



Universal Hot Water Pressure Cleaner Manual

Universal Manual

UNIVERSAL INSTRUCTION MANUAL

UN1500/12G – UN2400/13G – UN3000/15G – UN3000/21G

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SAFETY:

Before operating a pressure cleaner please make sure that you read the manual / instructions that is supplied with every unit and make sure that you understand everything that has been read. If you are unsure please re-read the manual / instructions until you understand the entire contents. If anything is not understood please contact the supplier of the unit with any questions that you may have.

- 1) Read Manual Completely and Understand it
- 2) Please make sure that you have and are wearing the following safety clothes and any other you feel may be required: -
 - a) Safety Glasses
 - b) Steel Capped Shoes
 - c) Long Pants
 - d) Long Sleeved Top
 - e) Head Protection
 - f) Safety Gloves
 - g) Ear Plugs

Make sure that the power point that you are plugging the machine into is safe and not faulty. If it is faulty or tag on it is out of date please get a qualified electrician to repair prior to plugging in the machine to that socket.

DO'S AND DON'TS:

- 1) Never point the lance of a high pressure water blaster at a person while in use
- 2) Never point the lance of a high pressure water blaster at an animal while in use
- 3) Never wash the machine down with the high pressure water
- 4) Never wash the electrics of the machine or any other electrics with the high pressure water blaster
- 5) Always have a qualified technician repair faults with the pressure cleaner
- 6) Always wear the above safety gear while operating a pressure cleaner
- 7) Always read the operations manual of the machine prior to the first time using the pressure cleaner
- 8) Always abide by warning labels on the machine
- 9) Always get a qualified electrician to repair or replace the electrical cable of the pressure cleaner

SET UP INSTRUCTIONS

ITEMS REQUIRED:

1) WATER SUPPLY CONNECTION:

- a) Water hose with ½" internal bore size

2) ELECTRICAL CONNECTION:

- a) 3 PHASE OUTLETS FOR THE FOLLOWING CONFIGURATIONS:
 - 2400/13G – 10 AMP 4 PIN PLUG
 - 3000/15G – 20 AMP 4 PIN PLUG
 - 3000/21G – 20 AMP 4 PIN PLUG
- b) SINGLE PHASE must be a 15amp outlet to suit a 15 amp plug

3) FUEL:

- a) Diesel

CAUTION: Do not use Kerosene. Burner is not designed to burn kerosene.

WARNING: Do not use petrol or any oil containing petrol. This may result in explosion of the boiler.

Sufficient air must be available for combustion.

Use only in properly ventilated areas to ensure free flow of air to the burner.

DO NOT ATTACH AN EXTENDED FLUE TO THE EXISTING UNIT. THIS WILL VOID WARRANTY AND ESSENTIALLY WILL DESTROY THE BURNER SET UP.

Beware of tight locations and exhaust fans.

Combustion with inadequate oxygen produces dangerous carbon monoxide.

OPERATION:

1) CHECK:

- a) Power connection OK and switches OFF
- b) Water supply ON
- c) Cistern Tank full and float switch operating
- d) Float Valve closed when water level in cistern tank's 3" below top of tank
- e) Fuel tank is full

2) TO START:

- a) Pump and burner switches must be in off position.
- b) Turn on the main power switch.

- c) Turn pump switch ON. Ensure that the pump primes itself and settles down to steady operation with a continuous high pressure water flow from nozzles, before turning on the burner.
- d) If the hot water is required turn ON burner. Burner is equipped with automatic ignition and flame control. Firing results a few seconds after turning ON. Should flame not occur, refer to burner section below.

3) BURNER:

- a) Burner must have diesel to operate. If the burner shuts down while in use, check to see if the unit has run out of diesel. If it has, turn off machine, fill up with diesel (do no overfill), press the reset button on the burner section of the machine and restart the machine.
- b) Adjustments may need to be made to the burner during extreme weather changes that alters the effectiveness of ignition. If the burner won't start and there has been an extreme drop in temperature please contact your nearest service provider for directions on how to fix.

NOTE: Burner will only fire if the pump switch is in the ON position. Turning pump switch to OFF position will also turn the burner off.

4) STOP:

- a) Turn burner switch to OFF position.
- b) Keep pump running for approximately (1) one minute after burner is turned off to allow burner to be cooled and the ensure that NO HOT WATER IS LEFT IN THE COIL.
THIS IS VERY IMPORTANT!

5) DETERGENT SOLUTION (IF FITTED):

- a) The metering valve on the control panel regulates the amount of detergent mixed in the water. Adjust this until best results are obtained.(Average setting is half a turn open)
- b) After use of detergent, turn the valve to off and run the machine until water is clear and detergent has been flushed out of the system.

6) OPERATING HINTS:

- a) General cleaning: Use plenty of detergent and work from the top of the equipment down with a steady gun movement. Pre-soaking with detergent is generally advantageous.
- b) After pre-soaking, pressure wash at close range or as required with high pressure detergent and steady gun movement. Finally, rinse off thoroughly.
- c) Pre-treatment with degreasing solution can aid cleaning heavy buildup of grease and oil, which should be applied by a hand spray and not a pressure cleaner.

7) IMPORTANT:

- a) Keep trigger gun open as much as possible. Less SHOTGUNNING (constant pull and release of trigger) ensures longer life of gun, unloader valve, high pressure hose, etc.
- b) Unit is fitted with a Total Stop control for safety of the machine (this shuts down the machine when not in use after 1-2 minutes), but ALWAYS turn off the unit when not being used.

IMPORTANT NOTE:

- 1) Trigger must be fully open while trying to purge air out of detergent line.
- 2) Detergent bottle must be full.
- 3) Detergent pick up line must be fully submersed in solution.

MAINTENANCE & GENERAL INFO

IMPORTANT NOTE:

When doing maintenance to the pressure cleaner please make sure that the machines on / off switch is in the OFF POSITION, the power to the machine is turned off and the machine is unplugged and that the water to the machine is also turned off and unplugged.

WATER:

- a) Your pressure washer uses water to and relies upon water to operate properly. It is of **UTMOST IMPORANCE** that if you spot a leak anywhere in the machine, the gun, the lance, the hose, the bypass, etc that this is handled **IMMEDIATELY**. If you don't do this this may cause further internal damage to the machine where it is trying to compensate for lack of water. This includes fittings that are connected to the gun, lance or any part of the machine.

NEVER RUN A MACHINE WITH OUT WATER

PUMP:

- b) Check oil level weekly. The oil level can be checked by the sight glass on the right hand side of the pump and by removing the oil filler plug to which a dip stick is attached. Use SAE 20/40 or SAE 15/20 oil to top up if required. **DO NOT OVERFILL**
- c) Change oil every 6 months or 300 hours of operation. Suck oil out through dip stick hole using plastic bottle.

MOTOR:

- a) No maintenance during normal life. **NOTE: Motor must be kept dry at all times.**

UNLOADER VALVE:

- a) The unloader is a combined safety valve and unloader. Apart from wear and tear this valve should require no maintenance. The valve is set to the pressure & water volume of the machine supplied. Do not adjust this valve. **THIS WILL VOID WARRANTY.** If not done correctly this can lead to destruction of the pump and machine itself. If you feel the machine is low on pressure please see the General Fault Finding chart supplied and if not resolved contact your nearest service agent.

FILTERS:

- a) Inlet water filter and outlet water filter – clean once a week or more frequently as required. If you are using tank or recycled water more often may be necessary. This will ensure that the filters don't get clogged and no small particles get through into the pump.

FUEL FILTERS:

- a) Check fuel filter every month and replace if required.

BURNER:

- a) We use a Riello High Efficiency Burner with its own inbuilt safeties. The burner unit comes with a phot electric cell, so if there is no fuel in the system there will be no spark and therefore it will not allow the burner to start. The burner will also shutdown if it is running low on fuel or if there is no more fuel. If this occurs, turn machine off, fill with diesel, press reset on the burner, turn the machine back on and the burner should now be working.

COIL:

- a) Supplied with your unit is a Stainless Steel or MS coil. The coil is surrounded by a protective matting. When using this machine and running diesel through it the matting itself and coil may become soiled after quite some use. You will notice when it does when the stuff being emitted from the flue turns smoky. When this occurs, please contact your service agent as the coil may need to be removed, cleaned and new matting placed in. To avoid this occurring often please use high quality diesel.

DETERGENT (IF FITTED):

- a) Ensure they fit tightly over barbs. Loose fitting lines will allow air to be sucked in causing loss of pressure or a pulsating output. Extended operation with air leakage will damage the pump.

WARNING:

DO NOT run pump dry – machine is fitted with a low level water cut off, but this is ineffective if the pump loses prime.

Machine is fitted standardly with a Total Stop so that after 1-2 minutes of machine not in use it will automatically shut down; but always switch machine off when not in use.

DO NOT allow detergent tank to run dry and suck air. Shut off metering valve immediately, allow pump to re-prime and fill detergent tank.

GENERAL FAULT FINDING:

Please find below a general fault finding list on the machine. This is to help with any minor problems that may arise with the unit during operation and will help solve that problem quickly and efficiently without too much down time. If any of these faults show up and do not quickly resolve please contact your nearest service provider.

FAULT:	CAUSE:	REMEDY:
<p>Pump running but machine low on pressure.</p>	<ol style="list-style-type: none"> 1. Blocked nozzle 2. Worn Nozzle 3. Blocked inlet water filter. 4. Pump sucking air 5. Valves sticking 6. Unloader valve seat faulty 	<ol style="list-style-type: none"> 1. Inspect the nozzle thoroughly for any blockage. Take the nozzle off and hold up to light. You should be able to see through the hole. If there is any debris or something blocking it, clean out with air or water and reattach. 2. If nozzle is worn or broken it will need to be replaced. 3. Inspect any water filters to the machine and check for debris or something caught in them and clean them as necessary. 4. Check water supply and possibility of air ingress 5. Check and clean or replace is necessary. 6. Check and replace if necessary.

	<p>7. Nozzle incorrectly sized based on water flow and PSI.</p>	<p>7. Check and replace if necessary.</p>
<p>Fluctuating pressure/surging</p>	<p>1. Check all points 1-7 above</p> <p>2. Lack of water to the machine.</p>	<p>1. Do handlings as covered above.</p> <p>2. Check water to machine and that tap is still working, there are no blockages, water isn't being shared by others, etc.</p>
<p>Pressure low after period of normal use</p>	<p>1. Check points 1-7 above on low on pressure.</p> <p>2. Valves and Seals may be worn</p>	<p>1. Do handlings as covered in points 1-7 above.</p> <p>2. Take to a qualified repair technician</p>
<p>Pump noisy</p>	<p>1. Air suction</p> <p>2. Broken or weak suction or delivery valve spring.</p> <p>3. Foreign matter in valves</p> <p>4. Worn bearings</p> <p>5. Excessive temperature of liquid.</p>	<p>1. Check water supply and corrections on suction line.</p> <p>2. Check and replace if necessary.</p> <p>3. Check and clean if necessary</p> <p>4. Check and replace if necessary.</p> <p>5. Reduce to below 75 degrees C</p>
<p>Presence of water in oil</p>	<p>1. Oil seal worn</p>	<p>1. Check and replace if necessary.</p>

	<ol style="list-style-type: none"> 2. High humidity in air 3. Piston packing worn 	<ol style="list-style-type: none"> 2. Check and change oil twice as often 3. Check and replace if necessary
Water dripping from under pump	<ol style="list-style-type: none"> 1. Piston packing worn 2. Oring plunger retainer worn 3. Seals, valves gone 	<ol style="list-style-type: none"> 1. Check and replace if necessary 2. Check and replace if necessary. 3. Inspect and replace as necessary.
Oil dripping	<ol style="list-style-type: none"> 1. Oil seal worn 	<ol style="list-style-type: none"> 1. Check and replace if necessary.
Excessive vibration in delivery line	<ol style="list-style-type: none"> 1. Irregulator functioning of the valves 	<ol style="list-style-type: none"> 1. Check and replace if necessary
No burner	<ol style="list-style-type: none"> 1. Ran out of fuel or no fuel. 2. Pressure switch failure or Flow switch. 3. Fuel Filter clogged 	<ol style="list-style-type: none"> 1. Fill with fuel. Press the reset button. 2. Clean flame sensor and press reset button <ol style="list-style-type: none"> 2.1 Fill with fuel and press reset button 2.2 Replace pressure switch or flow switch 3. Replace Fuel Filter
Burning dirty	<ol style="list-style-type: none"> 1. Water in fuel or bad fuel. 	<ol style="list-style-type: none"> 1. Drain fuel tank, refill with fuel then replace fuel filter

	<ol style="list-style-type: none"> 2. Coil due for desoot 	<ol style="list-style-type: none"> 2. Contact your nearest service provider.
Unit does not auto stop	<ol style="list-style-type: none"> 1. Pressure switch or flow switch failure 2. Timer failed 	<ol style="list-style-type: none"> 1. Replace pressure switch or flow switch 2. Replace timer

SAFETIES THROUGH OUT THE MACHINE:

Please find a list of safeties that have been put throughout the machine to help reduce the risk of injury to the operator and also damage to the machine.

- 1) **Riello high efficiency burner with flame sensor – This stops the hot water side of the machine being used without diesel.**
- 2) **Reset button on burner – When the burner runs out of fuel it won't start straight back up again after being refilled. You must press the reset button in order to restart the machine again.**
- 3) **Low pressure bypass – When the trigger is released and then pulled again for further operation there is a slow build up of pressure and NOT a kick back of 3000psi at the gun. This stops the operator from being thrown off balance and accidently spraying someone or something with 3000psi.**
- 4) **IP56 Control Box – The electrics of the machine are enclosed in an IP56 control box. This helps protect the electrics and the operator.**
- 5) **Flex drive coupling between pump and motor – There is a flex drive coupling between the pump and motor to help restrict heat transfer between the two major operating components of the unit.**
- 6) **Safety Valve – When there is a build up of pressure in the unit and it can't release it through the normal avenues the safety valve will let go and put the water out the back end of the unit.**
- 7) **Header Tank – The header tank is there so that the machine has enough water to it, so the machine doesn't run out of water.**
- 8) **Auto Stop Time Delay – This is there, so that if the trigger is released and not being used after about 1-2 minutes the machine will shut down to protect the pump from overheating.**
- 9) **Steel Powder Coated Frame and Cover – The steel powder coated frame and cover is to help with the durability of the machine and if by any chance that the burner started**

blowing out flames the cover wouldn't melt or catch on fire, therefore protecting the rest of machine from being damaged.

10) 2 x Solid Rubber wheels and 2 x Lockable Jockey Wheels – These 2 different types of wheels are used to make the machine easy to move around, which in turn stops the operator of the unit from straining or hurting themselves when moving the machine. The lockable jockey wheels also stops the unit from rolling away or into the operator or another person if the unit is kept on a slight hill or is bumped by accident by another person.

11) IP55 Rated Electric Motor – The motor used on this machine is an IP55 Rated motor. This is done to protect the machine from water over spray.

PUMP BREAKDOWN AND SPARE PARTS LIST:

Please see the below lists of spare parts and machine component breakdowns including the wiring diagram.

These can be found on our website at www.jetblaster.com.au in the section of manuals.

Each part and wiring diagram is entered separately as listed here.

UN1500/12

PUMP W140

2.2KW NICOLINI MOTOR

K7-0 BYPASS

UNIVERSAL WIRING DIAGRAM

G10 REILLO BURNER

UN2400/13

PUMP W171

4KW NICOLINI MOTOR

K7-0 BYPASS

UNIVERSAL WIRING DIAGRAM

G10 REILLO BURNER

UN3000/15

PUMP WS201

5.5KW NICOLINI MOTOR

K7-0 BYPASS

UNIVERSAL WIRING DIAGRAM

G10 REILLO BURNER

UN3000/21

PUMP WS202

7.5KW NICOLINI MOTOR

K7-0 BYPASS

UNIVERSAL WIRING DIAGRAM

G10 REILLO BURNER