

Aussie Eco-Clean Monsoon Series High Pressure Blaster (Three Phase Models)

OPERATION & MAINTENANCE MANUAL



Covers:

Monsoon 200
Monsoon 300
Monsoon 300 Maxi
Monsoon 400
Monsoon 400 Maxi
Hurricane

Feb 2010



AUSTRALIAN PUMP



IMPORTANT:

TO REDUCE RISK OF INJURY,
READ OPERATING INSTRUCTIONS
CAREFULLY BEFORE USING EQUIPMENT

AUSSIE ECO CLEAN BLASTER OPERATING AND MAINTENANCE INSTRUCTIONS

*** * W A R N I N G * ***
**AUSSIE HEAVY DUTY WATER BLASTERS ARE DESIGNED
FOR PROFESSIONAL OPERATORS ONLY**
IMPORTANT
INSTRUCT OPERATORS IN CARE AND USE OF THE MACHINE BEFORE USE!

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

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:

1. Damage resulting from debris or mineral deposits contained within the water supply to the machine.
2. Leaking hoses when the outer cover of the hose has been abraded or the hose has been kinked.
3. Damage to o-rings and valves, etc. caused by the use of cleaning chemicals or compounds.
4. Replacement of parts damaged due to fair wear and tear.
5. Misuse, negligence, alteration, accident or breakage.
6. 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).
7. 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.
8. Repair or modification by an unauthorised service person.
9. 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.
10. Routine maintenance is the owner's responsibility. Failure to maintain the machine in line with the services outlined on page 8 will invalidate the warranty.
11. 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.

STANDARD EQUIPMENT

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

- 1 Gun handle assembly and high pressure hose
- 1 Lance and nozzle assembly
- 1 Inlet hose connector assembly

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.



SAFETY PRECAUTIONS - IMPORTANT

1. **NEVER** direct the spray jet at any person or animal.
2. **NEVER** direct spray jet at any surface that may contain asbestos material.
3. **NEVER** hold a finger over the high pressure nozzle.
4. **NEVER** direct the spray jet at the machine itself or any electrical equipment.
5. After use release the pressure in the high pressure hose by operating the pistol trigger.
6. **DO NOT** attempt any mechanical repair. If you have a problem with your machine contact your local Aussie Eco Clean Service Division, phone (02) 9894 4144.
7. **NEVER** supply any liquid other than water to the water inlet.
8. **NEVER** pull the high pressure hose if it has formed kinks or nooses.
9. **NEVER** pull the hose over sharp objects.
10. **DO NOT** attempt to disconnect any hose or coupling with pressure still in the hose.
11. **DO NOT** operate the machine whilst standing on ladders, use a platform tower or scaffolding.
12. Children should **NOT** be allowed to use the machine.
13. We recommend the use of safety goggles when using the machine, particularly with the sand blasting attachment (optional accessory) or any application where loose particles of stone or `grit, etc. may be blown around by the pressure spray.



ASSEMBLY AND PREPARATION FOR USE

1. Check the oil in the pump . **Note** separate reservoirs. With the machine on a level surface the oil level should cover the red spot in the oil level sight glass on the side of the machine. If necessary, top up with SAE 30w 50 oil (non foaming type). Do not mix different grades of oil as this may affect the machine's performance. If alternative oil is used, first empty out oil by unscrewing drain plug in bottom of machine.



2. Ensure breather plug is fitted to pump (yellow).
WARNING: Before operation ensure top mounted oil filler plug is replaced by breather. Failure to fit breather and keep clean can result in over pressuring of oil chamber (crank case) and can blow oil seals. **This will void warranty..**

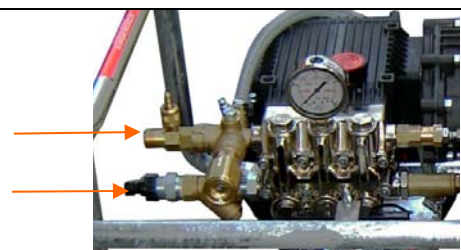
HEAVY DUTY LANCE: To assemble the lance, insert Section B into Section A and screw together and check nozzles have been fitted to end of lance (C & D).



HIGH PRESSURE HOSE

Connect the high pressure hose to the threaded water outlet on the side of the machine via a screw coupling. No spanners are necessary.

High pressure hose connection
Supply hose



WATER SUPPLY HOSE:

Use a good quality hose (not supplied) of 25mm diameter minimum.

Fasten the one end of the hose to the inlet hose connector securing using a worm drive clip. This connection **MUST** be tight to avoid leaks.

Water supply can be by means of either:

- **Mains Supply**
Secure the free end of the hose to your tap using a suitable tap adaptor (not supplied - available through all good hardware and garden supply stores).
- **Syphon Fed Supply**
Place the free end of the hose into a water tank or container and the pump will draw water itself. Use a larger diameter suction hose, at least 1" diameter and no more than 2 metres long. Water supply must be above or level with pump.

NOTE: To prevent the ingress of foreign bodies into the pump we recommend that a gauze filter (not supplied) be fitted to the free end of the hose, before connection to pump.

HOT WATER APPLICATION

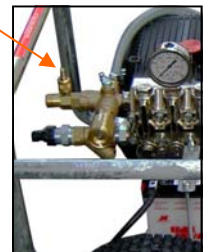
Aussie Eco-clean Monsoon & Hurricane water blasters can be used in their standard configuration with cold or hot water up to 60 C. Using optional **Hot Shot** seals and valves the pumps can be modified to operate with water temperatures up to **80 C**.

DETERGENT FUNCTION

This machine is designed to handle non-caustic cleaning agents to improve cleaning efficiency.

1. Push clear plastic chemical injection hose with filter assembly onto the injector nipple.
2. Submerge the end of the hose with filter into your chemical container.
3. Reduce pressure of machine to enable venturi system to activate: on double lance machine adjust by control handle
4. Allow some time for the chemical to work into the grime.
5. Set the lance to high pressure and blast detergent and dirt from the job.
6. Remove pick up hose from detergent bottle.
7. Rinse detergent valve with clean water by running at low pressure.

Warning: leaving detergent in the valve can cause it to stick and malfunction.



OPERATION:

Turn on water supply. Note: Tap should be full on.

Pull the trigger to expel air from the system. Water will trickle from the end of the lance when air is expelled.

Start the engine. (Refer to engine manual for details)

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

ACCESSORIES: (Consult Selection Guide)

Your Aussie water blaster can be used with a wide variety of optional extras to enhance performance. To use the accessories you must first disassemble the lance. Unscrew quick coupler to unlock the lance. The accessories can then be connected to the end of the lance assembly. If quick coupler is not supplied it can be purchased from your local Aussie Eco-Clean Distributor.

TURBO LANCE - A correctly selected heavy duty turbo lance can cut pressure cleaning time in half and is a very important accessory.

SANDBLAST HEAD - Wet sandblasting is safe and tremendously effective. Ideal for rust removal, paint stripping and graffiti removal.

OPTIONAL LANCES - A range of optional lances in stainless steel or zinc plated steel are available in lengths of up to 2 metres.

ROTARY CLEANER - The Aussie Eco-Clean rotary cleaner allows flat surfaces to be cleaned in a fraction of the time normally taken. Ideal for contractors and professional users.

LONG LENGTH HOSES - HOSE REELS, COUPLINGS - A wide range of optional long length hose assemblies, rapid reel hose reels and quick couplers and fittings are available to enhance your machine's performance. Consult your Aussie Eco-Clean Distributor for details.

Q STYLE COUPLERS - Colour coded quick couplers make nozzle change over a matter of seconds. Change from zero degrees for direct impact to 15 or 25 degrees in seconds.

Personal protection apparel recommended.

CARE AND MAINTENANCE:

AFTER EACH USE.....

If cleaning agents have been mixed with the incoming water, it is particularly important to flush the machine with clean water after 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



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.

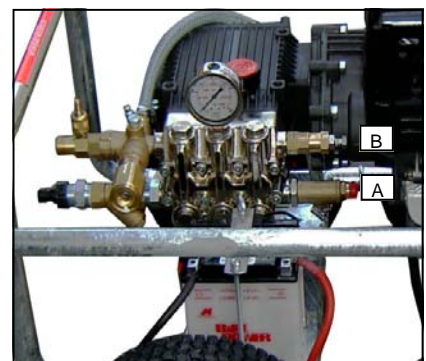
EXCESSIVE BY PASS RUNNING VOIDS WARRANTY!!

ASP SYSTEM..... AUSSIE SAFETY PROTECTOR SYSTEM

THERMAL DUMP (A): All Aussie Eco-clean machines are fitted with this valve as of June 2000 production. This device protects the pump by dumping water to ground if the machine is left on bypass running.

AUSSIE SAFETY VALVE (B) OPTIONAL EXTRA: This device "blows off" excess pressure if unloader has been tampered with thus protecting the pump. Do not tamper with pre-set unloader and safety valve. **(This will void your warranty.)**

AUSSIE FLOW SHUTDOWN DEVICE OPTIONAL EXTRA: a low flow shutdown device protects the machine from inadequate water supply. It also has the function of providing a "Total Stop" function by turning the machine on and off when the operator shuts off the trigger mechanism.



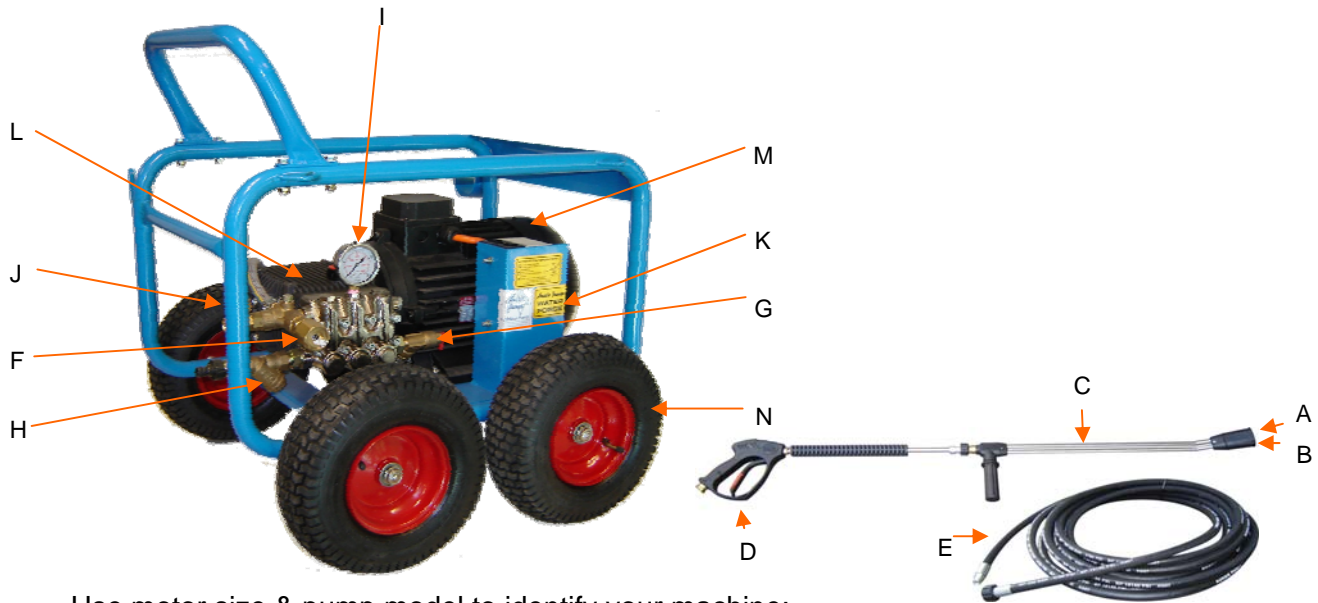
When the operator turns the gun on again he **MUST** first switch the double lance back to low pressure, momentarily, before moving back to the high pressure side of the lance.

The machine will start automatically when the operator presses the gun trigger when the machine is on low pressure lance adjustment.

TROUBLE SHOOTING GUIDE

FAULT	CAUSE	REMEDY
Pump running normally but pressure low on installation	Pump sucking air Valves sticking Unloader valve seat faulty Nozzle incorrectly sized Worn piston packing	Check water supply and possibility of air ingress. Check and clean or replace if necessary Check and replace Check and replace Check and replace
Fluctuating Pressure	Valves worn Valves blocked Pump sucking air Worn piston packing	Check and replace Check and replace Check water supply and air ingress at joints in suction line Check and replace
Pressure low after period of normal use	Nozzle worn Check valves worn Check valves blocked Unloader valve seat worn Worn piston packing	Check and replace Check and replace Check and clean Check and replace Check and replace
Pump Noisy	Air in suction Broken or weak suction or delivery valve spring Foreign matter in valves Worn bearing Excessive temperature of liquid	Check water supply and connections on suction line Check and replace Check and clean Check and replace Reduce temperature
Presence of water in oil	Oil seal worn High humidity in air Piston packing worn	Check and replace Check and change oil twice as often Check and replace
Water dripping below pump	Piston packing worn O.R plunger retainer worn	Check and replace Check and replace
Oil Dripping	Oil seal worn	Check and replace if necessary
Valves switches repeatedly when gun is off	Leaking gun and/or pressure pipe. Leaky sleeve Worn out kick-back valve body Leaky seals	Renew gun, seal pressure pipe Renew sleeve Check and renew as necessary kick-back valve plate and seat Renew seals
Leaky piston rod	Defective O-Ring/Support Ring	Renew piston rod seals and examine surfaces in guide case
Leaky by-pass at nominal pressure	Nozzle too small, too much water. Worn out by-pass valve	Install larger nozzle Examine and renew as necessary, poppet (16 for APR-11 for VD valves - 10 for ADV-8 for Unifit valves), valve set (14 or APR-12 for VD valves - 11 for AVD valves - 7 for Unifit) and by-pass valve body.
Pressure gauge shows high pressure fluctuations when shutting off gun	Valve set too high above operating pressure Dirty valve	Adjust the unloader at the operating pressure. Clean valve (removing lime deposits etc). Grease parts before installing.
Motor hums when switched on but does not start	Main voltage too low Spray gun not activated Cross section of extension lead too small	Check electrical connection Activate spray gun when switching on Use correct dimension extension lead

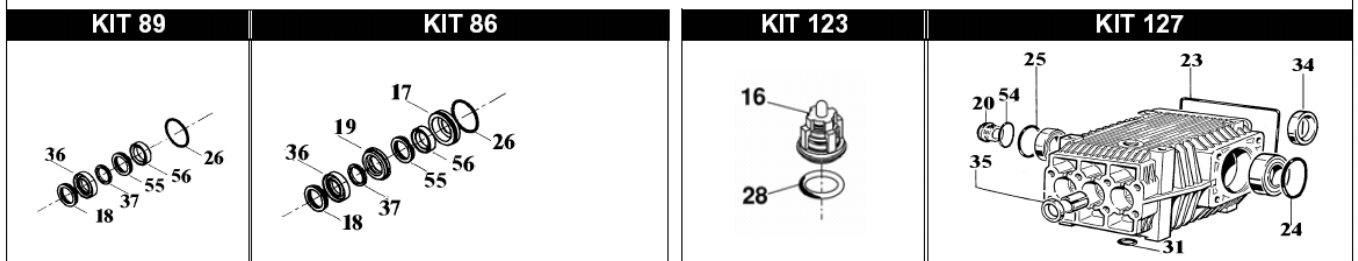
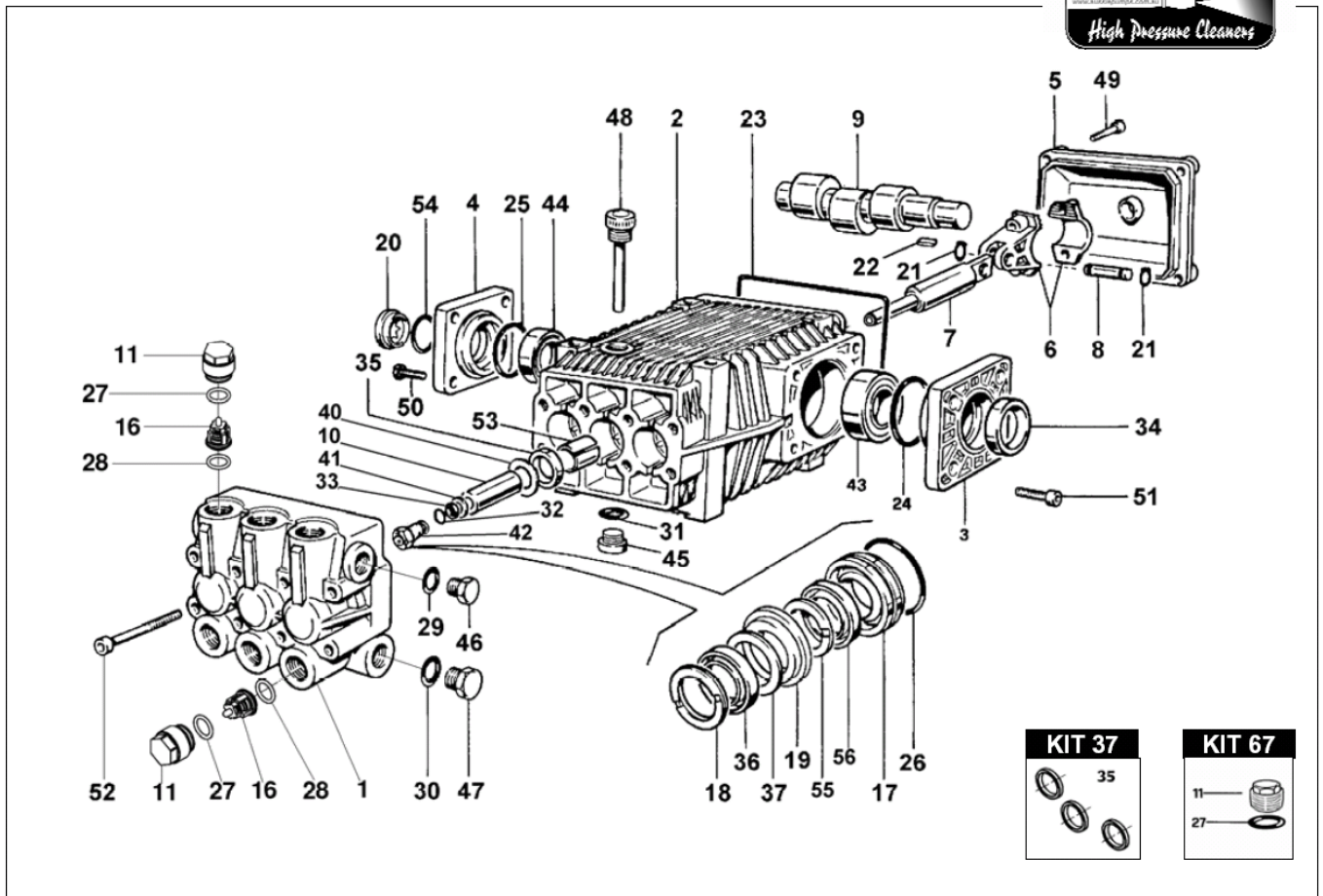
PARTS IDENTIFICATION



Use motor size & pump model to identify your machine:

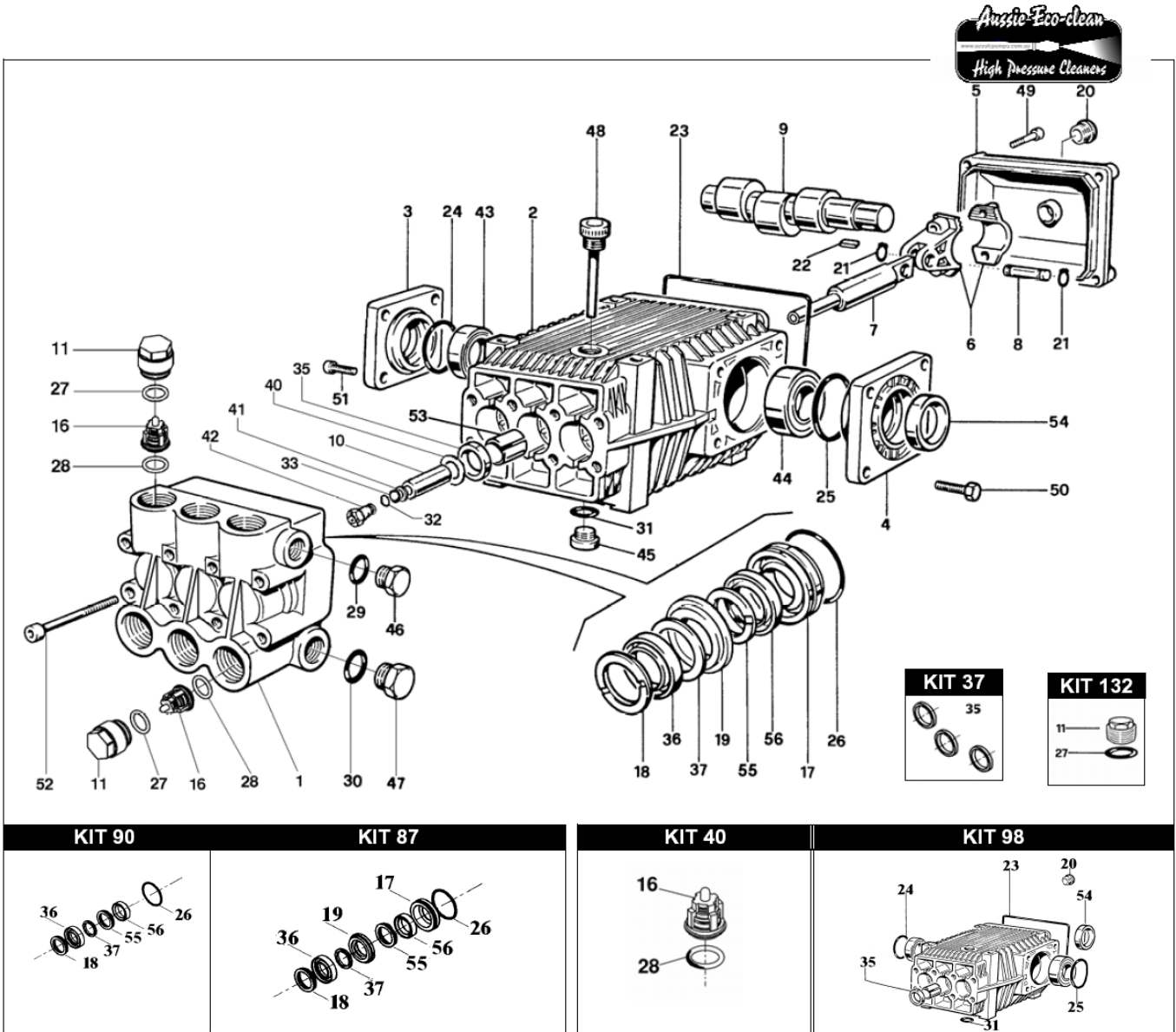
Model	Motor	Pump Model	Pump Pressure (psi)	EWP	Flow rate (lpm)	Pump rpm
Monsoon 200	7.5HP, 5.5kW, IP56	TTV2015	3000	4785	15	1450
Monsoon 300	10HP, 7.5 kW, IP56	TTV2021	3000	4785	21	1450
Monsoon 300 Maxi	15HP, 10 kW, IP56	KKV2028	3000	4785	28	1450
Monsoon 400	10HP, 7.5 kW, IP56	KTV3015	4000	6400	15	1450
Monsoon 400 Maxi	15HP, 10 kW, IP56	KTV3021	4000	6400	21	1450
Hurricane	17HP, 12.5kW, IP56	HDS5057	5000	8500	18	1725

Position	Part No	Description	Monsoon					
			200	300	300m	400	400m	Hurricane
Nozzles								
A	C915065M	HP NOZZLE (15° ANGLE, TIP SIZE 65)		x				
	C915085M	HP NOZZLE (15° ANGLE, TIP SIZE 85)			x			
	C915035M	HP NOZZLE (15° ANGLE, TIP SIZE 35)				x		
	C915055M	HP NOZZLE (15° ANGLE, TIP SIZE 55)					x	
	C915040M	HP NOZZLE (15° ANGLE, TIP SIZE 40)						x
B	C915500MSS	LP DETERGENT NOZZLE	x	x	x	x	x	
Lance & Gun								
C	C3924.01	684MM SS DUAL LANCE	x	x	x	x	x	
	C3905.15	900 MM SS SINGLE LANCE						x
D	C4326.23	AL5 GUN WITH MELTED HANDLE & QC	x	x	x	x	x	
	C4344.12	5000 PSI RATED AL35 GUN & QC						x
Hose								
E	R206K2214MB6X10	10 MTR HP HOSE (R2, 4500 PSI)	x	x	x	x	x	
	HW06FB6FB6X10	10 MTR HP HOSE (R2, 5800 PSI)						x
Unloader								
F	C4910.10	UNLOADER VALVE (3600 PSI)	x					
	BVB80/280	UNLOADER VALVE (4000 PSI)		x	x			
	BVB350	UNLOADER VALVE (5100 PSI)				x	x	x
Thermal Dump Valves								
G	MPA60063070	THERMAL DUMP VALVE 1/2"	x	x	x	x	x	x
Inlet Strainer								
H	AYSTRAINER3/4"	3/4" Y STRAINER	x	x	x	x	x	x
Gauge								
I	AGCDR0102	6,000 PSI PRESSURE GAUGE	x	x	x	x	x	x
Chemical Injector								
J	MTM00029143	CHEMICAL INJECTOR	x	x	x	x	x	
Switch								
K	ASWITCH25A	ON/OFF SWITCH (25 AMP)	x	x	x	x	x	x
Electric Motor								
M	A140060T001	7.5HP MOTOR (5.5 KW) 24MM	x					
	A140060T002	10HP MOTOR (7.5 KW) 24MM		x		x		
	A140060T003	15HP MOTOR (11 KW) 30MM			x		x	
	A140060T009	17HP MOTOR (12.5 KW)						x
Wheel								
N	A400016	13" WHEEL	x	x	x	x	x	x



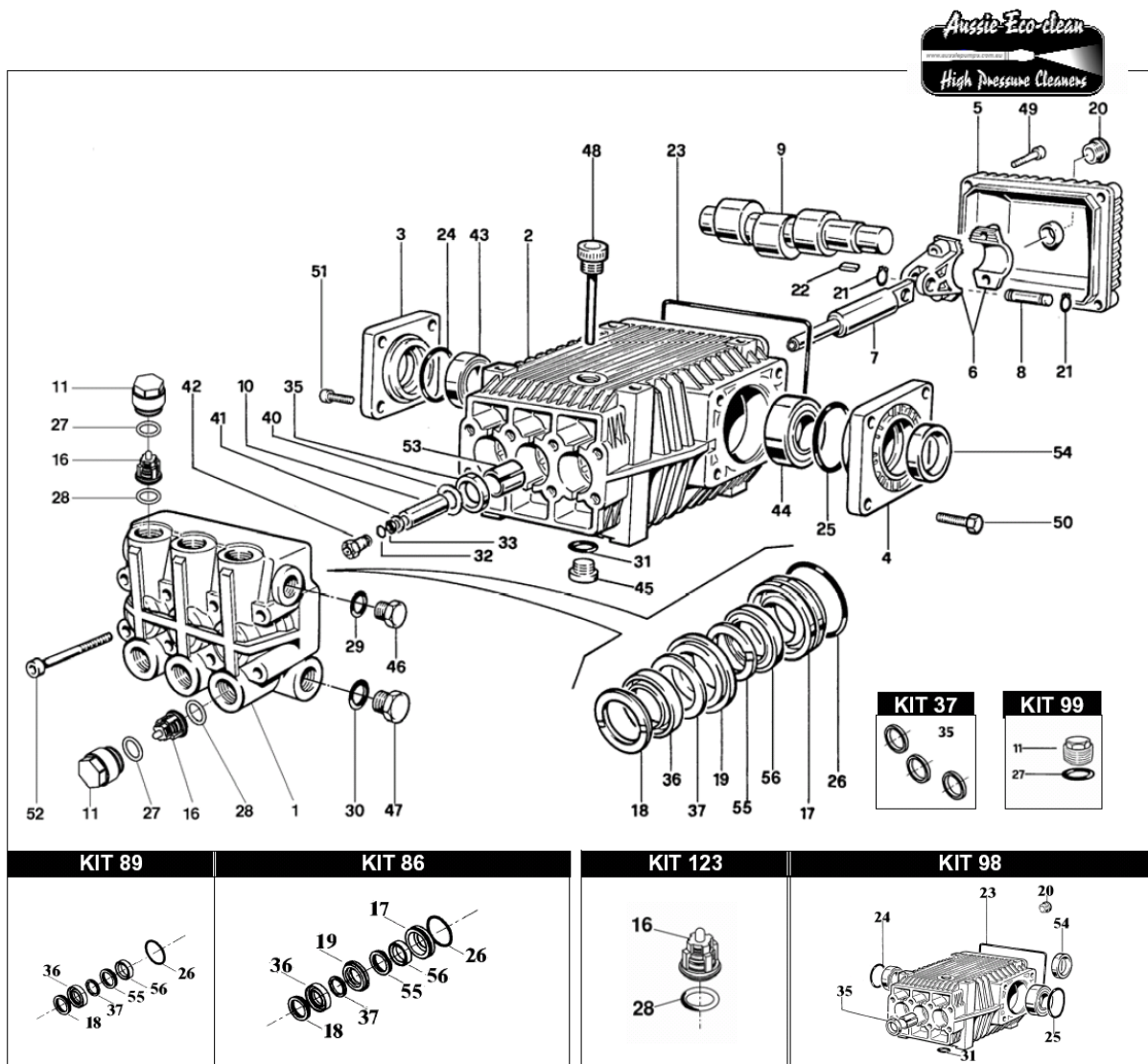
Kit No.	Part No.	Description
127	B069872973	Oil Seal & Sight Glass Kit
123	B069867973	Valve Kit
89	B069839973	Seal Kit Minor
86	B069836973	Seal Kit Major
37	B069814973	Oil Seal Kit
Aussie pressure test		Aussie pressure test set includes gauge and fitting for testing pump output

PUMP PARTS KKV 2028 (Monsoon 300 Maxi)



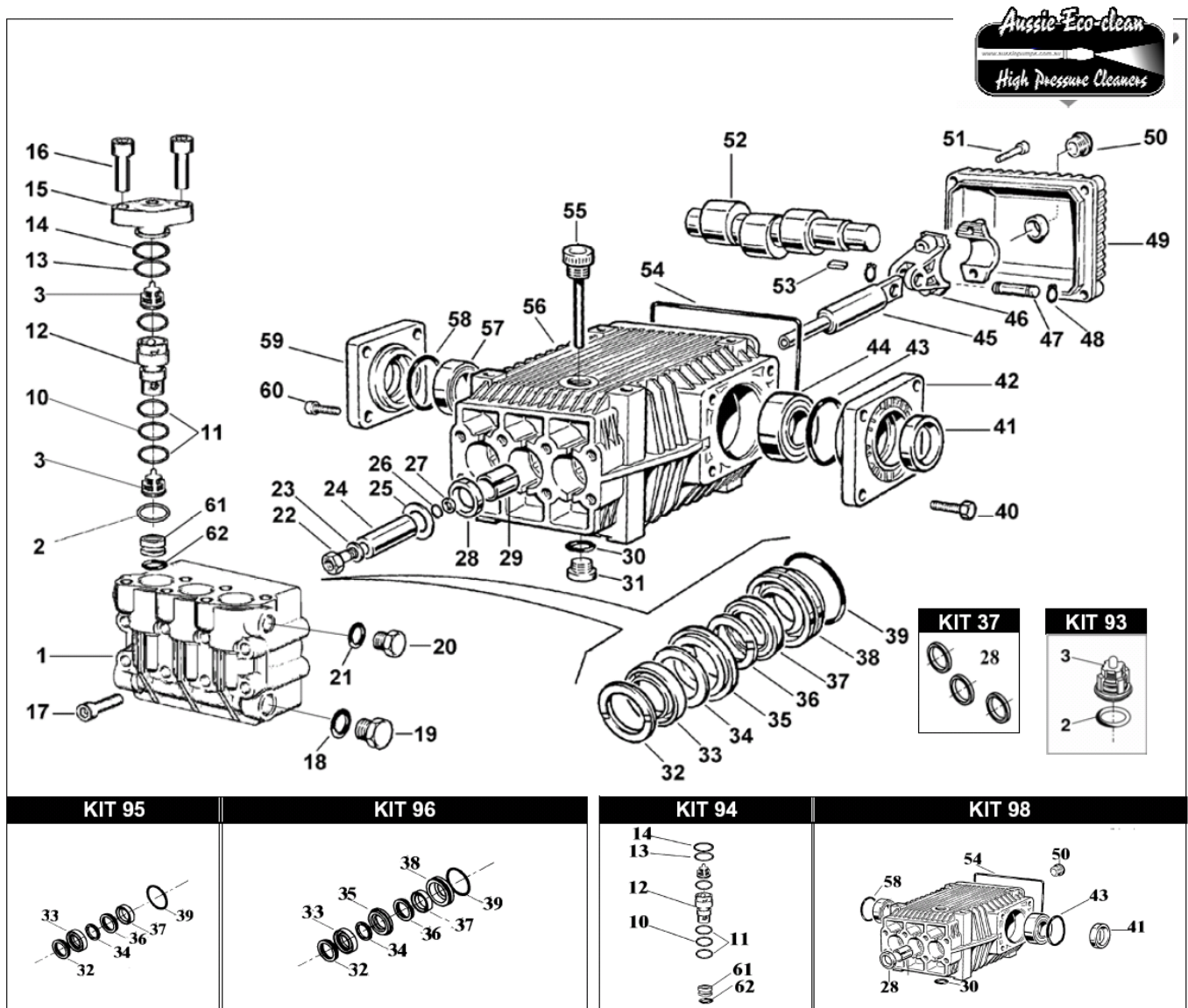
Kit No.	Part No.	Description
98	B069842973	Oil seal & Sight Glass kit
40	B069817973	Valve Kit
90	B069840973	Seal Kit Minor
87	B069837973	Seal Kit Major
37	B069813973	Oil Seal Kit
Aussie pressure test		Aussie pressure test set includes gauge and fitting for testing pump output

PUMP PARTS KTV 3015, 3021 (Monsoon 400, 400 Maxi)



Kit No.	Part No.	Description
98	B069842973	Oil seal & Sight Glass kit
123	B069867973	Valve Kit
89	B069839973	Seal Kit Minor
86	B069836973	Seal Kit Major
37	B069814973	Oil Seal Kit
Aussie pressure test set		Aussie pressure test set includes gauge and fitting for testing pump output pressure and Bertolini Pump Selection Guide

PUMP PARTS HDS 5057 (Hurricane)



Kit No.	Part No.	Description
98	B069842973	Oil seal & Sight Glass kit
95	B069833973	Seal Kit Minor
96	B069834973	Seal Kit Major
37	B069813973	Oil Seal Kit
93	B069829973	Valve Kit
Aussie pressure test set		Aussie pressure test set includes gauge and fitting for testing pump output pressure and Bertolini Pump Selection Guide

WARNING

OVERSPEEDING

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

EXCESSIVE BYPASS

Do not run on excessive by-pass. Switch machine off within five minutes of ceasing operation as excessive by-pass 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

- . Check pump oil level
 - . Check engine oil level
 - . Check nozzle for wear
 - . Check all high pressure components for leaks:
 - . gun/lance
 - . HP hose
 - . all fittings
 - . Check water filter and clean if necessary
 - . Check unloader, safety valve and thermal dump for leaks
-

THREE MONTHLY REGULAR SERVICE

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

- . Change pump oil
- . Change gearbox oil (if applicable)
- . 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
- . Check gearbox to engine key for wear, if key is worn see your local Aussie Eco Clean Service Department

NB Damage generated by worn keys is not covered by warranty!

**WEAR PROTECTIVE GOGGLES
AND CLOTHING!**



AUSTRALIAN PUMP

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