



# Aussie Raptor

Electric Drive Hydro-Blaster

Jan 2016

## Operator's Instruction Manual



Operators must read this manual and understand it before operating this machine

Ref: ARAP\_ELECT\_VER2

# Aussie Pumps

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Before attempting to operate your machine please read this Instruction Manual thoroughly following all directions carefully. By doing so you will ensure safe operation of the unit and will enjoy long and trouble free service from your heavy duty water blaster.

## WARRANTY COVERAGE

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The Aussie Eco-Clean Raptor has a two year warranty from date of purchase. This warranty covers any defect which occurs due to faulty workmanship or material under normal use. Please keep your receipt as proof of purchase. This warranty specifically excludes the following:

- Damage resulting from debris or mineral deposits contained within the water supply to the machine.
- Leaking hoses when the outer cover of the hose has been abraded or the hose has been kinked.
- Damage to o-rings and valves, etc. caused by the use of cleaning chemicals or compounds.
- Replacement of parts damaged due to fair wear and tear.
- Misuse, negligence, alteration, accident or breakage.
- Failure of the machine due to lack of normal maintenance services (The owner is responsible for the performance of regular maintenance services, as specified in the Operator's Manual).
- Damage and/or progressive damage caused by the failure to inform Australian Pump Industries Pty Ltd, or the closest Authorised Australian Pump Agent or Distributor, within seven days of the defect becoming apparent.
- Repair or modification by an unauthorised service person.
- Australian Pump Industries Pty Ltd specifically excludes from warranty responsibility any consequential loss or damage including on-site servicing, loss of time, loss of use of the machine, hire costs of a replacement machine or inconvenience..
- Where possible return faulty goods to the place of purchase. No products can be returned to us without prior permission. The reason for return must be clearly stated.

**N.B. Warranty is not transferable to third parties in the event of sale of the machine within the warranty period. Please note that any parts used in warranty repairs are guaranteed for a period limited by the original warranty of the parent product.**

Our goods 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 for 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.

The benefits under the Aussie Pump warranty are in addition to other rights under Australian Consumer Law.

## SAFETY FIRST

**WARNING:** To comply with Australian and New Zealand standards, operator's of 5000psi machines and larger need to complete operational and safety training courses and be duly certified in order to comply with Occupational Health & Safety requirements.

### ATTENTION OPERATOR

Please read the Operating and Safety Instructions in this manual thoroughly before using your Aussie Raptor water blaster. Please note that safety procedures must be followed carefully. Non-compliance can result in severe injury or even death.

### SAFETY CLOTHING

Wearing protective clothing is essential for the use of B-class machines (5000psi and above). Eye protection, gloves, body protection, steel capped boots and ear protection equipment are essential. For details see page 7.

### WATER BLASTING OPERATION

While using the Aussie Predator, take special care to ensure the gun and nozzle are never pointed at any person or animals. Severe injury or death may result. For details and other warnings see page 5.

### BACTERIA WARNING

In the event that some person or persons may be sprayed by high pressure water, it is important medical personnel be advised as unusual infections with microaerophilic organisms can occur. For details see *Emergency Medical Information* page 14.

## SPECIFICATIONS

| Performance        |             | Raptor 12              | Raptor 16              | Raptor 18              | Raptor 21              |
|--------------------|-------------|------------------------|------------------------|------------------------|------------------------|
| Stock code         |             | ABRAPTOR/12EMOT        | ABRAPTOR-16MOT         | ABRAPTOR/18EMOT        | ABRAPTOR/21EMOT        |
| Pump pressure      | psi         | <b>7,300 (500 BAR)</b> | <b>7,300 (500 BAR)</b> | <b>7,300 (500 BAR)</b> | <b>7,300 (500 BAR)</b> |
| EWP with turbo     | psi         | 12,000                 | 12,000                 | 12,000                 | 12,000                 |
| Flow               | lpm         | <b>12</b>              | <b>16</b>              | <b>18</b>              | <b>21</b>              |
| Motor              | Phase       | <b>Three phase</b>     | <b>Three phase</b>     | <b>Three phase</b>     | <b>Three phase</b>     |
| Power              | kW          | 4 pole, 12.5           | 4 pole, 18.5           | 4 pole, 18.5           | 4 pole, 21             |
| Pump speed         | rpm         | 1450                   | 1450                   | 1450                   | 1450                   |
| Pump type          |             | Penta                  | Bertolini              | Bertolini              | Bertolini              |
| Pump Model         |             | GHC12/50S              | RA 1650                | RA 1850                | RA 2150                |
| Nozzle size        |             | 020                    | 030                    | 030                    | 040                    |
| Accessories - Hose |             | 10M 1/4" 1,000 BAR     | 10M 1/4" 1,000 BAR     | 10M 1/4" 1,000 BAR     | 10M 1/4" 1,000 BAR     |
|                    | Gun         | RL84                   | RL84                   | RL84                   | RL84                   |
|                    | Lance       | RL800                  | RL800                  | RL800                  | RL800                  |
|                    | Nozzle type | Laser cut              | Laser cut              | Laser cut              | Laser cut              |



## ACCESSORY INFORMATION

Ensure that all accessories are rated to 7,300 psi (500 bar) before using with the Aussie Raptor.

Suitable accessories available from Australian Pump Industries;

- 1) Aussie Turbo Master turbo head CTN500-\_\_\_. (1/4" M to 1/2" M nipple required to fit to lance.) Also available as a complete kit with lance, gun, nozzle & nipple to allow quick coupling to hose (CTN500-\_\_GLK)

- 2) Aussie Grit blast Kit

TPS450 500 bar grit blast head, 1/4" F BSP (C4700.18)

Probe 580mm, 20mm hose barb (C4604.01)

**Note:** Available as a complete kit with lance, gun, nozzle & nipple to allow quick coupling to hose (TPS450/\_\_\_GLK).

- 3) Aussie 500 bar gun, lance & shoulder rest.

RL84 500 bar spray gun, 1/2" F BSP

(MPA30540000)

RL800 500 bar s/s 800mm single lance, 1/2" M

(MPA30500080)

RL1250 500 bar s/s 1250mm single lance, 1/2" M

(MPA30500092)

Shoulder rest, 300mm

(MPA30501921)



## HIGH PRESSURE WASH DOWN

The Aussie Raptor can be used for any high pressure water blasting application in construction, mining, ship cleaning, dry docks, graffiti removal or for any other difficult task.

### HIGH PRESSURE PISTON PUMPS

Your high pressure Udor pumping system is the heart of your water jetter. The pump has been specially designed to be used with cold water (max 60°C) for high pressure wash down applications. Your high pressure Udor piston pump is designed to move a certain amount of water per revolution by its three solid ceramic pistons.

High pressure is created once the pump outlet is restricted with a nozzle. All high pressure outlet connections, hosing and equipment is rated over and above the maximum operating pressures of the pump.

Please **do not** alter any valving on your pump; altering will void all warranty. For any malfunction of the high pressure pumping system, please contact Australian Pump Industries or the Distributor you purchased the unit from.

Because of safety/danger hazards with high pressure systems, only use approved high pressure hosing and components when replacing or repairing your Raptor. For guidance on this, please contact Australian Pump Industries or the Distributor you purchased the unit from.

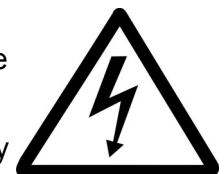
Once wash down nozzles have worn, pressure loss will occur. Replacement of nozzles is necessary to maintain constant and maximum efficiency of your Raptor. Using worn nozzles will reduce unloader valve service life.

## **WARNING... Do Not Alter Pressure Setting**

Altering the high pressure unloader device and safety valve may result in severe injury or death. Warranty will be void if any high pressure valve equipment has been altered by non-qualified staff. Over-speeding or over-pressurizing of the pump system is **dangerous** and can severely reduce the operating life of the machine. It may also result in injury or death!

## **SAFETY PRECAUTIONS - IMPORTANT**

1. This blaster should only be operated by an operator who has been trained in high pressure safety awareness.
2. Never direct the spray jet at any person or animal.
3. Never direct spray jet at any surface that may contain asbestos material.
4. Never hold a finger over the high pressure nozzle.
5. Never direct the spray jet at the machine itself or any electrical equipment.
6. After use release the pressure in the high pressure hose by operating the pistol trigger.
7. Electric cables should not be left in a position where water can come into contact with the electric cable. Always keep electrical connections dry and off the ground.
8. When not in use always switch off the engine and disconnect from water supply.
9. Certain components become very hot when in use. Switch off the blaster and **ALLOW TO COOL** before touching.
10. Do not attempt any mechanical repair. If you have a problem with your machine contact your local dealer or Aussie Pumps service division, phone 02 8865 3500
11. Never supply any liquid other than clean water to the water inlet.
12. Never pull the high pressure hose if it has formed kinks or nooses. Never pull the hose over sharp objects.
13. Do not attempt to disconnect any hose or coupling with pressure still in the hose.
14. Do not operate the machine whilst standing on ladders, use a platform tower or scaffolding.
15. We recommend the use of personal protection equipment including safety goggles & suitable footwear.
16. The electrical power voltage must agree with the voltage specified on label on base of machine. [Note: Improper connection will damage machine and void warranty.]
17. The machine must be grounded. The unit must be wired into an appropriate power source by a licenced electrician.
18. To avoid damage to cable do not roll, crush or pull it. The power cable may only be repaired or replaced by an trained electrician.
19. Disconnect from power supply and relieve pressure to hose before attempting any work on the machine.





# PERSONAL PROTECTIVE EQUIPMENT



'Wear protective clothing'

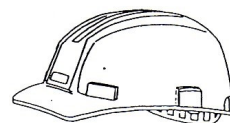
## General

Appropriate personal protective equipment should be worn where:

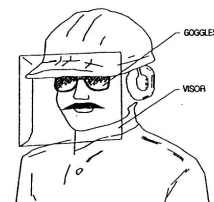
1. hazards cannot be otherwise prevented or suitably controlled, e.g. by engineering or administration controls, total enclosure or substitution; and/or
2. complete protection is essential, e.g. in some occupational environments with uncertain levels of hazards.

The provision and use of personal protective equipment does not reduce or replace the need for proper Occupational Health and Safety prevention measures, such as engineering or administrative controls to be undertaken. Recommendations of such preventative measures should always be fully explored before considering issue of personal protective equipment. Where personal protective equipment is issued, instruction and training should be provided regarding its correct use and maintenance.

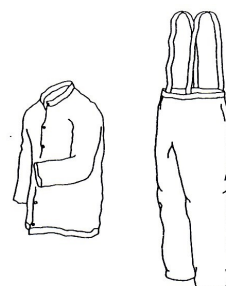
■ **Head Protection.** Where appropriate suitable head protection complying with AS/NZS 1808 should be worn.



■ **Eye Protection.** Eye protection complying with AS/NZS 1337 (adequate for the purpose and of adequate fit on the person) should be worn at all times when in the vicinity of water blasting operations. Where liquid is liable to cause eye damage, full visor and goggles are recommended.



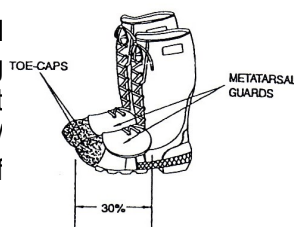
■ **Body Protection.** All persons should wear suitable waterproof clothing complying with AS 3765.1 or AS 3765.2 as appropriate, having regard to the type of work being undertaken. Liquid or chemical-resistant suits should be worn where there is an assessed risk to health or of injury that can be prevented by such equipment.



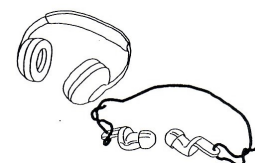
■ **Hand Protection.** Adequate hand protection complying with the recommendation/s of AS/NZS 2161.2, AS/NZS 2161.3 or AS/NZS 2161.5 should be worn when there is an assessed risk of injury that can be prevented by such equipment.



■ **Foot Protection.** All persons should wear appropriate occupational protective footwear complying with AS/NZS 2210.2. A metatarsal and lower leg guard should be used by water blasting operators where it is assessed that the risk of foot injury can be prevented by such equipment. AS/NZS 2210.1 provides guidance for the selection of footwear.



■ **Hearing Protection.** Suitable hearing protection complying with AS 1270 should be worn at all times when the noise levels exceed limits set by regulatory authorities. All personnel and operators should receive instruction in the correct use and maintenance of hearing protectors so that noise exposure lies within the limits as recommended by the regulatory authority.



**500 BAR (7,500 PSI)**

# Personal Safety Protection

**Aussie Pumps**  
**SAFE OPERATOR**

## Comfort, Function & Safety

Dyneema® is the worlds strongest fibre.  
This lightweight fabric offers a high level  
protection against waterjetting hazards.

### Protection level

- 500 BAR with a turbo or  
flat 15° spray angle
- 200 BAR with a pencil jet (0° angle)

### Features include

- Lined for maximum comfort
- Waterproof zippers with overlapping flap
- Dirt repellant
- Under arm ventilation
- Detachable hoods
- Adjustable waterproof cuffs & pockets
- Elasticated waist
- Re-inforced knee areas

### Options available ...

- Overall with detachable hood (XS to 3XL)
- Jacket with detachable hood (XS to 3XL)
- Trousers (XS to 3XL)
- Apron
- Gloves



Dyneema® is a registered  
trademark of Royal DSM N.V

**The strongest fibre  
in the world!**

**STAY  
SAFE  
STAY DRY**

**Aussie Pumps**  
[www.aussiepumps.com.au](http://www.aussiepumps.com.au)

AUSTRALIAN PUMP INDUSTRIES PTY LTD

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[info@aussiepumps.com.au](mailto:info@aussiepumps.com.au),

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

## OPERATOR'S HAND SIGNALS

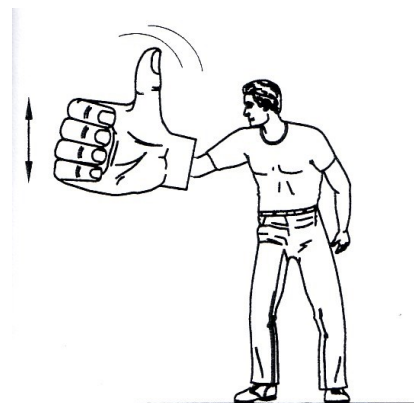


'Aussie Eco-Clean ...  
Safety First!'

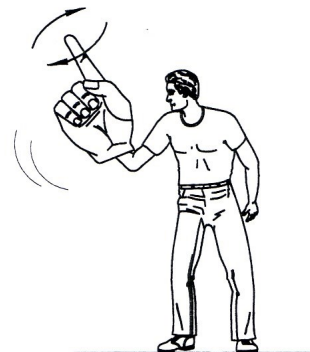
This section provides a set of hand signals for communication when carrying out water blasting operations.

### ■ **Pressurise System.**

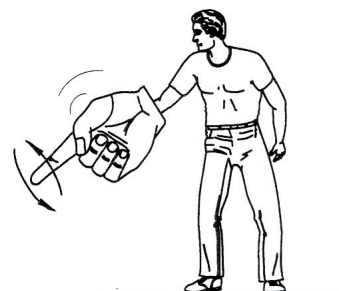
Thumb pointing upwards, the rest of the hand closed. From the shoulder height the arm moves up and down.



### ■ **Raise Pressure.** First finger pointing up, the rest of the hand closed. The hand is moved in a circular motion.



### ■ **Lower Pressure.** First finger pointing down, the rest of the hand closed. The hand is moved in a circular motion.



### ■ **Depressure System.** Form a fist. Move the arm back and forth at shoulder height.





## STANDARD EQUIPMENT

Before proceeding with assembly of your new Aussie Raptor, check that all parts listed below are included.

- 1 Gun/lance/nozzle assemble
- 1 x 10m high pressure hose

### **HIGH PRESSURE SETTING**

The high pressure pump is factory set to operate at its rated pressure. **DO NOT ADJUST.** Tampering with the pressure regulator will void warranty and can be dangerous.

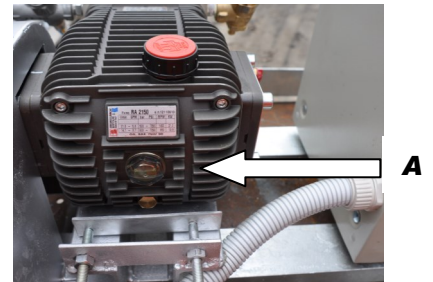
### **WARNING:**

If pressure drops off, check nozzle for wear. Nozzles should be replaced on a regular basis (every month for machines in regular use, every 3 months for machines used intermittently). Using the machine with the incorrect nozzle size or worn nozzle will void warranty and can be dangerous to the operator.

## ASSEMBLY AND PREPARATION FOR USE

### Check the oil in the (A) pump

- ♦ With the machine on a level surface the oil level should be level with middle of side oil plug or sight glass. Do not overfill. If necessary top up with SAE30W pump oil.
- ♦ Do not mix different grades of oil as this may affect the machine's performance.
- ♦ If alternative oil is used first empty out existing oil by unscrewing drain plug in bottom of machine.



**NOTE:** Read this handbook thoroughly and follow all directions carefully before you begin using the machine.

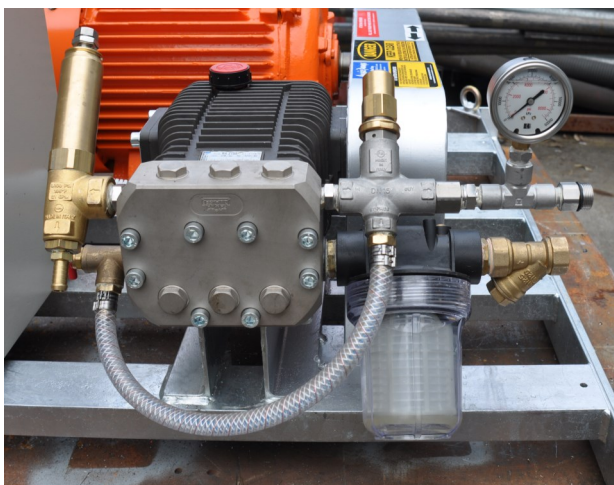
### High pressure hose

Connect the high pressure hose to the threaded outlet fitting on the side of the machine.

### Water supply hose

Use a good quality hose (not supplied) of the same diameter as the inlet on the Raptor. Connect hose to inlet fitting on pump. This connection must be tight to avoid leaks.

Connect the other end of the hose to the tap, ensuring that the flow will be sufficient for the pump requirements.



Outlet hose connection

Inlet hose connection

**NOTE:** A pump filter has been fitted to prevent the ingress of grit to the pump. Ensure filter is clean before using machine. This hydro-blaster can be used with water up to 60°C.

## **OPERATING INSTRUCTIONS**

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The hydro--blaster is supplied with an amperage cut-out switch. Do not adjust. Adjusting amperage cut-out switch voids warranty.

### **SWITCHING ON MACHINE**

1. Ensure power is connected.
2. Turn on water supply. NOTE: Tap should be fully open.
2. Pull the gun trigger to expel air from the system. Water will trickle from the end of the lance when air is expelled.
3. Start motor at amperage protection switch.
4. Check that there are no leaks in the line connections, pistol or power lance. Pressure begins when the pistol trigger is squeezed.

### **SAFETY ... IMPORTANT**

EXCESS ATOMISED MOISTURE CAN ENTER SWITCHES & MOTOR CONNECTIONS AND OVER  
TIME MAY CAUSE FAILURE  
KEEP THE MACHINE OUT OF MOISTURE LADEN ATMOSPHERES

### **WARNING .... DO NOT RUN EXCESSIVE BY-PASS**

SWITCH MACHINE OFF WITHIN TWO MINUTES OF CEASING OPERATION AS EXCESSIVE BY-  
PASS CAN CAUSE HEAT BUILD UP IN PUMP & SUBSEQUENT DAMAGE. EXCESSIVE BY PASS  
RUNNING VOIDS WARRANTY!!

### **SWITCHING OFF MACHINE**

1. Turn switch to OFF position.
2. Turn off water.
3. Release pressure in spray gun by pressing trigger until water only drips from the spray head.
4. Release trigger on gun.
5. Press safety latch on gun. This locks gun trigger and prevents accidental triggering.
6. Unplug machine from power point.
7. Disconnect water supply hose from machine.

## **CARE AND MAINTENANCE**

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### **AFTER EACH USE**

If there is a danger of freezing anti-freeze should be mixed with the flush water or the machine must be completely drained. After the final flush stop the machine. DO NOT allow the machine to idle for more than 15 seconds. This is particularly important when there is a danger of freezing. Do not run for longer without water supply.

### **STORAGE**

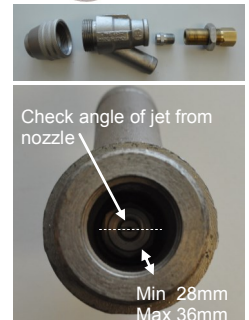
Store the washer in an upright position, preferably drained of water if there is a danger of freezing (or fill with anti-freeze).

## AUSSIE GRIT BLAST HEAD SET UP INSTRUCTIONS (optional accessory)

7,300 psi grit blast head (C4700.18)

Note: the Aussie Grit Blast head does not come with a nozzle. You will need a 15° Aussie Laser Cut 'M' series nozzle that suits the high pressure blaster the kit will be used with.

1. Unwind the tail coupling and remove top of the blast head. Screw in the nozzle to the tail.
2. Replace the tail and ensure that the tip of the nozzle is a minimum of 28mm from leading edge of body and a maximum of 36mm. The fan spray from the nozzle should be perpendicular to the sand intake tail. Mark the top side of the hexagonal coupling for reference.
3. Line up the dimple in the ceramic nozzle perfectly with the sand intake tail and hold in place with the holder. Screw down the head locking nut.
4. The fan produced by the two nozzles must be aligned.
5. Connect grit blast head to hp gun/lance and activate the gun with the high pressure blaster running. Check the fan jet leaving the nozzle is the full width of the slot. Adjust by rotating hexagonal tail coupling, ensuring that the marked side of the tail always finishes on top.
6. With the high pressure washer turned off, connect the sand hose to the sand intake tail and secure with hose clips. Secure sand blast probe to other end of the hose in the same way. The probe should be lodged into the sand bag.



**WARNING:** To reduce the risk of injury, always protect eyes and face with goggles and mask, and hands and arms with heavy work gloves when spraying abrasive materials.

## GRIT BLAST INSTRUCTIONS

1. Connect and open the water supply line before starting the pressure washer.
2. Squeeze the gun trigger to bleed air as normal.
3. Turn on the pressure washer and squeeze the gun trigger to activate the spray. **CAUTION:** Always test spray on a scrap of similar material first! The high pressure spray could damage the surface if the grit blaster is held too close.
4. To determine best distance for grit blasting, start with the spray nozzle a metre away from the surface and gradually move closer, frequently checking the surface for damage.
6. Always point the nozzle downward when not spraying. This prevents water from entering the sand supply. If water does get into the sand supply hose, remove the probe from the sand, hold the gun trigger open, and let the hose air dry. Always be sure the sand hose is dry before using.
7. Keep the sand covered to prevent the overspray from wetting the sand. Do not allow small pieces of the sand bag to fall into the sand supply. A smaller piece could prevent the flow of sand.

## MAINTENANCE, SERVICE AND SPARES

Your Aussie Raptor has been designed to give you long and trouble free service. If, however, having carefully followed the instructions in this booklet, you have a problem which cannot be resolved by referring to the Troubleshooting Guide below, or if you require spare parts or servicing, contact your local dealer or Australian Pump Industries on Telephone No.: **(02) 8865 3500**.

| TROUBLESHOOTING GUIDE                                  |   |  |
|--|---|--|
| FAULT  | CAUSE   | REMEDY   |
| Pump running normally but pressure low on installation | Pump sucking air<br>Valves sticking, dirt in valves<br>Unloader valve seat faulty<br>Nozzle incorrectly sized<br>Worn piston packing  | Check water supply and possibility of air ingress<br>Check and clean or replace if necessary<br>Check and replace<br>Check and replace<br>Check and replace                  |
| Fluctuating pressure                                   | Valves worn<br>Valves blocked<br>Pump sucking air<br>Worn piston packing  | Check and replace<br>Check and clean out if necessary<br>Check water supply and air ingress at joints in suction line<br>Check and replace                                   |
| Pressure low after period of normal use                | Nozzle worn<br>Suction or delivery valves worn<br>Suction or delivery valves blocked<br>Unloader valve seat worn<br>Worn piston packing<br>Cracked pistons as a result of dry running | Check and replace<br>Check and replace<br>Check and clean if necessary<br>Check and replace if necessary<br>Check and replace if necessary<br>Replace pistons                |
| Pump noisy   | Air in suction<br>Broken or weak suction or delivery valve spring<br>Foreign matter in valves<br>Worn bearings<br>Excessive temperature of liquid                                     | Check water supply and connections on suction line<br>Check and replace if necessary<br>Check and clean if necessary<br>Check and replace if necessary<br>Reduce temperature |
| Presence of water in oil                               | Oil seal worn<br>High humidity in air<br>Piston packing worn  | Check and replace<br>Check and change oil twice as often<br>Check and replace if necessary   |
| Water dripping from under pump                         | Piston packing worn<br>Plunger retainer worn  | Check and replace<br>Check and replace   |
| Oil dripping   | Travel plug in use on pump<br>Oil seal worn   | Replace with breather plug<br>Check and replace  |



**WARNING: CHECK OIL LEVEL IN PUMP REGULARLY  
DO NOT OVERFILL**



# **ACCIDENT REPORTING FOR INDUSTRIAL APPLICATIONS**

- Reporting.** All accidents or injuries, whether resulting in “lost time” or “no lost time” injuries, should be recorded in accordance with the recommendations of AS 1885.1.

Incidents that result in “near misses” should also be recorded as a means of providing a record of significant incidents that have the potential to result in serious injury at the workplace, so appropriate measures can be implemented to minimise or eliminate these potential hazards.
- Personal Injuries.** In the event that a person is injured by the impact of a water jet, the injury caused may appear insignificant and give little indication of the extent of the injury beneath the skin and the damage to deeper tissues. Although only a small hole may be present, quantities of water may have penetrated the skin and entered the flesh and organs causing serious injury.
- Medical Recommendation.** If an accident occurs where pressurised water penetrates or appears to have penetrated the skin, medical assistance should be sought immediately.
- Immediate First Aid.** Where medical examination is not immediately possible (e.g. in remote situations), appropriate basic first aid measures should be applied and the patient observed closely until medical treatment is available.
- Medical Alert Card.** All operators engaged in commercial and industrial water blasting operations should carry out an immediately accessible, waterproof medical alert card. This card should:

  - outline the possible nature of injuries and post-accident infections that can be caused by high pressure water blasting;
  - provide details of immediate first-aid treatment until medical treatment can be arranged; and
  - provide the name or names of medicos (and contact phone numbers) who should be contacted for expert medical advice for the treatment of high pressure water blasting injuries.

In addition, the card may also:

- identify the worker; and
- outline medical information about the worker; e.g. blood type, allergies and conditions, such as asthma.

# **EMERGENCY MEDICAL INFORMATION**

Immediate hospital attention should be given to personnel who sustain equipment related injuries while operating the system. In such cases, it is vital that medical personnel be apprised of all facts relevant to such injuries. Therefore, all operating personnel should be provided with waterproof emergency medical tags or cards describing the nature of their work and the possibility of injury inherent in the use of a water blasting device. The tag or card should also bear the following standard notice:



## **IMPORTANT**

'Aussie Eco-Clean ...  
Safety First!'



## **MEDICAL ALERT**

This card is to be carried by personnel working with high pressure water blasting equipment. Obtain medical treatment immediately for ANY high pressure water blasting injuries.



**DIAL 000 FOR EMERGENCY ADVICE**

**AUSTRALIAN PUMP**

RELIABLE PRODUCTS ... RELIABLE PEOPLE

AUSTRALIAN PUMP INDUSTRIES PTY LTD  
7 Gladstone Rd, CASTLE HILL NSW 2154  
Ph: (02) 9894 4144 Fax: (02) 9894 4240

**CAUTION: This person may have been working with water blasting equipment at pressures to 500 bar (7,300 PSI).**

This should be taken into account during diagnosis. High pressure water injection injuries can produce an unexpected pattern of severe internal and external injury along with infectious complications. Emergency physicians must be aware of the varied deceptive presentations and subsequent complications to deal with injuries effectively. Bacterial swabs and blood cultures may be helpful. A local poison control centre should be contacted for additional treatment information.

WHERE MEDICAL ATTENTION IS NOT IMMEDIATELY POSSIBLE, APPROPRIATE BASIC FIRST AID MEASURES SHOULD BE APPLIED AND THE PATIENT OBSERVED CLOSELY UNTIL MEDICAL TREATMENT AVAILABLE.



## SAFETY TRAINING

# AUSSIE SAFE OPERATOR HIGH PRESSURE SAFETY AWARENESS COURSE

### A MUST DO COURSE FOR ALL HIGH PRESSURE CLEANING EQUIPMENT OPERATORS

This hands-on course will not only train your staff to operate Class A & B Aussie high pressure cleaning equipment safely (up to 500 BAR) but also how to look after their equipment ensuring it stays in top working order for longer.

**Location** Australian Pump Industries  
7 Gladstone Rd, Castle Hill NSW

**Duration** Approx 3 hours,  
practical session included

**Cost** \$460 per person

### Members only

FREE to Members using Aussie  
Blasters

50% discount to other members

Certified Aussie Eco-clean Operator  
id tag & certificate awarded  
to successful participants



**Call Aussie for dates  
of next course  
& to book your place  
02 8865 3500**



**OH&S recommends safety training for all hp operators  
There is a push to make it compulsory ... be prepared**

### Topics Covered

- Hazards associated with High Pressure Water Blasting
- System principles & operation
- Maintenance, inspection & testing
- Misuse of equipment
- Injuries & the actions required in the event of an accident
- Essential personal protective clothing & equipment

**AUSTRALIAN PUMP INDUSTRIES PTY LTD**

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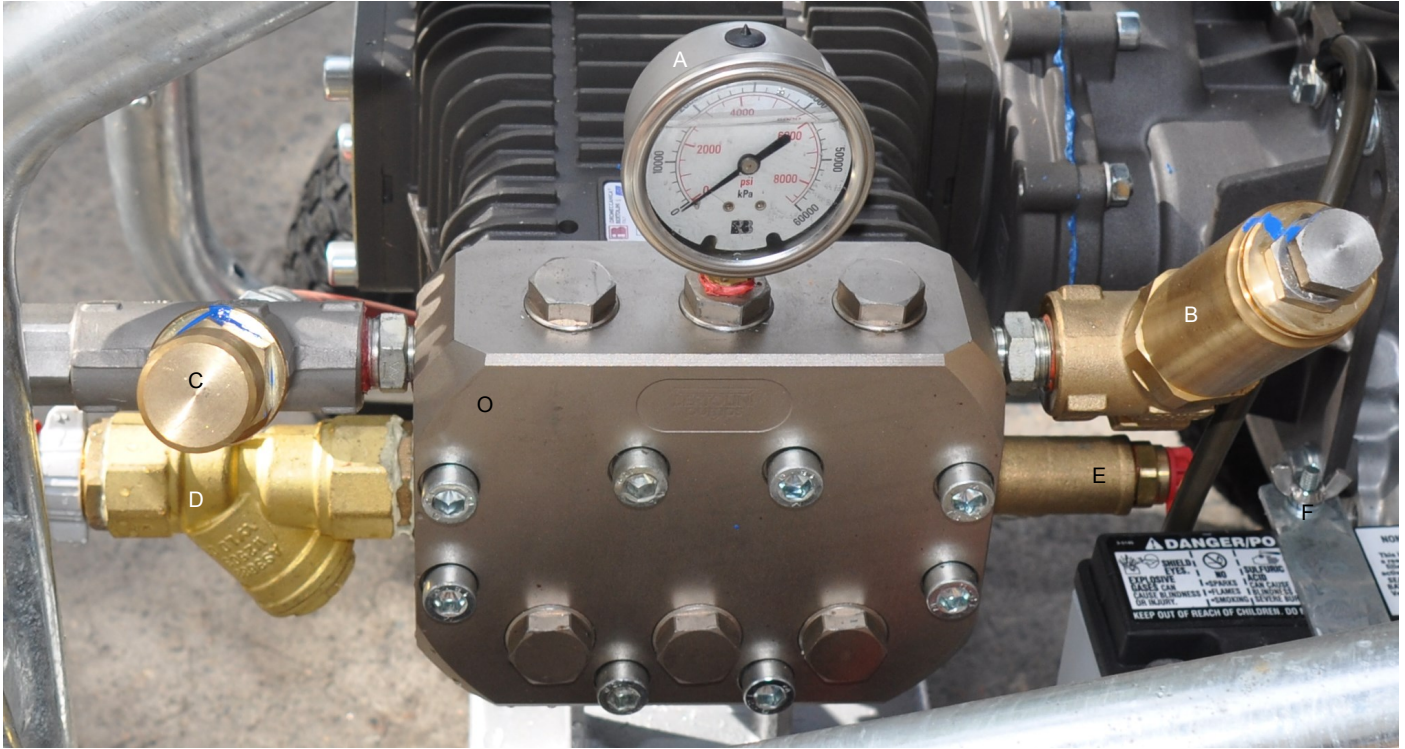
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**Aussie Pumps**



## Replacement Parts



| ITEM NO. | DESCRIPTION             | RAPTOR 12       | RAPTOR 16         | RAPTOR 18         | RAPTOR 21         |
|----------|-------------------------|-----------------|-------------------|-------------------|-------------------|
| A        | 700 BAR GAUGE           | AGAUGE700BAR    | AGAUGE700BAR      | AGAUGE700BAR      | AGAUGE700BAR      |
| B        | UNLOADER VALVE (VB53)   | BVB53           | BVB53             | BVB53             | BVB53             |
| C        | SAFETY VALVE            | BVS500          | BVS500            | BVS500            | BVS500            |
| D        | Y STRAINER              | AYSTRAINER1"    | AYSTRAINER1"      | AYSTRAINER1"      | AYSTRAINER1"      |
| E        | THERMAL DUMP VALVE      | MPA60063070     | MPA60063070       | MPA60063070       | MPA60063070       |
|          | ON/OFF SWITCH           | ASWITCHASSY25A  | ASWITCHASSY32ES   | TBA               | TBA               |
|          | 13" WHEEL               | A400016         | A400016           | A400016           | A400016           |
|          | MOTOR                   | A140060T025     | AT416018NR9J5MG   | AT416018NR9J5MG   | TBA               |
|          | FRAME (if applicable)   | AFRAMESCERAPTOR | AFRAMESCERAPTOR   | AFRAMESCERAPTOR   | AFRAMESCERAPTOR   |
|          | 8100 PSI GUN (RL84)     | MPA30540000     | MPA30540000       | MPA30540000       | MPA30540000       |
|          | SS SINGLE LANCE (RL800) | MPA30500080     | MPA30500080       | MPA30500080       | MPA30500080       |
|          | HP CERAMIC NOZZLE       | M0124006110     | M0124006210       | M0124006210       | M0124006310       |
|          | 10MTR 500 BAR HOSE      | A36414432109    | A36414432109      | A36414432109      | A36414432109      |
| O        | PISTON PUMP 7,300 PSI   | GHC 12/50S      | Bertolini RA 1650 | Bertolini RA 1850 | Bertolini RA 2150 |





# AUSSIE HYDRO-BLASTER RISK ASSESSMENT

## MODELS:

In line with the National Occupation Health & Safety Commission's requirements the data below applies to the Aussie Scud range of high pressure water blaster models:

- ♦ Aussie Raptor Hydro-blaster

## DESCRIPTION:

Electric drive ultra high pressure cold water blasters designed for professional cleaning applications.

## MATERIAL CONSTRUCTION:

Aussie Scud pressure washers are mounted on heavy duty trolley mounted frames. They consist of a quality four pole electric motor driving a 500 BAR pump. The machines are supplied with wheels for ease of portability and manoeuvrability. The machines can be supplied with hose reels and up to 45 metres of high pressure hose to increase operator convenience.

## RISK RANKING METHOD:

Risk is the combination of the likelihood of a specific unwanted event and the potential consequences if it should occur.

## RISK RANKING METHOD:

For each event, the appropriate probability (a letter A to E) and consequences (a number 1 to 5) is selected.

### PROBABILITIES:

- A. Common or repeating occurrence.
- B. Known to occur or "it has happened".
- C. Could occur, or "I've heard of it happening".
- D. Not likely to occur.
- E. Practically impossible.

### CONSEQUENCES FOR PEOPLE:

- 1. Fatality or permanent disability.
- 2. Serious lost time, injury or illness.
- 3. Moderate lost time, injury or illness.
- 4. Minor lost time, injury or illness.
- 5. No lost time.

## RISK RANKING TABLE:

The consequences (loss outcomes) are combined with the probability (of those outcomes) in the risk ranking table to identify the risk rank of each loss event (e.g. a consequence of 3 with a probability of B yields a risk rank of 9).

The table yields a risk rank from 1 to 25 for each set of probabilities and consequences. A rank of 1 is the highest magnitude or risk that is a highly likely, very serious event. A rank of 25 represents the lowest magnitude of risk, an almost impossible very low consequence event.

| C<br>O<br>N<br>S<br>E<br>Q<br>U<br>E<br>N<br>C<br>E | PROBABILITY |    |    |    |    |    |
|---|-------------|----|----|----|----|----|
|   |             | A  | B  | C  | D  | E  |
|   | 1           | 1  | 2  | 4  | 7  | 11 |
|   | 2           | 3  | 5  | 8  | 12 | 16 |
|   | 3           | 6  | 9  | 13 | 17 | 20 |
|   | 4           | 10 | 14 | 18 | 21 | 23 |
|   | 5           | 15 | 19 | 22 | 24 | 25 |

Controls must be taken to either eliminate or minimise the risk.



**POTENTIAL HAZARD:**

| <b>Hazard</b>  | <b>Yes/<br/>No</b> | <b>Risk</b>   | <b>Risk<br/>Rating</b> | <b>Controls</b>   |
|--|--------------------|---|------------------------|---|
| Entanglement with hose<br>(tripping, falling)            | Yes                | Personal injury of the<br>operator or bystanders  | 13                     | <ul style="list-style-type: none"> <li>♦ Warning stickers</li> <li>♦ hose reel option</li> </ul>  |
| Injury from high pressure water                          | Yes                | Personal injury of the<br>operator or bystanders  | 4                      | <ul style="list-style-type: none"> <li>♦ Warning notice on blaster</li> <li>♦ Warning in Operator's Manual,</li> <li>♦ Use of safety protection clothing (Aussie Safe-operator)</li> <li>♦ Use of barriers to keep bystanders away from work area</li> </ul>  |
| Ergonomic lifting or movement<br>on site,                | Yes                | Personal injury   | 8                      | <ul style="list-style-type: none"> <li>♦ Machine decal warning about correct lifting procedures</li> <li>♦ Operator's Manual</li> <li>♦ Staff training</li> </ul>   |
| Belt failure   | Yes                | Serious injury  | 20                     | <ul style="list-style-type: none"> <li>♦ Enclosed guard must be in place</li> </ul>   |
| Electrocution  | Yes                | Serious injury, burns   | 21                     | <ul style="list-style-type: none"> <li>♦ Warning sticker on machine</li> <li>♦ Disconnect machine when not in use</li> </ul>  |
| Unsecured machine, moves<br>unattended                   | Yes                | Cause of accidents and/<br>or injury  | 18                     | <ul style="list-style-type: none"> <li>♦ Warning sticker "Secure Machine during Operation"</li> <li>♦ Operator's Manual</li> </ul>  |
| Noise  | Yes                | Hearing damage  | 15                     | <ul style="list-style-type: none"> <li>♦ Warning sticker regarding ear muffs to be used during operation</li> </ul>   |
| Dislodged particles in<br>atmosphere                     | Yes                | Sight damage  | 6                      | <ul style="list-style-type: none"> <li>♦ Warning regarding wearing safety glasses.</li> </ul>   |
| Slipping on wet surface                                  | Yes                | Personal injury   | 9                      | <ul style="list-style-type: none"> <li>♦ Use of suitable footwear</li> </ul>  |
| Contact with chemical cleaners<br>used to clean surfaces | Yes                | Skin contact could result<br>in burns, skin irritation<br>etc. Fumes from some<br>chemicals may lead to<br>respiratory problems | 4                      | <ul style="list-style-type: none"> <li>♦ Chemical cleaners to only be used as a last resort when other methods have failed.</li> <li>♦ Areas to be kept well ventilated.</li> <li>♦ Staff to follow manufacturers' instructions at all times for use, storage &amp; disposal.</li> <li>♦ Staff to wear the appropriate PPE</li> <li>♦ Respiratory protection when required</li> </ul> |

Signed originator .....

Job title.....

Date Completed .....

# PLAN SAFE ... STAY SAFE

## **WARNING**

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### **OVERSPEEDING**

- Do not operate machine at over 1450rpm.
- Over speeding can cause serious pump damage.

### **EXCESSIVE BYPASS**

- Do not run on excessive bypass. Switch machine off within five minutes of ceasing operation as excessive bypass can cause heat build-up in pump and subsequent damage. Excessive bypass running voids warranty.

### **HIGH PRESSURE SETTING**

- The high pressure pump is factory set to operate at its rated pressure. **DO NOT ADJUST.** Tampering with the pressure regulator will void warranty and can be **DANGEROUS.**

### **CHECK NOZZLE MONTHLY**

- If pressure drops off, check nozzle for wear. Nozzles should be replaced on a regular basis (every month for machines in regular use, every three months for machines used intermittently). Using the machine with the incorrect nozzle size or worn nozzle will void warranty and can be **DANGEROUS** to the operator.

## **PRESSURE CLEANER DAILY CHECK LIST**

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### **IMPORTANT:**

- Check pump oil level  
*NB.* Pump oil level should be level with the middle of the side oil plug or sight glass. Do not overfill. If necessary, top up with SAE30W oil.  
Do not mix different grades of oil as this may affect the machine's performance. If alternative oil is used, first empty out existing oil by unscrewing drain plug in bottom of machine.
- Check nozzle for wear.
- Check all high pressure components for leaks:  
(a) Gun/Lance. (b) HP hose. (c) All fittings.
- Check water filter and clean if necessary.
- Check unloader, safety valve and thermal dump for leaks.

**Warning:** Ensure top mounted breather plug is kept clean. Blocked breather can result in pressurisation of the oil chamber and blown seals.

## **THREE MONTHLY REGULAR SERVICE**

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All professional machines need to be thoroughly serviced every three months. The service involved should include the motor manufacturer's recommendations (see separate Manual) and the following:

- Change pump oil
- Check filter for foreign debris.
- Check unloader, safety valve and thermal dump for leaks.
- Check all HP components for leaks: Gun/Lance, HP hose and all fittings.
- Replace nozzles.



RELIABLE PRODUCTS ... RELIABLE PEOPLE

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