BUILT TO LAST

Makers of Commercial Dish and Glasswashers

PROUDLY AUSTRALIAN MADE

Since 1954

Norris Controller

Service Manual

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10/5/2016

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Revisions:

REV #	Description:	By:	Date:
1	Initial Release	Damien	
2			
3			
4			
5			
6			
7			

Introduction:

Navigation:

Below is a table outlining the different button combinations & what they do.

Operation	Buttons to Press	Type & Duration	What will happen?
Turn Machine **ON**	B1	Press & Hold 5 Seconds	Machine will turn on
Select Cycle	B2	Press	Cycle Will Change
Start Cycle	B3	Press	Cycle Will Start
Turn Machine **OFF** "shutdown"	B1	Press & Hold 3 Seconds	Machine Will shut down then turn OFF
Machine Info	B3	Press & Hold	Will display machine information, time, serial number, cycle count.
Enter Configuration Menu (machine must be OFF)	B2 & B3	Press, Hold (5 Seconds) & Release	On release screen will turn ON and be in Configuration Menu
Scroll	B2	Press	Will Scroll through options
Select	B3	Press	Will either "set" or turn on/off component
Exit Configuration Screen	B2 & B3	Press, Hold (5 Seconds) & Release	Will turn machine OFF
Adjust parameters (machine must be ON)	B2, & B3	Press, Hold (5 Seconds) & Release	Will entre machine parameters
De-Scale Cycle	B2	Press & Hold	Will do de-scale cycle then shutdown

Errors:

Below is the list of errors that can appear on the display, and what can cause them to happen, the machine can be reset by press and holding the power button for 5 seconds

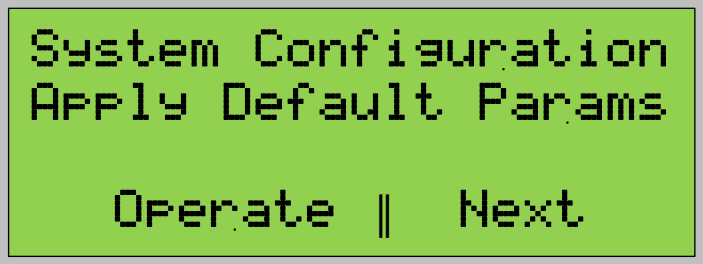
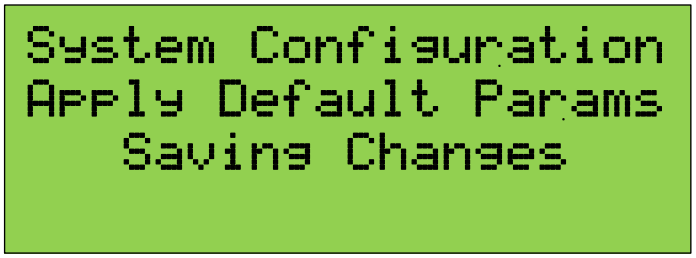
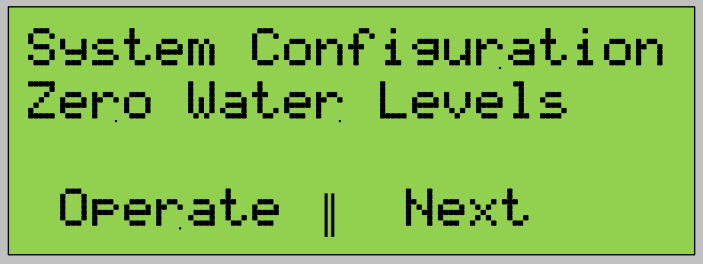
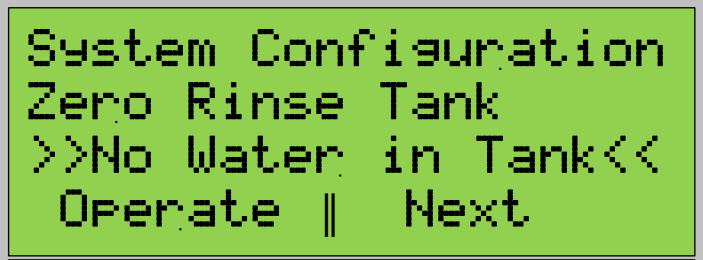
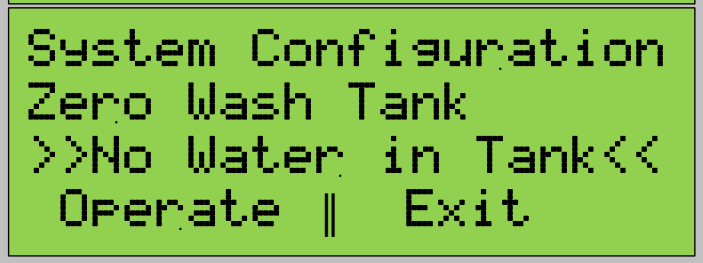
Error	Cause	Fix
Main Contact Failure	Digital input from "NO" on contactor not detected	Replace contactor
Rinse Fill Failure	Has taken longer than 3min to fill rinse tank	If poor water pressure, enable low water pressure setting
		No incoming water
Rinse Pump Failure	Has taken longer than 5min to fill the wash tank	Stem Pipe hasn't been installed
		Faulty rinse pump – replace pump
		Incorrect reading from Pressure sensor
Rinse Tank Water High	Rinse Tank has over filled	Faulty solenoid – replace solenoid
		Incorrect reading from pressure sensor
Rinse Tank Water Low	Rinse tank level has gone to low – element safety	If poor water pressure, enable low water pressure setting
		No incoming water
Rinse Tank Over Temp	Rinse tank has reached 95°c	Temp set to high
		Faulty Probe – replace probe
		Contactor won't turn off

Wash Tank Water High	Wash tank has overfilled	Blocked drain
		Faulty Drain pump – replace pump
Wash Tank Water Low	Wash tank level has gone to low – element safety	Stem Pipe not installed
		Leaking seal on stem pipe
		Incorrect signal from pressure sensor
Wash Tank Over Temp	Wash tank has reached 95°c	Faulty Probe – replace probe
		Contactor won't turn off
Drain Pump Failure	Has taken too long to reach low point on drain	Check for blockage in drain
		Faulty Drain pump – replace pump

System Configuration:

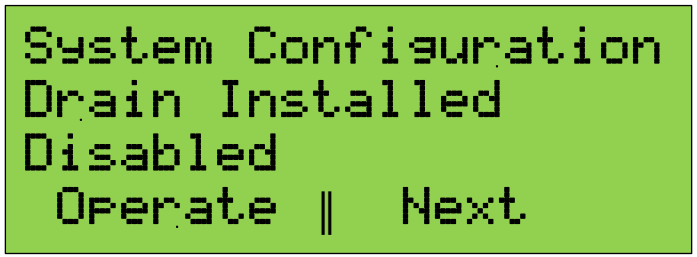
In the configuration screen you will be able to do the following: **NOTE: Ensure that the Door/Hood is closed or some components won't turn ON**

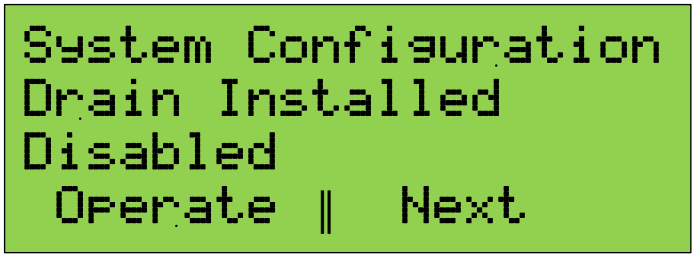
- Apply Default Parameters
- Zero Pressure Sensors
- Factory Test Mode:
    - Rinse Tank Elements (will only remain on for 5 seconds)
    - Wash Tank Elements (will only remain on for 5 seconds)
    - Rinse Pump
    - Solenoid (Hot)
    - Solenoid (Cold)
    - Wash Pump
    - Detergent Pump
    - Rinse Aid Pump
    - Drain Pump
- Drain Pump – enable/disable
- Low Water Pressure – enable/disable

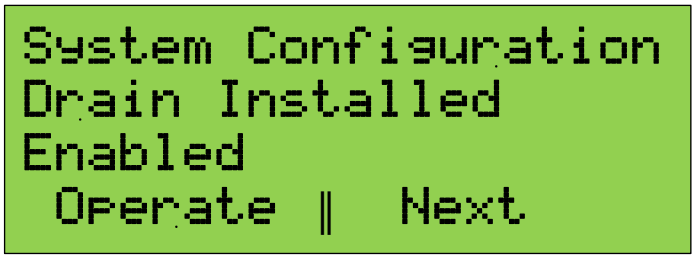
DESCRIPTION	SCREEN SELECTION SCROLLING	SCREEN AFTER SELCTION
Off Screen: **To turn access Configuration Menu, press and hold B2 & B3 for 5 seconds then release to turn screen ON.**		
B2 = Bottom Left "ACTION" **B3 = Bottom Right "ACTION"**		
Zero Water Levels: **This is to be done on install to take into account any atmospheric conditions.**		 

Enable/Disable Drain Pump:

To enable/disable the use of a drain pump inside a machine.

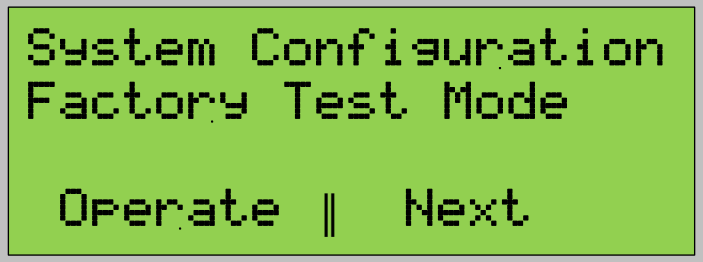


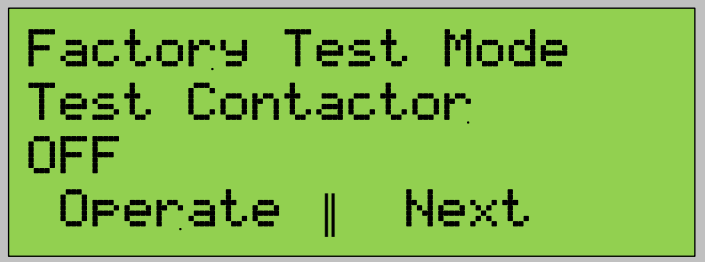


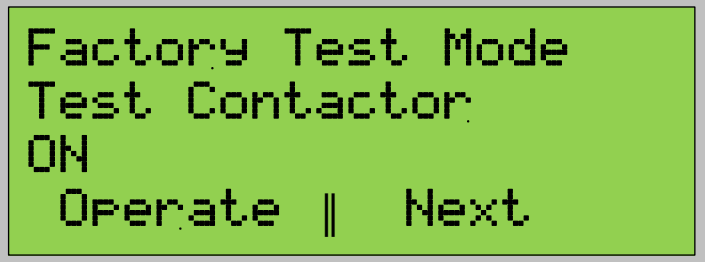


Factory Test Mode:

This section allows for the testing of each component inside the machine.



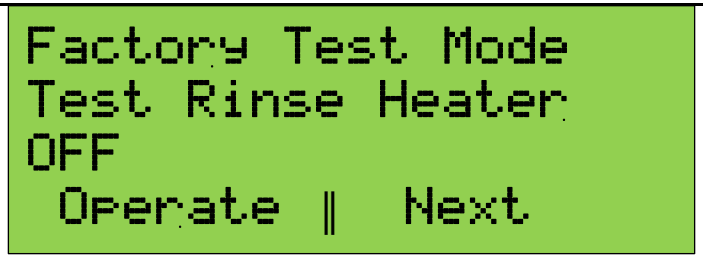


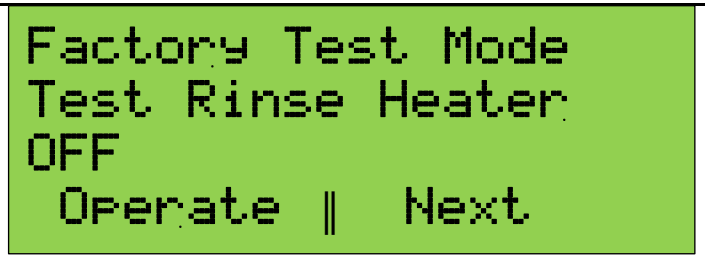


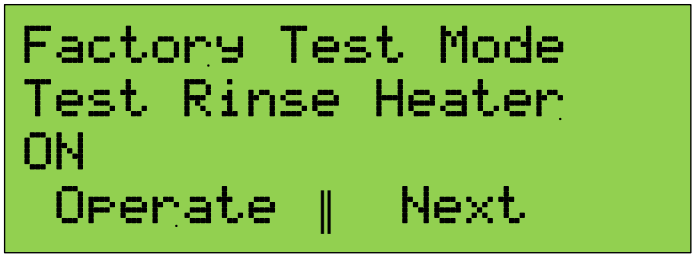
Turn ON & OFF Rinse Elements:

Allows the rinse element operation to be tested.

NOTE: Elements will only stay on for 5 seconds.



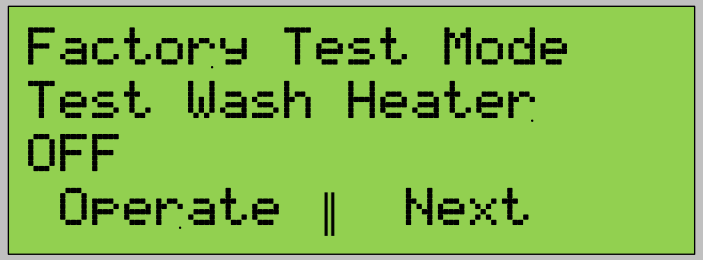


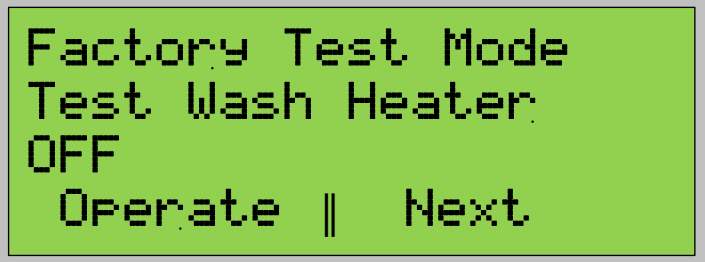


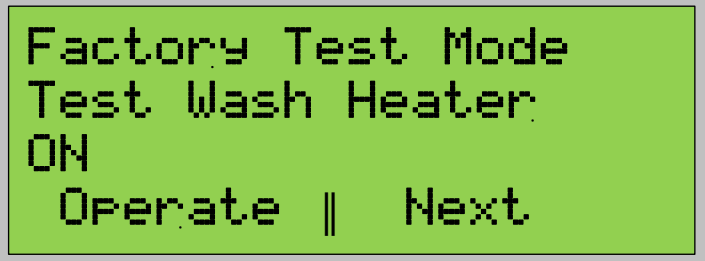
Turn ON & OFF Wash Elements:

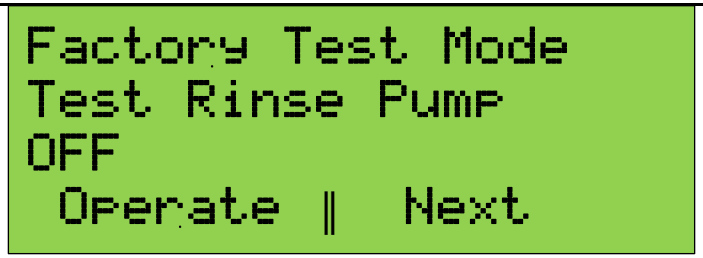
Allows the wash element operation to be tested.

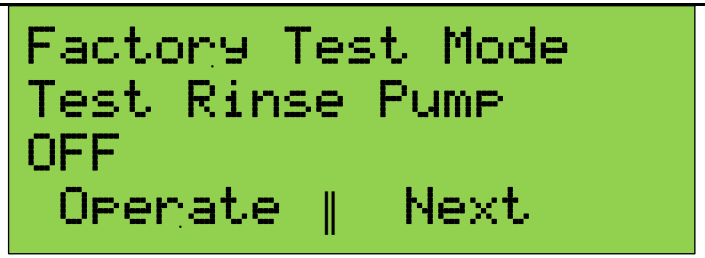
NOTE: Elements will only stay on for 5 seconds.

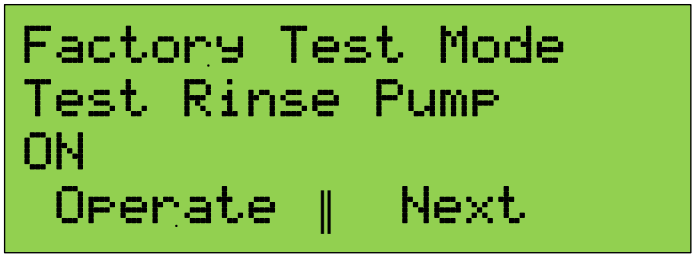






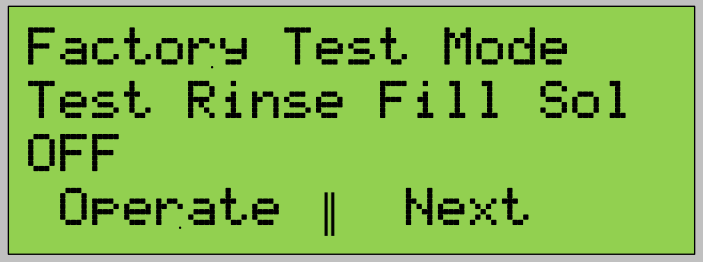


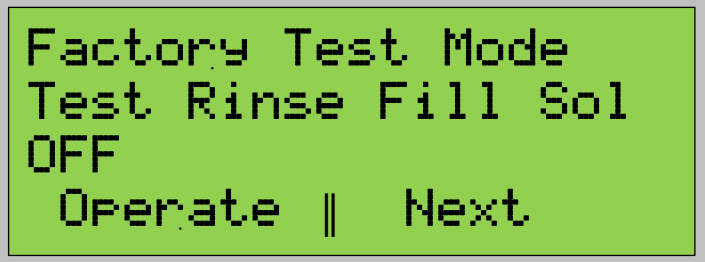


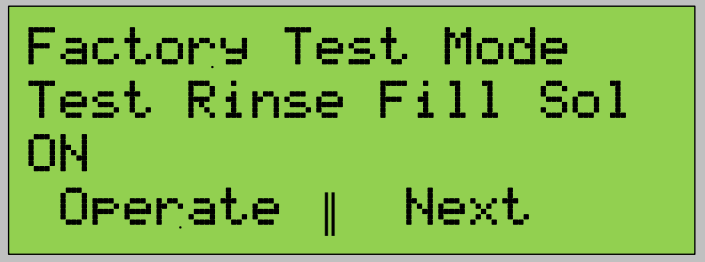


Turn ON rinse solenoid:

Allows for testing of the rinse solenoid, (NOTE: (Rinse tank machines) This can fall outside of the normal operational levels required, to ensure no errors appear please use the Test Rinse Pump function to drain the rinse tank afterwards)

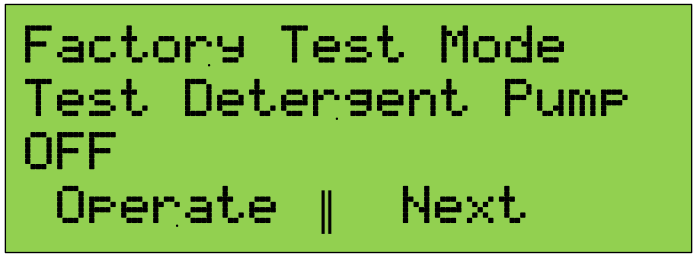


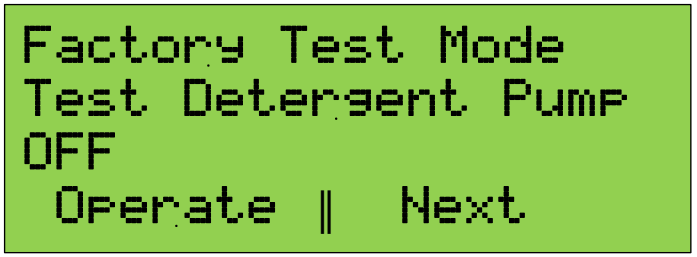


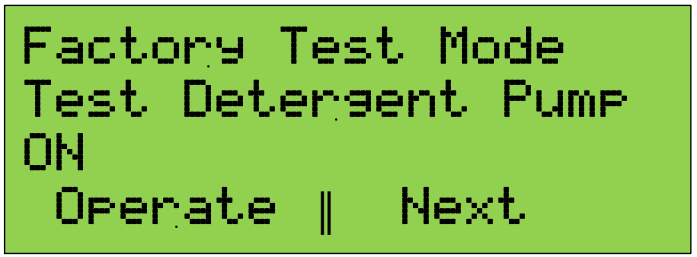


Turn ON/OFF Detergent Pump:

Allows the operation of the Detergent Pump to be tested.

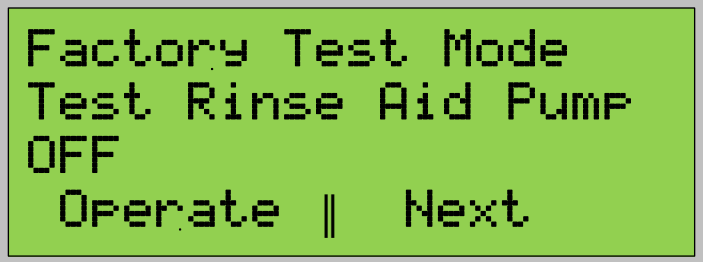


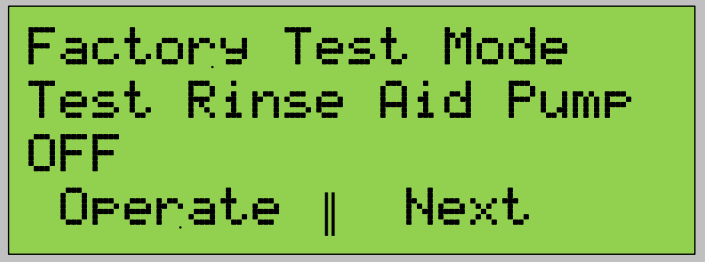


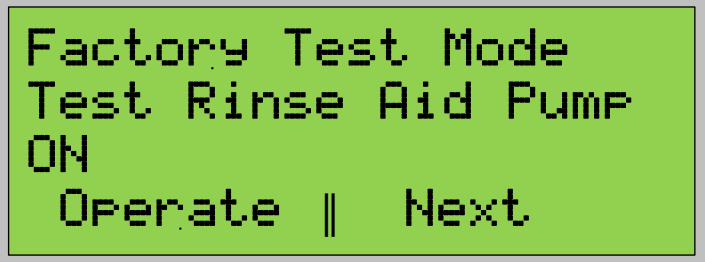


Turn ON/OFF Rinse Aid Pump:

Allows the operation of the Rinse Aid Pump to be tested.

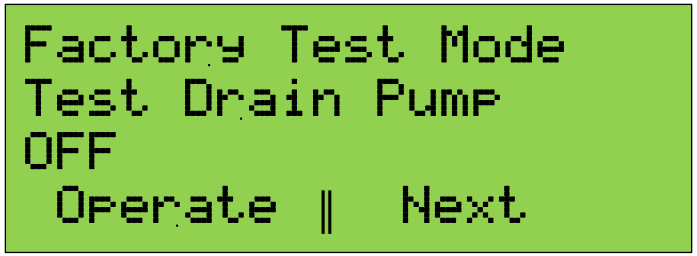


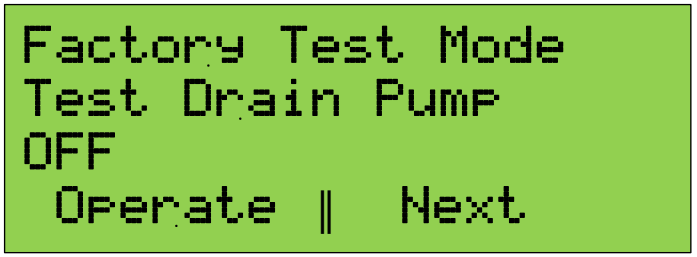


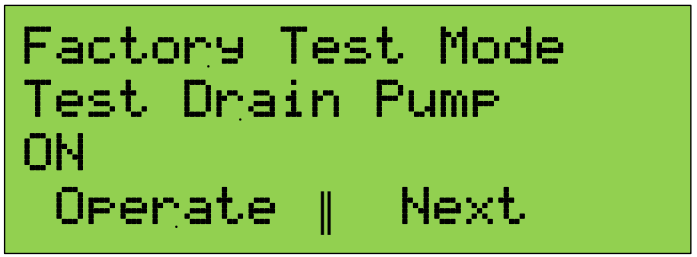


Turn ON/OFF Drain Pump (if activated):

Allows the operation of the Drain Pump to be tested (if activated).







User Configuration:

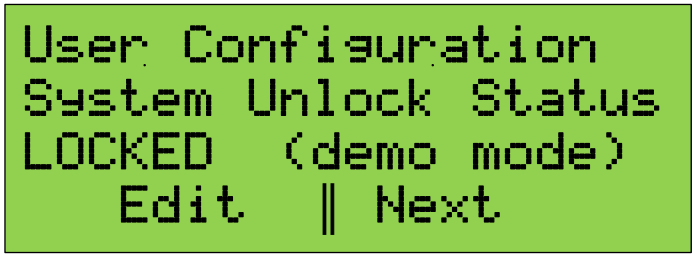
DESCRIPTION	SCREEN SELECTION SCROLLING	SCREEN AFTER SELCTION

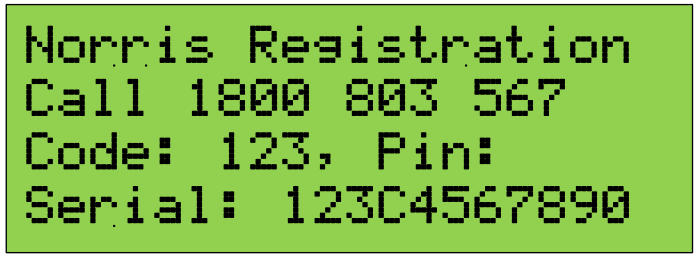
When the machine is first installed a PIN number is required to unlock the machine.

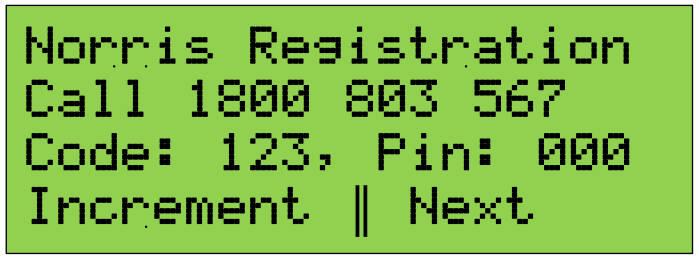
The machine will only do short cycles that are used by the Norris staff to ensure that the machine is working correctly.

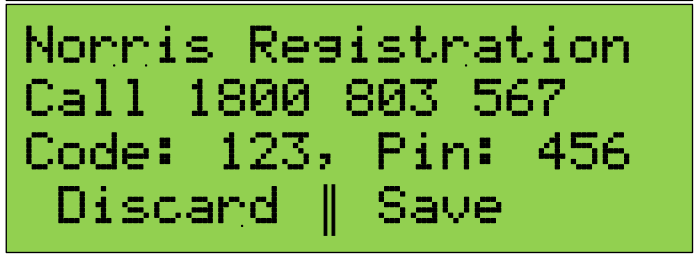
To get a PIN number please contact Norris on 1800 703 567

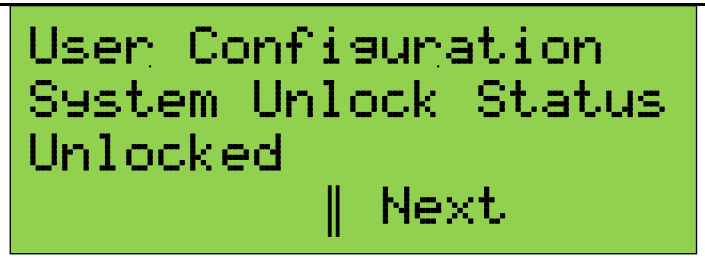
(Note: PIN Numbers shown will not work)





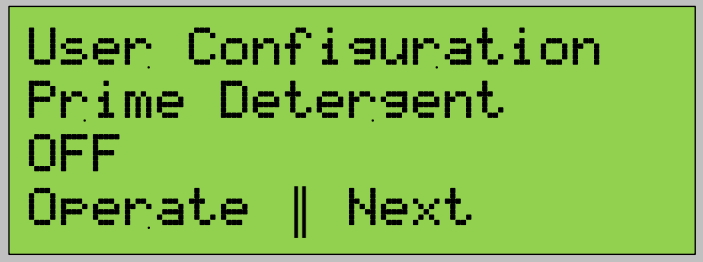


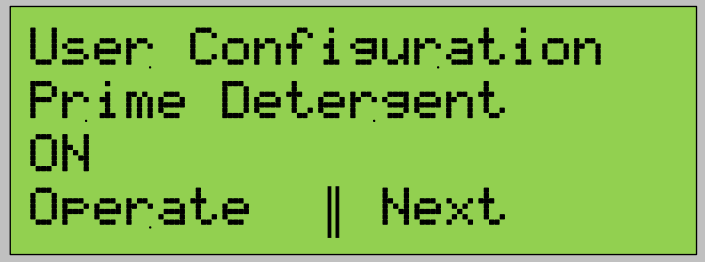




Allows the user to prime the detergent pump

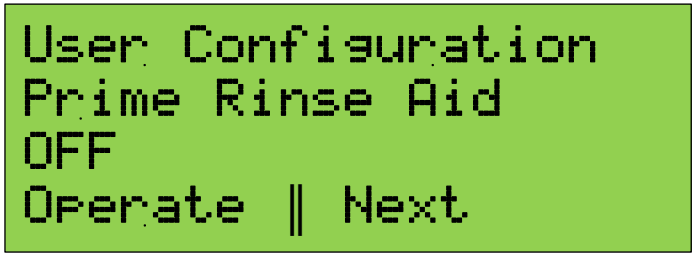
(Note: Pump does not automatically turn off)

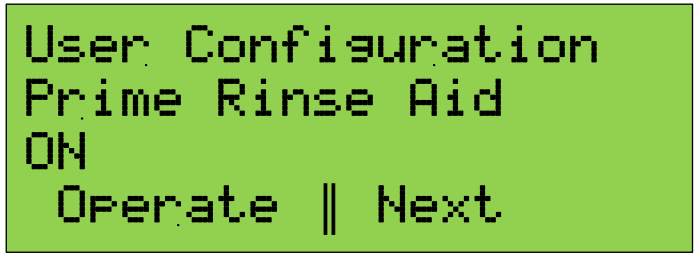




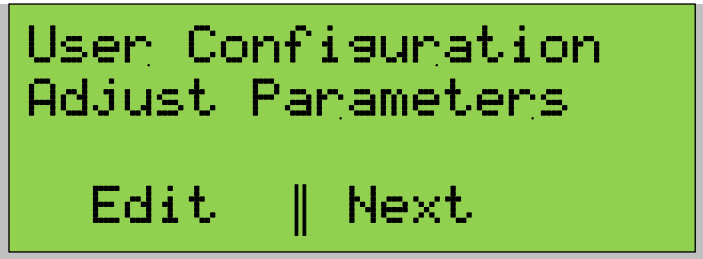
Allows the user to prime the rinse aid pump

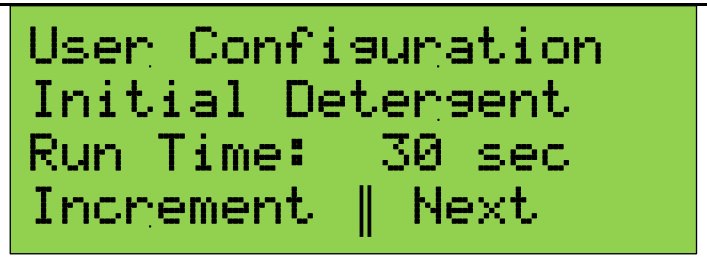
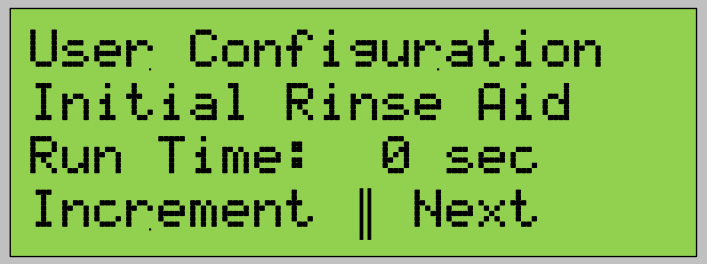
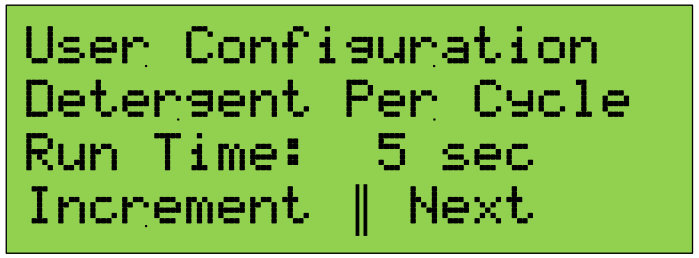
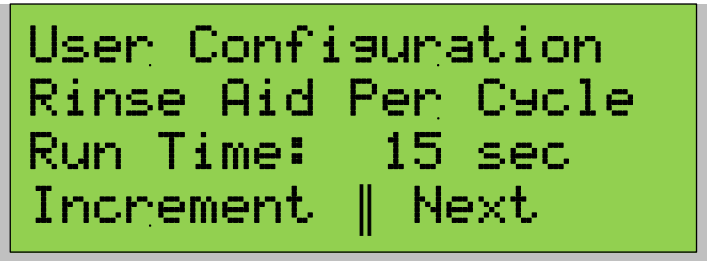
(Note: Pump does not automatically turn off)

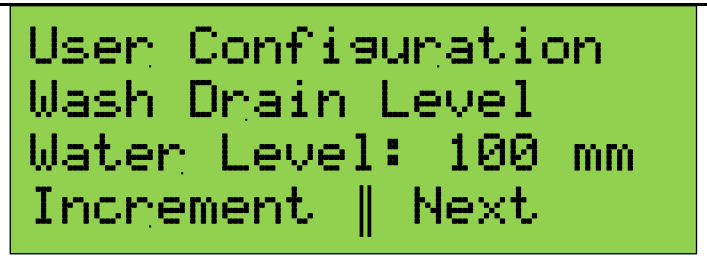
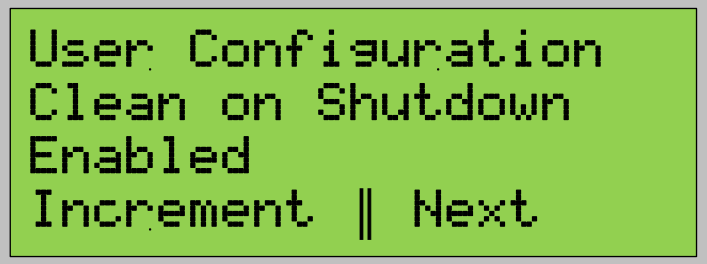
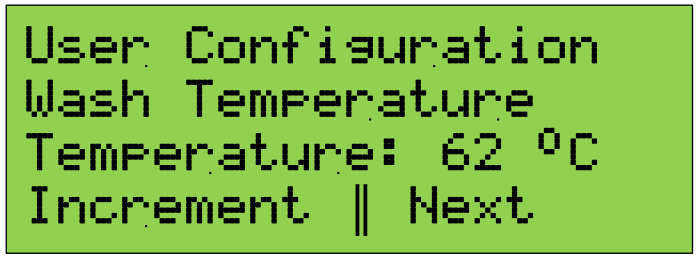
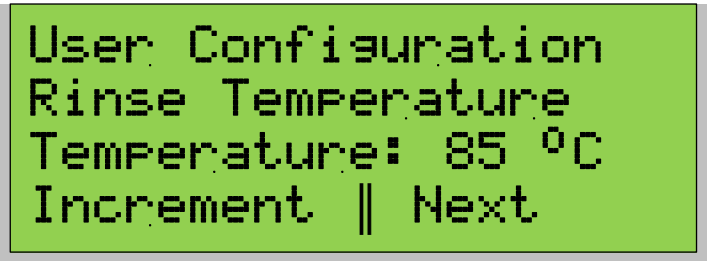




Allows the user to adjust basic parameters



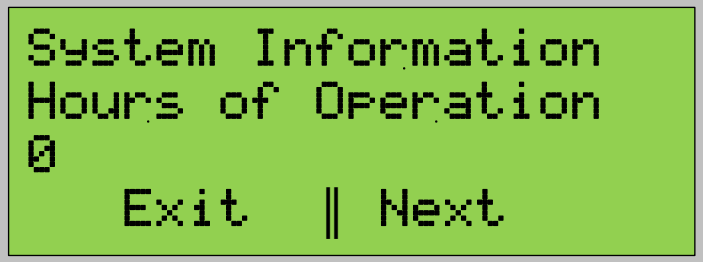
Allows the user to adjust the amount of detergent that is put into the wash chamber during the fill	By pressing B2 the time will go up in increments of 5 seconds to 90 then start back at 0.	
Allows the user to adjust the amount of rinse aid that is put into the wash chamber during the fill	By pressing B2 the time will go up in increments of 5 seconds to 90 then start back at 0.	
Allows the user to adjust the amount of detergent used per cycle	By pressing B2 the time will go up in increments of 5 seconds to 90 then start back at 0.	
Allows the user to adjust the amount of rinse aid used per cycle	By pressing B2 the time will go up in increments of 5 seconds to 90 then start back at 0.	

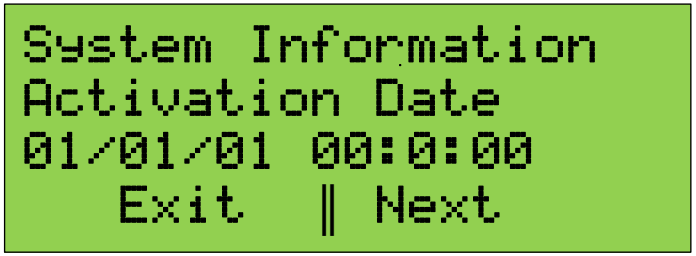
Allows the user to adjust the height that the drain pump starts	By pressing B2 the level will change, this value changes between machine types.	
Allows the user to enable or disable the clean on shutdown feature	We recommend this feature stay enabled.	
Allows the user to adjust the wash tank temp between 50-75°c	By pressing B2 the temperature will scroll between 55°c & 70°c	
Allows the user to adjust the rinse temp between 82-88°c	By pressing B2 the temperature will scroll between 82 & 88°c	

Machine Info:

DESCRIPTION	SCREEN SELECTION SCROLLING	SCREEN AFTER SELCTION
	READY Wash: 120 seconds Idle R: 82.8°C W: 60.2°C	System Information System Time 19/05/1989 21:30:00 Exit ‖ Next
	Machine Serial Number, used for identification of the machine, also required for requesting warranty work & machine unlocking.	System Information Serial Number 123C4567890 Exit ‖ Next
		System Information Wash Count 0 Exit ‖ Next
		System Information Last Drain Time 01/01/01 00:00:00 Exit ‖ Next

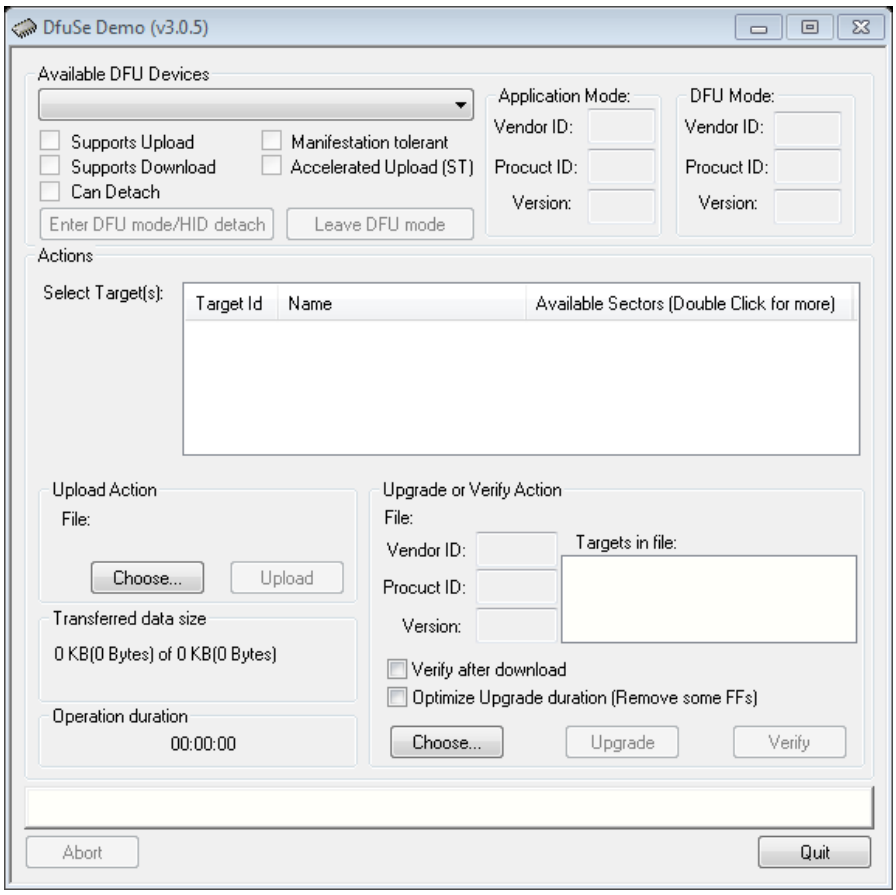
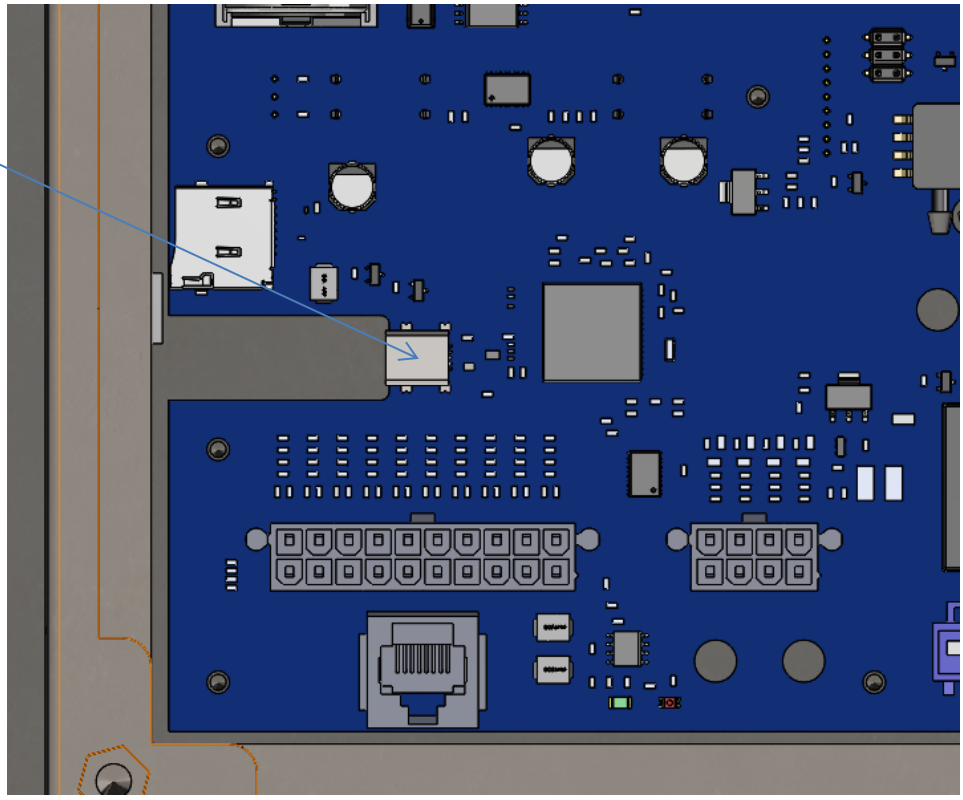
How long the machine has been turned “ON” for





Identifies the Firmware version install on the machine

Upgrading Boards Firmware:

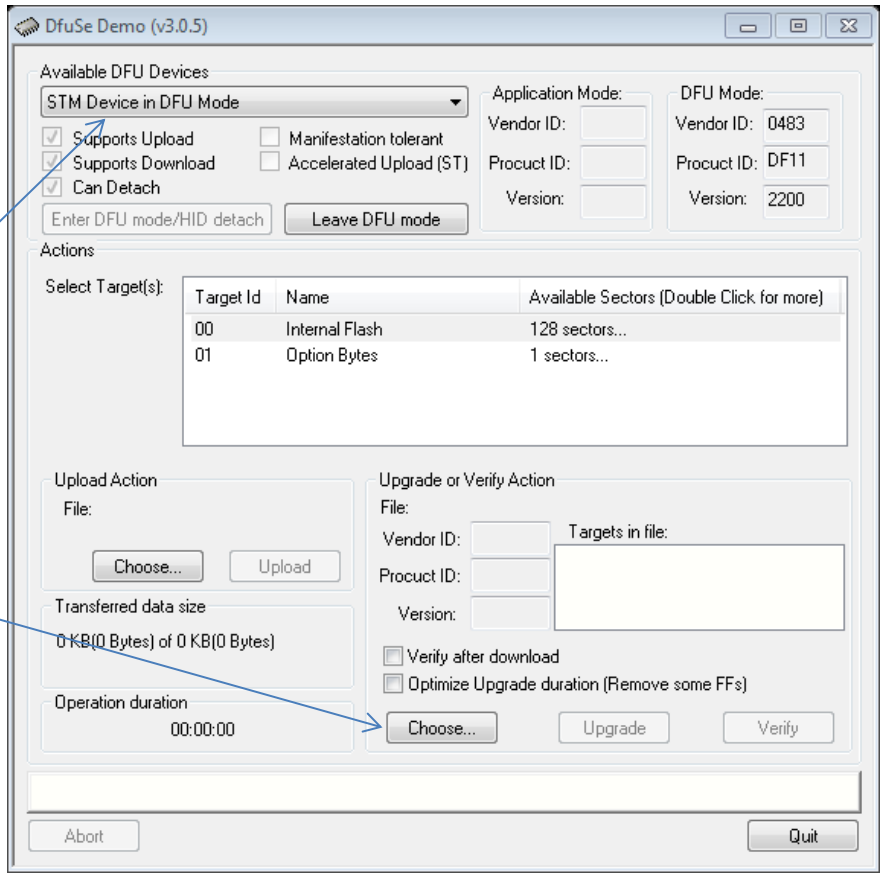
Install DfuSe Demo on the device you wish to do the program updates from. Please contact Norris for the installation files for this software. It currently only works on windows devices.	
Insert USB Micro B cable into the Micro B insert on the control board.	

While pressing the POWER button the board, plug the other end of the USB cable into either a PC or Laptop (windows only), if this is the first time connecting to a Norris AWC Board insure that you have internet connection as it will require to download the appropriate drivers to connect correctly.

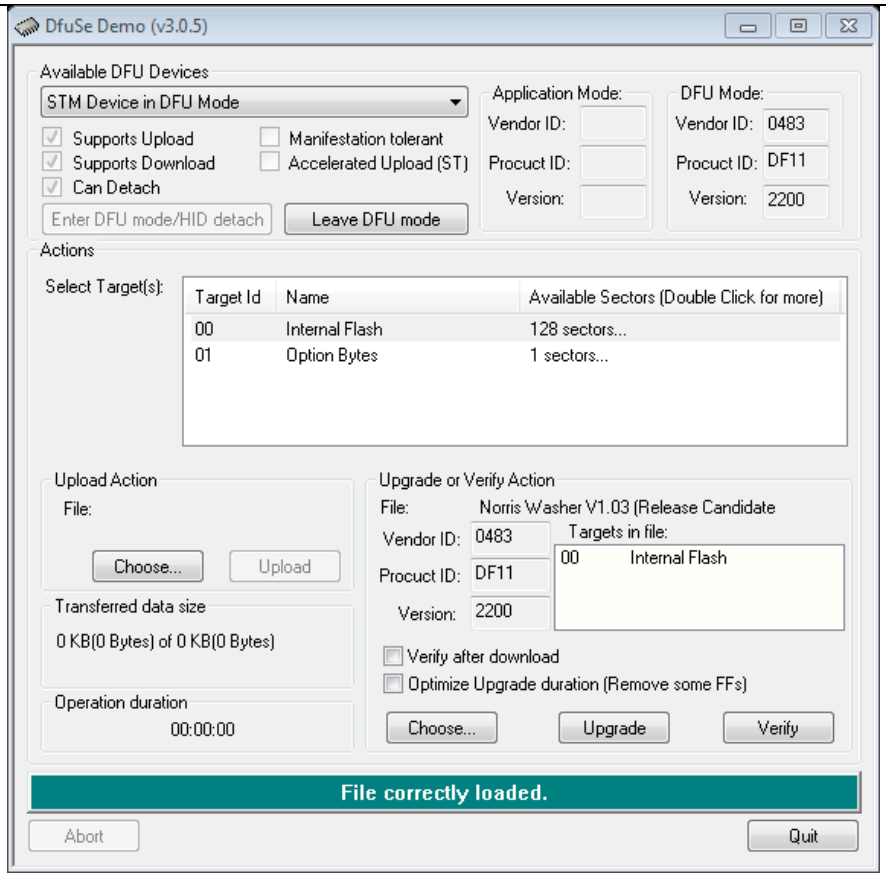
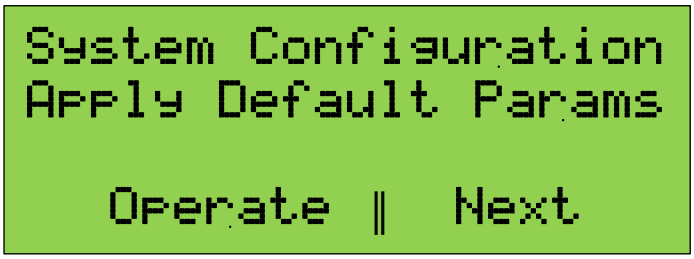
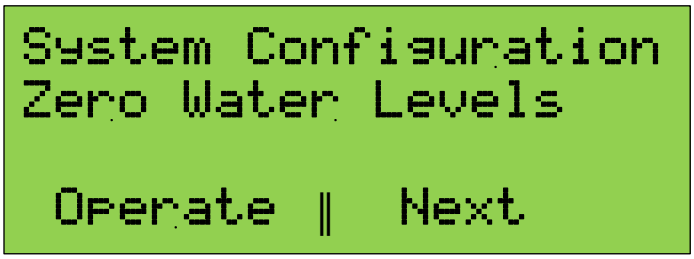
After plugging in the USB cable, release the power button, your PC/Laptop it should displace USB Device is Unrecognisable (this is normal).

Once the board has connected (this may take a few minutes for the first connection) it will appear in the available DFU Devices in the top dropdown box.

Once this has appeared select the choose button, and select the Norris Washer V*.**.dfu file



It will display that the file is

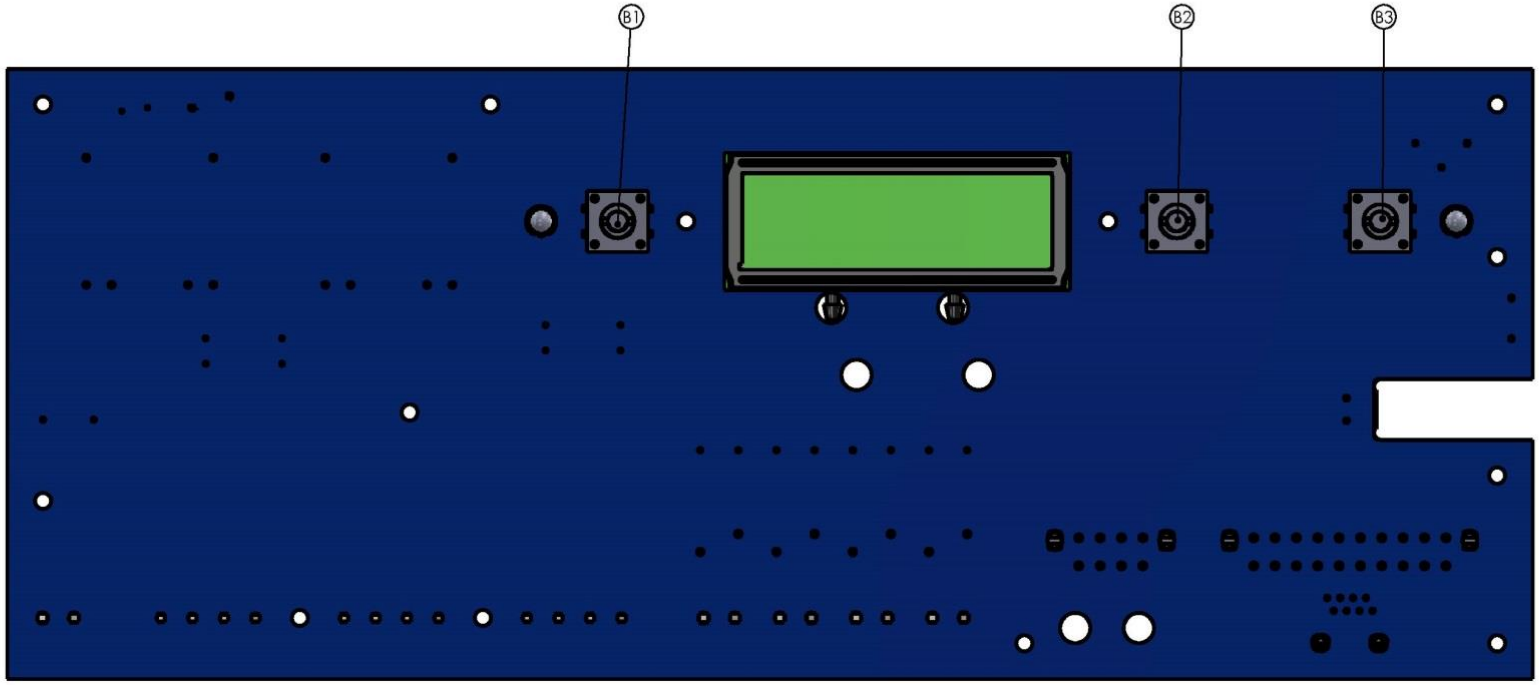
correctly loaded, once this appears, click on the “Upgrade” button; it will come up with a message asking if you want to continue, click YES. Once you have clicked yes it should take around 15 seconds to complete the update. Once it has completed unplug the control board, resecure the board cover gasket and plate.	
Before turning the machine back ON, press and hold the Cycle (B2) & Start (B3) Button’s for 5 seconds to entre system configuration, and select operate on Apply Default Params (cycle button (B2))	
Also re-zero the water level sensors, **(please ensure that both the Rinse & Wash tanks are empty before doing this)**	
Once the default params have been applied and level sensors zeroed, press and hold the Cycle (B2) & Start (B3) for 5 seconds to turn the machine back OFF. Updates complete turn the machine on.	

PART TOOLED FROM 3D FILE

REFER TO TITLE BLOCK FOR FILE NAME

2D DRAWING DESCRIBES CRITICAL DIMENSIONS AND TOLERANCES AND ALL OTHER DETAILS NOT INCLUDED IN 3D FILE

KEY	DESCRIPTION
B1	Power Button ON/OFF
B2	Select Cycle
B3	Start



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e: damien@norris.com.au

	NAME	DATE
DRAWN	D. Berry	11/03/2016
CHK'D	T. Stewart	
APPV'D		

FINISH: N/A

MATERIAL: N/A

WEIGHT: N/A

TITLE: NORRIS ADVANCED WASH CONTROL

DWG NO. 141-10-070

REVISION

SCALE 1:1 SHEET SIZE A3 SHEET 2 OF 2

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
2 PLACE DECIMAL 0.00 ±0.10mm
1 PLACE DECIMAL 0.0 ±0.25mm
0 PLACE DECIMAL 0 ±0.50mm
ANGULAR ±0.5°

DO NOT SCALE DRAWING

DEBUR AND BREAK SHARP EDGES

REVISIONS

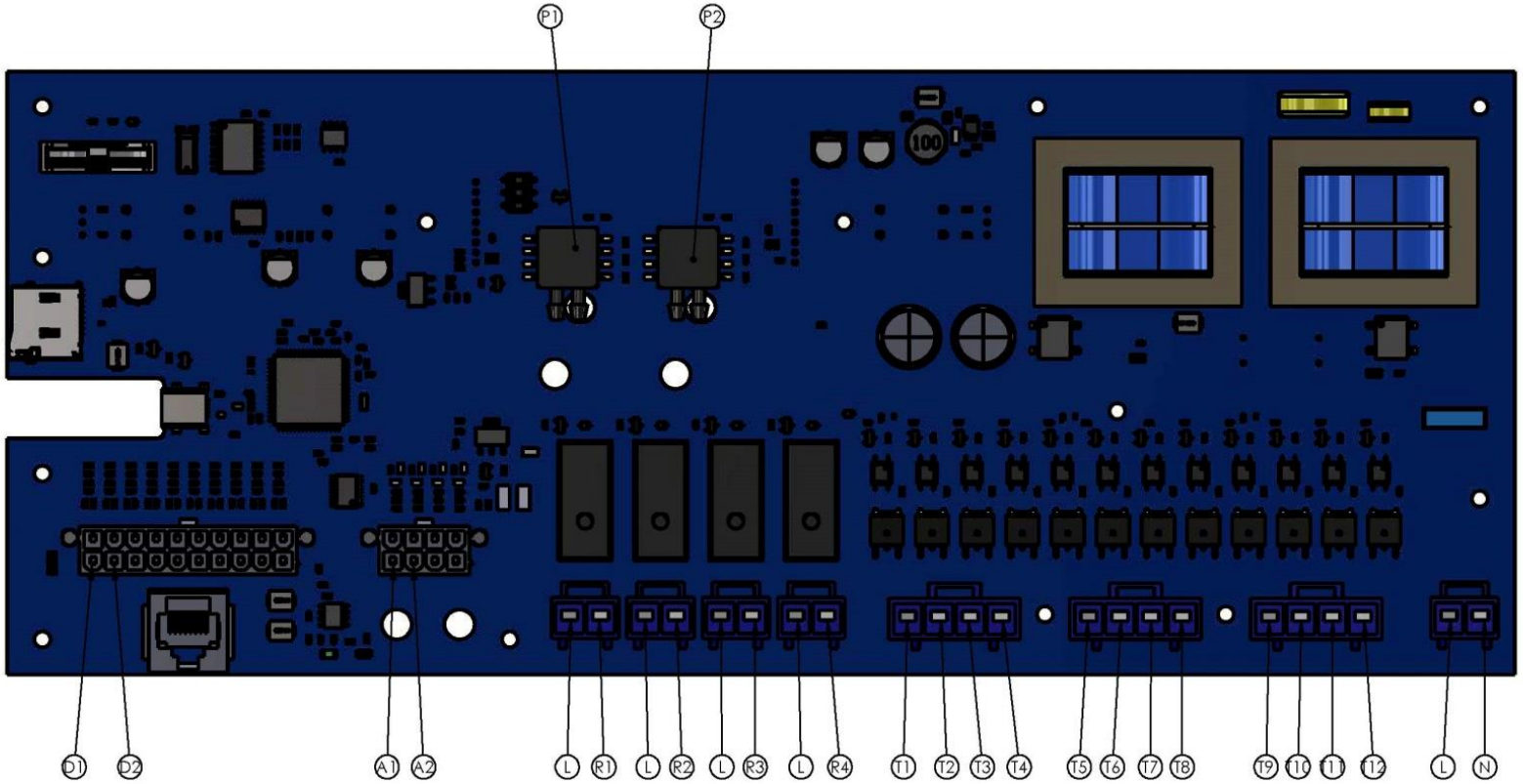
ZONE	REV.	DESCRIPTION	DATE	APPROVED

PART TOOLED FROM 3D FILE

REFER TO TITLE BLOCK FOR FILE NAME

2D DRAWING DESCRIBES CRITICAL DIMENSIONS AND TOLERANCES AND ALL OTHER DETAILS NOT INCLUDED IN 3D FILE

KEY	DESCRIPTION
T1	Main Contactor/Relay
T2	Rinse Tank Elements
T3	Wash Tank Elements
T4	Wash Pump
T5	Solenoid HOT
T6	Solenoid COLD
T7	Detergent Pump
T8	Rinse Aid Pump
T9	Drain Pump
T10	N/A
T11	N/A
T12	N/A
R1	Rinse Pump 0.5HP
R2	Wash Pump 0.5HP
R3	Wash Tank 500w
R4	N/A
D1	Main Contactor/Relay
D2	Hood/Door Switch
A1	Rinse Tank Probe
A2	Wash Tank Probe
P1	Rinse Tank Pressure Switch
P2	Wash Tank Pressure Switch
L	Live Power
N	Neutral



ZONE	REV.	DESCRIPTION	DATE	APPROVED
REVISIONS				

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
2 PLACE DECIMAL 0.00 ±0.10mm
1 PLACE DECIMAL 0.0 ±0.25mm
0 PLACE DECIMAL 0 ±0.50mm
ANGULAR ±0.5°

DO NOT SCALE DRAWING

DEBUR AND BREAK SHARP EDGES

	NAME	DATE
DRAWN	D. Berry	11/03/2016
CHK'D	T. Stewart	
APPV'D		
FINISH:	N/A	
MATERIAL:	N/A	
WEIGHT: N/A		

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w: www.norris.com.au
e: damien@norris.com.au

TITLE:

NORRIS ADVANCED WASH CONTROL

DWG NO. 141-10-070

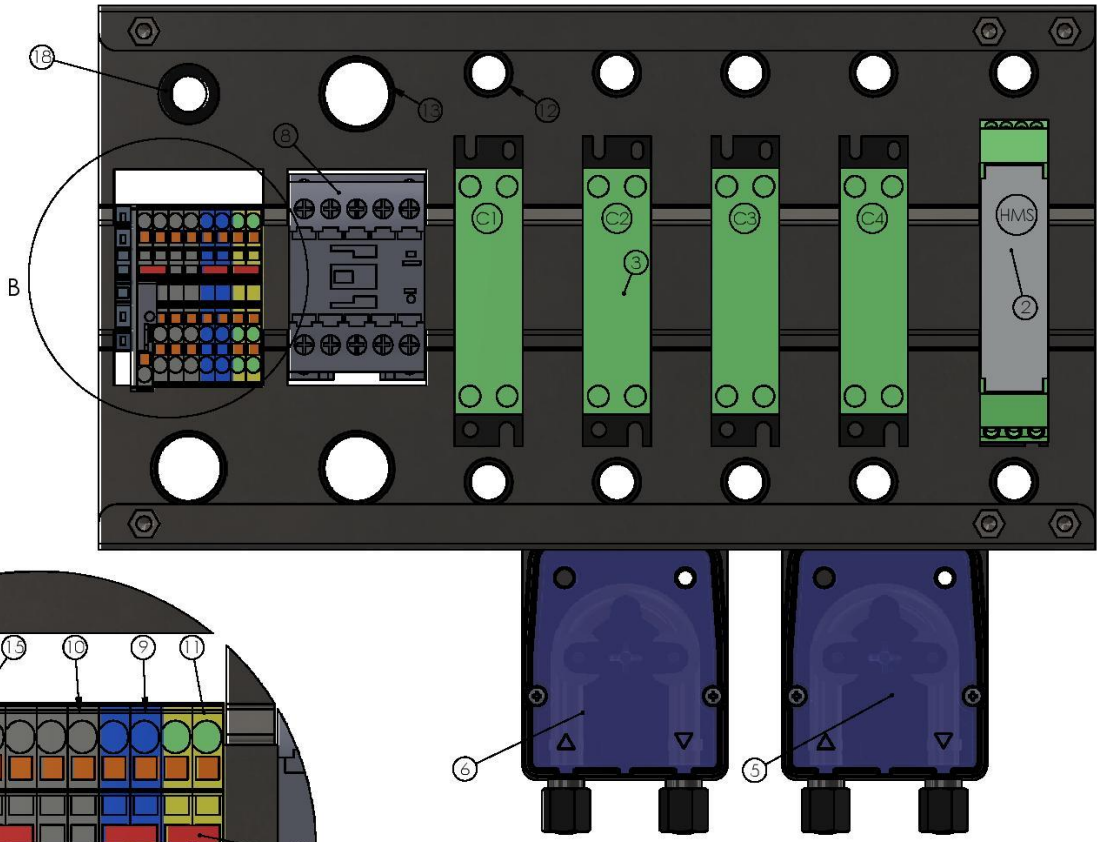
REVISION

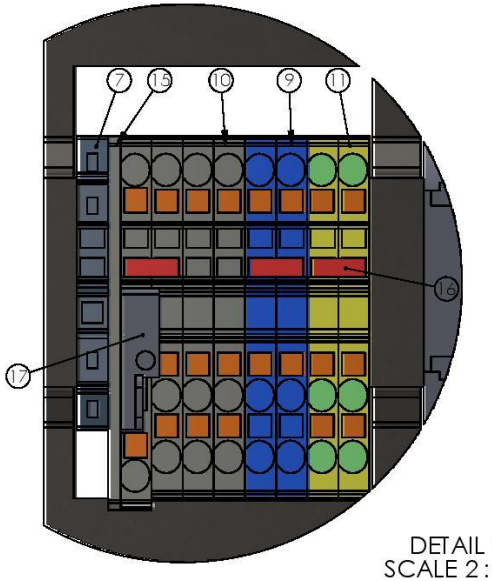
SCALE 1:1 SHEET SIZE A3 SHEET 1 OF 2

PART TOOLED FROM 3D FILE

REFER TO TITLE BLOCK FOR FILE NAME

2D DRAWING DESCRIBES CRITICAL DIMENSIONS AND TOLERANCES AND ALL OTHER DETAILS NOT INCLUDED IN 3D FILE





DETAIL B
SCALE 2 : 1.7

ITEM NO.	PART NUMBER	DESCRIPTION	BT2000/QTY.
1	22-224	ELECTRICAL MOUNTING BOX	1
2	042-10-790	HYBRID MOTOR STARTER	1
3	042-10-791	SOLID STATE CONTACTOR 20AMP	5
4	117-10-025	NUTSERT SS M6 CLOSED END	6
5	136-17-085	DETERGENT PUMP	1
6	136-17-087	RINSE AID PUMP	1
7	168-10-793	CLIPFLEX 35-5 END STOP	1
8	046-10-301	CONTACTOR MOELLER DIL M9	1
9	168-10-795	PUSH IN TERMINAL TWIN - NEUTRAL	2
10	168-10-796	PUSH IN TERMINAL TWIN - ACTIVE	3
11	168-10-794	PUSH IN TERMINAL TWIN - EARTH	2
12	018-10-323	BUSH M16 NYL SNAP	10
13	018-66-130	BUSH M25.5 NYL SNAP	3
14	168-10-732	PT2.5-TG FUSE TERMINAL	1
15	168-10-797	TERMINAL END COVER DISCONNECT TYPE	1
16	168-10-798	FBS 2-5 2 POS JUMPER	3
17	168-10-731	FUSE PLUG WITH LED	1
18	075-10-646	Cable Glands M20X1.5	1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

p: +61 2 49714500
w: www.norris.com.au
e: damien@norris.com.au

	NAME	DATE
DRAWN	D. Berry	04/09/2015
CHK'D	T. Stewart	
APPV'D		
FINISH:	N/A	
MATERIAL:	N/A	
WEIGHT: 2294.14		

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
2 PLACE DECIMAL 0.00 ± 0.10mm
1 PLACE DECIMAL 0.0 ± 0.25mm
0 PLACE DECIMAL 0 ± 0.50mm
ANGULAR ± 0.5°

DO NOT SCALE DRAWING

DEBUR AND BREAK SHARP EDGES

TITLE:
BT2000 CONTROL BOX

DWG NO. UPRIGHT ELECT

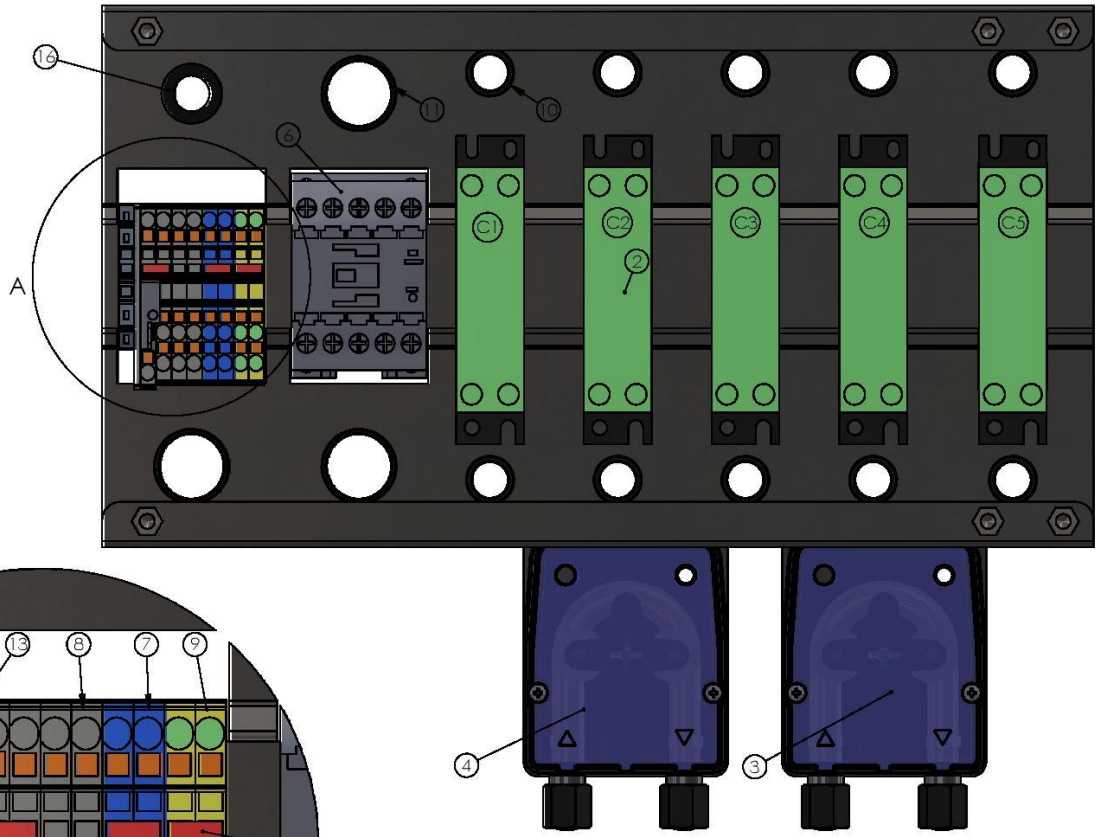
REVISION

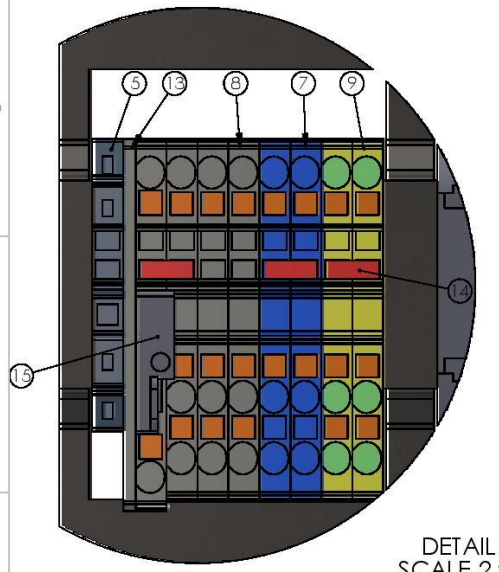
SCALE 1:1.7 SHEET SIZE A3 SHEET 2 OF 3

PART TOOLED FROM 3D FILE

REFER TO TITLE BLOCK FOR FILE NAME

2D DRAWING DESCRIBES CRITICAL DIMENSIONS AND TOLERANCES AND ALL OTHER DETAILS NOT INCLUDED IN 3D FILE





DETAIL A
SCALE 2 : 1.7

ITEM NO.	PART NUMBER	DESCRIPTION	Default/QTY.
1	22-224	ELECTRICAL MOUNTING BOX	1
2	042-10-791	SOLID STATE CONTACTOR 20AMP	5
3	136-17-085	DETERGENT PUMP	1
4	136-17-087	RINSE AID PUMP	1
5	168-10-793	CLIPFLEX 35-5 END STOP	1
6	046-10-301	CONTACTOR MOELLER DIL M9	1
7	168-10-795	PUSH IN TERMINAL TWIN - NEUTRAL	2
8	168-10-796	PUSH IN TERMINAL TWIN - ACTIVE	3
9	168-10-794	PUSH IN TERMINAL TWIN - EARTH	2
10	018-10-323	BUSH M16 NYL SNAP	10
11	018-66-130	BUSH M25.5 NYL SNAP	3
12	168-10-732	PT2.5-TG FUSE TERMINAL	1
13	168-10-797	TERMINAL END COVER DISCONNECT TYPE	1
14	168-10-798	FBS 2-5.2 POS JUMPER	3
15	168-10-731	FUSE PLUG WITH LED	1
16	075-10-646	Cable Glands M20X1.5	1

How to convert 3phase BT700 to a single phase machine:

- Disconect & remove wires from the Main Contactor (T1 & T2) to C1(T1) & C2 (T1)
- L1 & board AC power are connected please do the following
  - Remove Wire from Main Contactor (T3), re-insert it to T1 on Main Contactor.
- Swap the T1 Wires on C2 & C3, this will allow the 3.6kW element to be used in the in the rinse tnak

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
2 PLACE DECIMAL 0.00 ± 0.10mm
1 PLACE DECIMAL 0.0 ± 0.25mm
0 PLACE DECIMAL 0 ± 0.50mm
ANGULAR ± 0.5°

DO NOT SCALE DRAWING

DEBUR AND BREAK SHARP EDGES

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e: damien@norris.com.au

	NAME	DATE
DRAWN	D. Berry	04/09/2015
CHK'D	T. Stewart	
APPV'D		
FINISH:	N/A	
MATERIAL:	N/A	
WEIGHT: 2294.14		

TITLE:

BT700/3 ELECTRICAL BOX

DWG NO. UPRIGHT ELECT

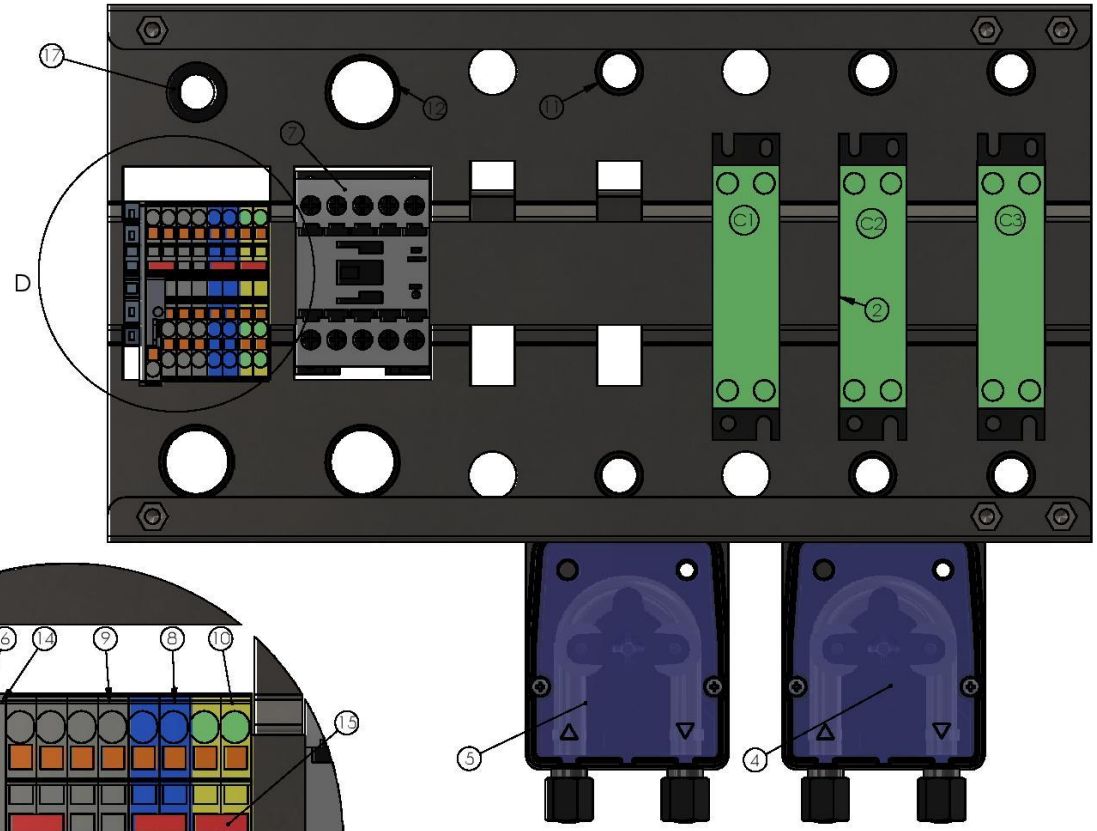
REVISION

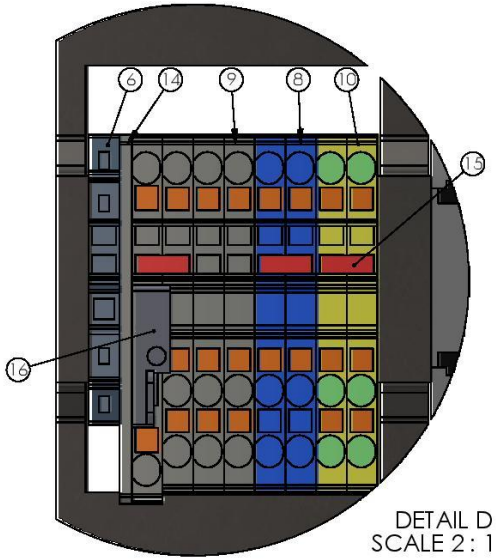
SCALE 1:1.7 SHEET SIZE A3 SHEET 1 OF 3

PART TOOLED FROM 3D FILE

REFER TO TITLE BLOCK FOR FILE NAME

2D DRAWING DESCRIBES CRITICAL DIMENSIONS AND TOLERANCES AND ALL OTHER DETAILS NOT INCLUDED IN 3D FILE





DETAIL D
SCALE 2 : 1.7

ITEM NO.	PART NUMBER	DESCRIPTION	BT700 Mk1/QTY.
1	22-224	ELECTRICAL MOUNTING BOX	1
2	042-10-791	SOLID STATE CONTACTOR 20AMP	3
3	117-10-025	NUTSERT SS M6 CLOSED END	6
4	136-17-085	DETERGENT PUMP	1
5	136-17-087	RINSE AID PUMP	1
6	168-10-793	CLIPFLEX 35-5 END STOP	1
7	046-10-301	CONTACTOR MOELLER DIL M9	1
8	168-10-795	PUSH IN TERMINAL TWIN - NEUTRAL	2
9	168-10-796	PUSH IN TERMINAL TWIN - ACTIVE	3
10	168-10-794	PUSH IN TERMINAL TWIN - EARTH	2
11	018-10-323	BUSH M16 NYL SNAP	6
12	018-66-130	BUSH M25.5 NYL SNAP	3
13	168-10-732	PT2.5-TG FUSE TERMINAL	1
14	168-10-797	TERMINAL END COVER DISCONNECT TYPE	1
15	168-10-798	FBS 2-5 2 POS JUMPER	3
16	168-10-731	FUSE PLUG WITH LED	1
17	075-10-646	Cable Glands M20X1.5	1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
2 PLACE DECIMAL 0.00 ± 0.10mm
1 PLACE DECIMAL 0.0 ± 0.25mm
0 PLACE DECIMAL 0 ± 0.50mm
ANGULAR: ± 0.5°

DO NOT SCALE DRAWING

DEBUR AND BREAK SHARP EDGES

	NAME	DATE
DRAWN	D. Berry	04/09/2015
CHK'D	T. Stewart	
APPV'D		
FINISH:	N/A	
MATERIAL:	N/A	
WEIGHT: 2294.14		

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e: damien@norris.com.au

TITLE:

BT700Mk1 & BT600 CONTROL BOX

DWG NO. UPRIGHT ELECT

REVISION

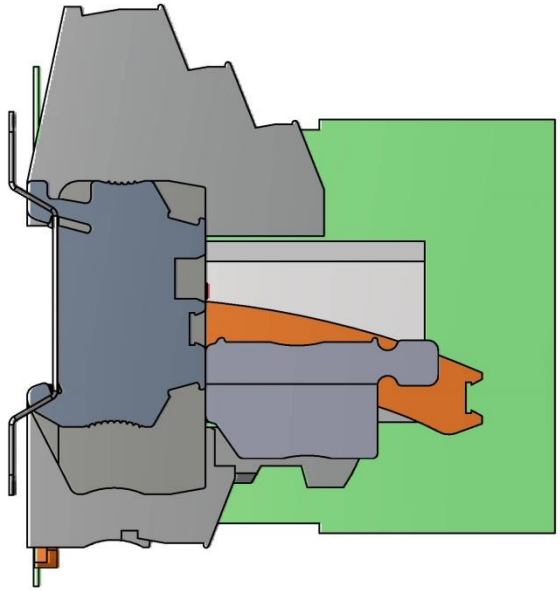
SCALE 1:1.7 SHEET SIZE A3 SHEET 3 OF 3

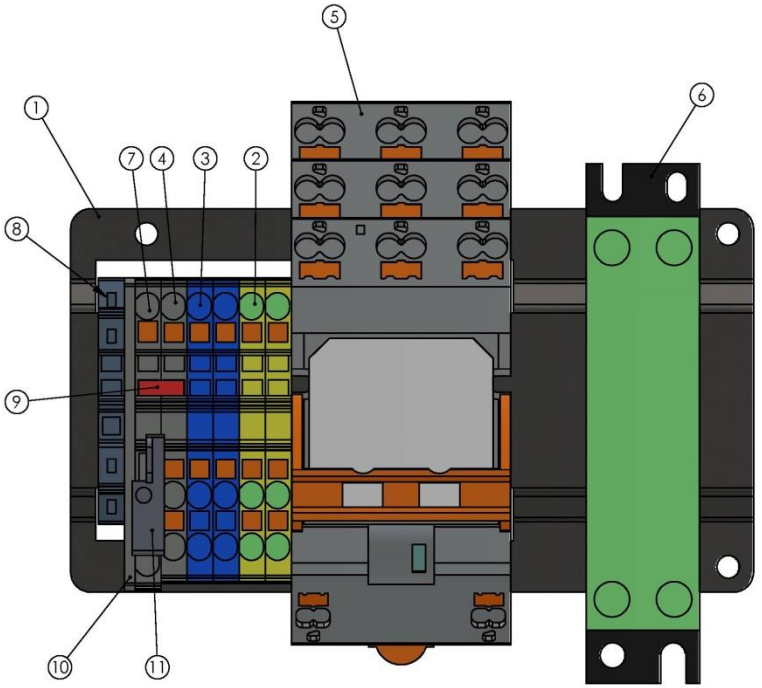
PART TOOLED FROM 3D FILE

REFER TO TITLE BLOCK FOR FILE NAME

2D DRAWING DESCRIBES CRITICAL DIMENSIONS AND TOLERANCES AND ALL OTHER DETAILS NOT INCLUDED IN 3D FILE

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	18-047	Electrical Mount	1
2	168-10-794	PUSH IN TERMINAL TWIN - EARTH	2
3	168-10-795	PUSH IN TERMINAL TWIN - NEUTRAL	2
4	168-10-796	PUSH IN TERMINAL TWIN - ACTIVE	1
5	142-10-792	MOTOR RELAY	1
6	042-10-791	SOLID STATE CONTACTOR 20AMP	1
7	168-10-732	PT2.5-TG FUSE TERMINAL	1
8	168-10-793	CLIPFLEX 35-5 END STOP	1
9	168-10-798	FBS 2-5 2 POS JUMPER	1
10	168-10-797	TERMINAL END COVER DISCONNECT TYPE	1
11	168-10-731	FUSE PLUG WITH LED	1





REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED:
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TOLERANCES:
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1 PLACE DECIMAL 0.0 ± 0.25mm
0 PLACE DECIMAL 0 ± 0.50mm
ANGULAR ± 0.5°

DO NOT SCALE DRAWING

DEBUR AND BREAK SHARP EDGES

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e: damien@norris.com.au

	NAME	DATE
DRAWN	D. Berry	22/08/2016
CHK'D	T. Stewart	
APPV'D		

FINISH: N/A

MATERIAL: N/A

WEIGHT: 525.98

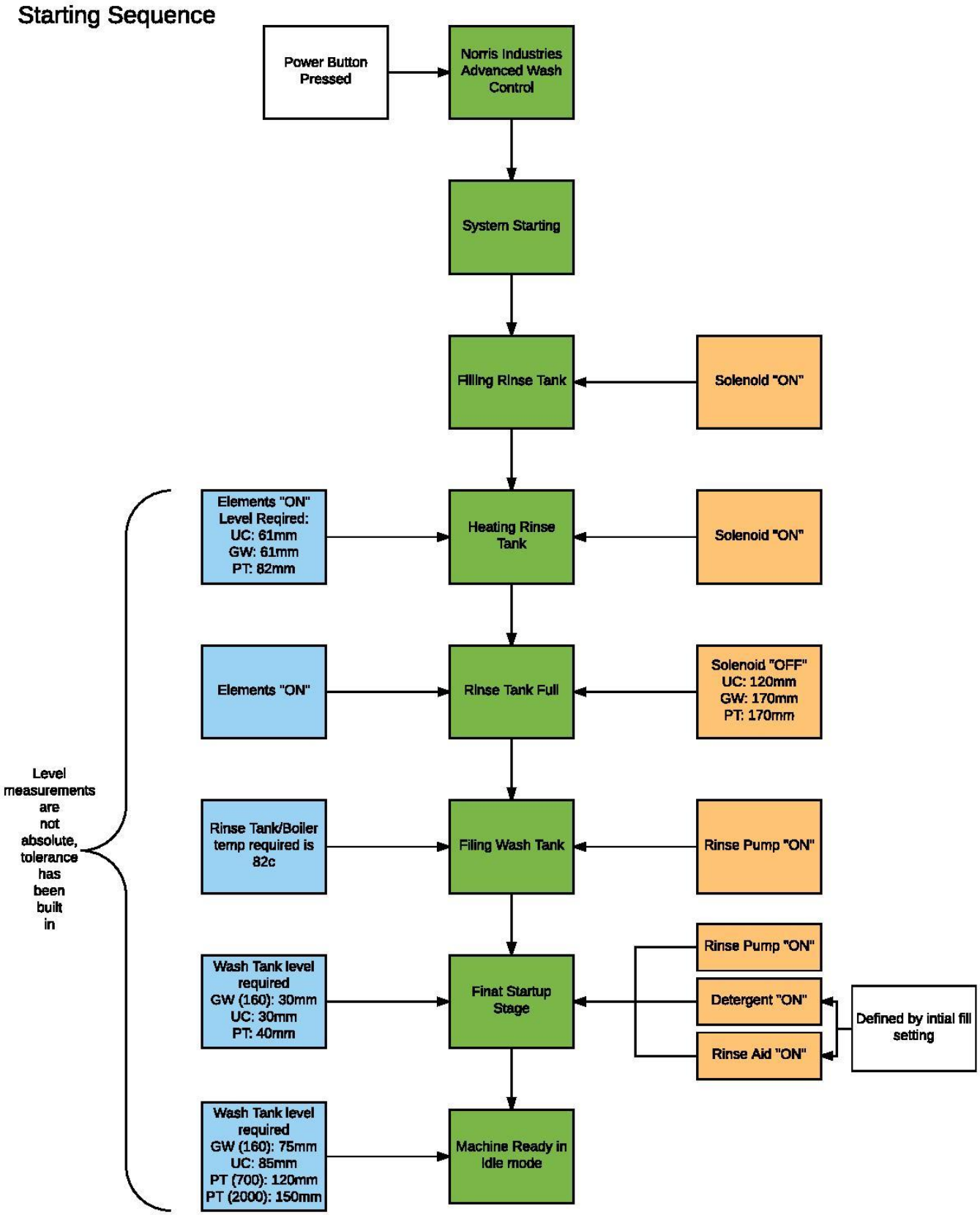
TITLE: Electrical Mount Assy

DWG NO. Elect Mount

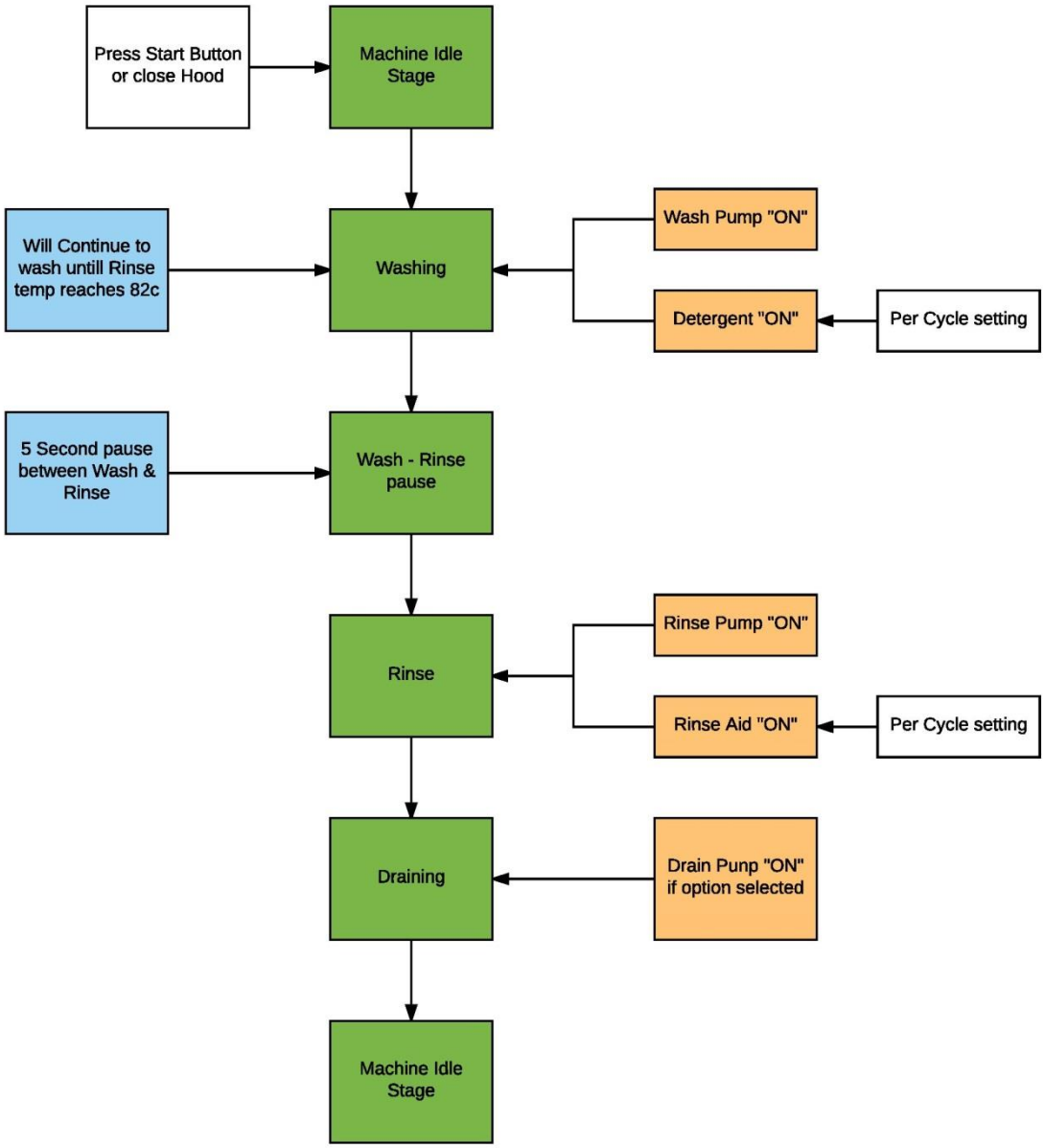
REVISION

SCALE 1:1 SHEET SIZE A3 SHEET 1 OF 1

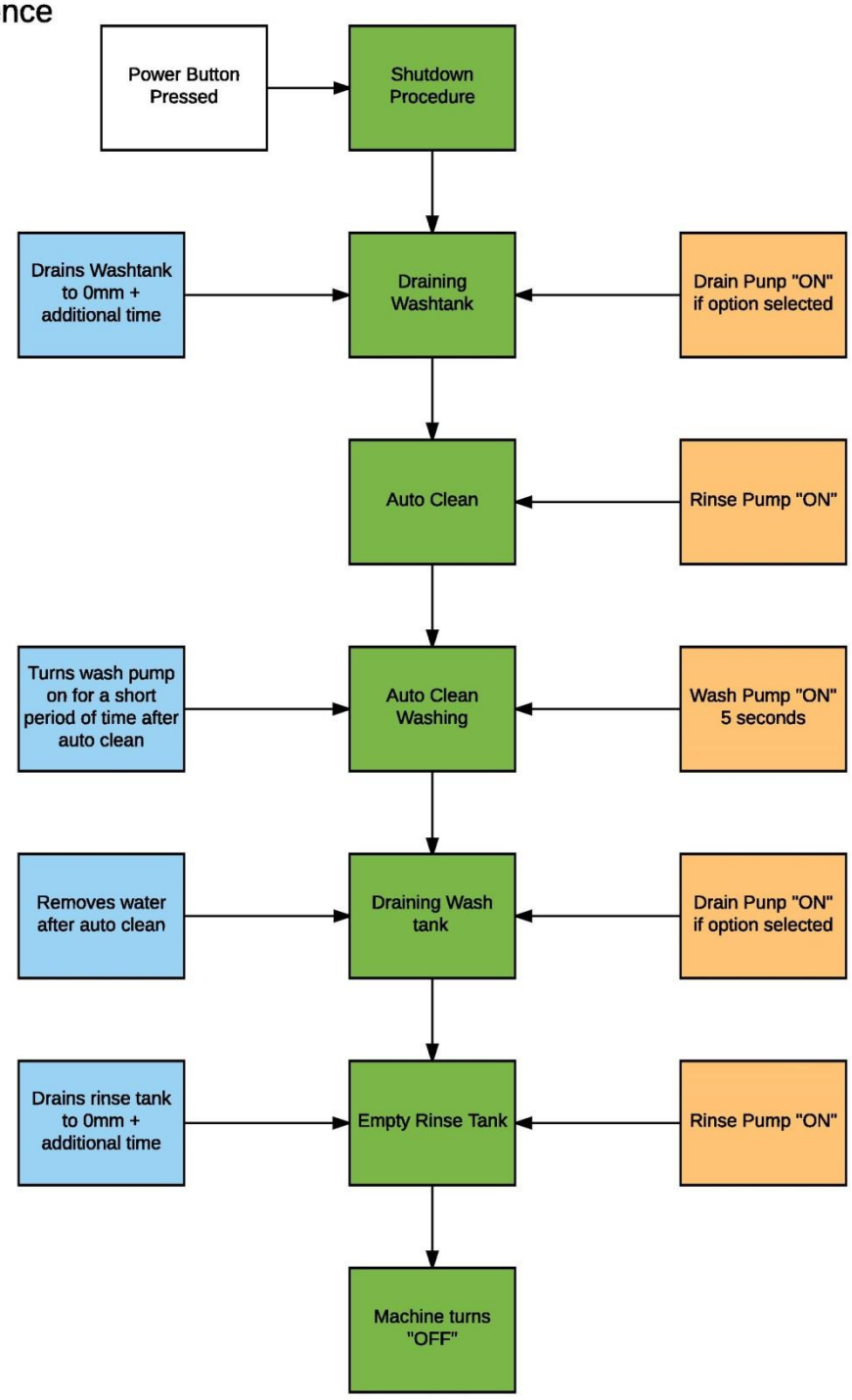
Starting Sequence

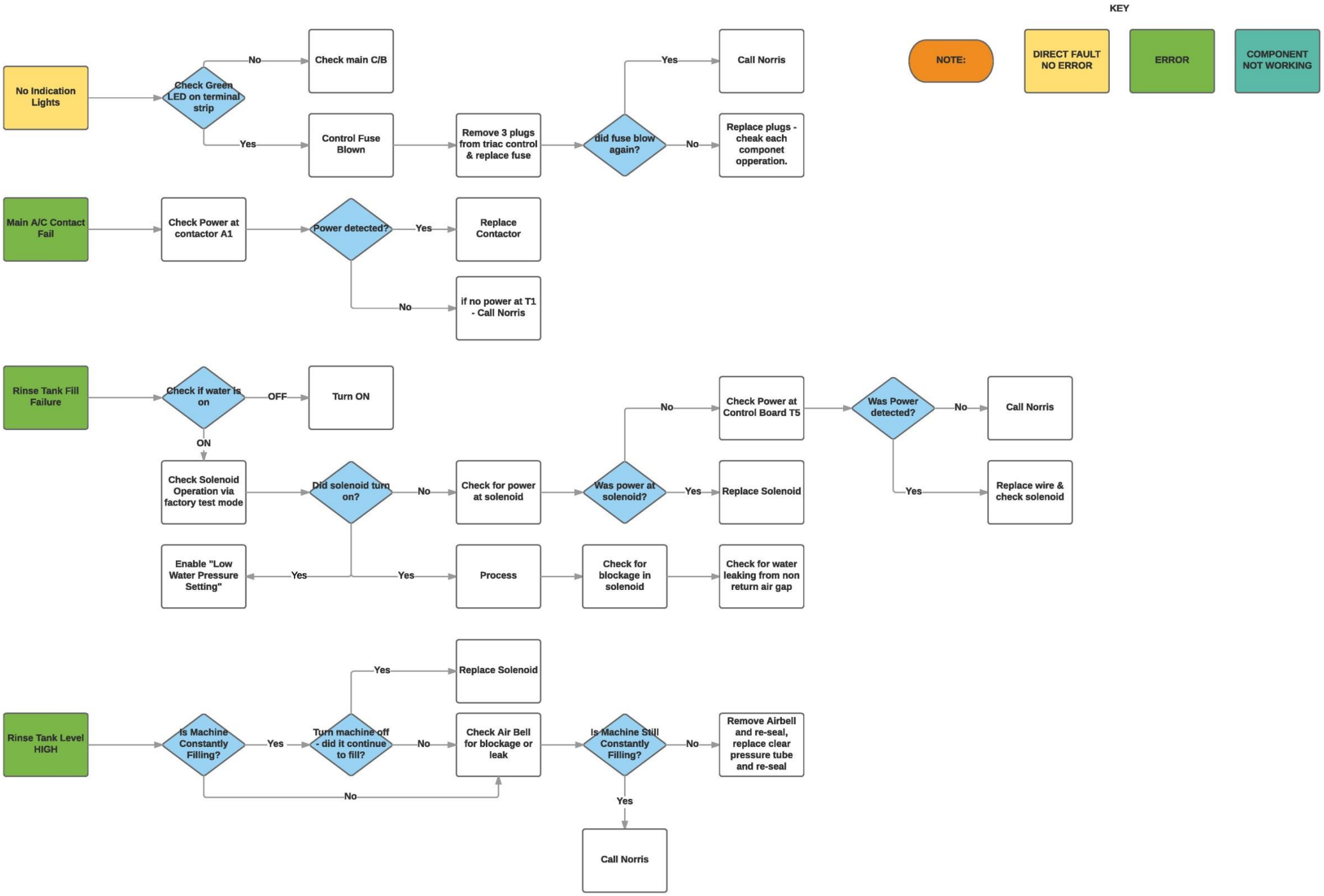


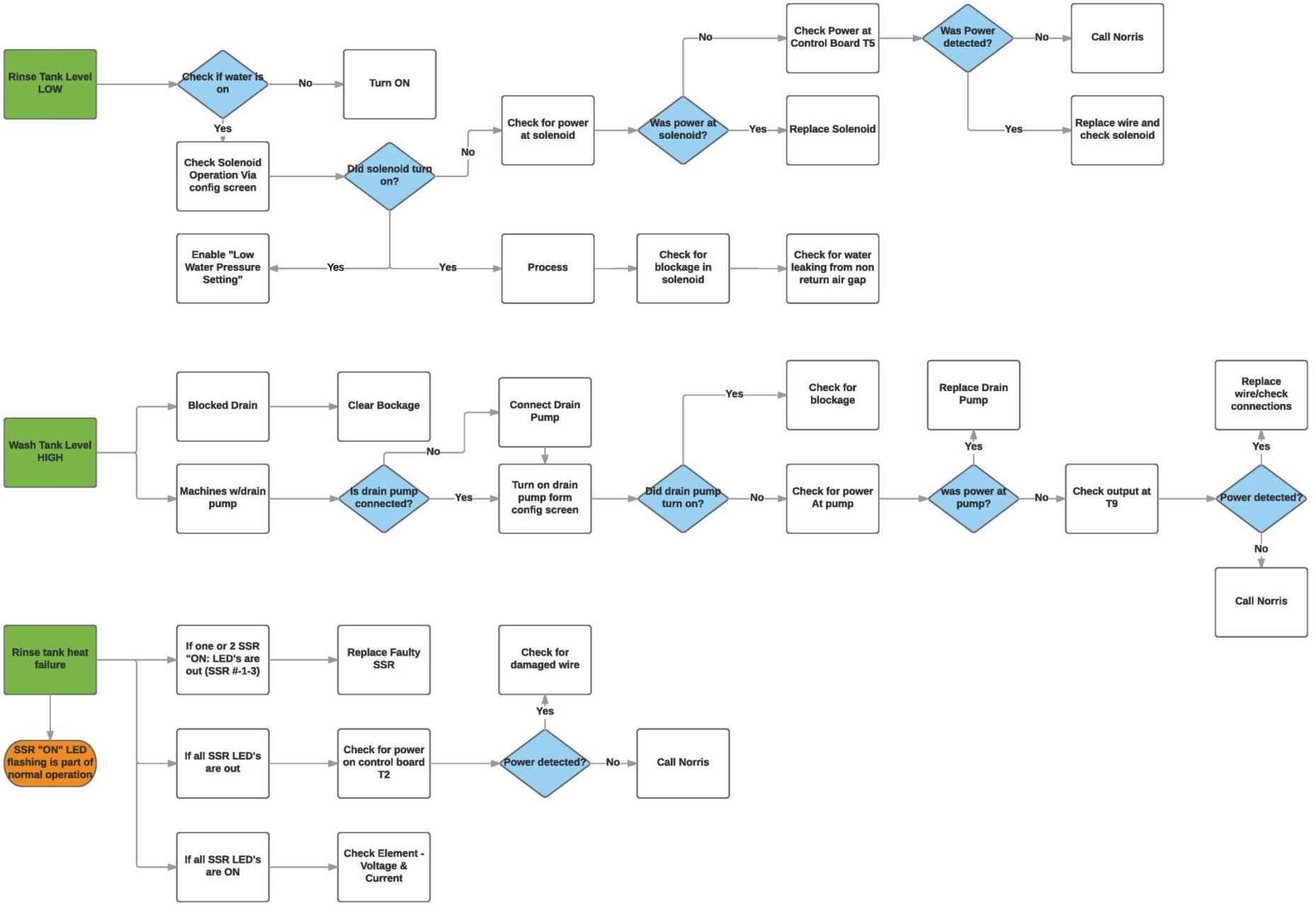
Cycle Sequence

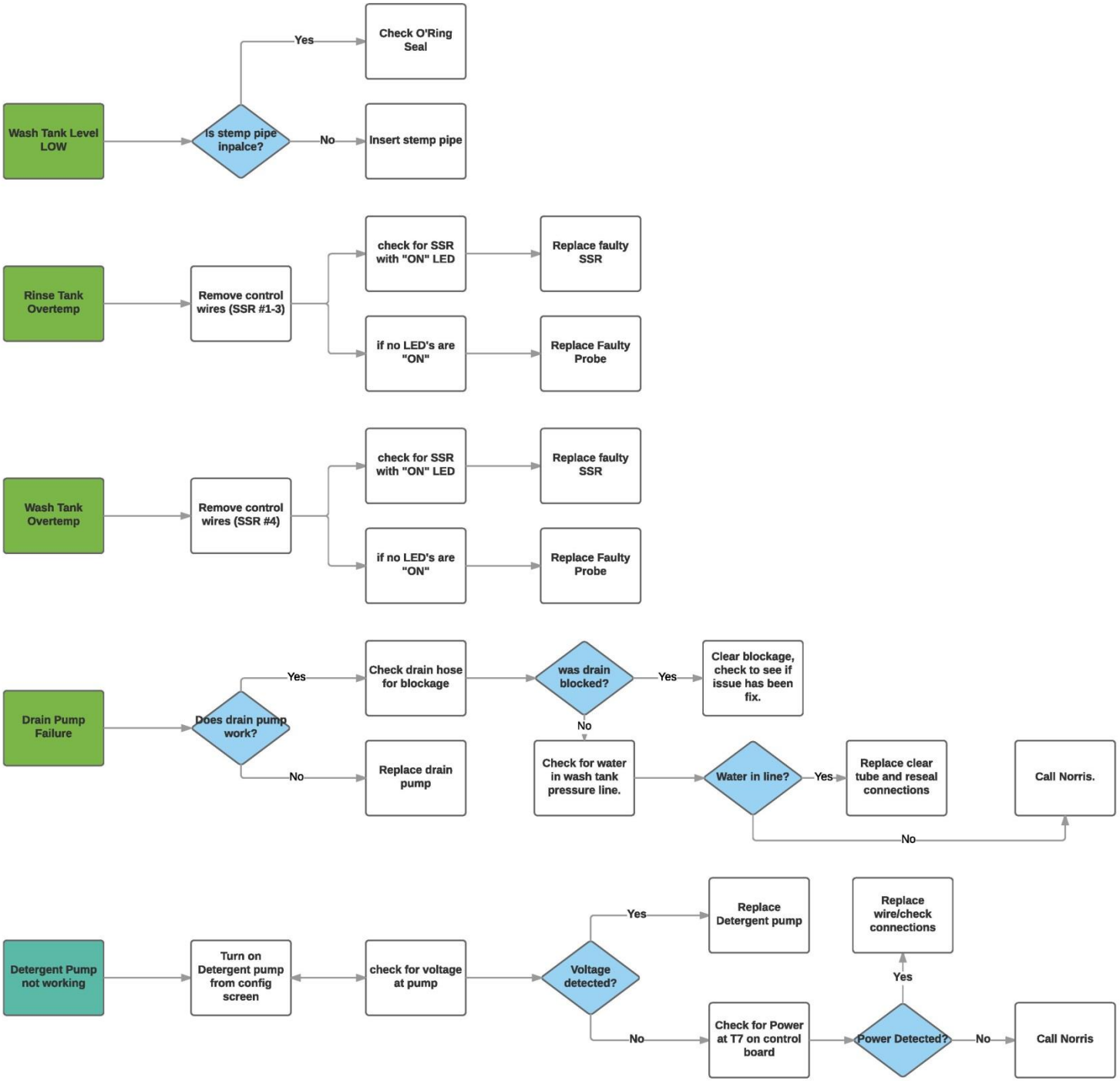


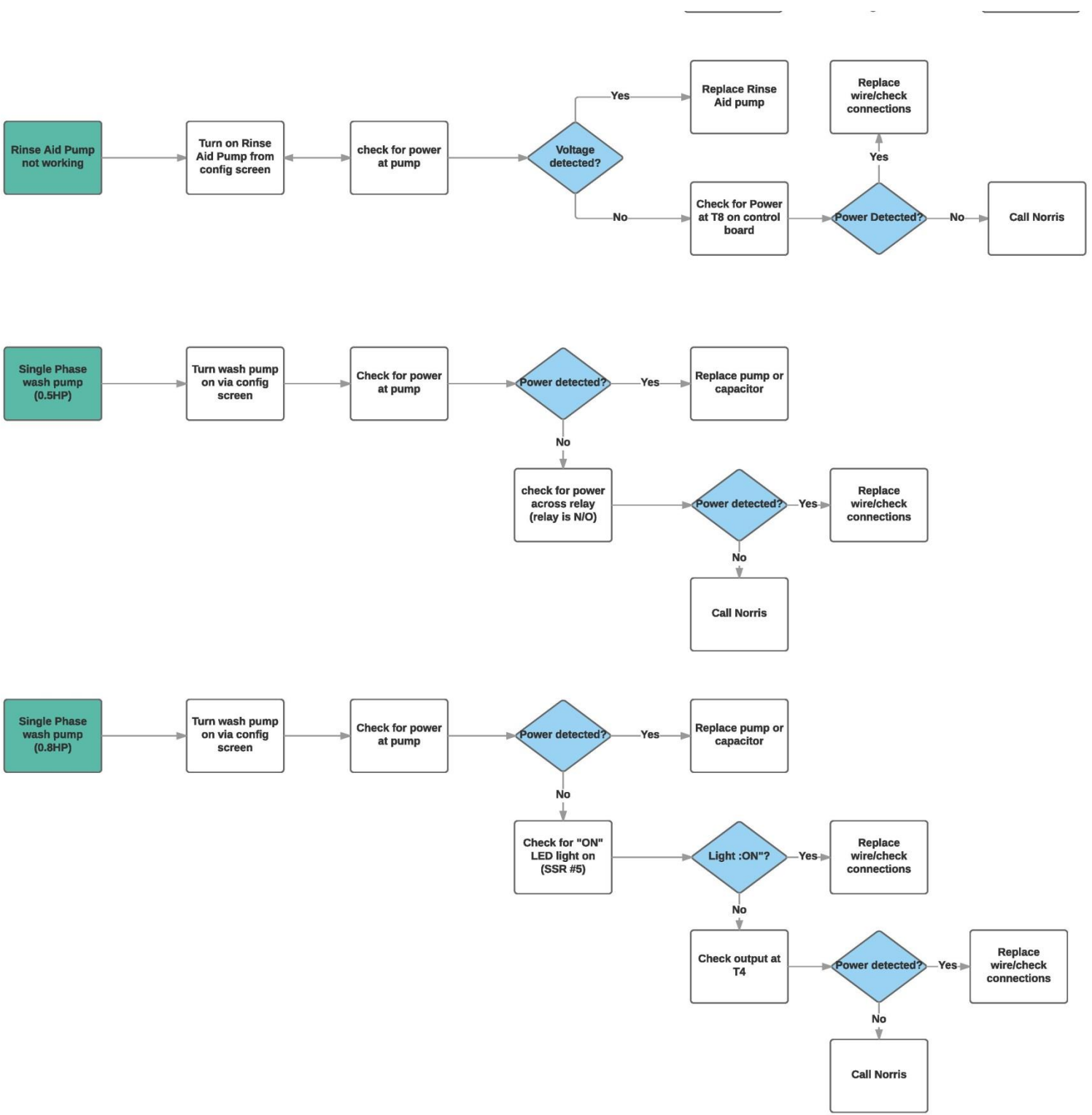
Shutdown Sequence

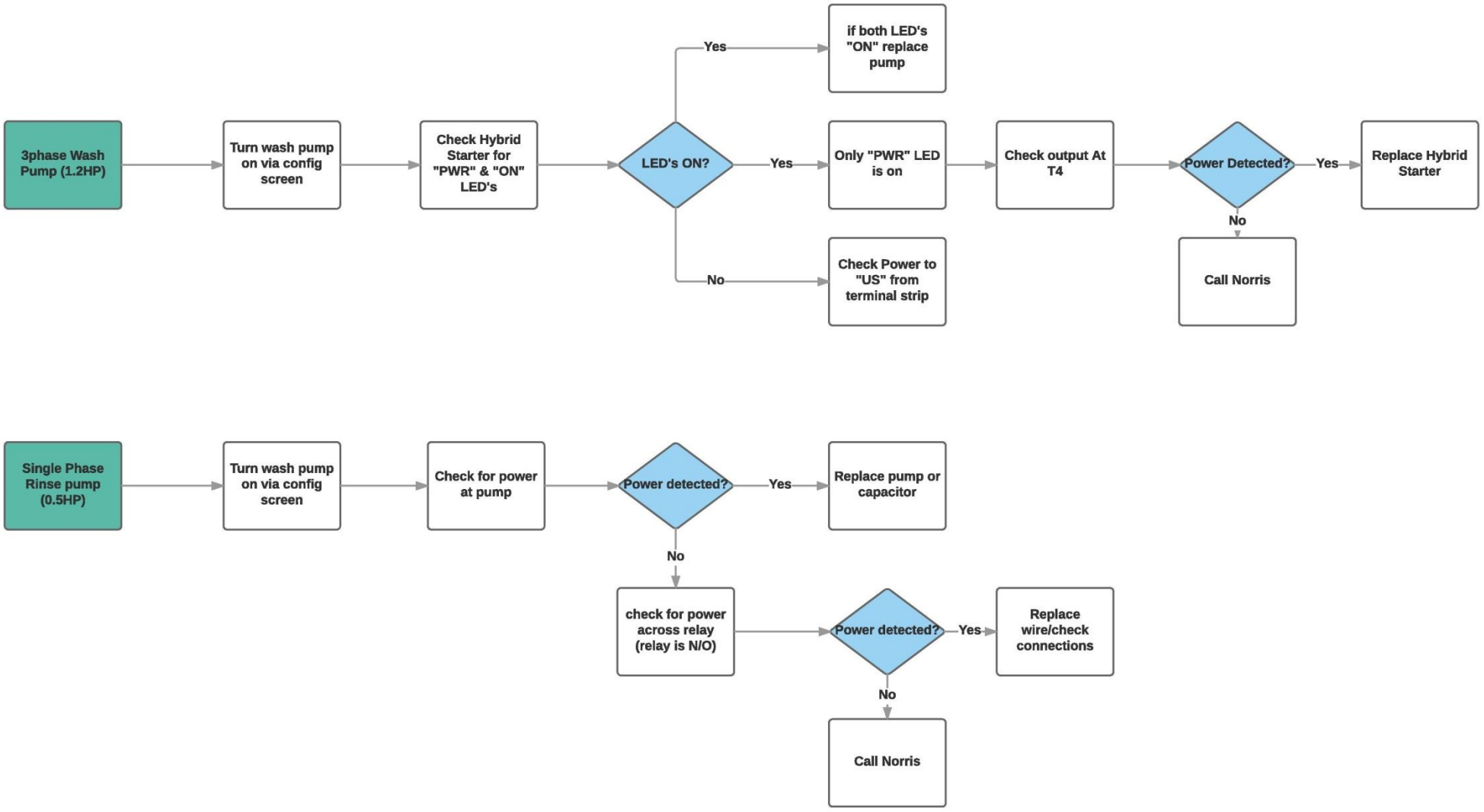



KEY
NOTE:
DIRECT FAULT NO ERROR
ERROR
COMPONENT NOT WORKING
No Indication Lights
Check Green LED on terminal strip
No
Check main C/B
Yes
Control Fuse Blown
Remove 3 plugs from triac control & replace fuse
did fuse blow again?
Yes
Call Norris
No
Replace plugs - cheak each componet opperation.
Main A/C Contact Fail
Check Power at contactor A1
Power detected?
Yes
Replace Contactor
No
if no power at T1 - Call Norris
Rinse Tank Fill Failure
Check if water is on
OFF
Turn ON
ON
Check Solenoid Operation via factory test mode
Did solenoid turn on?
No
Check for power at solenoid
Was power at solenoid?
No
Check Power at Control Board T5
Was Power detected?
No
Call Norris
Yes
Replace wire & check solenoid
Yes
Replace Solenoid
Enable "Low Water Pressure Setting"
Yes
Yes
Process
Check for blockage in solenoid
Check for water leaking from non return air gap
Rinse Tank Level HIGH
Is Machine Constantly Filling?
Yes
Turn machine off - did it continue to fill?
Yes
Replace Solenoid
No
Check Air Bell for blockage or leak
Is Machine Still Constantly Filling?
No
Remove Airbell and re-seal, replace clear pressure tube and re-seal
No
Yes
Call Norris


Rinse Tank Level LOW
Check if water is on
No
Turn ON
Yes
Check Solenoid Operation Via config screen
Did solenoid turn on?
No
Check for power at solenoid
Was power at solenoid?
No
Check Power at Control Board T5
Was Power detected?
No
Call Norris
Yes
Replace wire and check solenoid
Yes
Replace Solenoid
Yes
Enable "Low Water Pressure Setting"
Yes
Process
Check for blockage in solenoid
Check for water leaking from non return air gap
Wash Tank Level HIGH
Blocked Drain
Clear Bockage
Machines w/drain pump
Is drain pump connected?
No
Connect Drain Pump
Yes
Turn on drain pump form config screen
Did drain pump turn on?
Yes
Check for blockage
No
Check for power At pump
was power at pump?
Yes
Replace Drain Pump
No
Check output at T9
Power detected?
Yes
Replace wire/check connections
No
Call Norris
Rinse tank heat failure
SSR "ON" LED flashing is part of normal operation
If one or 2 SSR "ON: LED's are out (SSR #-1-3)
Replace Faulty SSR
If all SSR LED's are out
Check for power on control board T2
Power detected?
Yes
Check for damaged wire
No
Call Norris
If all SSR LED's are ON
Check Element - Voltage & Current


Wash Tank Level LOW
Is stemp pipe inpalce?
Yes
Check O'Ring Seal
No
Insert stemp pipe
Rinse Tank Overtemp
Remove control wires (SSR #1-3)
check for SSR with "ON" LED
Replace faulty SSR
if no LED's are "ON"
Replace Faulty Probe
Wash Tank Overtemp
Remove control wires (SSR #4)
check for SSR with "ON" LED
Replace faulty SSR
if no LED's are "ON"
Replace Faulty Probe
Drain Pump Failure
Does drain pump work?
Yes
Check drain hose for blockage
was drain blocked?
Yes
Clear blockage, check to see if issue has been fix.
No
Check for water in wash tank pressure line.
Water in line?
Yes
Replace clear tube and reseal connections
Call Norris.
No
No
Replace drain pump
Detergent Pump not working
Turn on Detergent pump from config screen
check for voltage at pump
Voltage detected?
Yes
Replace Detergent pump
No
Check for Power at T7 on control board
Power Detected?
Yes
Replace wire/check connections
No
Call Norris


Rinse Aid Pump not working
Turn on Rinse Aid Pump from config screen
check for power at pump
Voltage detected?
Yes
Replace Rinse Aid pump
No
Check for Power at T8 on control board
Power Detected?
Yes
Replace wire/check connections
No
Call Norris
Single Phase wash pump (0.5HP)
Turn wash pump on via config screen
Check for power at pump
Power detected?
Yes
Replace pump or capacitor
No
check for power across relay (relay is N/O)
Power detected?
Yes
Replace wire/check connections
No
Call Norris
Single Phase wash pump (0.8HP)
Turn wash pump on via config screen
Check for power at pump
Power detected?
Yes
Replace pump or capacitor
No
Check for "ON" LED light on (SSR #5)
Light :ON"?
Yes
Replace wire/check connections
No
Check output at T4
Power detected?
Yes
Replace wire/check connections
No
Call Norris


3phase Wash Pump (1.2HP)
Turn wash pump on via config screen
Check Hybrid Starter for "PWR" & "ON" LED's
LED's ON?
Yes
if both LED's "ON" replace pump
Yes
Only "PWR" LED is on
Check output At T4
Power Detected?
Yes
Replace Hybrid Starter
No
Call Norris
No
Check Power to "US" from terminal strip
Single Phase Rinse pump (0.5HP)
Turn wash pump on via config screen
Check for power at pump
Power detected?
Yes
Replace pump or capacitor
No
check for power across relay (relay is N/O)
Power detected?
Yes
Replace wire/check connections
No
Call Norris