

CROMMELINS PRESSURE CLEANERS

OPERATION & INSTRUCTION MANUAL

Thank you for your selection of a Crommelins Pressure Cleaner. This Operation Manual explains its use, installation, checking and maintenance. We highly recommend that you retain this manual for ready reference regarding its proper handling.



Thank you very much for purchasing a Crommelins Pressure Cleaner. This manual covers the operation and maintenance of the Crommelins Pressure Cleaner.

Please take a moment to familiarise yourself with the proper operation and maintenance procedures to maximise the safe and efficient use of this product.

Keep this owner’s manual at hand, so that you can refer to it at any time.

Due to constant efforts to improve our products, certain procedures and specifications are subject to change without notice.

When ordering spare parts please have handy your products model number and serial number. Record these numbers in the boxes below for future reference.

MODEL NO														
SERIAL NO														

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SAFETY

This manual contains important information on how to use the CPV and CPC Series Pressure Cleaners properly and safely. Please read through this manual before you attempt to operate this product.

Ensure safe operation, this pressure cleaner is designed to give safe and dependable service if operated according to the instructions.

WARNING! Fluids under high pressure from spray or leaks can penetrate the skin and cause extremely serious injury, including death or the need for amputation. This product must be used **ONLY** by personnel that have been instructed in the safe use of this machine. Observe all warnings when you operate, maintain and repair the pressure cleaner.

- Children and pets must keep away from the area of operation at all times.
- Always make a pre-operation inspection before starting the engine. (For more information read engine operational manual)
- Must know how to stop the engine quickly and understand the operation of all controls.
- Stop engine without fail before replenishing fuel tank. Never replenish fuel while the engine is running or remains hot otherwise spilled or evaporated fuel is liable to catch fire from the engine spark or muffler heat. Wipe off spilled fuel before starting engine.
- Mufflers and other hot parts are dangerous. Do not touch them with hands or any other body parts.
- Do not place flammable objects near the unit.
- Be careful with the operating place and ventilation, avoid operating the machine in a closed room, tunnel or other badly ventilated places, as its exhaust fumes contain deadly poisonous carbon monoxide. If the machine is unavoidably operated in such a place, discharge the exhaust fumes outside the room by a suitable means.
- Observe the following cautions when transporting. Close fuel tank cap securely and close fuel tap tightly during transportation. Drain petrol or diesel from fuel tank before transporting over a long distance or on rough roads.

To prevent injury wear the following protective items: Gloves, work boots, ear plugs, safety glasses and any other protective items (hard hat, mask) required by job conditions.



SAFETY PRECAUTIONS

- **NEVER** point the spray gun at people, animals or plants.
- **NEVER** put your hand or fingers over the spray tip.
- **NEVER** try to stop or deflect leaks with your hand or body.
- **NEVER** purchase and use chemicals or detergents that are toxic, flammable or high acidic/alkaline base, and always request a material safety data sheet (MSDS) for the product you are purchasing.
- **NEVER** use a powder type detergent or chemical that is not manufactured for pressure washer use, i.e. dish detergent, laundry soap.
- **NEVER** attempt any repairs or maintenance with the engine running or the pump and gun primed.
- **NEVER** spray flammable liquids, toxic chemicals (such as insecticide or weed killer) as personal injury or death could result from fire, explosion, or poisoning while damaging the environment.
- **NEVER** leave the pressure cleaner unattended once you have started it. If you must leave, follow complete shutdown instructions to prevent unauthorized and untrained personnel from operating the machine.
- **NEVER** move the machine by pulling the hose.
- **NEVER** put any type of trigger lock onto the gun.
- **ALWAYS** face nozzle and wand to the ground when testing.
- **NEVER** exceed the pressure rating of the unit's recommended pressure.
- **NEVER** change quick couplers with the nozzle under pressure and without the gun safety in the "ON" or "LOCK" position.
- **NEVER** run the machine without water, this will damage the pump and void warranty.
- The machine should be located as close as possible to the water supply.
- Locate the machine on a solid and level surface so that engine and pump crankcase oil lubricate components properly. Avoid areas where water can build up in the working area as possible injury can occur caused by the surface becoming slippery from water build up.
- Locate the machine so the operator has easy access to the pressure cleaner and its controls.
- To prevent excessive hose damage, locate the pressure cleaner so that the hose does not cross traffic areas.
- Be sure that all system components and accessory items are original equipment, using other accessories voids any warranty offered by the manufacturer.
- **NEVER** alter or modify the pressure cleaner as personal injury or death could result.

ENGINE PRECAUTIONS

WARNING! Read engine owners/operators manual before using or attempting to service this machine.

- **DO NOT** fill fuel tank while engine is running. Allow engine to cool before refuelling.
- **DO NOT** operate the engine when an odour of fuel is present, or other explosive conditions exist.
- **IF FUEL IS SPILT**, move the machine away from the area of the spill and avoid creating any source of ignition until the fuel has been removed.
- **DO NOT** store, spill, or use fuel near an open flame or devices such as a stove, furnace, water heater which utilize a pilot light, or devices which can create a spark.
- **RE-FUEL OUTDOORS** or in well ventilated area.
- **DO NOT** operate engine if the air cleaner or cover directly over the carburettor air intake is removed.
- **DO NOT** choke the carburettor to stop the engine.
- **DO NOT** tamper with the governor springs, governor links or other parts which may increase the governed engine speed.
- **DO NOT** tamper with the engine speed selected by the original equipment manufacturer.
- **CAUTION!** DO NOT run at excessive speeds. Operating the engine at excessive speeds increases the danger of personal injury.
- **DO NOT** touch hot mufflers, cylinders or fins, as contact may cause burns.

PRESSURE PUMP PRECAUTIONS

- **NEVER** allow the pump to run for more than a 3 minute period without opening the gun. (This will cause pump damage due to excessive water temperature and void the warranty)
- **NEVER** let the pump run when the machine is not connected to the water supply.
- **NEVER** run acid or hard caustics through the pump.
- **ALWAYS** use citrus based detergents.
- **NEVER** use hot water through the pump.
- Machine must be turned off and pressure released from pump and gun, before checking for leaks, tighten connections if necessary.

PRE-OPERATION CHECK LIST

- Be sure you understand all the safety precautions and have been instructed in the safe use of the machine.
- Wear face, feet and eye protection to prevent injury from spray and flying debris.
- Wear protective gloves, rubber boots, and other protective clothing as required.
- Understand all safety precautions and first aid for any detergent or chemical being used.
- Check that all lines and hoses are not kinked, twisted or damaged. Replace any damaged hose.
- Check that the machine is connected to a water supply and that the water supply is on.
- Tighten all fluid connections securely.
- Replace red transit bungs with dipsticks supplied on pump head.
- Check that oil and fuel levels are at the correct levels before operating.
- Before starting machine, be sure pump is primed and air is purged from the system by allowing water to flow through the pump.

SET-UP & USE

Follow these instructions for set-up and use of your high pressure cleaner.

1. Position the machine on a solid level surface with slopes for drainage to prevent water build-up on the floor or surface. Position the machine so that the operator has easy access to the pressure cleaner and its controls. Be sure ventilation WARNINGS are observed.
2. Check and determine that the water supply source is capable of exceeding the output in litres per minute of the pump. If you are drawing water from a clean static source, rather than a pressure main, the pressure cleaner must be primed and placed as close as possible to the water source. The intake hose used must be as large as possible. When drawing water from a pressure source, you need a hose with 16mm or 5/8" outside diameter.
3. Connect the high pressure hose to the pressure washer and tighten securely.

OPERATION INSTRUCTIONS

WARNING! High pressure spray, improperly used could damage the equipment you wish to clean or the surrounding environment. Practice on scrap materials, gradually increasing pressure applied to the object by adjusting the nozzle or moving the nozzle closer to the object until it is cleaned without being damaged.

The manufacturer does not accept responsibility for damage caused by the consumer's failure to adjust or operate the machine in accordance with the instruction provided in the owner manual supplied with the machine.

OPERATION INSTRUCTIONS

Follow these instructions to operate the machine:

1. Use the pre-operation checklist to help avoid personal injury.
2. Set gun assembly to low pressure
 - a. CPV Series – Do not fit nozzle to lance
 - b. CPC Series – Twist gun assembly side handle anti-clockwise to low pressure)
 - c. CPH Series – Allow water to flow through lance
3. Prime the pump and purge air from the system by squeezing the gun trigger before starting the machine, with the unit attached to a pressure main. Let the water flow from the wand until air is purged from system.

4. **STARTING (PETROL UNITS)**

STEP 1 – Open engine fuel cock.

STEP 2 – Set throttle lever to starting position.

STEP 3 – For cold engine starting, close carburettor choke lever.

STEP 4 – Set engine switch to “ON”.

STEP 5 – Pull recoil starter. (**IMPORTANT:** Do not pull recoil starter rope to the end as it may cause damage. When the rope is pulled out, release the rope slowly. Do not let the rope snap back)

STEP 6 – After engine starts, open the choke halfway and warm up the engine for 2-3 minutes with low speed position. The warm up procedure should particularly be followed during cold weather.

STARTING (DIESEL UNITS)

STEP 1 – Set speed control to low speed. Larger engines press speed lever down till it locks into place.

STEP 2– Pull recoil starter rope until resistance is felt.

STEP 3 – Bracing foot against frame, pull recoil starter rope with both hands.

STEP 4- If electric start, turn the key until engine starts. (**IMPORTANT:** Do not pull recoil starter rope to the end as it may cause damage. When the rope is pulled out, release the rope slowly. Do not let the rope snap back)

5. For high pressure spraying
 - a. CPV Series – Select desired spray pattern (0°, 15°, 40° or BLACK detergent nozzle). **DO THIS ONLY WHEN THE TRIGGER IS NOT SQUEEZED AND THE GUN SAFETY LOCK IS ON.**
 - b. CPC Series – Twist gun assembly side handle clockwise to increase pressure

6. The manufacturer has adjusted the pump pressure to its maximum operating pressure. Simply adjust the pressure required for cleaning with a selected nozzle from the quick connection nozzle set.
7. You are now ready to start cleaning with your pressure cleaner. Hold the spray gun firmly and squeeze the trigger. Always begin high pressure cleaning with the nozzle at least 1 metre from the object being cleaned and gradually move the nozzle closer to the object until it is cleaned.
8. To draw chemical/detergent, be sure the pick-up tube is installed into the chemical/detergent container with the tube submerged in the solution. Change quick connection nozzle to the detergent nozzle and squeeze the gun trigger. The detergent will be drawn up and out of the lance. When the object is covered replace the detergent nozzle with a high pressure one.
9. Never allow the pump to run for more than a 3 minute period without opening the gun. This will cause the pump damage due to excessive water temperature and void the warranty. (A thermal relief valve has been added to the pump to reduce the possibility of overheating. However, malfunction of this device does not constitute pump warranty for damage caused by overheating.)
10. As you operate the machine, be sure the water inlet supply hose does not become kinked.
11. The maximum engine RPM has been set by the manufacturer. Tampering with the engine governor will void pump warranty.
12. Do not exceed the manufacturer's maximum pressure by increasing the unloader adjustment. (This will void pump warranty.)

SHUTDOWN INSTRUCTIONS

1. Make sure the gun is closed.
2. **SHUTDOWN – PETROL UNIT**

STEP 1 – Move throttle lever to low speed position.

STEP 2 – Turn of the red stop switch.

STEP 3 – Close engine fuel cock.

EMERGENCY SHUTDOWN: Move throttle lever to OFF and press engine stop button.

SHUTDOWN – DIESEL UNIT

STEP 1 – Electric start models. Turn key to the off position.

STEP 2 – Move throttle lever to low speed position, then push red lever till the engine stops

STEP 3 – Move the throttle lever to the stop position.

3. Turn off the water supply and remove the water supply hose from the pump. Pull the gun trigger to release any built up pressure (make sure you do not spray people or objects.)
4. Disconnect the pressure hose from the pump and gun and store on the hooks provided on the trolley.
5. For safety and your liability protection, remove high pressure hose and store gun/wand in a secure place with this manual to eliminate possibility of unauthorized and untrained personnel from operating the machine.

CHECKS & MAINTENANCE

Daily Checks

Regular inspection of your pressure cleaner is the key to prolonging its life. Follow these simple daily checks. This must be done with the engine OFF.

1. Check air filter for dirt and clean or replace as required. Refer to engine owner manual.
2. Check engine oil level. (Dipstick is attached to inside of oil cap.) Refer engine owner manual.
3. Check engine fuel level.
4. Check high pressure hose for kinks, twists or damage. Replace any damaged hose.
5. Check that the pump oil level is within operation range on the pump dipstick. Model CPV2700X17 has a sealed oil filled gearbox and must be refilled by service dealer.
6. Check that the water supply is adequate for your machine.
7. Check water inlet filter (situated behind the water inlet connector) remove with long nose pliers and clean as necessary.

Preventative Maintenance

Change pump oil after first 50 hours of use or first season, then every 300 hours or as needed. Units that have a reduction gearbox fitted use SAE90 pump oil, all other units are required to use SAE30 universal pump oil and follow the below steps:

1. Un-thread the oil cap on the top of the pump
2. Put a container under the pump then unscrew the drain plug on the bottom of the pump;
3. After oil drains away completely, screw the drain plug into the drain hole again, make sure the o-ring is with the plug.

4. Refill pump oil via the top hole of the pump until the oil level is to the top of the oil dipstick level indicator.
 5. Screw on the oil cap.
- N.B. Dispose of used oils as per your local environmental disposal by laws.

CPV SERIES PETROL SPECIFICATION CHART

MODEL	CPV2700RP	CPV3200RP	CPV4000RP
Pressure PSI max	2700	3200	4000
Bar (max)	180	220	275
Water Flow (L/min max)	11.4L	14.0L	15.0L
Water Pump	Triplex	Triplex	Triplex
Fuel Type	Petrol	Petrol	Petrol
Engine Make	Robin	Robin	Robin
Engine	7.0hp EX21	9.0hp EX27	14.0hp EX40
Starting System	Recoil Start	Recoil Start	Recoil Start
Fuel Tank (L)	3.6L	6.1L	7.0L
Noise Level db@7m	68db	70db	72db
Lance & Spray Gun	Single Lance HD Gun	Single Lance HD Gun	Single Lance HD Gun
Nozzles	0° /15° /40°/ detergent	0° /15° /40°/ detergent	0° /15° /40°/ detergent
Hose Type & Length	10m HD Braided Hose	10m HD Braided Hose	10m HD Braided Hose
Detergent Tank (L)	Detergent Suction Pickup	Detergent Suction Pickup	Detergent Suction Pickup
Weight (kg)	43.0kg	48.0kg	67.0kg
Dimensions (LxWxH) mm	670 x 520 x 960mm	720 x 520 x 960mm	920 x 600 x 960mm
Folded Dimensions	670 x 520 x 480mm	720 x 520 x 530mm	
Manufacturer's Warranty	2 years	2 years	2 years
Engine Warranty	3 years	3 years	3 years
Pressure Pump Warranty	1 year	1 year	1 year

CPC SERIES PETROL SPECIFICATION CHART

MODEL	CPC2000RP	CPC3000RP	CPC4000RP
Pressure PSI max	2700	3200	4000
Bar (max)	180	220	275
Water Flow (L/min max)	11.4L	14.0L	15.0L
Water Pump	Triplex	Triplex	Triplex
Fuel Type	Petrol	Petrol	Petrol
Engine Make	Robin	Robin	Robin
Engine	7.0hp EX21	9.0hp EX27	14.0hp EX40
Starting System	Recoil Start	Recoil Start	Recoil Start
Fuel Tank (L)	3.6L	6.1L	7.0L
Noise Level db@7m	68db	70db	72db
Lance & Spray Gun	Single Lance HD Gun	Single Lance HD Gun	Single Lance HD Gun
Nozzles	0° /15° /40°/ detergent	0° /15° /40°/ detergent	0° /15° /40°/ detergent
Hose Type & Length	10m HD Braided Hose	10m HD Braided Hose	10m HD Braided Hose
Detergent Tank (L)	Detergent Suction Pickup	Detergent Suction Pickup	Detergent Suction Pickup
Weight (kg)	43.0kg	48.0kg	67.0kg
Dimensions (LxWxH) mm	670 x 520 x 960mm	720 x 520 x 960mm	920 x 600 x 960mm
Folded Dimensions	670 x 520 x 480mm	720 x 520 x 530mm	
Manufacturer's Warranty	2 years	2 years	2 years
Engine Warranty	3 years	3 years	3 years
Pressure Pump Warranty	1 year	1 year	1 year

MODEL	CPC2000YDE	CPC3000YDE	CPH3000RP
Pressure (max)	2000psi	3000psi	3000
Bar (max)	138	206	206
Water Flow (L/min max)	12L/min	15L/min	13L
Water Pump	Triplex	Triplex	Triplex
Fuel Type	Diesel	Diesel	Petrol
Engine Make	Yanmar	Yanmar	Robin
Engine	4.7hp L48	10.0hp L100	9.0hp EX27
Starting System	Electric Start	Electric Start	Recoil Start
Fuel Tank (L)	2.4L	4.7L	6.1L
Noise Level db@7m	94db at 1m	97db at 1m	70db
Lance & Spray Gun	Twin Lance HD Gun	Twin Lance HD Gun	Single Lance HD Gun
Nozzles	Detergent Nozzle, Turbo Optional	Detergent Nozzle, Turbo Optional	Permanent attached
Hose Type & Length	10m Braided HP Hose	10m Braided HP Hose	10m Braided HP Hose
Detergent Tank (L)	Detergent Suction Pickup	Detergent Suction Pickup	N/A
Weight (kg)	76.0kg	115.0kg	59kg

Dimensions (LxWxH)mm	900x650x860	900x650x860	900x650x860
Manufacturer's Warranty	2yrs	2yrs	2yrs
Pressure Pump Warranty	1yr	1yr	1yr

CPC SERIES DIESEL SPECIFICATION CHART

MODEL	CPH3000RP
Pressure PSI max	3000
Bar (max)	206
Water Flow (L/min max)	13L
Water Pump	Triplex
Fuel Type	Petrol
Engine Make	Robin
Engine	9.0hp EX27
Starting System	Recoil Start
Fuel Tank (L)	6.1L
Noise Level db@7m	70db
Lance & Spray Gun	Single Lance HD Gun
Nozzles	Permanent attached
Hose Type & Length	10m Braided HP Hose
Detergent Tank (L)	N/A
Weight (kg)	59kg
Dimensions (LxWxH)mm	900x650x860
Manufacturer's Warranty	2yrs
Pressure Pump Warranty	1yr

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Engine won't start	<ol style="list-style-type: none"> 1. Engine switch in OFF position 2. Throttle lever on/off switch in OFF position 3. No fuel in engine 4. Worn, fouled or dirty spark plug 5. Pressure build up in pump 	<ol style="list-style-type: none"> 1. Turn engine switch to ON position 2. Turn throttle lever to ON position 3. Fill fuel tank or turn on fuel supply 4. Replace with factory recommended spark plug 5. Squeeze trigger on spray wand to release pressure in hose line
Units with Oil Alert System	<ol style="list-style-type: none"> 1. Engine not level or engine oil level too low 	<ol style="list-style-type: none"> 1. Place engine on level surface or fill crankcase with oil (refer to engine manufacturers instruction manual)
Engine with low power	<ol style="list-style-type: none"> 1. Throttle control lever not set to full throttle position 2. Partially clogged gun nozzle 	<ol style="list-style-type: none"> 1. Set throttle control lever to full position 2. Clean nozzle of any blockage
Engine runs well at no load but 'bogs' down under full load	<ol style="list-style-type: none"> 1. Engine speed too low 	<ol style="list-style-type: none"> 1. Contact your pressure cleaner dealer
Engine will not start: or starts and runs rough	<ol style="list-style-type: none"> 1. Low oil level 2. Dirty air filter 3. Out of petrol 4. Stale petrol 5. Spark plug wire not connected to spark plug 	<ol style="list-style-type: none"> 1. Fill crankcase to proper level 2. Clean or replace air cleaner 3. Fill fuel tank 4. Drain fuel tank, fill with fresh fuel 5. Connect wire to spark plug

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Engine shuts down during operation	<ol style="list-style-type: none"> 1. Low fuel level 2. Low oil level 	<ol style="list-style-type: none"> 1. Fill fuel tank 2. Fill crankcase with oil to proper level or level machine
Engine lacks power	<ol style="list-style-type: none"> 1. Dirty air filter 	<ol style="list-style-type: none"> 1. Clean or replace air filter
Engine 'hunts' or falters	<ol style="list-style-type: none"> 1. Choke is opened too long 2. Blocked spray nozzle 	<ol style="list-style-type: none"> 1. Move choke to halfway position until engine runs smoothly 2. Remove and clean nozzle tip
CPV SERIES No low pressure detergent delivery	<ol style="list-style-type: none"> 1. High pressure nozzle on wand 2. Syphon hose or hose filter blocked 	<ol style="list-style-type: none"> 1. Fit black detergent nozzle 2. Clean or unblock hose and filter
Unit does not reach required pressure	<ol style="list-style-type: none"> 1. Restricted or insufficient water supply, or pump sucking air 2. Detergent nozzle fitted to lance 3. Water leak in high pressure fittings, hose or gun 4. Pump has operated more than 3 minutes without pulling trigger 5. Thermal relief valve stuck open 	<ol style="list-style-type: none"> 1. Check water supply and supply hose, and inlet water filter 2. Replace with high pressure nozzle 3. Use Teflon tape or pipe sealant to tighten hose fitting, replace hose or gun 4. Pull trigger at least 30 seconds every 3 minutes 5. Return unit to your pressure washer dealer

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
<p>CPC SERIES</p> <p>No low pressure detergent delivery</p>	<ol style="list-style-type: none"> 1. Twin lance not set to low pressure 2. Syphon hose or hose filter blocked 3. Detergent won't flow on low pressure 	<ol style="list-style-type: none"> 1. Loosen off black side handle to low pressure flow 2. Clean or unblock hose and filter 3. Detergent too thick, dilute as required so as to pick-up on low pressure
<p>Unit does not reach required pressure</p>	<ol style="list-style-type: none"> 1. Restricted or insufficient water supply, or pump sucking air 2. Detergent nozzle fitted to lance 3. Water leak in high pressure fittings, hose or gun 4. Pump has operated more than 3 minutes without pulling trigger 5. Thermal relief valve stuck open 6. Pressure regulator (if fitted) has been wound down 	<ol style="list-style-type: none"> 1. Check water supply and supply hose, and inlet water filter 2. Replace with high pressure nozzle 3. Use Teflon tape or pipe sealant to tighten hose fitting, replace hose or gun 4. Pull trigger at least 30 seconds every 3 minutes 5. Return unit to your pressure washer dealer 6. Wind pressure regulator clockwise to increase pressure
<p>If problem continues, take your pressure cleaner to a dealer for servicing.</p>		

NOTE

Most detergent delivery problems can be prevented by:

1. Using citrus based detergents
2. Flushing the chemical/detergent system before storing
3. NEVER use powdered detergents that are not manufactured specifically for use in pressure cleaners (ie dish detergent)

WARRANTY (FAQ) Frequently Asked Questions

Q. My Pressure cleaner won't start...

A. Are all engine controls set properly?

A. Do you have fuel in your machine?

A. Check that the engine oil level correct?

Q. How do I get the soap suction to work?

A. Replace the high pressure nozzle with the BLACK detergent nozzle..

Q. I don't have any water pressure...

A. Do you have any kinks, leakage or blockage in hoses, fittings and nozzles?

A. Is the Black detergent nozzle attached to the end of the lance?

A. Have you let the unit run in bypass for longer than 3 minutes (pump running, gun trigger not depressed)

A. Have you checked the nozzle for excessive wear?

A. Check nozzle for blockages

WARRANTY

Consult the CROMMELINS Machinery warranty leaflet (supplied with your new product) for full details and a list of service dealers for this product, also available online at www.crommelins.com.au.

CROMMELINS GENERATORS

OPERATION & INSTRUCTION MANUAL
