

## Hydrum Servicing & Troubleshooting

On completion of installation the operator should ensure that the Hydrum is firmly bolted to its' concrete base and that the drivepipe has been laid evenly.

The following procedures should then be applied: -

1. Before starting up a Hydrum it is recommended that the supply to the drivepipe be closed and the waste valve removed. The valve on the drivepipe should then be opened for a few minutes to allow the Hydrum to be well flushed. When this has been done, shut off the supply and replace the water valve.
2. Start the Hydrum by opening the valve on the drivepipe. Usually the Hydrum will start pulsating but if this does not happen, the rubber clack may be pushed open a few times by inserting a blunt iron or steel rod through one of the perforations of the waste valve seat. Where a metal clack is fitted it may be opened a few times by pushing down on the top of the metal clack spindle. If the rising main is empty it may be necessary to repeat the above procedure several times.
3. The quantity of water taken to drive the Hydrum (and consequently the rate of delivery to the high level) can be regulated as follows: -
  - 3a. Where a rubber clack is fitted to the waste valve the consumption (and delivery) may be reduced from the rated maximum for a given Hydrum by screwing the wheel shaped guard closer up the waste seating. This will cause the Hydrum to beat faster. This adjustment is made by loosening the locknut on top of the valve spindle and turning the spindle with the box key provided. Be sure to retighten the locknut before the Hydrum is started.
  - 3b. Where the waste valve is fitted with a metal mushroom shaped clack the length of the stroke may be varied by means of the two brass locknuts on the valve spindle. The stroke may vary from 1/16" to 1/4". The shorter the stroke, the less water the Hydrum will require, the less it will deliver, and the faster it will pulsate.

The waste valve should normally be adjusted so that there is at least a slight overflow at the intake or the feedwell to make sure you are not overrunning the supply.

In times of water shortage it is preferable to operate the Hydrum continuously on a quick stroke rather than intermittently on a slow one. By this means you will save trouble and pump up more water in the long run.

**N.B.** No branches should be taken from the rising main to deliver water at a level lower than about three times the working fall otherwise the Hydrum may stop each time the water is drawn through any such branches. Branches may be taken from higher points on the rising main, and for preference should be controlled by ballcocks.

When a stop valve is fitted on the drive pipe close to the Hydrum, the valve should be fixed in a horizontal or oblique position to ensure no pockets of air will form in the valve mechanism.

Spare rubber clacks should be kept in a cool dark place.



## Spare Parts

When ordering spare parts it is essential to quote the serial number of the Hydram. The serial number of most Hydrams is located on the small brass plate attached to the air vessel. To indicate the part that you require, please quote the figure number and description in accordance with the parts list given below which refers to the sectional drawing.

Not all parts apply to all Hydrams.

Part No.	Description
1	Injection Socket
2	Bolt, Nut & Washer for Injection Socket
3	Ram Body
4	Waste Valve HD Bolt
5	Waste Valve Stud & Nut
6	Waste Valve Cover
7	Waste Valve Seating
8	Shutter Guard Spindle
9	Waste Valve Lug Nut
10	Waste Valve Clack (Rubber)*
11	Shutter Guard
12	Waste Valve Mushroom Clack
13	Waste Valve Seat & Cover
14	Brass Locknuts for Clack
15	Air Valve
16	Delivery Valve Seat
17	Delivery Valve Disc*
18	Air Vessel Flange Bolt, Nut & Washer
19	Star Nut or Saucer
20	Air Vessel Door Bolt or Stud & Nut
21	Air Tap
22	Air Vessel Door
23	Air Vessel
24	Air Vessel Eyebolt
25	Delivery Pipe Flange
26	Delivery Flange Bolt, Nut & Washer
27	Nipple
28	Back Pressure Valve (screwed)
29	Delivery Pipe Union
30	Socket Flange Joint Ring
31	Waste Valve Joint Ring
32	Delivery Valve Joint Ring
33	Air Vessel Door Joint Ring
34	Delivery Flange Joint Ring

\* Recommended spares.