IMPORTANT
QUICK REFERENCE TROUBLESHOOTING GUIDE

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
4. Air is being drawn into the cylinder from in and around the piston.	Foreign matter lodged on or around piston o-ring.	 Replace piston o-ring (11) and lubricate liberally.
	Piston not sealing against push rod.	Remove cylinder (8). Hold rear push rod (15), tighten piston (12) firmly using wide blade screwdriver in slot or replace push rod / piston seal ring (if applicable).
	Delivery valve and spring incorrectly assembled.	 Reassemble valve (7) and spring (6) correctly (see parts illustration).
	Feed tube perforated /damaged.	Replace the feed tube.
	Feed tube connection at container or instrument is split or damaged.	Replace container fitting or inlet adaptor to ensure an air tight seal. Cut feed tube for clean ends.
5. Piston not returning fully on filling stroke.	Piston o-ring and lubricating washer are dry.	 Remove cylinder (8), soak piston o-ring (11) and lubricating washer (13) in NJ Phillips Lubricant.
	Blockage in inlet line.	Check inlet valve (18) and spring (17), inlet adaptor (19), feed tube and container draw off fitting for foreign matter.
	Kinking or restriction of feed tube.	Remove restriction or reposition feed tube.
	Binding of push rod within dose adjustor assembly caused by foreign matter lodged between sliding surfaces.	Dismantle push rod (15) from instrument and rinse it and dose adjustor assembly with clean water. Inspect for damage. If damaged, replace affected part.
	Material used too viscous for draw-off and feed tube.	Increase feed tube and draw off bore size.
	Chemical container not collapsing as instrument draws fluid.	Vent pack or use a Phillips Vented Draw-Off system.
6. Hard delivery stroke pressure	Foreign matter in delivery valve spring or blockage in nozzle.	 Remove nozzle (2). Clean delivery valve &, spring and nozzle fluid hole. Reassemble.

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njphillips.com
Our expertise is in your hands.

PAD87, PAD76C | QL747-R4

60ml Variable

Automatic Drencher MkIII

njphillips.com
Our expertise is in your hands.

The Phillips 60ml Automatic Drencher (referred to as instrument) has been designed for oral administration to livestock of most solutions and suspensions within its dose range.

As components in this instrument may be affected by solvents in some 'pour-on' formulations no responsibility will be accepted by the manufacturer should the instrument be used with such products.

BEFORE DRENCHING

Always read the label.
Check the label on the pharmaceutical manufacturer's container for dose rates, precautions, and safety information prior to use.

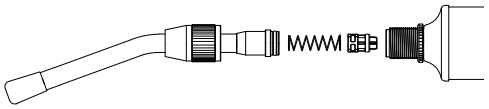
Use only the recommended dose rate.
Use only the pharmaceutical manufacturer's recommended rates. Refer to the pharmaceutical manufacturer's dose rate chart or specification. NJ Phillips Pty Limited will take no responsibility if the instrument is used for any other purpose than specified or used contrary to the pharmaceutical manufacturer's dose rate specifications.

Check the instrument.
Before each use, the nozzle should be inspected to ensure there are no sharp edges. Should this occur, remove with file or emery paper or replace nozzle.

INSTRUCTIONS FOR USE

Preparing the Instrument
To simplify packing, the nozzle of this instrument has been removed. To reassemble, follow the sketch provided paying particular attention to correct assembly of the valve.

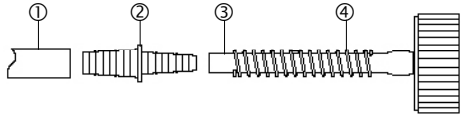
Fit the appropriate nozzle to the handpiece, taking care to ensure the delivery valve (item 7) and spring (item 6) remain facing in direction shown in the handpiece diagram.



Drenching

1. Fit one end of the feed tube to the container. Fix the tube by screwing the spring provided, in an anticlockwise direction over the tube and adaptor. This will also prevent kinking of the feed tube at this point.
2. If using a backpack with a different size connection, connect the large bore feed tube (1) as shown in the diagram to the plastic adaptor (2), then attach the plastic adaptor to the draw off cap using the ¼" feed tube (3) and spring (4).

Fit the other end of the tube to the inlet adaptor (item 19) of the instrument, in a similar manner.



3. Prime the handpiece by squeezing the lever several times until an unbroken flow of liquid passes from the nozzle. **The instrument must be held vertically, with the nozzle pointed upwards, to ensure the instrument is fully primed.**

WARNING **Care must be taken to ensure the liquid does not come into contact with any part of the operators body. Chemicals may cause injury to the operator.**

4. Set the required dose with minimum return spring tension to fill the cylinder. Over tensioning may cause excessive spit from the nozzle. The dose is set by aligning the appropriate calibration on the push rod with the rear of the handle, then lock by means of the screw and lock nut at the base of the handle.
5. Before use and after priming each new container, measure the dose to ensure it is correct. (See calibration instructions.)

CAUTION Always exercise care when dosing animals. Do not apply undue pressure and ensure the nozzle is not forced against or through delicate mouth and throat tissues.

Calibration of the Instrument
As the graduation markings on the push rod (item 15/32) are for reference only, check the accuracy of the instrument with a calibrated measuring glass. To ensure repeatability, squirt 2 x 20ml doses into a calibrated glass. The level of fluid should be at the 40ml mark. If it is not, readjust the instrument following the steps above then perform the dose test again. If you have problems with dose accuracy contact the manufacturer or place of purchase.

To Adjust the Dose
Loosen item 31 *(dose adjustor lock nut)*. Depress the lever to take pressure off item 30, *(dose adjustor screw)*. Adjust the dose adjustor screw in or out depending on the dose setting required. To set the correct dose, align item 12 *(black piston)* with the cylinder marking. Once the piston is in the correct position, release pressure on the lever and re-tighten item 31 *(dose adjustor lock nut)*. (See calibration instructions.)

Cylinder Fill Rate and Delivery Pressure

This can be varied by adjusting item 26 *(return spring)* tension. Turning item 23 *(adjustor nut)* on the trunnion assembly clockwise, will increase fill rate and delivery pressure, turning anticlockwise will reduce fill rate and delivery pressure. Minimum return spring tension should be used to achieve acceptable filling rate and delivery speed. If spitting occurs reduce tension on return spring.

Drenching Position

For best operating results the container should be at about the same height as the instrument when in use. Should the container be at a much lower level than the instrument, filling rate will slow down between doses. The return spring adjustor nut of the instrument may be tightened to minimise this.

Sterilizing

A common method of sterilization is as follows:

1. Connect feed tube and spring to handpiece.
2. Wrap cloth around handpiece and place end of feed tube into container of clean hot water and draw hot water into cylinder by depressing lever. It is most important the cylinder is full of water before suspending in container. If this is not done, the steam created by sterilizing can crack the cylinder.
3. Remove cloth and suspend complete instrument by fully immersing in a container of water and boil for 10 to 20 minutes.
4. Remove instrument from container, wrap cloth around handle and pump dry, remove cloth and dry handpiece.

NOTE

Suspending the instrument not only makes it easier to remove, but also prevents damage should the container boil dry. Chemical sterilization with antiseptic solutions is sometimes practised and in such instances the recommendations of the chemical manufacturer should be followed. DO NOT attempt to sterilize by autoclaving.

Attach connecting tube to both the hand piece and draw off system. Make sure the springs provided are screwed over the feed tube in an anti-clockwise direction. This will prevent the tube from kinking at these points.

CARE AND MAINTENANCE

Before Drenching

As lubricants will evaporate during storage, before using it is important to run a few drops of oil into the air holes of the adaptor, with the nozzle of the handpiece pointing downwards. This will allow the oil to run into the cylinder and lubricate the piston.

Ensure that all equipment is thoroughly clean before use, by flushing with water.

Before each use the nozzle should be inspected to ensure plating is not damaged or worn to a sharp edge. Should this occur, remove with file or emery paper or replace nozzle.

After Drenching

Where suspension type drenches have been used it is advisable to flush the complete equipment with a water detergent mix. This should be followed by clean water.

Solution type drenches normally require only a thorough flushing with clean water.

All moving parts should be lubricated before storage.

IMPORTANT

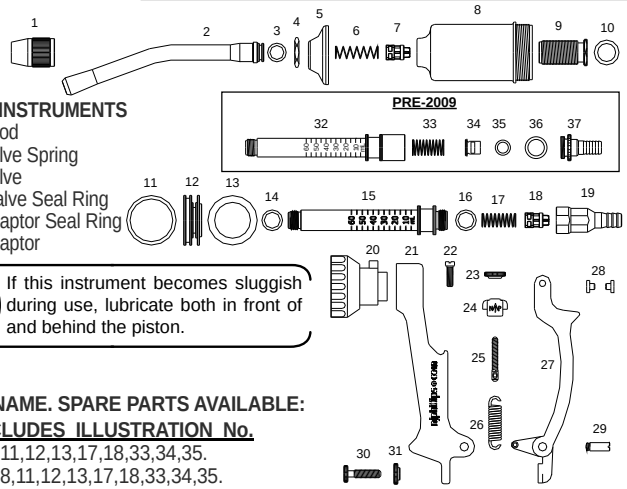
DO NOT store your applicator or feedtube full of product. Clean as per the “Care and Maintenance - After Drenching” instructions.

LEGEND:

1. Nozzle Lock Nut
2. Cattle Nozzle
3. Nozzle Seal Ring
4. Delivery Cage Lock Nut
5. Cylinder Shield Cap
6. Delivery Valve Spring
7. Delivery Valve
8. Cylinder
9. Delivery Valve Cage
10. Delivery Cage Seal Ring
11. Piston O-Ring
12. Piston
13. Lubricating Washer
14. Piston Seal Ring
15. Push Rod
16. Inlet Adaptor Seal Ring
17. Inlet Valve Spring
18. Inlet Valve
19. Inlet Adaptor
20. Cylinder Adaptor
21. Handle
22. Handle Clamp Screw
23. Spring Adjustor Nut
24. Spring Adjustor Trunnion
25. Spring Adjustor Spindle
26. Return Spring
27. Lever
28. Lever Pad (2 Per)
29. Lever Screw
30. Dose Adjustor Screw
31. Dose Adjustor Lock Nut

PRE-2009 INSTRUMENTS

32. Push Rod
33. Inlet Valve Spring
34. Inlet Valve
35. Inlet Valve Seal Ring
36. Inlet Adaptor Seal Ring
37. Inlet Adaptor



IMPORTANT

If this instrument becomes sluggish during use, lubricate both in front of and behind the piston.

PLEASE ORDER BY KIT AND PART NAME. SPARE PARTS AVAILABLE:

KIT No.	PART NAME	INCLUDES ILLUSTRATION No.
WX1326	Minor Service Kit	6,7,11,12,13,17,18,33,34,35.
WX1327	Major Service Kit	6,7,8,11,12,13,17,18,33,34,35.

Parts not included in Minor or Major Service Kits may be available for individual purchase.

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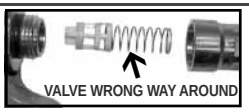
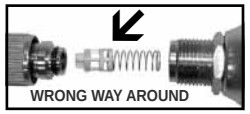
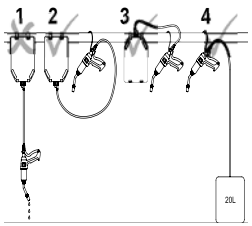
SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
1a. Product being returned to the container from the instrument. **1b. Unable to draw product from the container.**	Foreign matter lodged under the inlet valve.	 Remove inlet adaptor (19) and clean the internal seat by removing valve(18) and spring (17), rinse with clean water then wipe with a soft cloth. Reassemble ensuring correct orientation of the valve (18) and spring (17).
	Inlet valve spring is missing.	 Replace inlet valve spring (17).
	The inlet valve and spring are incorrectly assembled.	 Reassemble the valve (18) and spring (17) correctly (as shown in the top photo).
	Foreign matter lodged under delivery valve.	 Remove nozzle (2), valve (7) and spring (6). Clean valve seat located in front of cylinder by rinsing and wiping with a soft cloth. Clean valve (7) and spring (6) and reassemble ensuring valve and spring are oriented correctly.
2. Product leaking out of the nozzle or air being drawn into the cylinder from the nozzle end.	Nozzle seal ring is damaged.	Replace nozzle seal ring (3).
	Delivery valve and spring are incorrectly assembled.	 Reassemble valve (7) and spring (6) correctly (see parts illustration).
	Delivery valve sealing edge damaged.	 Replace the delivery valve (7) and spring (6).
	Delivery cage seal ring damaged.	Replace the delivery cage seal ring (10).
3. Fluid dripping/ running out of nozzle when not in use.	Instrument is hanging at end of feed tube when not in use.	 Hang instrument at same height or higher than off take point of feed tube on container of product. This ensures the delivery valve is free of load which can cause the product to leak past the valve assembly.