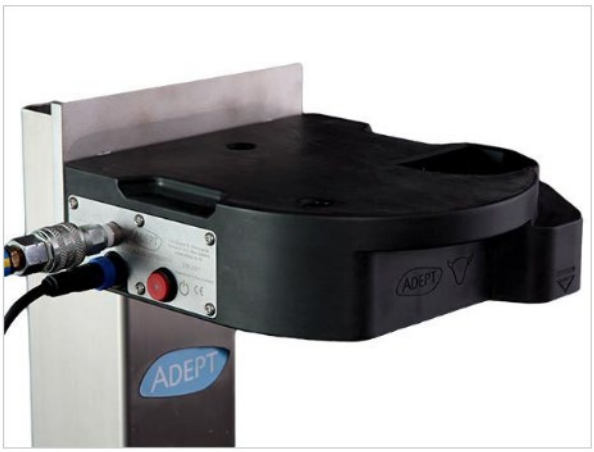
TOUCHLESS CLIP DISPENSER

SERVICE MANUAL

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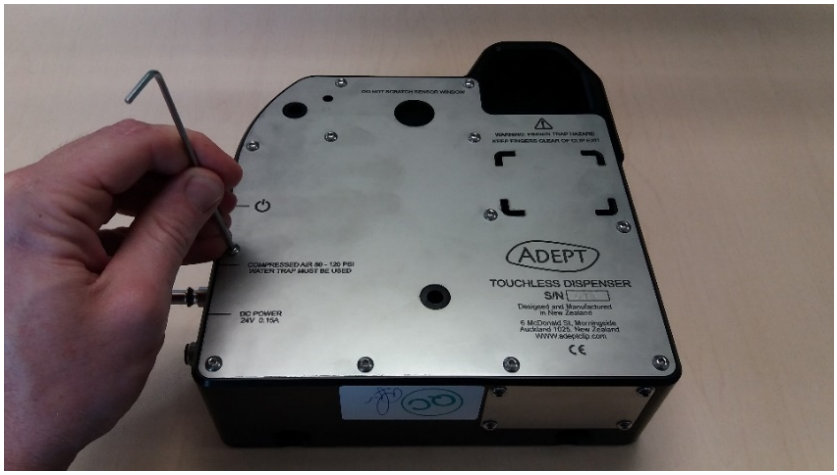
1. Servicing Guide

For all part replacements and any maintenance which involves opening the unit:

1. Disconnect the air supply line at the ARO fitting on the unit.
2. Disconnect the power supply cable by unscrewing the collar and pulling the plug free.
3. Place the unit upside down on a clean flat surface.
4. Using a 2.5mm Allen key, remove the twelve M4 cap screws on the underside of the dispenser base and remove the stainless-steel cover plate.

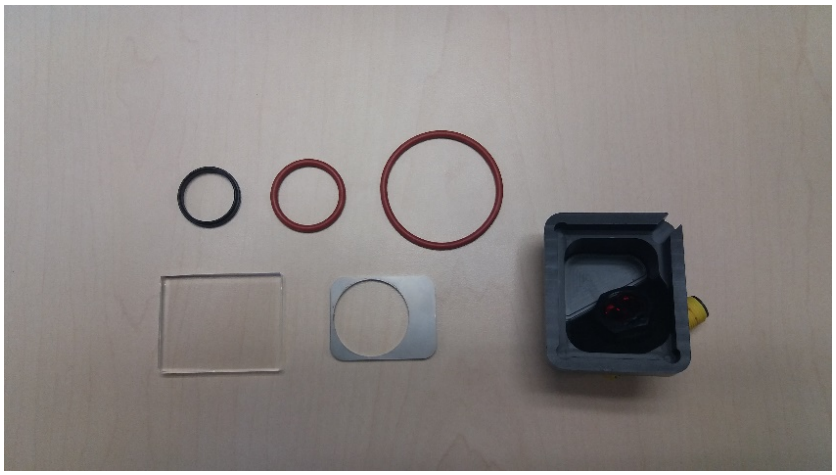


When replacing the cover plate O-ring may require some encouragement to settle in to groove. It is the correct size and will fit once worked into the groove correctly.

DO NOT CUT O-RING TO FIT! This will compromise the seal of the dispenser.

2. IR Sensor (1020-061) replacement

1. If after recalibration checks the sensor is still not triggering correctly, it should be replaced. Remove the IR Sensor and the Sensor Mount from the dispenser base as per the recalibration procedure in **Section 2**.
2. Remove the sensor lead from the IR Sensor by unscrewing the collar and pulling the plug out.
3. Remove the two O-rings, O-ring carrier, Backup Ring and Glass window from the Sensor Mount.



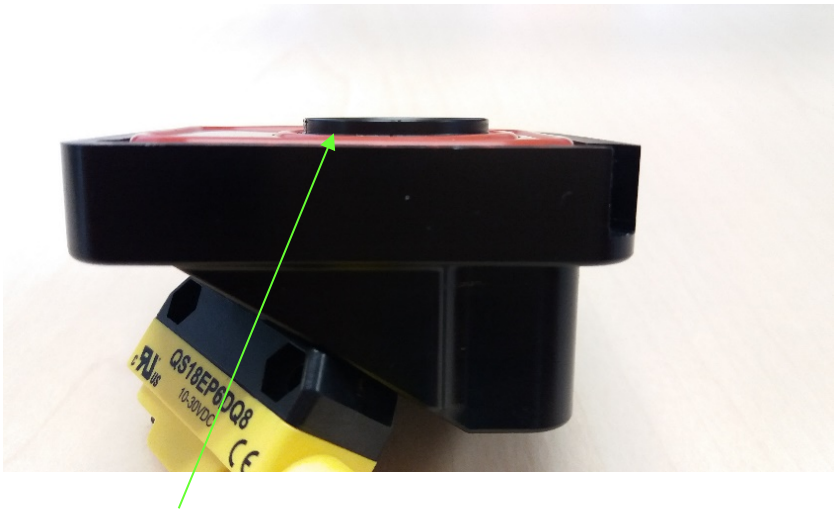
4. Using long nose pliers or similar, unscrew the IR Sensor retaining nut

5. Reassemble using a new IR Sensor (1020-061). Ensure IR sensor retaining nut is done up tight. ***Note: sensor is calibrated to correct detection range.***

Ensure the IR sensor is orientated correctly in the Sensor Mount (1020-095B) as below.

6. Ensure the glass window is clean and free of any contamination. Refit the Glass window into the Sensor Mount, then fit the O-ring Carrier and both the large and small O-Rings as per below.

7. Refit the Backup Ring, ensure that the step in the Backup Ring faces upwards as per below.

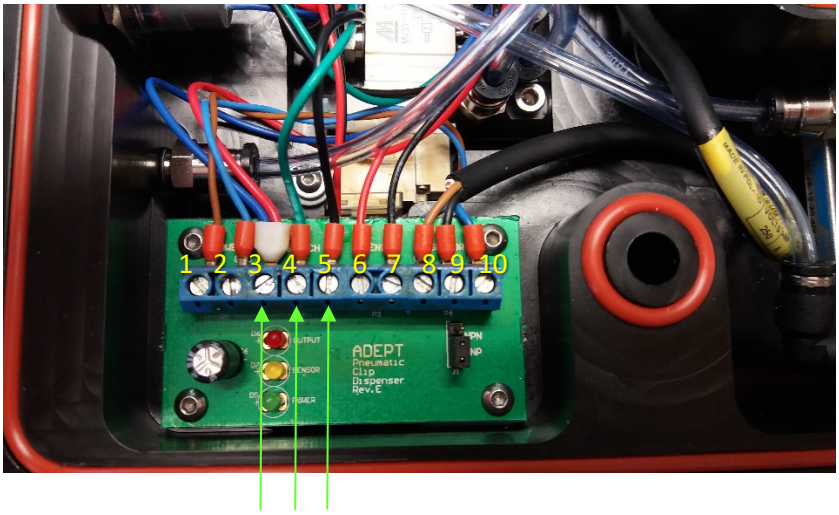


Backup ring step facing upward

8. Re-attach the sensor lead, the connector is keyed so will only fit in one orientation. Screw up the plug retaining sleeve.

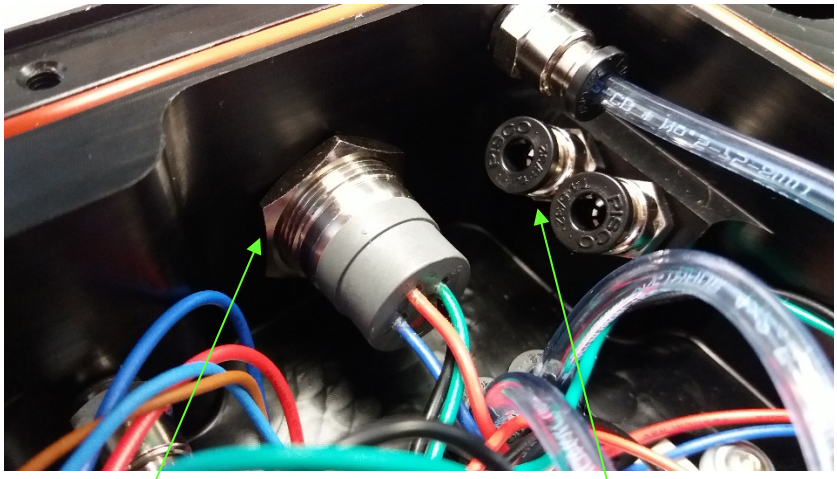
3. Power Switch (1020-112) replacement

1. Disconnect the **Red/Blue**, **Green** and **Black** switch wires from the PCB by loosening the terminal screws (from left to right) **3**, **4** and **5**.



Loosen terminal screws 3, 4 and 5

2 Remove the air line exhaust tubes from the push-in connectors to improve access. Unscrew the switch retaining nut using long nose pliers or similar.

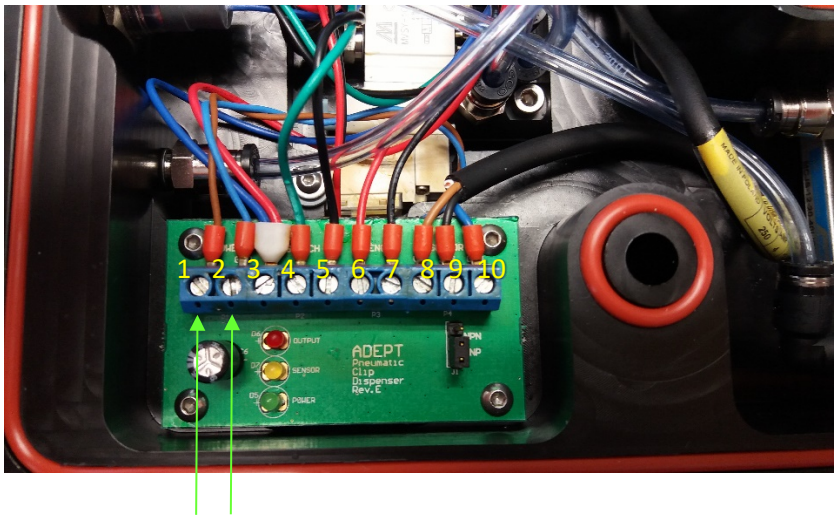


Retaining Nut *Air line exhaust tubes removed*

3. Push the Power Switch out of the dispenser base.
4. Refit replacement switch, taking care to ensure the switch O-ring is seated correctly.
5. Reinstall switch retaining nut.
6. Reconnect the **Red/Blue**, **Green** and **Black** wires to the PCB. Reattach the air lines, ensure cover plate O-rings are correctly positioned, replace the stainless-steel cover plate and M4 cap screws.

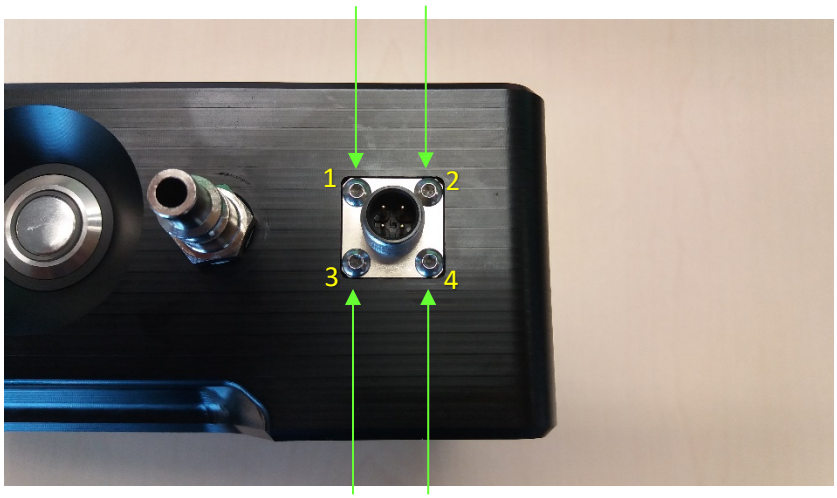
4. Power Connecter Binder (1020-070) replacement

1. Loosen the PCB terminal screws **1** and **2** on the left side of the PCB and remove the **Brown** and **Blue** wires by gripping the bootlace terminals using long nose pliers.



Loosen terminal screws 1 and 2

2. Unscrew the four M3 button head screws holding the Power Connector to the outside of the dispenser base.

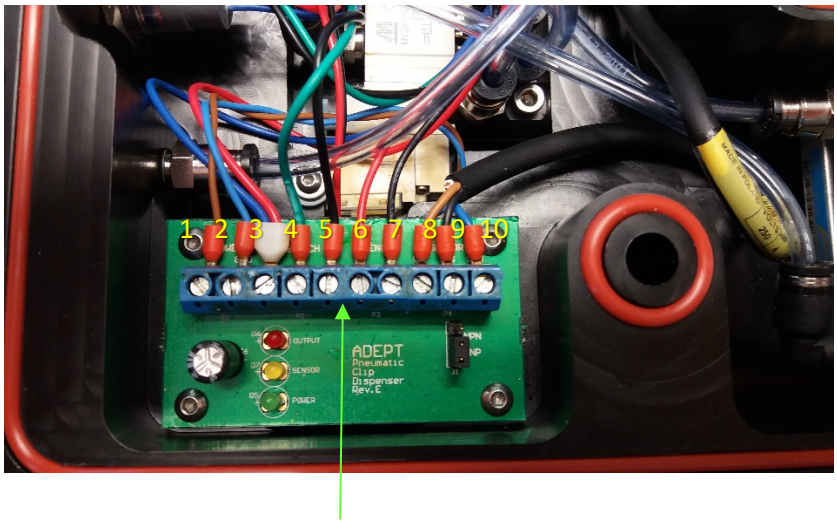


Remove the four M3 button head screws

3. Pull the Power Connector out of the dispenser body, carefully feeding the wires through from the inside.
4. Thread the new Power Connector wires through the hole on the base and route them neatly back to terminals **1** and **2** on the PCB.
5. Insert the Power Connector into the base hole, ensuring the O-ring is seated correctly. Refit the four M3 button head retaining screws.
6. Screw the **Brown** wire to terminal **1** and the **Blue** wire to terminal **2**.
7. Ensure cover plate O-rings are correctly positioned and replace the stainless-steel cover plate and cap screws.

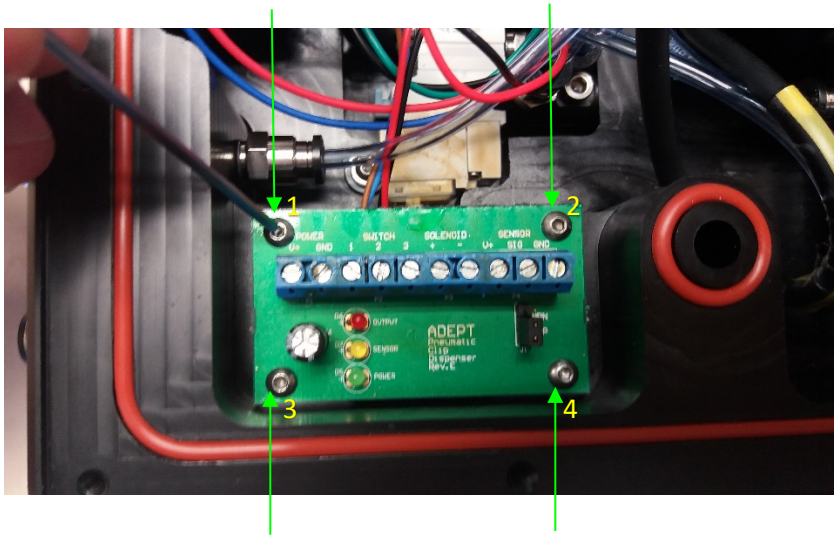
5. PCB (1020-062F) replacement

1. Loosen all the PCB terminal screws (1 to 10) and remove the wiring by gently pulling out the bootlace connectors using long nose pliers.

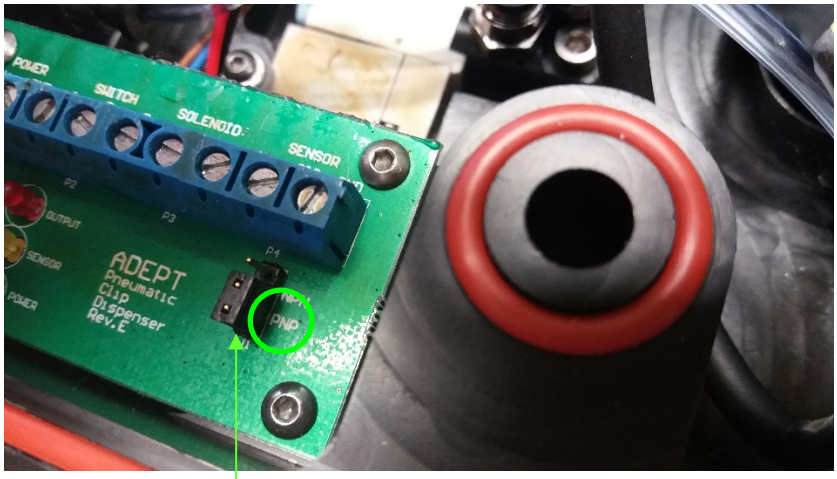


Loosen all PCB screw terminals and remove wiring

2. Unscrew the four M3 cap screws holding the PCB

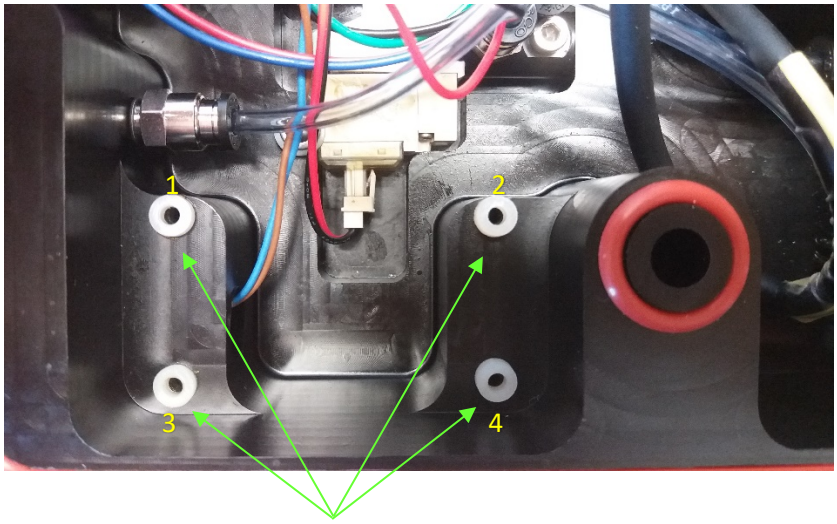


3. Ensure the jumper on the new PCB is set to the ‘PNP’ position prior to installation.



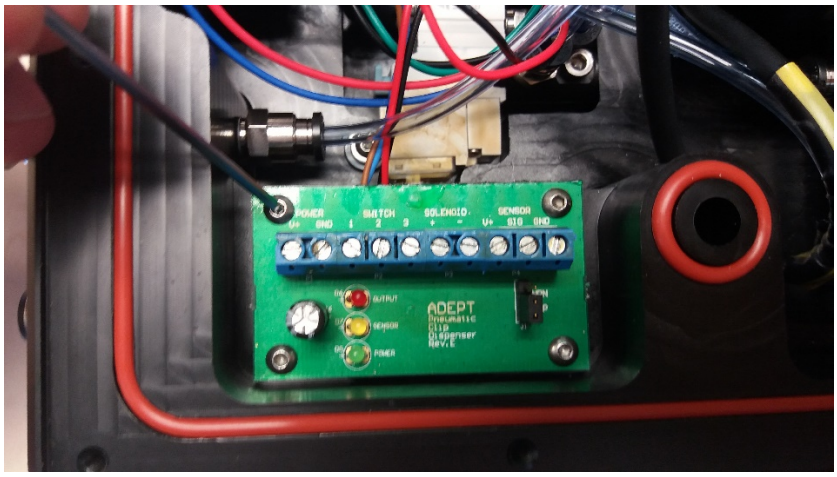
Set jumper to "PNP" position

4. Locate the four PCB spacers correctly above the PCB mounting holes in the dispenser base.

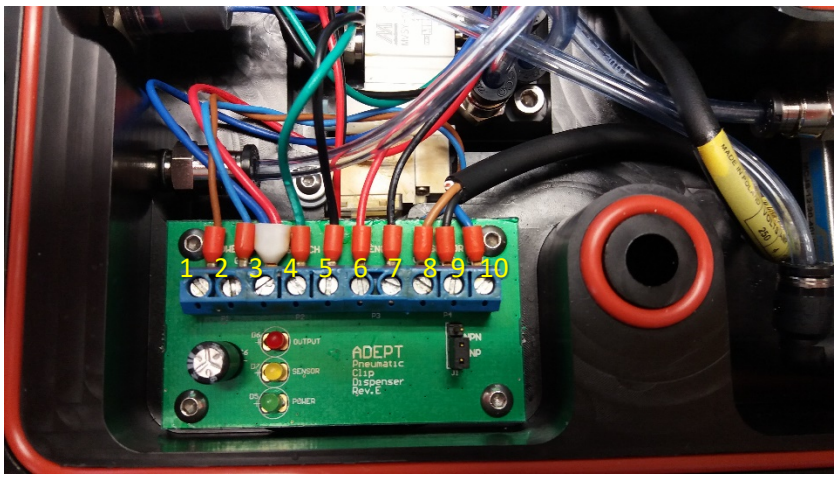


Align PCB spacers over the screw mounting holes

5. Install the new PCB in position using the four M3 cap screws.



6. Reconnect all wiring back to the PCB



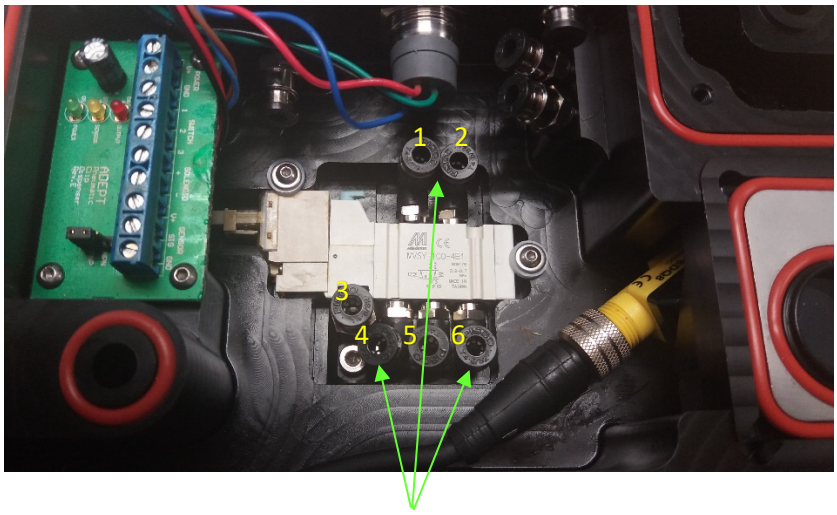
The wiring guide is as follows:

Terminal	Wire Colour	Component
1	Brown	Power Connector Binder
2	Light Blue	Power Connector Binder
3	Blue + Red	Power Switch
4	Green	Power Switch
5	Black	Power Switch
6	Red	Pneumatic Valve
7	Black	Pneumatic Valve
8	Brown	IR Sensor
9	Black	IR Sensor
10	Blue	IR Sensor

7. Ensure cover plate O-rings are correctly positioned. Replace the stainless-steel cover plate and the M4 cap screws.

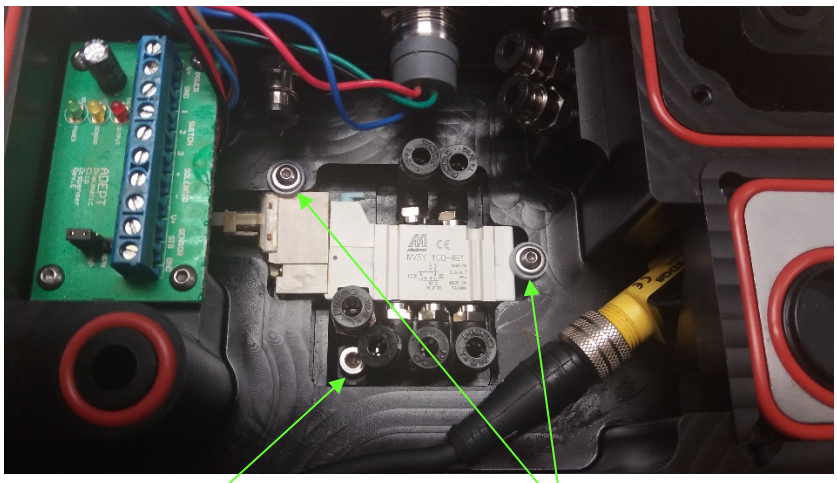
7. Pneumatic Solenoid Valve (1020-074) Replacement

1. Disconnect the six air lines from the valve to provide access to the Solenoid Valve. The air lines are fitted using push in fittings and can be pulled out by pushing down on the outside of the fitting while pulling on the air line.



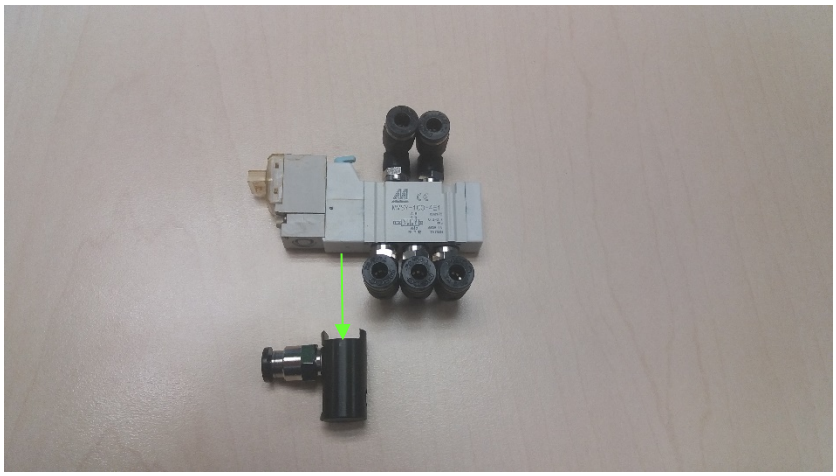
Air lines removed

2. Remove the two M3 cap screw (Including SS Washer and Plastic Washer) and one M5 cap screw holding the Solenoid Valve in place and remove from the recess in the dispenser base.



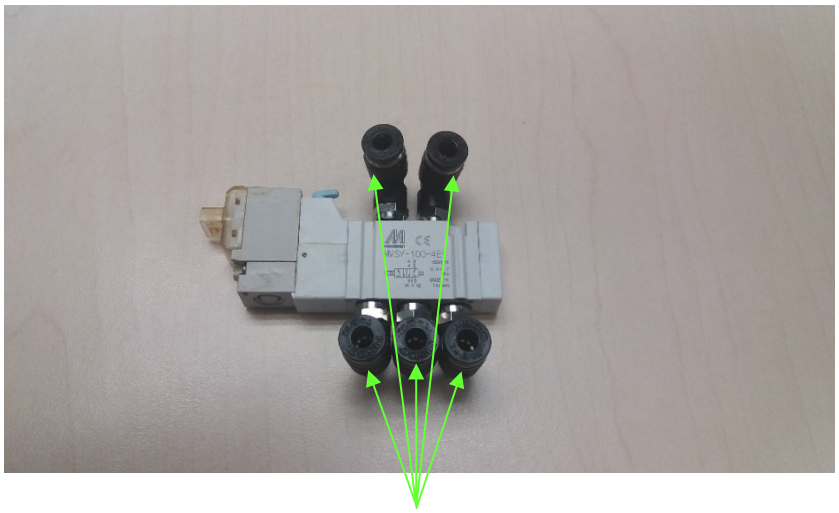
M5 cap crew *M3 cap screw, Washer and Plastic Washer*

3. Separate the Vent Block from the Solenoid Valve body.



Remove Vent Block

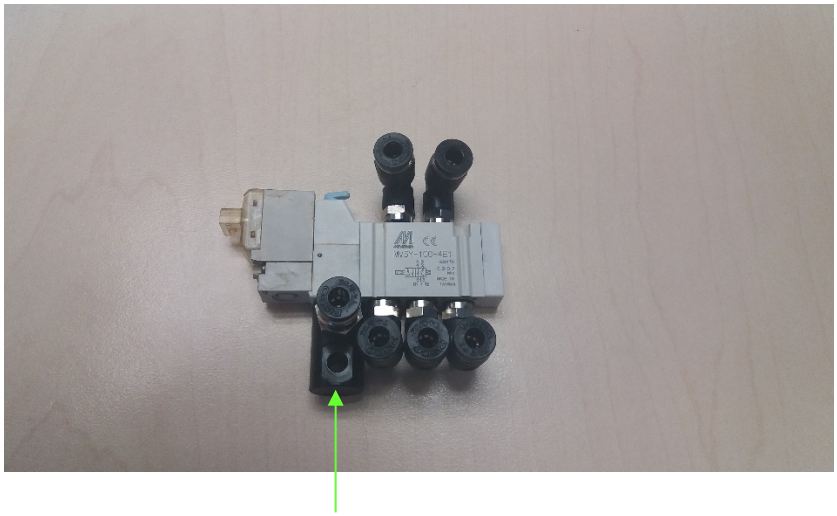
4. Remove the five elbow fittings from the old valve install them to the new replacement valve. Use an 8mm open ended spanner to undo each fitting. When refitting to the new valve, make sure the orientation of the fittings is upwards. Be careful not to overtighten the elbow fittings.



Remove elbow fittings and install on to new valve

5. Refit the Vent Block to the Solenoid Valve, ensure the small O-ring is in position in the Vent Block.

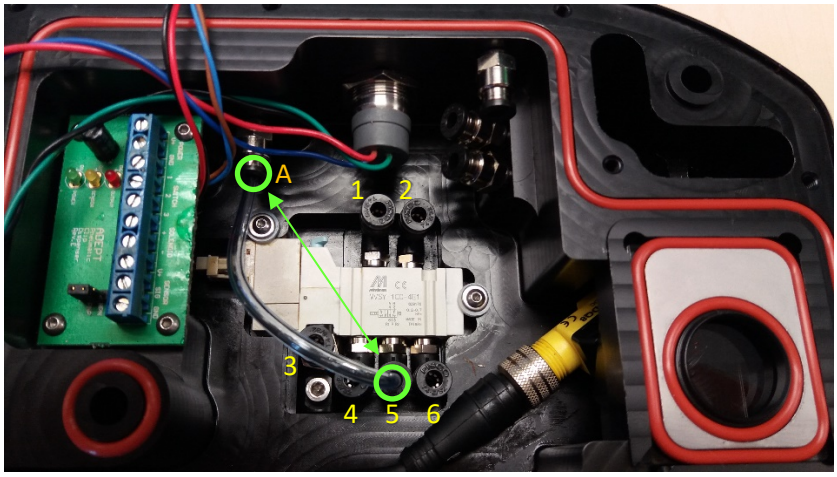
Vent Block O-ring installed



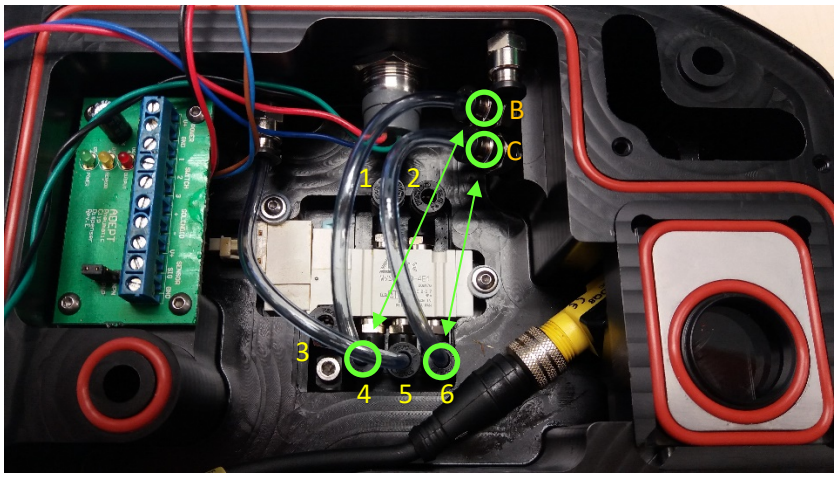
Vent Block seated on Solenoid Valve

6. The new valve comes fitted with an unterminated wire harness, discard this and connect the new valve to the existing harness from the old valve. Refit the valve into its recess and secure with the two M3 screws and one M5 cap screw, reversing the disassembly process.

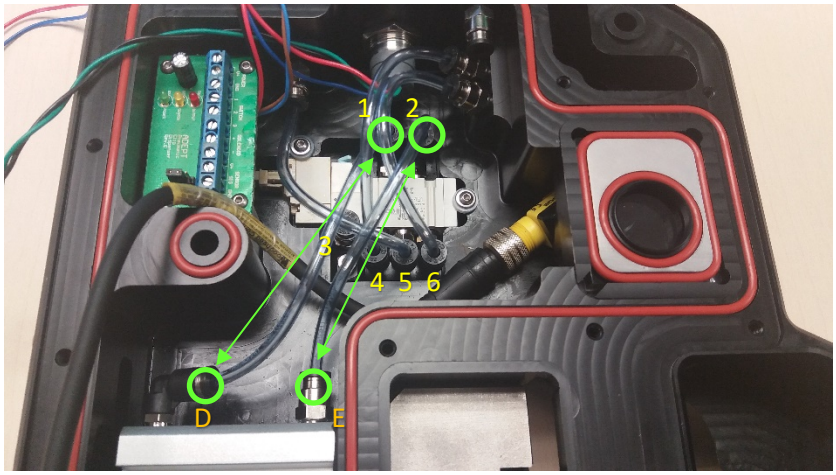
7. Refit the air line main inlet connection **A** to the Solenoid Valve connection **5**.



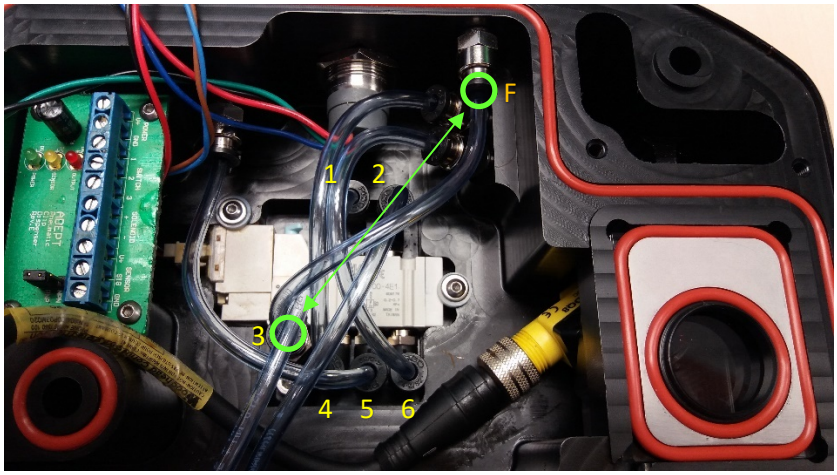
8. Refit the exhaust air line connection **B** to Solenoid Valve connection **4**. Refit the exhaust air line connection **C** to Solenoid Valve connection **6**.



9. Refit the Pneumatic Cylinder connection **D** to Solenoid Valve connection **1**. Refit the Pneumatic Cylinder connection **E** to Solenoid Valve connection **2**.



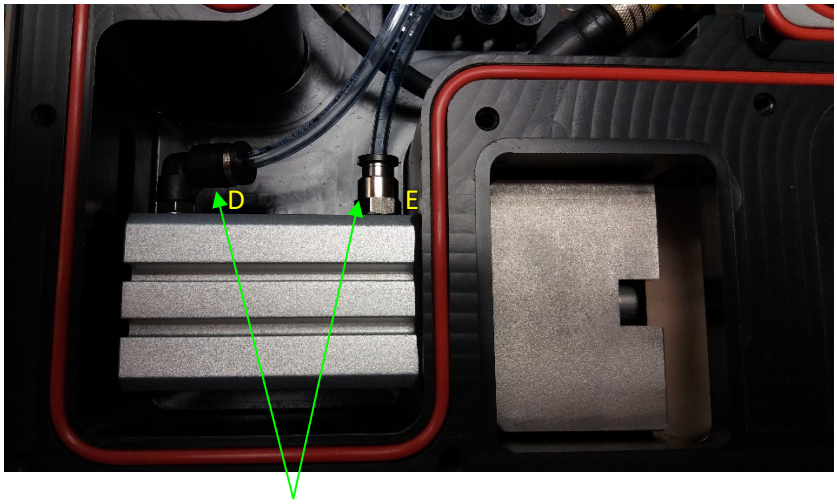
10. Refit the vent air line connection **F** to Solenoid Valve connection **3**.



11. Ensure cover plate O-rings are correctly positioned. Replace the stainless-steel cover plate and the M4 cap screws.

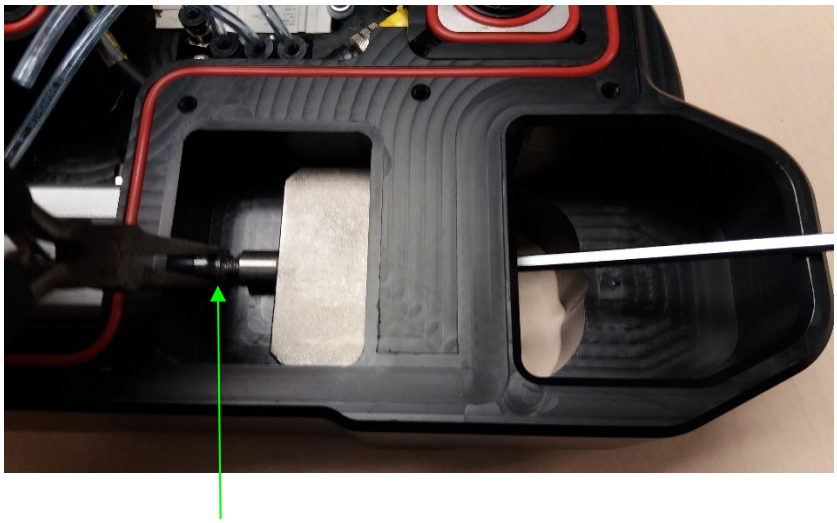
8. Pneumatic Cylinder (1020-073) Replacement

1. Disconnect the Pneumatic cylinder air line connections **D** and **E**.



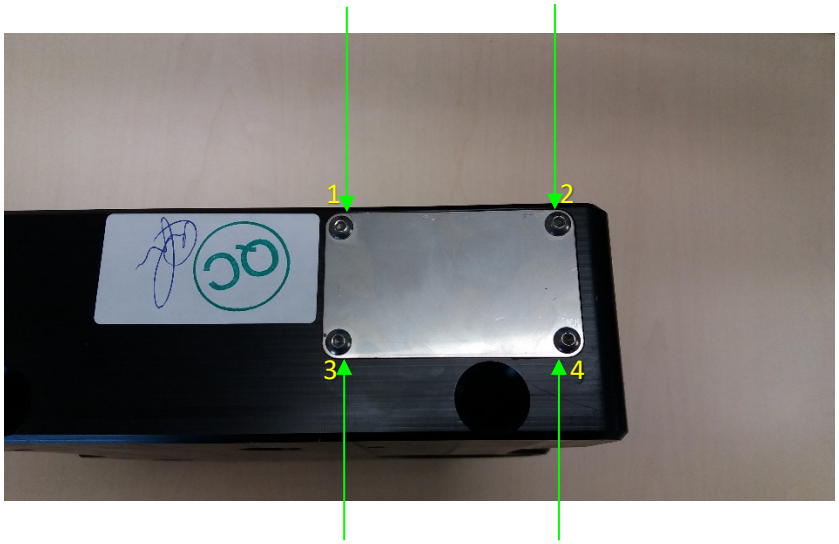
Remove air line from connections D and E

2. Remove Metal Pusher and Spacer by undoing the cap screw holding the pusher onto the cylinder ram using a long Allen key. Hold the cylinder ram in position with long nose pliers.

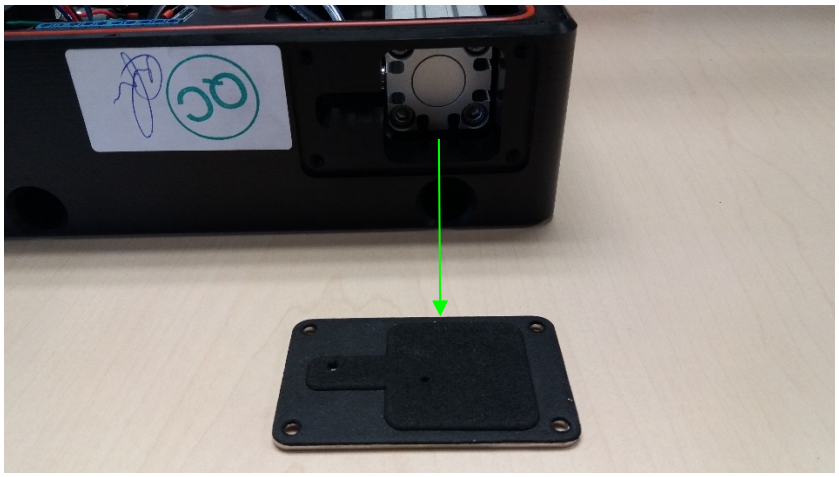


Hold cylinder ram with pliers while undoing the cap screw

3. Remove the M4 four cap screws and Cover Plate from the back of the dispenser base.

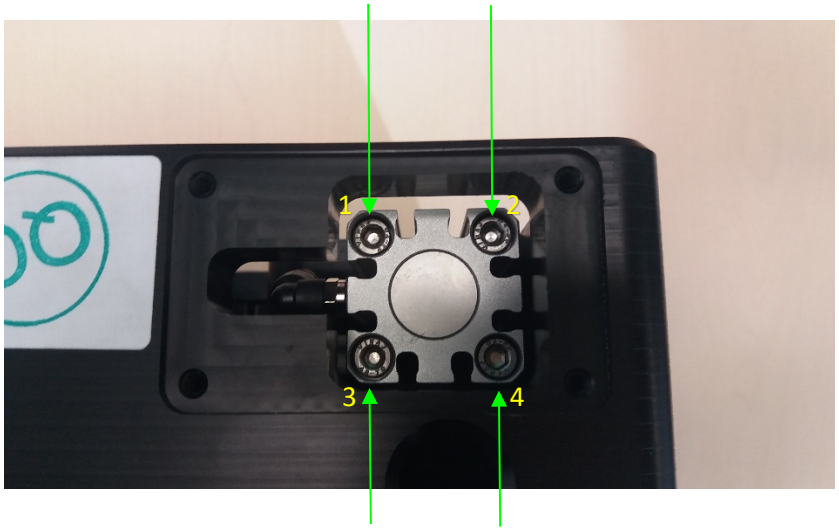


Remove the four M4 cap screws

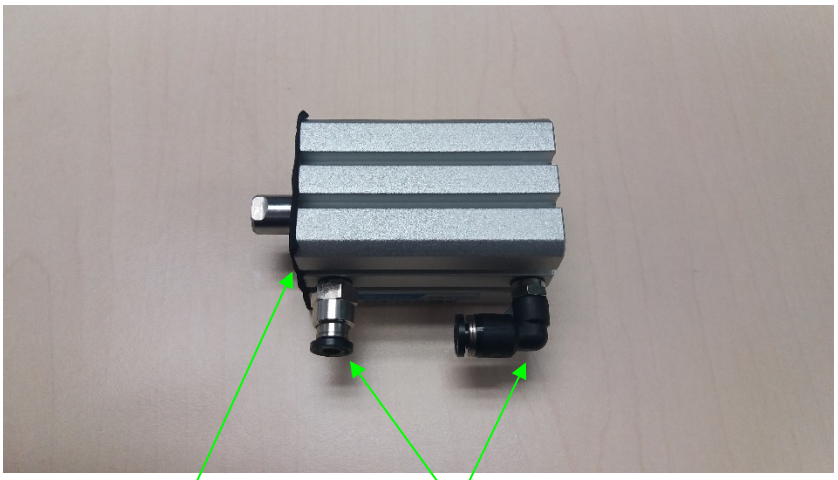


Remove the Cover Plate from the base

4. Remove the four cap screws holding the cylinder and slide it out through the back of the dispenser base.

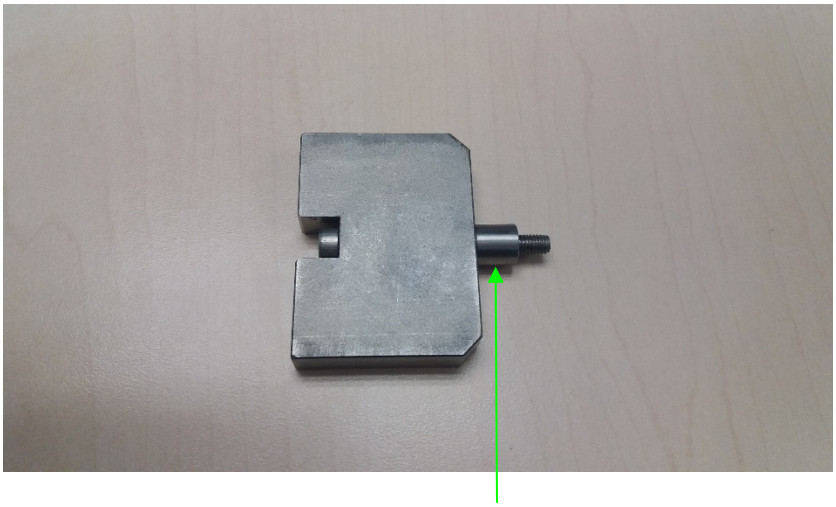


5. Remove the air line fittings from the old cylinder and refit to the new one using an 8mm spanner. Do not over tighten the fittings when reinstalling. Install the included new self-adhesive gasket. Align the gasket up with the screw holes when applying.



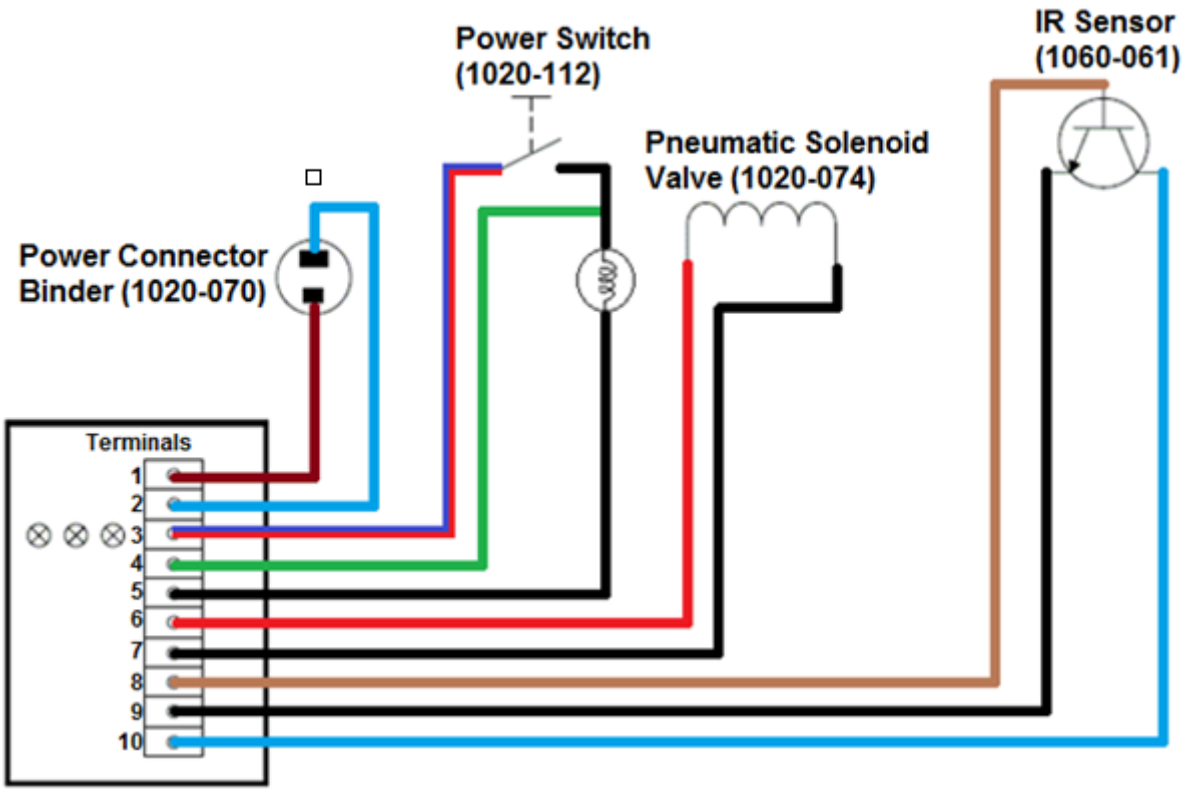
Install new gasket *Install the air line fittings*

6. Refit cylinder and tighten the four retaining cap screws. Refit back cover plate and cam screws. Screw Pusher assembly onto cylinder ram (make sure spacer piece is in position)



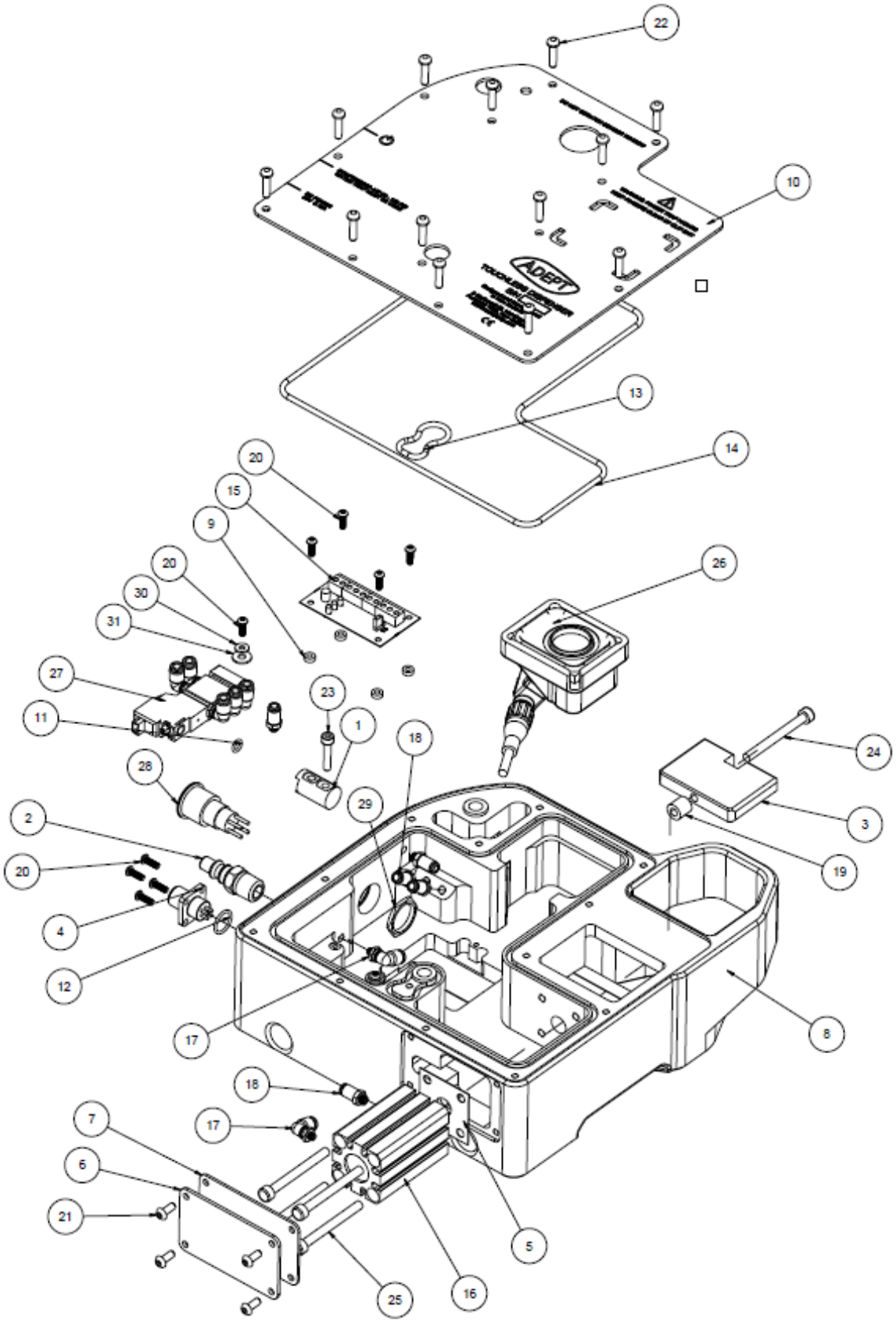
Ensure spacer is installed before Pusher is reinstalled

6. Appendix A: Wiring Schematic



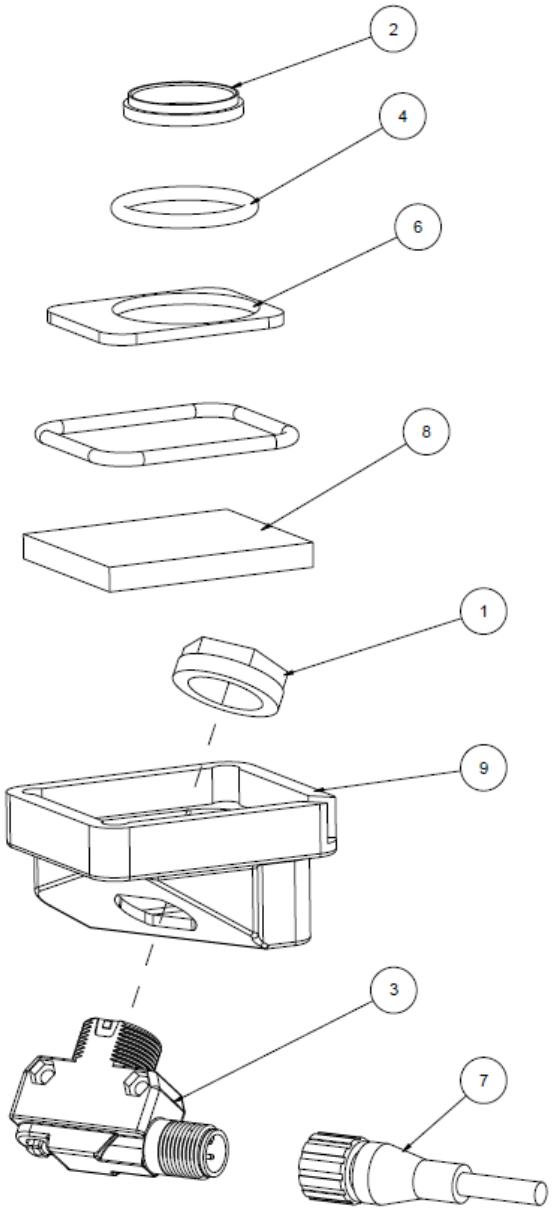
Terminal	Wire Colour	Component
1	Brown	Power Connector Binder
2	Light Blue	Power Connector Binder
3	Blue + Red	Power Switch
4	Green	Power Switch
5	Black	Power Switch
6	Red	Pneumatic Valve
7	Black	Pneumatic Valve
8	Brown	IR Sensor
9	Black	IR Sensor
10	Blue	IR Sensor

7. Appendix B: Main Assembly Diagram and Parts List



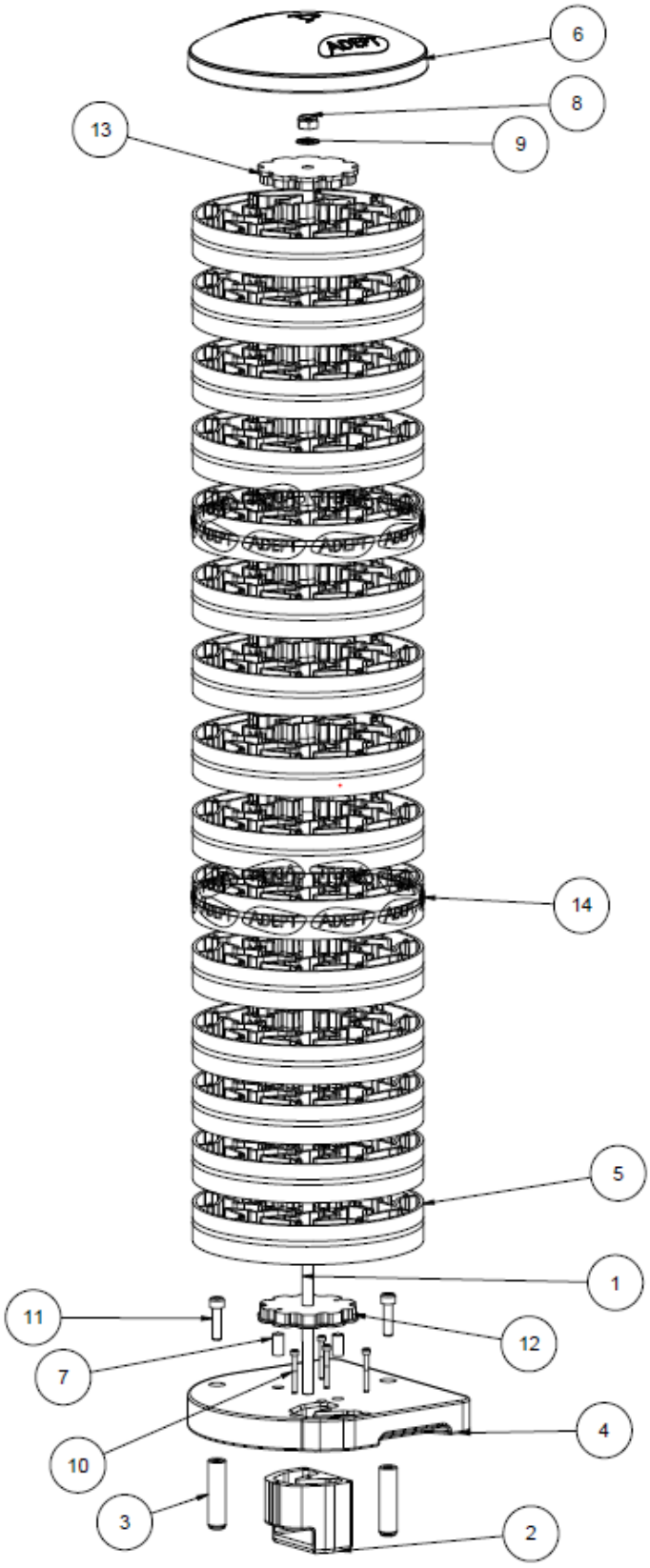
Item	Description	Part Number
1	Valve Vent Block	1020-110B
2	ARO Fitting ¼" X ¼" BSPT	1020-072
3	Clip Pusher	1020-045E
4	Power Connector Binder	1020-070
5	Cylinder Front Gasket	1020-059C
6	Cylinder Rear Cover S/S	1020-065D
7	Cylinder Rear Cover Gasket	1020-060D
8	Dispenser Base	1020-057S
9	Washer – M3 Nylon	n/a
10	Stainless-Steel Main Cover	1020-066J
11	O-Ring 5 x 1.5	1020-101
12	O-Ring 12 x 1.5	1020-080
13	O-Ring 26 x 3	1020-079
14	O-Ring 230 x 3	1020-077
15	PCB	1020-062F
16	Pneumatic Cylinder	1020-073
17	Air Line Fitting - Elbow	1020-076
18	Air Line Fitting - Straight	1020-075
19	Ram Spacer	1020-111
20	Cap Screw – M3 x 10	n/a
21	Cap Screw – M4 x 10	n/a
22	Cap Screw – M4 x 16	n/a
23	Cap Screw – M4 x 20	n/a
24	Cap Screw – M5 x 50	n/a
25	Cap Screw – M5 x 60	n/a
26	IR Sensor Assembly	*See Appendix C*
27	Pneumatic Solenoid Valve	1020-074
28	Power Switch	1020-112
29	Power Switch Nut	n/a
30	Washer – M3 Penny	n/a
31	Washer - Nylon	n/a

8. Appendix C: IR Sensor Assembly and Parts List



Item	Description	Part Number
1	Back Nut	n/a
2	Backup Ring	1020-109
3	IR Sensor	1020-061
4	O-Ring 26 x 3	1020-079
5	O-Ring 47 x 3	1020-103
6	O-Ring Carrier	1020-067D
7	IR Sensor Plug	1020-069
8	Sensor Glass	1020-063E
9	Sensor Mount	1020-095

9. Appendix D: Carousel Assembly and Parts List



Item	Description	Part Number
1	Beef Clip Dispenser - SS Rod (500 Clip)	1020-055
1	Beef Clip Dispenser - SS Rod (750 Clip)	1020-056
2	TLD – Beef Clip Carousel - Chute	1020-049D
3	Carousel Legs S/S	1020-046C
4	TLD - Beef Clip Carousel - Main Plate	1020-48F
5	Beef Clip Dispenser - Cassette	1020-001E
6	Dispenser Cover	1213-001
7	Dispenser Ball Stop	1020-006
8	Dispenser Nut - M10 Nyloc Nut S/S	1020-003
9	Dispenser Washer - M10 Washer S/S	1020-004
10	M4x35 Capscrew S/S	1020-040
11	M8x30 Capscrew S/S	1020-098
12	Beef Clip Dispenser - Bottom Star	1224-012
13	Beef Clip Dispenser - Top Star	1224-011
14	Beef Clip Dispenser Cassette (White)	1020-502