

## TECHNICAL ADVICE

### Sealing Areas of Your Feedtube Equipped Applicator

This Technical Advice sheet looks at the importance of the sealing areas of the applicator, and explains why it is important to check these each time you use your applicator.

#### THE FEEDTUBE

Many NJ Phillips applicators are equipped with a feedtube that links the applicator to the bottle of product. The feedtube is attached to a barbed inlet fitting on the applicator and the other end is attached to a barbed fitting connected to the neck of the bottle.

Make sure the ends of the feedtube are not stretched or cracked and that there are no splits or leaks in the feedtube. If air can find its way into the feedtube through any leaks the applicator will not perform correctly.

The feedtube should be pliable. If the tube is stiff it may be prone to cracking or be difficult to work with.

On larger applicators that are fitted with 6mm or 9mm internal diameter feedtube two anti-kink feedtube springs are provided. The feedtube will locate over the barbs on the inlet fitting and the bottle neck. Then the anti-kink feed tube spring winds anti-clockwise over the tube and is pushed up over the section of tube located each barb. The springs not only prevent kinking, but also help secure the hose onto the barbed fittings.

Smaller applicators usually don't have anti-kink springs on the feedtube.

Avoid letting the feedtube kink during use as this will prevent product flowing freely from the bottle to the applicator.

#### THE INLET FITTING

Take a close look at the barbed inlet fitting on your applicator. The applicator may be fitted with a screw-on barbed inlet fitting (Figure 1) or sometimes the barbed inlet is moulded or shaped into the plastic or metal of the pushrod and cannot be unscrewed (Figure 2). If your applicator is fitted with a screw-on style inlet fitting you must ensure when the feed tube is fitted and when you are using your applicator that the fitting remains firmly tightened. If it comes loose it will allow air to leak in. Screw-on inlet fittings are usually sealed with an O-ring. If the O-ring is damaged or missing the applicator may leak. If that is the case replace the O-ring.

#### VALVES

All feedtube model applicators function similarly. They have an inlet valve and a delivery valve. These spring loaded valves control the function of the applicator and ensure product/ fluid is drawn into the applicator in the required dose then dispensed. Depending on the model of instrument, the valves may have an O-ring seal or they may be a solid plastic valve with no O-ring. Whether the valve is an O-ring or solid type any damage to the O-ring or face of the valve or to the valve seat it seals against in the pushrod will cause the applicator to fail. Any debris caught around the valve will also cause it to fail.

##### a) Inlet Valve

If the barbed inlet-fitting on the pushrod is screw-on type, then the spring-loaded inlet valve inside will be found in the inlet fitting when you unscrew it. If the barbed inlet fitting is a solid type then you will locate the inlet fitting in the pushrod behind the piston. In that case, to access the valve, the instrument must be opened and the inlet valve is reached through the piston or by unscrewing it.

**Note** - on some smaller disposable injectors the inlet valve cannot be serviced.

##### b) Delivery Valve

The same issues apply for the delivery side of your applicator. In Figure 3, the nozzle nut secures over the delivery cage, which houses the spring-loaded outlet valve. If the valve is worn or damaged or there is debris in the valve it will cause the applicator to fail. If the instrument leaks from around the nozzle nut it indicates the nozzle nut may be loose resulting in the valve not seating properly allowing liquid to trickle through.



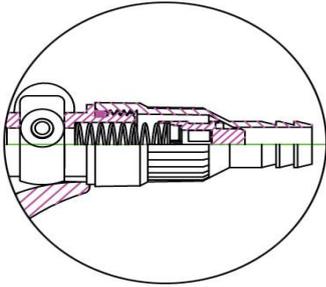


Figure 1

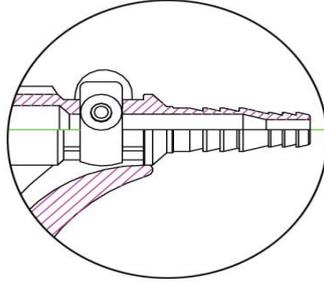


Figure 2

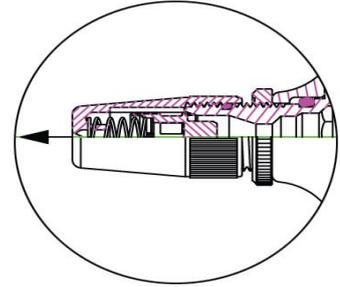


Figure 3

### DURING USE OF YOUR NJ PHILLIPS PTY LIMITED APPLICATOR

Watch out for problems. Keep an eye open for product leaking or escaping from the applicator or container and feed tube during use. Importantly, STOP operating the applicator if this happens and correct the issue immediately.

#### If air is getting into the cylinder check the following points:

1. Is the feed tube fixed correctly to your container of product and the inlet fitting?
2. If a dip tube style draw-off is being used in the product container Is the dip tube secure and airtight?
3. Are there any cracks or holes in the feedtube?
4. Is the inlet fitting (screw-on type) sealing properly and secure?
5. If the piston screws on to the push rod is it sealing properly and secure?
6. Is the outlet valve sealing properly and secure.
7. Are all O-ring seals in good condition?

#### If there is no air in the system, but the instrument is not re-filling properly:

8. Are the anti-kink feed tube springs fitted to both ends of the feed tube?
9. Has a vacuum been created in the rigid product container? – If so allow some air into the container.
10. Are the inlet and delivery valves clean and operating properly?
11. Does the piston O-ring need to be lubricated?
12. Is the instrument gumming up due to the product?
13. Is the cylinder secured to the handle properly?
14. Is the delivery cage tight and secure?
15. Is the nozzle nut secure and tight?

The other item that should be checked frequently is any area that has an o-ring used to seal a joint. The common areas are the inlet fitting if a screw type, and the nozzle nut area. All O-rings should be checked to ensure they are clean, not damaged and they should be lubricated with NJ Phillips Lubricant if required.

### AFTER USE

Always ensure the applicator is cleaned and re-lubricated after use. The cleaning instructions are found in the instruction leaflet that is supplied with most models of NJ Phillips applicators. Or, look on our [website](http://www.njphillips.com).

### SUMMARY

Your NJ Phillips Pty Limited applicator has been manufactured to a high standard and the instructions that came with your applicator must be followed to ensure you set up the applicator correctly. If something does not seem right, we advise you stop and consult the leaflet. If all else fails call NJ Phillips, send us an email or check the Information Guides and Video section of our website [njphillips.com](http://njphillips.com).

