



**BUILT TO LAST**

Makers of Commercial Dish and Glasswashers

PROUDLY AUSTRALIAN MADE

— Since 1954 —

# **Norris Underbench**

## **AP500**

### **Operation Manual**



Rev No. 4

7/24/2018

# Contents

1	Introduction.....	2
2	INSTALLATION .....	3
	2.1 Requirements.....	3
	2.2 Positioning & Connecting .....	4
	2.3 Lights and Buttons .....	5
	2.4 Zeroing (Must be carried out on first start-up).....	6
	2.5 Priming new rinse and detergent lines.....	7
3	OPERATION.....	8
	3.1 General Operating Safety.....	8
	3.2 Wash Cycle (guide only) .....	8
	3.3 Start of day Operation .....	9
	3.4 General Operation.....	10
	3.5 End of day drain and shutdown .....	10
4	MAINTENANCE.....	11
	4.1 Daily Cleaning.....	11
	4.2 Weekly Cleaning .....	11
	4.3 Servicing and Descaling.....	11
	4.3.1 Machine Servicing.....	11
	4.3.2 Descaling.....	11
5	MACHINE INFORMATION .....	12
	5.1 Screen Displays and fixes .....	12
	5.2 Detergent & Rinse Aid.....	15
	5.2 Minimum Operating Temperatures.....	15
6	TROUBLESHOOTING & ERROR MESSAGES .....	16
	6.1 Troubleshooting .....	16
	6.2 Error Messages.....	17
7	SAFETY.....	18
	7.1 Intended Use.....	18
	7.2 Non-Intended Use.....	18
	7.3 Handling Chemicals .....	18
	7.4 General Safety .....	19
8	DISPOSAL.....	19
9	ENVIRONMENTAL .....	19
10	Unlocking Your Machine (with PIN).....	20

# 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**

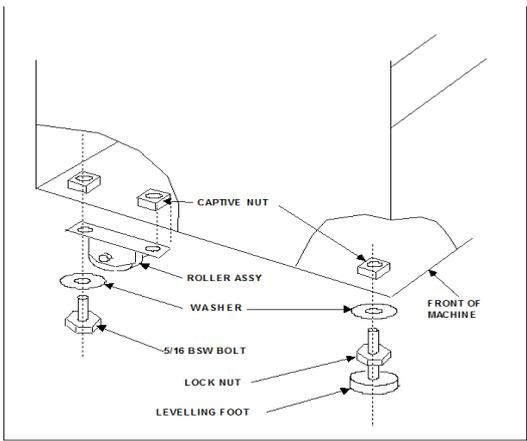
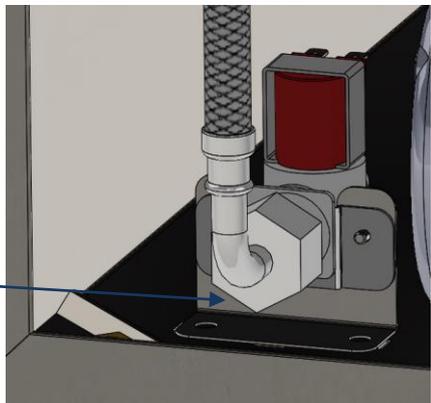
**[www.norris.com.au](http://www.norris.com.au)**

## 2 INSTALLATION

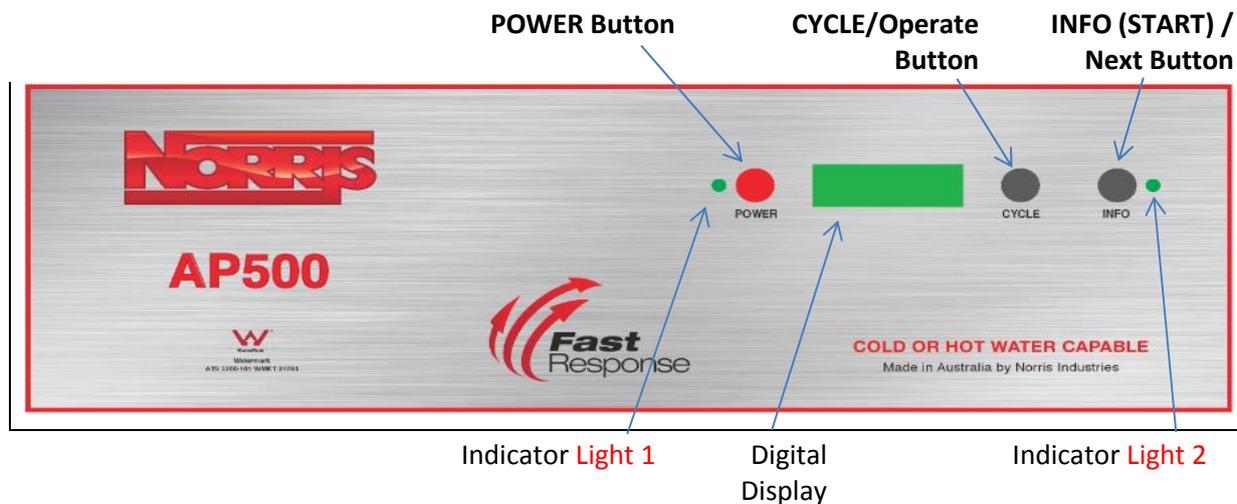
### 2.1 Requirements

<b>A safe location</b>	The dishwashing machine must not be installed in a potentially explosive atmosphere or in areas subject to frost.
<b>Water System</b>	Water pressure requirements are: 10 L/m minimum at 200-400 kPa max. <b>Note:</b> Supplying with higher pressure water can cause damage to the machine which may void warranties, please contact Norris for more information.
<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.
<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>15 amp power supply</b>	A 15 amp power point with a dedicated power circuit.

## 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>	
<p><b>1 Position and Level Your Machine</b></p>	
a)	Fit adjustable feet to underside of machine.
b)	Position machine and adjust feet so that the machine is level and in place.  <p><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.</p>
	
<p><b>2 Connect Water</b></p>	
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 illustration)  <p><b>Note:</b> Do not over tighten connections.</p>
	
c)	Turn tap on and check for leaks
<p><b>3 Drainage and Power</b></p>	
a)	Connect the drain hose to the "S" or "P" trap spigot.
b)	Connect the power lead from the machine to a 15 amp outlet. 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>
<p><b>4 Detergent and Rinse Aid</b></p>	
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.

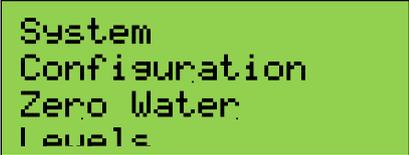
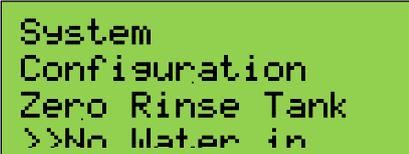
## 2.3 Lights and Buttons



<b>POWER button</b>	Turns the machine ON and OFF.
<b>CYCLE / Operate button</b>	Changes cycle or Operates function that you are in.
<b>INFO / Next button</b>	Starts cycle or Scrolls through function menu.
<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>• When not lit – awaiting instructions</li> <li>• Activates GREEN when machine is performing a cycle</li> </ul> <p>Both lights flash RED if an error presents – check Error Codes &amp; Troubleshooting information.</p>

## 2.4 Zeroing (Must be carried out on first start-up)

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 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 13 (Rinse Tank High) 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>Press and hold <b>CYCLE</b> and <b>INFO</b> simultaneously for 5 seconds, then release. (System Configuration screen will appear)</li> </ul>	
3	<p><b>Zero Water Level Screen</b></p> <ul style="list-style-type: none"> <li>Press <b>INFO 2 times</b> to scroll to the Zero Water Levels screen appears. (Tip: If you go past just keep scrolling until it reappears)</li> </ul>	
4	<p><b>Zero Rinse Tank Screen</b></p> <ul style="list-style-type: none"> <li>Press <b>CYCLE once</b> to enter zero rinse tank.</li> </ul>	
5	<p><b>Zero Rinse Tank</b></p> <ul style="list-style-type: none"> <li>Press <b>CYCLE once</b> to zero the rinse water level. (Note that the screen displays <i>Saved Successfully</i>)</li> <li>Press <b>INFO once</b> to move to Zero Wash Tank Screen.</li> </ul>	
6	<p><b>Zero Wash Tank Screen</b></p> <ul style="list-style-type: none"> <li>Press <b>CYCLE once</b> to zero the wash water level. (Note that the screen displays; <i>Saved Successfully</i>)</li> <li>Once "No Water in Tank is displayed Press <b>INFO once</b> to move to exit. Now you are ready to follow the steps on the next page <b>2.5 Priming</b></li> </ul>	

## 2.5 Priming new rinse and detergent lines

8	<p style="text-align: center;"><b>Priming Detergent</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO 5 times</b> until you are at Factory Test Mode.</li> <li>• Press <b>CYCLE once</b> to enter Factory Test Mode.</li> <li>• Press <b>INFO 5 times</b> until the Test Detergent Pump Screen appears.</li> <li>• Press <b>CYCLE</b> to turn the detergent pump ON</li> </ul> <p>(Note: the approximate detergent priming time is 1 minute)</p> <ul style="list-style-type: none"> <li>• Press <b>CYCLE</b> to turn the detergent OFF.</li> </ul>	<div style="border: 1px solid black; background-color: #c8e6c9; padding: 5px; margin-bottom: 10px;">             Factory Test Mode              Test Detergent              PUMP              OFF         </div> <div style="border: 1px solid black; background-color: #c8e6c9; padding: 5px;">             Factory Test Mode              Test Detergent              PUMP              ON         </div>
9	<p style="text-align: center;"><b>Priming Rinse Aid</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO once</b> for the Rinse Aid Pump Screen to appear</li> <li>• Press <b>CYCLE</b> to turn the rinse aid ON</li> </ul> <p>(Note: the approximate rinse aid priming time is 5 minutes)</p> <ul style="list-style-type: none"> <li>• Press <b>CYCLE</b> to turn the rinse aid OFF.</li> </ul>	<div style="border: 1px solid black; background-color: #c8e6c9; padding: 5px; margin-bottom: 10px;">             Factory Test Mode              Test Rinse Aid              PUMP              OFF         </div> <div style="border: 1px solid black; background-color: #c8e6c9; padding: 5px;">             Factory Test Mode              Test Rinse Aid              PUMP              ON         </div>
10	<p style="text-align: center;"><b>Exit System Configuration</b></p> <ul style="list-style-type: none"> <li>• Press <b>INFO 2 times</b> until the Factory Test Mode appears.</li> </ul> <p>(Tip: If you go past just keep scrolling until it reappears)</p> <ul style="list-style-type: none"> <li>• Press and Hold <b>CYCLE</b> and <b>INFO</b> simultaneously for 5 seconds, then release.</li> </ul> <p>(The screen will turn OFF upon release)</p>	<div style="border: 1px solid black; background-color: #c8e6c9; padding: 5px; text-align: center;">             System              Configuration              Factory Test Mode         </div>

## 3 OPERATION

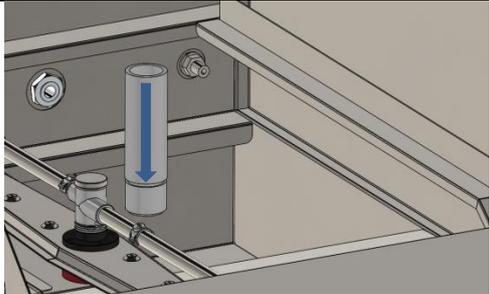
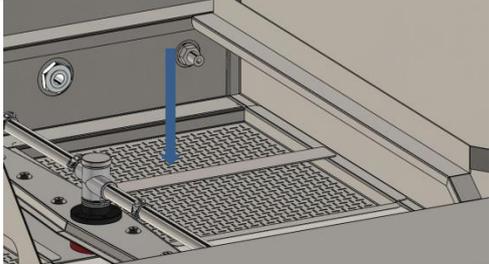
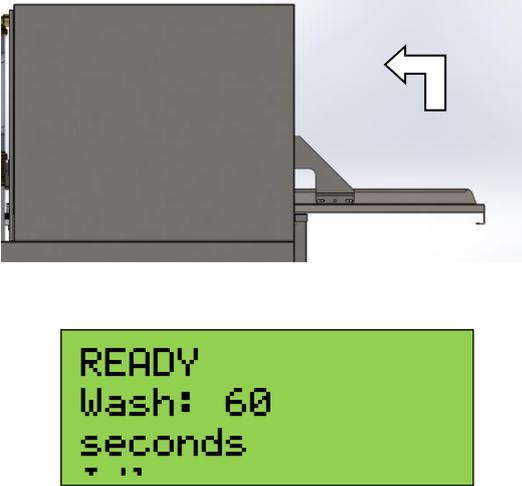
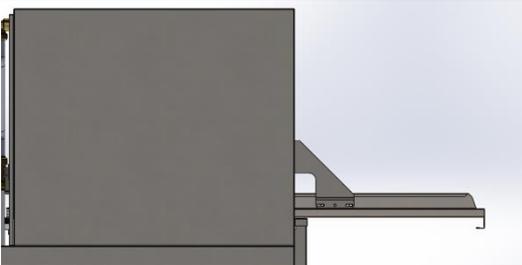
### 3.1 General Operating Safety

- 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.

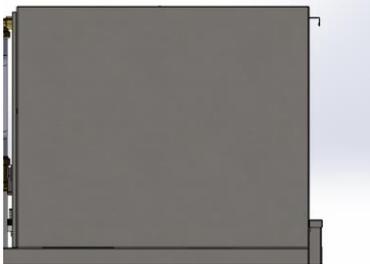
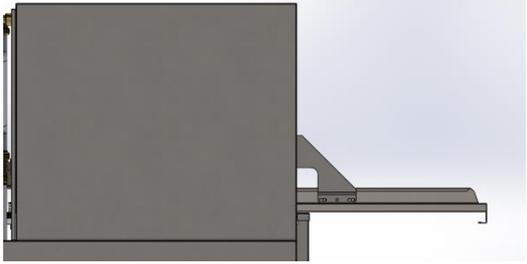
### 3.2 Wash Cycle (guide only)

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

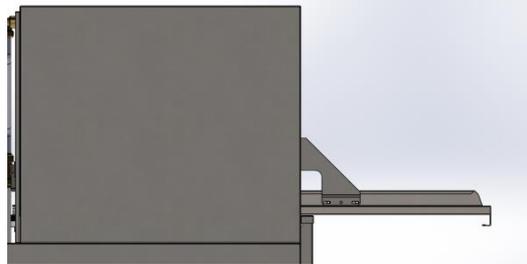
### 3.3 Start of day Operation

Step	Action	Illustration
1	<p><b>Turn the machine ON</b></p> <ul style="list-style-type: none"> <li>Press &amp; Hold <b>POWER</b> until screen turns ON.</li> </ul> <p>(For Shutdown incomplete see page 13.)</p>	
2	<ul style="list-style-type: none"> <li><b>Insert the Stem Pipe</b></li> </ul> <p>(Ensuring that the O'Ring is in the groove at the bottom of the stem pipe). This will prevent premature draining of the wash tank.</p>	
3	<ul style="list-style-type: none"> <li>Place the Scrap trays in position.</li> </ul>	
4	<ul style="list-style-type: none"> <li><b>Close the door</b> (the machine will begin the filling procedure.)</li> <li>You can use the machine when the <b>READY</b> Screen appears on the digital screen.</li> <li>Note: The machine has a start-up process that heats the boiler, the heat exchange pipes, and the wash tank. Once the wash tank is at 62° the machine is ready to use. It will display <b>READY</b> and Idle as shown. This process can take 30 minutes.</li> </ul>	
5	<p>Once the machine is <b>READY</b>, open the door to insert the rack.</p>	

### 3.4 General Operation

Step	Action	Illustration
1	Press <b>CYCLE</b> multiple times to select the appropriate length of wash time (60, 90,120 seconds or Manual) <i>(Refer to 3.2 for the wash cycle lengths)</i>	
2	To start cycle close the door and press the <b>INFO</b> button.  If the <b>Manual</b> cycle was selected, the machine will continue to wash until the <b>INFO</b> button is pressed again.	
3	Once cycle has completed allow 3-5 seconds for excess water to drain away before opening the door	

### 3.5 End of day drain and shutdown

Step	Action	Notes
1	Open the door	
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.
3	Remove the scrap trays and Stem Pipe From Machine.	This will allow the machine to drain.
4	Close the door. (the machine will begin to rinse and drain) Allow to air dry overnight by opening the door once complete.	The machine will automatically rinse, drain 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

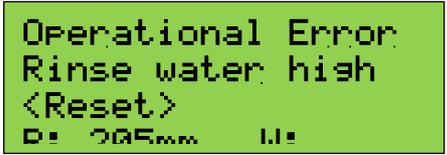
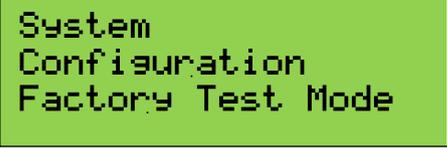
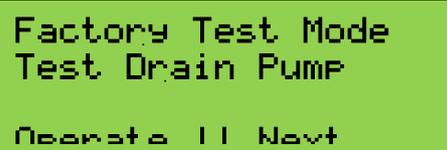
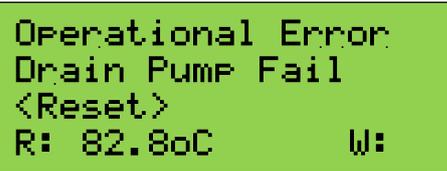
If the machine is operated with very hard water and without the appropriate water treatment, lime scale can build up in the boiler, in the interior of the machine and in all lines which carry water. Build-up of lime scale deposits can present a hygiene risk, and the lime scale can cause the heating elements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

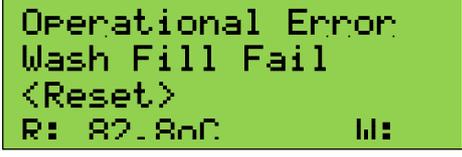
The descaling process should be performed by a Norris-approved service technician, in accordance with the descaling solution instructions.

## 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>INFO</b> button 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>	<pre>System Starting Preparing Machine R: 205mm    W: 150mm R: 82.8oC   W:</pre>
<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>	<pre>READY Wash: 120 seconds Idle R: 82.8oC    W:</pre>
<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>	<pre>Cycle Running Washing Remaining: 60 sec R: 82.8oC    W:</pre>
<p><b>Wash Pause:</b></p> <p>This delay is to allow for excess water to drain from the wash arms</p>	<pre>Cycle Running Wash to Rinse delay Washing R: 82.8oC    W:</pre>
<p><b>Rinsing:</b></p> <p>When the machine is rinsing, remaining seconds will countdown to zero (0).</p>	<pre>Cycle Running Rinsing Remaining: 15 sec R: 82.8oC    W:</pre>
<p><b>Shutdown Procedure:</b></p> <p>Press and hold down <b>POWER</b> button for 5 seconds the machine will enter its "Shutdown Procedure" once the wash tank is drained the machine will automatically turn off.</p>	<pre>Shutdown Procedure Draining R: 205mm    W: 150mm R: 82.8oC   W:</pre>

Description	Screen Display
<p><b>Rinse Tank High:</b> Machine was not zeroed, need to drain all water out. Make sure the machine is off then; enter factory test mode by holding down <b>CYCLE</b> and <b>INFO</b> for 5 seconds and release.</p>	
<p>Then scroll through using <b>INFO</b> button until you reach: Factory Test Mode.</p> <p>Press <b>CYCLE</b> once. (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</b> once, then <b>CYCLE</b> once to re-enter Factory Test Mode.</p> <p>Press <b>INFO</b> 4 times Test Rinse pump should appear. Press <b>CYCLE</b> to empty the tank and press <b>CYCLE</b> again when it is empty (The pump will sound different when the tank is empty).</p> <p>Press <b>INFO</b> 3 times to Test Drain Pump. Press <b>CYCLE</b> to operate the Drain Pump and <b>CYCLE</b> to stop pumping when the tank is empty.</p> <p>To exit Press <b>INFO</b> once. Factory test mode will be displayed. Press and hold both <b>CYCLE</b> and <b>INFO</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> This can occur when the Drainage stem pipe is 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, ie: remove drain stem and close the door. Re-install drain stem and close the door when prompted.</p>	
<p><b>Wash Water High:</b> Caused when the drain is blocked.</p>	

Description	Screen Display
<p><b>Rinse Fill Fail:</b> (Cafemate only) Causes;</p> <ul style="list-style-type: none"> <li>• Poor water pressure.</li> <li>• No incoming water.</li> <li>• Solenoid valve fault.</li> </ul>	 <p>Operational Error: Rinse Fill Fail &lt;Reset&gt; R: 82.8nC III:</p>
<p><b>Wash Fill Fail:</b> (Café Master only) Causes;</p> <ul style="list-style-type: none"> <li>• Drain hose unclamped from the rear of the machine as well as the drain stem left out.</li> <li>• Solenoid valve fault.</li> </ul>	 <p>Operational Error: Wash Fill Fail &lt;Reset&gt; R: 82.8nC III:</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.

.

## 5.2 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>Level in Rinse Tank too High</b>	Machine is not level	Ensure machine is level
		Faulty solenoid or technical issue	Contact Norris
3	<b>Rinse water too low</b>	Water has been turned off	Turn water on
		Low water pressure or technical issue	Contact Norris
4	<b>Rinse Heat Failure</b>	Technical error	Contact Norris
5	<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
6	<b>Wash heat failure</b>	Faulty temperature probe, element or relay on board	Contact Norris
7	<b>Main AC Contact Fail</b>	Faulty contactor / relay or loose wire	Contact Norris
8	<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
9	<b>Rinse Pump Failure</b>	Stem pipe hasn't been installed	Install step pipe
		Low water pressure or technical error	Contact Norris
10	<b>Eprom</b>	Technical fault	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

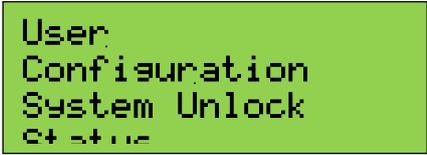
Norris prides itself on developing sustainable and efficient products

- 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 Your Machine (with PIN)

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	Turn the machine ON <ul style="list-style-type: none"> <li>Press <b>Power</b> button for 5 seconds</li> </ul> <i>The start-up sequence of screens will display until the Ready screen is displayed</i>	
2	At the <i>Ready</i> screen: <ul style="list-style-type: none"> <li>Press and Hold <b>CYCLE</b> and <b>INFO</b> for 5 seconds and then release</li> </ul> <i>The User Configuration System Time screen is displayed. (Time can be set here with the Edit function.)</i> <ul style="list-style-type: none"> <li>Press <b>INFO</b> to access the Next screen</li> </ul>	
3	One of two possible screens may appear – one <i>Unlocked</i> and the other <i>Locked</i> . <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</b> and <b>INFO</b> for 5 seconds</li> <li>You will not 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> 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	When the system has been successfully unlocked, the <i>Ready</i> screen will be displayed. Your machine is now ready for operation.	

***SERVICE NOTES:***

***SERVICE NOTES:***



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

