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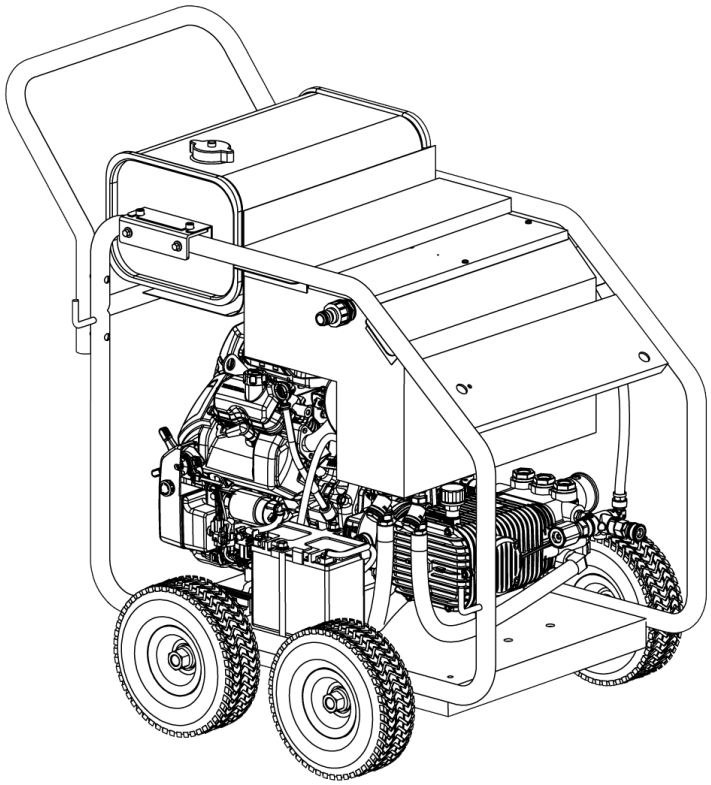
Operator's Manual

Pressure Cleaners – Class B



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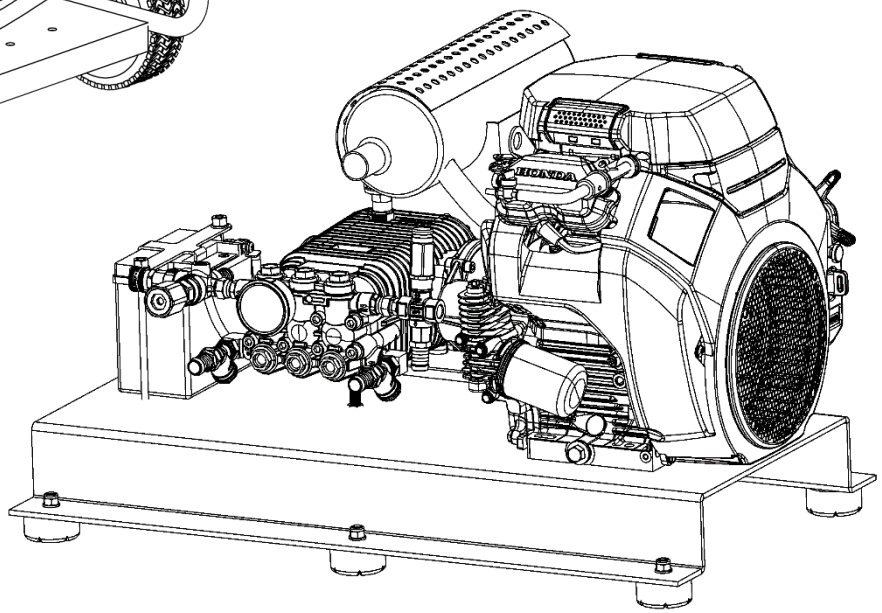

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CLASSIFICATION

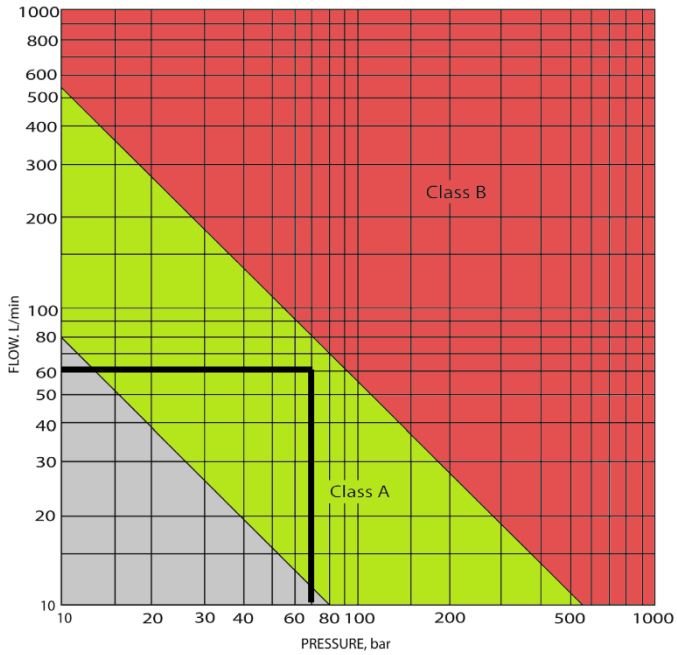
High Pressure Water Cleaning systems which include all BAR pressure cleaners are separated into two classes as per Australian and New Zealand Standard 4233.1 & 2

Class A systems – Produce [pressure*flow] between **800 bar litres per minute** and **5600 bar litres per minute**.

Class B systems – Produce [pressure*flow] of **5600 bar litres per minute** or greater.

A high pressure cleaning system cannot be reclassed by reducing available working pressure, the rating is based on the units' maximum output capability.

The following graph provided by Safe Work Australia can assist you to determine the class of your system.



Helpful conversions

Pressure			
1	psi	=	0.0689 bar
14.5	psi	=	1 bar
1000	psi	=	68.9 bar
2900	psi	=	200 bar

Volume			
0.264	gallons	=	1 litres
1	gallons	=	3.785 litres
2.642	gallons	=	10 litres
7.925	gallons	=	30 litres

[π = 3.14]

Bar litres per minute = pressure (bar) x flow (L/min)

For example –

1000 psi gives **68.9 bar** pressure from the conversion table and let's say we want **60 L/min** of flow. So if we follow the graph, we can see that the lines meet in the green section which is class A and if we put the values into the formula we get –

68.9 bar x 60 L/min = **4134 bar litres per minute**

which justifies the system to be in the **class A** range as we witnessed from the graph.

Nozzle reaction force (newtons) = 0.182 x pressure (bar) x [π x (nozzle diameter / 2)^2 (mm^2)]

[Please refer to online catalogue page - 526 for nozzle diameter.]

This manual references or includes material from the following sources:
Guide for managing risks from high pressure water jetting, Safe Work Australia - https://www.safeworkaustralia.gov.au/
AS/NZS 4233.1:2013 High pressure water jetting systems – Safe operation and maintenance
AS/NZ2 4233.2:2013 High pressure water jetting systems – Construction and performance

CONTENTS

INTRODUCTION

Thanks for purchasing a High Pressure Cleaner from BAR Group. Your new equipment is designed to operate at high pressures for domestic/professional cleaning applications.

This manual is an important part of your pressure cleaner and was written to take you through the safety requirements and operating functions of your machine. It should be read thoroughly before initial use, and referred to often to ensure adequate safety and service concerns are being addressed.

Reading the operator's manual thoroughly will help avoid any personal injury or damage to your machine. By knowing how best to operate this machine, you will be better positioned to instruct others who may also operate the unit.

You can refer back to the manual at any time to help with understanding procedures or troubleshooting, so store it with the machine at all times.

Attention: Read through the complete manual prior to the initial use of your high pressure water cleaner.

PRODUCT DETAILS

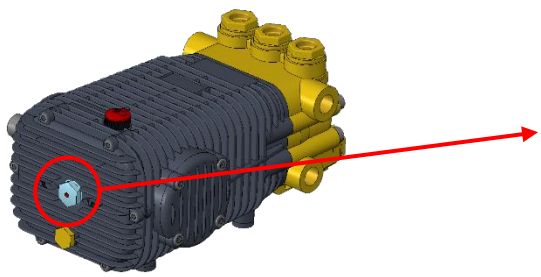
If you need to contact an Authorized Dealer or our Customer Service line (02) 4577 2144 for information on servicing, always provide the product model and serial numbers.

You will need to locate the model and serial number for your machine and record the information in the table provided below.

Date of Purchase:
Dealer Name:
Dealer Contact:

Product Identification Numbers
Model Number:
Serial Number:

Lubrication Fluids	
Engine:	**SAE 10W30**
Gearbox:	**SAE 90**
Pump:	**Universal Tractor Transmission Oil**



Please check pump oil level through the sight glass. Make sure it doesn't fall below or exceed past the red dot.

RISK ASSESSMENT

Managing risks

Risk is the potential for injury or negative consequence based on the likelihood of a specific event occurring. Controls must be put in place to eliminate the risk. Where the risk cannot be entirely eliminated, implement controls to reduce risk by lowering the chance of the event occurring or minimising the severity of the consequence.

The risk matrix below can be used to provide a rank for any specific event.

Likelihood \ Consequences	Extreme	Major	Moderate	Minor	Negligible
Certain	25	23	20	16	11
Likely	24	21	17	12	7
Possible	22	18	13	8	4
Unlikely	19	14	9	5	2
Rare	15	10	6	3	1

Rank	Risk
≥18	Very High
12-17	High
6-11	Medium
≤5	Low

Some potential hazard events, risk rankings and possible control measures are outlined below.

Potential Hazard	Risk/Consequence	Risk Ranking	Control measures
High pressure water jet	Operator injury, bystander injury	18	• Only point jet at area to be cleaned • Use signage and barriers around work area • Stop cleaning if a person enters the work area • Wear appropriate PPE • Never use damaged equipment • Never leave running unit unattended
Unsecured machine moves during use	Operator injury, bystander injury	8	• Use wheel chocks for mobile units • Periodic checks of mounting fasteners/locking plates for vehicle mounted units
Uneven ground or entangled hoses	Operator injury (trip/fall)	8	• Clear work area of trip hazards prior to operating pressure cleaner • Use hose reel to avoid tangle hoses • Wear non-slip footwear
Noise	Hearing damage	11	• Use hearing protection when nearby unit
Contact with chemicals	Skin irritation/burns, Sight impairment, Respiratory issues (fumes)	13	• Only use chemical cleaner if absolutely necessary. • Adequate ventilation for work area • Wear appropriate PPE (gloves, goggles, etc.) • Follow chemical manufacture instructions
High temperature	Operator injury (burns)	9	• Avoid hot engine/pump/exhaust components • Appropriate warning labels
Fire or explosion	Operator injury, bystander injury, equipment damage	14	• Allow engine to cool adequately before refuelling • Ensure battery terminals are correctly protected/insulated • Never overcharge battery

Do's and Don'ts

DO
✓ Contact site engineer, obtain necessary permits and note special precautions.
✓ Erect barriers, rope off the clear area. Erect warning signs.
✓ Ensure adequate, clean water supply.
✓ Check fluid levels on engine, gearbox and pump. (Oil, fuel and water).
✓ Lay out equipment and visually inspect for damage. (Hoses, connections, etc.)
✓ Assemble equipment checking all joints.
✓ Ensure filters are clean.
✓ Fully prime equipment and bleed where necessary.
✓ Fit gun or lances and/or control valves. Visually check that correct size and type of nozzle is fitted for the application.
✓ Increase pressure slowly until operating conditions are reached.
✓ Re-check hose couplings and joints for leaks.
✓ Rectify all leaks, ensuring that the unit is shut down and line pressure released before making adjustments.
✓ Ensure all operators are wearing suitable protective clothing and are correctly positioned.
✓ Regularly check operating conditions. (Oil and water pressure, condition of filters, pipework and hoses).
✓ Ensure that all pressure in lines is released on any shutdown.
✓ On completion, strip down equipment and store in a clean condition.
✓ Clear the site of barriers, warning signs and debris, to customers' satisfaction.
✓ On completion, ensure that customer has signed the necessary paperwork. (Satisfaction notes, work sheets, etc.)

DO NOT
✗ **DO NOT** commence work on site without necessary permission.
✗ **DO NOT** commence any jetting operation until warning signs are on show and area roped off.
✗ **DO NOT** operate without adequate personal protection for eyes, head, ears, hands, feet and body.
✗ **DO NOT** run any equipment with any leakage whatsoever without rectifying.
✗ **DO NOT** attempt to tighten any pressure joint whilst equipment is under pressure.
✗ **DO NOT** by-pass safety cut-outs. Do check reasons for malfunction. (Low water, blocked filters, low oil level, etc.)
✗ **DO NOT** operate with guns and control valves not functioning correctly. (Failing to shut off, or leaking).
✗ **DO NOT** operate guns or control valves with the operating lever tied back, wedged or locked in the on position.
✗ **DO NOT** direct the water jet at any person or animal.
✗ **DO NOT** direct the water jet towards materials containing asbestos.
✗ **DO NOT** operate with badly worn or undersized nozzles.
✗ **DO NOT** continue to operate if any unauthorized personnel enter the operating/work area.
✗ **DO NOT** operate equipment at power levels which can produce a reaction force greater than the operator can comfortably absorb. (250N is advised as a maximum)
✗ **DO NOT** leave unit running unattended.
✗ **DO NOT** leave equipment unattended on site.
✗ **DO NOT** store unserviceable equipment. (Notify supervisor.)
✗ **DO NOT** leave the site in a dangerous or untidy condition.
✗ **DO NOT** leave site without notifying all parties. (Engineers, site agents, occupiers, etc.)

SAFETY

Precautions

Using a High Pressure Water Cleaner (HPWC) can be very hazardous and all operators must be trained and competent. Do not operate machine alone, a second operator should always be present.

High pressure water jets can easily penetrate the skin, never place any part of your body in front of the high pressure nozzle.

Completely drain water from all components if freezing conditions are expected. Ice forming inside pump/hoses can cause significant personal injury or equipment damage.

Site and Work Area

When working on a construction site, adhere to all signage and ensure correct worksite PPE is worn.

Always assess the site and plan your work prior to set up of the HPWC. Things to consider are:

- Potential work area hazards
- Potential environmental issues
- Appropriate control measures
- Safety standards
- Emergency procedures

The work area should be adequately ventilated, well lit and free from obstructions. Block off the area using barriers to keep bystanders and non-essential persons away. Barriers should be erected at a distance outside the effective range of the high pressure spray so that it is no longer harmful to persons or animals.

Appropriate signage such as "DANGER – HIGH PRESSURE WATER CLEANING EQUIPMENT IN USE" should be clearly visible to anyone approaching the work area. Nearby workers should be notified of intended operations prior to commencing works.

Personal Protective Equipment (PPE)

Always wear the appropriate protective equipment.

Good Workplace Health and Safety practices and other risk control measures are not replaced by the use of personal protective equipment. Preventative measures should always be explored before considering the requirement of PPE. Where PPE is issued, training in the correct use and maintenance should be provided to all operators and workers.

- **Head protection**
  Where required, head protection complying with AS/NZS 1801: 1997: *Occupational protective helmets* should be worn.
- **Eye protection**
  Eye protection suitable for the task, of good fit on the worker and complying with AS/NZS 1337: 2010 (Series): *Personal eye protection* should always be worn when the worker is near jetting operations. The worker in direct control of the flow of water should as a minimum, wear safety glasses and a face shield complying with AS/NZS 1337.
  Where liquids which can cause eye damage are being used at the workplace it may be necessary to use a combination of a face shield visor and goggles or a full hood with shield.

- **Leg and body protection**
  Workers should wear waterproof protective clothing complying with AS 3765.1-1990: *Clothing for protection against hazardous chemicals — Protection against general or specific chemicals* or AS 3765.2-1990: *Clothing for protection against hazardous chemicals – Limited protection against specific chemicals.*
  Leg and body armour manufactured from materials capable of withstanding the direct force of the water jet should be used by water jetting operators where there is risk of injury. Liquid or chemical-resistant suits should be worn where a risk assessment indicates these are required.

- **Hand protection**
  Hand protection complying with the recommendations of AS/NZS 2161.2:2005: *Occupational protective gloves - General requirements*, AS/NZS 2161.3:2005: *Occupational protective gloves - Protection against mechanical risks* or AS/NZS 2161.5:1998: *Occupational protective gloves - Protection against cold*, should be worn where a risk assessment indicates this is required.

- **Foot and lower leg protection**
  Workers should wear protective footwear complying with AS/NZS 2210.3:2009: *Occupational protective footwear - Specification for safety footwear*. A foot and lower leg guard or shield made from material capable of withstanding the direct force of the water jet should be used where there is a risk of foot or leg injury.
  Further guidance on the selection of footwear is in AS/NZS 2210.1: 2010: *Safety, protective and occupational footwear - Guide to selection, care and use*.

- **Hearing protection**
  Where noise cannot be eliminated or minimised so far as is reasonably practicable personal hearing protectors as well as instruction and training in their use should be provided. Hearing protectors should be selected in accordance with AS/NZS 1269.3:2005: *Occupational noise management – hearing protector program* and tested in accordance with AS/NZS 1270:2002: *Acoustics - hearing protectors*.

- **Respiratory protection**
  Workers involved in high pressure water jetting operations should wear respiratory protection where there is an assessed risk of injury that can be prevented by such equipment. Respiratory protection should only be worn by workers who have been trained in its correct use.
  A respiratory protection program should be implemented where there is evidence it could prevent injury or disease. AS/NZS 1715:2009: *Selection, use and maintenance of respiratory protective equipment* provides guidance on the implementation of respiratory protection programs.

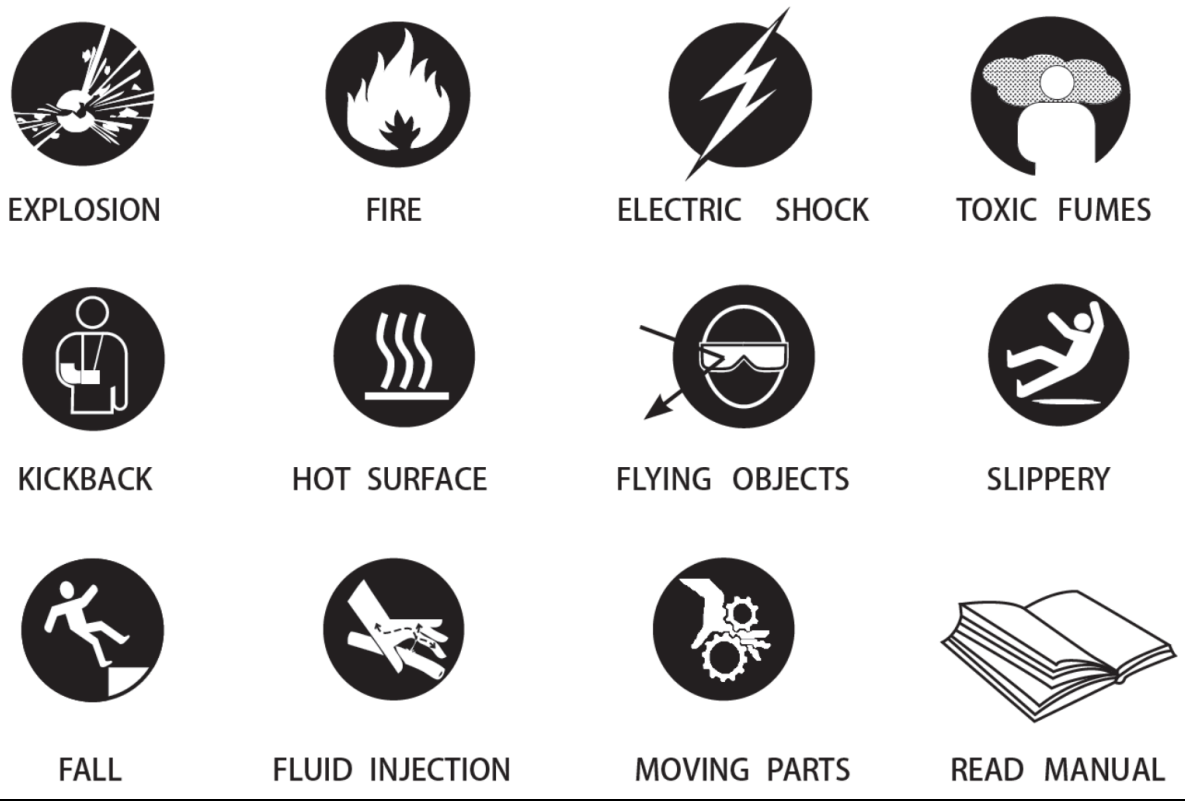
Hazards and Symbols

This is the safety alert symbol. It is used to draw attention to potential hazards.
Obey all safety messages that follow this symbol to avoid possible injury or death.

The safety alert symbol is used in conjunction with a signal word, a pictorial symbol and/or safety message to assist in identifying the hazard.

DANGER indicates a hazard which, if not avoided, will result in death or serious injury.	**WARNING** indicates a hazard which, if not avoided, could result in death or serious injury.
CAUTION indicates a hazard which, if not avoided, might result in moderate or minor injury.	**NOTICE** indicates a situation that could result in equipment or property damage.

Hazard Symbols



⚠ WARNING

Fuel and its vapours are extremely flammable and explosive.

Fire or explosion can cause severe burns or death.

When Adding or Draining Fuel

- Shut-down engine and let it cool at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.
- Fill or drain fuel tank outdoors and in accordance with the LOCAL GOVERNMENT GUIDELINES.
- DO NOT overfill tank. Always allow space for fuel expansion.
- If fuel spills, wait until it evaporates before starting engine.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- DO NOT light a cigarette or smoke.

When Operating Equipment

- DO NOT tip engine or equipment at angle which causes fuel to spill.
- DO NOT spray flammable liquids.

When Transporting or Repairing Equipment

- Transport/repair with fuel tank EMPTY or with fuel shutoff valve OFF.
- Disconnect spark plug wire.

When Storing Fuel or Equipment with Fuel in Tank

- Store away from furnaces, stoves, water heaters, clothes dryers, or other appliances that have pilot light or other ignition source because they can ignite fuel vapours.

⚠ WARNING

Risk of electrocution.

Contact with power source can cause electric shock or burn.

- NEVER spray towards a power source.
- Ensure all nearby electrical equipment is appropriately protected again the ingress of water or debris.

⚠ WARNING

Running engines produce carbon monoxide, an odourless, colourless, poisonous gas.
Breathing carbon monoxide can cause headache, fatigue, dizziness, vomiting, confusion, seizures, nausea, fainting or death.
Some chemicals or detergents may be harmful if inhaled or ingested, causing severe nausea, fainting, or poisoning.

- ONLY operate High Pressure Water Cleaner outdoors.
- DO NOT start or run engine indoors or in an enclosed area, even if windows and are open.
- Keep exhaust gas from entering a confined area through windows, doors, ventilation intakes or other openings.
- Use a respirator or mask whenever there is a chance that vapours may be inhaled.
- Read all instructions with mask to be certain the mask will provide the necessary protection against harmful vapours.

⚠ WARNING

Starter cord kickback (rapid retraction) can result in bodily injury.
Kickback will retract starter cord faster than it can be let go.
Broken bones, fractures, bruises, or sprains could result.

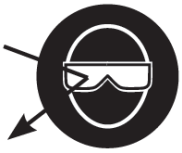
- NEVER pull starter cord without first relieving pressure from all lines.
- When starting engine, pull cord slowly until resistance is felt and then pull rapidly to avoid kickback.
- After each starting attempt, where engine fails to run, point spray gun in safe direction and squeeze trigger to release pressure.
- Firmly grasp spray gun with both hands when using high pressure spray to avoid injury if spray gun kicks back.

⚠ WARNING

Contact with muffler area can result in serious burns.
Exhaust heat/gases can ignite combustibles, structure or damage fuel tank causing a fire.

- DO NOT touch hot components
- AVOID hot exhaust gases.
- Remove nearby combustible materials before operating pressure cleaner unit.
- Allow equipment to cool before touching.
- Keep at least 1.5m of clearance on all sides of pressure cleaner unit including overhead.

⚠ WARNING



Risk of eye injury.

Spray can splash back or propel objects.

- Always wear safety goggles when using this equipment or in vicinity of where equipment is in use.
- Before starting the pressure cleaner, be sure adequate safety goggles are worn.
- NEVER substitute safety glasses for safety goggles.

⚠ WARNING

Pressure washing can create puddles and slippery surfaces.

Kickback from spray gun can cause loss of balance and/or a fall.

- Operate pressure cleaner from a stable surface.
- The cleaning area should have adequate drainage to reduce the possibility of a fall due to wet/slippery surfaces.
- Use extreme caution if the water cleaner must be used from a ladder, scaffolding, or any other similar location.
- Firmly grasp spray gun with both hands when using high pressure spray to avoid injury from spray gun reaction force.

⚠ WARNING

The high pressure jet of water produced by this equipment can cut through skin and its underlying tissues, leading to serious injury and possible amputation. Spray gun traps high water pressure, even when engine is stopped and water is disconnected, which can cause injury.

- DO NOT allow children to operate the pressure cleaner.
- NEVER attempt to repair the high pressure hose. Replace it.
- NEVER attempt to repair leaking connections with sealant of any kind. Replace O-ring or seal.
- NEVER connect high pressure hose to nozzle extension.
- Keep high pressure hose connected to pump and spray gun while system is pressurised.
- ALWAYS point spray gun in safe direction and squeeze spray gun trigger to release high pressure every time engine is stopped.
- NEVER aim spray gun at people, animals, or plants.
- DO NOT leave spray gun unattended while machine is running.
- NEVER use a spray gun which does not have a trigger lock or trigger guard in place and in working order.
- Always be certain spray gun, nozzles and accessories are correctly attached before spraying water.

⚠ WARNING

Starter and other rotating parts can entangle hands, hair, clothing, or accessories.

- NEVER operate pressure cleaner without protective housings and covers.
- DO NOT wear loose clothing, jewellery or anything that may be caught in the starter or other rotating parts.
- Tie up long hair securely.

⚠ WARNING

Unintentional sparking can result in fire or electric shock

When adjusting or making repairs

- Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug.

When testing for engine spark

- Use approved spark plug tester.
- DO NOT check for spark with spark plug removed.

⚠ NOTICE

High pressure jets may damage fragile items including glass.

- DO NOT point spray gun at glass, especially when using 0° nozzle.
- NEVER aim spray gun at people, animals or any other living thing.

⚠ NOTICE

Improper treatment of pressure cleaner can damage it and shorten its life.

- If you have questions about intended use, contact the nearest authorized dealer, call our support line on (02) 4577 2144, or visit our website bargroup.com.au.
- NEVER operate unit with broken or missing parts, or without protective housings and covers.
- DO NOT by-pass any safety devices on this machine.
- DO NOT tamper with governed speed.
- DO NOT operate pressure cleaner above rated pressure.
- DO NOT modify pressure cleaner in any way.
- Before starting pressure cleaner in cold weather, check all parts of the equipment to be sure ice has not formed.
- NEVER move machine by pulling on hoses. Use the unit's handle or frame only.
- Check fuel system for leaks or signs of deterioration, such as chafed or spongy hose, loose or missing clamps, and damaged tank or cap.
- Correct all defects before operating pressure cleaner.

Medical

All operators should carry a medical alert card which explains to medical staff the possible nature of the injury, both relating to the high pressure water and any unusual infections that could be present.

Additional medical alert cards are available via our website.

Incident reports

Incident reporting is vital for improving workplace safety procedures. All accidents, injuries and "near-miss" incidents should be appropriately recorded according to jobsite and company procedures.

The record of these significant incidents provides data to assist in the implementation of safety measures and procedures to eliminate or minimise potential hazards and reduce workplace injuries.

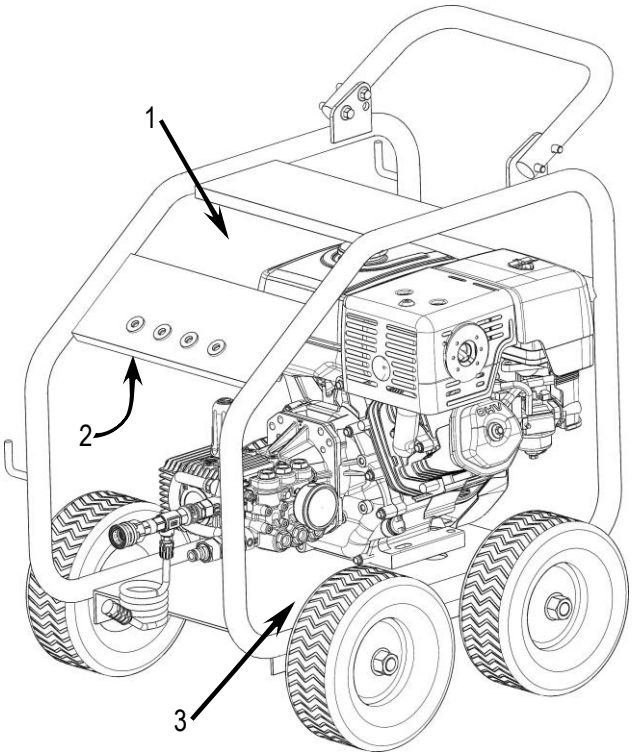
An incident report should also be completed when there is any equipment failure with details of latest inspection recorded.

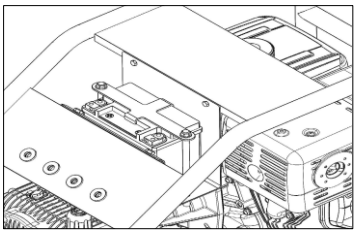
Details recorded should include but are not limited to:

- Date and time of incident
- Location of incident
- Reporting person's name and contact
- Equipment/unit in use (inc serial numbers if possible)
- Description of incident
- Description of injury
- Description of equipment/property damage
- First aid or Medical attention received
- Witnesses (other employees or bystanders)

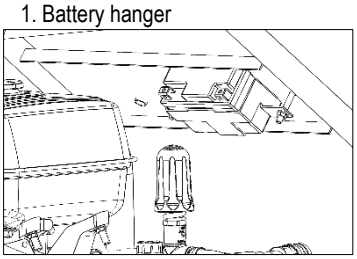
UNDERSTANDING EQUIPMENT

Some pressure cleaner models require assembly prior to use. If your unit is an electric start machine the battery leads will also need to be connected. The below diagram shows common placements of the battery.

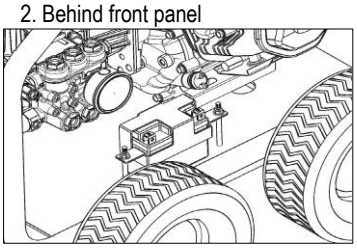




1. Battery hanger

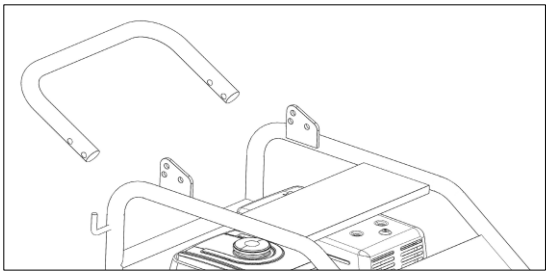


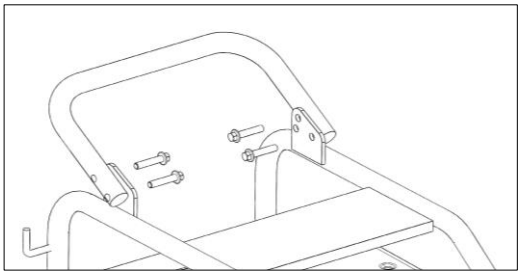
2. Behind front panel



3. Base plate

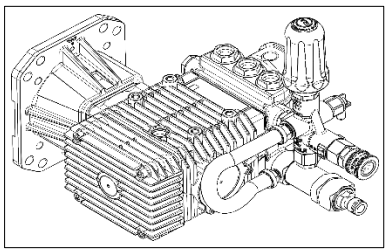
To attach the handle to the frame of your machine, locate the supplied mounting hardware, align handle with holes in frame place all bolts and washers in place before tightening. Check all frame bolts regularly.



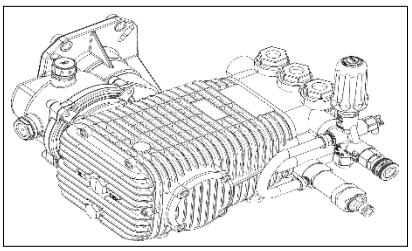


Pressure cleaner pumps are driven either directly by the engine or through a reduction gearbox. To aid in determining the difference, an example of each is pictured below.

Direct drive pump

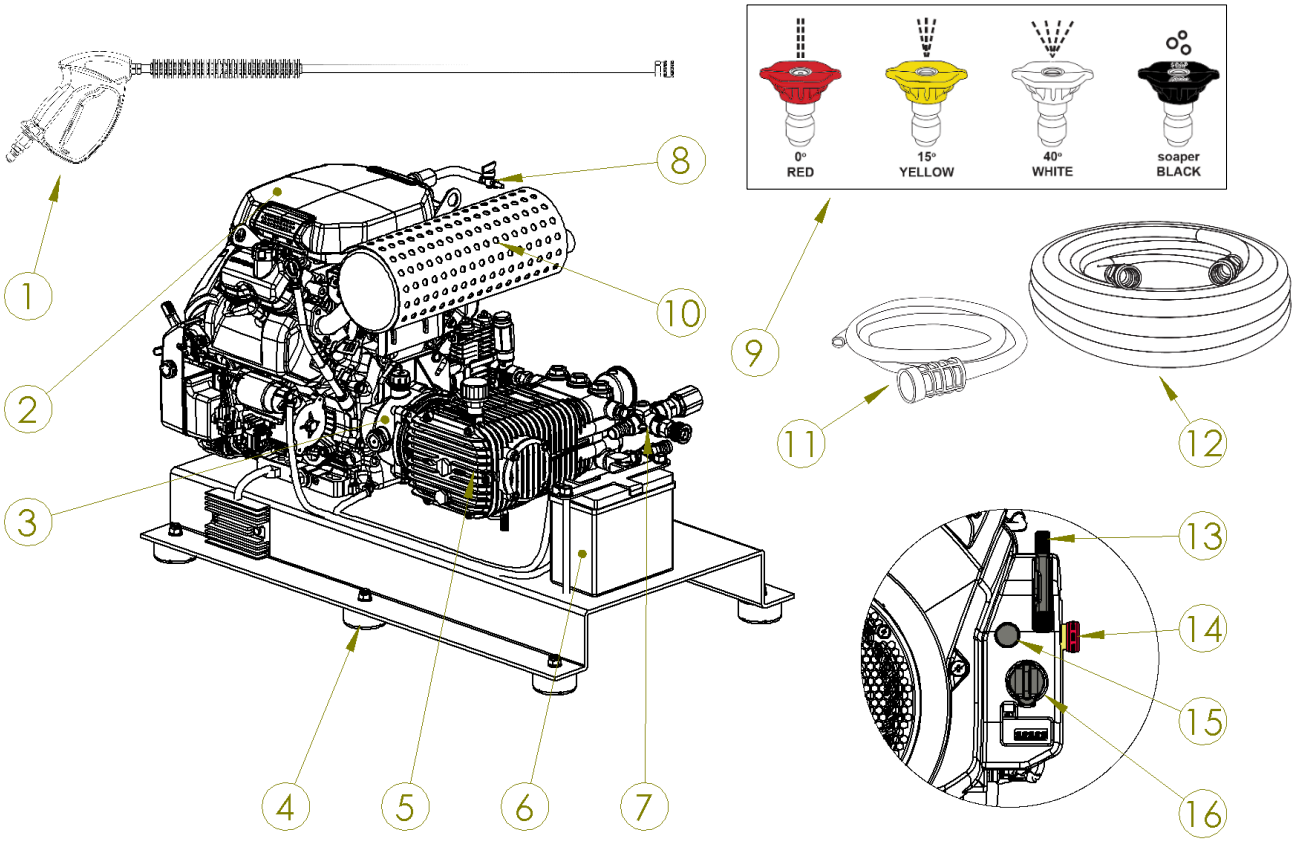


Gearbox driven pump



Note: Diagrams on this page are intended for general reference and may vary in appearance to your machine.

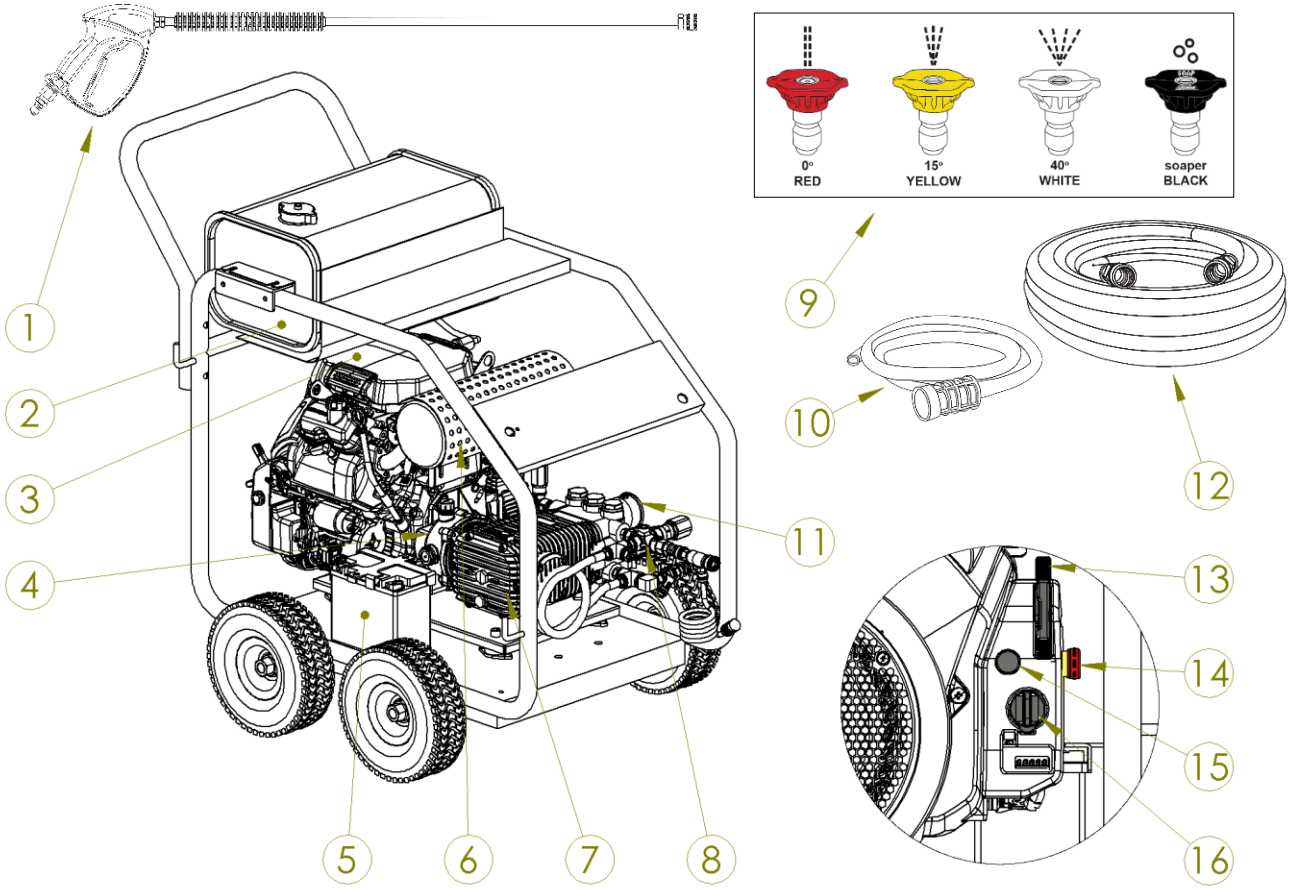
120 BAR4023CG-HEC 3



1. **Spray gun/Lance assembly** - Controls the application of water onto cleaning surface with trigger device. Includes trigger lock. Allows you to switch between various spray tips.
2. **Air filter** - Protects the engine by filtering dust and debris out of intake air.
3. **Gearbox** - Houses reduction gears to reduce shaft speed for pumps.
4. **Rubber mounts** - isolates motor pump group via rubber feet.
5. **Pump** - Develops high pressure. Connect the supply hose to the water tank or pump inlet and connect the high pressure hose to the outlet.
6. **Battery** - For electric start machines.
7. **Unloader** - Opens to bypass in an over-pressured system. Pressure is pre-set at the factory.
8. **Fuel tap** - No fuel tank supplied with this model. Allows you to attach your own fuel source.
9. **Nozzles** - 0°, 15°, 40° and detergent: for various cleaning applications.
10. **Muffler/Exhaust** - Reduces noise of the engine and expels heat (CAUTION HOT).
11. **Detergent siphoning hose** - Used to draw detergent into a low pressure stream. (OPTIONAL EXTRA)
12. **High pressure hose** - Designed to withstand the pressure created by the pump. Carries water flow to gun.
13. **Throttle lever** - Adjusts engine speed, set to maximum speed once started.
14. **Emergency stop** - Immediately shuts off engine when pressed. To release rotate clockwise.
15. **Choke** - Prepares a cold engine for starting.
16. **Ignition switch** - Set switch to "On". "Start" for electric starter engagement. Turn to "Off" to shutdown engine.

[**NOTE:** See petrol engine manual also provided for detailed operation/maintenance & warranty information.]

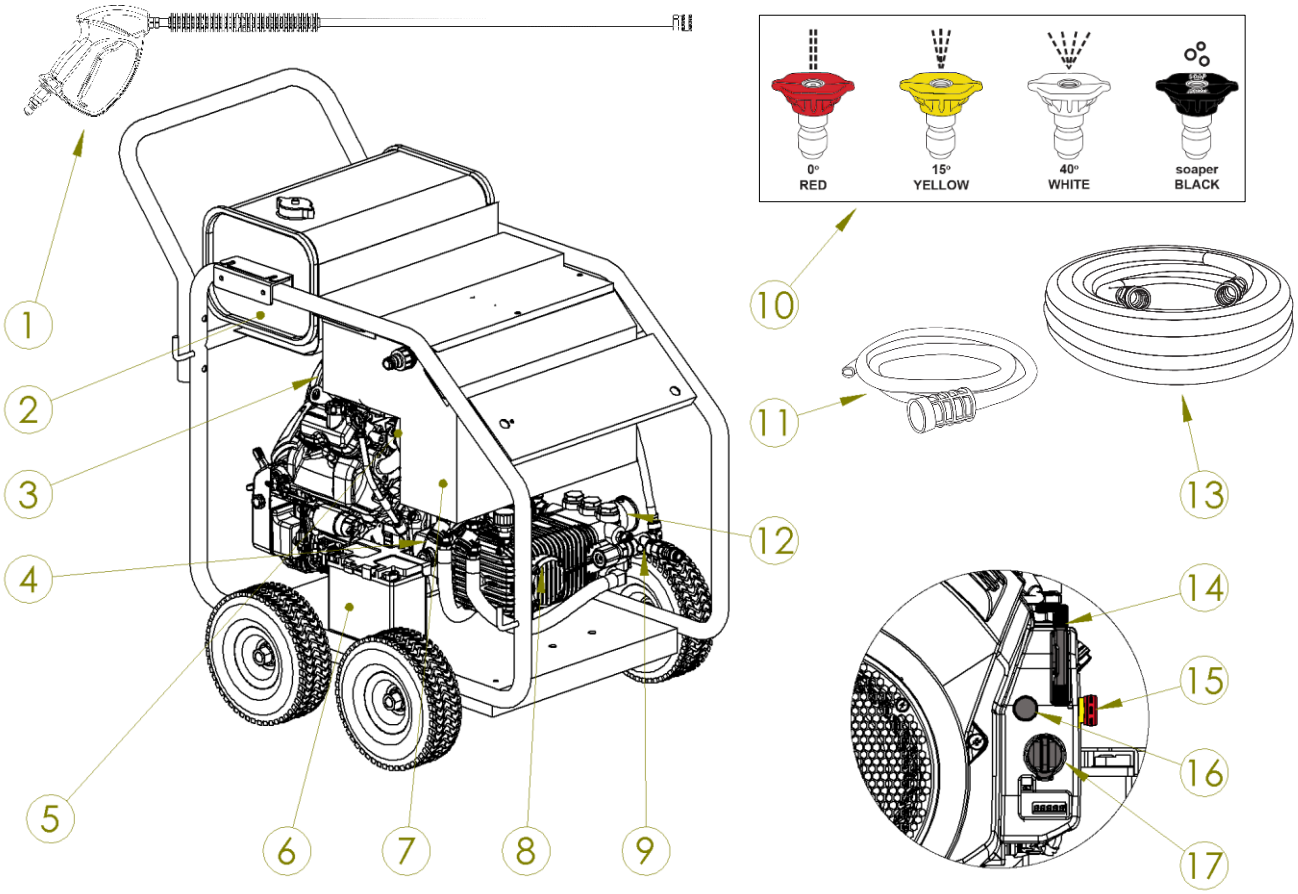
120 BAR4023CG-HEJM



1. **Spray gun/Lance assembly** - Controls the application of water onto cleaning surface with trigger device. Includes trigger lock. Allows you to switch between various spray tips.
2. **Fuel tank** - Always leave room for fuel expansion. Do not fill while machine is running or hot.
3. **Air filter** - Protects the engine by filtering dust and debris out of intake air.
4. **Gearbox** - Houses reduction gears to reduce shaft speed for pumps.
5. **Battery** - For electric start machines.
6. **Muffler/Exhaust** - Reduces noise of the engine and expels heat (CAUTION HOT).
7. **Pump** - Develops high pressure. Connect the supply hose to the water tank or pump inlet and connect the high pressure hose to the outlet.
8. **Unloader** - Opens to bypass in an over-pressured system. Pressure is pre-set at the factory.
9. **Nozzles** - 0°, 15°, 40° and detergent: for various cleaning applications.
10. **Detergent siphoning hose** - Used to draw detergent into a low pressure stream. (OPTIONAL EXTRA)
11. **Pressure gauge** - Shows the operating pressure on an easy read dial.
12. **High pressure hose** - Designed to withstand the pressure created by the pump. Carries water flow to gun.
13. **Throttle lever** - Adjusts engine speed, set to maximum speed once started.
14. **Emergency stop** - Immediately shuts off engine when pressed. To release rotate clockwise.
15. **Choke** - Prepares a cold engine for starting.
16. **Ignition switch** - Set switch to "On". "Start" for electric starter engagement. Turn to "Off" to shutdown engine.

[**NOTE:** See petrol engine manual also provided for detailed operation/maintenance & warranty information.]

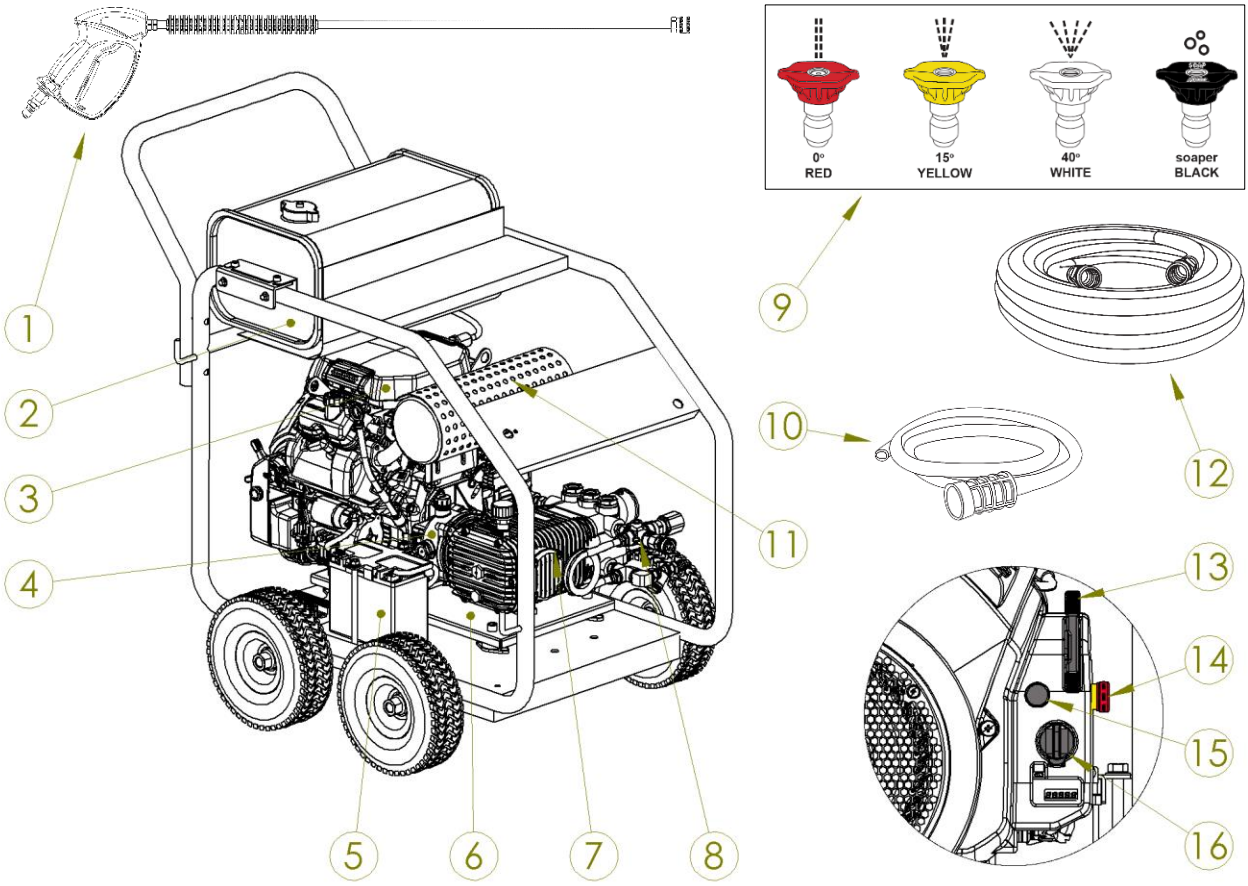
120 BAR4023CG-HEJMT



1. **Spray gun/Lance assembly** - Controls the application of water onto cleaning surface with trigger device. Includes trigger lock. Allows you to switch between various spray tips.
2. **Fuel tank** - Always leave room for fuel expansion. Do not fill while machine is running or hot.
3. **Air filter** - Protects the engine by filtering dust and debris out of intake air.
4. **Gearbox** - Houses reduction gears to reduce shaft speed for pumps.
5. **Muffler/Exhaust** - Reduces noise of the engine and expels heat (CAUTION HOT).
6. **Battery** - For electric start machines.
7. **Water tank** - Holds a reserve of water for pumps with high flow rates. Also referred to as break tank.
8. **Pump** - Develops high pressure. Connect the supply hose to the water tank or pump inlet and connect the high pressure hose to the outlet.
9. **Unloader** - Opens to bypass in an over-pressured system. Pressure is pre-set at the factory.
10. **Nozzles** - 0°, 15°, 40° and detergent: for various cleaning applications.
11. **Detergent siphoning hose** - Used to draw detergent into a low pressure stream. (OPTIONAL EXTRA)
12. **Pressure gauge** - Shows the operating pressure on an easy read dial.
13. **High pressure hose** - Designed to withstand the pressure created by the pump. Carries water flow to gun.
14. **Throttle lever** - Adjusts engine speed, set to maximum speed once started.
15. **Emergency stop** - Immediately shuts off engine when pressed. To release rotate clockwise.
16. **Choke** - Prepares a cold engine for starting.
17. **Ignition switch** - Set switch to "On". "Start" for electric starter engagement. Turn to "Off" to shutdown engine.

[**NOTE:** See petrol engine manual also provided for detailed operation/maintenance & warranty information.]

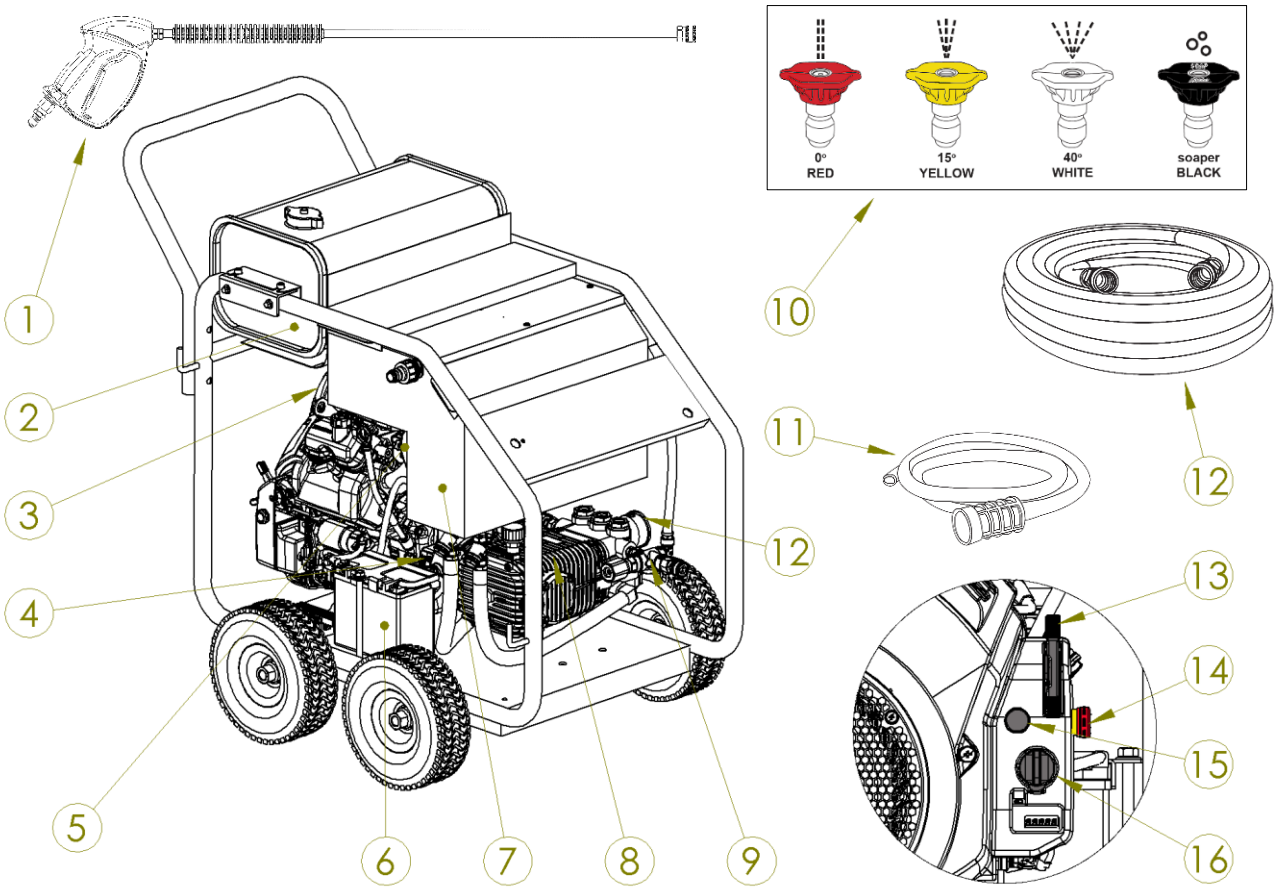
120 BAR5027CG-HEJM



1. **Spray gun/Lance assembly** - Controls the application of water onto cleaning surface with trigger device. Includes trigger lock. Allows you to switch between various spray tips.
2. **Fuel tank** - Always leave room for fuel expansion. Do not fill while machine is running or hot.
3. **Air filter** - Protects the engine by filtering dust and debris out of intake air.
4. **Gearbox** - Houses reduction gears to reduce shaft speed for pumps.
5. **Battery** - For electric start machines.
6. **Vibration plate** - isolates motor pump group on anti-vibration mounts to limit frame vibrations.
7. **Pump** - Develops high pressure. Connect the supply hose to the water tank or pump inlet and connect the high pressure hose to the outlet.
8. **Unloader** - Opens to bypass in an over-pressured system. Pressure is pre-set at the factory.
9. **Nozzles** - 0°, 15°, 40° and detergent: for various cleaning applications.
10. **Detergent siphoning hose** - Used to draw detergent into a low pressure stream. (OPTIONAL EXTRA)
11. **Muffler/Exhaust** - Reduces noise of the engine and expels heat (CAUTION HOT).
12. **High pressure hose** - Designed to withstand the pressure created by the pump. Carries water flow to gun.
13. **Throttle lever** - Adjusts engine speed, set to maximum speed once started.
14. **Emergency stop** - Immediately shuts off engine when pressed. To release rotate clockwise.
15. **Choke** - Prepares a cold engine for starting.
16. **Ignition switch** - Set switch to "On". "Start" for electric starter engagement. Turn to "Off" to shutdown engine.

[**NOTE:** See petrol engine manual also provided for detailed operation/maintenance & warranty information.]

120 BAR5027CG-HEJMT



1. **Spray gun/Lance assembly** - Controls the application of water onto cleaning surface with trigger device. Includes trigger lock. Allows you to switch between various spray tips.
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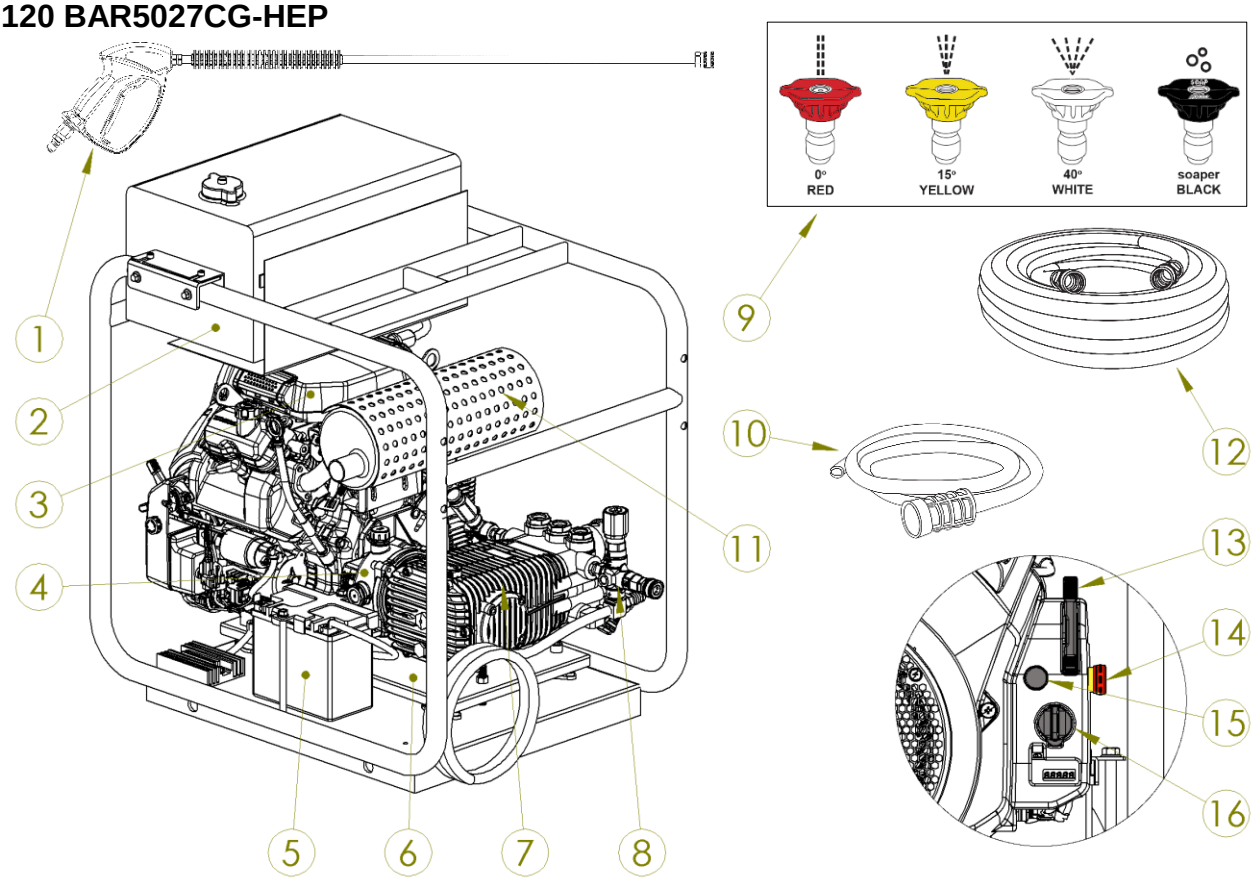
12. **Pressure gauge** - Shows the operating pressure on an easy read dial.
13. **High pressure hose** - Designed to withstand the pressure created by the pump. Carries water flow to gun.
14. **Throttle lever** - Adjusts engine speed, set to maximum speed once started.
15. **Emergency stop** - Immediately shuts off engine when pressed. To release rotate clockwise.
16. **Choke** - Prepares a cold engine for starting.
17. **Ignition switch** - Set switch to "On". "Start" for electric starter engagement. Turn to "Off" to shutdown engine.

[**NOTE:** See petrol engine manual also provided for detailed operation/maintenance & warranty information.]

120 BAR5027CG-HEP



1. **Spray gun/Lance assembly** - Controls the application of water onto cleaning surface with trigger device. Includes trigger lock. Allows you to switch between various spray tips.
2. **Fuel tank** - Always leave room for fuel expansion. Do not fill while machine is running or hot.
3. **Air filter** - Protects the engine by filtering dust and debris out of intake air.
4. **Gearbox** - Houses reduction gears to reduce shaft speed for pumps.
5. **Battery** - For electric start machines.
6. **Vibration plate** - isolates motor pump group on anti-vibration mounts to limit frame vibrations.
7. **Pump** - Develops high pressure. Connect the supply hose to the water tank or pump inlet and connect the high pressure hose to the outlet.
8. **Unloader** - Opens to bypass in an over-pressured system. Pressure is pre-set at the factory.
9. **Nozzles** - 0°, 15°, 40° and detergent: for various cleaning applications.
10. **Detergent siphoning hose** - Used to draw detergent into a low pressure stream. (OPTIONAL EXTRA)
11. **Muffler/Exhaust** - Reduces noise of the engine and expels heat (CAUTION HOT).
12. **High pressure hose** - Designed to withstand the pressure created by the pump. Carries water flow to gun.
13. **Throttle lever** - Adjusts engine speed, set to maximum speed once started.
14. **Emergency stop** - Immediately shuts off engine when pressed. To release rotate clockwise.
15. **Choke** - Prepares a cold engine for starting.
16. **Ignition switch** - Set switch to "On". "Start" for electric starter engagement. Turn to "Off" to shutdown engine.

[**NOTE:** See petrol engine manual also provided for detailed operation/maintenance & warranty information.]

OPERATION

Preparation checks

- ☐ Is the work area clearly defined and warning signs posted?
- ☐ Have precautions been taken to protect electrical equipment?
- ☐ Is there a risk to workers or possible damage to equipment from things like the release of chemicals, hot or flammable liquids and gases, drifting mist or other materials?
- ☐ Have workers nearby been told about the intention to carry out pressure cleaning operations?
- ☐ Are components, for example fittings, hoses, guns and foot pedals of the correct pressure rating?
- ☐ Are hoses and fittings in safe operating condition and protected from accidental damage?
- ☐ Are nozzles free from blockages and in safe operating condition?
- ☐ Is there a suitable cool and clean water supply?
- ☐ Is the water supply filter clean and in safe operating condition?
- ☐ Have workers received correct training and been provided with appropriate PPE for this job?
- ☐ Are control systems and emergency stops operating correctly?
- ☐ Is the location of emergency medical aid known by workers?
- ☐ Has an effective communication system been put in place for the job?
- ☐ Has the reaction force been calculated to ensure that it is under 250N (25.5kgs) for hand held gun work?
- ☐ Are oil levels in the engine, gearbox and pump all at the proper level?
- ☐ Are drive belts correctly tensioned and guards/shields installed?
- ☐ Is there sufficient fuel? (Avoid spilling or overfilling fuel tank, allow any spilt fuel to evaporate before start-up)

⚠ NOTICE

Running components with low oil levels will result in significant damage and may void warranty.

- Check all oil levels prior to starting unit.
- Use dipstick to check oil level in engine.
- Oil should cover the half way mark on the sight glass of the gearbox and pump.

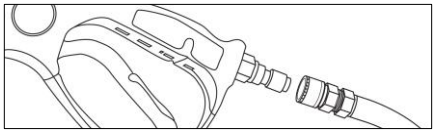
⚠ NOTICE

Running pump without water will result in significant damage and may void warranty.

- A lack of water will cause pump to overheat.
- Check water supply is turned on and break tank(s) is full.

Start-up procedure

1. Check the following fluids are at the proper level:
    a. Oil levels in engine, gearbox and pump (Check 'Product Details' for specifications)
    b. Fuel level – be careful not to spill or overfill tank. ⚠**WARNING**
2. Use a good quality garden hose for water supply. Check hose is free from obstructions/debris before connecting to water tank or pump.
3. Ensure water supply is turned ON and capable of supplying flow greater than the flow output of pressure cleaner. Use a good quality supply/garden hose that is free from obstructions/debris.
4. Make and check all outlet connections (hoses, gun/lance, nozzles).
5. Check break tank is full and float valve is operating correctly.
6. Confirm emergency stop button is reset and engage battery isolator.



7. Ensure hose end is safely secured to safe start connector. If no nozzle is attached hose may be safely held pointing down and away from persons. ⚠**WARNING**
8. Turn on fuel tap and start engine (if starting cold, apply choke). Do not start with line closed.
    a. For recoil start engines – check engine run switch is ON (if applicable). Pull starter cord gently until resistance is felt and then pull rapidly to avoid kickback.
    b. For electric start engines – Turn the key on, then to start position. Release key once engine fires.
9. Bring engine up to required operating speed (and release choke)

Shut-down procedure

1. Remove all but the last metre of hose from drain (not applicable if operating as pressure cleaner).
2. Close the ball valve (not applicable if operating as pressure cleaner).
3. Throttle down engine and allow to idle for a short time before turning off engine.
4. Turn off the fuel tap and remove ignition key.
5. Isolate the battery.
6. After engine has shut down, safely release the pressure from all hoses and attachments.
7. Disconnect supply hose.
8. Remove remaining hose from drain (if applicable).
9. Clean and stow hose, gun/lance, nozzles, and any other attachments.

Emergency Stop

All Class B pressure cleaners are equipped with an emergency stop as mandated in AS/NZ4233.2.

This is only to be used in emergencies. Refer to above shut-down procedure to be used in all other circumstances.

If the emergency stop has been used, it must be reset before the pressure cleaner can be operated. Reset by turning button or collar clockwise.

Check the operation of the emergency stop button regularly.

After an emergency, remember to switch the ignition key to the OFF position and isolate battery.

Safe operation

Safe operating of the pressure cleaner will minimise the risk of injury and damage to equipment. Please read in full prior to operating your pressure cleaner.

When operating a mobile unit (with wheels) always place chocks so that the unit cannot move during operation.

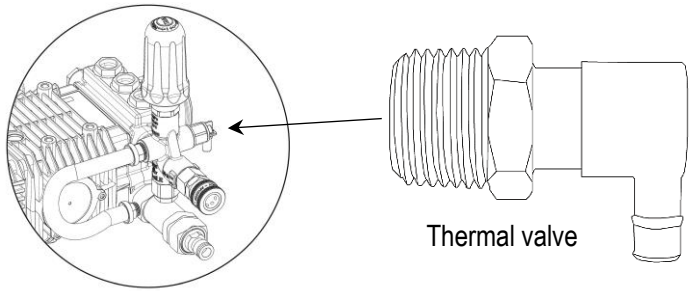
Do not run engine faster than factory set maximum. Over speeding can cause significant damage to the pump.

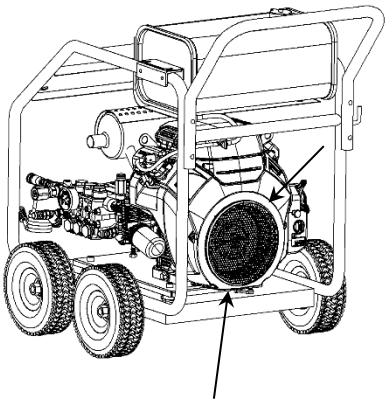
Operating the pressure cleaner while it is secured using tie-down only points for transport can cause frame damage as it restricts the units' natural vibration.

Be wary of running unit in bypass for long periods. The resulting heat build-up can cause damage to the pump. Ensure unit is shut-down within 1 minute of completing operation.

Most pumps are protected by a thermal valve. The thermal valve releases water if a pump starts to run too hot. It will prevent catastrophic heat failure. However, the pump may have suffered damage and need maintenance, repair, or replacement. If the thermal valve does not reset and continues to leak water, it may need replacement.

Note: Heat build-up is not a concern on units with large break tanks as water is bypassed back to tanks.





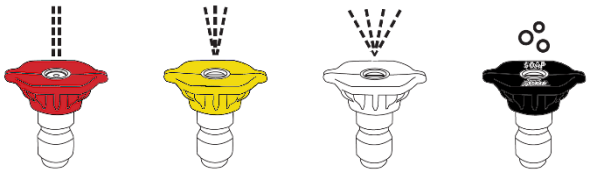
Ensure unit is always run with adequate ventilation and fresh air supply. Do not suffocate engine or obstruct access to cooling fan and intake (see image).

The unloader and safety valves have been factory set for optimal performance. Do not tamper as adjusting above rated pressures can be very dangerous.

Nozzle selection

Always use the correct size nozzle, an incorrect nozzle will not allow pump unit to reach maximum performance.

Our selection of nozzles will cover all your pressure cleaning needs from quick connect packs to specialized nozzles.



The correct size nozzle with produce maximum pressure at maximum flow. Using an:

- Undersized nozzles will cause damage to unloader as it will be in constant bypass - pressure will be maintained but with limited flow.
- Oversized nozzle will maintain maximum flow but will reduce working pressure.

To determine correct nozzle size for your HPWC you will need to know maximum pressure (psi) and flow (L/min). Consult the nozzle sizing guide on our website bargroup.com.au.

If you required assistance in selecting an appropriate nozzle for your application visit the nearest authorised dealer or contact us on (02) 4577 2144.

Equipment inspection

Pressure cleaning equipment should be inspected regularly to ensure safe compliance and to avoid damage or personal injury.

a) Keeping records of all equipment showing maintenance carried out and the results of formal inspections and tests will prove such activities are carried out.

b) While inspection before/during/after use is important, it does not remove the need for regular formal inspections to be carried out by the operator and/or company service team.

c) In the event of any equipment failure, a formal inspection of all equipment should be performed to identify whether other components were damaged as a result of the failure. An incident report should also be completed - See Page 11.

Nozzles are designed and sized specifically to control flow rate, pressure, direction and shape of jet. Using a nozzle with a blocked or worn orifice, damaged threads, cracks or any other structural damage could result in significant personal injury. As well as pre and post operation, performing inspections regularly during jetting operations can identify worn or damaged nozzles before injury occurs.

Damaged nozzles should be immediately removed from service and then repaired or destroyed.

High pressure guns and triggers should be free from all leaks and when released should quickly cut off the flow of water. If your trigger mechanism is not working correctly, remove from service immediately and take it to your nearest dealer for repair or replacement.

Hose wear occurs over time but is significantly increased by many factors including:

- environmental exposure to sharp edges or abrasive surfaces;
- chemicals used in cleaning operations;
- longitudinal stress from extended 'long-line' runs or long vertical drops;
- exposure to temperatures above hose rating;
- unnecessarily frequent pressure cycles or prolonged time at high pressures.

Where possible avoid the above to maximise the service life or your hose. In the case of chemical use, ensure equipment is properly neutralised after use.

Any hose that has visible stress points, deep abrasions, bulges, kinks, leaks, corrosion, blisters or bubbles in the outer covering should be considered defective.
Defective hoses should be immediately removed from service and clearly marked/tagged to prevent unintentional use.

Any other devices/equipment used with your pressure cleaner should be inspected regularly in accordance with the manufactures documentation.

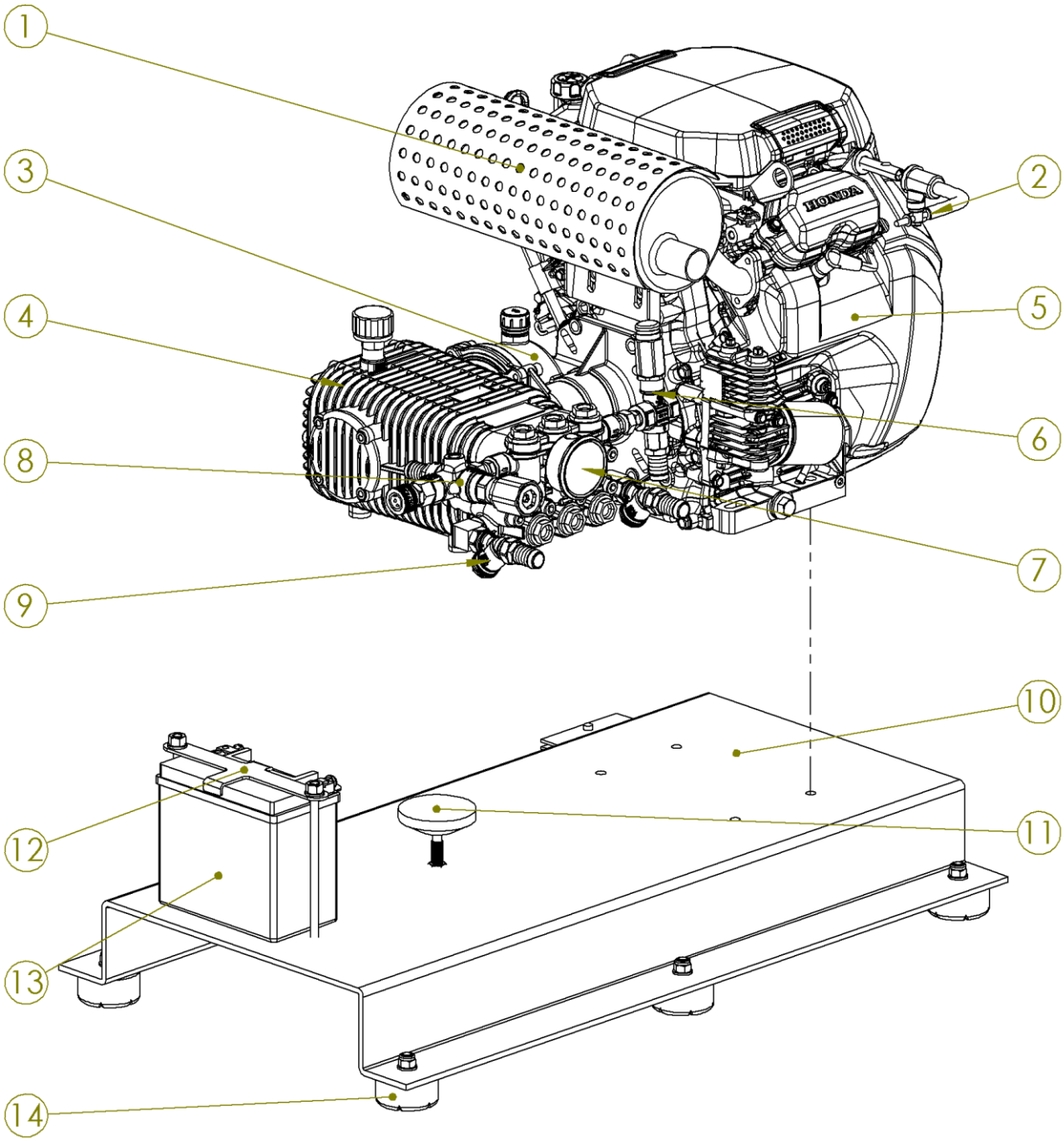
PARTS LISTS

To order replacement parts please visit our website bargroup.com.au; call us on (02) 4577 2144; or contact the nearest authorized dealer.

A list of authorised dealers can be found on the Contact Us page of our website.

120 BAR4023CG-HEC 3

Maximum pressure (psi)	Maximum flow (L/min)	Engine	Power (hp)
4000	21	Honda GX630	20.8

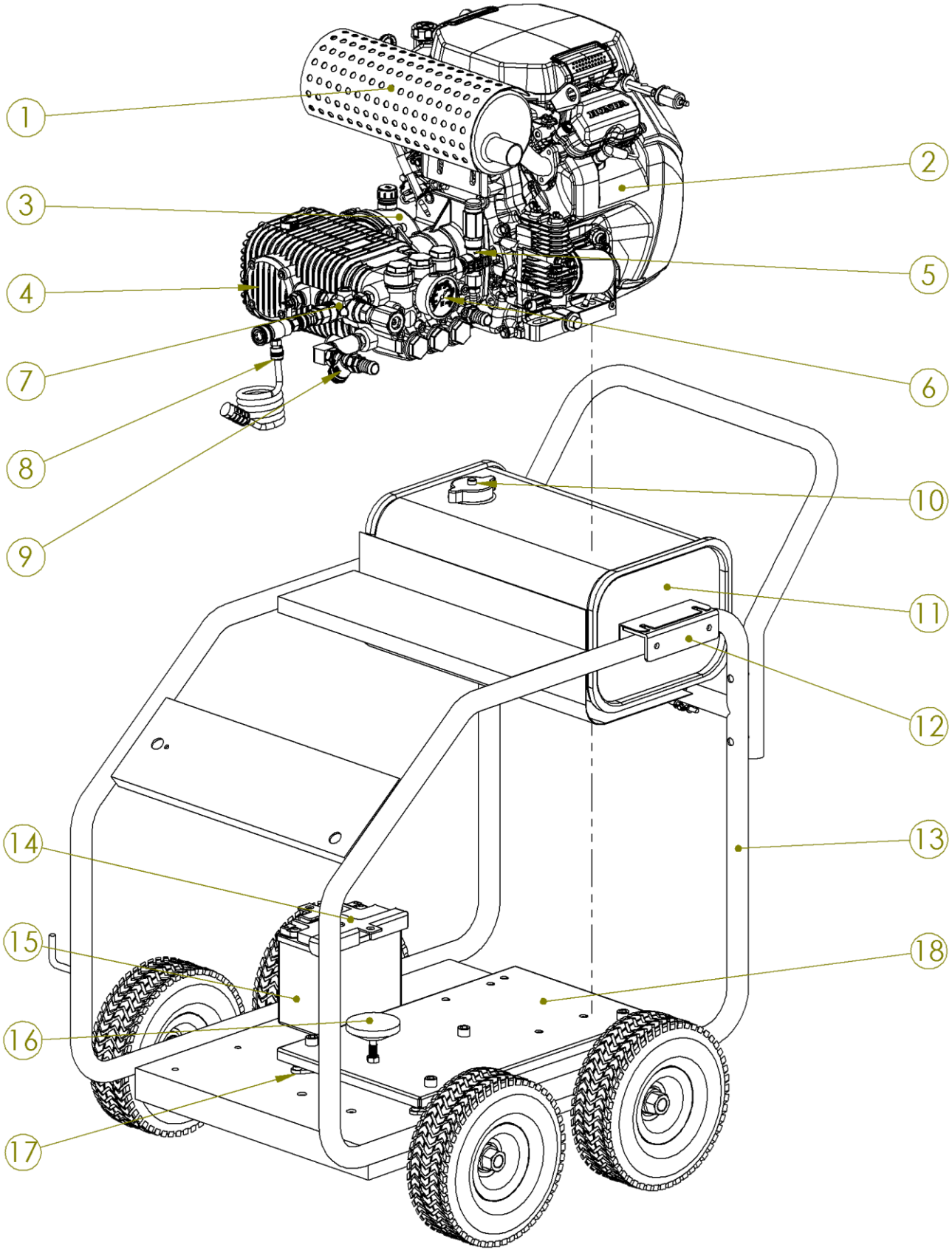


120 BAR4023CG-HEC 3

Item No.	Part Number	Description	QTY
1	165 VHRC1	Right discharge Honda Muffler	1
2	165 Fuel Tap PL	Fuel tap for external connection	1
3	145 50.0071.00	Speed reduction Gearbox	1
4	210 SW5540S	Comet SW series Pump	1
5	165 GX630RHQZB3	Honda Engine 20Hp	1
6	145 60.0580.00	Safety Valve VS350	1
7	165 1615948B	Pressure Gauge	1
8	145 60.1800.00	Unloader Valve VB350	1
9	125 85.801.001	Y Strainer Water Inlet	2
10	165 85.600.085B	Pressure washer Frame	1
11	165 2004 LVR801250S	Pump support A Justa foot	1
12	125 85.804.044	Battery holder	1
13	165 Battery ETX16	Gel Battery 325CCA	1
14	-	Rubber foot	6

120 BAR4023CG-HEJM

Maximum pressure (psi)	Maximum flow (L/min)	Engine	Power (hp)
4000	21	Honda GX630	20.8

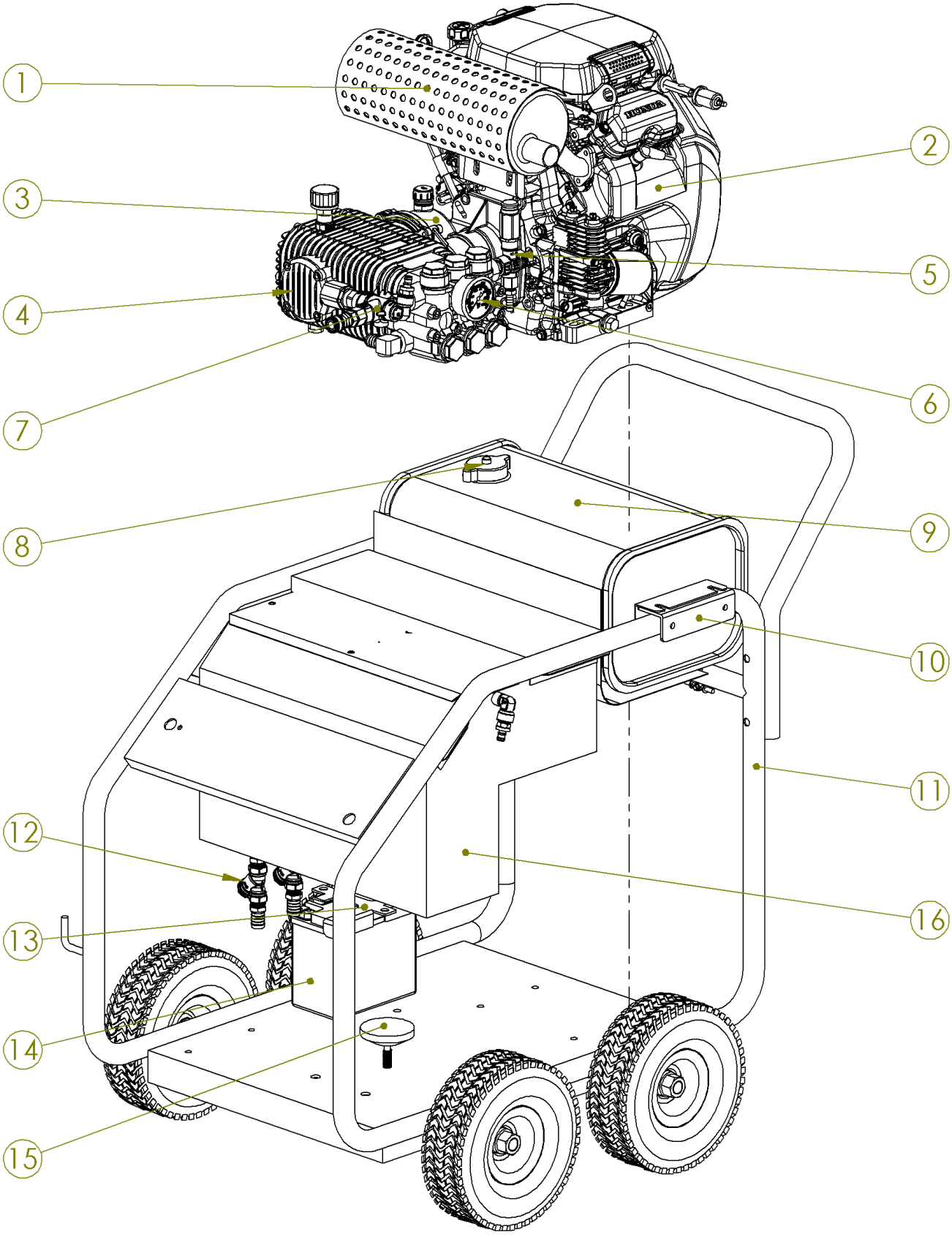


120 BAR4023CG-HEJM

Item No.	Part Number	Description	QTY
1	165 VHRC1	Right discharge Honda Muffler	1
2	165 GX630RHQZB3	Honda Engine 20Hp	1
3	145 50.0071.00	Speed reduction Gearbox	1
4	210 RW5040	Comet RW series Pump	1
5	145 60.0580.00	Safety Valve VS350	1
6	165 1615948B	Pressure Gauge	1
7	145 60.1800.00	Unloader Valve VB350	1
8	125 85.400.001	Chemical kit	1
9	125 85.801.001	Y Strainer Water Inlet	2
10	125 85.601.035	Fuel cap	1
11	125 85.601.030	25L Fuel tank w/ heat shield	1
12	165 Fuel Tank bracket 38	Fuel tank mounting bracket	2
13	165 Frame JMP-L	Pressure washer Frame	1
14	125 85.804.044	Battery holder	1
15	165 Battery ETX16	Gel Battery 325CCA	1
16	165 2004 LVR801250S	Pump support A Justa foot	1
17	165 NR1 Grey	Vibration isolation mounts	5
18	165 Base Plate Honda	Vibration plate	1

120 BAR4023CG-HEJMT

Maximum pressure (psi)	Maximum flow (L/min)	Engine	Power (hp)
4000	21	Honda GX630	20.8

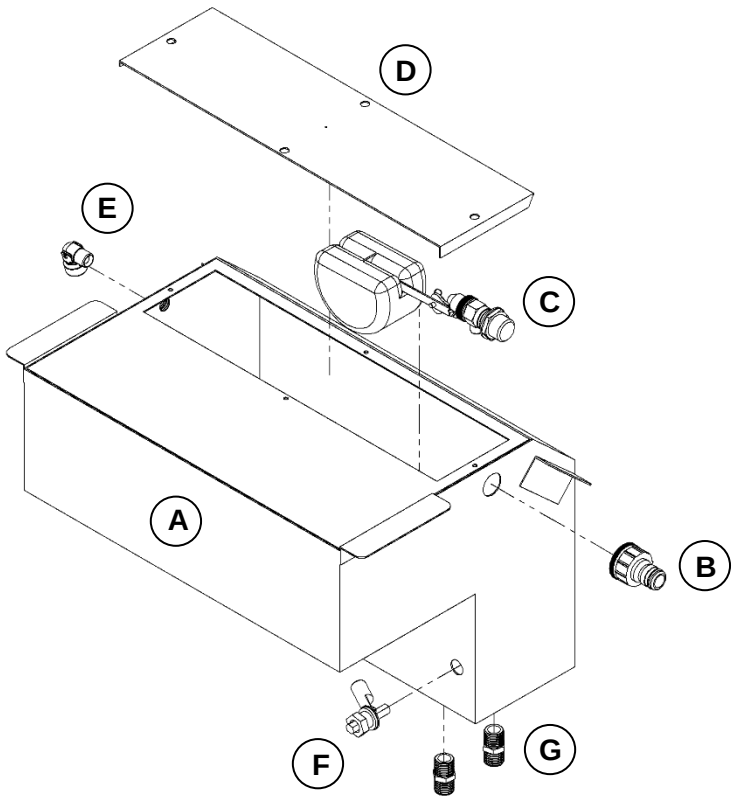


120 BAR4023CG-HEJMT

Item No.	Part Number	Description	QTY
1	165 VHRC1	Right discharge Honda Muffler	1
2	165 GX630RHQZB3	Honda Engine 20Hp	1
3	145 50.0071.00	Speed reduction Gearbox	1
4	210 RW5040	Comet RW series Pump	1
5	145 60.0580.00	Safety Valve VS350	1
6	165 1615948B	Pressure Gauge	1
7	145 60.1800.00	Unloader Valve VB350	1
8	125 85.601.035	Fuel cap	1
9	125 85.601.030	25L Fuel tank w/ heat shield	1
10	165 Fuel Tank bracket 38	Fuel tank mounting bracket	2
11	165 Frame JMP-L	Pressure washer Frame	1
12	125 85.801.001	Y Strainer Water Inlet	2
13	125 85.804.044	Battery holder	1
14	165 Battery ETX16	Gel Battery 325CCA	1
15	165 2004 LVR801250S	Pump support A Justa foot	1
16	125 85.601.015 38L SS	Water tank 38L	1

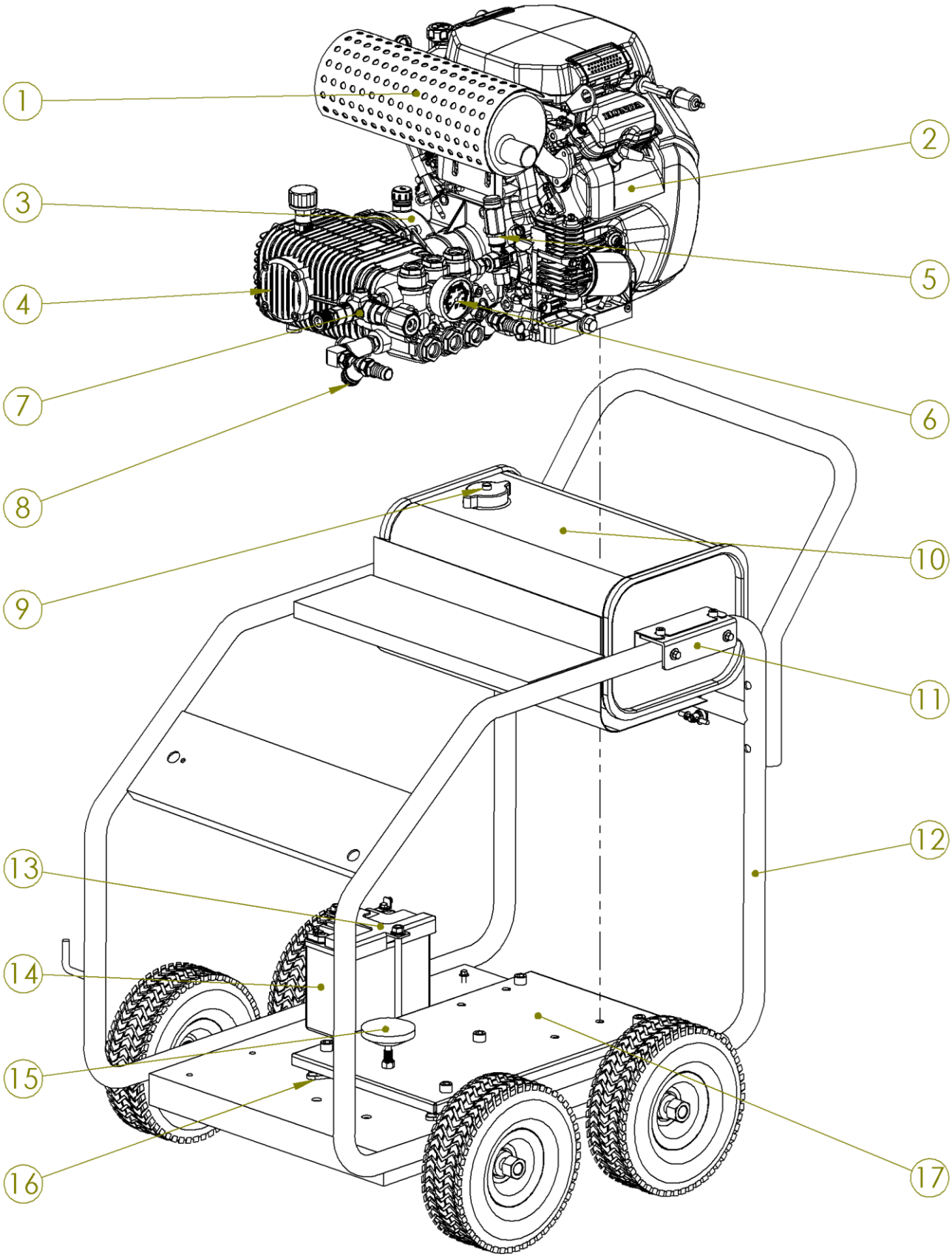
Water Tank Assembly

Item No.	Part Number	Description	QTY
A	125 85.601.015 38L SS	Water Tank 38L	1
B	165 950-5223	T Hose F 19mm Tap Plug(Female)	1
C	145 29.0160.20	Brass Float Valve 3/4BspM	1
D	-	Tank Lid	1
E	165 03304907	Elbow 3/8 90 deg MF Brass	1
F	165 SF-0920	Float Assembly without cable	1
G	165 03306206	Nipple - Hex 1/2 brass	2



120 BAR5027CG-HEJM

Maximum pressure (psi)	Maximum flow (L/min)	Engine	Power (hp)
5000	21	Honda GX690	22.1

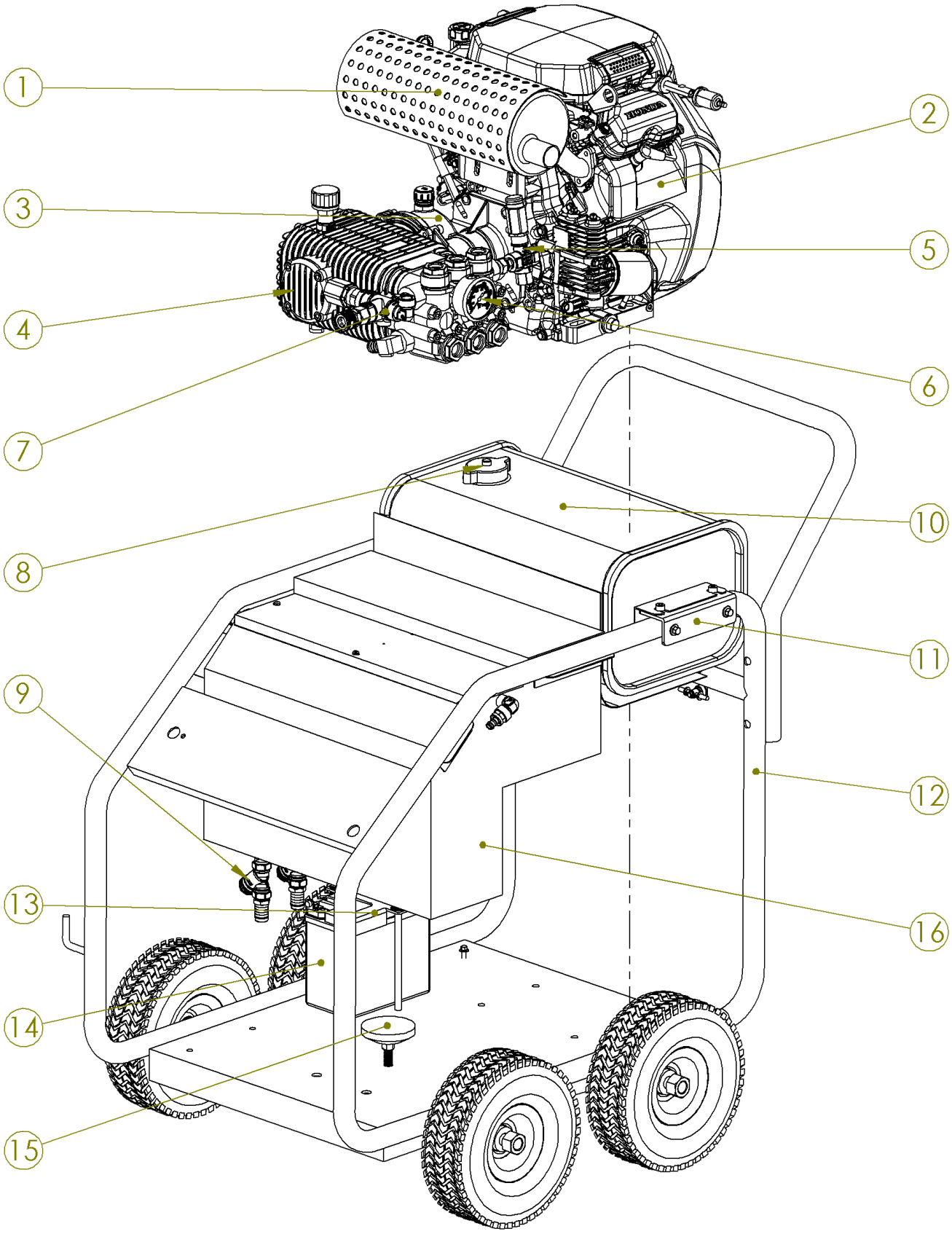


120 BAR5027CG-HEJM

Item No.	Part Number	Description	QTY
1	165 VHRC1	Right discharge Honda Muffler	1
2	165 GX690 RHTXF7	Honda Engine 27Hp	1
3	145 50.0071.00	Speed reduction Gearbox	1
4	210 TW5550S	Comet TW series Pump	1
5	145 60.0580.00	Safety Valve VS350	1
6	165 1615948B	Pressure Gauge	1
7	145 60.1800.00	Unloader Valve VB350	1
8	125 85.801.001	Y Strainer Water Inlet	2
9	125 85.601.035	Fuel cap	1
10	125 85.601.030	25L Fuel tank w/ heat shield	1
11	165 Fuel Tank bracket 38	Fuel tank mounting bracket	2
12	165 Frame JMP-L	Pressure washer Frame	1
13	125 85.804.044	Battery holder	1
14	165 Battery ETX16	Gel Battery 325CCA	1
15	165 2004 LVR801250S	Pump support A Justa foot	1
16	165 NR1 Grey	Vibration isolation mounts	5
17	165 Base Plate Honda	Vibration plate	1

120 BAR5027CG-HEJMT

Maximum pressure (psi)	Maximum flow (L/min)	Engine	Power (hp)
5000	21	Honda GX690	22.1

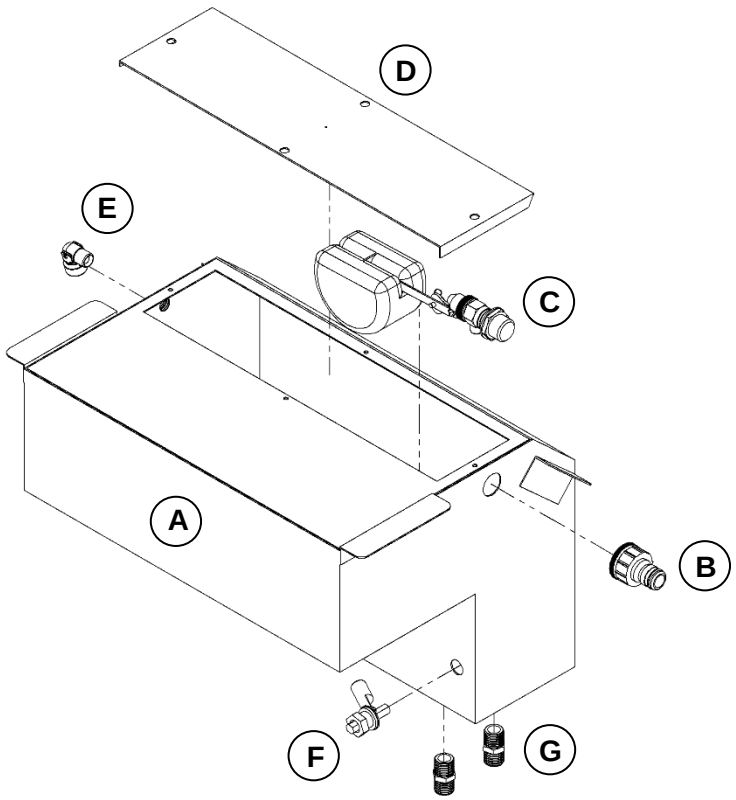


120 BAR5027CG-HEJMT

Item No.	Part Number	Description	QTY
1	165 VHRC1	Right discharge Honda Muffler	1
2	165 GX690 RHTXF7	Honda Engine 27Hp	1
3	145 50.0071.00	Speed reduction Gearbox	1
4	210 TW5550S	Comet TW series Pump	1
5	145 60.0580.00	Safety Valve VS350	1
6	165 1615948B	Pressure Gauge	1
7	145 60.1800.00	Unloader Valve VB350	1
8	125 85.601.035	Fuel cap	1
9	125 85.801.001	Y Strainer Water Inlet	2
10	125 85.601.030	25L Fuel tank w/ heat shield	1
11	165 Fuel Tank bracket 38	Fuel tank mounting bracket	2
12	165 Frame JM	Pressure washer Frame	1
13	125 85.804.044	Battery holder	1
14	165 Battery ETX16	Gel Battery 325CCA	1
15	165 2004 LVR801250S	Pump support A Justa foot	1
16	125 85.601.015 38L SS	Water tank 38L	1

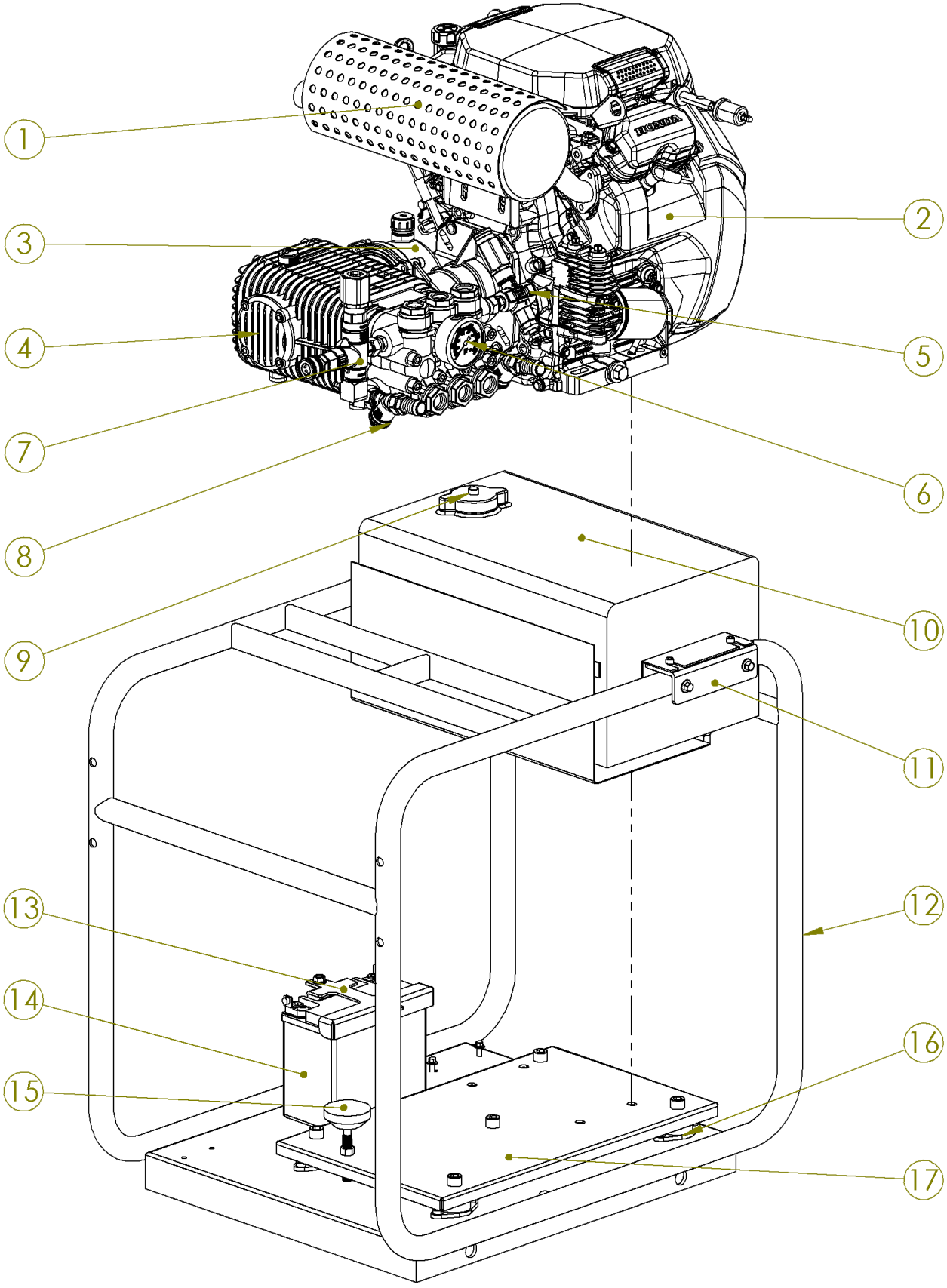
Water Tank Assembly

Item No.	Part Number	Description	QTY
A	125 85.601.015 38L SS	Water Tank 38L	1
B	165 950-5223	T Hose F 19mm Tap Plug(Female)	1
C	145 29.0160.20	Brass Float Valve 3/4BspM	1
D	-	Tank Lid	1
E	165 03304907	Elbow 3/8 90 deg MF Brass	1
F	165 SF-0920	Float Assembly without cable	1
G	165 03306206	Nipple - Hex 1/2 brass	2



120 BAR5027CG-HEP

Maximum pressure (psi)	Maximum flow (L/min)	Engine	Power (hp)
5000	21	Honda GX690	22.1



120 BAR5027CG-HEP

Item No.	Part Number	Description	QTY
1	165 VHLC1	Left discharge Honda Muffler	1
2	165 GX690 RHTXF7	Honda Engine 27Hp	1
3	145 50.0071.00	Speed reduction Gearbox	1
4	210 TW5550S	Comet TW series Pump	1
5	145 60.0580.00	Safety Valve VS350	1
6	165 1615948B	Pressure Gauge	1
7	145 60.1800.00	Unloader Valve VB350	1
8	125 85.801.001	Y Strainer Water Inlet	2
9	125 85.601.035	Fuel cap	1
10	125 85.601.030	25L Fuel tank w/ heat shield	1
11	165 Fuel Tank bracket 38	Fuel tank mounting bracket	2
12	165 Frame JMP-L	Pressure washer Frame	1
13	125 85.804.044	Battery holder	1
14	165 Battery ETX16	Gel Battery 325CCA	1
15	165 2004 LVR801250S	Pump support A Justa foot	1
16	165 NR1 Grey	Vibration isolation mounts	5
17	165 Base Plate Honda	Vibration plate	1

STORAGE

When storing your pressure cleaner unit for more than 30 days it is important to prepare the unit to avoid damage and ensure it runs smoothly when next used.

For engine preparation be sure to read engine manufacturers instructions, some general tips are below:

- Empty the fuel tank and mix a small amount of fresh fuel and a quality fuel stabiliser.
- Start and run the engine long enough to pull the new mix through the entire fuel system.
- Allow approx. 20mins for the stabiliser to dissolve any residues through the fuel system.
- Run engine until it is out of fuel and drain carburettor bowl.

Preparing the pump and accessories:

- Clean all dirt and grime from the unit and all accessories.
- Drain pump and all accessories of all water to avoid freezing or corrosion.

NOTICE
Freezing temperatures can cause serious damage to your pump
• DO NOT store pressure cleaner in cold temperatures without proper preparation. • DO NOT use pressure cleaner if there is a chance ice has formed inside pump or hose. • Always remove all held water from pump unit and accessories.

Hoses where possible, should be stored lying flat in a cool dry area.

Store unit indoors and/or under cover in a cool dry place. Use a suitable protective cover that will not retain moisture.

WARNING	
	Storage covers can be flammable.
• DO NOT place a cover over the pressure cleaner unit while hot. • Allow equipment to cool completely (for at least 30mins) before placing cover.	

MAINTENANCE

All commercially used machines need to be under a regular maintenance schedule to keep operating at their best. The maximum allowable interval for this maintenance is every six months or 100hrs, whichever comes first.

Maintenance should be performed by an approved and qualified technician, refer to the nearest authorised dealer for further information if required.

The maintenance should include the engine manufactures recommendations (see separate engine manual) as well as the following:

- Change pump and gearbox oil.
- Change engine oil, oil filter and/or fuel filter if required (see engine manual).
- Check and clean all water filters for foreign debris.
- Check unloader and safety valve for leaks.
- Check all link hoses around machine for leaks.
- Inspect condition and replace engine/gearbox drive keyway if needed.

When performing maintenance take the time to complete a formal inspection of all cleaning equipment including hoses, nozzles, guns and lances. Replace any damaged or defective components – See 'Equipment inspection' (Page 22).

Records

Date	Maintenance performed	Signed

TROUBLESHOOTING

The table below should be used to identify and correct any issues experienced with your HPWC.

If you are experiencing an issue that is not listed here or you have exhausted possible solutions in this table and are still experiencing the issue, visit the nearest authorised dealer or contact us on (02) 4577 2144.

Issue observed	Possible Cause	Solution
Failure to produce pressure, Erratic pressure, Chattering, Loss of pressure, Low water volume.	Low pressure spray tip installed.	Replace with high pressure spray tip.
	Water inlet is blocked.	Clear inlet.
	Inadequate water supply.	Provide adequate water flow.
	Inlet hose is kinked or leaking.	Straighten inlet hose. Replace if leaking.
	Clogged inlet hose screen.	Check and clean inlet hose screen.
	Water supply is over 100°F (38°C).	Provide cooler water supply.
	High pressure hose is blocked or leaking.	Clear blocks in outlet hose. Replace if leaking.
	Spray gun leaks.	Replace spray gun.
	Spray tip is obstructed.	Clean spray tip.
	Pump is faulty.	Contact the nearest authorised dealer.
No low pressure detergent delivery	Detergent siphoning tube is not submerged.	Fully submerge detergent siphoning tube into detergent.
	Detergent siphoning tube/filter is clogged or cracked.	Clean or replace filter/siphoning tube.
	High pressure spray nozzle installed.	Replace with low pressure spray tip.
Engine will not start ***Also see engine manual provided or your authorised service agent***	Throttle lever or on/off switch in OFF position.	Turn throttle lever to ON position.
	No fuel in engine.	Fill fuel tank or turn on fuel supply.
	Worn, fouled, or dirty spark plug.	Replace with factory recommended spark plug.
	Pressure build up in pump.	Squeeze trigger or open ball valve (refer to 'Start-up procedure').
	Spark plug cable not connected.	Connect cable to the spark plug.
	Over choked or flooded	Open choke fully, turn engine switch off, crank engine to clear excess fuel.
Engine lacks power	Dirty air filter.	Replace air filter.
Engine runs well at no load but bogs down under load	Engine speed is too slow.	Adjust throttle lever to full throttle.
Engine runs poorly	Low oil level.	Fill oil in crankcase to proper level.
	Stale fuel.	Drain fuel tank and fill with fresh fuel (consider using fuel system cleaner).
	Old, worn or incorrect spark plug.	Replace with recommended spark plug.
	Water contaminated fuel.	Drain fuel tank and fill with fresh fuel.
Engine spitts or flutters	Choke is opened too early.	After starting, move choke to halfway position until engine runs smoothly.
Engine shuts down during operation	Out of fuel.	Fill fuel tank.
	Low oil level.	Fill oil in crankcase to proper level.
	Low water in water tank.	Ensure water supply is enough to keep water tank full.

Issue observed	Possible Cause	Solution
Oil alert	Engine is not level.	Place unit on a level surface.
	Low oil level.	Fill oil to proper level or perform oil change.
Unit does not reach required operating pressure	Restricted or insufficient water supply.	Check supply hose isn't kinked, tap is fully open, filter not blocked.
	Unsuitable or worn nozzle.	Replace nozzle.
	Regulator set too low (for units with an adjustable unloader).	Reset unloader by turning knob (clockwise increases pressure).
	Inlet/delivery valves blocked.	Remove inlet/delivery valves and clean for debris.

TERMS & CONDITIONS

Prices

All prices are current at the date of issue and subject to change without notice. Unless otherwise stated, all quotations are valid for 7 days. All retail prices quoted are recommendations only. There is no obligation to comply with those recommendations.

Special Builds

Any item not specifically listed as a part number in the current catalogue is considered a "special build. Special builds are not eligible for return or deferment of delivery.

Payment

Payment terms are 30 days from the end of the month, unless otherwise stated in writing.

Return of goods

Goods eligible for return must be pre-approved, in writing, by BAR. Returned goods will be subject to a 15% restocking fee to cover administration costs, plus an additional amount estimated to be BAR's cost to return the goods to new, warehouse condition.

Shipping

All products from BAR are supplied ex-works our nearest warehouse. Where BAR agree to pay the freight for any shipment, this does not change the ex-works terms. We strongly recommend you undertake transit insurance for all shipments.

Warranty

The Trade Practices Act supersedes all warranty conditions detailed below. All products are warranted to be free from faulty materials and workmanship. This excludes fair wear and tear, improper installation or application, failure to carry out scheduled and reasonable maintenance or improper application.

Suitability for purpose

BAR makes no representation about the suitability of a product for a specific application. Our representations relate solely to the operating performances of the product (in isolation to the application).

Reservation of Title

The rights to, and full interest and title in the goods supplied remains with BAR and does not pass to you until the goods have been fully paid for.

NOTES

Please scan the QR code
to download manual here:

If you need assistance with the operation of your Pressure Cleaner please contact

02 4577 2144

sales@bargroup.com.au

October 2022