

## S063 Inspection and Servicing

The pump is made from a 323U Watson Marlow pump unit and the Pressure Control Unit manufactured for SUS.

In normal service, the pumps are expected to last over 5 years, and no wear is expected within this time. The annual service is to check for damage to the unit and confirm normal function.

### Inspection:

1. Carry out inspection and checks for pump damage or lead damage, using S063 Pump Inspection Checklist attached
2. Carry out pressure test as below. When the pressure dial is set at 5, if the average pressure is outside 0.8 to 1.2 bar, investigate the cause (see fault-finding)

### Pressure test

#### Equipment

- 1 to 3 bar pressure gauge
- 1m length of S064 tube, marked with a test position at a distance of 0.6m from the pressure gauge

#### Method

- Load the tube into the pressure control unit & pump head with the test mark inside the pressure control unit
- Leave the suction end of tube in free air
- Turn the pump on, set the pressure dial to position 5 and record the pressure on the gauge
- To release the pressure for the next test, slightly open and close the pump head jaws

#### Note

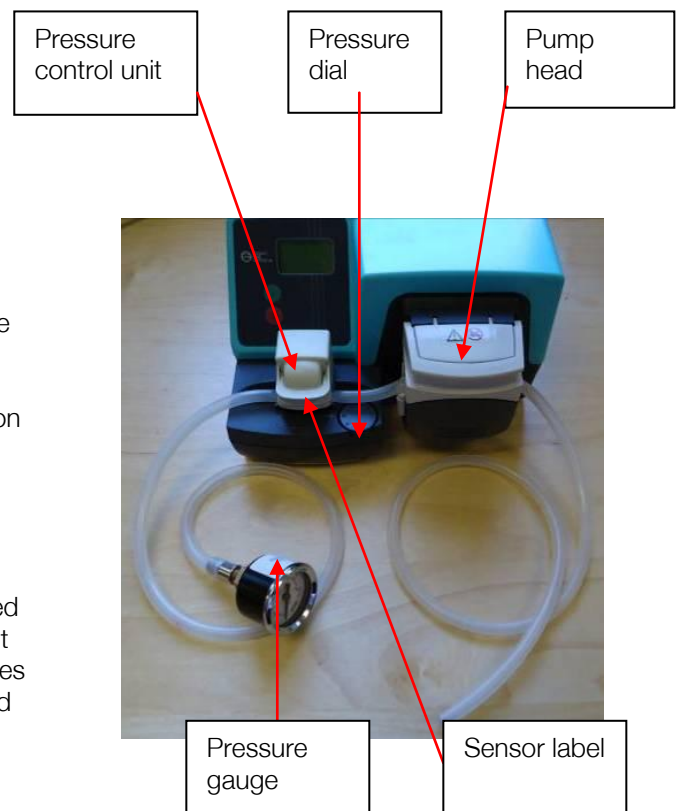
To ensure repeatability, the same piece of tube is used for each test. The tube is marked up to show the test location, and the pressure should be measured 4 times at 90 degree intervals; the tube is rotated 90, 180 and 270 degrees. At each position the test is repeated 3 times, giving 12 readings per dial setting.

- Repeat the test with the pressure dial set at position 3 (position 5 is used to set the pressure to 1.0 bar)
- Record the test results to confirm satisfactory operation.

When the pressure dial is set at 5, if the average pressure is outside 0.8 to 1.2 bar, investigate the cause (see fault-finding)

### Service:

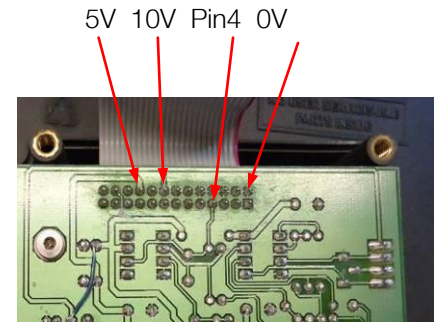
SUS255 S063 Inspection and Servicing rev2 N:\SUS\Operations\Quality\Quality documents



Check the pump head and pressure control unit jaws open and close smoothly, lubricate with a 1mm<sup>3</sup> drop of OG0035 grease if required

## Fault-finding:

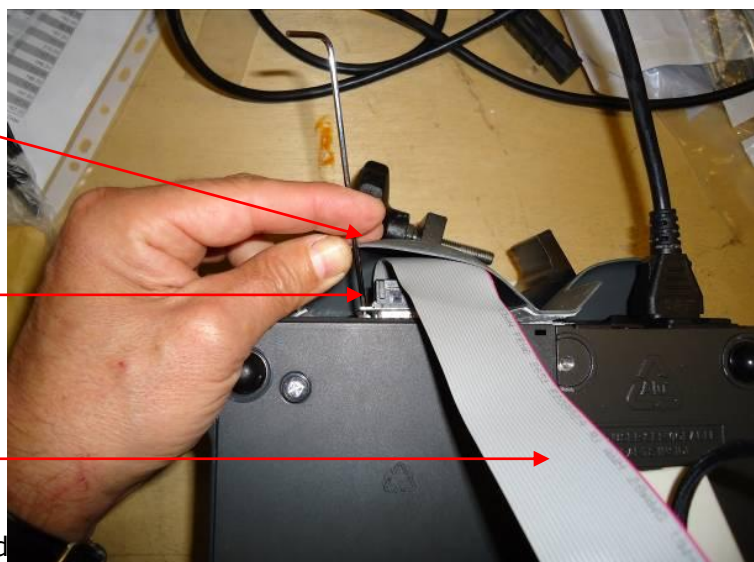
- 'E' fault display on pump – see Watson Marlow manual
- Pump display shows 'ana' but pump not running – to check controller function, try operating the pump without loading any tube. With no tube in the pump or pressure control unit, turn on the pump to display 'ana' - the pump should run. If the pump does not run, there is a problem with the pressure control unit or with a connection - swap the pressure control unit from another pump to check if the fault is with the pressure control unit or connector
- After changing the pressure control unit, if the pump still does not work remove the bottom cover from the pressure control unit and check that the voltage on the pins is as shown on photo 0V, 5V, 10V. (Pin 4 is the input voltage to the pump, 0V = stop, 10V = 400 rpm).
  - o If 5V or 10V are not detected when measured, there is a fault with the pump or connector. Check connector or ribbon cable for damage, and check voltages at pump connector. Change Interface Card if wrong voltages at pump connector
  - o If the voltage at Pin 4 does not vary by pressing a finger on the sensor label, there is a fault with 1226 Control Unit PCB
  - o If there are signs of water or corrosion inside the pressure control unit, the sensor label may have been damaged – fit new pressure control unit
  - o If visual inspection of PCB's shows a fault - change Pressure control unit to confirm
- To swap pressure control unit - remove stainless steel bracket under pump, bend back rear drip cover and remove ribboned cable connector. Replace with new unit.







Bend back rear cover to remove connector

Connector

Ribbon cable



## Spares:

1226	Control Unit PCB	
1228	Pressure control unit	
OG0035	Lubricant grease 10ml	
MNA2022A	Interface card Watson Marlow pump	
033.3451.00K	Pump Head	



Single Use Surgical 3 Spring Hill Road  
Park Springs Barnsley S72 7BQ UK

Telephone +44 (0)1226 732 333  
Facsimile +44 (0)1226 785 386

Email [info@susl.co.uk](mailto:info@susl.co.uk)  
Website [www.susl.co.uk](http://www.susl.co.uk)

## S063 Pump Inspection Checklist

Serial Number 00

### Initial inspection:

	YES	NO
Good general cleanliness?		
Free from any obvious mechanical damage?		
Do both jaws open and close smoothly?		
No water marks on outside of pump or controller?		
Power up, display shows '50'?		
Turn on, display shows 'ana' and pump turns?		
Pump passes pressure test? Test pressure with length of S064 tubing and 1-3 bar pressure gauge. Test in 4 tube positions, and repeat each test 3 times. Test with different dial positions on controller.		

### Pressure test as received:

Dial position	Tube at 0 deg	90 degrees	180 degrees	270 degrees
5				
3				

### Check inside controller case:

	YES	NO
Any signs of water on top face of PCB?		
Any signs of corrosion of PCB components or solder or tracks?		
Any signs of water inside bottom of controller?		

### Corrective action taken:

### Final pressure test if any repairs needed:

Dial position	Tube at 0 deg	90 degrees	180 degrees	270 degrees
5				
3				