nut.

Unit will not pump, or ram advances then re-tracks with each movement of primary pistons

There are two ball valves for each primary piston, allowing each piston to work independently of the other - it is possible to have one piston to functioning correctly and one piston not functioning.

First check the ball valve(s) located under the primary cylinder(s) - as described in the beginning of this guide.

The second set of ball valves are located inside the tank, on the inside face of the pump block.

There are 2 x port caps, springs and steel balls.

Check/clean these ports and re seat the balls into ports. There are 2 magnets each positioned close to drilled ports. Make sure these have not accidentally been moved obstructing these port holes.

There is a strainer filter bung at the bottom that should be removed and cleaned.



Unscrew the cylinder from the rear pump block.

To access these valves the main ram, the front pivot block, the tank and the main cylinder will need to be removed.

Remove the front pivot mount block and ram as described earlier.



Note the orientation of this cylinder before re-installing. Ends are slightly different.

The tank can then be removed - it only has O-ring pressure holding it on.

Unscrew the cylinder from the rear pump block.



Springs located below grub screws



Removing springs. (Note orientation, small end of the springs go to the balls.)



Grub screw, balls and springs shown removed .



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