

# RAC

## 1650W Pressure Washer

RAC-HP009



Waste electrical products should not be disposed of with household waste.  
Please recycle where facilities exist.



Check with your local authority or retailer for recycling advice.

# Safety and Warning Information

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## General safety rules

**Warning:** Read the instructions fully before using this equipment for the first time. Failure to follow the instructions may result in fire, electrical shock and/or serious injury. We recommend that you use safety equipment during use.

## Please retain these instructions for future use and referral.

This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the machine by a person responsible for their safety. Children should be supervised to ensure that they do not play with the machine.

Never operate this unit when tired or under the influence of alcohol or drugs.

High pressure jets can be dangerous if misused. The jet **MUST NOT** be directed at yourself, other people, animals, live electrical equipment or the pressure washer itself. The trigger gun safety lock prevents the trigger from accidentally being engaged. This is a safety feature and cannot be used to lock the trigger in the ON position.

When operating this unit the water pressure generated may cause 'kickback' of the trigger gun. Please ensure you have a firm grip of the trigger gun when in use.

We recommend that other people are at least 10m away from the working area and there is at least 3m clearance between the pressure washer and any other object.

Do not use the pressure washer if important parts are damaged (e.g. high pressure hose / lance).

Do not disconnect the high pressure hose whilst the system is under pressure. This system is capable of producing 1552 PSI. To avoid rupture and injury do not operate this machine with components rated less than 1552 PSI working pressure (including but not limited to spray guns, hoses and connections).

Do not use acids, alkalis, solvents or any other flammable material in this machine. These chemicals can cause serious physical injuries and can also seriously damage the machine.

Always ensure the machine is on a flat level surface and is stable. Never tip the machine on one side.

When using a pressure washer, always ensure that your water supply is protected by a backflow preventer (as per water bylaws). This will avoid possible contamination of your water supply.

Use cold mains water feed only.

This unit must always have a continuously supply of water when running. Dry running will seriously damage the seals.

**Important:** The pressure washer is equipped with an auto stop device. When the trigger is released it will open the power circuit to the motor and cause the pressure washer motor to stop.

The motor will resume when the trigger is pulled. The pressure washer is also equipped with a main power ON/OFF switch located on the unit. It should always be moved to the OFF position when the pressure washer is not being used.

This product is a class II product-double insulated. No means of grounding (to earth) is provided on this product nor should it be added. Only a qualified person should carry out servicing.

If an extension lead is to be used with this product, please ensure that:

Only extension cords having an electrical rating not less than the rating of the product are used.

Only extension cords that are intended for outdoors are used.

To reduce the risk of electrocution, you keep all connections dry and off the ground.

You do not touch the plug with wet hands.

# Safety and Warning Information

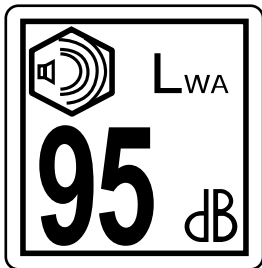
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**Hose:** Water supply hose must be at least 1/2" in diameter with a minimum recommended length of 5 metres.

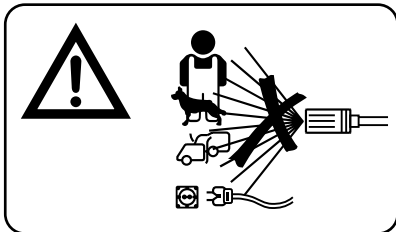
- Use only original spare parts from the manufacturer or approved by the manufacturer.
- **WARNING:** High pressure hoses, fittings and couplings are important for the safety of the appliance.

Use only hoses, fittings and couplings recommended by the manufacturer.

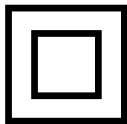
## Warning Symbols



Risk of hearing impairment



Do not direct the jet at people, animals, live electrical equipment or at the appliance itself.



Double insulated

# COMPONENTS



## Component List

1. High pressure hose
2. Soap/detergent dispenser
3. On / Off switch
4. High pressure lance
5. Male quick fit connector
6. Trigger gun
7. Lance extension
8. Cleaning needle

## Technical specification

Rated voltage:	240V AC	Cable length:	5m
Rated power:	1650W	Hose length:	5m
Rated frequency:	50Hz	Noise value:	95 dB (A) Lwa
Protection class:	II	Noise value:	92 db (A) Lpa
Degree of protection:	IPX5		
Rated pressure:	70 Bar / 7 MPa		
Inlet pressure:	Max 4.0 Bar		
Supply water temperature:	Max: 50°C		
Nozzle spray angle:	0 – 90°		
Max output flow rate:	5.5 L/min		
Net Weight:	5.5 Kgs		

# ASSEMBLY

Before carrying out any assembly or disassembly of the unit, please ensure that the unit is not connected to the electrical supply.

## Assembling your machine

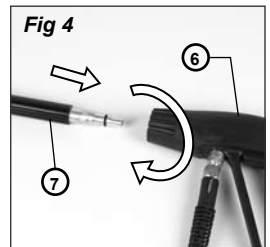
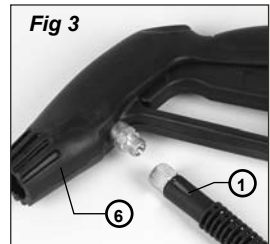
1. Connect the high pressure hose (1) to the high pressure outlet as shown in Fig 1
2. Connect the high pressure hose (1) to the trigger gun (6) as in Fig 3
3. Fit the lance extension (7) into the trigger gun (6) by pushing the lance extension into the trigger gun and locating the lugs at the same time. Turn clockwise to lock into position (Fig 4).
4. Fit the high pressure lance (4) into the lance extension (7) by pushing the high pressure lance into the extension lance and locating the lugs at the same time. Turn clockwise to lock into position.

**Warning:** - Do not fit lances when the power is on.

5. Fit the quick connector male (5) as per Fig 2, and make sure it is fully tightened.

## Connecting to the water supply

1. Connect the female quick fit connector of your garden hose onto the male quick fit connector (5) of your high pressure cleaner. Fig 2



# OPERATING INSTRUCTIONS

## Note:

Before connecting to the mains power supply please ensure that the ON / OFF switch is in the OFF position (Fig 5), the water supply is connected and is turned on.

Running the pressure washer without any water supply will damage the pump.

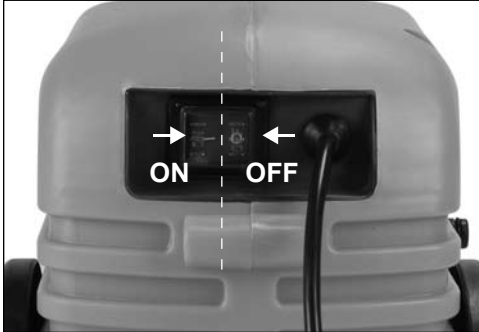


Fig 5

## Instructions for use

a) With the unit fully assembled, ensure that the unit is switched OFF and is connected to the mains and the water supply. Pull the trigger a few times to expel any air trapped in the system.

b) Ensuring that the trigger is released, switch ON the pressure washer. The unit is now ready to operate by pulling the trigger.

## Note:

The motor only runs when the trigger is operated.

When the pressure washer is not in use, lock off the gun trigger for safety reasons (Fig 6). Switch the unit OFF when not in use for extended periods of time.

Never operate the pressure washer without the water supply connected and turned on.



## Helpful Hints

Before using remove any objects which could create a hazard.

Ensure that all doors and windows are closed (where appropriate).

The adjustable lance allows you to use a variety of spray patterns from a fan to a pencil jet (fig 7). When using the pressure washer to clean decking, patios, vehicles, etc., always start by using the fan spray and begin spraying from a minimum 30cm away to avoid damaging the surface of the material to be cleaned.

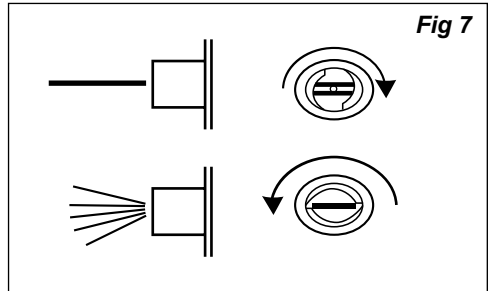


Fig 7

The spray can be adjusted from a pencil jet to a fan by turning the nozzle (Fig 7).

**WARNING: Do not adjust the nozzle while the trigger is squeezed.**

The pressure of the spray on the surface you are cleaning increases as you move the nozzle closer to the surface. We recommend that for most cleaning applications a 45° spray angle should be used to avoid damaging the surface being cleaned. Spraying directly head-on tends to cause dirt particles to embed in the surface.

## Pre-operation

### ADJUSTING FAN PATTERN

The angle of spray may be adjusted on some lances by rotating the nozzle. This will vary the spray pattern from approximately a 0° narrow high impact stream to a 60° wide fan spray. (See Fig 8)

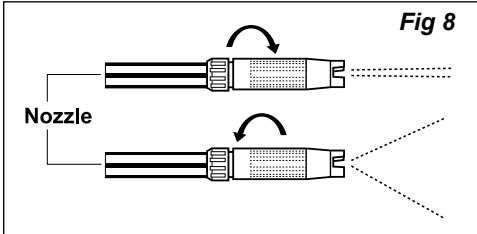


Figure 8 – Adjusting nozzle for fan pattern (not applicable on some nozzles)

A narrow stream has high impact force on the cleaning surface and results in maximum deep cleaning in a concentrated area. However, this narrow high impact spray must be used carefully as it may damage some surfaces.

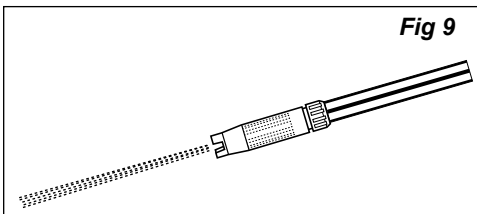


Figure 9 – Narrow high impact stream

A wide fan pattern will distribute the impact of the water over a larger area, resulting in excellent cleaning action with a reduced risk of surface damage. Large surface areas can be cleaned more quickly using a wide fan pattern.

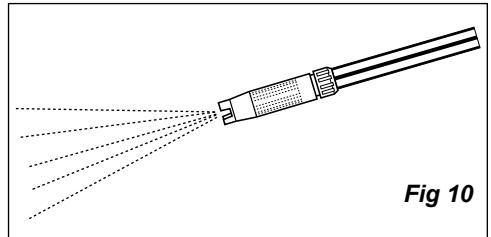
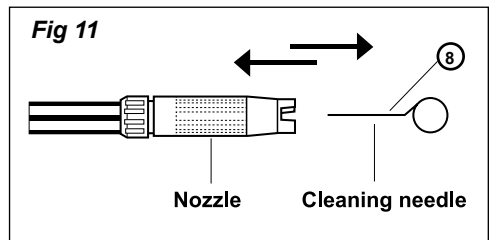


Figure 10 – Wide fan pattern

### NOZZLE CLEANING INSTRUCTIONS

A clogged or partially clogged nozzle can cause a significant reduction of water and may cause the unit to pulsate while spraying. To clean out the nozzle:

- Turn off and unplug the unit.
- Turn off the water supply and relieve any pressure within the unit by squeezing the trigger 2-3 times.
- Separate the lance from the gun.
- Rotate the nozzle to the narrow stream setting. This opens up the fan blades.
- Insert the cleaning needle (8) into the nozzle hole and move it back and forth until the debris is dislodged (Fig 11).



- Remove additional debris by backflushing water through the nozzle. To do this, place the end of a garden hose (with water running) on the end of the nozzle for 30-60 seconds.

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## HOW TO AVOID SURFACE DAMAGE

Damage to surfaces can occur when the impact force of the water exceeds the durability of the surface. Never use a narrow high impact stream or a turbo/ rotary nozzle on a surface that is susceptible to damage. Avoid spraying windows with a narrow high impact stream or turbo nozzle as this may cause breakage. The surest way to avoid damaging surfaces is to follow these steps:

1. Before squeezing the trigger, adjust the nozzle to a wide fan pattern.
2. Place the nozzle approximately 4-5 feet from, and angled at 45° to the cleaning surface and begin spraying.
3. Vary the fan pattern spray angle and the distance to the cleaning surface until optimum cleaning efficiency is achieved without damaging the surface.

## Detergent Applicator

Only use detergents that are specifically made for pressure washers or you could damage the seals/ components inside the pressure washer.

Follow the detergent manufacturer's directions for mixing the correct concentrations of detergent to water

The ratio through the pressure washer is approximately 5.4% (1 to 19).

1. Unscrew top of detergent applicator and fill applicator with detergent.
2. Replace top on applicator.
3. Remove lance from gun.
4. Attach detergent applicator to gun. (See Figure 12)

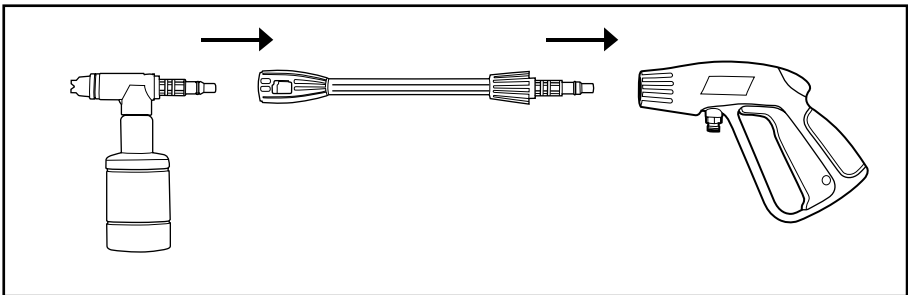


Figure 12 - Attach application to gun



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## DETERGENTS

The use of detergents can dramatically reduce cleaning time and assist in the removal of difficult stains. Some detergents have been customised for pressure washer use. The use of thicker detergents, such as washing-up liquid, will clog the chemical injection system and prevent the application of the detergent.

The cleaning power of detergents comes from applying them to a surface and giving the chemicals time to break down the dirt and grime. Detergents work best when applied at low pressure.

Follow this with a high pressure rinse for best cleaning results. On vertical surfaces, apply the detergent starting at the bottom and work your way upward.

This will prevent the detergent from sliding down and causing streaks. High pressure rinsing should also progress from the bottom upwards. On particularly tough stains it may be necessary to use a brush in combination with detergents and high pressure rinsing.

### Operation

The following cleaning procedure will help you organize your cleaning task and ensure that you achieve the most beneficial results in the shortest amount of time. Remember to use the spraying/cleaning techniques previously listed.

#### 1. Preparation

It is important to prepare the surface that is to be cleaned. This is done by clearing the area of furniture and making sure that all windows and doors are closed tight. In addition, you should make sure that all plants and trees adjacent to the cleaning area are protected by a drop cloth. This will ensure that your plants won't be sprayed by the detergents.

#### 2. Initial High Pressure Rinse

The next step is to spray the surface with water to clear off any dirt or grime that may have collected on it. This will allow your detergent to attack the deep down dirt that has worked its way into the cleaning surface. Before squeezing the trigger, adjust the nozzle to a wide fan pattern and slowly adjust to the desired spray pattern. This will help you avoid applying too much concentrated spray to the surface which could cause damage.

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## TIPS FOR EXTENDING THE LIFE OF YOUR PRESSURE WASHER

1. Never operate the unit without water.
2. This pressure washer is not designed to pump hot water. Never connect it to the hot water supply – this will significantly reduce the life of the pump.
3. Only use detergents specifically designed for pressure washers. Other types of detergent may cause internal damage to the unit, as might chemicals such as bleach, washing-up liquid, etc.
4. Do not use the unit unless it is attached to a suitable water supply.
5. Winter Storage:  
For storage during the winter months we recommend the use of a solution of 50/50 mix of antifreeze and water. This will keep the pump from freezing and getting damaged and will protect the internal components.

Method: You will need a length of garden hose and a funnel. Attach the garden hose to the inlet and pour the antifreeze into the unit via the funnel. Switch the unit on for a few seconds to allow the solution to flow through the system. Disconnect your pressure washer from the mains power, then pack away in your storage area.

**WARNING:** Before reusing, completely flush the unit out with plain water.

Anti-freeze can damage paintwork so you must ensure there is no anti-freeze left in the system before using it again.

# Troubleshooting chart

Symptom	Possible cause (s)	Corrective Action(s)
Pressure washer does not start	<ol style="list-style-type: none"> <li>1. Unit is pressurized</li> <li>2. Poor plug connection or faulty outlet socket</li> <li>3. Extension cord too long or undersized</li> <li>4. Main voltage supply too low</li> </ol>	<ol style="list-style-type: none"> <li>1. Squeeze trigger on gun</li> <li>2. Check plug, socket</li> <li>3. Remove extension cord</li> <li>4. Check that main supply voltage is adequate</li> </ol>
Pump does not reach necessary pressure	<ol style="list-style-type: none"> <li>1. Water inlet filter is clogged</li> <li>2. Pump sucking air from hose connections</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean water inlet filter</li> <li>2. Check that connections and locking ring are properly tightened</li> </ol>
Fluctuating pressure	<ol style="list-style-type: none"> <li>1. Pump sucking in air</li> <li>2. Clogged nozzle</li> </ol>	<ol style="list-style-type: none"> <li>1. Check that hoses and connections are tight</li> <li>2. Clear blockage with cleaning needle (see page 5)</li> </ol>
Motor stops suddenly	<ol style="list-style-type: none"> <li>1. Extension cord too long or undersized</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove extension cord</li> </ol>

## Plug fitting

Note: If a moulded plug is fitted and has to be removed, take great care in disposing of the plug and severed cable; it must be destroyed to prevent engaging into a socket. If the supply cord is damaged it must be replaced by a qualified person in order to avoid hazard. Your pressure washer is supplied with a fitted plug, however if you should need to fit a new plug follow the instruction below. If in doubt consult a qualified electrician.

## IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

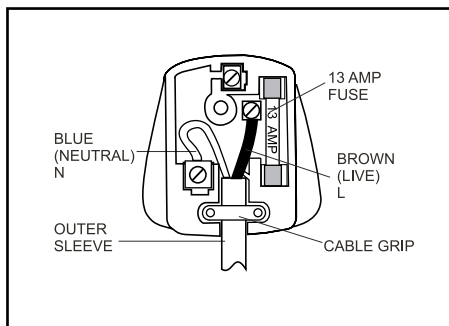
Blue - Neutral Brown - Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. No connection is to be made to the earth terminal of the plug.

If a 13 AMP (BS 1363/A) plug is used, a 13 AMP fuse must be fitted, or if any other type of plug is used a 13 AMP fuse must be fitted, either in the plug, or adaptor or on the distribution board.



## EC DECLARATION OF CONFORMITY

EQUIPMENT: 1650W Pressure Washer  
MODEL NUMBER: RAC-HP009  
EU REPRESENTATIVE: Hilka Pro Imports  
ADDRESS: 1 Roebuck Place  
Roebuck Road  
Chessington  
Surrey. KT9 1EU.  
United Kingdom

The Technical documentation is kept by: - as above

This is to certify that the aforementioned equipment fully conforms to the protection requirements of the following EC Council Directives on the approximation of the laws of the member states relating to:

Applicable Directives:

2000/14/EC	Noise
89/336/EEC	EMC
73/23/EEC	LVD
93/68/EEC	

And in consideration of the following standards:


EN 50366: 2003+A1  
EN 55014-1:2000+A1+A2  
EN 55014-2: 1997+A1  
EN 61000-3-2:2000 +A2  
EN 61000-3-3: 1995+A1+A2  
EN 60335-2-79: 2004+A1  
EN 60335-1: 2002+A1+A11+A12+A2  
EN ISO3744

We declare that the above equipment conforms to the requirements of the Directive 2000/14/EC  
Sound power level:

Measured	92 dB (A)
Guaranteed	95 dB (A)

The Conformity assessment procedure followed was in according with annex V of Directive 2000/14/EC

This declaration ceases to be valid should there be any modifications or changes to the machine, outside the details in the Instruction Booklet, made by the user.

  
Signed:  
(Responsible person)

Position: **Director**

Name: R. Satchell

Date of issue: 13/01/09



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE).

This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.

For further information, please contact your local or regional authorities.

Electronic products not included in the selective sorting process are potentially dangerous for the environment and human health due to the presence of hazardous substances.

*If faults cannot be remedied, contact the **Helpline on 020 8391 6767***

***Helpline@hilka.co.uk***

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