



**BUILT TO LAST**

Makers of Commercial Dish and Glasswashers

**PROUDLY AUSTRALIAN MADE**

— Since 1954 —

# **Norris Upright Dishwasher**

## **FI 700/750**

### **Operation Manual**

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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 with 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 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”, a philosophy that requires constant innovation and keeps sustainability at the forefront of our business practices.

This means we are focussed not only on what we make – high performance warewashing machines built with high quality materials – but how we make it.

In 2014, with over 300 solar panels installed on the factory roof, rainwater tanks, cardboard and waste metal recycling initiatives, Norris became a Silver Partner in the NSW Office of Environment & Heritage Sustainability Advantage Program.

Our team at Caves Beach NSW is committed to keep innovating! Every step we take is intended to give you confidence and peace of mind that choosing a Norris machine supports a better future for Australian manufacturing - and for the planet.

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 this appliance, or for spare parts and/or warranty, please contact our Norris Customer Service team:

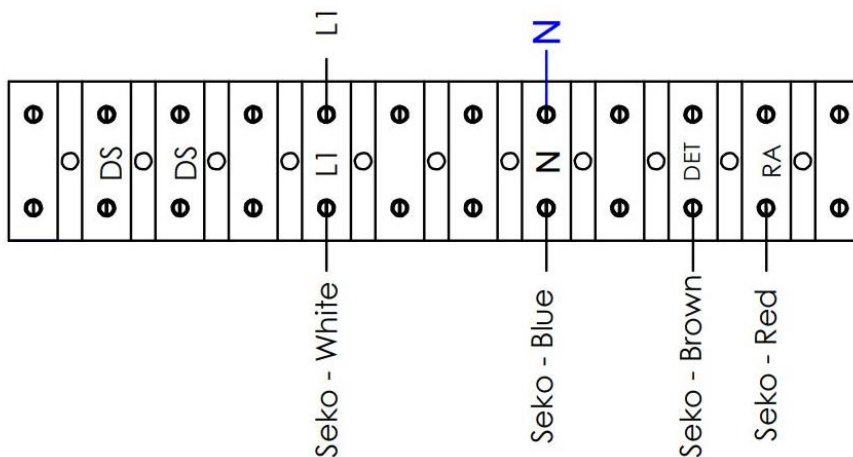
Phone: +61 2 4971 4500  
Free call: +61 1800 803 569  
[www.norris.com.au](http://www.norris.com.au)

## 2 INSTALLATION

### 2.1 Requirements

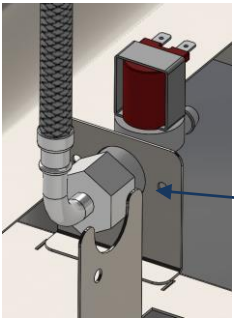
<b>Authorised Technician defined as: Qualified Electrician or Disconnect/ Reconnect Technician</b>	Have the machine installed by an authorised technician in accordance with the locally applicable regulations (water, wastewater, electrics). <b>Note: incorrect installation may void warranty</b>
<b>A Safe Location</b>	The dishwashing machine must not be installed in a potentially explosive atmosphere or in areas subject to frost or extreme heat.
<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>Water pressure requirements are: 10 L/min at 200-400 kPa max.</b> Higher water pressure can cause damage to the machine which may void warranty, 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 16 L/min at up to 65°C.
<b>Detergent &amp; Rinse Aid connection</b>	<b>External dosing pump system kit is supplied with the machine.</b> To install – refer to Quick guide installation instructions Dosing pump system instructions are included in the kit provided.
<b>3 Phase Power Supply</b>	A minimum 20 Amp per phase, 3 phase power supply needs to be located within 1 metre of the machine and within easy reach, <b>but not behind the machine.</b>
<b>Single Phase Power Installation</b>	For a single-phase installation, only connect line 1. A minimum 20 Amp isolator power supply needs to be located within 1 metre of the machine and within easy reach, <b>but not behind the machine.</b>

**Wiring diagram** below to show active and neutral lines on terminal strip for the External Dosing Pump system:



Front of 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 authorised 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 the underside of the machine.
b)	Position the machine and adjust the feet so that the machine is level. <b>Note: Ensure that the machine IS LEVEL.</b> If the machine is not 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)	Purge the site's incoming water supply to be free from foreign matter prior to connecting. Place a bucket under the tap before connecting hoses and turn it 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. <b>This will not be covered by warranty.</b>
b)	Connect the braided hose to the cold water tap then connect the other end to the solenoid. Firmly hand tighten (See illustrations below)
	 <p><b>Note:</b> Do not over-tighten connections.</p>
c)	Turn the tap on and check for leaks (adjust accordingly)
<b>3</b>	<b>Pipes and Leads</b>
a)	Connect the drain hose to the drain spigot and lightly apply clamp.
b)	Connect the power lead from the machine to the power supply. (Check correct amperage).
<b>4</b>	<b>Detergent and Rinse Aid</b>
a)	External Detergent and Rinse Aid dispensers must be installed at time of installation. Refer to Quick Guide installation instructions.
	We recommend using the Zexa range of Machine Wash and Rinse Aid products. These products are formulated for optimising your machines performance and protecting inner components. Using these products also provides eligibility for our extended warranty – see page 15 for details.
<b>5</b>	<b>Exhaust Hood or Canopy (if required)</b>
a)	As an option: The FI750 can have a steam condenser hood unit attached <i>Note:</i> Some Councils require an exhaust hood or canopy for dishwashers. Check with your local authority regarding your installation.
<b>6</b>	<b>Basket Runner</b>
a)	The Basket Runner is removable for ease of cleaning.

## 2.3 Screen and Dial



<b>Selector Dial</b>	Use the Selector Dial for: OFF, FILL, CYCLE and DRAIN options – always turn dial to the right. The wash and rinse cycle is pre-set to 90 seconds, BUT cycle will continue to wash until correct temperature is reached in the rinse chamber. <b>Machine automatically stops once both cycles are complete.</b>
<b>Temperature Display</b>	The digital display shows the status of the rinse temperature.

## 2.4 Water Levels

This machine will automatically maintain correct water levels for normal operation. See End of Day Drain and Shutdown for further instructions.

## 2.5 Priming Boiler

This machine automatically primes the boiler before the rinse elements are energised.

For repairs or loss of water, there is a manual priming switch. Contact Norris for further technical instructions.

## 2.6 Priming New Rinse and Detergent Lines

Norris recommends that you prime the chemical lines before you run the machine for the first time or are connecting new chemical containers in order to remove all air from the lines.


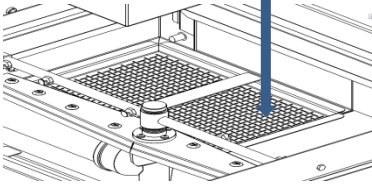
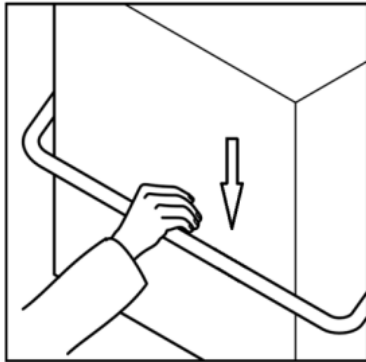
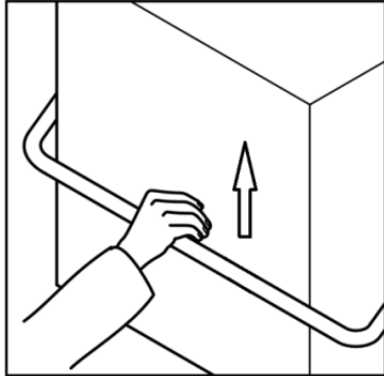
For dosing instructions, refer to manufacturers chemical label instructions.

## 3 OPERATION

### 3.1 General Operation and Safety Instructions


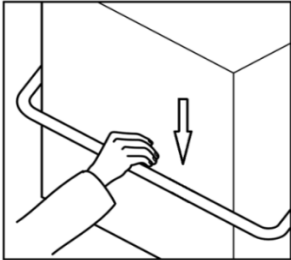
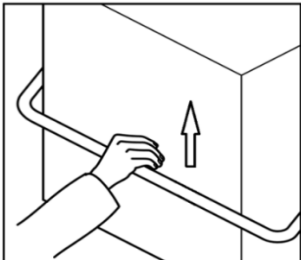
- Carefully read through the safety and operating notes contained in these instructions. Norris will not accept any liability and all warranty claims will be rendered null and void if the safety notes are not observed.
- Have the machine connected by authorised technicians in accordance with the locally applicable regulations (water, wastewater, electrics).
- Have the machine worked on and serviced by authorised technicians.
- The dishwashing machine must not be installed in a potentially explosive atmosphere or in areas subject to frost or extreme heat.
- 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 – 82.5 °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.
- Do not use sharp objects to operate the controls of the machine.
- Do not open the machine hood whilst in operation. There is a risk that the hot washing solution could be sprayed out.
- 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 Start of Day Operation

Step	Action	Illustration
1	Open the Hood	
2	Replace Filter Covers & Scrap Trays	
3	<p><b>TO FILL:</b></p> <p><b>Close the Hood and turn Dial to the right to FILL</b></p> <p>The machine will fill the wash chamber with water.</p> <p>Note: Closing the hood starts the operation</p>	
4	<p>The machine will automatically stop filling once correct level is reached. Machine is <b>ready for operation</b>.</p> <p><b>Hood can be left open or closed.</b></p>	

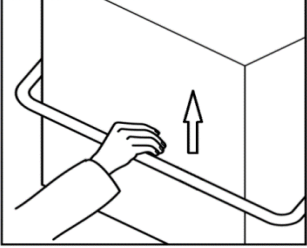

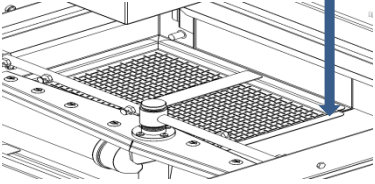
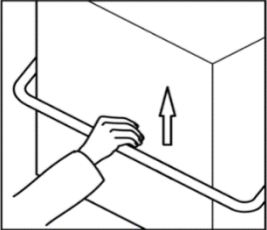


### 3.3 General Operation

Step	Action	Illustration
1	<p><b>TO USE:</b></p> <p><b>Open the hood and insert rack</b></p> <p>Turn the <b>Dial</b> to the right to <b>CYCLE</b></p>	
2	<p>To <b>start</b> the cycle:</p> <p><b>Close the Hood.</b></p> <p>The cycle will always start once the hood is fully closed.</p> <p>The machine will automatically complete its rinse cycle once correct temperature has been reached</p>	
3	<p>Once the cycle has completed allow 3 - 5 seconds for excess water to drain away before opening the hood.</p> <p><b>Best practice is to leave hood open when not in use</b></p>	

**Note: During general operation please ensure to regularly clean scrap tray and remove excess debris**

### 3.4 End of Day Drain and Shutdown

Step	Action	Notes
1	<p><b>Open the Hood</b> and remove excess debris.</p> <p>Turn the <b>Dial to the right to Drain</b></p>	
2	<p>When all the water is drained away and wash tank is empty, turn the <b>Dial to OFF</b></p> <p><b>Machine must be turned OFF.</b> Continuous running of drain pump without water can lead to pump failure</p>	
2	<p><b>Remove the Scrap Trays</b> and any excess debris. <b>Filter covers can also be removed</b></p> <p>Wipe out excess water (Caution elements may hot to touch)</p>	
4	<p>Allow to air dry overnight by leaving the <b>Hood Open</b></p>	

**Note: Machine dial must be switched to OFF at end of day**

## 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 a detergent solution (filters, wash fields etc.).
- Do not spray the machine or the immediate vicinity (walls, floors etc.) with a water hose, steam cleaner or pressure washer. Do not allow water to be sprayed in and around the machine as this may result in machine failure.
- Do not use any scouring powder or abrasive cleaning agents.

### 4.1 Daily Cleaning

- Remove excess debris from scrap tray regularly during operation.
- Clean the outside of the machine using a suitable stainless-steel cleaner and a soft cloth. We recommend Zexa stainless steel cleaner.
- While performing daily cleaning, make sure that no foreign objects which may rust have been left in the interior of the machine. Rust particles may originate from non-stainless-steel dishes, cleaning aids, damaged wire racks or water pipes with no corrosion protection.

### 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 them thoroughly to remove any soil that may have been stuck inside them. Failure to clean these areas regularly may result in premature wear on wash spindles and bearings.

### 4.3 Servicing and Descaling

Norris recommends using your local Norris-Approved authorised service technicians for machine servicing and descaling. For information on service agents [www.norris.com.au](http://www.norris.com.au) or contact: Norris Customer Service Team On PH: +61 1800 803 569

**Warranty will be voided if using unqualified technicians.**

#### 4.3.1 Machine Servicing

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


#### 4.3.2 Descaling

Regular descaling of the machine wash tank should occur relative to water quality and machine use. Descaling should be performed by a Norris-Approved service technician, in accordance with the descaling solution instructions. We suggest a minimum of every 3 months.

If the machine is operated with very hard water and without the appropriate water treatment, limescale can build up in the boiler, in the interior of the machine and in all lines which carry water. A build-up of limescale deposits can present a hygiene risk and the limescale can cause the heating elements to fail.

## 5 MACHINE INFORMATION

### 5.1 Screen Display

Description	Screen Display
The Screen Display will show the Current Rinse Tank Temperature in ° C.	

### 5.2 Detergent & Rinse Aid

**An External dosing pump system kit is supplied with this machine.**

To install – refer to Quick guide installation instructions.

Dosing pump installation instructions are included in the kit provided.

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

We recommend using **Zexa Machine Wash and Rinse Aid** which when used will extend machine **warranty**. Refer to Warranty Terms and Conditions for more information.

### 5.3 Minimum Operating Temperatures

Norris Dishwashers are designed 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 and above. Until the correct temperature is reached the dishwasher will not finish its wash cycle.

The 3 phase is designed to run on cold water and improves reliability and saves energy.

## 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
- Hood is closed

#### Customer Service Team:

Email the following information to

[service@norris.com.au](mailto:service@norris.com.au)

1. Business Name
2. Machine Serial no
3. Contact details
4. Machine error or fault

No	Issue	Possible Cause	Possible Solution
1	<b>Dishes are not clean when washed</b>	Too little or no detergent	Check the Detergent supply is not empty Check the tubes (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 the Wash Arms and clean
		Temperature is too low	Allow wash water to heat up
		Faulty Dosing Pump or Technical Error	Contact Norris
2	<b>Dishes are still soapy after rinsing</b>	Too much detergent	Reduce amount of detergent used
		Incorrect detergent has been used	Ensure the use of non-foaming detergent
		Blocked Rinse Jets	Remove the Rinse Arms and clean
3	<b>Dishes are not dry</b>  <b>Note: plastics and Tupperware will need to be air dried or wiped with a clean towel</b>	This machine does not have a drying feature. As a result of the wash and rinse process, heat is transferred into the item that is being washed.	Some items conduct heat better than others. Rinse aid is designed to assist in the drying function
		Too little or no rinse-aid	Check the rinse-aid supply is not empty Check the tubes (outside the machine) to ensure nothing is obstructing or impeding the flow
		Faulty Dosing Pump or Technical Error	Contact Norris
4	<b>Not Filling with Water or Rinsing</b>	No Water	Ensure the Water is turned ON and hood is closed
		Blockage in the Rinse Jets	Remove the Rinse Arms and clean
		Hood switch faulty	Contact Norris
5	<b>Water not draining</b>	Filters are blocked or foreign material has entered the pump	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, hospitality or similar industries.
- This machine does not have a drying feature. As a result of the wash and rinse process, heat is transferred into the items that are being washed. Some items conduct heat better than others. Rinse aid is designed to assist in the drying function.
- 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 be supervised whilst operating the machine.
- 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

- Most warewashing chemicals are highly corrosive. 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 that are suitable for commercial dishwashing machines. Such products are marked accordingly. We recommend using products developed by Zexa chemicals. These products are specially designed for Norris Glasswashers & Dishwashers and can be purchased from [www.zexa.com.au](http://www.zexa.com.au)
- 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, or manual wash-up cleaner. These products must not enter the dishwashing machine.
- Please note any residue from manual detergents used during the pre-wash process can interfere with the performance of the machine

## 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.

A Norris machine is designed to last a long time. Before disposal, we strongly recommend you consider refurbishment. Contact Norris for further assistance.

## 9 ENVIRONMENTAL

Norris prides itself on developing sustainable and efficient products

- If power consumption is a consideration, please close the hood if the machine is not in use for an extended period of time
- Make sure the drains flow into a suitable sewer.
- Do not exceed the recommended dose of detergent.
- Where suitable, use an environmentally friendly machine wash. Zexa provides a range of non-hazardous, non-caustic machine wash products safe for grey water and septic tanks

# 10 WARRANTY TERMS AND CONDITIONS

All Norris, Australian Manufactured Glass and Dishwashers come with a two (2) year parts & labour warranty as set out below. This warranty is given by Norris Industries Pty Ltd, hereinafter referred to as Norris, ABN 69 002 351 840, of 28 Strathmore Road, Caves Beach, NSW, Australia, the manufacturer of Norris brand Glasswashers and Dishwashers (the appliance) and shall only apply to appliances installed in premises within the Commonwealth of Australia.

**1. Subject to the exclusions set out in section 2 below, Norris warrants that the component parts of the appliance are free from defects in material and workmanship for the following periods:**

- 1.1. The warranty period for the cabinet is five (5) years from the date of original purchase;
- 1.2. The warranty period for all parts and labour, whether internal or external, is two (2) years from the date of original purchase.
- 1.3. If a defect in workmanship or materials occurs within the warranty period, Norris will repair the defect using a Norris authorised technician, subject to the exclusions below.

**2. Service under warranty will not apply where:**

- 2.1. The purchaser or installer has not complied with the conditions or directions contained within the operating and installation instructions supplied with the appliance;
- 2.2. There is a failure of the purchaser/operator to reasonably maintain the appliance according to instructions supplied; for example; scale build up inside machine, elements and solenoids.
- 2.3. There is general wear and tear of wash and rinse arm bearings;
- 2.4. There is general wear and tear of the detergent and or rinse aid dispenser squeeze tubes;
- 2.5. There is a failure in any way of the "S" or "P" trap;
- 2.6. There is a failure of the drain hose;
- 2.7. There is a failure of the drain tube 'O' ring; if applies
- 2.9. There is malicious damage or damage caused by careless and improper use;
- 2.10. There is a malfunction caused by dirty or poor-quality water or water pressures outside the recommended range;
- 2.11. There is damage caused to the appliance in delivery from the dealer to the customer;
- 2.12. There is damage caused by the customer's installer at the time of installation;
- 2.13. There is consequential damage caused to premises or fittings through a component part failure;
- 2.14. There is damage caused by vermin, insects, or other pests;
- 2.15. The customer has used replacement parts not supplied by Norris or labour not being that of an authorised Norris technician;
- 2.16. An authorised Norris technician attends to the appliance and no fault is found; or
- 2.17. There is damage caused by the installation or attachment to the appliance of external apparatus not supplied to the customer by Norris and will be charged at Norris technician's normal rates.

**Note 1:** The adjustment of any detergent and or rinse aid dispensers, whether native to the machine or by another chemical supplier, is not covered under warranty.

**Note 2:** The detergent and rinse aid dispenser squeeze tubes are consumable and as such should be replaced at six (6) monthly intervals. The squeeze tubes and the service to replace the squeeze tubes are not covered under warranty.



**3. Warranty service is carried out on-site during business hours.**

This warranty does not cover distance in excess of a 1 hour travel by road of the machine location, additional travelling time, or any after-hour charges or costs unless previously agreed to by Norris. For any warranty service call, Norris may require the customer to provide details of and to authorise the use of, the customer's credit card to cover any excess charges under this item, and relevant service, labour, or parts charges. If the warranty service call proves to be due to one of the exclusions set out in clause 2; relevant service, labour, and parts charges will be at the customer's expense. If Norris deems it necessary to return the appliance or a component part of the appliance to its factory for repairs the customer will pay the freight in both directions unless otherwise agreed to by Norris.

4. Use of replacement parts not supplied by Norris or the use of labour not being that of an authorised Norris technician shall relieve Norris of all future liability and responsibility.

5. (a) This warranty is the only warranty applicable to the appliance and subject to any warranties that cannot be excluded at law is expressly in lieu of all other expressed or implied warranties including any implied warranty of merchantability or fitness for a particular purpose and any other on the part of Norris.

(b) The remedy contained in this warranty is the sole remedy for any defect found to exist in the appliance and subject to clause 6, all other remedies, losses and damages are excluded, including any liability for incidental or consequential damages.

6. If the Trade Practices Act 2012 or any other legislation implies a condition or warranty in respect of any appliance or any labour services provided, and Norris's liability for breach of that condition or warranty may not be excluded but may be limited, clause 5(b) does not apply to that liability and instead Norris's liability for such breach is limited to, in the case of the supply of goods, Norris replacing the goods or supplying equivalent goods or repairing the goods, or in the case of a supply of services, Norris supplying the services again or paying the cost of having the services supplied again.

7. Persons requiring service and seeking to rely on this warranty must contact and deal with Norris (Free call +61 1800 803 569) who will appoint an approved Norris service technician.

8. All parts replaced under the provisions of this warranty shall become the property of Norris and shall be released by the customer to the authorised Norris technician for return to Norris.

9. The rights or obligations under this warranty must not be assigned, transferred, or licenced by the original purchaser of the appliance, and is not transferable to any subsequent owner of the appliance.

10. This warranty is only applicable to the Norris Australian Manufactured Machines.

Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. For any further information please call Norris.

**Customer Service Team:**

Email the following information to [service@norris.com.au](mailto:service@norris.com.au)

1. Business Name
2. Machine Serial no
3. Contact details
4. Machine error or fault

***SERVICE NOTES:***

***SERVICE NOTES:***



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

