



# PoolCop Evolution

## Maintenance Manual

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**Firmware Version:** V44

**Product Versions:** PoolCop Evolution



## **Change Summary**

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First edition  
Proof reading

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## Section 1 TECHNICAL SUPPORT AND SUPPORT LEVELS

### PCFR SAS

La Remise, 861 Boulevard du Nord

84160, Cucuron

France

[contact@poolcop.fr](mailto:contact@poolcop.fr)

### 1.1 L1 Level Support

L1 is the support level for initial client contact and basic client issues.

The first objective of L1 support personnel is to gather the client's information and to determine the client's issue by analyzing the symptoms and to determine the underlying problem. Once identification of the underlying problem is established, the specialist can begin sorting through the possible solutions available. L1 support typically handles straightforward and simple problems using basic troubleshooting, the product User and Installation Manuals, and this Service Manual.

L1 support can be carried out by all personnel acting as initial contact for user requests and, if required, creating an incident to notify other business teams/units to satisfy user request. The goal is to handle 70%-80% of the user problems before finding it necessary to escalate the issue to a higher level. L1 support requires good basic knowledge of the products, as well as terms and conditions offered by the business rather than detailed technical information on the product or pool maintenance.

### 1.2 L2 Level Support

L2 is more in-depth technical support than L1 and carried out by personnel with and more experience and technical knowledge. Technicians are responsible for assisting L1 support personnel solve basic technical problems and for investigating elevated issues by confirming the validity of the problem and seeking for known solutions related to these more complex issues.

Prior to further troubleshooting, it is important that the L2 support personnel review what has already been accomplished by during L1 support and how long the issues has been apparent for the particular client. This is a key element in meeting both the client and business needs as it ensures prioritization of the troubleshooting and proper management of time and allocation of resources.

If L2 support personnel cannot determine a solution, they will elevate this issue to L3 support. Solutions are performed by this group to help ensure the intricacies of a challenging issue are solved by providing experienced and knowledgeable technicians. This may include, but is not limited to onsite installations or replacements of various hardware components, software repair, diagnostic testing, and the utilization of remote control tools used to take over the user's machine for the sole purpose of troubleshooting and finding a solution to the problem.

### 1.3 L3 Level Support

This is the highest level of support in a three-tiered technical support model responsible for handling the most difficult or advanced problems. It denotes expert level troubleshooting and analysis methods. These individuals are experts in their fields and are responsible for not only assisting both Level 1 and Level 2 personnel, but with the research and development of solutions to new or unknown issues. Note that Level 3 technicians have the same responsibility as Level 2 technicians in reviewing the work order and assessing the time already spent with the customer so that the work is prioritized and time management is sufficiently utilized. If it is at all possible, the technician will work to solve the problem with the customer as it may become apparent that the Tier I and/or Tier II technicians simply failed to discover the proper solution. Upon encountering new problems; however, Tier III personnel must first determine whether or not to solve the problem and may require the customer's contact information so that the technician can have adequate time to troubleshoot the issue and find a solution. In some instances, an issue may be so problematic to the point where the product cannot be salvaged and must be replaced. Such extreme problems are also sent to the original developers for in-depth analysis.

### 1.4 L4 Level Support

L4 represents an escalation point beyond the organization. This is generally a hardware or software vendor.

## Section 2 TOOLS, EQUIPMENT AND CONSUMABLES

### 2.1 General Guidelines on Tools and consumables

Installers and Technicians will carry their own full tool kit of the tools, parts and consumables needed for pool and equipment maintenance.

Over and above this there are specific items which may be specific to PoolCOP installations and maintenance, or items which help and speed up installation and maintenance tasks. Some of these items are available from PCFR and listed in the current catalogue of pool equipment; these items have Part Codes indicated.

### 2.2 Tool Kit

Installer Tool Kit	Part Code	Comment
1. Spanners 5mm, 20mm:		
2. Phillips screwdriver		PH1 size
3. screwdriver		4mm
4. 5mm spherical head Allen key		
5. Adjustable wrench		25mm
6. Water analysis kit		pH, FC, TC, Total Alkalinity, Hardness, CYA,

### 2.3 Recommended Consumables

Agreed Installers can also source installation and maintenance consumables directly from PCFR at preferential rates. We source our consumables directly from suppliers and manufacturers when possible, to ensure the best rates on these consumables for the installer and maintainer.

Recommended Consumables	Part Code	Comment
1. Silicone lubricating paste		
2. Mini fuse Ø5x20mm		-10x160mA temporized (230V) or 315mA temporized (120V) -10x2A rapid
3. ORP 470mV buffer liquid		Recommended to control sensor
4. pH 7 buffer liquid		Recommended, not required.

### 2.4 Recommended Spare parts Kit

The following is a recommended spares kit to be carried. Carrying adequate spares ensures that any malfunctions or failures can be rectified timeously.

Recommended Spares Kit	Part Code	Comment
1. Valve Data Unit (VDU):		
a. Kit Diffuser 1,5"	PC1207	Silicone tube included
b. Kit Diffuser 2,0"	PC1208	Silicone tube included
c. PCB Micro with LCD Screen PCB004-C	CF1220.01	PCB004
d. Kit PCB Connection SE Data PCB005	CF1218	PCB005
e. Kit PCB Pickup PCB001	CF1215	PCB001
f. Motor Unit	CF1210.03	
g. Kit Sensor SE pH+ORP Pt	SO4902	4 wires sensor
h. Kit Sensor SE pH+ORP Au	SO4903	4 wires sensor
i. Kit Water Temperature Sensor	CF1210.19	
j. Kit Sensor Pressure 0.2m Cable	CF1224	
k. Connection Cable UL	CF1220.23	
l. VDU Datalink Cable UL	CF1210.29	
m. VDU Cover with Keypad EVO	CF1221-D2	
2. Control Connection Unit (CCU) :		
a. Battery 12V VRLA FR	CO2202	
b. Kit Power Supply PCB103-C EU	CF1151	230VAC, With fuses 160mA

## Section 3 ACRONYMS

Acronyme	Signification
CCU	<b>C</b> ontrol <b>C</b> onnection <b>U</b> nit : apposed on a wall
VDU	<b>V</b> alve <b>D</b> ata <b>U</b> nit : Valve Unit mounted on multi-média filter
PCB	<b>P</b> rinted <b>C</b> ircuit <b>B</b> oard: it's an electronic board.


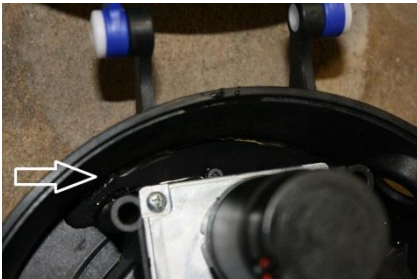
## Section 4 PREVENTATIVE MAINTENANCE

### 4.1 PMP\_01\_EN: Checking the battery



Preventative Procedure		Support : L1	
<p>This Preventive Maintenance Procedure details steps to check battery.</p> <p>The 12VDC SLA battery performs critical safety functions and ensures that the valve can always be secured into a safe position in the event of power loss.</p> <p>If the battery function check fails, charge the battery for 10 hours using an appropriate charger, then retest. If the battery is left to charge in the CCU, ensure that all water valves are closed and the pump remains off to ensure that water is not drained from the pool.</p>		Procedure	<b>MPM_01_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
		0:05	
Parts required	QTY	Codes	
-	-	-	
Steps	Cross Ref.	Tool, Part	
1	<ul style="list-style-type: none"> <li>○ On main screen, press UP and Down Arrow to enter service Mode.</li> <li>○ In MENU&gt;MANUAL CONTROL&gt;VALVE ROTATION ask the valve to rotate to <b>WASTE position</b>.</li> </ul> <p><b>Note:</b> this test may lead to water loss. If this is not acceptable, close all the manual valves to and from the pool.</p>		
2	<ul style="list-style-type: none"> <li>○ Remove the mains power supply at the breaker to simulate a power failure leaving PoolCOP switch <b>ON</b>.</li> </ul> <p><b>Note:</b> Power supply must be removed at the breaker, not using the standby switch.</p>		
3	<ul style="list-style-type: none"> <li>○ Check the following on the CCU: <ul style="list-style-type: none"> <li>○ The "<b>Power On</b>" LED extinguishes.</li> <li>○ The "<b>Battery On</b>" LED remains illuminated.</li> <li>○ After a brief delay the valve rotates to <b>FILTER</b> or <b>CLOSED</b> position depending on the pool settings.</li> </ul> </li> </ul> <p>Then LCD on the VDU displays: <b>"AC POWER FAILURE POOLCOP DEACTIVATED"</b>.</p> <ul style="list-style-type: none"> <li>○ If valve does not reach its position or if the screen goes black immediately, follow the "Checking/Replacing the 12V Battery" Service Procedure.", in particular check that battery is correctly charged. Depending on storage conditions, batteries must not be fully charged.</li> </ul>	SCCU_05_EN	
4	<ul style="list-style-type: none"> <li>○ Re Open the manual valves</li> </ul>		
5	<ul style="list-style-type: none"> <li>○ Restore power to the CCU.</li> </ul>		
6	<ul style="list-style-type: none"> <li>○ Check the following on the CCU: <ul style="list-style-type: none"> <li>○ The "<b>Power On</b>" LED must illuminated.</li> <li>○ The "<b>Battery On</b>" LED remains illuminated.</li> </ul> </li> <li>○ "<b>POOLCOP REACTIVATED</b>" is displayed on the PoolCOP VDU.</li> <li>○ On main screen, press UP and Down Arrow to leave service Mode.</li> <li>○ If programmed to run, the pool filtration starts.</li> </ul>		
End of Preventative Procedure			

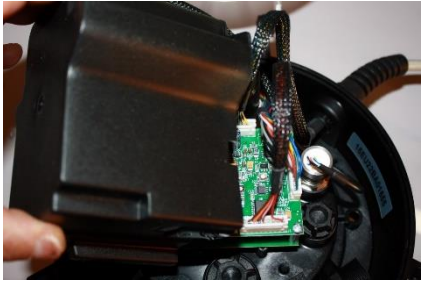



## 4.2 PMP\_02\_EN: Checking the valve Diffuser

Preventative Procedure		Support : L1	
This Preventive Maintenance Procedure details steps to check the Diffuser.  Diffuser gasket is glued on the diffuser. A visual control is therefore possible without dismantling the VDU as describe is this Procedure. Visual control must be done at least once per year.		Procedure	<b>MPM_02_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- 10mm spanner - 5mm Allen key - silicon grease - screwdrivers		0:20	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	LEAKAGE VERIFICATION		
2	<ul style="list-style-type: none"> <li>In MENU&gt;MANUAL CONTROL&gt;VALVE ROTATION, ask the valve to go into <b>FILTER</b> position (if not already).</li> </ul>		
3	<ul style="list-style-type: none"> <li>In MENU&gt;MANUAL CONTROL&gt;PUMP, turn the pump ON</li> </ul>		
4	<ul style="list-style-type: none"> <li>Check leak to waste.</li> <li>Open the cover using clips.</li> </ul>  <ul style="list-style-type: none"> <li>Check leak inside PoolCop, behind gear motor.</li> </ul>  <ul style="list-style-type: none"> <li>If a leak is detected, proceed to diffuser replacement following the Service Procedure "Checking/Replacing valve diffuser".</li> </ul>	SVDU__16_EN	
5	<ul style="list-style-type: none"> <li>Follow "Shut down the CCU" Service Procedure</li> </ul>	SCCU_01_EN	
6	<ul style="list-style-type: none"> <li>Remove water from inside valve housing using either the purge plug either the sight glass.</li> </ul>		


7	DESASSEMBLING		
8	<ul style="list-style-type: none"> <li>○ On 1;5" valve housing, loosen the 6 Allen screws</li> </ul> 		10 mm spanner 5mm Allen key
9	<ul style="list-style-type: none"> <li>○ On 2.0" valve housing, loosen the 10 external Allen screws</li> </ul> 		10 mm spanner 5mm Allen key
10	<p align="center"><b>CAUTION:</b> On 2.0" <b>do not</b> loose the 6 internal Allen screws</p>		
11	<ul style="list-style-type: none"> <li>○ Check gasket condition and wear.</li> </ul>  <ul style="list-style-type: none"> <li>○ Check if the gasket shows signs of snagging.</li> <li>○ In case of any doubt, proceed to the replacement of the diffuser following Checking/Replacing valve diffuser".</li> <li>○ If gasket is in good shape, clean and add pure silicon grease (provided with a new diffuser) on gasket and valve housing.</li> </ul>	SVDU__20_EN	Pure silicon grease
12	RESASSEMBLING 2.0"		
13	<ul style="list-style-type: none"> <li>○ Check adapter O-ring. In case of any doubt proceed to replacement.</li> <li>○ Using silicone grease will help to maintain O-Ring in its groove.</li> </ul>  <ul style="list-style-type: none"> <li>○ Fit the adapter ring to the valve housing.</li> </ul>		JT0003 Pure silicone grease

14	<p style="text-align: center;"><b>CAUTION:</b></p> <p>Make sure to respect the correct orientation of adapter ring. The pin must be aligned with valve housing sight glass.</p> 		
15	<ul style="list-style-type: none"> <li>○ Make sure the captive nut close to the 'Pump In' entry is in place.</li> </ul>  <ul style="list-style-type: none"> <li>○ Tighten the 10 bolts.</li> </ul>		5mm Allen key 10 mm spanner
16	<ul style="list-style-type: none"> <li>○ Go to step 20 CHECK</li> </ul>		
17	REASSEMBLE 1.5"		
18	<ul style="list-style-type: none"> <li>○ Check the Valve Data Unit O-Ring. In case of any doubt proceed to replacement.</li> </ul>  <ul style="list-style-type: none"> <li>○ Fit the PoolCop main base in place.</li> </ul>		JT0001
19	<ul style="list-style-type: none"> <li>○ Tighten the 6 Allen bolts (or screws on 2.0" valve housing).</li> <li>○ You will need to partially bend the spring by pressing the main base.</li> </ul>		5mm Allen key 10 mm spanner


20	CHECK		
21	<ul style="list-style-type: none"> <li>○ Using the screwdriver, remove the electronics black cover.</li> </ul> 		Screwdriver
22	<ul style="list-style-type: none"> <li>○ Push down the positioning disk with a flat screwdriver.</li> </ul> 		screwdriver
23	<ul style="list-style-type: none"> <li>○ Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
24	<ul style="list-style-type: none"> <li>○ Close the cover back.</li> </ul>		
25	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
26	<ul style="list-style-type: none"> <li>○ Start the pump (if not running)</li> <li>○ Check for any leak inside the PoolCOP and to the waste line.</li> <li>○ In case of leak, repeat this Service Procedure and especially look for any damage on the gasket or valve housing.</li> </ul>		
End of Preventative Procedure			

## Section 5 SERVICING THE CONTROL CONNECTION UNIT CCU


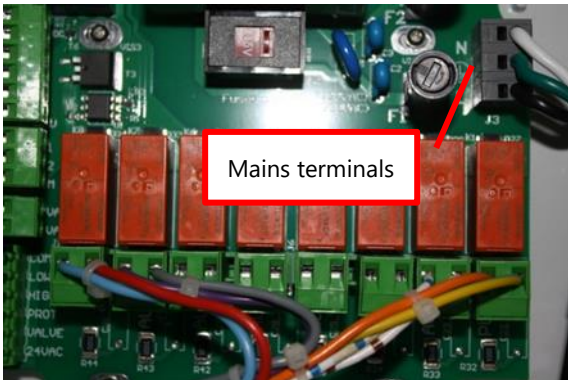
### 5.1 SCCU\_01\_EN: Shut down the CCU

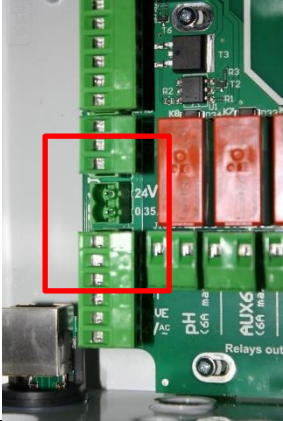
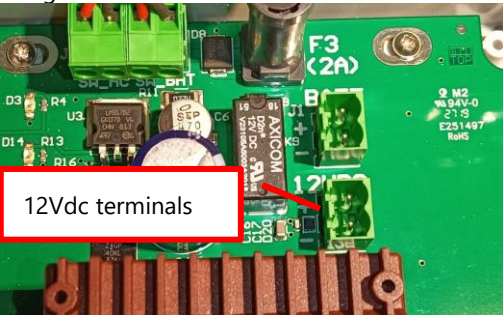
Servicing the Control Connection Unit CCU		Support : L1	
This Service Procedure details steps to shut down the Valve Data Unit and secure the pool if unit is on the field.		procedure	<b>SCCU_01_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
		0:02	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	<ul style="list-style-type: none"> <li>○ Switch OFF the CCU with standby switch.</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>		
2	<ul style="list-style-type: none"> <li>○ Remove power from the CCU using the breaker.</li> </ul>		
3	<ul style="list-style-type: none"> <li>○ If work involve risk of water leaks:                             <ul style="list-style-type: none"> <li>○ Close all valves to or from the pool.</li> <li>○ Disconnect power to the pump and auxiliaries (booster pump...)</li> <li>○ Depressurize and drain the multiport valve using the sight glass or purge plug.</li> <li>○ Make sure there is no pressure on the valve housing.</li> </ul> </li> </ul>		
End of Service Procedure			

## 5.2 SCCU\_02\_EN: Powering Up the Control Connection Unit

Servicing the Control Connection Unit CCU		Support : L1	
This Service Procedure details steps to power up the CCU and prepare the pool if unit is on the field.		procedure	<b>SCCU_02_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
		0:05	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	<ul style="list-style-type: none"> <li>○ Check if sight glass and purge plug in place and are secure.</li> <li>○ Open the valves to or from the pool for normal operation (as they were before closing them all).</li> <li>○ Reconnect power to the pump and auxiliaries (booster pump...).</li> <li>○ Check if there is no leak at this stage.</li> </ul>		
2	<ul style="list-style-type: none"> <li>○ Close the transparent CCU face plate.</li> <li>○ Reconnect power to the CCU.</li> </ul>		
3	<ul style="list-style-type: none"> <li>○ Switch ON the CCU.</li> <li>○ Check that the 2 LED <b>Power</b> and <b>Battery</b> are ON.</li> <li>○ Check firmware version displayed at the LCD screen.</li> </ul>  <ul style="list-style-type: none"> <li>○ If displayed screen stay blank, or blink switch OFF the CCU and review your latest operation for any error /default. Verify valve rotation to filter or closed position depending on pool settings in PoolCOP.</li> <li>○ If pump is running continuously (except 24/24 filtration mode) or valve is rotating continuously, switch OFF the CCU and review your latest operation.</li> </ul>		
4	<ul style="list-style-type: none"> <li>○ Filtration may start if a filtration cycle is programmed</li> </ul>		
End of Service Procedure			

### 5.3 SCCU\_03\_EN: Checking Voltages in Control Connection Unit

Servicing the Control Connection Unit CCU		Support : L2	
This Service Procedure details steps to check if mains is apply to CCU.		procedure	<b>SCCU_03_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver - voltmeter compliant with 240Vac voltage		0:10	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<p><b>WARNING! ELECTRIC SHOCK HAZARD!</b> This Service Procedure is strictly reserved to trained and authorized personnel.</p>		
3	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
4	CHECK 230Vac (110Vac)		
5	<ul style="list-style-type: none"> <li>Using a voltmeter on VAC range, check voltage between "N" and "L" on terminals J3 close to the transformer.</li> <li>Valid ranges are:                             <ul style="list-style-type: none"> <li><b>205Vac</b> to <b>250Vac</b> for 230Vac networks.</li> <li><b>105Vac</b> to <b>125Vac</b> for 115Vac networks.</li> </ul> </li> </ul> 		Voltmeter
6	<ul style="list-style-type: none"> <li>If voltage is not in the valid range, please contact electrical distribution network. PoolCop may encounters malfunctions.</li> </ul>		

7	CHECK 24Vac		
8	<ul style="list-style-type: none"> <li>o Unplug terminal J26.</li> <li>o Using a voltmeter on VAC range, check voltage on the <b>24V(AC)</b> terminal.</li> <li>o Valid range is <b>22 Vac to 28 Vac.</b></li> </ul> 		Voltmeter
9	<ul style="list-style-type: none"> <li>o If voltage is not in the valid range, please note that PoolCOP may encounters malfunctions in time.</li> <li>o This PCB should be replaced as soon as possible following "Replacing the PCB103 Board" Service Procedure.</li> </ul>	SCCU_10_EN	
10	<ul style="list-style-type: none"> <li>o If 24Vac voltage is null with switch ON and fuses controlled as correct (following SCCU_04_EN Service Procedure), then the transformer is out of order.</li> <li>o The Power Supply PCB103 cannot be repaired.</li> <li>o Replace this PCB following "Replacing the PCB103 Board" Service Procedure.</li> </ul>	SCCU_04_EN SCCU_10_EN	
11	<ul style="list-style-type: none"> <li>o Plug back J26.</li> </ul>		
12	CHECK 12VDC		
13	<ul style="list-style-type: none"> <li>o Unplug battery on J1.</li> </ul>		
14	<ul style="list-style-type: none"> <li>o Using a voltmeter on VDC range, check voltage on the <b>+12V</b> terminal J25 located above the transformer.</li> <li>o Valid range is <b>12.5Vdc to 14.5Vdc.</b></li> </ul> 		Voltmeter
15	<ul style="list-style-type: none"> <li>o If 12Vdc voltage is null with switch ON and fuses controlled as correct following "Checking/replacing CCU fuses" Service Procedure, then the PCB103 Board is damaged.</li> <li>o Replace this PCB following "Replacing the PCB103 Board" Service Procedure.</li> </ul>	SCCU_04_EN SCCU_10_EN	
16	<ul style="list-style-type: none"> <li>o Reconnect the battery.</li> </ul>		
17	REASSEMBLE		
18	<ul style="list-style-type: none"> <li>o Close the transparent CCU face plate.</li> </ul>		

End of Service Procedure

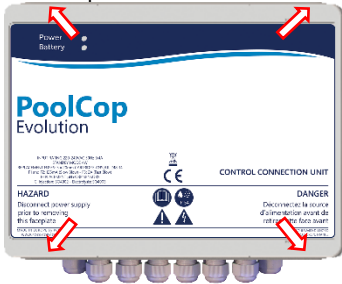



### 5.4 SCCU\_04\_EN: Checking/Replacing the CCU Fuses

Servicing the Control Connection Unit CCU		Support : L2	
This Service Procedure details steps to check and replace CCU fuses.		procedure	<b>SCCU_04_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Ohmmeter		0:15	
Parts required	QTY	Codes	
- Glass fuse 5x20mm 160mA Slow Blow (230V) or 315mA Slow Blow (120V)	2	-FS5x20-160mA Slow	
- Glass fuse 5x20mm 2A Fast Blow	1	-FS5x20-315mA Slow -F5x20-2A Fast	
Steps	Cross Ref.	Tool, Part	
1	o Follow "Shut down the Unit" Service Procedure.	SCCU_01_EN	
2	<b>WARNING! ELECTRIC SHOCK HAZARD!</b> Make sure every electrical energy sources have been cut off before continuing		
3	o Open the CCU face plate.		Screwdriver
			
4	o Remove the power fuses F1 and F2 close to the mains connector J3 ( <b>160mA Slow Blow</b> ).		
			
5	o Using the Ohm meter, check fuse continuity and sizing. o Replace fuse by same size <b>160mA Slow Blow (230V)</b> or <b>315mA Slow Blow (120V)</b> if fuse is blown.		Ohm meter FS5x20-160mA F5x20-315mA
6	o Remove the battery fuse F3 ( <b>2A Fast blow</b> ).		
			


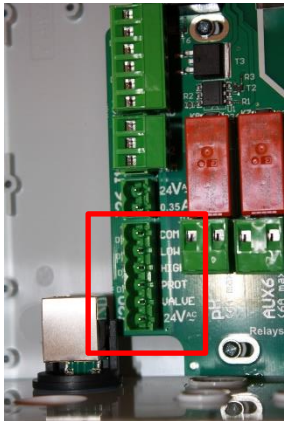
7	<ul style="list-style-type: none"><li>○ Using the Ohm meter, check fuse continuity and sizing.</li><li>○ Replace fuse by same size and <b>2A Fast Blow</b> if fuse is blown.</li></ul>		Ohm meter F5x20-2A
8	<ul style="list-style-type: none"><li>○ If fuse is blown, follow "Checking/Replacing 12V battery" Service Procedure.</li></ul>	SCCU_05_EN	
9	<ul style="list-style-type: none"><li>○ Follow "Powering up the Unit" Service Procedure.</li></ul>	SCCU_02_EN	
End of Service Procedure			



### 5.5 SCCU\_05\_EN: Checking/Replacing the 12V Battery

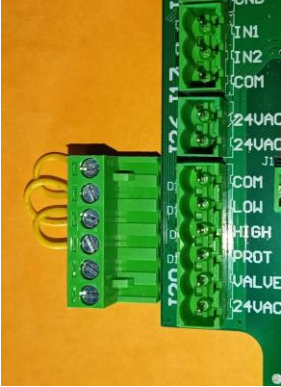
Servicing the Control Connection Unit CCU		Support : L2	
This Service Procedure details steps to check and replace 12V battery		procedure	<b>SCCU_05_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdrivers flat, cross - Voltmeter		0:15	
Parts required		QTY	Codes
- 12V VRLA battery 1.2Ah (size 40mm x 50mm x 100mm)		1	-CO2202
Steps		Cross Ref.	Tool, Part
1	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
2	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
3	<ul style="list-style-type: none"> <li>Unplug the battery connector J1.</li> </ul>  <ul style="list-style-type: none"> <li>Using the voltmeter, on VDC range, check the battery voltage on the connector (battery side).</li> </ul>		Voltmeter
4	<ul style="list-style-type: none"> <li>If voltage is <b>less than 11.5V</b> and battery has been in charge for more than 4 hours, then proceed to replacement.</li> </ul>		12V Battery CO2202
5	<ul style="list-style-type: none"> <li>Plug back the battery connector.</li> </ul>		
6	<ul style="list-style-type: none"> <li>Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
7	<ul style="list-style-type: none"> <li>On main screen, press UP and Down Arrow to enter service Mode.</li> <li>Using PoolCop panel go to MENU&gt;MANUALS_COMMAND&gt; VALVE, rotate the valve to "WASTE" position. After rotation, make sure to return to main menu using QUIT button as much as necessary.</li> </ul>		
8	<ul style="list-style-type: none"> <li>Remove power from the CCU using the power breaker while leaving the standby switch to ON.</li> </ul>		

9	<ul style="list-style-type: none"><li>○ Valve should turn to its safe position ("Filter" or "Closed") depending on the pool settings; and then PoolCOP should display the message of power loss.<ul style="list-style-type: none"><li>○ If valve cannot reach its end position and/or PoolCOP screen becomes black, restart Service Procedure from the beginning and, in particular, make sure the battery is fully loaded. Depending on their shelf time, battery may not be correctly loaded. If possible wait for 4 hours and check these 3 last steps again.</li><li>○ If not possible or if problem persists, restart in step 1 and change the battery again.</li></ul></li></ul>		
10	<ul style="list-style-type: none"><li>○ Bring back power to the CCU.</li></ul>		
11	<ul style="list-style-type: none"><li>○ Make sure manual valves are in the right position.</li><li>○ On main screen, press UP and Down Arrow to leave service Mode.</li><li>○ Pump and auxiliaries will return to their desired status.</li></ul>		
End of Service Procedure			

### 5.6 SCCU\_06\_EN: Checking Level Sensor Inputs

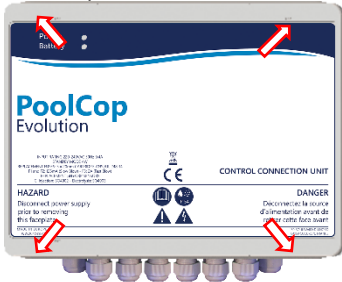
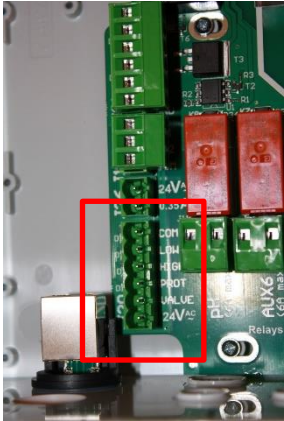
Servicing the Control Connection Unit CCU		Support : L3	
This Service Procedure details steps to check the level sensor inputs		procedure	<b>SCCU_06_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Screwdrivers		0:30	
Parts required		QTY	Codes
- 0.5mm <sup>2</sup> , 10cm length wire		3	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Using PoolCOP menu MENU&gt;WATER_AND_TREATMENT&gt;WATER_LEVEL, check that water control is installed.</li> <li>Set mode to REFILL.</li> </ul>		
3	<ul style="list-style-type: none"> <li>Using PoolCOP MENU&gt;MANUAL_CONTROL&gt;PUMP, stop the pump.</li> <li>Make sure there is no risk of water overflow when pump is stopped, close the adequate valves if needed.</li> </ul>		
4	<ul style="list-style-type: none"> <li>In the technical room, close the manual valve on refilling water network.</li> </ul>		
5	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
6	<ul style="list-style-type: none"> <li>Unplug the connector from terminal J20.</li> <li>Disconnect the cables on <b>WL(PROT)</b>, <b>WL(LOW)</b>, <b>WL(HIGH)</b> and <b>WL(COM)</b> from terminal. Make sure you will be able to reconnect these cables in the same order.</li> </ul> 		

7	CHECK		
8	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;ADJUST LEVEL, screen should then display "Checking level in progress Action running".</li> <li>Return to the main screen pressing QUIT 2 times.</li> <li>Once the level is updated (approx. 40 seconds), level is indicated.</li> </ul>		
9	<ul style="list-style-type: none"> <li>If level is "<b>Faulty</b>", then the Power Supply PCB103 need to be replaced.</li> <li>Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
10	<ul style="list-style-type: none"> <li>Otherwise, level should be "<b>Low</b>" with 3 vertical blinking arrows confirming that the refill is on-going.</li> </ul>		
11	<ul style="list-style-type: none"> <li>Using a 0.5mm<sup>2</sup> wire, establish a connection between <b>WL(COM)</b> and <b>WL(LOW)</b>.</li> </ul>  <ul style="list-style-type: none"> <li>Plug the connector into the terminal.</li> </ul>		
12	<ul style="list-style-type: none"> <li>On PoolCOP main menu, level should appear "<b>Normal</b>" within 1 minute and 3 vertical blinking arrows should confirm the refill is still on-going.</li> </ul>		
13	<ul style="list-style-type: none"> <li>If level remains "<b>Low</b>" or becomes "<b>Faulty</b>" after 1 minute, then the Power Supply PCB103 need to be replaced.</li> <li>Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
14	<ul style="list-style-type: none"> <li>Unplug the connector from J20.</li> <li>Using 2x0.5mm<sup>2</sup> wire, establish a connection between <b>WL(COM)</b>, <b>WL(LOW)</b> and <b>WL(HIGH)</b>.</li> </ul>  <ul style="list-style-type: none"> <li>Plug the connector into J20 terminal.</li> </ul>		


15	<ul style="list-style-type: none"> <li>On PoolCop main menu, level should appears <b>"High"</b> within 1 minute. The 3 vertical arrows should disappear, refill should stop.</li> </ul>		
16	<ul style="list-style-type: none"> <li>If level remains <b>"Low"</b>, <b>"Normal"</b> or become <b>"Faulty"</b> after 1 minute, then the Power Supply PCB103 need to be replaced.</li> <li>Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
17	<ul style="list-style-type: none"> <li>Unplug the connector from J20.</li> <li>Using 3x0.5mm2 wire, establish a connection between <b>WL(COM), WL(LOW), WL(HIGH) and WL(PROT).</b></li> </ul>  <ul style="list-style-type: none"> <li>Plug the connector into J20 terminal.</li> </ul>		
18	<ul style="list-style-type: none"> <li>On PoolCop main menu, if the 3 vertical arrows have disappeared, go to PoolCop menu MENU&gt;MANUAL_CONTROL&gt;ADJUST LEVEL, ask for a pool refill, screen should then display "Checking level in progress Action running".</li> <li>On PoolCop main menu level should appears <b>"V_High"</b> within 1 minute.</li> </ul>		
19	<ul style="list-style-type: none"> <li>If level remains <b>"Low"</b>, <b>"Normal"</b>, <b>"High"</b> or become <b>"Faulty"</b> after 1 minute, then the Power Supply PCB103 need to be replaced.</li> <li>Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
20	REASSEMBLE		
21	<ul style="list-style-type: none"> <li>On PoolCop main menu, if the 3 blinking arrow are still present, then go to MENU&gt;MANUAL_CONTROL&gt;STOP_REFILL, validate, screen should then display 'Refill stopped'.</li> </ul>		
22	<ul style="list-style-type: none"> <li>Unplug connector from J20.</li> <li>Disconnect the temporary wires from the water level connector.</li> </ul>		
23	<ul style="list-style-type: none"> <li>Reconnect the wires from the water level sensor to their respective pins.</li> <li>Plug connector into J20 terminal.</li> </ul>		
24	<ul style="list-style-type: none"> <li>Close the transparent CCU face plate.</li> </ul>		
25	<ul style="list-style-type: none"> <li>Restore water level settings if they were changed when starting this procedure.</li> </ul>		
26	<ul style="list-style-type: none"> <li>Re Open the manual valve on the fresh water network.</li> </ul>		
27	<ul style="list-style-type: none"> <li>If needed, Open the valve to the pool closed in step 3.</li> </ul>		
28	<ul style="list-style-type: none"> <li>Enter and leave PoolCop MENU&gt;TIMER FILTRATION.</li> <li>Pump and auxiliaries will return to their desired status.</li> </ul>		

End of Service Procedure

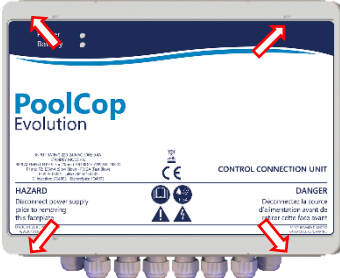

### 5.7 SCCU\_07\_EN: Checking Solenoid Valve Output


Servicing the Control Connection Unit CCU		Support : L3	
This Service Procedure details steps to check the output to water refill solenoid valve.		procedure	<b>SCCU_07_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Voltmeter - Screwdriver		0:15	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Using PoolCOP menu MENU&gt;WATER_AND_TREATMENT&gt;WATER_LEVEL, check that water control is installed.</li> <li>Set mode to REFILL.</li> </ul>		
3	<ul style="list-style-type: none"> <li>Using PoolCOP MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump. Make sure there is no risk of water overflow when pump is stopped, close the adequate valves if needed.</li> </ul>		
4	<ul style="list-style-type: none"> <li>In the technical room, close the manual valve on refilling water network.</li> </ul>		
5	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
6	<ul style="list-style-type: none"> <li>Unplug the Water level connector from J20.</li> </ul> 		
7	CHECK		
8	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;ADJUST LEVEL, screen should then display 'Checking level in progress Action Running'.</li> <li>Return to the main screen by pressing QUIT 2 times.</li> <li>Once the level is updated (approx. 40 seconds), level is indicated.</li> </ul>		




9	<ul style="list-style-type: none"> <li>○ If level is "<b>Faulty</b>", then the Power Supply PCB103 need to be replaced.</li> <li>○ Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
10	<ul style="list-style-type: none"> <li>○ Otherwise, level should be "<b>Low</b>" with 3 vertical blinking arrows confirming that the refill is on-going.</li> </ul>		
11	<ul style="list-style-type: none"> <li>○ Using the voltmeter on VAC range, check for 24VAC voltage on the <b>VALVE 24VAC</b>.</li> </ul>  <ul style="list-style-type: none"> <li>○ If no voltage or voltage is lower than <b>16VAC</b>, then the Power Supply PCB103 need to be replaced. Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Voltmeter
12	<ul style="list-style-type: none"> <li>○ Plug back the connector into J20</li> <li>○ Using the voltmeter on VAC range, check again for 24VAC voltage on the <b>VALVE 24VAC</b>.</li> <li>○ If no voltage or voltage is lower than <b>16VAC</b>, the solenoid, or the wiring to the solenoid need to be checked/replaced.</li> </ul>		
13	<ul style="list-style-type: none"> <li>○ On PoolCOP main menu, if the 3 blinking arrow are still present, then go to MENU&gt;MANUAL_CONTROL&gt;STOP_REFILL, validate, screen should then display 'Refill stopped'.</li> </ul>		
14	<ul style="list-style-type: none"> <li>○ On PoolCOP main menu check for no vertical blinking arrows.</li> </ul>		
15	<ul style="list-style-type: none"> <li>○ Using the voltmeter on VAC range, check for no voltage on the <b>VALVE 24VAC</b> terminals.</li> <li>○ If voltage is <b>above 1 VAC</b>, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the PCB103 Board" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Voltmeter
16	REASSEMBLE		
17	<ul style="list-style-type: none"> <li>○ Plug back the water level connector to the terminal J20.</li> </ul>		
18	<ul style="list-style-type: none"> <li>○ Close the transparent CCU face plate.</li> </ul>		
19	<ul style="list-style-type: none"> <li>○ Reopen the manual valve on the fresh water network.</li> </ul>		
20	<ul style="list-style-type: none"> <li>○ If needed, Open the valve to the pool closed in step 2.</li> </ul>		
21	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCOP MENU&gt;TIMER FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> </ul>		
End of Service Procedure			

### 5.8 SCCU\_08\_FR: Checking Pump and Aux Relays

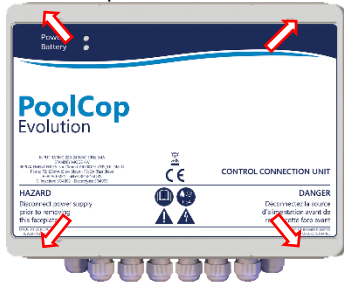
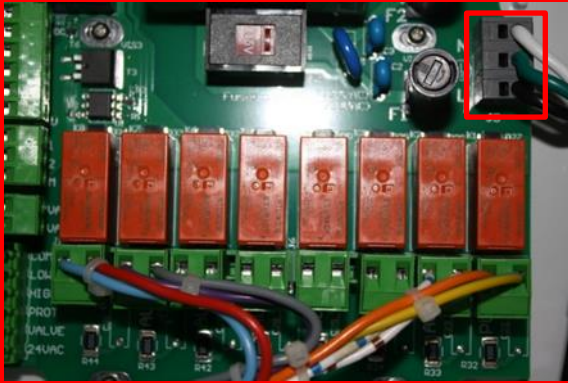
Servicing the Control Connection Unit CCU		Support : L3	
This Service Procedure details steps to check pump and aux relays.		procedure	<b>SCCU_08_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Ohm meter - Screwdriver		0:15	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Using PoolCOP MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump.</li> <li>Make sure there is no risk of water overflow when pump is stopped, close the adequate valves if needed.</li> <li>Using PoolCOP MENU&gt;CONFIGURATION&gt;FILTER_DATA, set the "Waste Valve" to <b>NO</b>.</li> <li>Using PoolCOP MENU&gt;MANUAL CONTROL&gt;AUXILIARIES, stop all running auxiliaries, if any.</li> </ul>		
3	<ul style="list-style-type: none"> <li>Disconnect power to pump and auxiliaries and make sure no external electrical sources may energize them.</li> </ul>		
4	<p><b>WARNING! ELECTRIC SHOCK HAZARD!</b> This Service Procedure is reserved to qualified personal authorized to work with electrical power ON.</p>		
5	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
6	CHECK PUMP		
7	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;CONFIGURATION&gt;PUMP_DATA, configure pump as "mono speed" pump. If pump is multi speed, note the selected speed for 24/24, cycle1, cycle2 and Backwash.</li> </ul>		
8	<ul style="list-style-type: none"> <li>Unplug connector on <b>PUMP</b>.</li> </ul> 		


9	<ul style="list-style-type: none"> <li>Using the Ohmmeter check if there is no continuity between the two <b>PUMP</b> pins.</li> <li>If the continuity is proven, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
10	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;PUMP, <b>start the pump</b>.</li> </ul>		
11	<ul style="list-style-type: none"> <li>Using the Ohmmeter check if there is continuity between the two <b>PUMP</b> pins.</li> <li>If no continuity is detected, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
12	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;PUMP, <b>stop the pump</b>.</li> </ul>		
13	<ul style="list-style-type: none"> <li>Plug back the connector on <b>PUMP</b>.</li> </ul>		
14	CHECK AUX1 to AUX5		
15	<ul style="list-style-type: none"> <li>Unplug connector on <b>AUXn</b>.</li> </ul> 		
16	<ul style="list-style-type: none"> <li>Using the Ohmmeter check if there is no continuity between <b>AUXn</b> pins.</li> <li>If the continuity is proven, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
17	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;AUXILIARIES, set <b>AUXn to ON</b>.</li> <li>Note1: if <b>AUXn</b> is "Available", configure it to "Garden 1" for the test.</li> <li>Note2: if <b>AUX5</b> is reserved for "Waste", go in MENU&gt;CONFIGURATION&gt;FILTER DATA and set "Waste Valve" to NO.</li> </ul>		
18	<ul style="list-style-type: none"> <li>Using the Ohmmeter check if there is continuity between <b>AUXn</b> pins.</li> <li>If no continuity is detected, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
19	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;AUXILIARIES, set <b>AUXn to OFF</b>.</li> <li>Restore <b>AUXn</b> configuration, if changed in step 17.</li> </ul>		
20	<ul style="list-style-type: none"> <li>Plug back the connector on <b>AUXn</b>.</li> </ul>		
21	<ul style="list-style-type: none"> <li>Repeat from step 15 for all Auxiliary channels up to Aux5.</li> </ul>		

22	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;CONFIGURATION&gt;PUMP_DATA, restore the pump configuration.</li> <li>Using the PoolCOP menu MENU&gt;CONFIGURATION&gt;FILTER_DATA, restore the "Waste Valve" setting if changed.</li> </ul>		
23 CHECK AUX6			
24	<ul style="list-style-type: none"> <li>Unplug the connector on <b>AUX6</b>.</li> </ul> 		
25	<ul style="list-style-type: none"> <li>Using the Ohmmeter check if there is no continuity between <b>AUX6</b> pins.</li> <li>If the continuity is proven, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103 " Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
26	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;AUXILIARIES, set <b>AUX6 to ON</b>.</li> <li>Note: If <b>AUX6</b> is used has a mean to control disinfection, then go to MENU&gt; WATER_AND_TREATMENT&gt; ORP_CONTROL and <b>ask for priming and stay in this menu</b>.</li> </ul>		
27	<ul style="list-style-type: none"> <li>Using the Ohmmeter check if there is continuity between <b>AUX6</b> pins.</li> <li>If no continuity is detected, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
28	<ul style="list-style-type: none"> <li>Using the PoolCOP menu MENU&gt;MANUAL_CONTROL&gt;AUXILIARIES, set <b>AUX6 to OFF</b>.</li> <li>If <b>AUX6</b> is used has a mean to control disinfection, then leave the MENU&gt; WATER_AND_TREATMENT&gt; ORP_CONTROL.</li> </ul>		
29	<ul style="list-style-type: none"> <li>Plug back the connector on <b>AUX6</b>.</li> </ul>		
30 CHECK AUX7-pH			
31	<ul style="list-style-type: none"> <li>Unplug the connector on <b>pH</b>.</li> </ul> 		

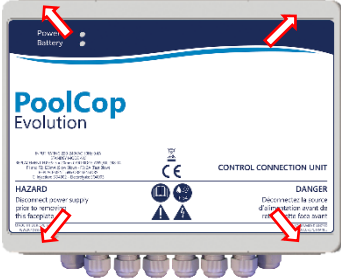
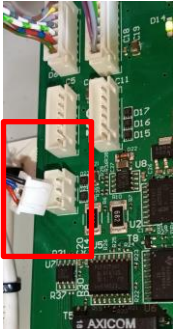
32	<ul style="list-style-type: none"> <li>○ Using the Ohmmeter check if there is no continuity between <b>pH</b> pins.</li> <li>○ If the continuity is proven, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
33	<ul style="list-style-type: none"> <li>○ Using the PoolCop menu MENU&gt;WATER_AND_TREATMENT&gt;PH_CONTROL configure pH control installed (if not), <b>ask for priming and stay in this menu.</b></li> </ul>		
34	<ul style="list-style-type: none"> <li>○ Using the Ohmmeter check if there is continuity between <b>pH</b> pins.</li> <li>○ If no continuity is detected, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	Ohm meter
35	<ul style="list-style-type: none"> <li>○ Using the PoolCop menu MENU&gt; WATER_AND_TREATMENT&gt;PH_CONTROL restore pH configuration if not installed or <b>leave the menu.</b></li> </ul>		
36	<ul style="list-style-type: none"> <li>○ Plug back the connector on <b>pH.</b></li> </ul>		
37	RESASSEMBLE		
38	<ul style="list-style-type: none"> <li>○ Close the transparent CCU face plate.</li> </ul>		
39	<ul style="list-style-type: none"> <li>○ If needed, Open the valve to the pool closed in step 2.</li> </ul>		
40	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCop MENU&gt;TIMER_FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> </ul>		
End of Service Procedure			

### 5.9 SCCU\_10\_EN: Replacing the Power Supply PCB103 Board

Servicing the Control Connection Unit CCU		Support : L2	
This Service Procedure details steps to changes the PCB103 Board.		Procedure	<b>SCCU_10_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Screwdriver - Voltmeter		0:30	
Parts required		QTY	Codes
- Kit Power Supply PCB103 EU -		- 1	CF1151
Steps		Cross Ref.	Tool, Part
1	DISSASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
4	<p><b>WARNING! ELECTRIC SHOCK HAZARD!</b> Make sure power as been removed by checking that there is no voltage at mains terminal J3</p> 		
5	<ul style="list-style-type: none"> <li>Make sure you will be able to restore correct wiring, write some note or take a picture of the CCU before unwiring.</li> </ul>		
6	<ul style="list-style-type: none"> <li>Unplug all connectors.</li> </ul>		


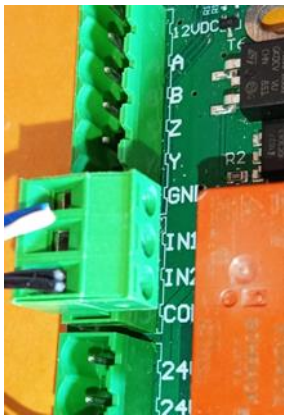
7	<ul style="list-style-type: none"> <li>○ Use a flat screwdriver to loose wires from mains terminal.</li> </ul> 		Screwdriver
8	<ul style="list-style-type: none"> <li>○ Loose the 6 screws which maintain the PCB into the enclosure</li> <li>○ Remove PCB103 Board.</li> </ul>		Screwdriver
9	RESSASSEMBLE		
10	<ul style="list-style-type: none"> <li>○ Put the new PCB in place.</li> </ul>		CF1151
11	<ul style="list-style-type: none"> <li>○ Secure the PCB with the 6 screws.</li> </ul>		Screwdriver
12	<ul style="list-style-type: none"> <li>○ Reconnect the mains wires, using a screwdriver may help.</li> <li>○ Pull on the wires to verify that they are properly maintained.</li> </ul>		Screwdriver
13	<ul style="list-style-type: none"> <li>○ Plug back all the connectors.</li> </ul>		
14	<p style="text-align: center;"><b>CAUTION:</b>                  Make sure to mix Pump and Aux connectors.                  Make sure to plug the battery on the right (J1 BATT) 12V connector</p>		
15	<ul style="list-style-type: none"> <li>○ Follow "Powering Up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
16	<ul style="list-style-type: none"> <li>○ If needed, check that the PCB103 is now working using MENU&gt;MANUAL_CONTROL&gt;PUMP or MENU&gt; MANUAL_CONTROL&gt;AUXILIARIES.</li> </ul>		
End of Service Procedure			


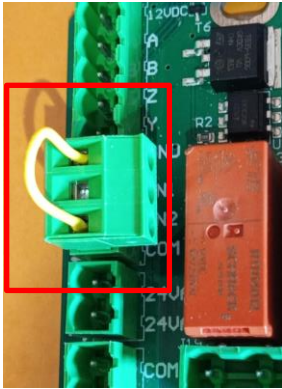
### 5.10 SCCU\_11\_EN: Replacing Air Temperature Sensor

Servicing the Control Connection Unit CCU		Support : L2	
This Service Procedure details steps to changes the air temperature sensor.		Procedure	<b>SCCU_11_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Screwdriver -		0:10	
Parts required		QTY	Codes
- Air Temperature Sensor UL		- 1	- CF1100.23
Steps		Cross Ref.	Tool, Part
1	DISSASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
4	<ul style="list-style-type: none"> <li>Unplug the temperature sensor from J27. Be careful to not pull on the cable but on the connector itself.</li> </ul> 		
5	<ul style="list-style-type: none"> <li>Extract the cable from the enclosure and dispose the damaged sensor.</li> </ul>		
6	REASSASSEMBLE		
7	<ul style="list-style-type: none"> <li>Route the new sensor cable inside the enclosure using a gland (add a new compression gland if required).</li> </ul>		CF1100.23
8	<p align="center"><b>CAUTION:</b> Do not camp the sensor cable with power cables. Leave 15cm distance.</p>		
9	<ul style="list-style-type: none"> <li>Plug the new sensor.</li> <li>make sure you respect the polarizing plug to not damage it.</li> </ul>		
10	<ul style="list-style-type: none"> <li>Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
11	<ul style="list-style-type: none"> <li>Check Air temperature indication on main screen</li> </ul>		
End of Service Procedure			




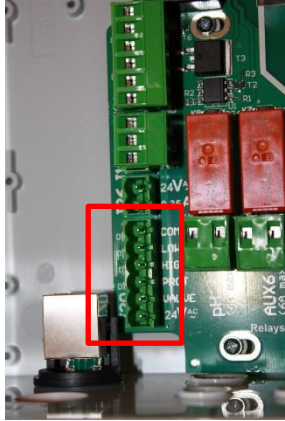
### 5.11 SCCU\_13\_EN: Checking Inputs

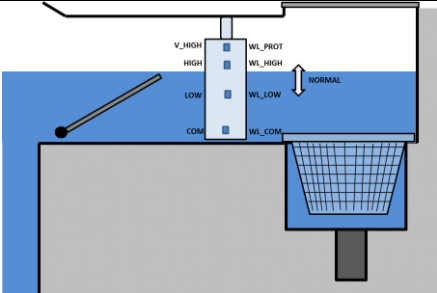
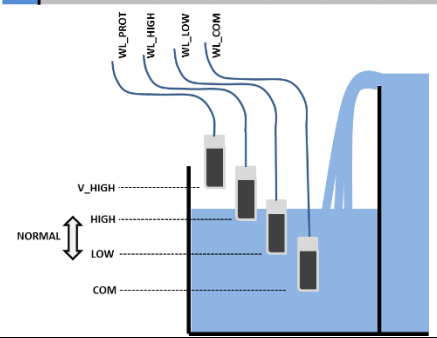
Servicing the Control Connection Unit CCU		Support : L3	
This Service Procedure details steps to check the multipurpose inputs		Procedure	<b>SCCU_13_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Screwdriver		0:30	
Parts required		QTY	Codes
- 0.25mm <sup>2</sup> , 10cm length wire		- 3	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Using PoolCOP menu MENU&gt;CONFIGURATION&gt;INPUTS, Set Input1 and Input 2 as <b>not used</b>.</li> <li>Note the current configuration as you will have to restore it at the end of this Service Procedure.</li> </ul>		
3	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
4	<ul style="list-style-type: none"> <li>Disconnect the cables on <b>IN1, IN2 and GND</b> from terminal J17. Make sure you will be able to reconnect these cables in the same order.</li> </ul> 		Screwdriver
5	CHECK		
6	<ul style="list-style-type: none"> <li>Using PoolCOP menu MENU&gt;CONFIGURATION&gt;INPUTS, Set Input1 as <b>"Disinf consumables"</b>, <b>"Action when closed"</b>, <b>"Alert=YES"</b>.</li> <li>Using PoolCOP menu MENU&gt;CONFIGURATION&gt;INPUTS, Set Input2 as <b>"pH consumables"</b>, <b>"Action when closed"</b>, <b>"Alert=YES"</b>.</li> <li>Back to main menu, ensure they are no alerts, and clear all present alerts if any.</li> </ul>		

7	<ul style="list-style-type: none"> <li>There should not remain or appear alert linked to pH or Disinfection consumables.</li> <li>If there is an alert, then the Power Supply PCB103 needs to be replaced. Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
8	<ul style="list-style-type: none"> <li>Using a 0.5mm<sup>2</sup> wire, establish a connection between <b>IN1 and GND.</b></li> </ul> 		Screwdriver Wires
9	<ul style="list-style-type: none"> <li>On PoolCOP main menu, the alert '<b>WARN: CONSUMABLE. Check pH consumable</b>' should appear.</li> <li>If alert doesn't appear, then the Power Supply PCB103 needs to be replaced.</li> <li>Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
10	<ul style="list-style-type: none"> <li>The alert '<b>WARN: CONSUMABLE. Check disinfection consumable</b>' should <u>not</u> appear.</li> <li>If alert does appear, then the Power Supply PCB103 needs to be replaced.</li> <li>Follow "Replacing the Power Supply PCB103 " Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
11	<ul style="list-style-type: none"> <li>Disconnect the connection between <b>IN1 and GND.</b></li> <li>Using 2x0.5mm<sup>2</sup> wire, establish a connection between <b>IN2 and GND.</b></li> </ul> 		Screwdriver Wires
12	<ul style="list-style-type: none"> <li>On PoolCOP main menu, the alert '<b>WARN: CONSUMABLE. Check Disinfection consumable</b>' should appear.</li> <li>If alert doesn't appear, then the Power Supply PCB103 needs to be replaced.</li> <li>Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	

13	<ul style="list-style-type: none"> <li>○ The alert '<b>WARN: CONSUMABLE. Check pH consumable</b>' should <b>not</b> appear.</li> <li>○ If alert does appear, then the Power Supply PCB103 needs to be replaced</li> <li>○ Follow "Replacing the Power Supply PCB103" Service Procedure and stop this procedure.</li> </ul>	SCCU_10_EN	
14	REASSEMBLE		
15	<ul style="list-style-type: none"> <li>○ Remove connection between <b>IN1</b> and <b>GND</b>.</li> <li>○ Reconnect the inputs wires to their respective pin.</li> </ul>		Screwdriver
16	<ul style="list-style-type: none"> <li>○ Close the transparent CCU face plate.</li> </ul>		
17	<ul style="list-style-type: none"> <li>○ Using PoolCOP menu MENU&gt;CONFIGURATION&gt;INPUTS, restore inputs configuration.</li> </ul>		
18	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCOP MENU&gt;TIMER FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> </ul>		
End of Service Procedure			

### 5.12 SCCU\_14\_EN: Replacing Water Level Sensor


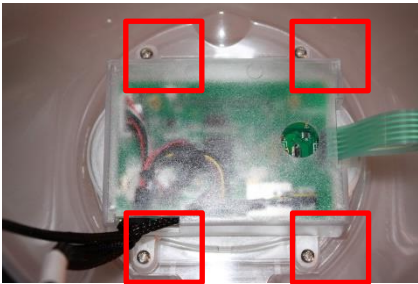

Servicing the Control Connection Unit CCU		Support : L2	
This procedure describes how to replace/connect the water level sensor		Procedure	<b>SCCU_14_EN</b>
		Revision	<b>01</b>
Required Tools:		Time:	
- Screwdriver		0:10	
Required Parts		QTE	Codes
- Water Level Sensor (Cable 20m)		- 1	- NI2010.01
Or			
- Buffer Tank Level Sensor		- 4	- NI4010
Steps		Reference.	Tool, part
1	<ul style="list-style-type: none"> <li>Stop the pump (MENU&gt;MANUAL_CONTROL&gt;PUMP).</li> </ul>		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
4	<ul style="list-style-type: none"> <li>Unplug the Water Level connector from J20.</li> </ul> 		
5	<ul style="list-style-type: none"> <li>Disconnect wires from COM, LOW, HIGH, PROT.</li> <li>Extract the cable from the compression gland.</li> </ul>		Screwdriver
6	<ul style="list-style-type: none"> <li>Place the new sensor starting from the water end (water side)</li> </ul>		
7	<ul style="list-style-type: none"> <li>Route the new sensor cable end through a compression gland into the CCU.</li> <li>Limit the cable length inside the CCU to less than 20cm. Cut the extra length of cable if required.</li> </ul>		


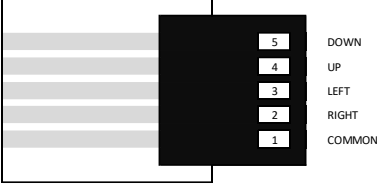
8	<ul style="list-style-type: none"> <li>○ Connect wires to the connector.</li> </ul>		Screwdriver
8.1	<p>Make sure to connect wires in the right order depending on the sensor being used:</p>		
8.2		<ul style="list-style-type: none"> <li>○ WL(COM) is Yellow</li> <li>○ WL(LOW) is Blue</li> <li>○ WL(HIGH) is Red</li> <li>○ WL(PROT) is Green</li> </ul>	NI2010
8.3		<ul style="list-style-type: none"> <li>○ WL(COM) is Blue</li> <li>○ WL(LOW) is Blue</li> <li>○ WL(HIGH) is Blue</li> <li>○ WL(PROT) is Blue</li> </ul>	NI4010
9	<ul style="list-style-type: none"> <li>○ Plug the connector into the terminal J20.</li> </ul>		
10	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
11	<ul style="list-style-type: none"> <li>○ When restarting, a level check will be automatically performed.</li> <li>○ Check reading is conform to real water level.</li> </ul>		
12	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCOP MENU&gt;TIMER FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> </ul>		


End of Procedure

**Section 6 SERVICING THE VALVE DATA UNIT**

**6.1 SVDU\_01\_EN: Checking/Replacing The Keyboard**


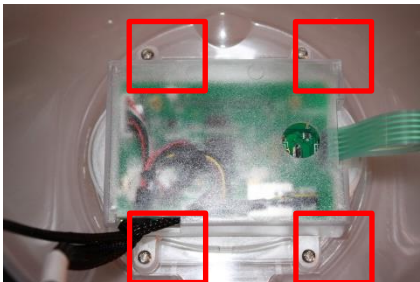

Servicing the Valve Data Unit		Support : L3	
This Service Procedure details steps to check and replace the keyboard. This keyboard is glued on the PoolCOP cover and cannot be separate from it. In case of damage, keyboard and cover must be replaced together.		Procedure	<b>SVDU_01_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver - Ohm meter - 2.54mm Male/Male expander		0:30	
Parts required		QTY	Codes
- VDU Cover With Keypad EVO			- CF1221-D2
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>o Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>o Open the cover using clips.</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>		
4	<ul style="list-style-type: none"> <li>o Loosen the 4 screws retaining the microprocessor cover and remove this cover.</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>		Screwdriver
5	<ul style="list-style-type: none"> <li>o The keyboard is connected to the PCB004 Board with a flat cable on the right side. Unplug this flat cable.</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>		


6	○ DIAGNOSE		
7	○ Connect the 2.54mm M/M expander to the keyboard connector.  		2.54mm M/M expander
8	 <ul style="list-style-type: none"> <li>○ With the Ohm meter and without acting on any keypad button check that there is no continuity between any of the 5 terminations. Check every possible combination.</li> <li>○ If the continuity is proven in one combination, then the Cover needs to be replaced; jump to step 14 REPLACE.</li> </ul>		Ohm meter
9	<ul style="list-style-type: none"> <li>○ Place the Ohm meter between <b>COMMON</b> and <b>RIGHT</b>.</li> <li>○ Return the cover and press the RIGHT down button.</li> <li>○ Check if continuity appears when press and disappears when release.</li> <li>○ If not correct, then the Cover needs to be replaced; jump to step 14 REPLACE.</li> </ul>		Ohm meter
10	<ul style="list-style-type: none"> <li>○ Place the Ohm meter between <b>COMMON</b> and <b>LEFT</b>.</li> <li>○ Return the cover and press the LEFT down button.</li> <li>○ Check if continuity appears when press and disappears when release.</li> <li>○ If not correct, then the Cover needs to be replaced; jump to step 14 REPLACE.</li> </ul>		Ohm meter
11	<ul style="list-style-type: none"> <li>○ Place the Ohm meter between <b>COMMON</b> and <b>UP</b>.</li> <li>○ Return the cover and press the UP arrow button.</li> <li>○ Check if continuity appears when press and disappears when release.</li> <li>○ If not correct, then the Cover needs to be replaced; jump to step 14 REPLACE.</li> </ul>		Ohm meter
12	<ul style="list-style-type: none"> <li>○ Place the Ohm meter between <b>COMMON</b> and <b>DOWN</b>.</li> <li>○ Return the cover and press the DOWN arrow button.</li> <li>○ Check if continuity appears when press and disappears when release.</li> <li>○ If not correct, then the Cover needs to be replaced; jump to step 14 REPLACE.</li> </ul>		Ohm meter
13	○ Jump to step 18 REASSEMBLE		

14	REPLACE		
15	<ul style="list-style-type: none"> <li>○ Keep the PCB004 Board apart.</li> <li>○ Do not unplug the other connectors.</li> </ul>		
16	<ul style="list-style-type: none"> <li>○ Using a flat screwdriver, remove the 2 spindles retaining the cover to the Valve Data Unit base.</li> </ul> 		Screwdriver
17	<ul style="list-style-type: none"> <li>○ Replace the Cover including the spindles.</li> </ul>		CF1221.D2
18	REASSEMBLE		
19	<ul style="list-style-type: none"> <li>○ Install back the PCB004 Board in the cover so that the connector for the flat ribbon is on the right side.</li> </ul>		
20	<ul style="list-style-type: none"> <li>○ Plug back the flat cable to the PCB004 Board.</li> <li>○ Be sure to not twist the cable, it must be flat from the cover to the processor Board.</li> </ul>		
21	<ul style="list-style-type: none"> <li>○ Put the processor cover back in place and secure it with the 4 screws.</li> </ul>		Screwdriver
22	<p align="center"><b>CAUTION:</b> Make sure the board is correctly place in its holder before tightening the screws.</p>		
23	<ul style="list-style-type: none"> <li>○ Close the cover using the clips.</li> </ul>		
24	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
End of Service Procedure			




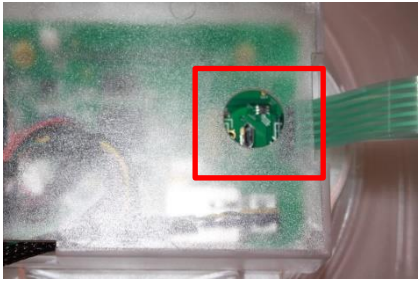
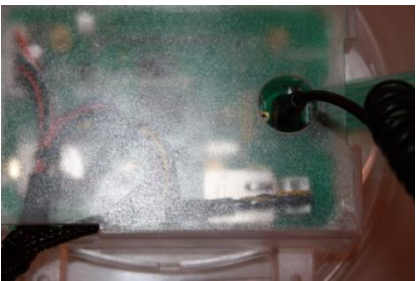
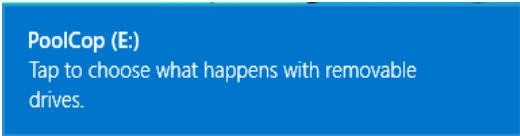
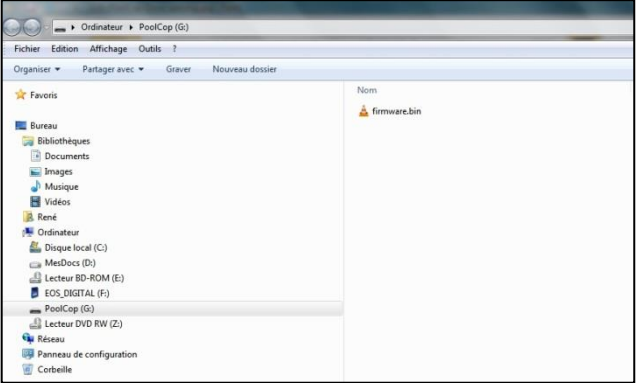
## 6.2 SVDU\_02\_EN: Checking/Replacing the 3.0V Coin Cell

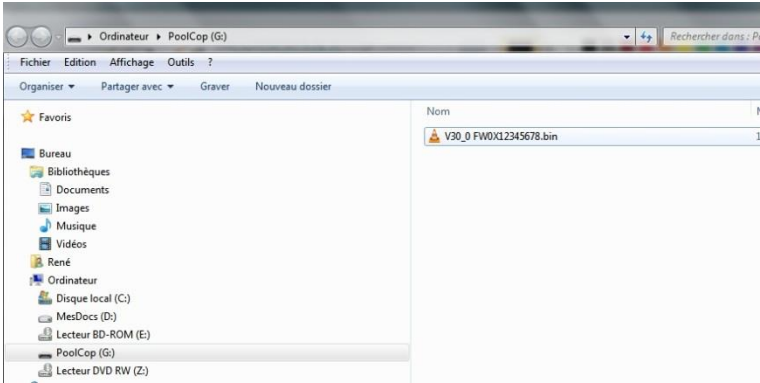
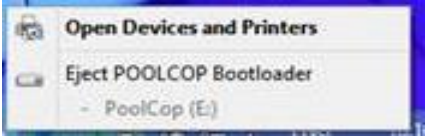
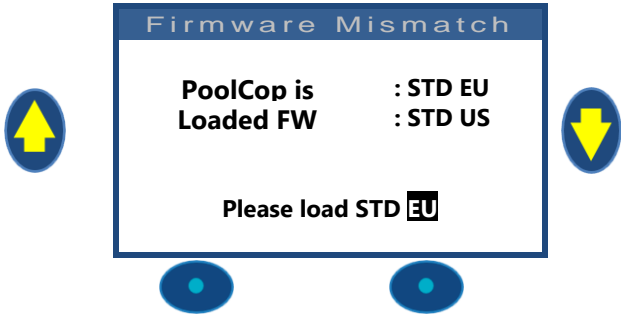
Servicing the Valve Data Unit		Support : L3	
This Service Procedure details steps to Check and replace the 3.0V coin cell. This battery is used for PoolCop real time clock.		Procedure	<b>SVDU_02_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver - Voltmeter		0:20	
Parts required		QTY	Codes
- 3V Coin cell CR2032 type		1	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>Open the cover using clips.</li> </ul> 		
4	<ul style="list-style-type: none"> <li>Loosen the 4 screws retaining the microprocessor cover and remove this cover.</li> </ul> 		Screwdriver
5	<ul style="list-style-type: none"> <li>The cell battery is located onto the PCB004 Board.</li> </ul> 		

6	DIAGNOSE		
7	<ul style="list-style-type: none"> <li>○ Extract the battery from its holder.</li> <li>○ Using the Voltmeter, check the battery voltage.</li> <li>○ If voltage is above 2.9V, no need to replace the cell, otherwise replace it.</li> </ul>		Voltmeter Cell CR2032
8	REASSEMBLE		
9	<ul style="list-style-type: none"> <li>○ Put the battery back.</li> </ul>		
10	<p style="text-align: center;"><b>CAUTION:</b></p> <p>Make sure to place the battery correctly, the retaining claw on the left side must be on the top side of the battery</p> 		
10	<ul style="list-style-type: none"> <li>○ Put the processor cover back in place and secure it with the 4 screws.</li> </ul>		Screwdriver
11	<p style="text-align: center;"><b>CAUTION:</b></p> <p>Make sure the board is correctly place in its holder before tightening the screws.</p>		
12	<ul style="list-style-type: none"> <li>○ Close the cover back</li> </ul>		
13	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
End of Service Procedure			

### 6.3 SVDU\_03\_EN: Replacing the Firmware via USB


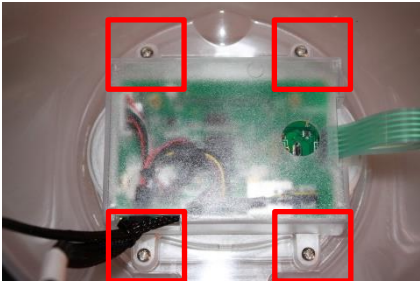
Servicing the Valve Data Unit		Support : L3	
This Service Procedure details steps to replace the firmware stored into flash memory using an USB cable		Procedure	<b>SVDU_03_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
<ul style="list-style-type: none"> <li>- USB-micro USB cable</li> <li>- Laptop with operating system Windows7 or later</li> <li>- Firmware *.bin file</li> </ul>		0:10	
Parts required		QTY	Codes
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>○ Take note of all settings. You will need to check them after firmware upgrade.</li> <li>○ Check the firmware version in MENU&gt;CONFIGURATION&gt;FACTORY_SETTINGS&gt;FW VERSION.                             <ul style="list-style-type: none"> <li>○ Pay attention of the model/region:                                     <ul style="list-style-type: none"> <li>▪ Model is <b>STD</b>.</li> <li>▪ Region is either <b>EU</b> either <b>US</b>, either <b>DA</b></li> </ul> </li> </ul> </li> </ul>		
3	<p align="center"><b>CAUTION:</b></p> <p align="center">Make sure to use the corrects model/region firmware. Loading a firmware with different Model or Region <b>will lock the PoolCOP.</b></p>		
4	<ul style="list-style-type: none"> <li>○ Shut down PoolCOP using the switch on the left side of the Control Connection Unit.</li> </ul>		
5	<ul style="list-style-type: none"> <li>○ Open the cover using clips.</li> </ul> <div style="text-align: center;">  </div>		


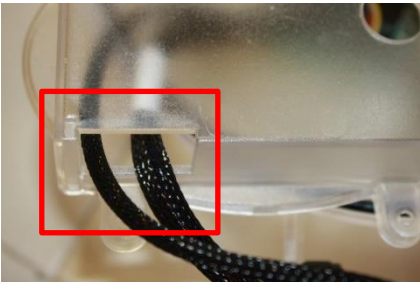
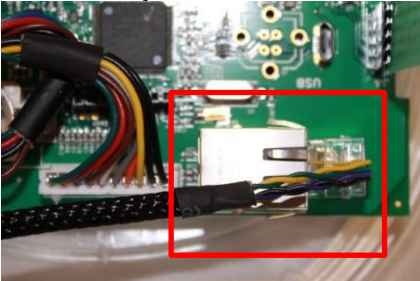
6	REPLACING the FFIRMWARE		
7	<ul style="list-style-type: none"> <li>Remove the micro USB cap (located behind the screen on the internal side of cover).</li> </ul> 		
8	<ul style="list-style-type: none"> <li>Connect the micro USB cable on the CPU board, and the other end to your computer.</li> </ul> 		USB cable
9	<ul style="list-style-type: none"> <li>On the computer screen, a new drive "PoolCOP" will show up:</li> </ul>  <ul style="list-style-type: none"> <li>Choose to view the content with the file explorer</li> <li><b>Note:</b> the drive logical name (<b>E:</b> here) may change according to the computer configuration.</li> </ul>		Computer
10	<ul style="list-style-type: none"> <li>The "PoolCOP" drive contains a single file named "firmware.bin". Delete this file:</li> </ul> 		

<p>11</p>	<ul style="list-style-type: none"> <li>Using the file explorer, copy the provided *.bin firmware file into the PoolCOP drive:</li> </ul> 		<p>*.bin file</p>
<p>12</p>	<ul style="list-style-type: none"> <li>Once the copy is done, eject the drive (as you would for an USB key):</li> </ul> 		
<p>13</p>	<ul style="list-style-type: none"> <li>Remove the USB cable from the CPU board and replace the cap.</li> </ul>		
<p>14</p>	<p>REASSEMBLE</p>		
<p>15</p>	<ul style="list-style-type: none"> <li>Close the cover back.</li> </ul>		
<p>16</p>	<ul style="list-style-type: none"> <li>Power up PoolCOP using the switch on the left side of the Control Connection Unit.</li> </ul>		
<p>17</p>	<ul style="list-style-type: none"> <li>Check the firmware version at start up, a welcome message will be displayed as well as the firmware version.</li> <li>However if the following error message is displayed, the loaded firmware is not correct.</li> </ul>  <ul style="list-style-type: none"> <li><b>Please follow instructions and load back right firmware (in this case load STD.EU)</b></li> <li>PoolCOP will remain inactive until a compatible firmware version is loaded.</li> </ul>		
<p>18</p>	<ul style="list-style-type: none"> <li>Review the settings.</li> </ul>		


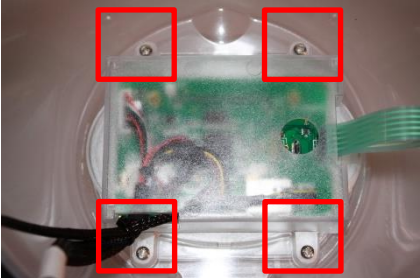
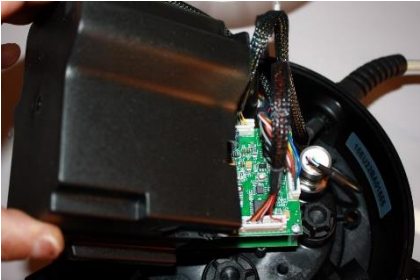
End of Service Procedure

### 6.4 SVDU\_04\_EN: Replacing the PCB004 Board or LCD Screen

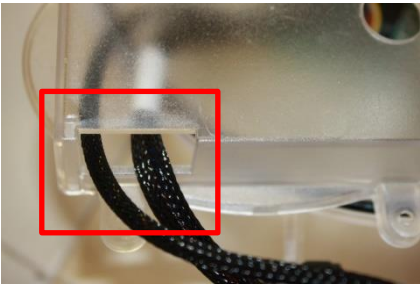
Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to check and replace the PCB004 Board or the LCD screen. LCD screen is soldered on the micro board and cannot be separate.		Procedure	<b>SVDU_04_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver		0:20	
Parts required	QTY	Codes	
- PCB micro with LCD Screen PCB004	1	- CF1220.01	
Steps	Cross Ref.	Tool, Part	
1	DISASSEMBLE		
2	<p align="center"><b>NOTE :</b></p> <p>Each PoolCOP is identified on the Web server with its own MAC address ;                      This Address is specific with each PCB004 board.                      In order to not loose historical data,  <b>DO not create a new PoolCOP on the server!</b>                      Get the MAC address provided with the PCB004 board and contact PCFR                      After sales support which will re-affect the MAC address for you.</p>		
3	<ul style="list-style-type: none"> <li>Take note of every setting entering the different menus. You will need to restore settings after changing the PCB004.</li> <li>Note: If PoolCOP is connect to the network, it will possible to restore settings from Web site.</li> </ul>		
4	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
5	<ul style="list-style-type: none"> <li>Open the cover using clips.</li> </ul> 		
6	<ul style="list-style-type: none"> <li>Loosen the 4 screws retaining the microprocessor cover and remove this cover.</li> </ul> 		Screwdriver
7	<ul style="list-style-type: none"> <li>Unplug the keyboard flat cable.</li> <li>Unplug the 2 end of connection cable.</li> <li>Unplug the Ethernet connection</li> </ul>		
8	<ul style="list-style-type: none"> <li>Remove the PCB004 Board.</li> </ul>		

9	REASSEMBLE		
10	<ul style="list-style-type: none"> <li>Install the Micro Board in the cover so that the connector for the flat ribbon is on the right side.</li> </ul>		- CF1220.01
11	<ul style="list-style-type: none"> <li>Plug back the flat keyboard cable. Be sure to not twist the cable, it must be flat from the cover to the processor Board.</li> </ul> 		
12	<ul style="list-style-type: none"> <li>Route the connection cable and ethernet cable through the processor cover.</li> </ul>  <ul style="list-style-type: none"> <li>Plug back the 2 connections cables to the Micro Board.</li> </ul>		
13	<ul style="list-style-type: none"> <li>Plug the RJ45 extremity to ethernet connector.</li> </ul> 		
14	<ul style="list-style-type: none"> <li>Put the processor cover back in place and secure it with the 4 screws.</li> </ul>		Screwdriver
15	<p align="center"><b>CAUTION:</b> Make sure the board is correctly place in its holder before tightening the screws.</p>		
16	<ul style="list-style-type: none"> <li>Close the cover back.</li> </ul>		
17	<ul style="list-style-type: none"> <li>Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
18	<ul style="list-style-type: none"> <li>Restore parameters as they were before changing the firmware.</li> <li>This can be done via Web Site</li> </ul>		
19	<ul style="list-style-type: none"> <li>Proceed to pH calibration if pH control is installed. Follow "Calibrating/replacing pH/ORP sensor".</li> </ul>	SVDU_07_EN	
End of Service Procedure			



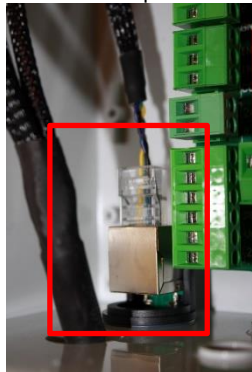
### 6.5 SVDU\_05\_EN: Replacing the Connection Cable


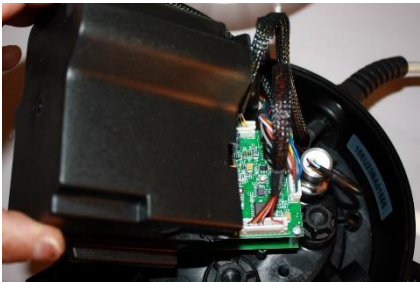
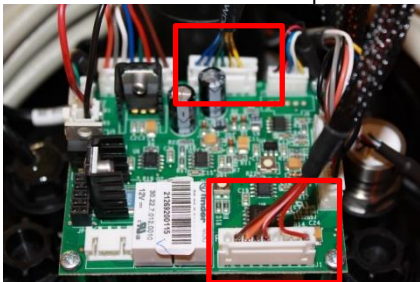
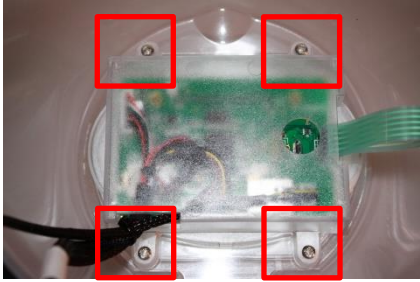
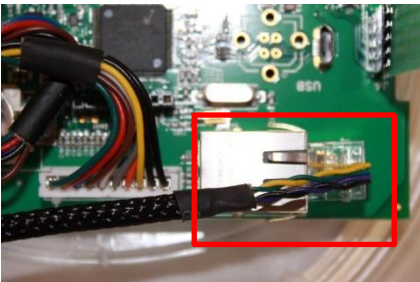
Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to check and replace the connection cable. This cable connects the PCB004 Board to the electronics Board set.		Procedure	<b>SVDU_05_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver		0:10	
Parts required		QTY	Codes
- Connection Cable UL		1	- CF1220.23
-			
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
4	<ul style="list-style-type: none"> <li>Open the cover using clips.</li> </ul> 		
4	<ul style="list-style-type: none"> <li>Loosen the 4 screws retaining the microprocessor cover and remove this cover.</li> </ul>  <ul style="list-style-type: none"> <li>Unplug the 2 terminations of the connection cable from the microprocessor PCB.</li> </ul>		Screwdriver
5	<ul style="list-style-type: none"> <li>Using the screwdriver, remove the electronics cover.</li> </ul>  <ul style="list-style-type: none"> <li>Unplug the 2 terminations of the connection cable from the top PCB.</li> </ul>		Screwdriver

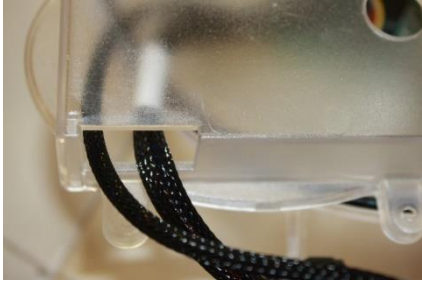


6	REASSEMBLE		
7	<ul style="list-style-type: none"> <li>Route the connection cable and ethernet cable through the processor cover</li> </ul> 		
8	<ul style="list-style-type: none"> <li>Plug back the new cable on both end (PCB003 and PCB004).</li> <li>Be sure to respect the polarizing plugs.</li> </ul>		CF1220.3
9	<ul style="list-style-type: none"> <li>Put the electronics cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
10	<ul style="list-style-type: none"> <li>Put the processor cover back in place and secure it with the 4 screws.</li> </ul>		Screwdriver
11	<p style="text-align: center;"><b>CAUTION:</b> Make sure the board is correctly place in its holder before tightening the screws</p>		
12	<ul style="list-style-type: none"> <li>Close the cover back.</li> </ul>		
13	<ul style="list-style-type: none"> <li>Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
End of Service Procedure			


## 6.6 SVDU\_06\_EN: Replacing VDU Datalink Cable


Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the VDU Datalink Cable. This cable connects the CCU to the VDU		Procedure	<b>SVDU_06_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver		0:10	
Parts required		QTY	Codes
- VDU Datalink Cable UL		1	- CF1210.29
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>Open the CCU face plate.</li> </ul> 		Screwdriver
4	<ul style="list-style-type: none"> <li>Unplug the VDU Datalink Cable from the PCB103 Board.</li> <li>Route the cable outside the enclosure by loosen the compression gland.</li> </ul> 		
5	<ul style="list-style-type: none"> <li>Unplug the ethernet from the pass through connector</li> </ul> 		


<p>6</p>	<ul style="list-style-type: none"> <li>○ Open the cover using clips.</li> </ul> 		
<p>7</p>	<ul style="list-style-type: none"> <li>○ Using the screwdriver, remove the electronics black cover.</li> </ul> 		<p>Screwdriver</p>
<p>8</p>	<ul style="list-style-type: none"> <li>○ Unplug the Datalink Cable from the top board.</li> </ul> 		
<p>9</p>	<ul style="list-style-type: none"> <li>○ Loosen the 4 screws retaining the microprocessor cover and remove this cover.</li> </ul> 		<p>Screwdriver</p>
<p>10</p>	<ul style="list-style-type: none"> <li>○ Unplug the Ethernet connection</li> </ul> 		


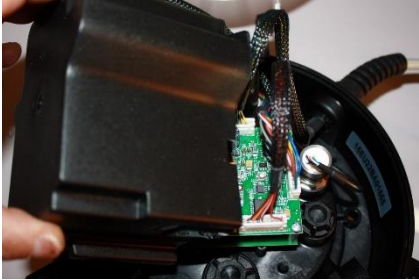
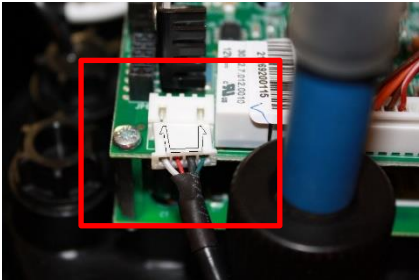
11	REASSEMBLE		
12	<ul style="list-style-type: none"> <li>○ Route the new VDU Datalink Cable into the main base and secure the compression gland.</li> </ul>		CF1210.29
13	<ul style="list-style-type: none"> <li>○ Connect the Life Line cable to the top Board.</li> <li>○ Be sure to respect the polarizing plug.</li> </ul>		
14	<ul style="list-style-type: none"> <li>○ Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
15	<ul style="list-style-type: none"> <li>○ Route the connection cable and ethernet cable through the processor cover</li> </ul> 		
16	<ul style="list-style-type: none"> <li>○ Plug back the RJ45 extremity to ethernet connector</li> </ul>		
17	<ul style="list-style-type: none"> <li>○ Put the processor cover back in place and secure it with the 4 screws.</li> </ul>		Screwdriver
18	<p align="center"><b>CAUTION:</b> Make sure the board is correctly place in its holder before tightening the screws</p>		
19	<ul style="list-style-type: none"> <li>○ Close the cover back.</li> </ul>		
20	<ul style="list-style-type: none"> <li>○ Route the VDU Datalink Cable to the CCU enclosure; enter the enclosure using the compression gland.</li> </ul>		
21	<ul style="list-style-type: none"> <li>○ Plug back the VDU Datalink Cable to the CCU.</li> </ul>		
22	<ul style="list-style-type: none"> <li>○ Plug back the RJ45 end to the pass through</li> </ul>		
23	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
End of Service Procedure			

### 6.7 SVDU\_07\_EN: Cleaning/Calibrating/Replacing the pH/ORP Sensor


Servicing the Valve Data Unit		Support : L2	
<p>This Service Procedure details steps to calibrate the pH using a buffer solution, clean or replace the sensor.</p> <p><b>Note:</b> When the sensor is assembled to the PoolCop, it's possible to calibrate the sensor 'on line' using the pool water pH as a reference without extracting the sensor from its holder.</p> <p><b>Note:</b> Probes are sensitive to leakage currents. Always make sure that the pool water is <b>properly bounded to earth (&lt;20 Ohms)</b>. The sensitive part of the ORP probe can be contaminated in the presence of metals in water. Always treat the water with <b>metal fixer before installing</b> the probe.</p>		Procedure	<b>SVDU_07_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
<ul style="list-style-type: none"> <li>- Screwdriver</li> <li>- pH 7.0 buffer solution</li> <li>- pH 4.0 buffer solution</li> <li>- ORP 470mV buffer solution</li> <li>- Cotton bud</li> <li>- Household cleaner</li> </ul>		0:15	
Parts required		QTY	Codes
- Kit Sensor SE pH+ORP Pt or - Kit Sensor SE pH+ORP Au		- 1  - 1	- SO4902 or - SO4903
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>o Using PoolCop MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump. Make sure there is no risk of water overflow in the pool or buffer tank when pump is stopped, close the manual valves.</li> <li>o Disconnect power to the pump and auxiliaries (booster pump...).</li> </ul>		
3	<ul style="list-style-type: none"> <li>o Using PoolCop MENU&gt;MANUAL CONTROL&gt;ROTATE_VALVE, turn the valve to CLOSE position.</li> <li>o Loosen the valve sight glass and make sure all the water inside the valve housing is drained.</li> </ul>		
4	<ul style="list-style-type: none"> <li>o Open the cover using clips.</li> </ul> <div style="text-align: center;">  </div>		

5	<ul style="list-style-type: none"> <li>Loosen the pH sensor and remove it from its housing.</li> </ul> 		
6	<p align="center"><b>CAUTION:</b></p> <p align="center">Proceed progressively and continuously check there is no risk of water projection when loosen. If so, tighten the pH sensor immediately and check step 3.</p>		
7	<ul style="list-style-type: none"> <li>For sensor replacement jump to step 24 REPLACE.</li> </ul>		
8	CALIBRATE pH		
9	<ul style="list-style-type: none"> <li>If the sensor is new, first rinse it in fresh water for 5 minutes.</li> <li>Put the sensor in pH7 buffer solution and stir for few seconds.</li> </ul>		pH7 buffer solution
10	<ul style="list-style-type: none"> <li>Using MENU&gt;MAINTENANCE&gt;pH_CALIBRATION, ask for calibration with pH 7.0.</li> <li>After calibration, PoolCop reads pH automatically.</li> <li>Should the pH be unstable or calibration impossible, proceed to sensor replacement. See step 24 REPLACE.</li> </ul>		
11	<ul style="list-style-type: none"> <li>Remove sensor from buffer solution.</li> <li>Rinse with clear water</li> <li>Put the sensor in pH4 buffer solution and stir for few seconds.</li> </ul>		pH4 buffer solution
12	<ul style="list-style-type: none"> <li>Using PoolCop MENU&gt;MAINTENANCE&gt;MEASURE PH, ask for pH reading.</li> <li>If the pH is stable and below pH4.5, go to step 35 REASSEMBLE, otherwise follow the cleaning procedure as describe in step 13 CLEANING the pH cell.</li> </ul>		


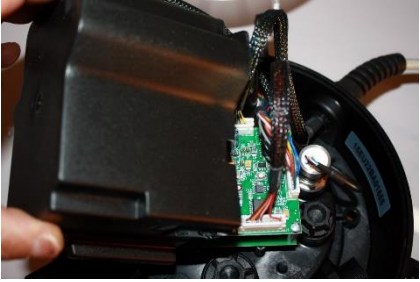
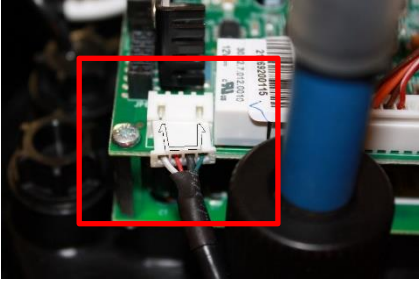
13	CLEANING the pH cell		
14	<ul style="list-style-type: none"> <li>○ If the pH is unstable or measurement reacts slowly, the cell may be partially clogged.</li> <li>○ Use the special tool to clean the cell</li> </ul>  <ul style="list-style-type: none"> <li>○ Carefully apply the tool on the glass cell and perform a few rotations by maintaining the tool between your thumb and forefinger.</li> <li>○ Repeat calibration procedure from step 8. If cleaning didn't improve measurement, proceed to probe replacement as described in step 24 REPLACE.</li> </ul>		Cleaning tool
15	<p style="text-align: center;"><b>CAUTION:</b> Make sure to not damage the metallic rod (pH+ORP sensor) during the cleaning.</p>		
16	CHECKING ORP SENSOR		
17	<ul style="list-style-type: none"> <li>○ Put the sensor in ORP 470mV buffer solution and stir for few seconds.</li> </ul>		ORP 470mV buffer solution
18	<p style="text-align: center;"><b>CAUTION</b> Make sure the power has been removed from the pump so that it cannot start.</p>		
19	<ul style="list-style-type: none"> <li>○ On the VDU, when the main screen is displayed, press simultaneously UP and DOWN arrows. This will enters SERVICE MODE.</li> <li>○ Press UP arrow until the screen display ORP value.</li> </ul>		
20	<ul style="list-style-type: none"> <li>○ Wait for reading stabilization, it could take up to 15 minutes.</li> </ul>		
21	<ul style="list-style-type: none"> <li>○ If reading is correct, go to step 35 REASSEMBLE.</li> <li>○ If cleaning has not already been performed go to step 22 CLEANING sensitive part of ORP.</li> <li>○ Otherwise replace the sensor as described in step 24 REPLACE.</li> </ul>		

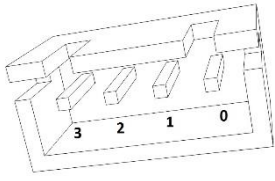
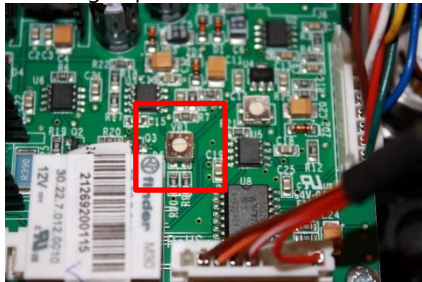
22	CLEANING sensitive part of ORP								
23	<ul style="list-style-type: none"> <li>The sensitive part of the ORP sensor (red circle below) is likely to be contaminated by presence of metals in the water. In such cases, the ORP sensor does not react. After completing a water treatment based on metal fixer for the pool, it may be useful to decontaminate the ORP probe if it still does not react within days after the treatment.</li> </ul>  <ul style="list-style-type: none"> <li>Using a cotton bud with a mildly abrasive household cleaner (like Jif cream cleaner), gently rub the metal rod to rid the metal oxides. Rub the best all sides.</li> <li>Then rinse the probe thoroughly with fresh water.</li> <li>Repeat step 16 CHECKING ORP SENSOR</li> </ul>		Cotton bud Household cleaner						
24	REPLACE								
25	<ul style="list-style-type: none"> <li>Switch OFF the CCU with standby switch.</li> </ul>								
26	<ul style="list-style-type: none"> <li>Using the screwdriver, remove the electronics cover.</li> </ul> 		Screwdriver						
27	<ul style="list-style-type: none"> <li>Unplug the pH/ORP sensor from the PCB Connection SE Data Board</li> </ul> 								
28	<ul style="list-style-type: none"> <li>Plug the new pH/ORP sensor to the PCB Connection SE Data Board.</li> <li>Be sure to respect the polarizing plug.</li> <li>Note: there are 2 reference for sensors:</li> </ul> <table border="1" data-bbox="188 1798 836 1899"> <thead> <tr> <th>Type of data</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>pH and ORP for liquid chlorine</td> <td>SO4902</td> </tr> <tr> <td>pH and ORP for salt water chlorinators</td> <td>SO4903</td> </tr> </tbody> </table>	Type of data	Reference	pH and ORP for liquid chlorine	SO4902	pH and ORP for salt water chlorinators	SO4903		SO4902 Or SO4903
Type of data	Reference								
pH and ORP for liquid chlorine	SO4902								
pH and ORP for salt water chlorinators	SO4903								



29	<ul style="list-style-type: none"> <li>○ When delivered, the sensor is provided with accessories. Please check the order:                             <ul style="list-style-type: none"> <li>○ First should be the nut to secure the sensor.</li> <li>○ Next, the star lock grab ring, the grab ring must be between 9-9.5cm from the sensor tip.</li> <li>○ Next, the compression ring</li> <li>○ Last, the O-ring.</li> </ul> </li> </ul> 		
30	<ul style="list-style-type: none"> <li>○ Remove the sensor transport cap.</li> </ul>		
31	<ul style="list-style-type: none"> <li>○ Put the sensor into its housing and secure it with the screw. Make sure to tighten enough in order to avoid leakage.</li> </ul>		
32	<p style="text-align: center;"><b>CAUTION:</b> Do not over-tighten as the electrode is a sensitive device. Ensure that the cap is sufficiently secure to retain the sensor in place under water pressure.</p>		
33	<ul style="list-style-type: none"> <li>○ Switch ON the CCU with standby switch.</li> </ul>		
34	<ul style="list-style-type: none"> <li>○ Proceed to sensor calibration, go to step 8 CALIBRATE.</li> </ul>		
35	REASSEMBLE		
36	<ul style="list-style-type: none"> <li>○ Put the sensor into its housing and secure it with the screw. Make sure to tighten enough in order to avoid leakage.</li> </ul>		
37	<p style="text-align: center;"><b>CAUTION:</b> Do not over-tighten as the electrode is a sensitive device. Ensure that the cap is sufficiently secure to retain the sensor in place under water pressure.</p>		
38	<ul style="list-style-type: none"> <li>○ Put the electronics white cover back in place and secure it with the 4 screws.</li> </ul>		Screwdriver
39	<ul style="list-style-type: none"> <li>○ Reconnect power to the pump and auxiliaries.</li> <li>○ Leave SERVICE MODE by pressing UP and DOWN arrows simultaneously.</li> <li>○ Start the filtration Pump in PoolCOP MENU&gt;MANUAL CONTROL&gt;PUMP.</li> <li>○ When the pump is primed, check leakage around the sensor.</li> <li>○ Leave the filtration running for a couple of minutes.</li> </ul>		
40	<ul style="list-style-type: none"> <li>○ Stop the pump.</li> <li>○ In MENU&gt;MAINTENANCE, ask for pH reading</li> <li>○ Check that pH reading is stable and representative.</li> <li>○ If not, go back to Trouble Shooting Procedures "Ph measurement is inconsistent " and " pH measurement is stuck"</li> </ul>		TWT_01_EN TWT_02_EN
41	<ul style="list-style-type: none"> <li>○ Close the cover using the clips.</li> </ul>		
42	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCOP MENU&gt;TIMER FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> </ul>		
End of Service Procedure			


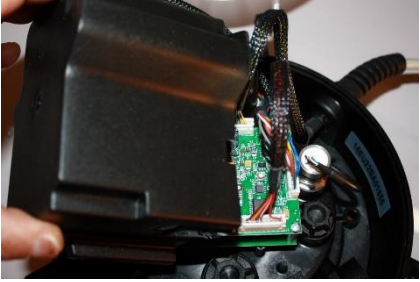
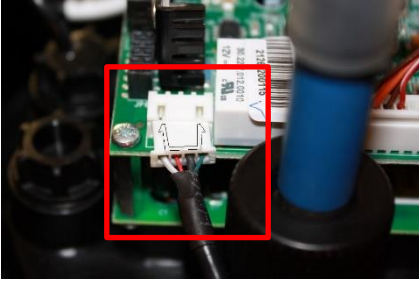
### 6.8 SVDU\_08\_EN: Checking pH Reading Circuitry

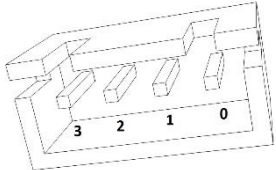

Servicing the Valve Data Unit		Support : L4	
This Service Procedure details steps to check pH reading circuitry.		Procedure	<b>SVDU_08_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
<ul style="list-style-type: none"> <li>- Screwdriver</li> <li>- Voltmeter</li> <li>- Voltage generator</li> <li>- JST HX3 Connector</li> </ul>		0:15	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>o Using PoolCOP MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump.</li> </ul>		
3	<ul style="list-style-type: none"> <li>o Open the cover using clips.</li> </ul> 		
4	<ul style="list-style-type: none"> <li>o Using the screwdriver, remove the electronics black cover.</li> </ul> 		Screwdriver
5	<ul style="list-style-type: none"> <li>o Unplug the pH/ORP sensor from the PCB Connection Data SE.</li> </ul> 		

6	CHECK		
7	<ul style="list-style-type: none"> <li>Short cut pin 1 and pin3 of the pH Board connector.</li> </ul> 		
8	<ul style="list-style-type: none"> <li>Using PoolCOP MENU&gt;MAINTENANCE&gt;MEASURE PH, ask for pH reading.</li> <li>If the pH is unstable, follow "Replacing PCB Connection SE Data PCB005 Board" Service Procedure and stop this procedure.</li> <li>If the <b>reading is not pH=7</b>, use the mini VR1 potmeter on the board to adjust reading at pH7.0.</li> </ul> 	SVDU_10_EN	
9	<p style="text-align: center;"><b>CAUTION:</b> Do not exceed +/-500mV when generating signal to the pH input. The electronic Board could be damaged.</p>		
10	<ul style="list-style-type: none"> <li>Connect the voltage generator between pin 1 and pin 3 of the connector.</li> <li>Pin 1 is the negative input (reference)</li> <li>Pin 3 is the positive input</li> <li>In order to facilitate the test, you can use a JST HX3 connector to wire the voltage generator in.</li> </ul>		Voltage generator
11	<ul style="list-style-type: none"> <li>Generate <b>-177mV</b> (negative value) on the input.</li> <li>Using PoolCOP MENU&gt;MAINTENANCE, ask for pH reading.</li> <li>If the pH is unstable or <b>above pH4.5</b>, follow "Replacing connection PCB Connection SE Data PCB005 Board" Service Procedure and stop this procedure.</li> </ul>	SVDU_10_EN	Voltage generator
12	<ul style="list-style-type: none"> <li>Generate <b>+177mV</b> (positive value) to the sensor.</li> <li>Using PoolCOP MENU&gt;MAINTENANCE, ask for pH reading.</li> <li>If the pH is unstable or <b>below pH9.0</b>, follow "Replacing connection PCB Connection SE Data PCB005 Board" Service Procedure and stop this procedure.</li> </ul>	SVDU_10_EN	
13	REASSEMBLE		
14	<ul style="list-style-type: none"> <li>pH input circuitry is calibrated and correct.</li> <li>Plug back pH/ORP sensor.</li> <li>Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
15	<ul style="list-style-type: none"> <li>Close the cover back.</li> </ul>		
16	<ul style="list-style-type: none"> <li>Enter and leave PoolCOP MENU&gt;TIMER FILTRATION.</li> <li>Pump and auxiliaries will return to their desired status.</li> </ul>		

End of Service Procedure


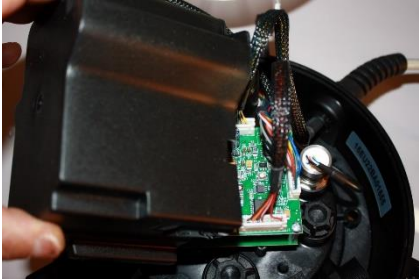
### 6.9 SVDU\_09\_EN: Checking ORP Reading Circuitry


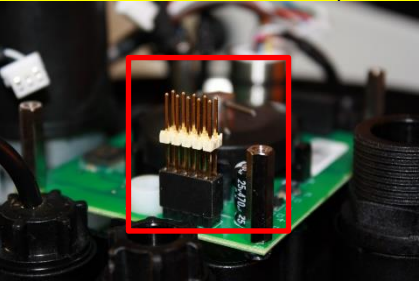
Servicing the Valve Data Unit		Support : L4	
This Service Procedure details steps to check ORP reading circuitry.		Procedure	<b>SVDU_09_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
<ul style="list-style-type: none"> <li>- Screwdriver</li> <li>- Voltmeter</li> <li>- Voltage generator</li> <li>- JST HX3 Connector</li> </ul>		0:15	
Parts required		QTY	Codes
-		-	-
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>o Using PoolCop MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump.</li> </ul>		
3	<ul style="list-style-type: none"> <li>o Open the cover using clips.</li> </ul> 		
4	<ul style="list-style-type: none"> <li>o Using the screwdriver, remove the electronics black cover.</li> </ul> 		Screwdriver
5	<ul style="list-style-type: none"> <li>o Unplug the pH/ORP sensor from the connection PCB.</li> </ul> 		

6	CHECK		
7	<ul style="list-style-type: none"> <li>Short cut pin 1 and pin 2 of the pH Board connector.</li> </ul> 		
8	<ul style="list-style-type: none"> <li>Switch PoolCOP in SERVICE MODE by pressing UP and DOWN arrows simultaneously.</li> <li>Use UP arrow to move to the screen where ORP value is displayed.</li> <li>Should the ORP be unstable, or far from zero, follow "Replacing connection PCB Connection SE Data PCB005 Board" Service Procedure and stop this procedure.</li> </ul>	SVDU_10_EN	
9	<p style="text-align: center;"><b>CAUTION:</b> Do not exceed +1500mV when generating signal to the pH input. The electronic Board could be damaged.</p>		
10	<ul style="list-style-type: none"> <li>Connect the voltage generator between pin 1 and pin 2 of the connector1</li> <li>Pin 1 is the negative input (reference)</li> <li>Pin 2 is the positive input</li> <li>In order to facilitate the test, you can use a JST HX3 connector to wire the voltage generator in.</li> </ul>		Voltage generator
11	<ul style="list-style-type: none"> <li>Generate 800mV (positive value) on the input.</li> <li>ORP should rise to 800mV.</li> <li>If ORP is unstable, follow "Replacing connection PCB Connection SE Data PCB005 Board" Service Procedure and stop this procedure.</li> <li>If the ORP is less than 790mV or over 810mV, use the mini VR2 potmeter to calibrate at 800mV +/-5mV.</li> </ul> 	SVDU_10_EN	Voltage generator

12	REASSEMBLE		
13	<ul style="list-style-type: none"><li>○ ORP reading is calibrated and correct.</li><li>○ Plug back pH/ORP sensor.</li><li>○ Put the electronics black cover back in place and secure it with the 2 screws.</li></ul>		Screwdriver
14	<ul style="list-style-type: none"><li>○ Close the cover back.</li></ul>		
15	<ul style="list-style-type: none"><li>○ Press simultaneously UP and DOWN arrows to leave SERVICE MODE.</li></ul>		
16	<ul style="list-style-type: none"><li>○ Enter and leave PoolCop MENU&gt;TIMER FILTRATION.</li><li>○ Pump and auxiliaries will return to their desired status.</li></ul>		
End of Service Procedure			


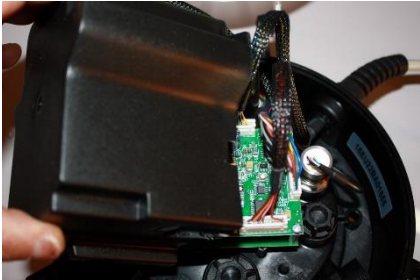
## 6.10 SVDU\_10\_EN: Replacing PCB Connection SE Data PCB005 Board

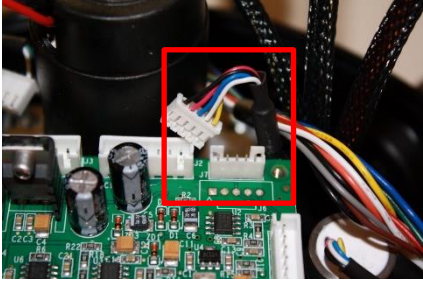
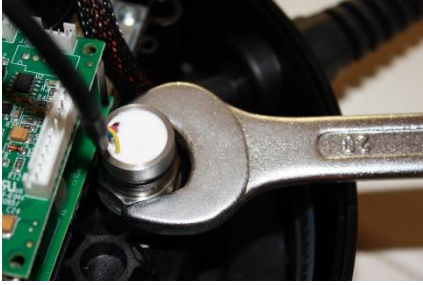
Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the PCB Connection SE Data. This Board is the upper Board in the mezzanine arrangement of boards under the black cover.		Procedure	<b>SVDU_10_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver - 5mm spanner		0:10	
Parts required		QTY	Codes
- Kit PCB Connection SE Data		- 1	- CF1218
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow "Shut down the Unit" Service Procedure.</li> </ul>	SCCU_01_EN	
3	<ul style="list-style-type: none"> <li>Open the cover using clips.</li> </ul> 		
4	<ul style="list-style-type: none"> <li>Using the screwdriver, remove the electronics black cover.</li> </ul> 		Screwdriver
5	<ul style="list-style-type: none"> <li>Unplug the VDU Datalink Cable.</li> <li>Unplug the Connection Cable.</li> <li>Unplug the motor cable.</li> <li>Unplug the pH/ORP sensor.</li> <li>Unplug the temperature sensor</li> <li>Unplug the pressure sensor.</li> </ul>		
6	<ul style="list-style-type: none"> <li>Using the screwdriver, remove the 4 screws on each angle of the board.</li> </ul>		Screwdriver

7	<ul style="list-style-type: none"> <li>Gently pull the PCB up, until its extraction from the board on the underneath level.</li> </ul> 		
8	<ul style="list-style-type: none"> <li>REASSEMBLE</li> </ul>		
9	<p style="text-align: center;"><b>CAUTION:</b> Make sure of the correct orientation. Make sure the bus connector is present:</p> 		
10	<ul style="list-style-type: none"> <li>Put the new PCB Connection SE Data PCB005 Board in place.</li> </ul>		CF1218
11	<ul style="list-style-type: none"> <li>Using the screwdriver, gently tighten the 4 screws on each angle.</li> </ul>		Screwdriver
12	<ul style="list-style-type: none"> <li>Plug back the cables and sensors.</li> <li>All connectors are different, there is risk of mixing.</li> </ul>		
13	<ul style="list-style-type: none"> <li>Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
14	<ul style="list-style-type: none"> <li>Close the cover back.</li> </ul>		
15	<ul style="list-style-type: none"> <li>Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
End of Service Procedure			


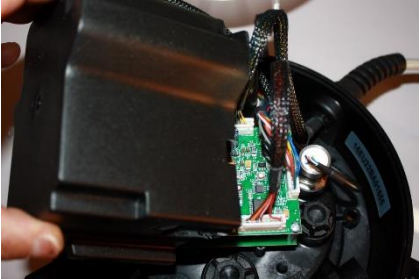
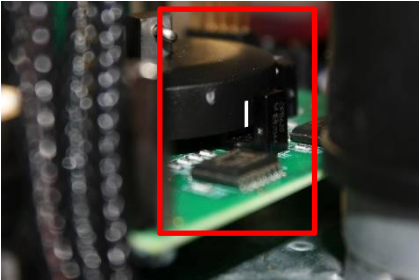


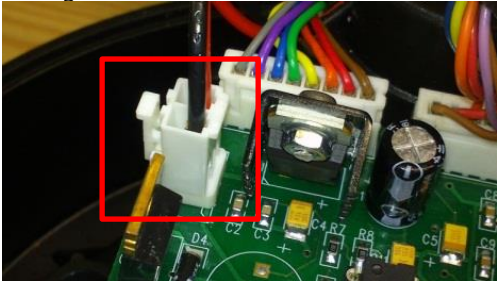
### 6.11 SVDU\_11\_EN: Replacing Pressure Sensor

Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the pressure sensor.		Procedure	<b>SVDU_11_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver - 20mm spanner		0:10	
Parts required	QTY	Codes	
- Kit Sensor Pressure 0.2m Cable	- 1	- CF1224	
Steps	Cross Ref.	Tool, Part	
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>○ Using PoolCOP MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump. Make sure there is no risk of water overflow when pump is stopped, close the adequate valves if needed.</li> <li>○ Using PoolCOP MENU&gt;MANUAL CONTROL&gt;AUXILIARIES, stop all running auxiliaries, if any.</li> </ul>		
3	<ul style="list-style-type: none"> <li>○ Disconnect power to pump and auxiliaries and make sure no external electrical sources may energize them.</li> </ul>		
4	<ul style="list-style-type: none"> <li>○ Using PoolCOP MENU&gt;MANUAL CONTROL&gt;ROTATE_VALVE, turn the valve to CLOSE position.</li> <li>○ Loosen the valve sight glass and make sure all the water inside the valve housing is drained.</li> </ul>		
5	<ul style="list-style-type: none"> <li>○ Follow "Shut Down the CCU" Service Procedure</li> </ul>		
6	<ul style="list-style-type: none"> <li>○ Open the cover using clips.</li> </ul> 		
7	<ul style="list-style-type: none"> <li>○ Using the screwdriver, remove the black electronics cover.</li> </ul> 		Screwdriver

8	<ul style="list-style-type: none"> <li>○ Unplug pressure sensor connector.</li> </ul> 		
9	<ul style="list-style-type: none"> <li>○ Loosen the sensor with 20mm spanner.</li> </ul> 		20mm spanner
10	REASSEMBLE		
11	<ul style="list-style-type: none"> <li>○ Check presence of O-Ring.</li> <li>○ Place the new sensor.</li> <li>○ Secure it gently with 20mm spanner.</li> </ul>		CF1224
12	<ul style="list-style-type: none"> <li>○ Plug back the sensor onto the board.</li> </ul>		
13	<ul style="list-style-type: none"> <li>○ Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
14	<ul style="list-style-type: none"> <li>○ Close the cover back.</li> </ul>		
15	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
16	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCOP MENU&gt;TIMER FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> </ul>		
17	<ul style="list-style-type: none"> <li>○ Check for the pressure reading.</li> <li>○ Adjust pressure settings in pump parameters and cleaning filter parameters if needed.</li> </ul>		
End of Service Procedure			



## 6.12 SVDU\_15\_EN: Checking Valve Position and Positioning Disk


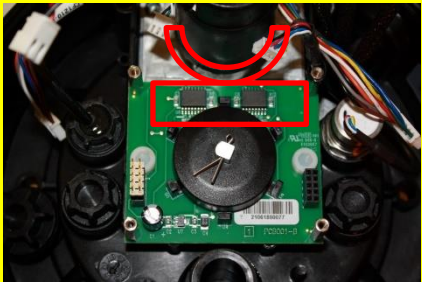
Servicing the Valve Data Unit		Support : L4	
This Service Procedure details steps to check valve position and positioning disk. Valve position is ensured by a positioning disk and opto-electronics forks on PCB Pickup PCB001. The positioning disk cut the forks signal with 2 consecutives slits. Position is determined using the second slit.		Procedure	<b>SVDU_15_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- screwdriver		0:40	
Parts required	QTY	Codes	
-			
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>On the LCD screen, check valve position.</li> </ul>		
3	<ul style="list-style-type: none"> <li>Open the cover using clips.</li> </ul> 		
4	<ul style="list-style-type: none"> <li>Using the screwdriver, remove the black electronics cover.</li> </ul>  <ul style="list-style-type: none"> <li>Positioning disk is located on top the bottom PCB Pickup PCB001 Board in the mezzanine arrangement.</li> </ul>		Screwdriver
5	<ul style="list-style-type: none"> <li>If valve is reported in FILTER position, looking at the disk form the rear side, one slit should be visible after the optoelectronic fork and the second slit should be in the middle of the fork (clockwise).</li> </ul> 		

6	<ul style="list-style-type: none"> <li>○ If PHYSICALLY, the valve is leaking because not REALLY in filter position, but slits are as described above, then the main base is not properly oriented on the valve housing. Check for Valve Data Unit orientation in installation manual.</li> </ul>	Installer and user Manual, section « Installation guide »	
7	CHECK		
8	<ul style="list-style-type: none"> <li>○ Using PoolCop MENU&gt;MANUAL_CONTROL&gt;VALVE_ROTATION, ask for any position different from current position.</li> <li>○ You should hear the motor running.</li> <li>○ If motor is not running, first check that there is no ALERT on the LCD screen as valve rotation may be inhibited by high pressure or other conditions. Solve this ALERT first.</li> </ul>		
9	<ul style="list-style-type: none"> <li>○ If motor is not running, first try to replace the control PCB. Follow "Replacing PCB Connection SE Data PCB005" Service Procedure.</li> <li>○ Repeat step 7 to CHECK.</li> </ul>	SVDU_10_EN	
10	<ul style="list-style-type: none"> <li>○ If PCB replacement does not solve the issue, then proceed to gear motor replacement; follow "Replacing Motor Unit" Service Procedure.</li> <li>○ Repeat step 7 to CHECK.</li> </ul>	SVDU_17_EN	
11	<ul style="list-style-type: none"> <li>○ Motor is running but the positioning disk is not moving. The gear motor is damaged. Follow "Replacing Motor Unit" Service Procedure.</li> <li>○ Repeat step 7 to CHECK.</li> </ul>	SVDU_17_EN	
12	<ul style="list-style-type: none"> <li>○ Motor is running but positioning disk is turning <b>Anti-Clockwise</b>, so motor is turning in the wrong direction.</li> <li>○ Check motor connector on PCB Connection SE Data PCB005 Board.</li> <li>○ The lock leg should be <b>turned to the outside</b> of the Board.</li> </ul>  <ul style="list-style-type: none"> <li>○ Plug the motor connector respecting the correct orientation.</li> <li>○ Repeat step 7 to CHECK.</li> </ul>		
13	<ul style="list-style-type: none"> <li>○ When the positioning disk is rotating, check for any damage or slit obstruction.</li> <li>○ If disk is damaged or dirty, follow "Replacing PCB Pickup PCB001 Board/positioning disk" Service Procedure.</li> </ul>	SVDU_16_EN	
14	REASSEMBLE		
15	<ul style="list-style-type: none"> <li>○ Put back the black electronics cover and secure it with 2 screws.</li> </ul>		Screwdriver
16	<ul style="list-style-type: none"> <li>○ Close the cover back.</li> </ul>		
17	<ul style="list-style-type: none"> <li>○ Enter and leave PoolCop MENU&gt;TIMER FILTRATION.</li> <li>○ Pump and auxiliaries will return to their desired status.</li> <li>○ Valve will rotate to FILTER position prior to start the pump.</li> </ul>		

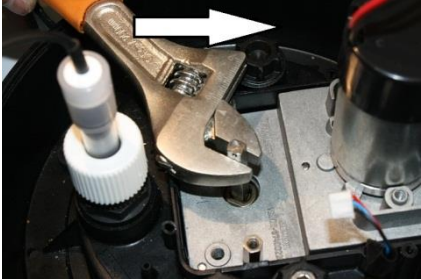

End of Service Procedure

### 6.13 SVDU\_16\_EN: Replacing PCB Pickup PCB001 Board/Positioning Disk


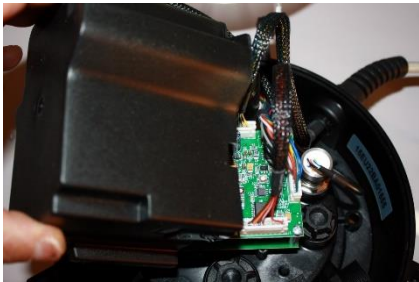
Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the PCB Pickup PCB001 board. This Board is the lower one in the mezzanine arrangement of Boards under the black cover.		Procedure	<b>SVDU_16_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
<ul style="list-style-type: none"> <li>- 5mm spanner</li> <li>- 5mm Allen key</li> <li>- pliers</li> <li>- screwdriver</li> </ul>		0:20	
Parts required	QTY	Codes	
<ul style="list-style-type: none"> <li>- Kit PCB Pickup</li> <li>- Positioning Disk Black</li> </ul>	<ul style="list-style-type: none"> <li>- 1</li> <li>- 1</li> </ul>	<ul style="list-style-type: none"> <li>- CF1215</li> <li>- CF1210.16</li> </ul>	
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>o Follow DISASSEMBLE part of "Replacing PCB Connection SE Data PCB005" Service Procedure.</li> </ul>	SVDU_10_EN	
3	<p align="center"><b>CAUTION:</b></p> <p>If the Valve Data Unit is <b>not mounted</b> on a multiport valve, you may need assistance from another people when releasing the Clip. At this time, the rotating part spring may unbend brutally.</p>		
4	<ul style="list-style-type: none"> <li>o Pull the cotter pin retaining the rotating disk on the shaft.</li> <li>o Remove the positioning disk.</li> </ul> 		pliers
5	<ul style="list-style-type: none"> <li>o Loosen the 2 screws on each side of the PCB001 Board with 5mm Allen key.</li> <li>o Be careful to not lose plastics spacers.</li> </ul> 		5mm Allen key

6	REASSEMBLE		
7	<ul style="list-style-type: none"> <li>○ The PCB Pickup is provided with 2 type of spacers.</li> <li>○ If spacer end is male, change to female with provided spare spacers.</li> <li>○ Make sure the top end of the spacer is female:</li> </ul> 		Screwdriver 5mm spanner
8	<ul style="list-style-type: none"> <li>○ Put the new PCB Pickup Board in place.</li> </ul>		CF1215
9	<p style="text-align: center;"><b>CAUTION:</b> Make sure to respect the correct orientation as shown on the picture.</p> 		
10	<ul style="list-style-type: none"> <li>○ Tighten the 2 screws on each side of the PCB001.</li> <li>○ Be sure to not omit plastics spacers.</li> </ul>		5mm Allen key
11	<ul style="list-style-type: none"> <li>○ Put the positioning disk back in place and fit the cotter pin into the shaft.</li> <li>○ Ask for help if Valve Data Unit is not on a multiport valve as the spring must be compressed.</li> <li>○ Secure the cotter pin by bending both ends.</li> </ul>		Plier
12	<ul style="list-style-type: none"> <li>○ Follow RESASSEMBLE part of "Replacing PCB Connection SE Data PCB005" Service Procedure.</li> </ul>	SVDU__10_EN	
End of Service Procedure			

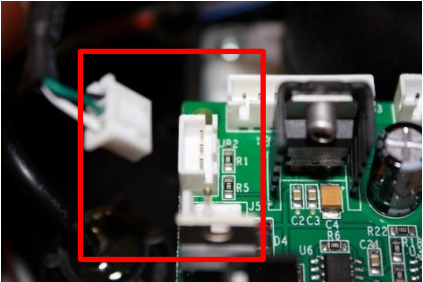

### 6.14 SVDU\_17\_EN: Replacing Motor Unit

Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the gear motor unit. This valve actuator is located in the base of Valve Data Unit, and it is also use to fix the 2 mezzanine PCB.		Procedure	<b>SVDU_17_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
<ul style="list-style-type: none"> <li>- 5mm Allen key</li> <li>- screwdriver</li> <li>- wrench</li> </ul>		0:30	
Parts required	QTY	Codes	
- Motor Unit	- 1	- CF1210.03	
Steps	Cross Ref.	Tool, Part	
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>o Follow DISASSEMBLE part of "Replacing the PCB Pickup PCB001 Board" Service Procedure.</li> </ul>	SVDU_16_EN	
3	<ul style="list-style-type: none"> <li>o The motor unit may be in stress with valve shaft and therefore be blocked. Use a wrench to slightly rotate the valve shaft clockwise. This will release the stress.</li> </ul> 		wrench
4	<ul style="list-style-type: none"> <li>o Lift out Motor Unit. This is one single piece and you can use the motor head as a way to pull the mechanism.</li> </ul>		
5	REASSEMBLE		
6	<ul style="list-style-type: none"> <li>o Put the new Motor Unit in place.</li> <li>o If valve shaft and motor slot are not align, just introduce valve shaft into Motor Unit slot and rotate manually the valve using the gearbox unit as lever arm.</li> </ul> 		CF1210.03
7	<ul style="list-style-type: none"> <li>o Follow REASSEMBLE part of "Replacing PCB Pickup PCB001" Service Procedure</li> </ul>	SVDU_16_EN	
End of Service Procedure			

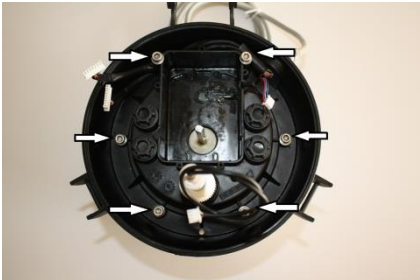
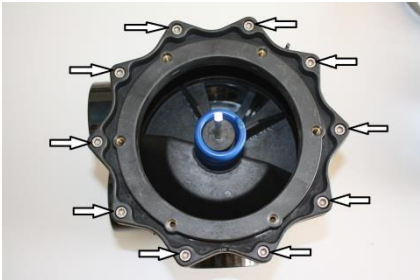
### 6.15 SVDU\_18\_EN: Replacing Water Temperature Sensor




Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the water temperature sensor.		Procedure	<b>SVDU_18_EN</b>
		Revision	<b>02</b>
Tools & consumables required:		Time:	
- screwdriver - wrench		0:10	
Parts required		QTY	Codes
- Kit Water Temperature Sensor		- 1	- CF1210.19
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>○ Using PoolCop MENU&gt;MANUAL CONTROL&gt;PUMP, stop the pump. Make sure there is no risk of water overflow when pump is stopped, close the adequate valves if needed.</li> <li>○ Using PoolCop MENU&gt;MANUAL CONTROL&gt;AUXILIARIES, stop all running auxiliaries, if any.</li> </ul>		
3	<ul style="list-style-type: none"> <li>○ Disconnect power to pump and auxiliaries and make sure no external electrical sources may energize them.</li> </ul>		
4	<ul style="list-style-type: none"> <li>○ Using PoolCop MENU&gt;MANUAL CONTROL&gt;ROTATE_VALVE, turn the valve to CLOSE position.</li> <li>○ Loosen the valve sight glass and make sure all the water inside the valve housing is drained.</li> </ul>		
5	<ul style="list-style-type: none"> <li>○ Follow "Shut Down the CCU" Service Procedure</li> </ul>		
6	<ul style="list-style-type: none"> <li>○ Open the cover using clips.</li> </ul> 		
7	<ul style="list-style-type: none"> <li>○ Using the screwdriver, remove the electronics cover.</li> </ul> 		Screwdriver



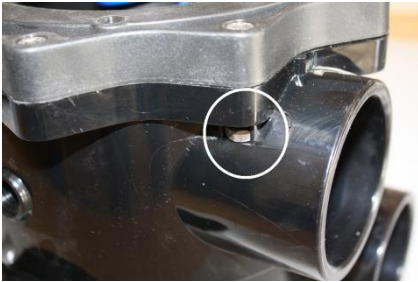




8	<ul style="list-style-type: none"> <li>○ The sensor is connected on the rear left side top board.</li> <li>○ Unplug the connector.</li> </ul> 		
9	<ul style="list-style-type: none"> <li>○ Loosen nut and remove the water temperature sensor.</li> </ul> 		Wrench
10	<p style="text-align: center;"><b>CAUTION:</b> Proceed progressively and continuously check there is no risk of water projection when loosen. If so, tighten the sensor immediately and check step 4.</p>		
11 REASSEMBLE			
12	<ul style="list-style-type: none"> <li>○ Check the presence of O-ring on new temperature sensor.</li> <li>○ Screw and tighten the temperature sensor in its housing.</li> </ul>		CF1210.19 Pliers
13	<ul style="list-style-type: none"> <li>○ Plug the sensor onto the electronic board.</li> </ul>		
14	<ul style="list-style-type: none"> <li>○ Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
15	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
16	<ul style="list-style-type: none"> <li>○ Using PoolCop MENU&gt;MANUAL CONTROL&gt;PUMP, start the pump.</li> <li>○ Check water temperature indication.</li> <li>○ Check tightness around the new sensor. Tighten the plug if needed.</li> </ul>		
17	<ul style="list-style-type: none"> <li>○ Close the cover back.</li> </ul>		
End of Service Procedure			

### 6.16 SVDU\_20\_EN: Checking/Replacing valve diffuser


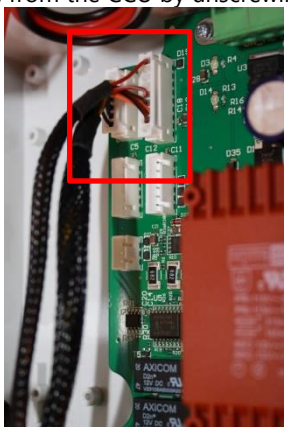
Servicing the Valve Data Unit		Support : L2	
This Service Procedure details steps to replace the valve rotating part. On "SG" type valve, wagon wheel gasket is glued in the rotating part. There is no way to replace the gasket alone, rotating part must be changed. The gasket needs annual servicing and regular replacement.		Procedure	<b>SVDU_20_EN</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- 10mm spanner - 5mm Allen key - Silicon grease		0:40	
Parts required	QTY	Codes	
- Kit Diffuser 1,5"	- 1	- PC1207	
or		or	
- Kit Diffuser 2,0"	- 1	- PC1208	
- O-Ring VDU Base	- 1	- JT001	
- O-Ring Adapter 2.0" (for PoolCOP 2.0" only)	- 1	- JT003	
Steps	Cross Ref.	Tool, Part	
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>Follow DISASSEMBLE part of "Replacing Motor Unit" Service Procedure.</li> </ul>	SVDU_17_EN	
3	<ul style="list-style-type: none"> <li>Loosen the 6 Allen bolts (or screws on 2.0" valve housing) of the PoolCOP main base and remove the main base.</li> <li>Be careful as the spring will unbend.</li> </ul> 		5mm Allen key 10 mm spanner
4	<ul style="list-style-type: none"> <li>For 2.0" valve, loosen the 10 bolts of the 2 inches adapter ring and remove the ring.</li> </ul> 		5mm Allen key 10 mm spanner


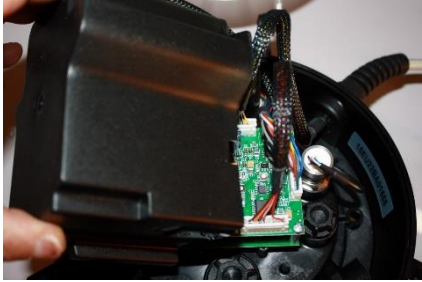
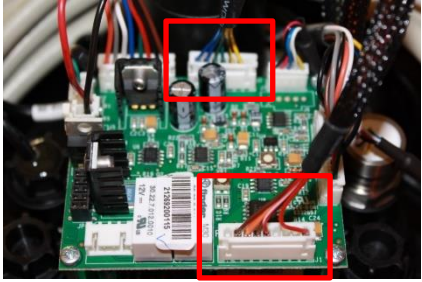
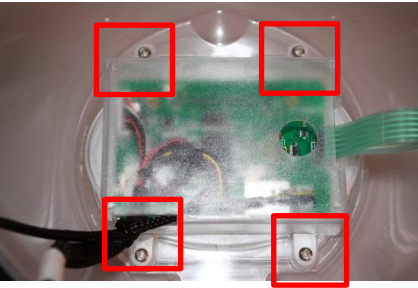
5	REPLACE		
6	<ul style="list-style-type: none"> <li>○ Inspect / Replace both shaft O-rings.</li> </ul>  <ul style="list-style-type: none"> <li>○ Before reassembling, use silicon grease on O-rings.</li> </ul>		PC1207 or PC1208 Silicon grease
7	<ul style="list-style-type: none"> <li>○ Inspect the wagon wheel gasket for any damage. Gasket can be worn, twisted, or ripped out.</li> </ul>  <ul style="list-style-type: none"> <li>○ In case of any doubt, proceed to replacement by changing the diffuser. At this stage there is no need to respect any orientation, but it will be easier further if the diffuser is close to the Filter position.</li> <li>○ Clean and grease the gasket seat in the valve housing with provided silicon grease.</li> <li>○ Grease the diffuser gasket with the provided silicon grease (grease is shown in blue in the following picture):</li> </ul>  <ul style="list-style-type: none"> <li>○ Add grease on the peripheral part of the diffuser (dotted line) so that to create an extra stock.</li> <li>○ Put the diffuser back into the valve housing.</li> <li>○ Put the spring back.</li> </ul>		PC1207 or PC11208

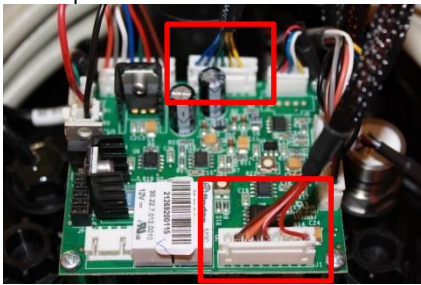
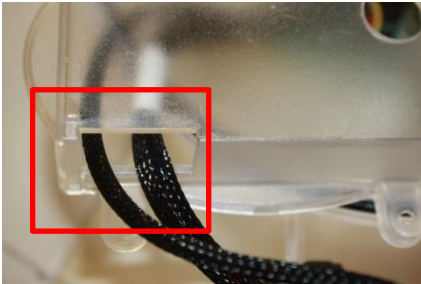
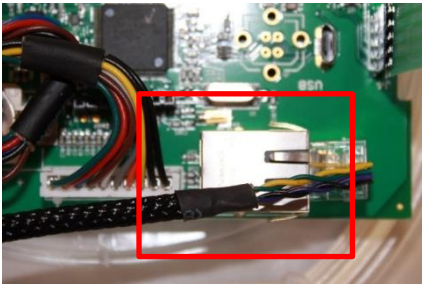
8	REASSEMBLE 2.0"		
9	<ul style="list-style-type: none"> <li>○ For 2.0" valve, check adapter O-ring. In case of any doubt proceed to replacement.</li> <li>○ Silicon grease will help to maintain the O-ring in to the groove during assembly.</li> <li>○ Fit the adapter ring on the top of the valve housing.</li> </ul> 		JT0003
10	<p style="text-align: center;"><b>CAUTION:</b></p> <p style="text-align: center;">Make sure to respect the correct orientation of adapter ring. The pin must be aligned with valve housing sight glass.</p> 		
11	<ul style="list-style-type: none"> <li>○ Make sure the captive nut close to the 'Pump In' entry is in place.</li> </ul>  <ul style="list-style-type: none"> <li>○ Tighten the 10 bolts.</li> </ul>		5mm Allen key 10 mm spanner

12	REASSEMBLE 1.5" and 2.0"		
13	<ul style="list-style-type: none"> <li>○ Check the Valve Data Unit O-Ring. In case of any doubt proceed to replacement.</li> </ul>  <ul style="list-style-type: none"> <li>○ Check that the 2 washers are in place and fit the PoolCop main base in place.</li> </ul>		JT001
14	<p style="text-align: center;"><b>CAUTION:</b></p> <p style="text-align: center;">Make sure to respect the correct orientation of main base. The Life Line cable entry must be aligned with valve housing sight glass.</p> 		
15	<ul style="list-style-type: none"> <li>○ Tighten the 6 Allen bolts (or screws on 2.0" valve housing).</li> <li>○ You will need to partially bend the spring by pressing the main base.</li> </ul>		5mm Allen key 10 mm spanner
16	<ul style="list-style-type: none"> <li>○ Follow REASSEMBLE part of "Replacing Motor Unit" Service Procedure.</li> </ul>	SVDU_17_EN	
17	<ul style="list-style-type: none"> <li>○ Check for any leak inside the PoolCop and to the waste line.</li> <li>○ In case of leak, repeat this Service Procedure and especially look for any damage on the gasket or valve housing.</li> </ul>		
End of Service Procedure			


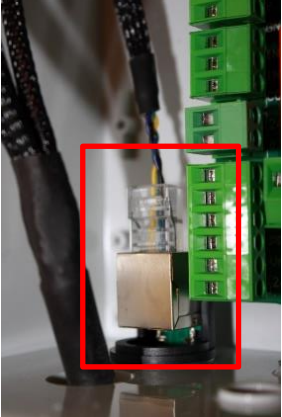
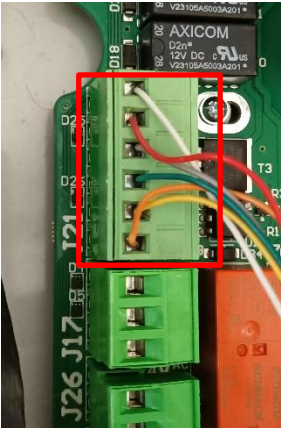
### 6.17 SVDU\_21\_EN: Firmware update from non-UF toUF

Servicing the Valve Data Unit		Support : L2	
This Service Procedure details the steps to migrate the firmware from a non-UF version to an UF version. This operation requires : <ul style="list-style-type: none"> <li>○ Replace the Micro PCB004 board</li> <li>○ Replace the Link Cable with the DataLink</li> <li>○ Remove the Web module.</li> </ul>		Procedure	<b>SVDU_21_E</b>
		Revision	<b>01</b>
Tools & consumables required:		Time:	
- Screwdriver		0:10	
Parts required		QTY	Codes
- Cable VDU Datalink UL		1	- CF1210.29
- Carte Micro PCB004 (version UF)		1	- CF1220.01
Steps		Cross Ref.	Tool, Part
1	DISASSEMBLE		
2	<ul style="list-style-type: none"> <li>○ Note all the parameter settings in the various menus. You will need these settings to restore the configuration.</li> <li>○ Note : if PoolCop is connected to the server, the settings can be restored from the website.</li> </ul>		
3	<ul style="list-style-type: none"> <li>○ Follow "Shut Down the CCU" Service Procedure</li> </ul>	SCCU_01_EN	
4	<ul style="list-style-type: none"> <li>○ Open the CCU face plate.</li> </ul> 		Screwdriver
5	<ul style="list-style-type: none"> <li>○ Unplug the cable from the PCB103 power supply board.</li> <li>○ Extract the cable from the CCU by unscrewing the cable gland.</li> </ul> 		

6	<ul style="list-style-type: none"> <li>○ Open the cover using clips.</li> </ul> 		
7	<ul style="list-style-type: none"> <li>○ Using the screwdriver, remove the electronics black cover.</li> </ul> 		Screwdriver
8	<ul style="list-style-type: none"> <li>○ Unplug the Link Cable from the upper board.</li> </ul> 		
9	<ul style="list-style-type: none"> <li>○ Remove Link Cable between VDU and DCU.</li> </ul>		
10	<ul style="list-style-type: none"> <li>○ Loosen the 4 screws retaining the microprocessor cover and remove this cover.</li> </ul>  <ul style="list-style-type: none"> <li>○ Unplug the two terminals of Connection Cable.</li> <li>○ Unplug keyboard ribbon cable.</li> </ul>		Screwdriver
11	<ul style="list-style-type: none"> <li>○ Remove the PCB004 Board.</li> </ul>		

12	REASSEMBLE		
13	<ul style="list-style-type: none"> <li>○ Insert the 'new' Data Link Cable in the VDU and tighten the compression gland.</li> </ul>		CF1210.29
14	<ul style="list-style-type: none"> <li>○ Plug the Data Link Cable onto the upper board.</li> <li>○ Make sure to respect size and orientation.</li> </ul> 		
15	<ul style="list-style-type: none"> <li>○ Put the electronics black cover back in place and secure it with the 2 screws.</li> </ul>		Screwdriver
16	<ul style="list-style-type: none"> <li>○ Route the Ethernet cable through the cover of PCB004.</li> </ul> 		
17	<ul style="list-style-type: none"> <li>○ Install the PCB Micro UF board in the cover so that the flat panel connection is on the right side.</li> <li>○ Plug back the keyboard ribbon.</li> <li>○ Plug back the 2 ends of the connection cable</li> </ul>		CF1220.01
18	<ul style="list-style-type: none"> <li>○ Plug the RJ15 end into its terminal.</li> </ul> 		
19	<ul style="list-style-type: none"> <li>○ Put the processor cover back in place and secure it with the 4 screws.</li> </ul>		Tournevis
20	<p align="center"><b>CAUTION:</b> Make sure the board is correctly place in its holder before tightening the screws.</p>		
21	<ul style="list-style-type: none"> <li>○ Close the cover back.</li> </ul>		
21	<ul style="list-style-type: none"> <li>○ Insert the Data Link Cable into the DCCU through the dedicated compression gland.</li> </ul>		



23	<ul style="list-style-type: none"> <li>○ Plug the Data Link Cable on the PCB103 board on J4 and J5.</li> </ul> 		
24	<ul style="list-style-type: none"> <li>○ If present, unplug the RJ45 coming from the Web Module from the pass-through compression gland.</li> </ul>		
25	<ul style="list-style-type: none"> <li>○ Plug the R45 end of Data Link Cable in pass through connector.</li> </ul> 		
26	<ul style="list-style-type: none"> <li>○ Unplug and remove the cable between J21 and Web module.</li> </ul> 		
27	<ul style="list-style-type: none"> <li>○ Remove the Web Module (if placed in the CCU).</li> </ul>		
28	<ul style="list-style-type: none"> <li>○ Follow "Powering up the Unit" Service Procedure.</li> </ul>	SCCU_02_EN	
29	<ul style="list-style-type: none"> <li>○ Restore parameters as they were before changing the firmware.</li> <li>○ This can be done via Web Site</li> </ul>		
30	<ul style="list-style-type: none"> <li>○ Proceed to pH calibration if pH control is installed. Follow "Calibrating/replacing pH/ORP sensor".</li> </ul>	SVDU_07_EN	

31	<p style="text-align: center;"><b>NOTE:</b></p> <p style="text-align: center;"><b>The PoolCOP's Mac Address is changed!!!</b></p> <p>Each PoolCOP is identified on the web server with its own MAC address; this address is specific to each PCB004 board.</p> <p>In order to avoid losing the historical data online, <b>do not create a new PoolCOP on the server!</b></p> <p>Use the MAC address that came with the new PCB004 board and contact PCFR Service who will do the reassignment for you.</p>		
End of Service Procedure			