



**BUILT TO LAST**

Makers of Commercial Dish and Glasswashers

PROUDLY AUSTRALIAN MADE

— Since 1954 —

# **Norris Upright Dishwasher**

**(AP-2500, AP-750) Fast Response (AWC)**

## **Operation Manual**



Rev No. 2

9/4/2018

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At the time of printing, this document is accurate and complete. In order to offer a reliable product with a long service life and advanced technology, the manufacturer reserves the right to modify the electrical, technical and aesthetic features of this appliance and replace any of its parts without notice, as deemed necessary.

# 1 Introduction

Thank you for choosing a Norris Dishwasher. Since 1954 Norris has been manufacturing & supplying the hospitality industry our range of commercial glass and dishwashers.

In true Australian tradition, our innovative founder Vince Norris designed and produced the first Australian commercial glass washer in his garage. We are an Australian owned company and to this day our products are still proudly Australian made.

We have grown from our humble beginnings into our current headquarters and manufacturing plant located in Caves Beach NSW.

Norris believes that “We would like to leave the world a better place than when we found it” and was the recipient of the 2016 HMA award for “Excellence in Environmentally Responsible Manufacturing Practices.”

Due to continued product development some details in this manual may vary to the appliance. This manual is correct at the time of printing and every effort is made to ensure that all information in this manual is current and correct.

Information contained in this manual is intended as a guide to the safe use and long life of the appliance, and should be kept handy for future reference.

For more information about the appliance not covered in this manual, or for spare parts, contact Norris Industries.

**Phone - 02 4971 4500**

**Free call - 1800 803 569**

**Fax - 02 4972 1064**

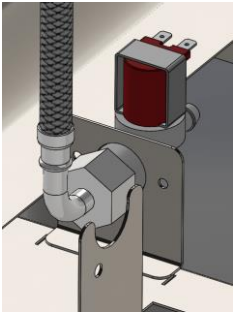
**[www.norris.com.au](http://www.norris.com.au)**

## 2 INSTALLATION

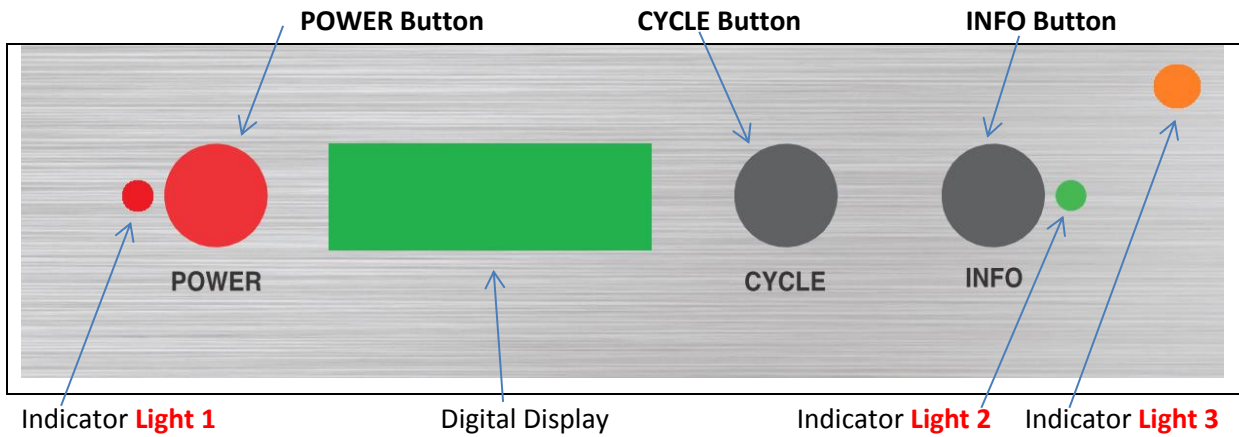
### 2.1 Requirements

<b>Qualified Electrician or Disconnect/Reconnect Technician</b>	Have the machine connected by qualified technicians in accordance with the locally applicable regulations (water, waste water, electrics).
<b>A safe location</b>	The dishwashing machine must not be installed in a potentially explosive atmosphere or in areas subject to frost.
<b>Cold Water Tap</b>	Cold water tap (½" BSP male) located adjacent to the machine to allow the water supply to be isolated if maintenance is required. Water pressure requirements are: 10 L/m minimum at 200-400 kPa max. Higher water pressure can cause damage to the machine which may void warranties, please contact Norris for more information.
<b>Drain Connection Point</b>	Drain connection point within 1 metre of the machine. The hot water discharge rate is approximately 16Lt's p/min at up to 65°C.
<b>Detergent &amp; Rinse Aid Supply</b>	Detergent and rinse aid supply containers within 1m.
<b>3 phase power supply</b>	A 20amp per phase, 3 phase power supply located within 1 metre of the machine and within easy reach, but not behind the machine.

## 2.2 Positioning & Connecting

Step	Action
<p><b>Warning:</b> Risk of electric shock Failure to connect properly to the power supply can cause mortal danger from electric shock. (Have the machine connected to the power supply by an authorized technician according to the local and national codes. For Australia: in accordance with AS/NZS3500.1)</p>	
<b>1</b>	<b>Position and Level Your Machine</b>
a)	Fit adjustable feet to underside of machine.
b)	Position machine and adjust feet so that the machine is level. <b>Note: Ensure that the machine IS level.</b> If the machine isn't level it may cause issues with the level sensors within the machine, which can lead to the machine flooding.
<b>2</b>	<b>Connect Water</b>
a)	Place a bucket under the tap and turn on to flush any foreign matter from the water line. <b>Note:</b> Failure to do this could result in foreign matter becoming lodged in the solenoid valve causing it to leak, Note: This will not be covered by warranty.
b)	Connect the braided hose to the cold water tap then connect the other end to the solenoid. (See illustrations below)
	 <p><b>Note:</b> Do not over tighten connections.</p>
c)	Turn tap on and check for leaks
<b>3</b>	<b>Pipes and Leads</b>
a)	Connect drain hose to drain spigot.
b)	Connect the power lead from the machine to the power supply. (Check correct amperage). The machine is now ready to be zeroed. <b>Do Not Turn Machine On, until step 2.4 "Zeroing the machine" is complete. Page 6.</b>
<b>4</b>	<b>Detergent and Rinse Aid</b>
a)	Detergent and rinse aid tubes are at the rear of the machine. Attach the ceramic weights and end strainers to the clear detergent hose and blue rinse aid hose.
b)	Position detergent and rinse aid supply bottles within range of the dishwasher. Insert the clear tube into the detergent and the blue tube into the rinse aid.
<b>5</b>	<b>Exhaust hood or Canopy (if required)</b>
a)	<b>Note:</b> Some Councils require an exhaust hood or canopy for dishwashers. Check with your local authority regarding your installation.
<b>6</b>	<b>Removable Basket Runner</b>
a)	The Basket Runner is fitted with 4 nuts for transportation, to remove and replace quickly during service loosen the nuts two turns. Now the Basket Runner will slide in and out without the need for any tools.



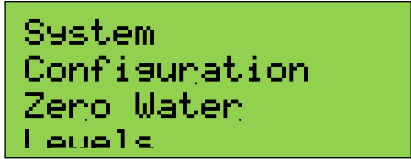
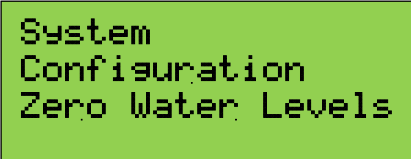
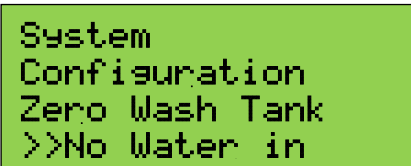
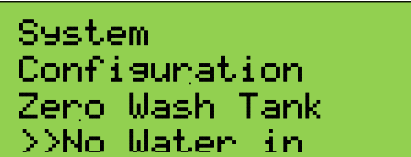
## 2.3 Lights and Buttons



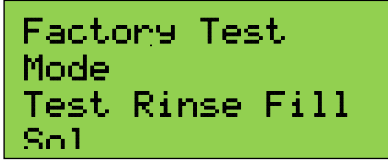
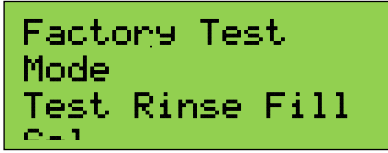
<b>POWER Button</b>	Turns the machine ON and OFF.
<b>CYCLE Button</b>	Activates function or cycle that has been selected.
<b>NEXT Button</b>	Scrolls through options for cycle or function.
<b>Indicator Lights</b>	<p>Indicator <b>Light 1</b>:</p> <ul style="list-style-type: none"> <li>• Activates RED when power is available to the machine</li> <li>• Activates GREEN when the machine is turned ON</li> </ul> <p>Indicator <b>Light 2</b>:</p> <ul style="list-style-type: none"> <li>• Orange is when hood is open.</li> <li>• Activates GREEN when machine is performing a cycle</li> <li>• Both lights flash RED if an error occurs, check error codes p</li> </ul> <p>Indicator <b>Light 3: Only in the AP-2500</b></p> <ul style="list-style-type: none"> <li>• Activates Orange light when the wash pump has a fault.</li> <li>• If this light illuminates call Norris for advice (02)49 714 500</li> </ul>

## 2.4 Zeroing (Must be done on first start-up Along with 2.5 and we recommend 2.6)

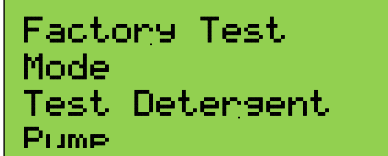
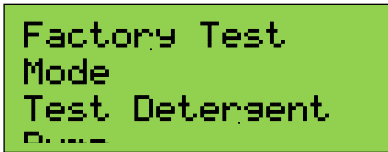
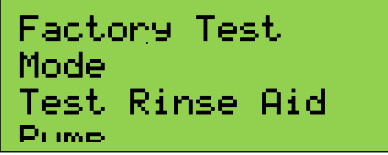
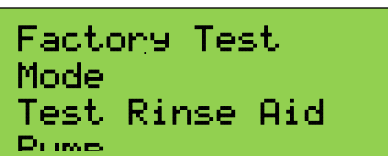
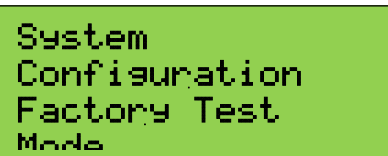
This procedure is required upon initial set-up. To zero your machine, follow these steps:

Step	Actions	Screen Will Display
1	<p><b>Before you start:</b></p> <ul style="list-style-type: none"> <li>Ensure there is no water in the wash tank (there won't be if this is the first time the machine has been configured). <b>If you have turned the machine on and there is water in the tank, refer to page 14 (Drain wash tank) to empty the tank.</b></li> </ul>	
2	<p><b>Starting from a blank (OFF) Screen</b></p> <ul style="list-style-type: none"> <li><b>Press and hold CYCLE and INFO Button</b> simultaneously for 5 seconds. (System Configuration screen will appear)</li> </ul>	
3	<p><b>Zero Water Level Screen</b></p> <ul style="list-style-type: none"> <li><b>Press INFO Button 2 times</b> to scroll to the Zero Water Levels screen appears.</li> </ul> <p>(Tip: If you go past just keep scrolling until it reappears.)</p>	
4	<p><b>Zero Water Level</b></p> <ul style="list-style-type: none"> <li><b>Press CYCLE once</b> to set water levels at zero.</li> <li><b>Press INFO Button once</b> to move to Zero Wash Tank Screen.</li> </ul>	
5	<p><b>Zero Wash Tank Screen</b></p> <ul style="list-style-type: none"> <li><b>Press CYCLE Button once</b> to zero the wash water level.</li> <li>Note that the screen displays <i>Saved Successfully</i>.</li> <li>Once the screen displays "No Water In Tank" <b>Press INFO Button</b> to move to Exit.</li> </ul>	
6	<p><b>Exit Zero Wash Tank Screen</b></p> <ul style="list-style-type: none"> <li><b>Press INFO 5 times</b> until you see Factory Test Mode.</li> <li><b>Press CYCLE once.</b></li> <li><b>Now you are ready to follow the steps on the next page 2.5 Priming</b></li> </ul>	

## 2.5 Priming Boiler

8	<p><b>Priming Boiler</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO Button 4 times</b> until the Test Rinse Fill Sol Screen appears.</li> <li>• Press <b>CYCLE</b> to turn on the Solenoid, wait until you hear the water start to spray out.</li> <li>• Press <b>CYCLE</b> to turn the solenoid OFF.</li> <li>• Now you are ready to follow the steps below, <b>2.6 Priming new rinse and Detergent lines.</b></li> </ul>	 
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## 2.6 Priming new rinse and detergent lines

8	<p><b>Priming Detergent</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO Button Once</b> the Test Detergent Pump Screen appears</li> <li>• Press <b>CYCLE</b> to turn the detergent pump ON (Note: the approximate detergent priming time is 1 minute)</li> <li>• Press <b>CYCLE</b> to turn the detergent OFF.</li> </ul>	 
9	<p><b>Priming Rinse Aid</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO</b> for the Rinse Aid Pump Screen to appear</li> <li>• Press <b>CYCLE</b> to turn the rinse aid ON (Note: the approximate rinse aid priming time is 5 minutes)</li> <li>• Press <b>CYCLE</b> to turn the rinse aid OFF.</li> </ul>	 
10	<p><b>Exit System Configuration</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO Button 2 times</b> until the Factory Test Mode appears</li> <li>• Press and Hold <b>CYCLE</b> and <b>INFO Button</b> simultaneously for 5 seconds</li> <li>• The screen will turn OFF upon release.</li> </ul>	



## 2.7 Wash Pump Rotation is Correct (AP-2500 only)

Three-phase pumps are able to spin both forwards (the correct direction), and backwards. Check if your pump is rotating in the correct direction by either:

- Checking the rotation of the pump via the direction of the fan at the rear of the motor. Use a torch to view this or a mobile phone can be used to capture the direction of the pump by holding it behind the machine in difficult-to-access places; and/or
- Listening to the pump when the machine is doing a cycle:
  - **Smooth and quiet:** If the pump is spinning in the correct direction the motor should sound smooth and reasonably quiet.
  - **Loud and very little water:** If the pump is spinning in the wrong direction (backwards) it will sound quite loud and there will be very little water coming out of the top arm (open the hood and check the arm still spinning to see the amount of water).

### 2.7.1 Procedure: Correct Wash Pump Rotation

**Note: this procedure requires a suitably qualified Electrician or Disconnect Reconnect Technician.**

If your pump is rotating backwards, this can be easily corrected by a suitably qualified electrician or disconnect reconnect technician as follows:

Step	Actions
<b>Use a suitably qualified Electrician or Disconnect/ Reconnect Technician</b>	
1	<b>Switch OFF the local mains isolator</b> to the dishwasher
2	<b>Swap L1 and L2 around</b> either - <ul style="list-style-type: none"><li>○ on the terminal strip on the control box inside the machine; or</li><li>○ on the three-phase isolator switch that the machine has been wired to</li></ul>
3	<b>Switch the local mains isolator to ON</b>
4	<b>Check</b> the wash pump rotation is correct

## 3 OPERATION


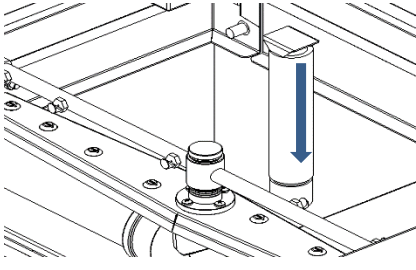
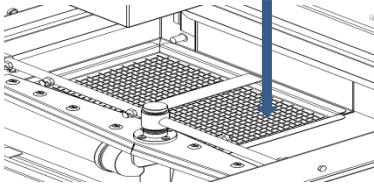
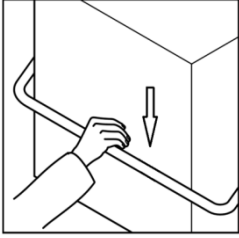
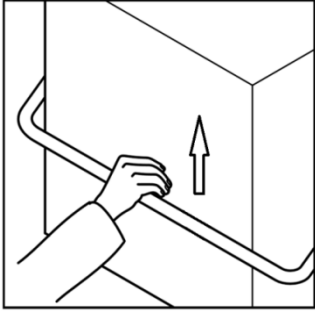
### 3.1 General Operating Safety

- Carefully read through the safety and operating notes contained in these instructions. Norris Industries will not accept any liability and all warranty claims will be rendered null and void if the safety notes are not observed.
- Load sharp, pointed utensils so that they cannot injure anyone.
- Keep children away from the dishwashing machine. The inside of the machine holds a solution of detergent in hot water at about 60°C - 65°C.
- Train the operating personnel in how to use the machine, and inform them of the information in the safety notes. Repeat the training at regular intervals in order to prevent accidents.
- Only use your fingers to operate the touchscreen; not sharp objects.
- Do not open the machine door whilst it is washing. There is a risk that hot washing solution could be sprayed out. Stop the wash cycle beforehand.
- In case of danger and/or defects, switch off the machine immediately. Switch off the local mains separator (main switch). Only then is the machine without power.


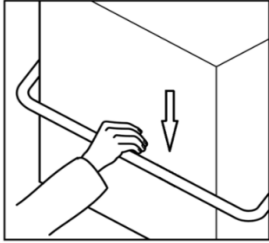
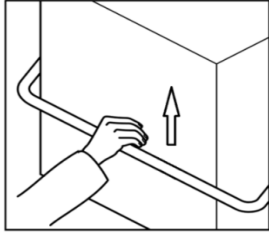
### 3.2 Wash Cycle Guide (guide only)

Cycle Selection	When to Select	Description
<b>60 seconds</b>	Glassware	Lightly soiled
<b>120 seconds</b>	Plates and crockery	Lightly soiled
<b>180 seconds</b>	Pots and cooking utensils	Heavily soiled
<b>Manual</b>	Baked on grime	The Manual wash will wash continuously until stopped by pressing B3.
<b>Dump &amp; Fill</b>	Replaces Wash water	Used to replace wash water

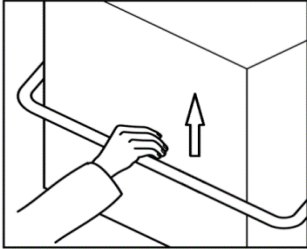
### 3.3 Start of day Operation

Step	Action	Illustration
1	Press & Hold <b>POWER</b> until screen turns ON (For Shutdown incomplete see page 14.)	
2	<b>Insert the Stem Pipe</b> ensuring that the O-ring is in the groove at the bottom. This will prevent premature draining of the wash tank.	
3	<b>Replace</b> the Scrap trays	
4	<p><b>Close the hood</b> to allow the machine to fill the wash chamber</p> <p>Machine will be ready to use when the <i>Ready Screen</i> appears on the digital screen.</p>	 <div data-bbox="831 1216 1233 1366" style="background-color: #90EE90; padding: 5px; border: 1px solid black;"> <p><b>READY</b>  Wash: 120 seconds  Idle  R: 82.8°C W:</p> </div>
5	Once machine is filled open the hood to insert first rack.	

### 3.4 General Operation

Step	Action	Illustration
1	<p>Press <b>CYCLE</b> multiple times to select the appropriate length of wash time (60, 90,120 seconds or Manual)  <i>Refer to the Wash Cycle Guide on the previous page</i></p>	
2	<p>To start cycle close the hood, cycle will start once the hood is fully closed.</p> <p>If the <b>Manual</b> cycle was selected, the machine will wash until the <b>INFO</b> Button is pressed.</p>	
3	<p>Once cycle has completed allow 3-5 seconds for excess water to drain away before opening the hood.</p>	

### 3.5 End of day drain and shutdown

Step	Action	Notes
1	Open the hood.	
2	Press and hold the <b>POWER</b> Button until the machine enters “shutdown procedure”.	The machine will automatically turn off once the procedure is complete.
2	<ul style="list-style-type: none"> <li>Remove the scrap trays.</li> <li>Remove the Stem Pipe From Machine.</li> </ul>	This will allow the machine to drain.
4	<p>Close the hood to drain and rinse.</p> <p>Allow to air dry overnight by opening the hood.</p>	The machine will automatically drain and rinse and turn OFF. This takes up to 5 minutes, depending on drainage speed and capacity.

## 4 MAINTENANCE

Norris recommends carrying out appropriate daily and weekly maintenance on the machine to keep it in working order.

- Wear protective clothing and protective gloves before touching any parts which are covered with detergent solution (filters, wash fields etc.).
- Do not spray off the machine and the immediate vicinity (walls, floors) with a water hose, steam cleaner or pressure washer.
- Do not use any scouring powder or abrasive cleaning agents.

### 4.1 Daily Cleaning

- When performing daily cleaning, make sure that no foreign objects which may rust have been left in the interior of the machine. These objects can even cause “stainless steel” material to rust. Rust particles may originate from non-stainless steel dishes, cleaning aids, damaged wire racks or water pipes with no corrosion protection.
- Clean the outside of the machine using a suitable stainless steel cleaner and a soft cloth. We recommend Zexa stainless steel cleaner and stainless steel polish.

### 4.2 Weekly Cleaning

- Use a brush or a cloth - **Not a pressure washer** - for cleaning the interior of the machine.
- Remove the Wash arms and rinse thoroughly to remove any soil that may have been stuck inside the arms.

### 4.3 Servicing and Descaling

**Norris recommends using your local Norris-approved qualified service technicians for machine servicing and descaling.**

**PH: 1800 803 569**

#### 4.3.1 Machine Servicing

Norris recommends having your machine serviced at least once a year by a qualified Norris-approved service technician. This service should also include having components which are subject to wear or ageing (bearings and dosing tubes) being checked and replaced as necessary.


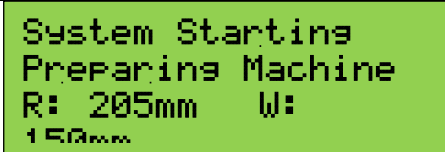

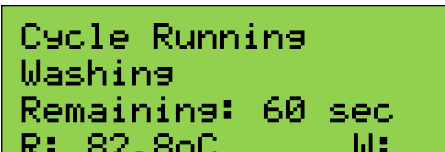
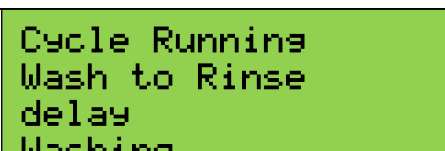
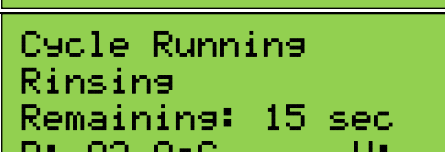
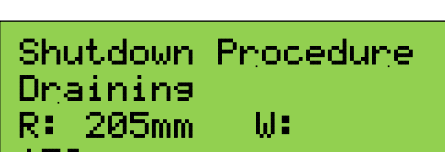
#### 4.3.2 Descaling


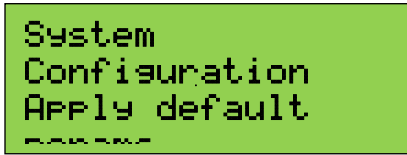
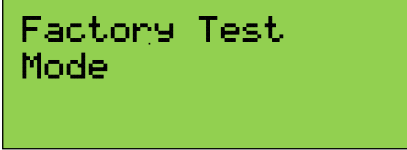
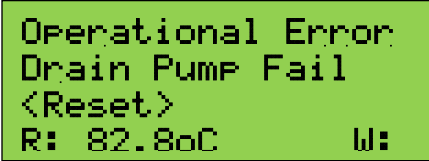
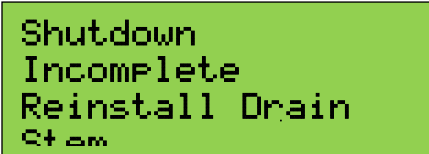
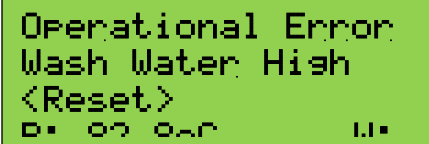
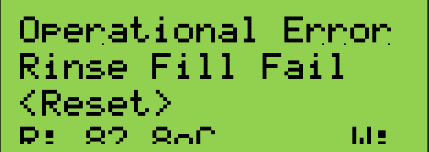
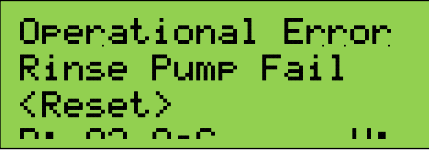
If the machine is operated with very hard water and without the appropriate water treatment, lime scale can build up in the boiler, in the interior of the machine and in all lines which carry water. Build-up of lime scale deposits can present a hygiene risk, and the lime scale can cause the heating elements to fail. Therefore, it is essential to remove these deposits at regular intervals.

The descaling process should be performed by a Norris-approved service technician, in accordance with the descaling solution instructions.

## 5 MACHINE INFORMATION

### 5.1 Screen Displays and fixes

Description	Screen Display
<p><b>Turn On:</b></p> <p>To turn the machine "ON" Press and hold <b>POWER</b> for 5 seconds and the start-up screen will appear.</p>	
<p><b>Start Up Screen:</b></p> <p>This screen is displayed during the start-up phase of the machine.</p>	
<p><b>Ready Screen:</b></p> <p>Once the machine is ready for operation this screen will be displayed, and the cycle can be selected.</p>	
<p><b>Washing Screen(s):</b></p> <p>When the machine is washing it will countdown to zero (0), if the rinse temperature is still below 82°C it will stay on zero (0) until it has reached that temperature.</p>	
<p><b>Wash Pause:</b></p> <p>This delay is to allow for excess water to drain from the wash arms</p>	
<p><b>Rinsing:</b></p> <p>When the machine is rinsing, remaining seconds will countdown to zero (0).</p>	
<p><b>Shutdown Procedure:</b></p> <p>Press and hold down <b>POWER</b> for 5 seconds the machine will enter its "Shutdown Procedure" once the wash tank is drained the machine will automatically turn off.</p>	

Description	Screen Display
<p><b>To Drain Wash Tank:</b> With the machine off, Hold down <b>CYCLE</b> and <b>INFO Button</b> for 5 seconds and release.</p>	
<p>Scroll through using <b>Green Button</b> until factory test mode.</p> <p>Then press <b>CYCLE</b>. (you are in factory test mode)</p>	
<p>Press <b>INFO</b> 7 times, Test Drain Pump should be displayed. Press <b>CYCLE</b> once to operate the drain pump until the pump sounds different (Like it has emptied all water out), then press <b>CYCLE</b> again to stop draining.</p> <p>Press <b>INFO Button</b> until you are back at Factory test mode. Press and hold both <b>CYCLE</b> and <b>INFO Button</b> for 5 seconds and let go. The machine is now ready to re-zero. Go to page 6 and start at step 2.</p>	
<p><b>Drain Pump Fail:</b> Drain stem pipe left in. Turn machine off (press and hold <b>POWER</b> for 3 seconds then release.) Remove drain stem close the door and hold <b>POWER</b> down to re-start the machine.</p>	
<p><b>Shutdown Incomplete:</b> Caused when water is still in the machine when trying to start up. Follow on screen instructions, i.e.: remove drain stem and close the hood. Then Re-install and close the door when prompted.</p>	
<p><b>Wash Water High:</b> Caused when the drainage is blocked.</p>	
<p><b>Rinse Fill Fail:</b> Drain stem pipe left out. Turn machine off (press and hold <b>POWER</b> for 3 seconds then release.) Remove drain stem close the door and hold <b>POWER</b> down to re-start the machine.</p>	
<p><b>Rinse Pump Fail:</b> Drain stem pipe left out. Turn machine off (press and hold <b>POWER</b> for 3 seconds then release.) Remove drain stem close the door and hold <b>POWER</b> down to re-start the machine.</p>	

## 5.2 Detergent & Rinse Aid

This Norris Dishwasher is fitted with detergent and rinse aid pumps. The pumps are factory set; however, if further adjustment is required this can be done via the control board settings.

A **commercial liquid non foaming dishwashing detergent** must be used in accordance to the chemical manufacturer's recommendations.

The clear detergent hose from the rear of the machine needs to be placed into a liquid detergent container located in a convenient position beside the dishwasher. If possible, place the container up off the floor, but no higher than the water level of the wash chamber of the dishwasher. This is to prevent possible siphoning of the detergent. The clear hose can be cut shorter if required.

For the first wash cycle of the day with the wash chamber full of fresh water the initial dose of commercial detergent will be as per the chemical supplier's instructions for 22 litres of water. The rinse cycle adds 2 litres of fresh water to the wash chamber every cycle so subsequent dosages of detergent, per wash cycle, for the day, will be as per the chemical supplier's instructions for 2 litres of water. This dosage may need to be varied according to water hardness and the type of load to be cleaned.

To determine the correct amount of detergent the machine should be inspected directly after a cycle has finished. The articles should be clean and there should be no excess detergent foam on top of the water in the wash tank.

The blue rinse aid hose from the rear of the machine needs to be placed into a container of liquid rinse aid located in a convenient position beside the dishwasher. If possible, place the container up off the floor, but no higher than the water level of the wash chamber of the dishwasher. The blue hose for the rinse aid can be cut shorter if required.

To determine the correct amount of rinse aid to use, the plates should be clean, streak free and should air dry rapidly.

## 5.3 Minimum Operating Temperatures

Norris dishwashers are programmed to operate at minimum rinse temperatures, as required by health regulations.

This dishwasher is factory set to complete its operation only when the rinse water is 82°C. Until the correct temperature is reached the dishwasher will not finish its wash cycle.

If the appliance is slow to recover after a cycle, check that it is connected to a constant hot water supply. The temperature of the incoming water will affect the dishwasher's recovery time.



## 6 TROUBLESHOOTING & ERROR MESSAGES

### 6.1 Troubleshooting

Please ensure the following are checked if the machine has a fault:

- Machine is level
- Water is on
- Power is on
- Pipework and drains are clear
- Stem pipe is positioned correctly
- Door or hood is closed

No	Issue	Possible Cause	Possible Solution
1	<b>Dishes are not clean when washed</b>	Too little or no detergent	Check that the detergent bottle is not empty
			Check the tubes (where they are outside the machine) to ensure nothing is obstructing or impeding the flow
		Dishes not loaded correctly	Ensure dishes are not stacked on top of each other
		Blocked wash jets	Remove arms and clean
		Temperature is too low	Allow wash water to heat up
		Faulty Dosing Pump or technical error	Contact Norris
2	<b>Dishes still soapy after rinsing</b>	Too much detergent	Reduce the amount of detergent used
		Incorrect detergent been used	Ensure use of non-foaming detergent
		Blocked Rinse Jets	Remove arms and clean
3	<b>Dishes are not dry</b>	Wash temperature too low	Allow wash water to heat up
		Too little or no rinse aid	Check that the rinse aid supply is not empty
		Dosing lines have a kink, break or blockage	Check the tubes (where they are outside the machine) to ensure nothing is obstructing or impeding the flow
		Faulty dosing pump or technical error	Contact Norris
4	<b>Not Rinsing</b>	No Water	Ensure water is turned ON
		Blockage in the jets	Remove the arms and clean
		Pump not working or technical error	Contact Norris

## 6.2 Error Messages

No	Error Message	Possible Cause	Possible Solution
1	<b>Rinse fill failure</b>	Water has been turned off	Ensure water is available
		Stem pipe hasn't been installed (boiler machines only)	Install stem pipe
		Faulty solenoid valve	Contact Norris
2	<b>Rinse Heat Failure</b>	Technical error	Contact Norris
3	<b>Wash water too high</b>	Blocked drain / poor drainage	Ensure pipes and drains are clear
		Faulty drain pump (if installed) or technical error	Contact Norris
4	<b>Wash heat failure</b>	Faulty temperature probe, element or relay on board	Contact Norris
5	<b>Main AC Contact Fail</b>	Faulty contactor / relay or loose wire	Contact Norris
6	<b>Drain Pump Error</b>	Machine isn't level	Ensure the machine is level
		Blocked drain	Unblock the drain
		Stem pipe hasn't been removed when required (draining machine)	Remove stem pipe to enable the machine to drain
		Faulty drain pump	Contact Norris
7	<b>Eprom</b>	Technical error	Contact Norris

## 7 SAFETY

### 7.1 Intended Use

- **The dishwashing machine is to be used exclusively for washing dishes, i.e. plates, cups, cutlery and trays or for washing glasses in catering or similar industries.**
- **Always wash using washing racks suitable for the dishes. Never wash without a washing rack, as this can cause irreparable damage to the machine.**
- **The dishwashing machines are technical pieces of equipment for commercial use and are not intended for domestic applications.**

### 7.2 Non-Intended Use

- This device is not designed for use by persons (including children) who have a restricted physical, sensory or mental capacity, or persons who lack experience and knowledge of how to use this device.
- Any such persons must first be instructed by a supervisory person with responsibility for their safety, or supervised whilst operating the device.
- Do not use the dishwashing machine for washing electrically heated cooking implements or items made of wood.
- Do not wash plastic items unless they are heat-resistant and will not be damaged by the detergent solution.
- Norris Industries will not accept liability for any damage caused by failure to use the dishwashing machine in accordance with the intended use.

### 7.3 Handling Chemicals

- When using chemicals adhere to the safety notes and recommended dosages printed on the packaging.
- Wear protective clothing, protective gloves and protective goggles when handling chemicals.
- Only use products which are suitable for commercial dishwashing machines. Such products are marked accordingly. We recommend using products developed by Zexa Pty Ltd. These products are specially designed for Norris Glasswashers & Dishwashers.
- Do not mix different detergent products as this could result in crystallisation and consequently cause irreparable damage to the detergent dosing device.
- Do not use any foaming products, e.g. hand soap, soft soap, and manual wash-up cleaner. These products must not enter the dishwashing machine.

## 7.4 General Safety

- Carefully read through the safety and operating notes contained in these instructions. Norris Industries will not accept any liability and all warranty claims will be rendered null and void if the safety notes are not observed.
- The dishwashing machine must not be installed in a potentially explosive atmosphere or in areas subject to frost.
- Load sharp, pointed utensils so that they cannot injure anyone.
- Keep children away from the dishwashing machine. The inside of the machine holds a solution of detergent in hot water at about 60°C - 65°C.
- Train the operating personnel in how to use the machine, and inform them of the information in the safety notes. Repeat the training at regular intervals in order to prevent accidents.
- Only use your fingers to operate the touchscreen; not sharp objects.
- Have the machine connected by qualified technicians in accordance with the locally applicable regulations (water, waste water, electrics).
- Do not open the machine door whilst it is washing. There is a risk that hot washing solution could be sprayed out. Stop the wash cycle beforehand.
- In case of danger and/or defects, switch off the machine immediately. Switch off the local mains separator (main switch). Only then is the machine without power.

## 8 DISPOSAL

There are no materials found in our machines that require special disposal procedures. All Norris Machines are made from high quality stainless steel, and recyclable plastics.

Please contact your local council or tip for the best place to dispose of your machine.

## 9 ENVIRONMENTAL


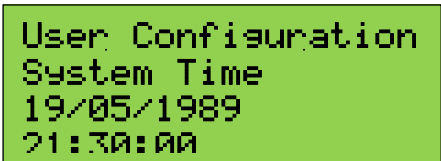
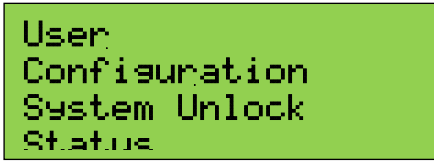
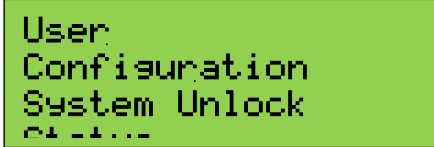

Norris prides itself on developing sustainable and efficient products

- Only wash full baskets. Switch the dishwasher off when not using it.
- Keep the machine closed when it is in standby.
- Make sure the drains flow into a suitable sewer.
- Do not exceed the recommended dose of detergent.

## 10 UNLOCKING THE MACHINE

The machine will only do short cycles that are used by the Norris staff to ensure that the machine is working correctly. When the machine is first installed a PIN is required to unlock the machine.

**Note:** Your machine comes with a security code (PIN). To ensure your machine is unlocked please follow these steps:

Step	Actions	Screen Will Display
1	<p>Turn the machine ON</p> <ul style="list-style-type: none"> <li>Press <b>POWER</b> for 5 seconds</li> </ul> <p><i>The start-up sequence of screens will display until the Ready screen is displayed</i></p>	
2	<p>At the <i>Ready</i> screen:</p> <p>Press and Hold <b>CYCLE</b> and <b>INFO</b> button for 5 seconds and then release</p> <p><i>The User Configuration System Time screen is displayed. (Time can be set here with the Edit function.)</i></p> <p><b>Press INFO Button</b> to access the Next screen</p>	
	<p><b>If the <i>Unlocked</i></b> screen appears (top right):</p> <ul style="list-style-type: none"> <li>Press and hold <b>CYCLE &amp; INFO Button</b> for 5 seconds</li> <li>You will <b>NOT</b> need to contact Norris. End of procedure.</li> </ul> <p><b>If the <i>Locked</i></b> screen appears (bottom left):</p> <ul style="list-style-type: none"> <li><b>Contact Norris to receive your 3-digit PIN.</b></li> <li>Call: <b>1800 803 569</b></li> </ul>	 
PIN	<b>Norris personnel will stay on the phone to talk you through the PIN entering process.</b>	
4	<p>When the system has been successfully unlocked, the <i>Ready</i> screen will be displayed.</p> <p>Your machine is now ready for operation.</p>	

***SERVICE NOTES:***

***SERVICE NOTES:***



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