



# SoloRain Troubleshooting Guide

The following is a step by step guide to help you diagnose possible problems with the Nelson SoloRain range of Programmable Actuators.

## What do I do if there is a leak?

### If the leak is at the adaptor or solenoid then,

1. Check that both the internal and external o-rings on the adaptor are present and are in good condition.
2. Ensure the rubber end cap on the plunger is present.
3. Check the correct adaptor is being used for that particular valve (see the PPI SoloRain Valve Compatibility Guide).

### If the valve won't fully close then,

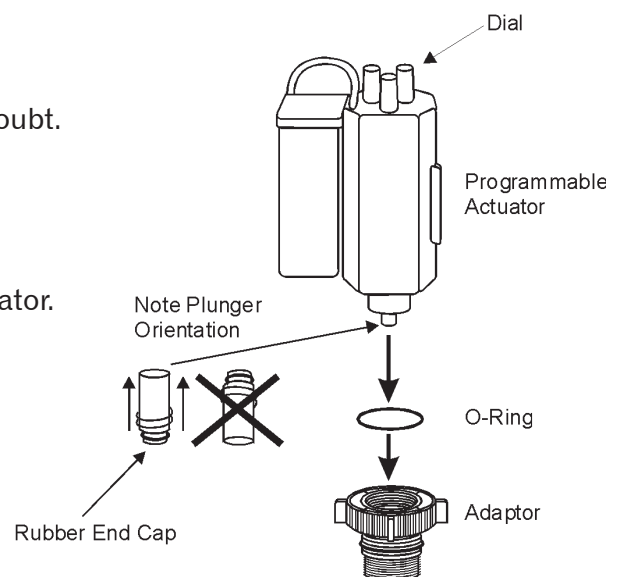
1. Check that the valve is installed and operating correctly (refer to the PPI Solenoid Valve Maintenance Sheet).
2. Check pressure – Nelson does not recommend SoloRain when the pressure is continually over 130psi (900kPa). You may need to add a pressure reducing valve upstream of the solenoid valve.
3. If the valve is fitted with a Manual Bleed Lever, then ensure that it hasn't been operated, as the SoloRain latching solenoid will not release the plunger. If this has occurred, unscrew the SoloRain actuator, pull the plunger out and reassemble.



## What do I do if it doesn't operate?

### Check the simple things first,

1. Is an alkaline battery installed?  
(Nelson Recommend Energizer Alkaline Batteries)
2. Check charge of battery – install new battery if in doubt.
3. Is the appropriate adaptor fitted?  
(see Solorain Compatibility Guide)
4. Check the plunger is not recessed inside the actuator.  
Lever it out with your fingernail if it is.
5. Remove adaptor and check plunger for correct orientation and ensure the spring and rubber end cap are present.
6. Ensure plunger chamber is clear of any debris.
7. Operating Pressure is below 130psi (900kPa).



## 8010 Series Actuators - Conduct a comprehensive test

1. Disconnect battery, set the correct time ensuring the am/pm dial is not in the Manual (hand) or Off positions and then reconnect the battery – listen for an audible double click.
2. Connecting the battery while in manual mode should cause the plunger to click continuously. If it only clicks twice then the actuator does not recognise the manual position.
3. Remove the adaptor, if possible, to observe the plunger operating.

### 4. Check Manual Operation:

- Set dial 3 to Off, then turn it to Manual (hand). This will draw in the plunger (audible click).
- Turn the dial back to Off. This will eject the plunger (audible click).
- Remember – after operating in the manual mode the dial must be turned to the Off position before using the Auto mode.



### 5. Check Automatic Operation:

- Disconnect the battery and set the time to 1.55pm, reconnect the battery.
- Change dial 1 to read 2.00pm (will start Auto cycle in 5 minutes).
- Set the run time to 5 minutes on dial 2.
- Set dial 3 to watering program C (pm side). This should be equal to 1 minute of watering.
- Observe the plunger as for the Manual Operation.

## 8030 Series Actuators and 8070 Programmer - Conduct a comprehensive test

Remember – Unless the programmer is connected to the actuator you can only set the current time and day. The actuator will not operate if the programmer is still connected. Day 1 should be Monday.

### 1. Check Manual Operation:

- Follow the flow chart on the programmer and set the actuator to water for 2 minutes.
- Disconnect the programmer.
- After a 30-second delay the plunger should activate and then eject after 2 minutes.

### 2. Check Automatic Operation:

- Set the current time and day (including am/pm if using a 12 hour clock).
- Clear all watering programs.
- Program a watering cycle to start in a couple of minutes for 2 minutes duration (don't forget am/pm for a 12 hour clock).
- Disconnect the programmer.
- Observe the plunger as for Manual Operation.