



Shades Technics

1666RS Toilet Cubicle



Manual

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To Switch The Cubicle On:


Engage the WC Master switch on the dashboard. The cubicle interior lamp will turn on for 30 seconds and the vacant lamp will come on after 1 minute. The cubicle is now ready to use. *(It is recommended that the vehicle engine is running)*


Cubicle Interior Light:

On entry, the interior spot lamps will come on automatically and illuminate the "Occupied" lamp. The interior lamp is controlled by a movement sensor which will switch off the light automatically, shortly after the cubicle is vacated and illuminate the "Vacant" lamp.


To Flush The Toilet:


Push the flush button  once to flush the toilet with a set quantity of water. Should a further flush be required, wait for the flush cycle to complete then press the button again. NOTE: The toilet will flush automatically if the cubicle is vacated without flushing first.

(When the holding tank is full, the dashboard LED  will illuminate and the "Occupied" lamp will signal. The toilet is now out of use until the holding tank is emptied.

(When the clean water tank is empty the dashboard LED  will illuminate and the "Occupied" lamp will signal. The toilet is now out of use until the water tank is re-filled.)

To Wash Your Hands:

Depress the handwash button  once to dispense a set amount of water.

(When the handwash tank is empty the dashboard LED  will illuminate to alert the driver..)

In Case of Emergency:

Depressing the red alarm button will alert the driver and sound a buzzer.

Cubicle Extractor Fan:

The ventilator fan runs at full speed when the cubicle is occupied and half speed when vacant. It can be altered to run constantly.

Water Tank Filling & Emptying

The freshwater tank is filled via a hose connector located in the side locker. The drain tap for this tank is also here. The holding tank is emptied by firmly pulling the handle on the slide valve which is also located in the locker.

Cubicle Cleaning

The cubicle is manufactured from Glass Reinforced Plastic (GRP) with high gloss interior and lightly textured exterior surfaces. This surface finish is delicate and must only be washed down using a mild detergent. The use of a caustic or abrasive material is not recommended, as this will affect the appearance. We recommend an all-purpose cleaner such as **Multi purpose cleaner (Cat no: 800102)** available from Shades Technics.

Toilet Bowl Cleaning

We recommend that the toilet bowl and seat can be cleaned using an anti-bacterial detergent such as **Powerclens (Cat No: 800050)**. The splash shield is removable to allow for easy cleaning by removing the 3 securing screws. A bead of silicon should be re-applied once clean.

Litter Bin

The cubicle features an Aluminium bin located next to the sink. Removing this bin gives access to the electrical control board. The use of a bin liner is recommended.

Soap Dispenser

To fill the dispenser, unlock the mirror cabinet, lift the lid of the dispenser and fill with liquid soap.

Toilet Roll

In order to reduce the risk of blocking the system, It is recommended that a high biodegradable paper is used at all times. **(Cat no: 800103-320 sheet X 36)**.

Domestic grade toilet paper is not recommended as this can block the system.

The toilet roll is located on the bottom of the bin cover and a larger paper roll is located behind the upper vanity door.

Service Access

The freshwater tank is located behind the vanity in the saloon and access to the pumps is via a removable panel at the back of the toilet – aisle side.

The toilet bowl lifts out from inside the cubicle when the 4 screws are removed.

The PCB, Isonic valve and control relays are located behind a plastic panel behind the bin cover.

Daily Routine

- Prior to the vehicle entering service the holding tank should be charged with an additive to sanitise the effluent.
- The recommended product is **Shades Super Sani ECO, (No.800025)** formulated from natural essential oils, this formaldehyde-free formula is contained within a water soluble membrane. A single 16 gram sachet contains the recommended dosage for 110 litre capacity holding tank and will function for a maximum of three days.
To apply:
 1. Ensure the holding tank is empty.
 2. Check the tank evacuation valve is closed
 3. Check the WC clean water tank is full.
 4. Switch on power to the cubicle (see page 3)
 5. Press the flush button to open the toilet valve and drop the complete sachet into the bowl.

Caution
Do not open the sachet .

- It is recommended that the WC supply tank is drained and the holding tank is emptied at the end of every day.
- The daily addition of a couple of drops of mild detergent into water resting in the toilet bowl will lubricate the slider and protect the seal.
- The hand wash tank should be emptied and re-filled daily. To help maintain a clean tank and freshwater the use of a sanitiser is recommended. Shades can supply a suitable product that disinfects the water, that is safe to drink and non-irritable to the skin and eyes. **Cat No. 800060**

Weekly Routine

- Check extractor fan function.
- Inspect the security of the faucet, door hinges and toilet seat. Check the operation of the cubicle door and lock function. Test alarm button and buzzer function.
- Open vanity door, check electrical and plumbing connections for security and leaks.
- Check water flow to the hand basin is smooth and constant.
- Connect a high pressure hose to the soil tank cleaner nozzle and leave it running for 2 minutes with the evacuation valve to the soil tank open.

Quartely Routine

- Flush out holding tank with clean water. (the holding tank must be empty and the vehicle positioned so that the holding tank evacuation valve is over a sewage drainage point)
To flush out:
 1. Switch on the cubicle.
 2. Connect a hosepipe to a mains water supply.
 3. Depress the flush button once to open the slide valve.
 4. When the valve opens, insert the end of the hose pipe down through the bowl, into the soil pipe. When the valve closes the hose will be held into position by the paddle pressure.
 5. Turn on the water to the hose pipe and fill the holding tank, being careful not to overfill.
 6. Switch off the water to the hose and open the evacuation valve to empty the tank.
 7. Press the flush button to open the valve and remove the hosepipe.
- Lubricate holding tank evacuation valve. (to be carried out immediately after flushing through the holding tank).
Undo the four fixing bolts holding the soil valve assembly together and remove the main body section. Lubricate the slide paddle using lithium grease or similar so the open/close operation is smooth. Replace the valve body and bolt together. Do not over tighten as this will restrict the operation of the valve.
- Disinfect the hand wash tanks and flush through with clean water.

If the vehicle is to be parked in zero or sub-zero temperatures, it is imperative that all water containers are completely drain beforehand. The hand wash supply can be switched off and an additive added to the flush tank to prevent freezing.

Note

No warranty claims will be accepted on any winter damaged parts.

Jump Starting

When jump starting the vehicle, please ensure that the dashboard master Switch, **WC**, is off!

Fault Reporting Procedure

1. In the unlikely event of a fault occurring an emergency parts kit has been supplied along with the enclosed comprehensive fault analysis flow chart
2. Using these charts, determine the cause of the fault and replace the faulty item from the kit if possible.
3. To order a replacement kit or non-kit part contact the dealer as specified on the contents page (Page 2) of this manual, quoting the cubicle serial number.
4. In order for replacement goods to be dispatched a simple warranty procedure must be followed.

Notes:

- **Tampering, unauthorised involvement or preventable damage will result in a charge being levied**

Warranty Claim Procedure

Shades Technics offer a comprehensive warranty cover for all products, valid for 24 months from the vehicle's date in service.

Contact the dealer or supplier from where the vehicle was purchased.

The dealer/supplier will then contact Shades Technics who will fax a warranty claim form to the customer.

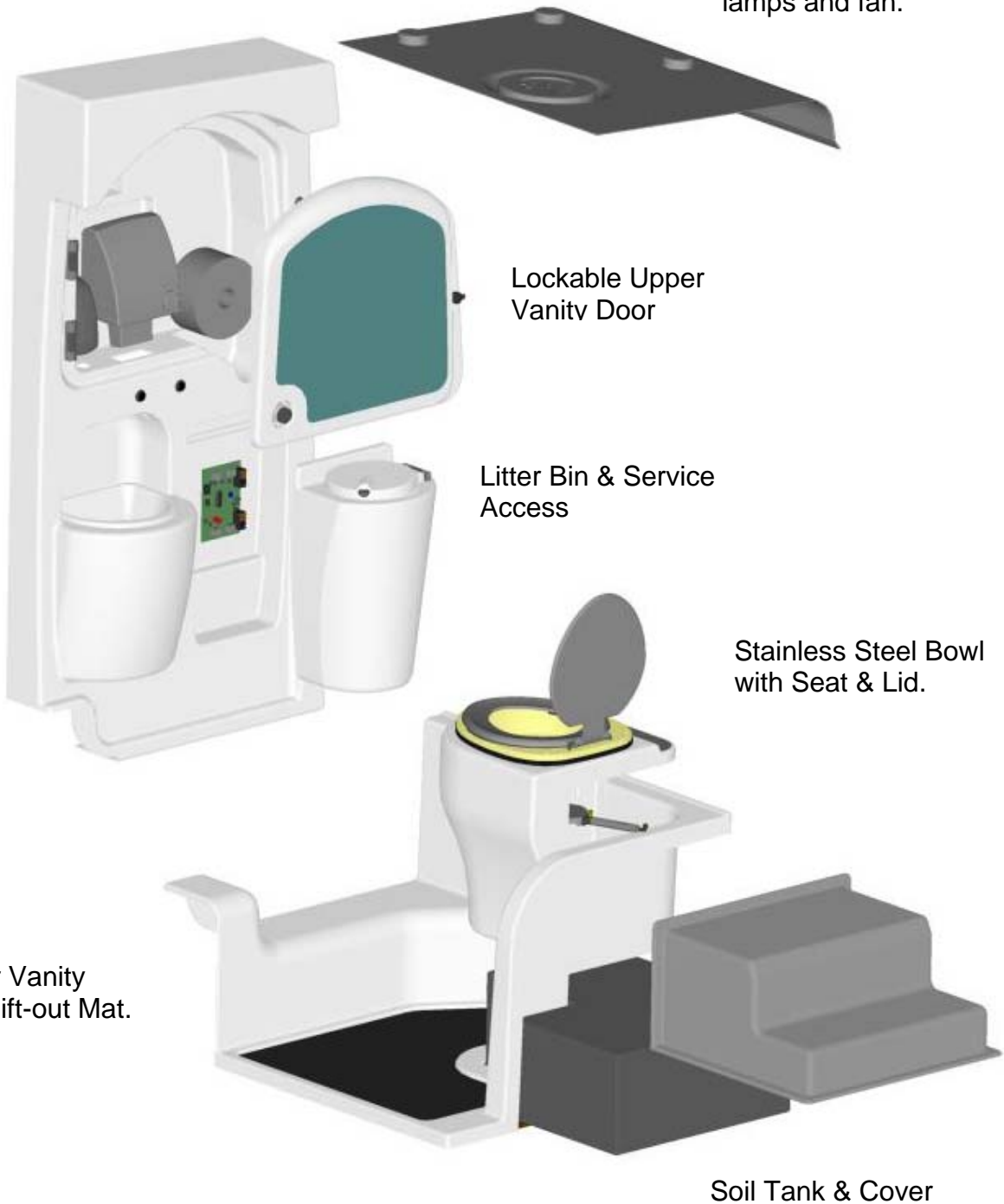
Complete the warranty claim form, ensuring all details are filled in and fax back to Shades Technics on +44 (0)1992 501669

Shades Technics will dispatch any parts required or organise rectification via one of the service points listed at the back of this parts & service manual

Please return any fault parts which have been replaced under warranty within 14 days or a charge may be levied

Wall Vanity Assembly.

Ceiling panel with spot lamps and fan.

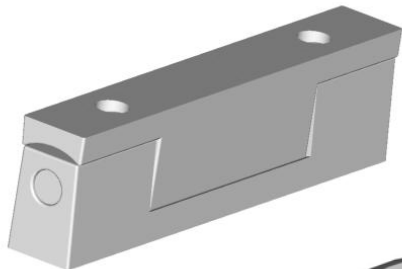




Hand wash Button
Cat No: 714007



Alarm Button
Cat No: 714030



Edgemount Hinge
Cat No: 661410



Sink Drain
Cat No: 701552



Hand Dryer
Cat No: 661800



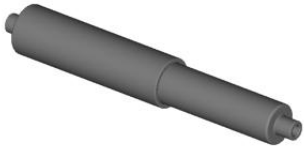
Soap Dispenser
Cat No: 661660



Ali Litter Bin
Cat No: 661018



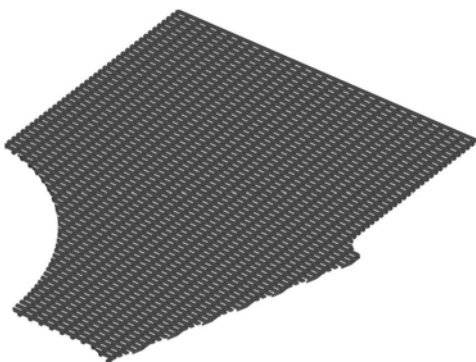
Plunger
Cat No: 714014



Toilet Roll Spindle
Cat No: 661618



Soap Ring
Cat No: 661216



Floor Mat
Cat No: 661486



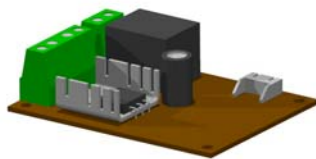
Floor Drain
Cat No: 701551



Ventilator Fan
Cat No: 727502



210mm Grab Handle
Cat No: 661166



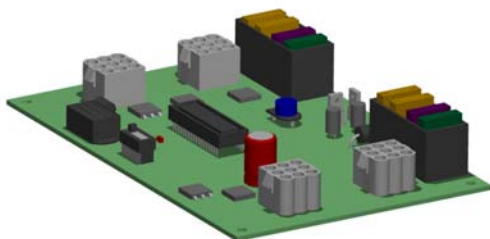
PIR Sensor
Cat No: 712030



Smoke Alarm
Cat No: 661120

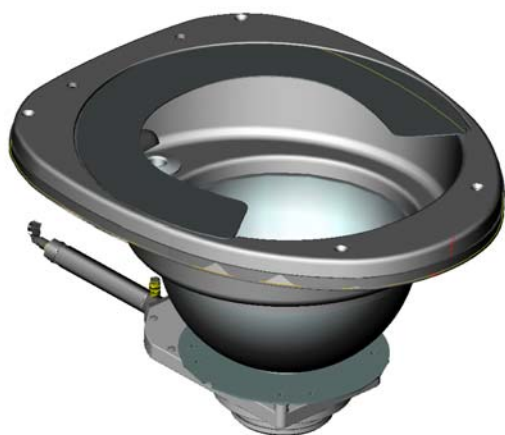


Master Key Lock
Cat No: 661217



SS PCB with Microchip
Cat No: 730616

Cubicle Bowl Spares

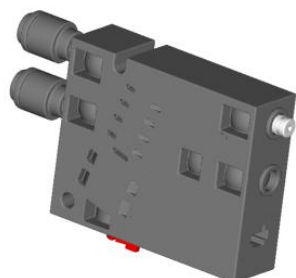


GRP Bowl (no seat)
Cat No: 688311



Toilet Seat
Cat No:735101

Toilet Seat Hinges
Cat No:735102



Isonic Valve
Cat No: 735714



Piston and Slide Valve Assembly
Cat No: 735713

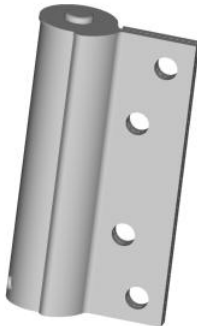
Cubicle Door Spares



Coat Hook
Cat No. 661030



Door Lock for RH Cubicle
Cat No: 661206



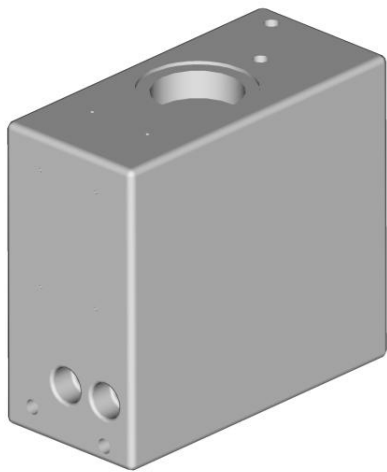
Door Hinges
Cat No. 661400



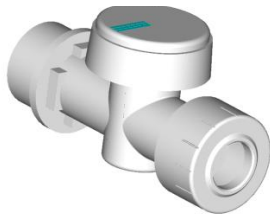
Cubicle Door Assy
Cat No.661900



Fan Cover
Cat No.661477



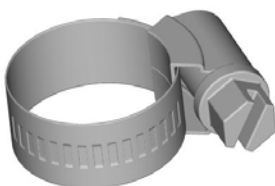
Hand Wash Tank with
Hatch Cover – 50ltr
Cat No. 733038



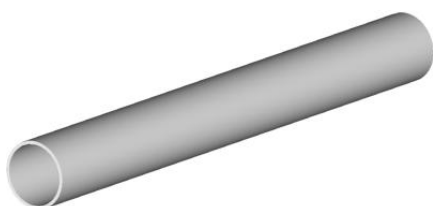
Shut off Tap
Cat No: 747037



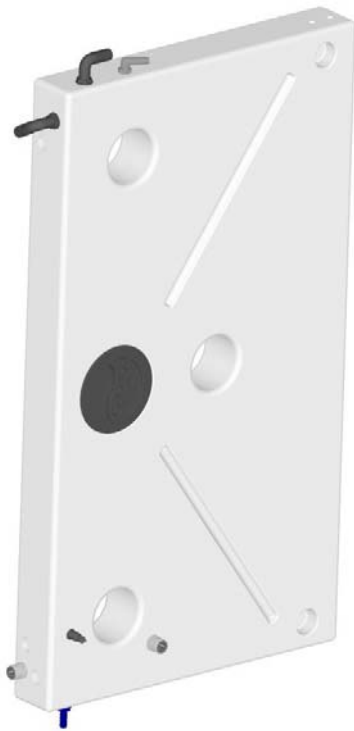
1/2" Potable Hose
Cat No: 744030



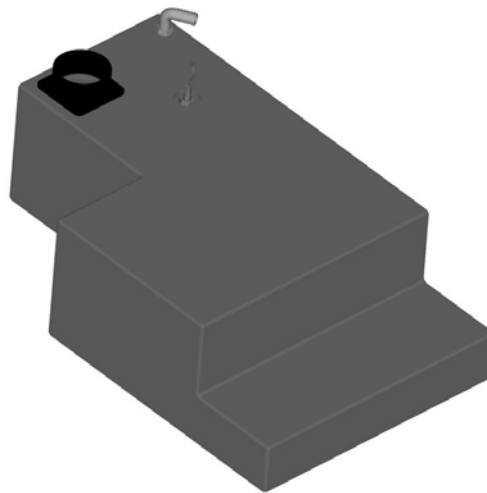
12-22 Hose Clip
Cat No: 744041



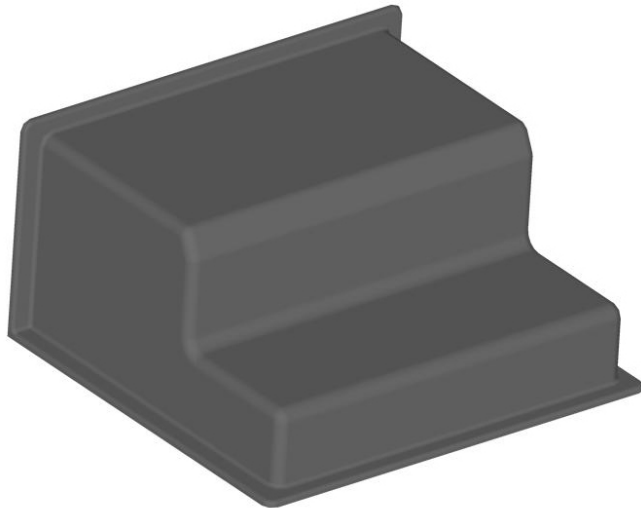
21.5mm Rigid Pipe
Cat No: 747055



WC Freshwater Tank – 70ltr
Cat No: 733038 (Bare)



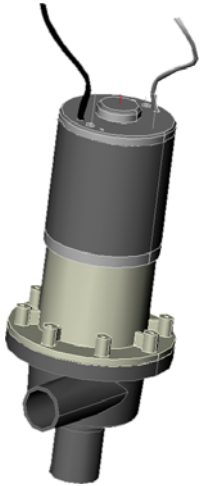
Soil Tank
Cat No: 731048 (Bare)



Soil Tank Cover
Cat No: 731049



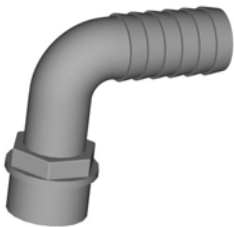
Solenoid Valve LP
Hose – Hose Cat No: 714620



Flush Pump
Cat No: 702180



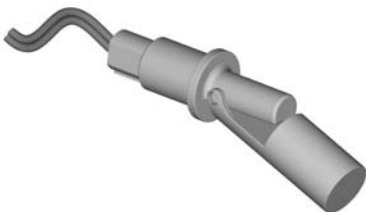
Handwash Pump
Cat No: 702110



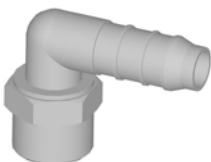
$\frac{3}{4}$ " Swivel Hose Connector
Cat No: 744120



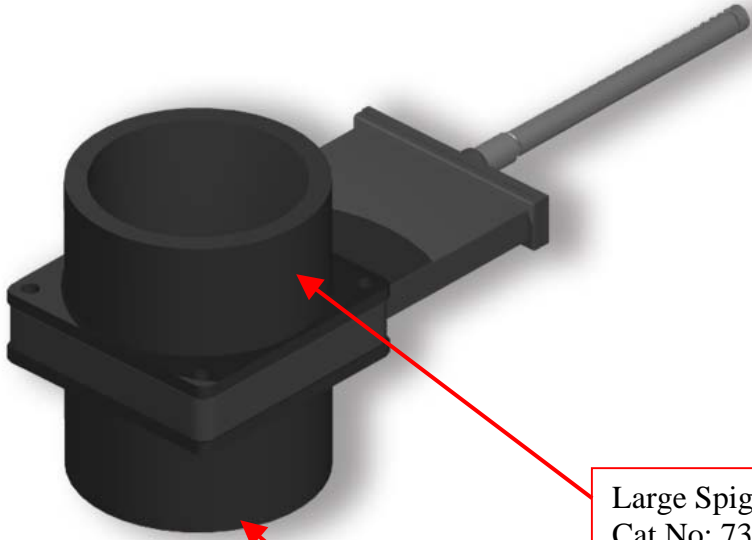
$\frac{1}{2}$ " BSP Coupler
Cat No: 747028



Horizontal Float Switch
Cat No: 714510



Elbow $\frac{3}{4}$ " x $\frac{3}{4}$ " Tank Fitting
Cat No: 744003



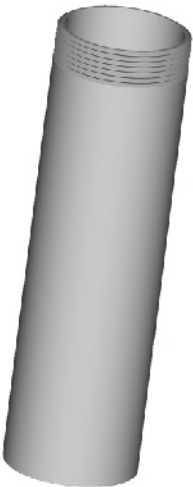
Large Spigot (Cut to 15mm)
Cat No: 735754

Gate Valve Assy
Cat No: 735709

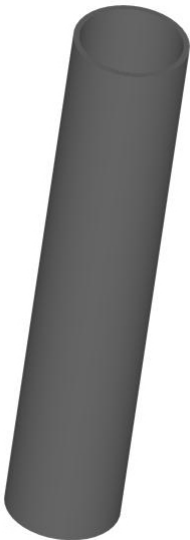


Large Spigot (Cut to 25mm)
Cat No: 735755

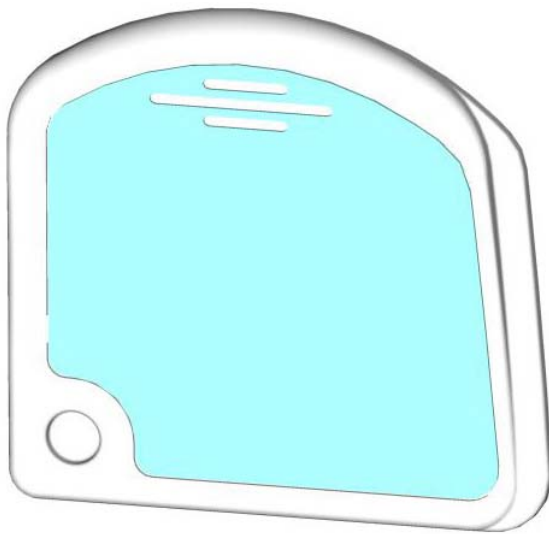
Soil Pipe Elbow
Cat No. 735699



Threaded Soil Pipe
Cat No. 735702



1M Soil Pipe
Cat No. 735704



Mirror
Cat No: 661825

Upper Vanity Door
Cat No: 688817



Bin Lid
Cat No: 688413



Bin Cover
Cat No: 688412



No Standing
Cat No:735560



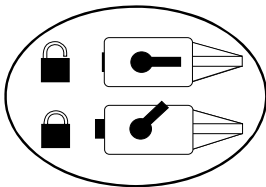
Emergency Alarm
Cat No:735566



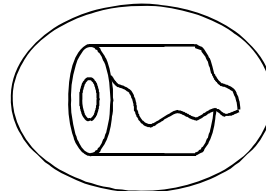
No Smoking
Cat No:735563



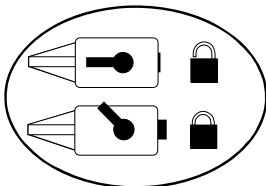
Shades Technics
Cat No:735568



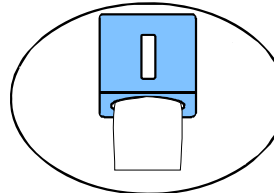
Door Lock LH
Cat No:735571



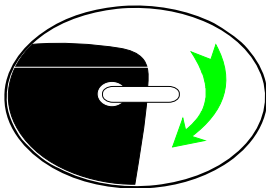
Toilet Roll
Cat No:735569



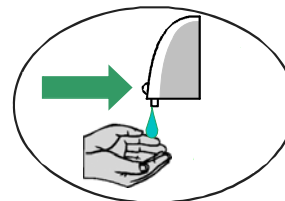
Door Lock RH
Cat No:735564



Hand Towel Dispenser
Cat No: 735573



Flush
Cat No:735562



Soap Dispenser
Cat No: 735572

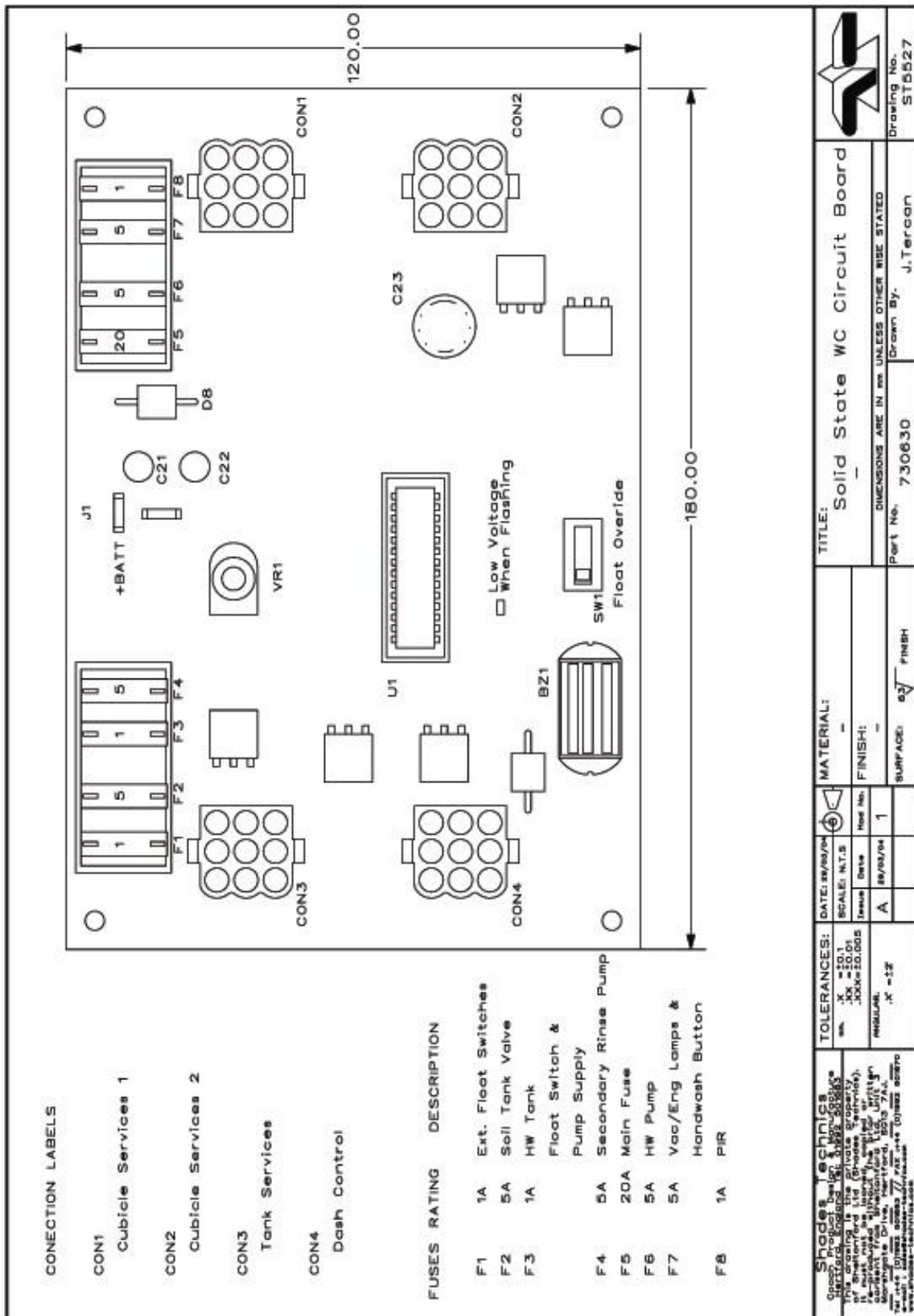


Hand wash
Cat No:735561



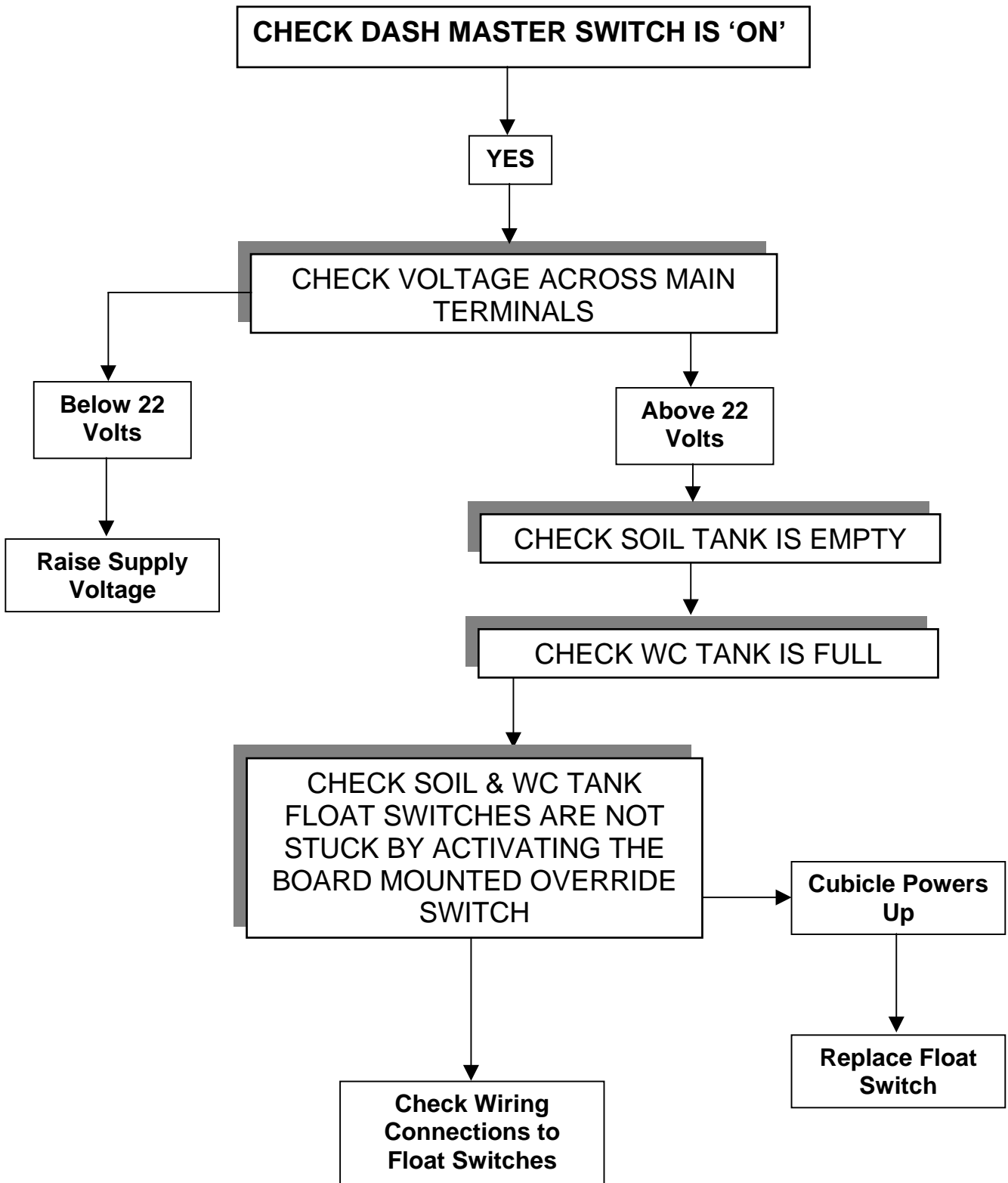
Litter Bin
Cat No:735567

Full Set Of Labels
Cat No: 735570
Please specify **LEFT** or **RIGHT** hand cubicle when placing order for labels

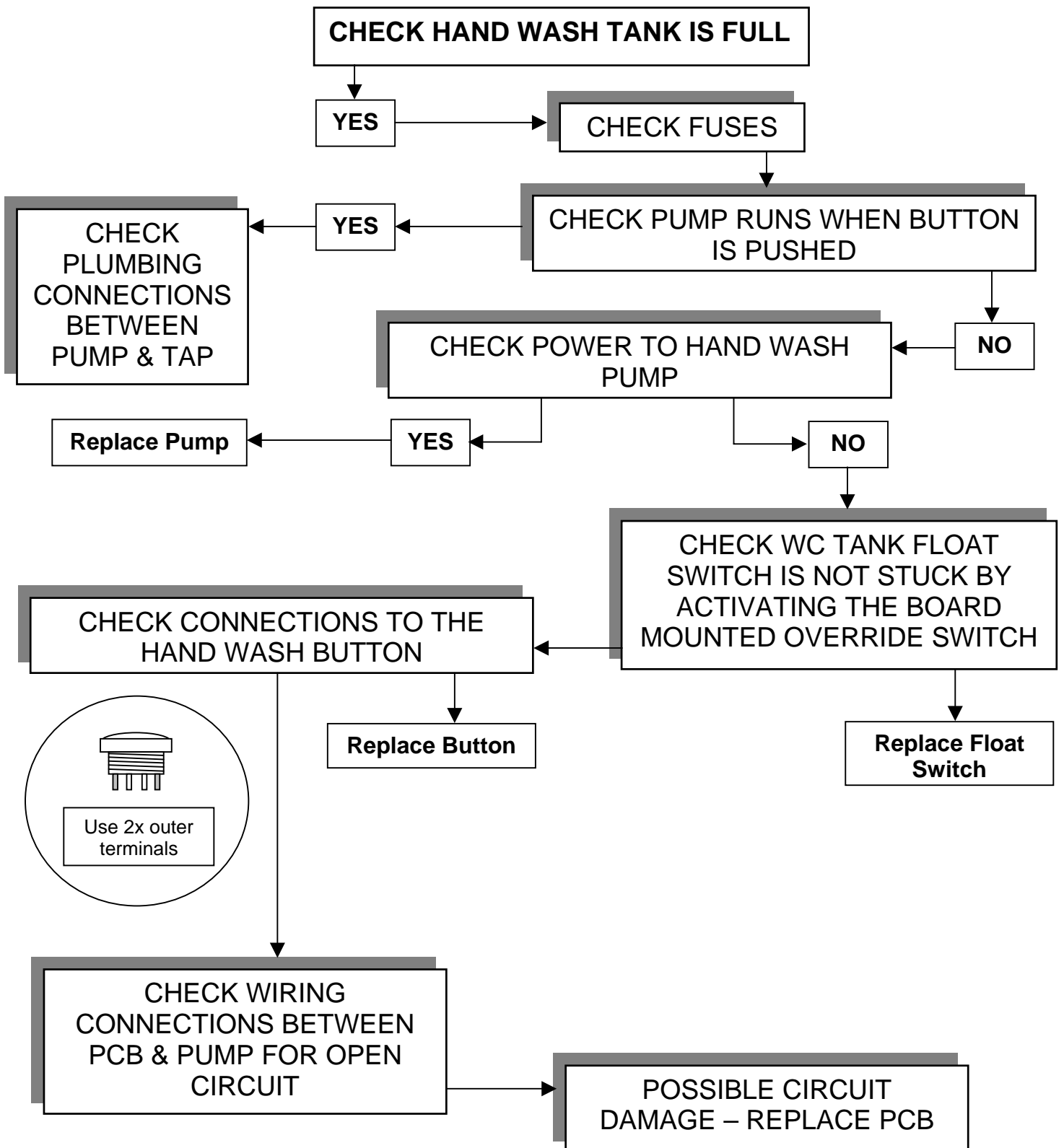


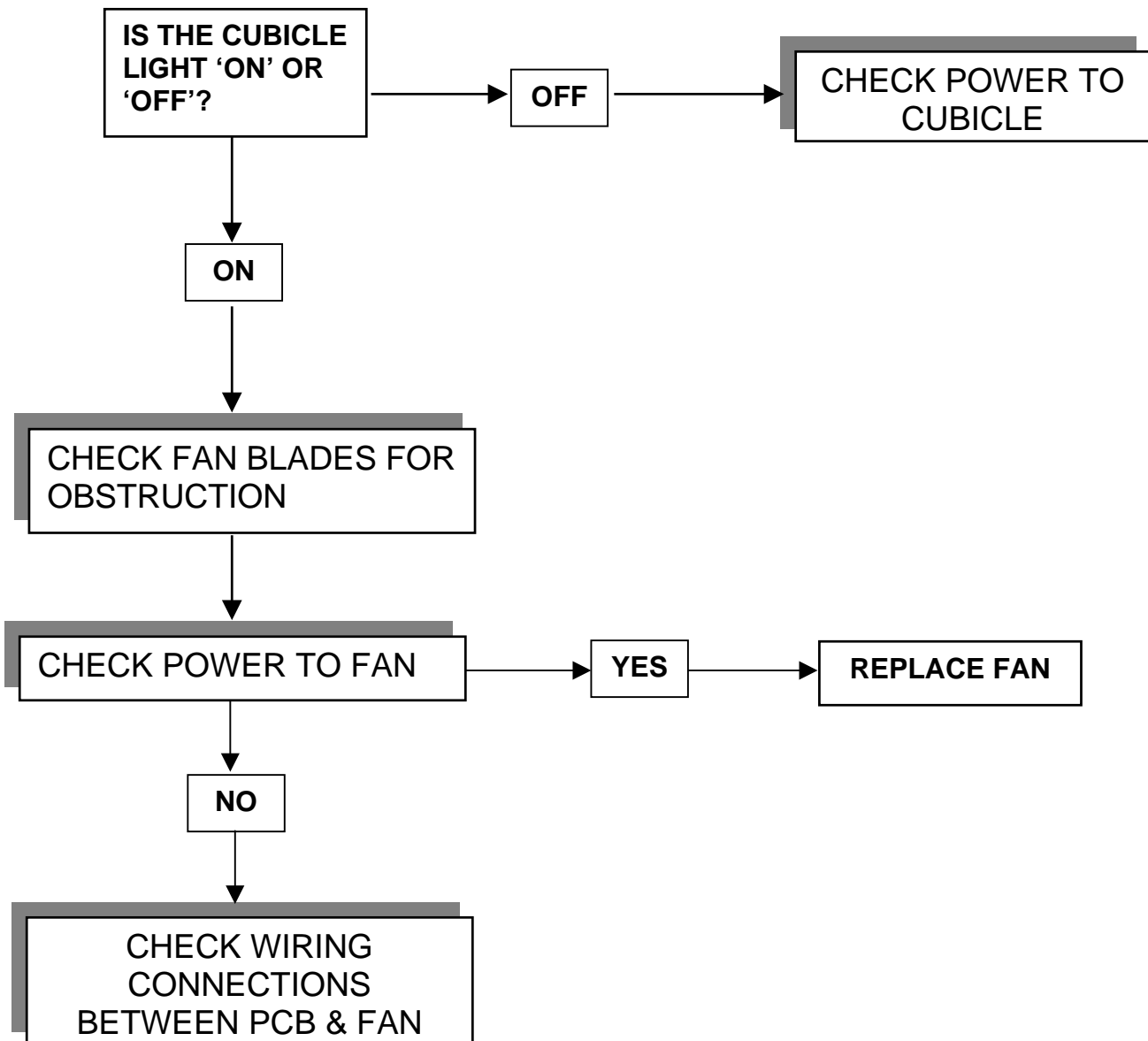
TOILET

- Toilet Fails To Power Up
- No Water From Hand Wash Faucet
- Extractor Fan Not Functioning
- Hydro-Jet Not Working – No Water or Pneumatic Valve
- Hydro-Jet Pneumatic Valve Opens – No Water
- Hydro-Jet Water Flows – Pneumatic Valves Does Not Open
- Poor Water Flow Around Bowl
- Interior Lamp Stays On Too Long/Not Long Enough
- Aircalor Hand – Drier Not Functioning
- Vacant/Engaged Lamp Fails
- Interior Lamp Fails
- Alarm Button/Buzzer Not Functioning
- Bad Toilet Odour

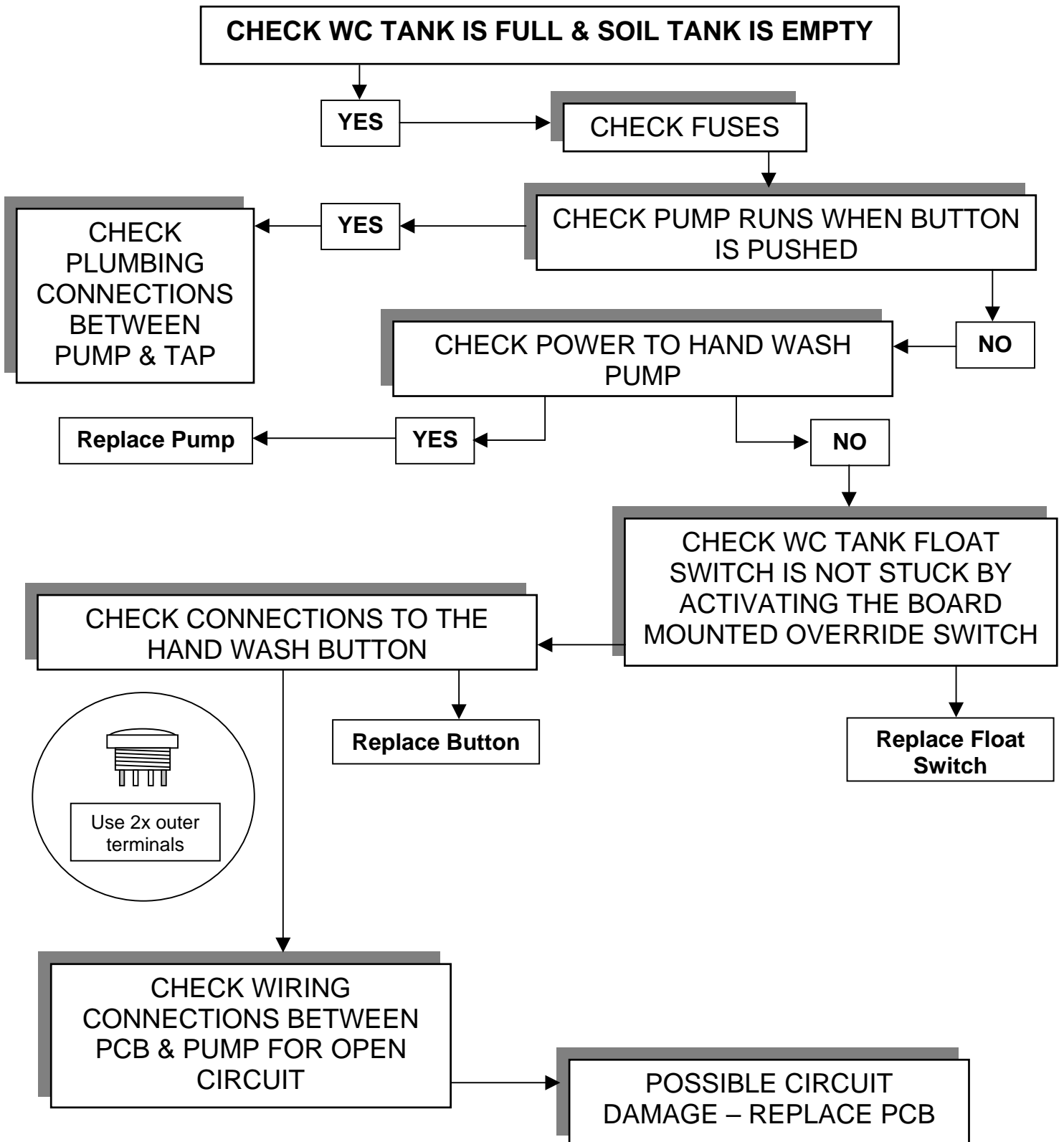


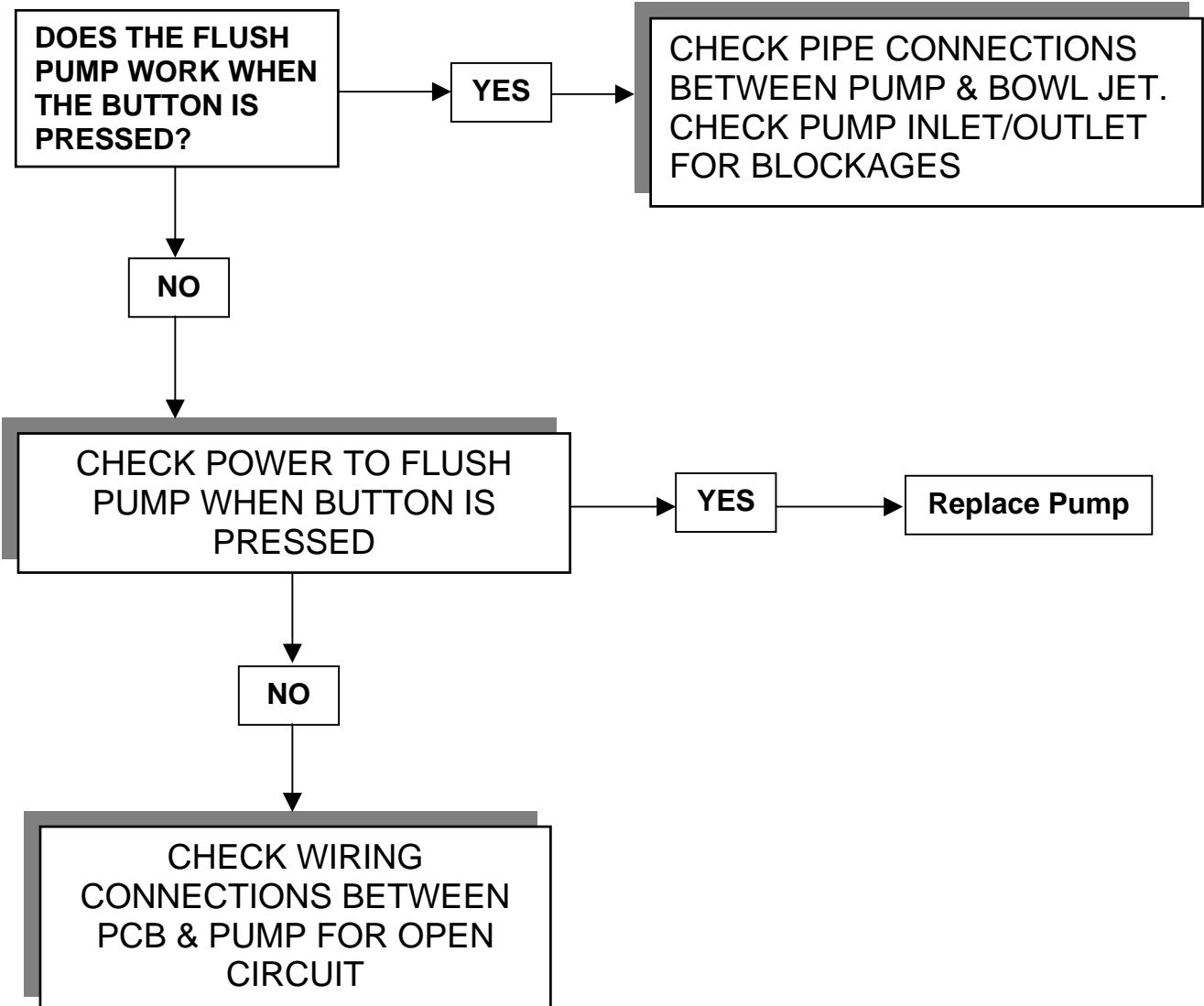
No Water From Hand Wash Faucet



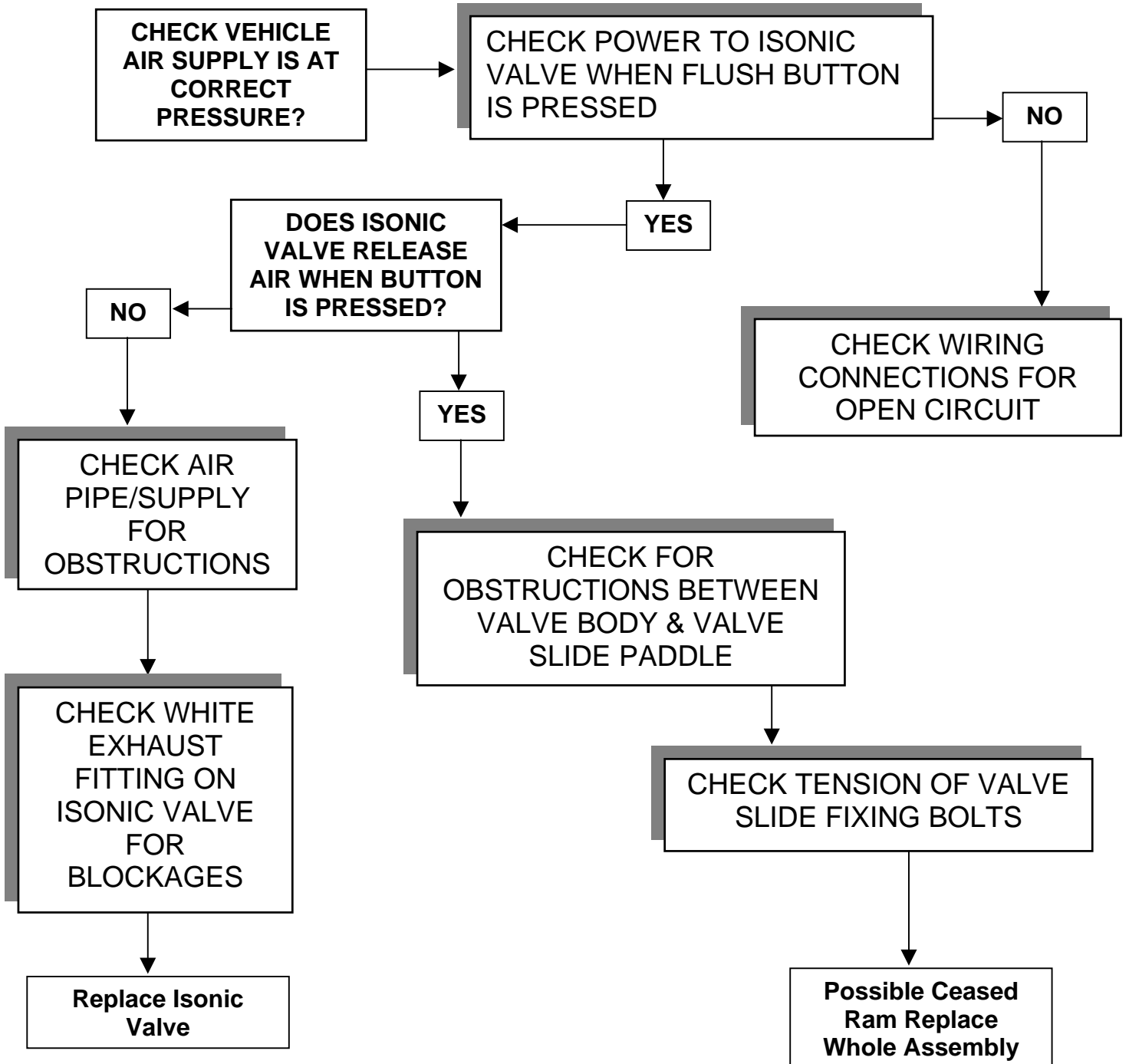


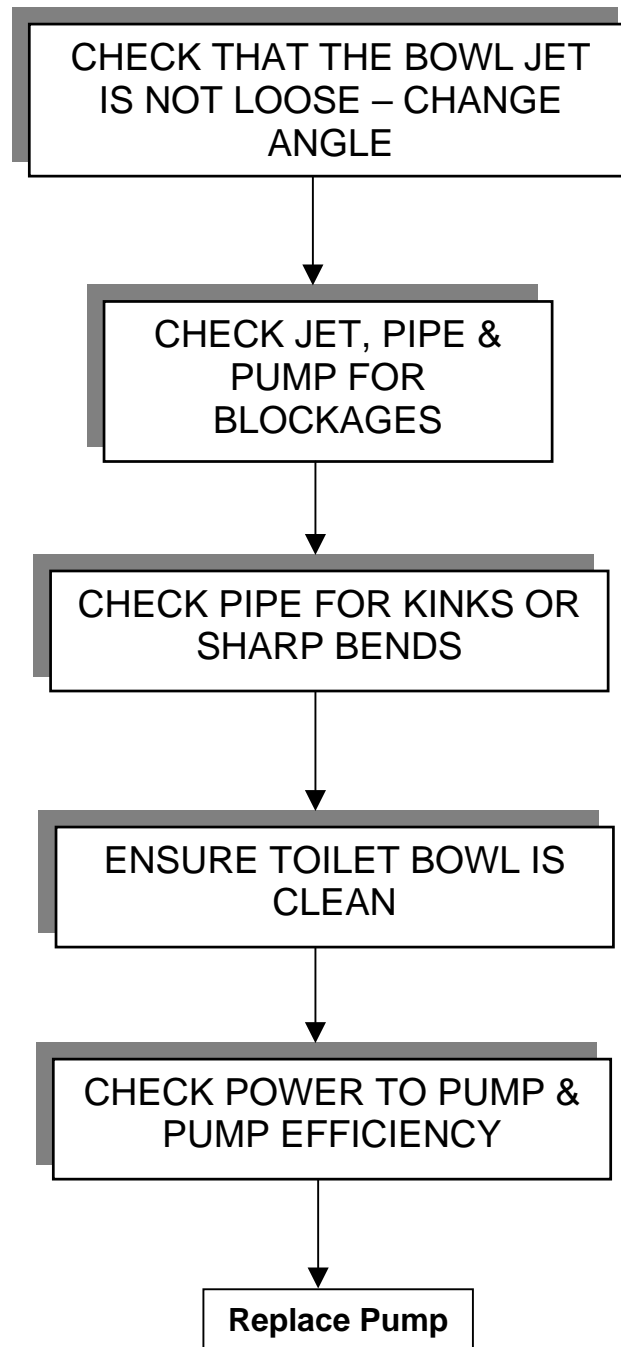
Hydro-Jet Not Working – No Water or Pneumatic Valve





Hydro-Jet Water Flows – Pneumatic Valve Does Not Open





Interior Lamp Stays On Too Long/Not Long Enough

THE INTERIOR LAMP SENSOR DETECTS BOTH HEAT & MOVEMENT. IT IS PRE-SET TO TURN OFF THE INTERIOR LAMPS 30 SECONDS FROM ITS LAST DETECTION

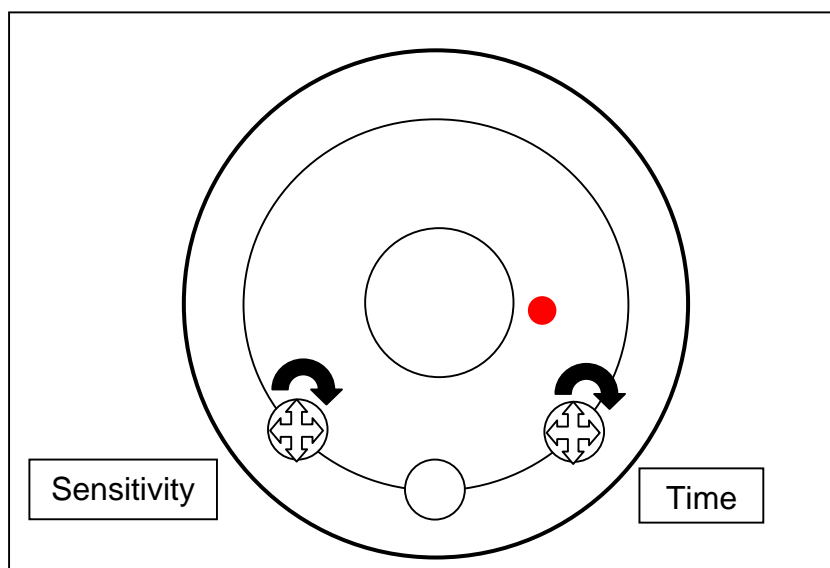
TO EXTEND THE TIME

**TURN RIGHT ADJUSTER
CLOCKWISE**

TO REDUCE THE TIME

**TURN RIGHT ADJUSTER
ANTI-CLOCKWISE**

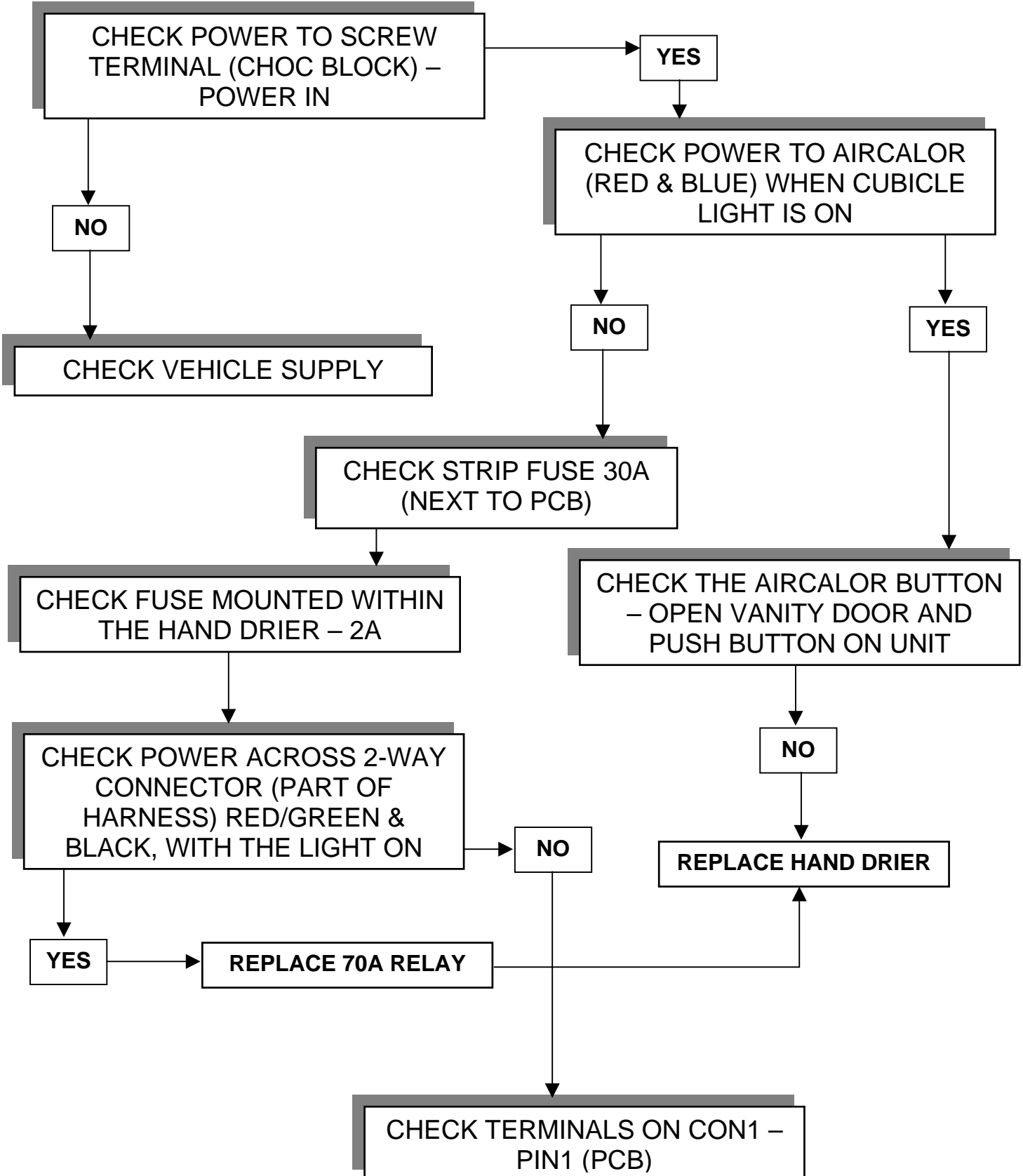
**IF ADJUSTMENT DOES
NOT ALTER THE TIME –
REPLACE PIR PCB &
SENSOR**

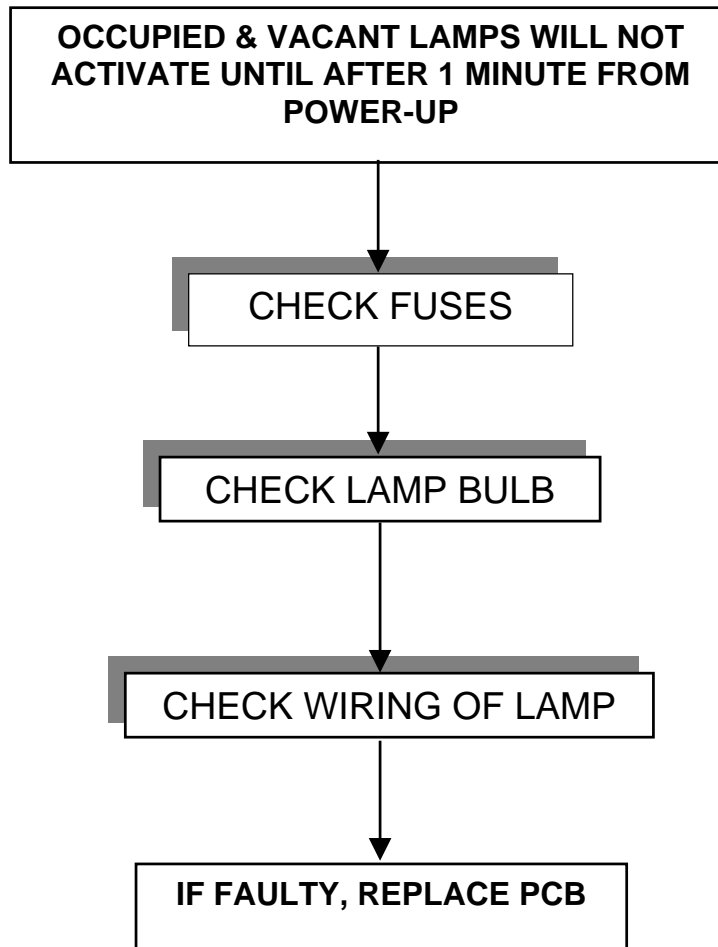


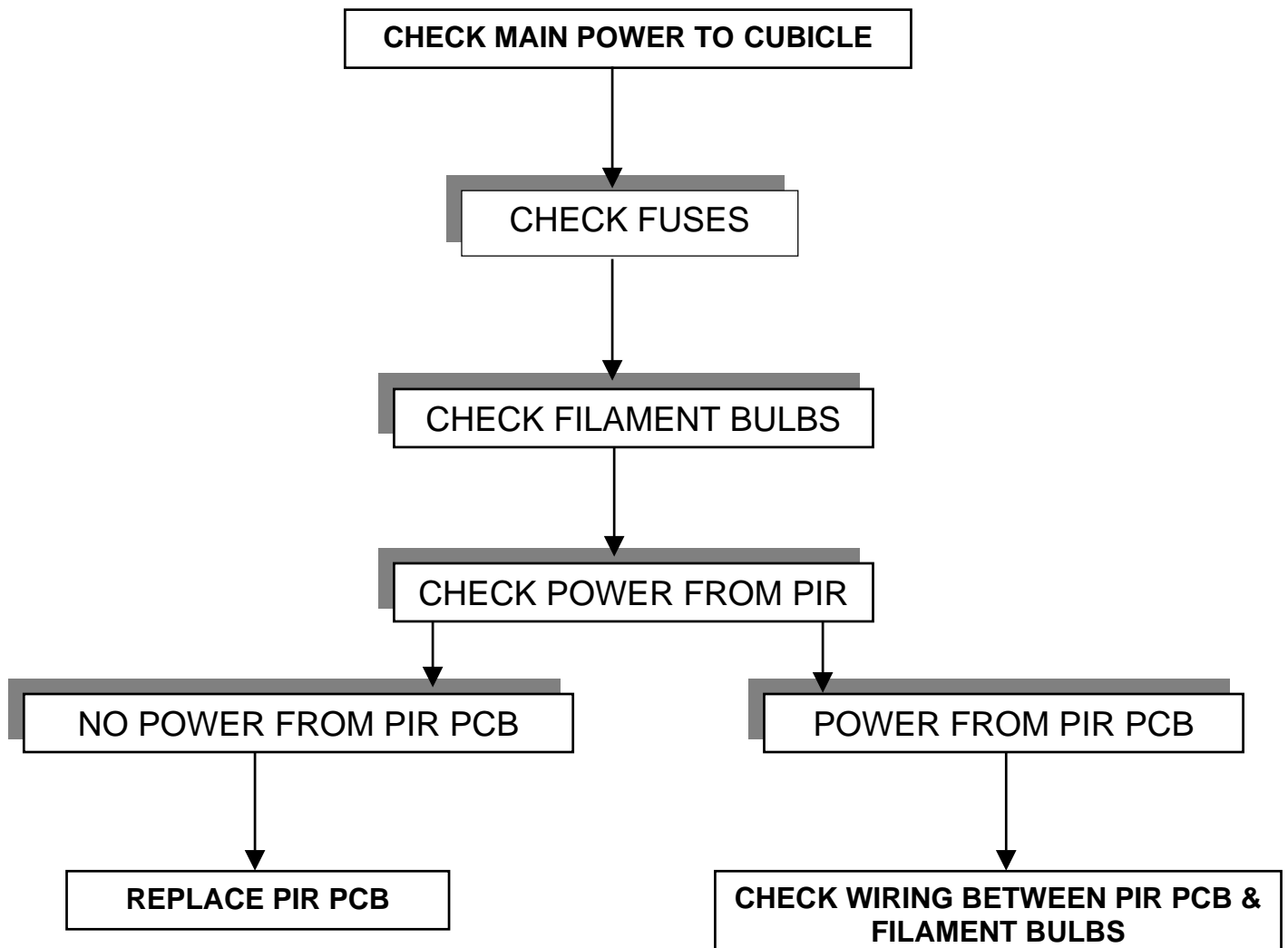
THE LEFT HAND ADJUSTER ALTERS THE SENSITIVITY OF THE SENSOR – CLOCKWISE TO INCREASE

Aircalor Hand – Drier Not Functioning

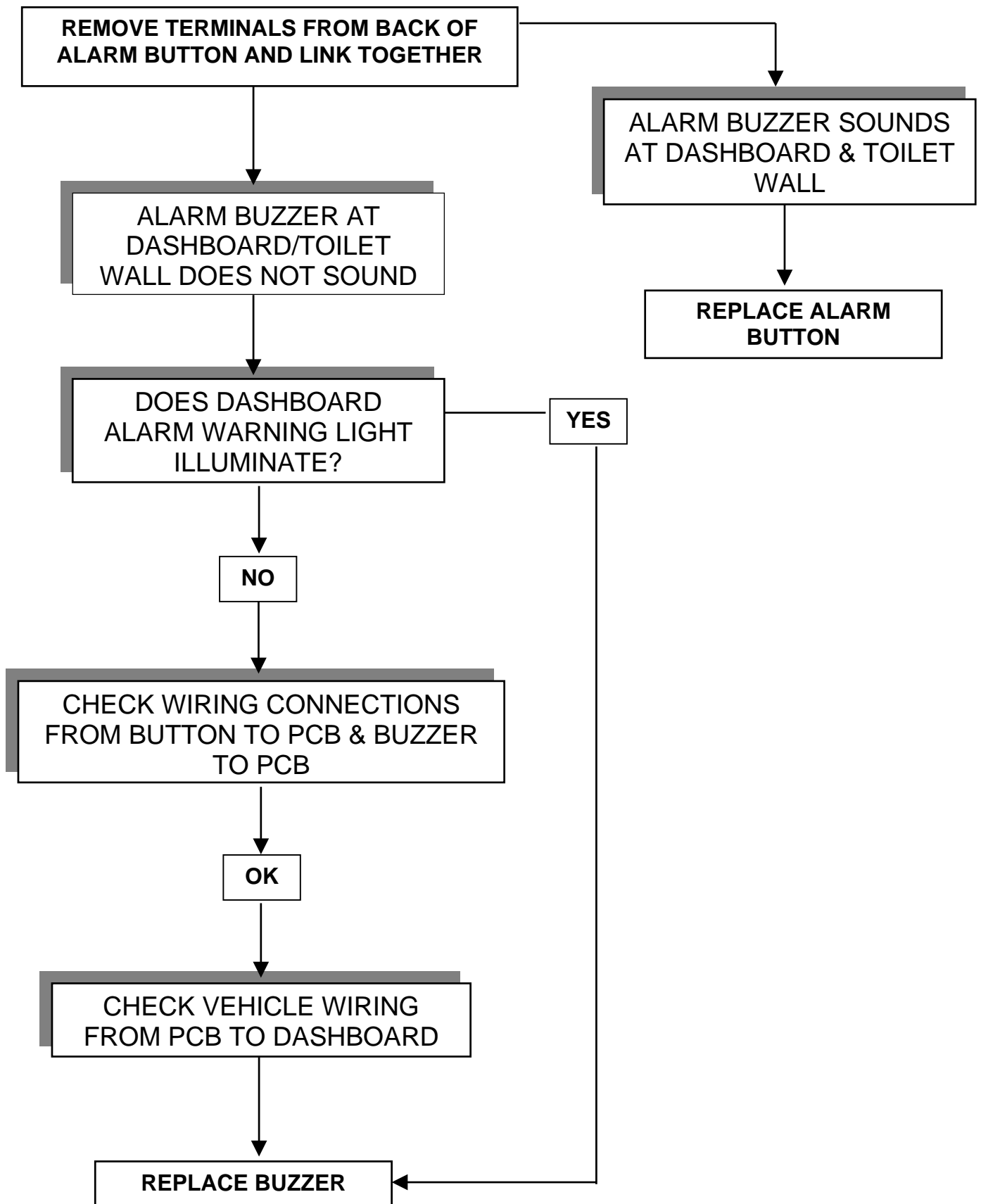
The Aircalor Hand-Drier will only Function with the WC Master Switch On and the Cubicle Interior Light On.

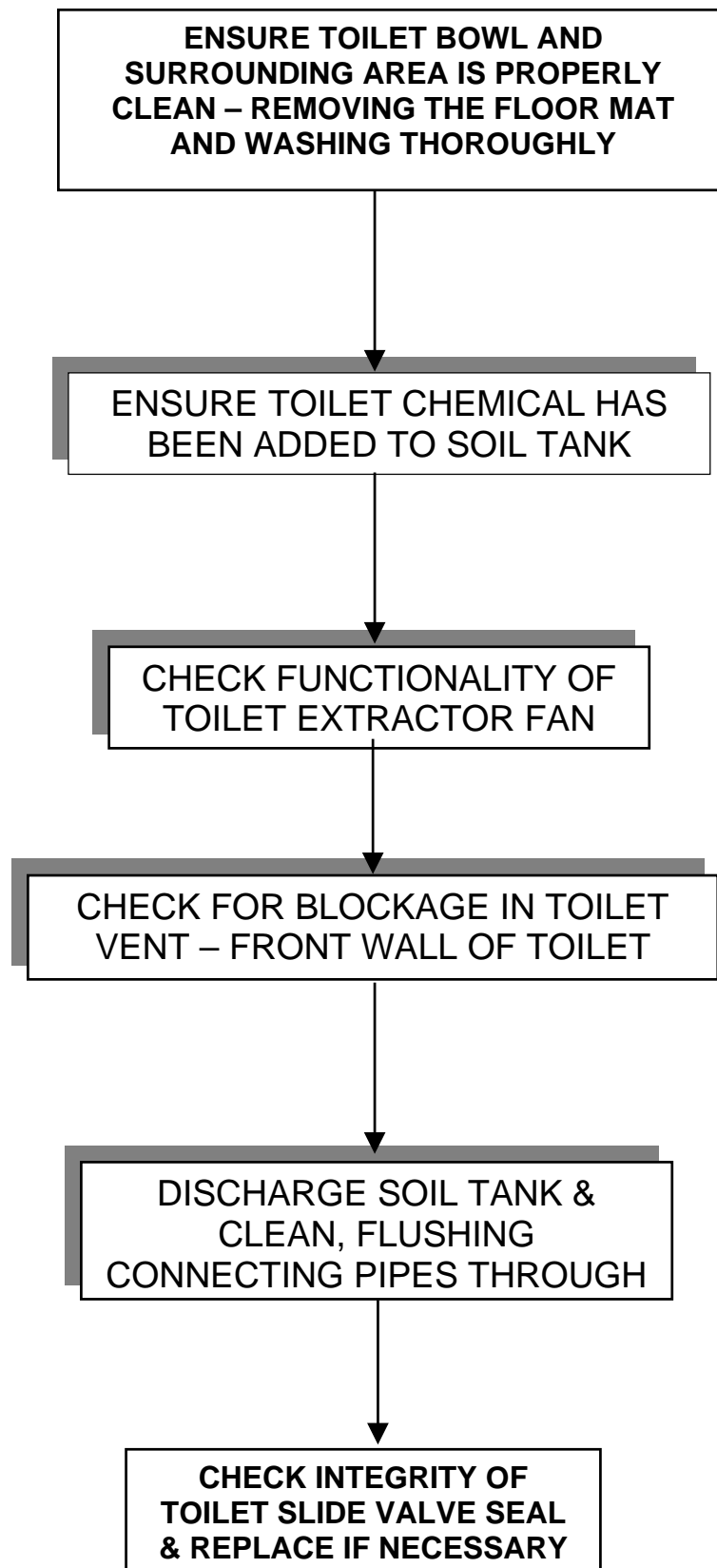






Alarm Button/Buzzer Not Functioning



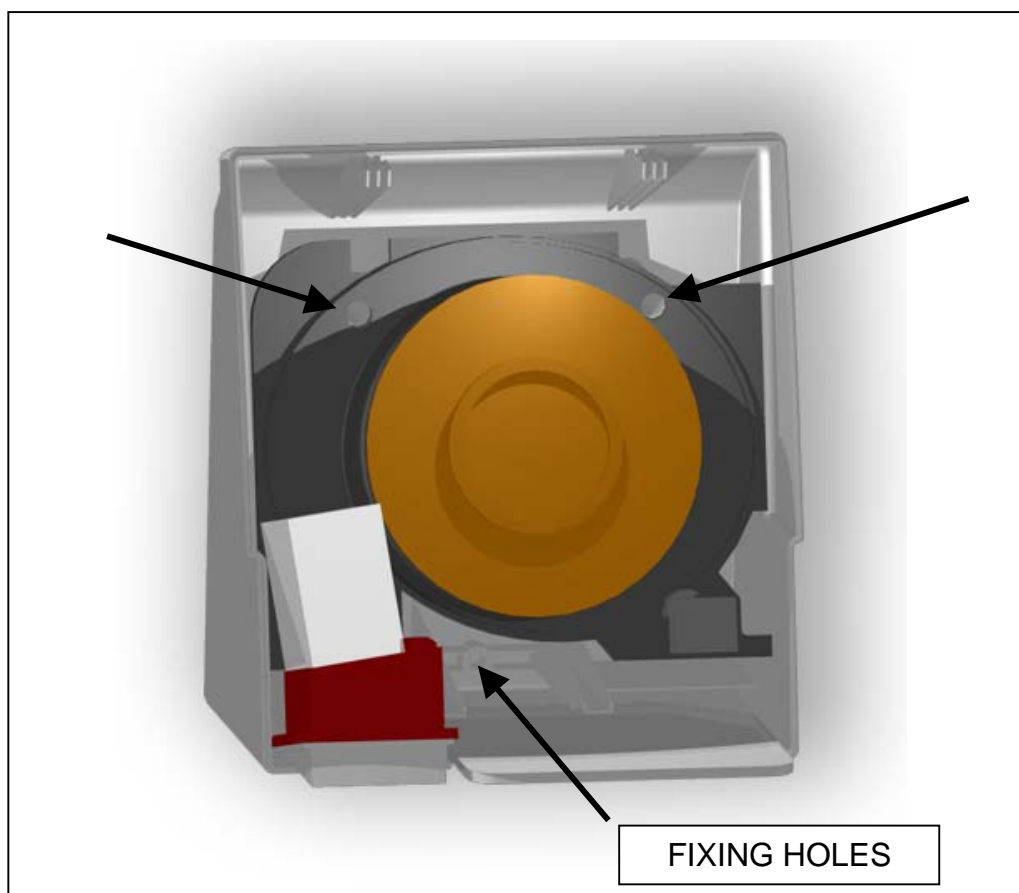


Part = Hand Drier

Location = Behind Upper Vanity Door

Replacement....

1. DISCONNECT THE POWER TO THE CUBICLE
2. UNLOCK AND OPEN THE UPPER VANITY DOOR
3. REMOVE 2X SCREWS SECURING THE DUCTING AND SLIDE IT DOWN
4. REMOVE 2x SCREWS ON THE UNDERSIDE OF THE HAND DRIER
5. REMOVE THE FRONT COVER OF THE HAND DRIER
6. REMOVE 2x RUBBER HOLE COVERS
7. REMOVE 3x SCREWS RELEASING THE UNIT FROM THE WALL
8. DISCONNECT THE 2 CABLES PASSING THROUGH THE OUTER WALL OF THE CUBICLE MAKING SURE THEY DO NOT FALL DOWN THE BACK
9. RE-CONNECT A NEW UNIT AND SCREW TO THE WALL
10. MAKE SURE THE RUBBER HOLE COVERS ARE RE-FITTED AND FIT THE COVER SECURING WITH BOTH SCREWS

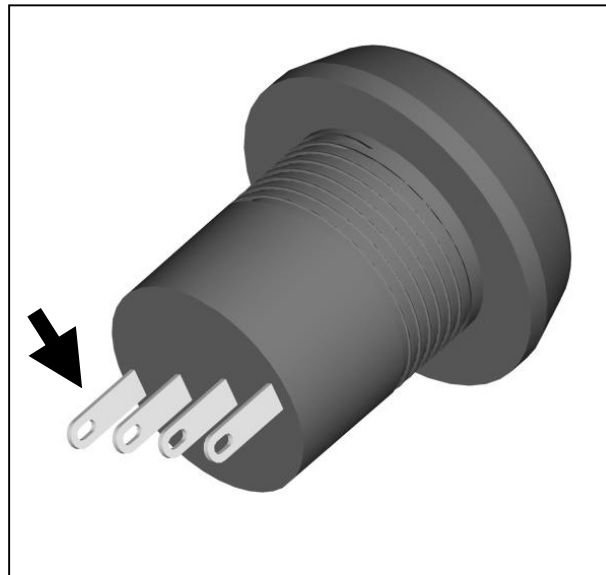


Part = Hand Wash & Flush Buttons

Location = Sink Vanity

Replacement....

1. DISCONNECT THE POWER TO THE CUBICLE
2. UNLOCK TANK SERVICE PANEL BEHIND THE VANITY
3. REMOVE TERMINALS FROM THE BACK OF THE BUTTON
4. UNSCREW THE COLLAR ON THE UNDERSIDE OF THE BUTTON
5. BUTTON SHOULD RELEASE FROM THE TOP
6. RE-FIT NEW BUTTON AND CONNECT THE TERMINALS



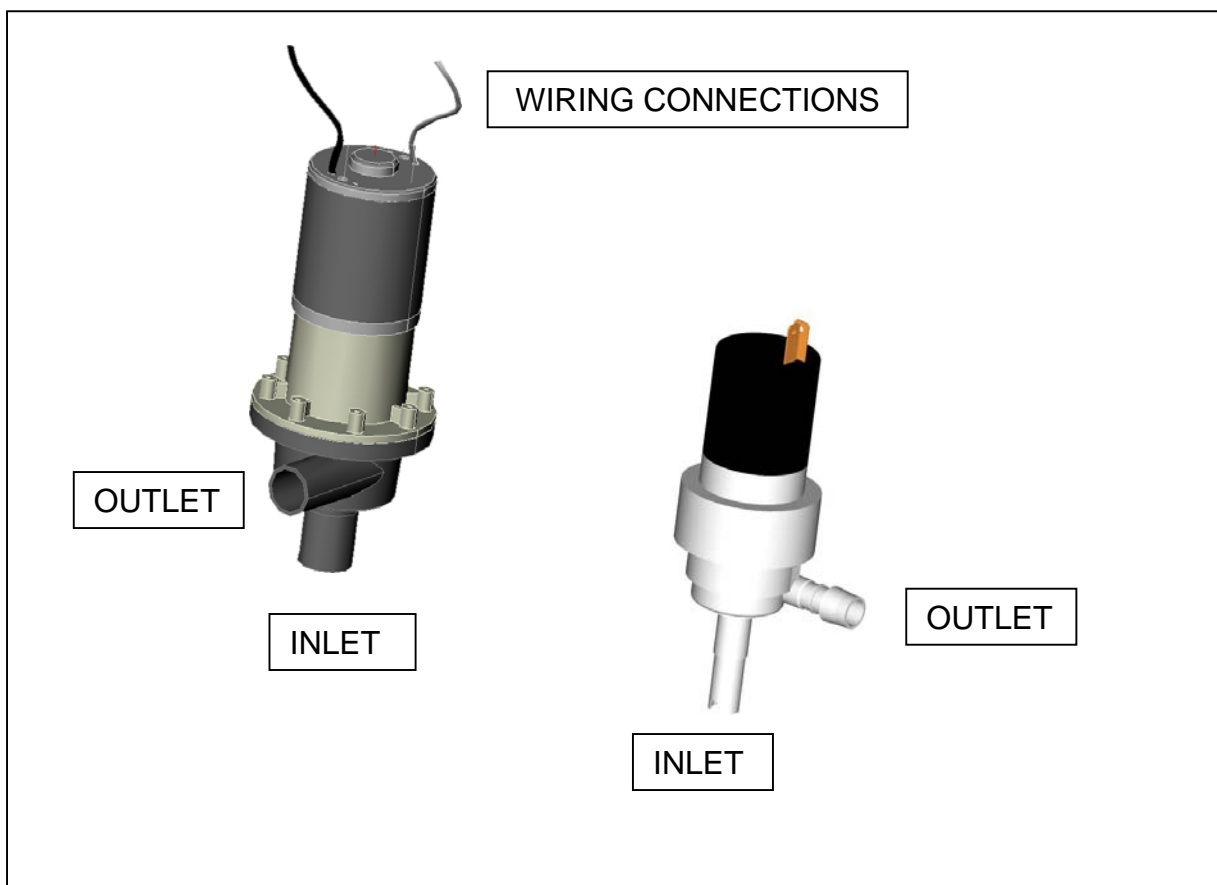
Use 2x outer
terminals

Part = Hand Wash & Flush Pump

Location = Behind Vanity Unit

Replacement....

1. DISCONNECT THE POWER TO THE CUBICLE
2. UNLOCK TANK SERVICES DOOR BEHIND VANITY
3. DRAIN FRESHWATER TANK (*ACCESS VIA LOCKER*)
4. DISCONNECT THE WIRES TO THE PUMP
5. REMOVE FROM SECURING CLIP OR RELEASE MOUNTING SCREWS
6. RELEASE INLET AND OUTLET PIPES
7. RE-FIT NEW PUMP MAKING SURE THAT BOTH INLET AND OUTLETS ARE WATER TIGHT AND THE FLOW ARROW IS POINTING IN THE CORRECT DIRECTION
8. RE-CONNECT THE POWER
9. CLOSE THE DRAIN ON THE SUPPLY TANK
10. RE-FILL TANK WITH FRESHWATER
11. SWITCH ON POWER TO CUBICLE
12. PRIME PUMP WITH 2-3 BUTTON PUSHES



Part = Toilet Slide Valve

Location = Toilet Bowl

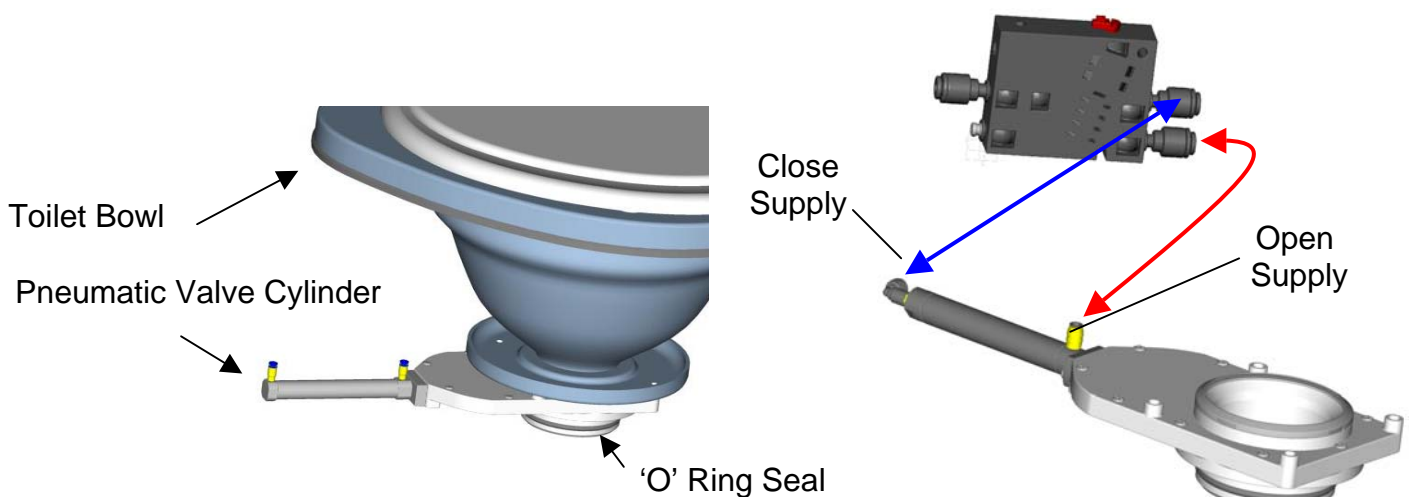
Removal....

1. DISCONNECT THE POWER TO THE CUBICLE
2. REMOVE 4x FIXING SCREWS FROM AROUND THE TOP OF THE BOWL
3. PULL & TWIST THE BOWL TO RELEASE THE SEAL FROM THE SOIL TANK
4. ONCE RELEASED, REMOVE THE SUPPLY HOSE TO THE FLUSH NOZZLE
5. LIFT BOWL OUT & REMOVE THE 2x AIR SUPPLY HOSES TO THE AIR CYLINDER
6. REMOVE 4x FIXING BOLTS SECURING THE SLIDE VALVE TO THE TOILET BOWL

CAUTION: As this air supply is from the vehicle (via the control valve), when it is disconnected the air pressure in the pipes will be at approx 8 bar and will cause the pipe to 'snake around' violently if it is not held firmly.

Replcement....

1. POSITION THE VALVE ASSEMBLY ON THE BOTTOM OF THE BOWL AND SECURE WITH THE 4x BOLTS. TIGHTEN BOLTS TO 6KGF.CM USING A TORQUE WRENCH.
2. SMEAR GREASE OR SIMILAR AROUND THE BLACK O-RING ON THE PNEUMATIC VALVE & PASS BOWL THROUGH APERTURE ON THE COWLING PUSH FIRMLY INTO THE SOIL TANK. ENSURE THAT THE RUBBER FIN GASGET IS NOT IN THE ENTRANCE TO THE TANK AND ON THE BOTTOM OF THE VALVE.
3. RECONNECT THE AIR PIPES TO THE CYLINDER AND THE INLET PIPE TO THE FLUSH NOZZEL
4. PUSH THE BOWL FIRMLY INTO THE SOIL TANK.
5. START THE VEHICLE ENGINE & SWITCH ON THE WC MASTER SWITCH. WAIT UNTIL THE VEHICLE AIR PRESSURE IS AT MAXIMUM BEFORE ATTEMPTING TO FLUSH THE TOILET.



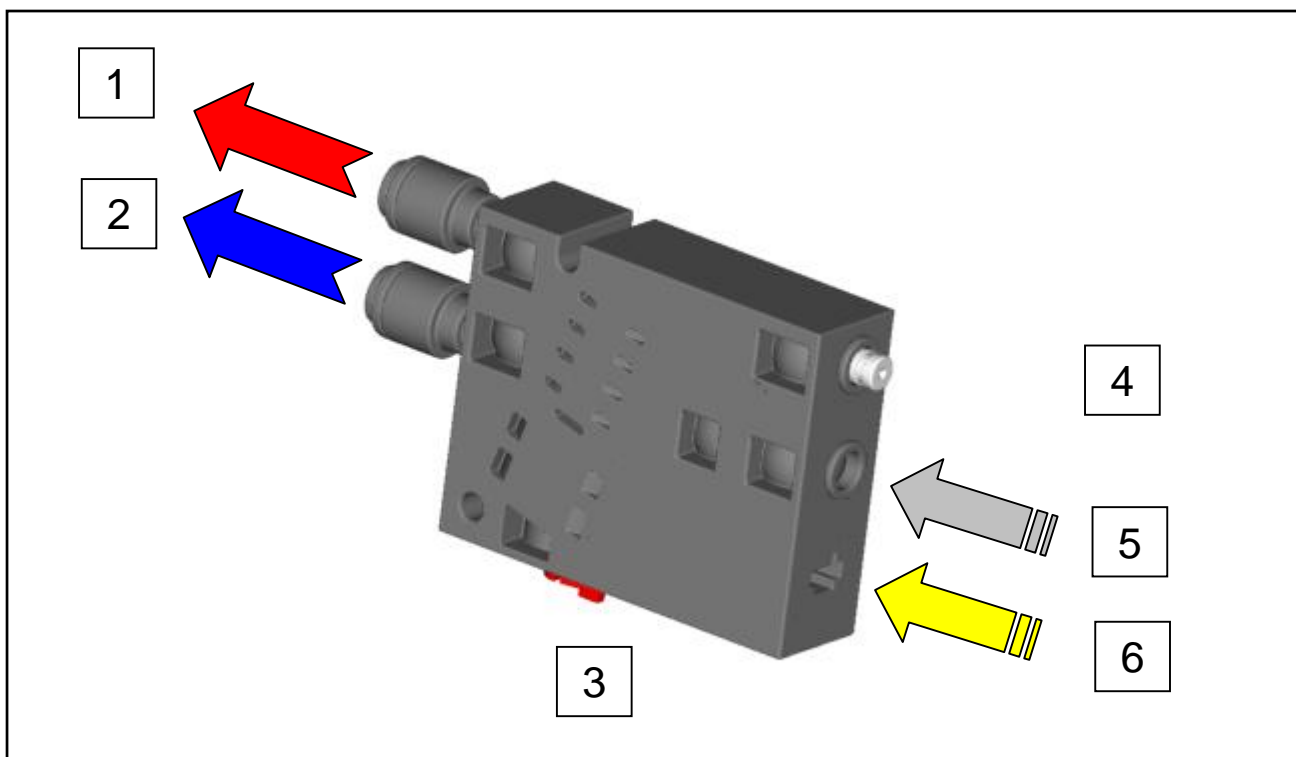
Part = Toilet Valve Control Box

Location = Mounted Next to the PCB

Replacement....

1. DISCONNECT THE POWER TO THE CUBICLE
2. UNCLIP THE BLACK CONTROL VALVE FROM ITS LOCATION
3. REMOVE THE ELECTRICAL CONNECTOR FROM THE VALVE
4. REMOVE THE 3x PIPES FROM THE VALVE
5. RECONNECT NEW VALVE MAKING SURE THAT THE PIPES ARE IN THE CORRECT LOCATION

CAUTION: As this air supply is from the vehicle (via the control valve), when it is disconnected the air pressure in the pipes will be at approx 8 bar and will cause the pipe to 'snake around' violently if it is not held firmly.



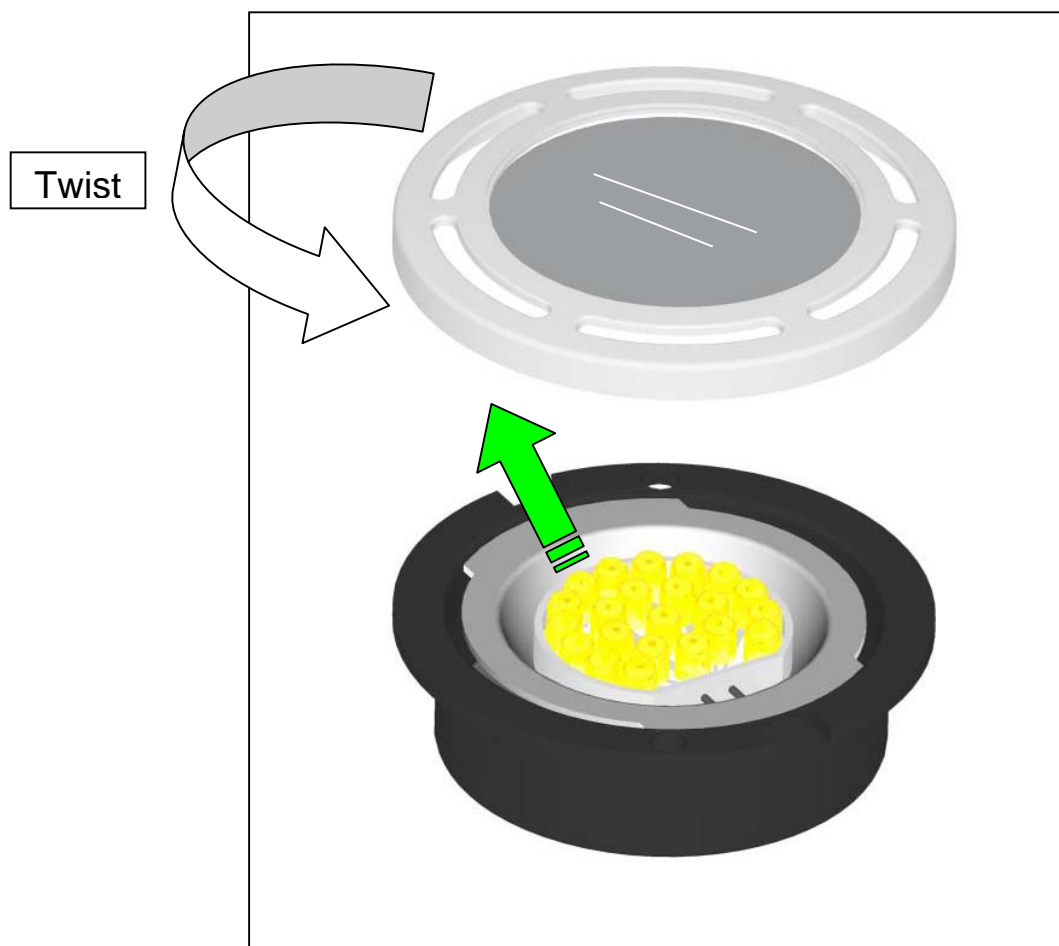
1. AIR SUPPLY OUT – TO FRONT OF CYLINDER TO OPEN SLIDE VALVE
2. AIR SUPPLY OUT – TO END OF CYLINDER TO CLOSE SLIDE VALVE
3. OVERRIDE SWITCH – SWAPS PORTS 1 & 2 OVER
4. EXHAUST – MUST BE KEPT CLEAR
5. AIR SUPPLY FROM VEHICLE – 10BAR MAX

Part = Toilet Lights – Bulb Replacement

Location = Ceiling Panel

Replacement....

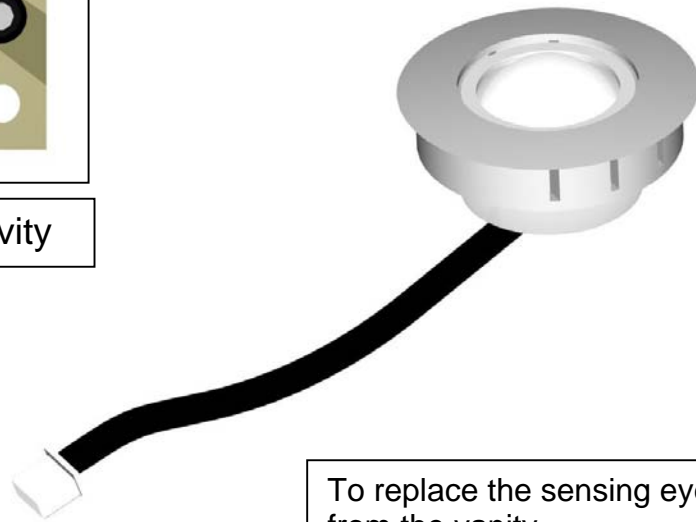
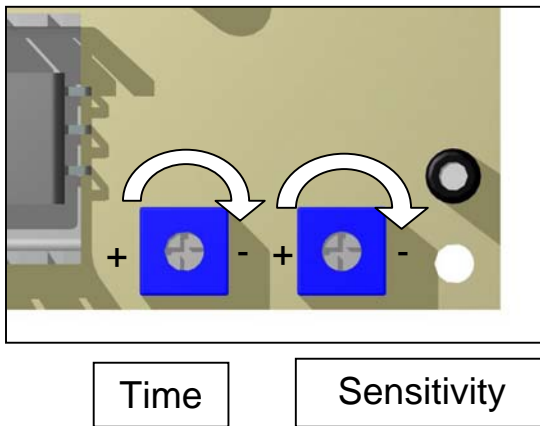
1. DISCONNECT THE POWER TO THE CUBICLE
2. UNCLIP THE LENSE COVER BY TWSITING IT CAREFULLY
3. REMOVE THE LED BULB CLUSTER
4. INSERT REPLACEMENT BULB
5. SECURE THE LENSE COVER CAREFULLY



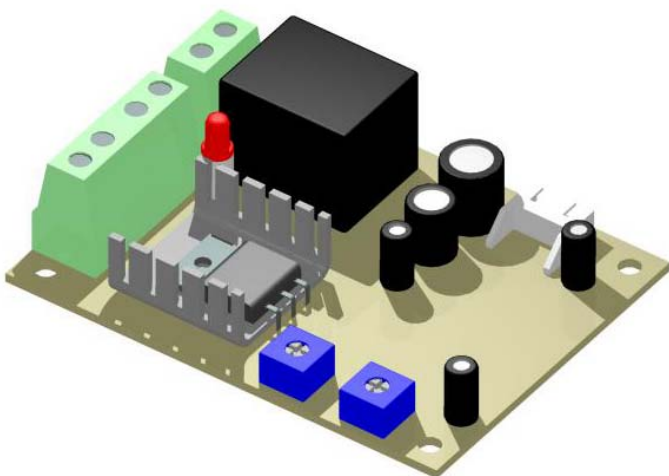
Part = PIR Adjustment & Replacement

Location = Upper Vanity Cupboard – Circuit Board / Vanity - Sensor Adjustment....

1. POWER ON
2. OPEN UPPER VANITY DOOR
3. ADJUST THE 2X BLUE VARIABLE RESISTORS AS SHOWN BELOW



To replace the sensing eye unclip from the vanity.



To replace the PCB unscrew the board from the vanity & disconnect the plug.

Part = PCB & Timer Board

Location = Vanity Unit (behind litter bin)

Service....

1. CHECK 24v CONNECTION (2-WAY PLUG)
2. CHECK FUSES ON MAIN BOARD
3. CHECK VOLTAGE

