

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



Campbell Hausfeld Electric Powered Pressure Washers

REGISTER YOUR PRODUCT ONLINE NOW!

<http://www.campbellhausfeld.com>

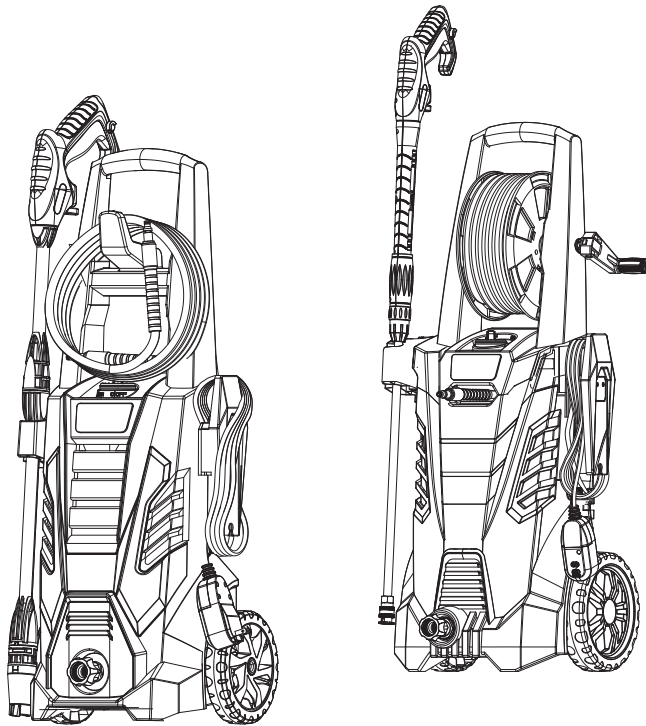


Figure 1 - Models PW190100 and PW190200

Description

These Campbell Hausfeld electric pressure washers are perfect for all around the home cleaning projects. The units operate quietly, efficiently and without fuel emissions. Each model features “instant start stop” (ISS) which shuts the motor off when the gun is not engaged. This conserves water and electricity, as well as extends the life of the pump.

The pressure washers are powered by a reliable universal motor and conveniently plug into household 120V – 15 Amp outlets. Both models are ETL approved to meet UL and ETL standards in the US and Canada.

READ & FOLLOW ALL INSTRUCTIONS

**SAVE THESE INSTRUCTIONS
DO NOT DISCARD**

Safety Guidelines

This manual contains information that is very important to know and understand. If you have any questions, please call 1-800-330-0712 for customer assistance. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

⚠ DANGER *Danger indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.*

⚠ WARNING *Warning indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.*

⚠ CAUTION *Caution indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.*

Specifications

Model	Pressure	Volt
PW190100	1900 psi / 13,100 kPa	120
PW190200	2000 psi/13,790 kPa	120

Please record Model Number and Serial Number for use when contacting the manufacturer:

Model No.: _____

Serial No.: _____

Purchase Date: _____

Purchase Place: _____

For information about this product, call 1-800-330-0712.

**REMINDER: Keep your dated proof of purchase for warranty purposes!
Attach it to this manual or file it for safekeeping.**

READ AND FOLLOW ALL INSTRUCTIONS • SAVE THESE INSTRUCTIONS • DO NOT DISCARD

Safety Guidelines (Continued)

NOTICE

Notice indicates important information, that if not followed, may cause damage to equipment.

NOTE: Information that requires special attention.

Safety Symbols

The following Safety Symbols appear throughout this manual to alert you to important safety hazards and precautions.



Read Manual First



Risk of Explosion



Risk of Fire



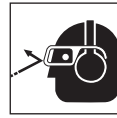
Risk of Electrocutation



Risk of Falling



Risk of Personal Injury



Wear Eye and Hearing Protection

⚠ WARNING

When using tools, basic precautions should always be followed, including the following:

CALIFORNIA PROPOSITION 65

⚠ WARNING

This product or its power cord may contain chemicals, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

⚠ WARNING

You can create dust when you cut, sand, drill or grind materials such as wood, paint, metal, concrete, cement, or other masonry. This dust often contains chemicals known to cause cancer, birth defects, or other reproductive harm. Wear protective gear.

GENERAL SAFETY

- To reduce the risks of electric shock, fire, and injury to persons, read all the instructions before using the tool. Failure to follow warnings, dangers, and cautions could result in **DEATH** or **SERIOUS INJURY**.
- Be thoroughly familiar with the controls and the proper use of the equipment. Follow all instructions. Contact your Campbell Hausfeld representative if you have any questions, 1 (800) 330-0712.
- Only persons well acquainted with these rules of safe operation should be allowed to use the unit.
- Follow all safety codes as well as the Occupational Safety and Health Act (OSHA).



WORK AREA

- Keep operation area clear of all persons.
- To reduce the risk of injury, close supervision is necessary when the product is used near children.
- Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. The tool is able to create sparks resulting in the ignition of the dust or fumes.

- NEVER spray flammable liquids or use pressure washer in areas containing combustible dust, liquids, or vapors.
- Never operate this machine in a closed building or in or near an explosive environment.



PERSONAL SAFETY

- Stay alert. Watch what you are doing and use common sense when operating the tool. Do not use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool increases the risk of injury to persons.
- Dress properly. Wear closed toe shoes (no flip flops.) Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair increases the risk of injury to persons as a result of being caught in moving parts.
- Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.



⚠ WARNING

Risk of injection or severe injury. Keep clear of nozzle. Do not discharge streams at persons. This product is to be used only by trained operators. Always remove lance from gun before cleaning debris from nozzle.



- Keep clear of nozzle. NEVER direct high pressure spray at a person, animal, or yourself.
- NEVER put hand or fingers over the spray nozzle while operating the unit.
- NEVER try to stop or deflect leaks with any body part.

⚠ WARNING

Ensuring that the tool is used only when the operator and all other personnel in the work area are wearing ANSI Z87 eye protection equipment, and when required, other appropriate protection equipment such as head, hearing protection, gloves, rubber boots, protective clothing when operating and performing maintenance. Serious eye or permanent hearing loss could result.



ELECTRICAL SAFETY

⚠ WARNING

Risk of electrocution:

- This product is provided with a ground fault circuit interrupter, GFCI, built into the power cord plug. Be sure to inspect cord and GFCI prior to use. Any repair or replacement of the power cord must be performed by a qualified (licensed or certified) electrical technician. If replacement of the plug or cord is needed, use only identical replacement parts.
- NEVER use an extension cord with this product.
- Inspect cord before using - Do not use if cord is damaged.
- Keep all electrical connections dry and off the ground.
- Do not touch plug with wet hands.
- Do not spray electrical apparatus and wiring.



Safety Guidelines (Continued)

TOOL USE AND CARE

▲ WARNING Do not use pressure that exceeds the operating pressure of any of the parts (hoses, fittings, etc.) in the pressurized system. Ensure all equipment and accessories are rated to withstand the maximum working pressure of the unit.

- a. Maintain the tool with care. A properly maintained tool reduces the risk of problems and is easier to control.
- b. Ensure safety devices are operating properly before each use. DO NOT remove or modify any part of the gun or unit.
- c. NEVER operate the machine without all components properly connected to the machine (handle, gun/wand assembly, nozzle, etc.).
- d. Point gun in safe direction. Unit will start spraying when trigger is squeezed if “On/Off” switch is in “ON” position.
- e. Know how to stop this product and bleed pressure quickly. Be thoroughly familiar with the controls.
- f. ALWAYS engage the trigger safety latch in the safe position when spraying is stopped even if only for a few moments.
- g. NEVER permanently engage the trigger mechanism on the gun.
- h. ALWAYS follow detergent manufacturer’s label recommendations for proper use of detergents. Always protect eyes, skin, and respiratory system from detergent use.
- i. NEVER disconnect the high pressure discharge hose from the machine while the system is pressurized. To depressurize machine, turn power and water supply off, then press the gun trigger 2-3 times.
- j. Unplug unit when not in use.
- k. Follow the maintenance instructions specified in the manual.

NOTICE

Equipment damage:

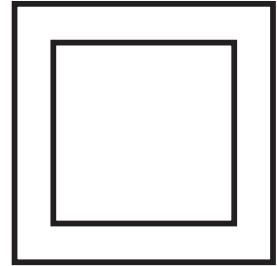
- l. ALWAYS turn water supply “ON” before turning pressure washer “ON.” Running pump dry causes serious damage.
- m. Do not operate the pressure washer with the inlet water screen removed. Keep screen clear of debris and sediment.
- n. NEVER operate pressure washer with broken or missing parts. Check equipment regularly and repair or replace worn or damaged parts immediately.
- o. Use only the lances supplied with this machine.
- p. NEVER leave the wand unattended while the machine is running.
- q. ALWAYS hold gun and wand firmly when starting and operating the machine.
- r. Release the trigger when changing from high to low pressure modes. Failure to do so could result in damage to the nozzle.
- s. NEVER store the pressure washer outdoors or where it could freeze. Freezing temperatures can seriously damage the pump.
- t. Pressure washer is not meant to pump hot water. Do not connect to hot water supply.

SERVICE

- a. When servicing a tool, use only identical replacement parts. Use only authorized parts.

Servicing of a Double-Insulated Appliance

In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means are provided for a double-insulated product, nor should grounding means be added to the product. Servicing a double-insulated product requires extreme care and knowledge of the system, and should be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the original parts. A double-insulated product is marked with the words “Double Insulation” or “Double Insulated.” Product may also be marked with symbol shown above.

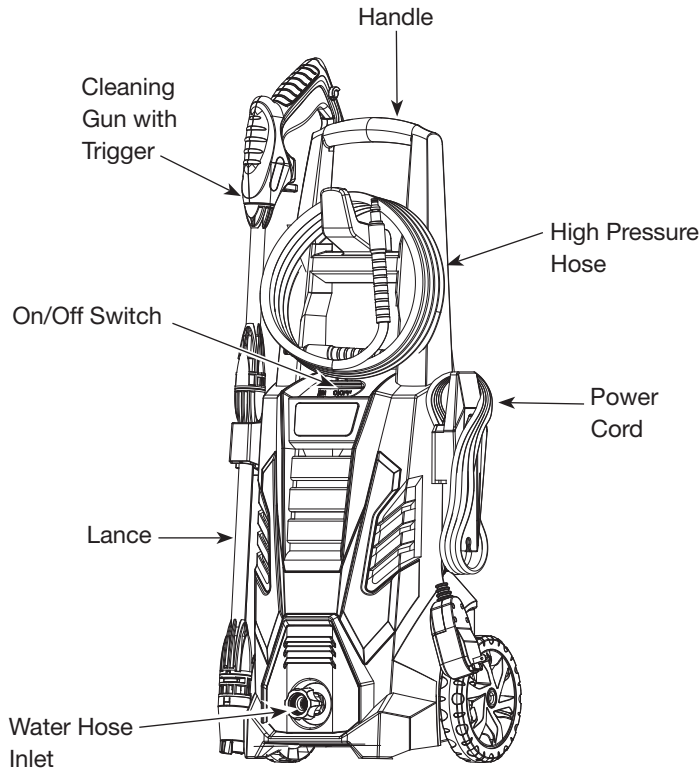


Double Insulated Symbol

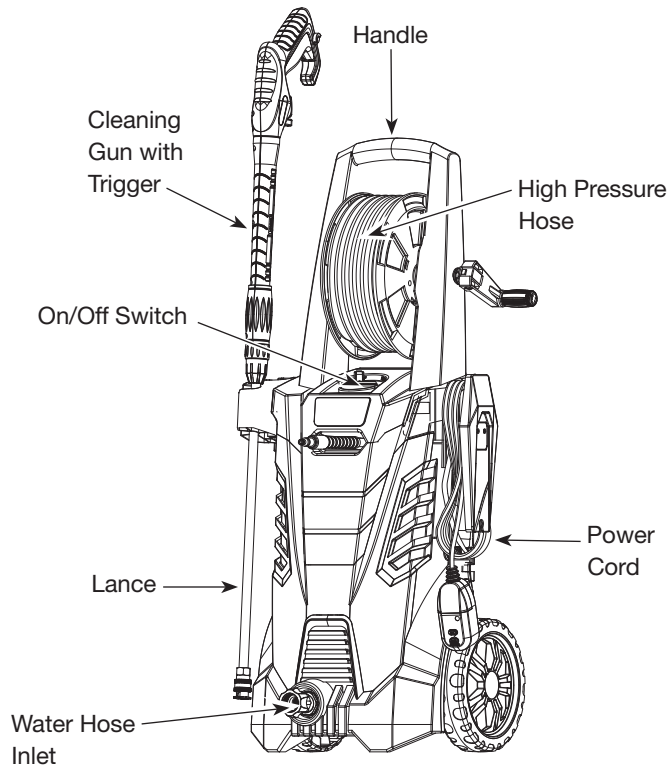
The **DANGER, WARNING, CAUTION, and NOTICE** notifications and instructions in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that caution is a factor which cannot be built into this product, but must be supplied by the operator.

**SAVE THESE INSTRUCTIONS
DO NOT DISCARD**

Unpacking



PW190100



PW190200

After unpacking the unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing or damaged parts. Make sure to tighten fittings, bolts, etc., before using the pressure washer. Check to be sure all supplied accessories are enclosed with the unit. If any parts are missing, **DO NOT RETURN THE UNIT TO THE RETAILER.** Know the unit's model number, serial number and date code (located on the back of the pressure washer) and call 1-800-330-0712 for replacement parts.

⚠ WARNING Do not operate the unit if it's damaged during shipping, handling, or use. Damage could result in bursting and cause injury or property damage.

RECOMMENDED USES FOR THIS PRESSURE WASHER

- ◆ Deck
- ◆ Siding
- ◆ Vehicles
- ◆ Gutters (with right angle nozzle)

ADDITIONAL ITEMS NOT INCLUDED

- ◆ ANSI Z87 Eye Protection
- ◆ Garden Hose

NOTE: For the PW190200 only - Hold on to the handle of the unit while unreeling the hose. This will prevent the unit from toppling over.

NOTE: Built-in detergent bottle to be used only when LP high flow nozzle is connected to lance for spraying

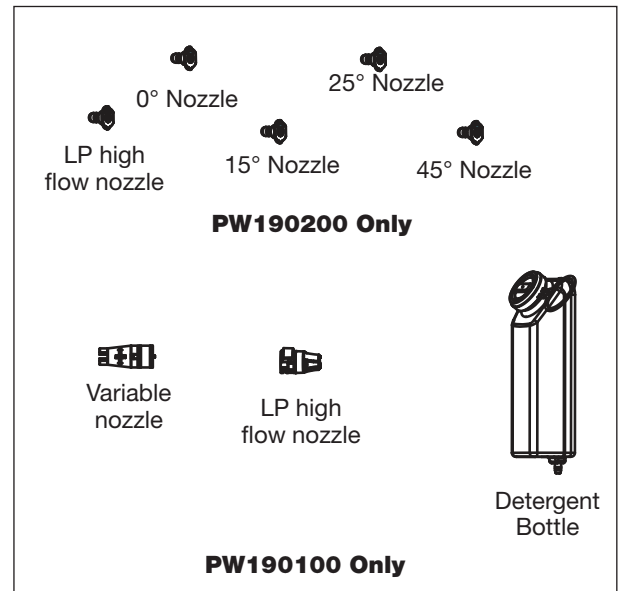


Figure 2 - Components of the Pressure Washer

Assembly and Preoperation

NOTICE

Always make sure that the garden hose is turned on before turning on the pressure washer. Running the pressure washer without water will damage the pumps seals.

NOTICE

Do not disassemble the lance or gun on this pressure washer. Replacement parts are not available for the gun or lance.

PW190100 & PW190200

1. Attach the storage hook (See Figure 3).
2. Attach the power cord hook (See Figure 4)
3. Attach the handle (1) onto unit with 2 phillips screws (See Figure 5).
4. Assemble the detergent bottle onto unit by inserting the outlet of bottle into the corresponding hole on the unit and then press the bottle onto the unit (See Figure 6).
5. Assemble the handle (3) onto unit by inserting the pin (4) to connecting rod (See Figure 7).
6. Attach high pressure hose to gun (See Figure 8).
7. Attach high pressure hose to high pressure outlet (See Figure 9).
8. Attach lance to gun, twist and lock. Attach nozzle to lance by pressing the Easy Connect button and inserting into Quick Connector on lance (See Figures 10 & 11) (PW190100 only).
9. Rotate the lance to gun. Insert the nozzle to quick connector on lance by pulling back the connector sleeve. (See Figures 12 & 13) (PW190200 only)
10. Attach garden hose to unit (See Figure 14).
11. Attach water inlet fitting (6) onto unit by using wrench (5). See Figure 15. (PW190200 only).
12. Press easy connect button while inserting quick connect fitting (See Figures 8, 9 & 11).

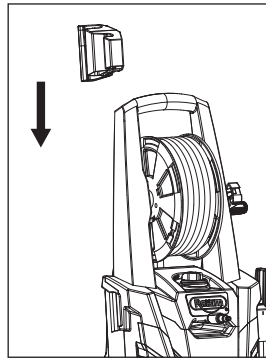


Figure 3 - Attach storage hook

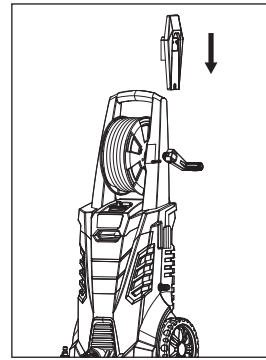


Figure 4 - Attach power cord hook

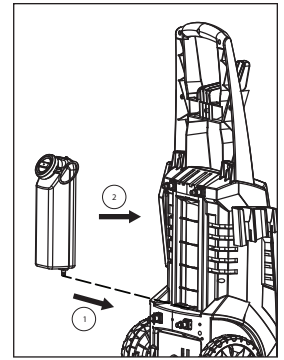


Figure 6 - Assemble the detergent bottle onto unit

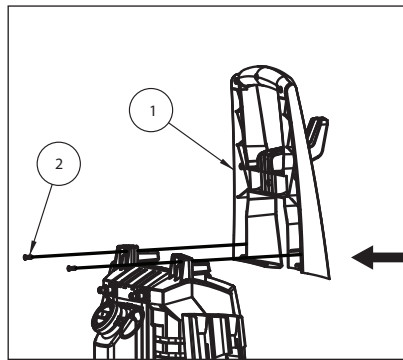


Figure 5 - Attach handle (PW190100 only)

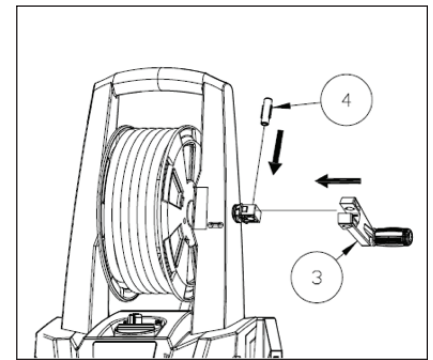


Figure 7 - Assemble the handle onto unit (PW190200 only)

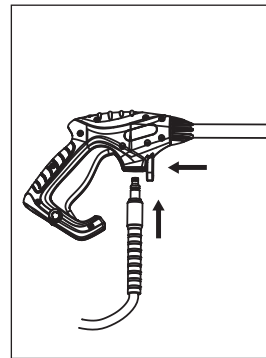


Figure 8 - Attach high pressure hose to gun

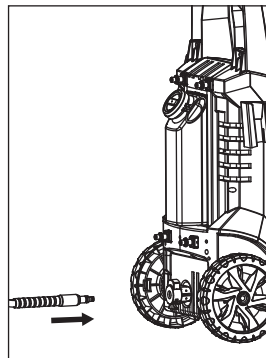


Figure 9 - Attach high pressure hose to high pressure outlet

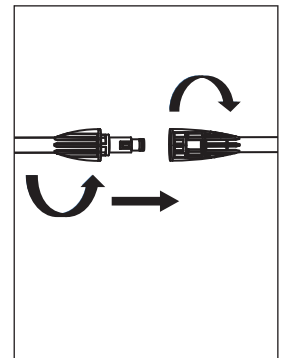


Figure 10 - Attach lance to gun

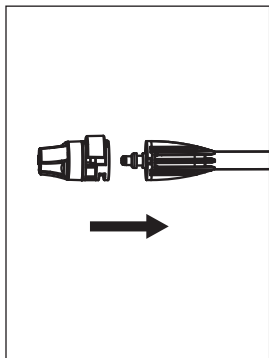


Figure 11 - Attach nozzle to lance (PW190100 only)

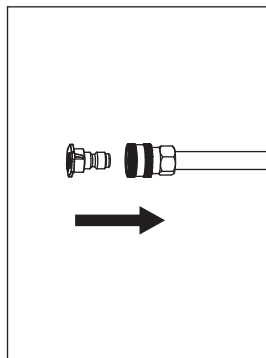


Figure 12 - Insert the nozzle to quick connector on lance (PW190200 only)

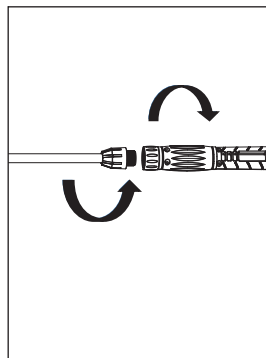


Figure 13 - Rotate the lance to gun

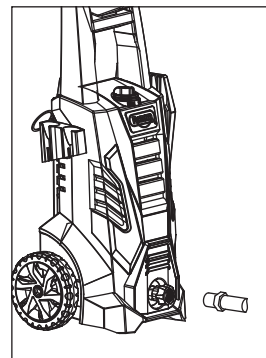


Figure 14 - Attach garden hose to unit

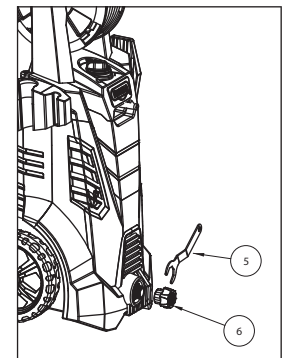


Figure 15 - Attach water inlet fitting onto unit (PW190200 only)

Assembly and Preoperation (Continued)

TRIGGER SAFETY LATCH

In the engaged position, the trigger safety latch prevents the gun from being triggered accidentally. Push the button in to engage it. (See Figure 16)

Always engage the trigger safety latch when the unit is not in use.

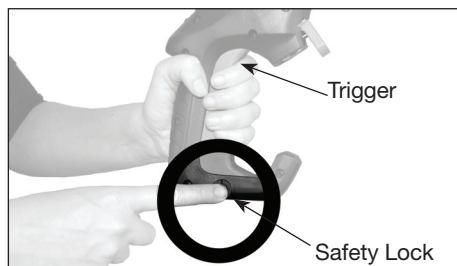


Figure 16 - Trigger safety latch

OPERATION

! IMPORTANT !

This pressure washer is equipped with a microswitch sensitive to water flow. This Instant Start/Stop switch (ISS) senses water flow in the pump. When the trigger is released, water stops flowing through the pump. The ISS then automatically turns the motor off to protect pump from overheating.

OPERATION

1. Turn on water.
2. Pull trigger on gun.
3. Turn the "ON/OFF" switch to "ON".
4. Release trigger. The pressure washer motor will stop running.
5. To spray again, pull trigger and motor and pump will restart.

NOTE: Occasionally the motor may run for a short time to bring fresh, cool water into the pump even if trigger is released. This is part of normal operation and will not damage the unit.

CAUTION Always turn the "ON/OFF" switch to "OFF" then trigger gun to release hose pressure before unplugging power cord.

CAUTION Risk of equipment damage. Always make sure the "ON/OFF" switch on the unit is "OFF" and unit is unplugged prior to storage.

WARNING Risk of Injection. Unit will start spraying when trigger is squeezed if ON/OFF switch is in "ON" position. Always point gun in safe direction.

SURFACE PREPARATION

The following cleaning procedure will help you organize your cleaning task and ensures that you will achieve the best results in the shortest amount of time. Gallons Per Minute (GPM), the more water per minute can mean faster cleaning, especially when washing off materials like mud and road tar. GROUND FAULT

CURRENT INTERRUPTER (GFCI) protects user from accidental electrocution (for electric powered pressure washers only). Remember to use the spraying / cleaning techniques mentioned in the following section.

Before starting a pressure washer cleaning job, prepare the surface you intend to clean. Clear furniture from the area and make sure that all windows and doors are closed tightly. Also, protect all plants and trees near the cleaning area with a drop cloth. A covering ensures that your plants won't be sprayed by the detergents.

START UP

ALWAYS use this start up procedure to ensure that the unit is started safely and properly.

NOTICE If water has frozen in the pressure washer, thaw the pressure washer in a warm room before starting. DO NOT pour hot water on or into the pump; internal parts will be damaged. Check for leaks.

1. Ensure that the power switch is in the "OFF" position.
2. Attach a garden hose to the inlet side of the pump and connect it to the water supply. Use a hose with an internal diameter (I.D.) of 5/8 in. (1.58 cm) and a length of 50 ft. (15 m) or less.

WARNING Some local plumbing codes require backflow prevention when connecting to a fresh water supply. Install a backflow preventer upstream from the pump if necessary.

- a. If inlet water pressure is over 100 psi, install a regulating water valve at the garden hose connection.
- b. Do not exceed 100° F (38° C) inlet water temperature.

NOTE: The inlet water supply must have a minimum flow rate of 5 gpm (19 lpm).

4. Turn the water supply ON.

NOTICE Never run the unit dry. Be sure the water supply is completely turned on before operating the unit.

5. Trigger the gun until water sprays from the nozzle indicating that all air is purged from the system. Set the trigger safety latch.
6. Plug the power cord into a grounded 120V outlet, that is on a dedicated circuit. Do not use extension cord. Press the reset button on the GFCI plug adapter. This must be done each time the unit is plugged into an outlet. (Figure 17)

SYSTEM CONNECTION

(See page 5 for Assembly Instructions)

1. Plug the power cord into a grounded 120V outlet.
2. Turn water on.
3. Unlock trigger lock by moving lock right to left.
4. Depress and hold the trigger on the gun for one minute to release pressure and remove any air trapped in the system.
5. Turn the "ON/OFF" switch to the "ON" position.

Operation (Continued)

INITIAL HIGH PRESSURE RINSE

Spray the cleaning surface with water to clear off any dirt or grime that may have collected on the surface. Doing so allows the detergent to attack the deep down dirt that has worked its way into the cleaning surface.

Trigger the gun 3 to 5 times to get any trapped air out of the system.

ADJUSTING THE SPRAY FAN ANGLE

1. The lance is affected by pressure during operation; therefore hold it firmly with both hands and point the nozzle toward the ground.
2. Activate by pulling the trigger of the gun/spray handle.
3. Adjust the distance to the cleaning surface, which will also adjust your pressure of the nozzle.
4. Spray pattern shape and intensity can be changed by twisting the spray adjuster at the end of the lance (See Figure 18, top and Figure 19 - PW190100 only) or by selecting different angle's nozzle (See Figure 18, bottom - PW190200 only). Keep hands clear of the front of the lance to prevent injury.

Pressure can also be adjusted by moving closer or further away from the cleaning surface and by adjusting the spray fan angle as shown.

ANGLE TO THE CLEANING SURFACE

When spraying water against a surface, you can generate maximum impact by striking the surface head on. However, this type of impact can cause dirt particles to embed in the surface and can prevent the desired cleaning action.

The optimum angle for spraying water against a cleaning surface is 45 degrees to efficiently remove debris. (Figure 20)

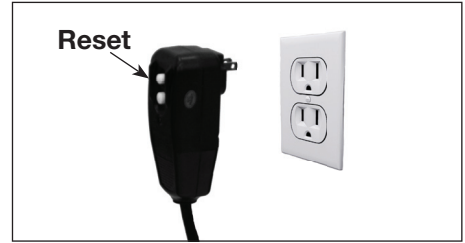


Figure 17 - Grounded plug/reset button

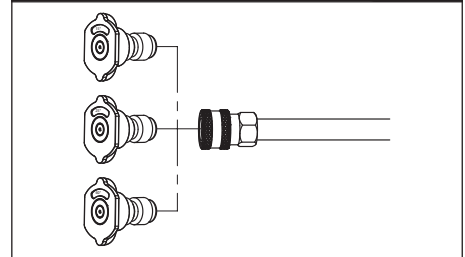
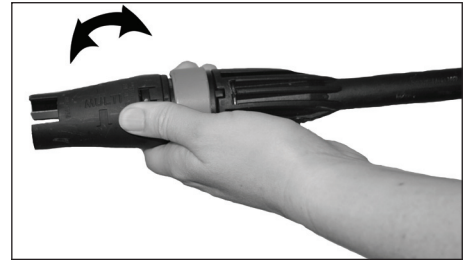


Figure 18 - Spray Adjust

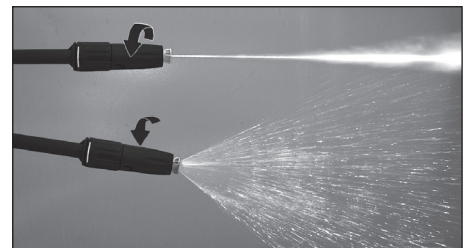


Figure 19 - Adjust spray pattern



Figure 20 - Optimum angle to cleaning surface

Operation (Continued)

Distance From Cleaning Surface

The distance between the spray nozzle and the cleaning surface is another factor that affects the impact force of the water. The impact force of the water increases as the nozzle is moved closer to the surface.

How to Avoid Damaging Surfaces

Damage to cleaning surfaces occurs because the impact force of the water exceeds the durability of the surface. You can vary the impact force by controlling the spray nozzle angle to the cleaning surface and the distance from the cleaning surface and by adjusting the spray nozzle. NEVER use a narrow high impact stream on a surface that is susceptible to damage. Avoid spraying windows with a narrow high impact stream. Doing so may break the window. The most sure way to avoid damaging surfaces is to follow these steps:

1. Place the spray nozzle approximately 4-5 feet (1,22-1,52 m) away from the cleaning surface. Then hold the lance and spray nozzle at a 45 degree angle to the cleaning surface. Trigger the gun.
2. Vary the fan pattern spray angle and the distance to the cleaning surface until optimum cleaning efficiency is achieved without damaging the surface.

DETERGENT APPLICATION

NOTE: Use only detergents formulated for pressure washers. Test detergent in an inconspicuous area before use. DO NOT use bleach in pressure washer.

Detergents

The use of detergents can dramatically reduce cleaning time and assist in the removal of difficult stains. Many detergents are customized for pressure washer use on specific cleaning tasks. Pressure washer detergents are as thick as water. Using thicker detergents – like dish detergent – will clog the chemical injection system and prevent the application of the detergent.

Once applied to a cleaning surface, detergents take time to break down dirt and grime. Detergents work best when applied at low pressure.

You can effectively clean surfaces by combining the chemical action of detergents with high pressure rinses. On vertical surfaces, apply the detergent starting at the bottom and work your way upward. This method prevents the detergent from sliding down and causing streaks. Begin high pressure rinsing at the top and work your way down to surface. On particularly tough stains, use a brush in combination with detergents and high pressure rinsing.

1. Follow manufacturer's label directions for mixing correct concentrations of detergent/detergents. The detergent to water ratio through the pump is approximately 10% (1 to 10).
- ◆ PW190100 & PW190200: Pour detergent into detergent container.

General Cleaning Tips

1. Apply the detergent so that it thoroughly covers the cleaning surface. Apply the detergent from bottom to top to prevent the detergent from sliding down and streaking. Wait a couple of minutes for the detergent to break down the dirt and grime. Use a brush to lightly scrub heavily soiled areas. Never allow the detergent to dry on the cleaning surface.
2. Rinse with high pressure.

CLEANING POWER

The easiest way to regulate the cleaning power of your pressure washer is by changing the distance from the surface you are cleaning. Begin spraying with a wide fan pattern while standing several feet from the surface. Slowly move closer to the object you are cleaning, adjusting the spray pattern as necessary, until you find the most effective cleaning technique.

FINAL RINSE

The final rinse should start at the top and work down to surface. Make sure that you thoroughly rinse the surface and that you remove all detergent.

PRESSURE RELIEF PROCEDURE

To reduce the risk of bodily injury or property damage, always follow this procedure whenever spraying is stopped, when work is completed, and before checking or repairing any part of the system.

1. Engage the trigger safety latch.
2. Turn the unit off.
3. Shut off the water supply.
4. Disengage the trigger safety latch and trigger the gun to relieve pressure.
5. Re-engage the trigger safety latch.
6. When checking or repairing unit, remove the wall outlet plug from the wall.
7. Before overnight storage, long term storage, or transporting unit, disconnect the water supply.

SHUTDOWN

1. Fully rinse detergent attachment with clean water.
2. Turn the motor OFF.
3. Turn the water supply OFF.
4. After the motor and water supply are turned off, trigger the gun to depressurize the system.

NOTICE NEVER turn the water supply off before turning the engine/motor off. Serious damage could occur to the pump and/or engine/motor.

CAUTION NEVER disconnect the high pressure discharge hose from the machine while the system is pressurized. To depressurize, turn engine/motor off, turn water supply off and squeeze gun trigger 2-3 times.

5. After each use, wipe all surfaces of the pressure washer with a clean, damp cloth.

Operation (Continued)

STORAGE

- Do not store the pressure washer outdoors.
- Do not store the pressure washer where it might freeze unless it has been properly winterized.

Winterizing Instructions

1. Disconnect the high pressure hose from the pump.
2. Insert a 12 inch to 14 inch piece of garden hose into the pump inlet.
3. Place a funnel in the other end of the garden hose.

NOTICE

Read the manufacturer's instructions for safe handling and disposal of RV antifreeze.

4. Pour approximately 6 oz. of RV antifreeze into the funnel.
5. Jog the On/Off Switch briefly until the RV antifreeze comes out of the pump outlet.
6. Disconnect the high pressure hose from the gun and drain the hose. Hold the gun and lance in a vertical position and squeeze the trigger to drain the water out.

NOZZLE CLEANING INSTRUCTIONS

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

To clean out the nozzle:

- Turn off unit.
- Turn off water supply. Relieve any pressure trapped in the hose by squeezing trigger 2-3 times.
- Separate lance from gun.
- Rotate nozzle to the narrow stream setting. This opens up the fan blades.
- Using the included nozzle cleaner, or an un-folded paper clip, insert wire into the nozzle hole and move back and forth until debris is dislodged (refer to Figure 21).
- Remove additional debris by back-flushing water through the nozzle. To do this, remove the lance from the gun, place end of a garden hose (with water running) nozzle to nozzle pushing water and debris out the back opening of the lance.

TIPS FOR EXTENDING THE LIFE OF YOUR PRESSURE WASHER

1. Never operate the unit without water.
2. Your pressure washer is not meant to pump hot water. Never connect your pressure washer to a hot water supply as it will significantly reduce the life of the pump.

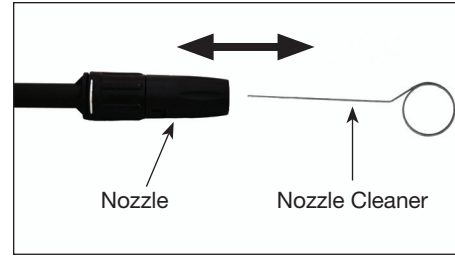


Figure 21

MAINTENANCE

Observe regular maintenance intervals to ensure maximum performance and life from the pressure washer. Refer to the schedule for recommended maintenance. If you operate the pressure washer in dusty conditions, perform maintenance checks more often.

MAINTENANCE SCHEDULE

Maintenance Schedule	Action needed
Daily	Check water inlet screen and filter.

TECHNICAL AND CONSUMER INFORMATION

Horizontal Oriented Pressure Washers	
Pump Detergent Suction	
Water to detergent ratio	10 to 1 (10% detergent)
Water Supply Requirements	
Minimum inlet pressure	20 psi
Maximum inlet pressure	100 psi
Maximum inlet temperature	100° F
Minimum inlet flow rate	5 gpm
Inlet garden hose size	5/8 in. I.D.
Maximum inlet garden hose length	50 ft

Troubleshooting Guide

SYMPTOM	CAUSE	SOLUTION
Low pressure and/or pump runs rough	<ol style="list-style-type: none"> 1. Worn nozzle 2. Inlet filter on pump clogged 3. Restricted inlet 4. Leaking high pressure hose 5. Pump drawing in air 	<ol style="list-style-type: none"> 1. Replace nozzle 2. Clean. Check more frequently 3. Check garden hose, may be collapsed or kinked. Check inlet water flow 4. Replace high pressure hose 5. Ensure hoses and fittings are tight
Strong surging at the inlet and low pressure	Foreign particles in the inlet or discharge valve or worn inlet and/or discharge valves	Call 1-800-330-0712
Fluctuating pressure	<ol style="list-style-type: none"> 1. Pump drawing in air 2. Nozzle clogged 	<ol style="list-style-type: none"> 1. Ensure hoses and fittings are tight. Purge air from garden hose 2. Clean or replace
Pressure drops after period of normal use	Nozzle worn	Check and replace
Pressure washer does not start up	<ol style="list-style-type: none"> 1. GFCI has tripped 2. Plug is not well connected or electric socket is faulty 3. Extension cord (see page 2 Electrical Safety section b) or wire size too small 4. Main voltage supply too low 5. Thermal safety switch has tripped 	<ol style="list-style-type: none"> 1. Push reset button on plug 2. Check plug, socket and fuses 3. Remove extension cord, product cannot be used with extension cord 4. Check that main supply voltage is adequate 5. Switch off unit and allow motor to cool down
Motor stops suddenly	<ol style="list-style-type: none"> 1. Extension cord (see page 2 Electrical Safety section b) or wire size too small 2. Thermal safety switch has tripped due to overheating 	<ol style="list-style-type: none"> 1. Remove extension cord, product cannot be used with extension cord 2. Check that main supply voltage corresponds to specifications
Unit begins to smoke	Overheated, overloaded or damaged motor	Turn off unit and call 1-800-330-0712
Pump noisy / pump runs rough	<ol style="list-style-type: none"> 1. Pump drawing in air/low water supply 2. Water too hot 	<ol style="list-style-type: none"> 1. Ensure fittings are tight. Increase water pressure 2. Reduce temperature below 100° F
Pressure washer will not spray detergent	Not using detergent dispenser	Change nozzle and detergent dispenser

Continued on next page

Troubleshooting Guide (Continued)

SYMPTOM	CAUSE	SOLUTION
Motor will not start	The gun trigger is not being pulled while starting	<ol style="list-style-type: none"> 1. Turn the water supply off. Disconnect the garden hose and the black high- pressure hose from the unit. This will relieve any pressure from the pump. 2. Plug the unit in to the electrical outlet. Make sure the unit is in the OFF position. 3. If your unit is equipped with a GFCI plug, push the top button, then the bottom button and then top button again. You should have a light showing on the small window above these buttons. If no red light is showing, you are not getting power to the unit. The unit can be taken to a service center for repair. 4. Hook the water supply back to the unit and turn the water on. Press the on button and see if it will start. If it does, shut the water and the unit off, attach the gun and hose and go to step 5. 5. With the unit in the OFF position, pull the trigger on the gun and make sure a small stream of water is coming out. Keep the trigger pressed while turning the unit ON.
Low pressure testing	Pump, gun or lance problem	<ol style="list-style-type: none"> 1. Remove the black high-pressure hose from the pressure washer. 2. Hook up the garden hose. 3. Turn on the water supply the water should flow through the pressure washer. 4. Turn on the pressure washer. The water should shoot 8-10 feet from the pump out of the pipe where the high-pressure hose hooks up. 5. If water does shoot 8-10 feet, then the pump is fine. If not, then the pump needs to be cleaned. Turn the water off to the pressure washer and call Technical Support at 1-800-330-0712 for further instructions. 6. If the pump is fine, then attach the black high-pressure hose to the pressure washer. Remove the nozzle from the lance. 7. Turn the water back on and trigger the gun. Water should shoot 10-20 feet from the gun. 8. If water does not shoot 10-20 feet from the gun, then the trigger valve in the gun is bad and the gun needs to be replaced. If it does shoot 10-20 feet, then the nozzle needs to be checked for clogs. See page 9 for Nozzle Cleaning Instructions.

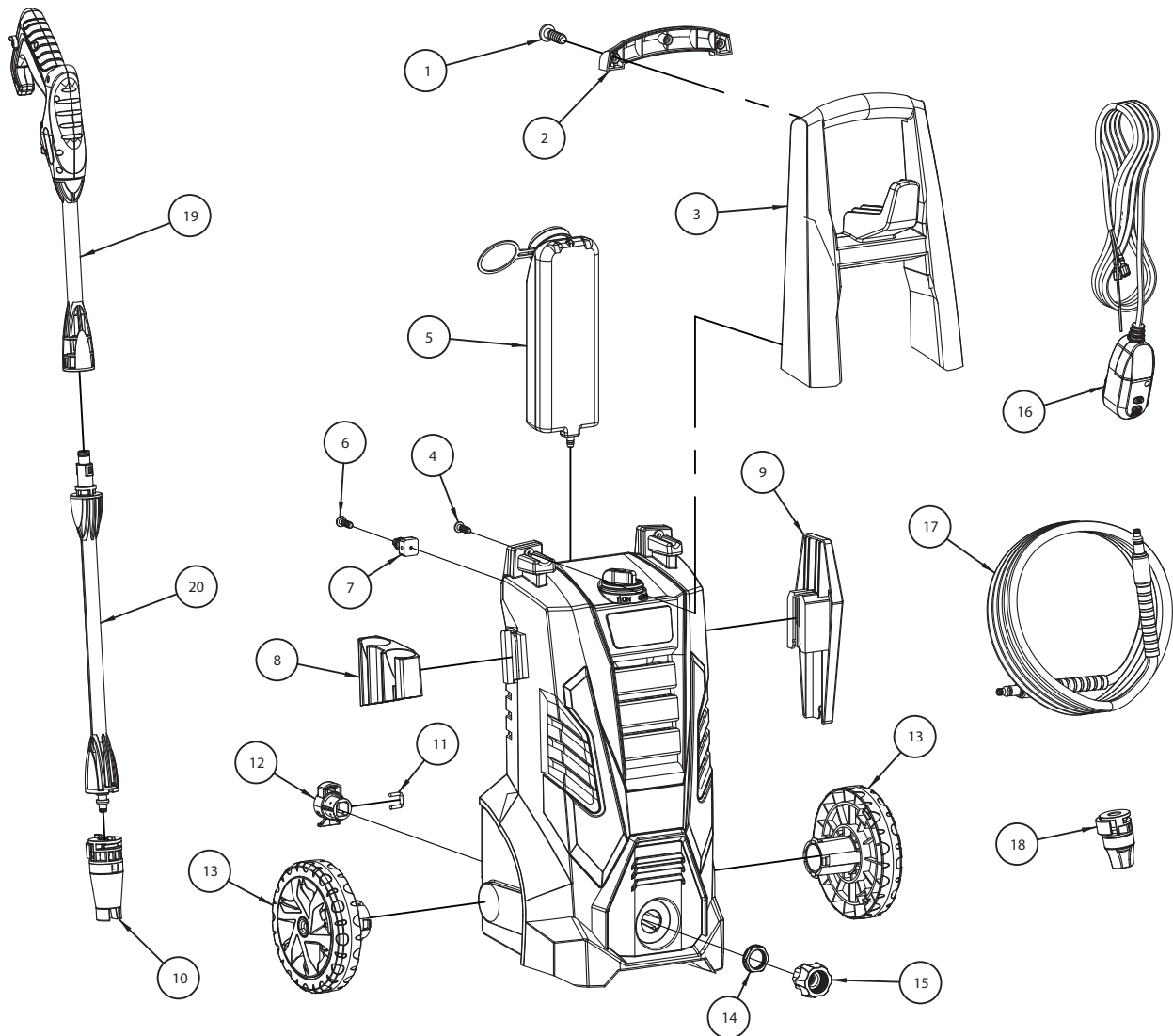
For Replacement Parts or Technical Assistance, Call 1-800-543-6400

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address any correspondence to:

Campbell Hausfeld
Attn: Customer Service
100 Production Drive
Harrison, OH 45030 U.S.A.



Replacement Parts List

Ref. No.	Description	Part Number	Qty.
1	SELF TAPPING SCREW	--	39
2	LONG HANDLE COVER	--	1
3	LONG HANDLE	--	1
4	SELF TAPPING SCREW	--	4
5	DETERGENT BOTTLE KIT	PW190154AV ▼	1
6	SELF TAPPING SCREW	■	4
7	CONNECTOR	■	4
8	GUN HOLDER	--	1
9	BRACKET FOR POWER CORD	--	1
10	ADJUSTABLE NOZZLE	PW083900AV ▶	1
11	U-PIN	●	1
12	OUTLET CONNECTOR ASSEMBLY	●	1
13	WHEEL KIT	--	2
14	INLET NUT	▲	1
15	GARDEN INLET FITTING WITH FILTER	▲	1
16	POWER CORD	--	1
17	HIGH PRESSURE HOSE	PW083700AV	1
18	LP HIGH FLOW NOZZLE	PW190150AV ▶	1
19	CLEANING GUN	PW083600AV	1
20	LANCE	PW083800AV	1
REPLACEMENT PARTS KITS			
▲	GARDEWN HOSE CONNECTION KIT	PW190151AV	
●	OUTLET CONNECTOR KIT	PW190152AV	
■	CONNECTOR KIT	PW190153AV	
▼	BOTTLE KIT	PW190154AV	
▶	NOZZLE KIT	PW190155AV	

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<http://www.campbellhausfeld.com>

Limited Warranty

1. **DURATION:** From the date of purchase by the original purchaser as follows: One Year.
2. **WHO GIVES THIS WARRANTY (WARRANTOR):** Campbell Hausfeld a Marmon/Berkshire Hathaway Company, 100 Production Drive, Harrison, Ohio 45030, Telephone: (800) 330-0712.
3. **WHO RECEIVES THIS WARRANTY (PURCHASER):** The original purchaser (other than for purposes of resale) of the Campbell Hausfeld pressure washer.
4. **WHAT PRODUCTS ARE COVERED UNDER THIS WARRANTY:** This PW190100/PW190200 Campbell Hausfeld Pressure Washer supplied
5. **WHAT IS COVERED UNDER THIS WARRANTY:** Substantial defects on material and workmanship which occur within the duration of the warranty period with the exceptions noted below. Warrantor will also cover normal wear items for a period of 90 days from the date of original purchase against defects in material and workmanship. These wear items include high pressure hoses, water and oil seals, o-rings, valves, lances, and spray nozzles.
6. **WHAT IS NOT COVERED UNDER THIS WARRANTY:**
 - A. Implied warranties, including those of merchantability and FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED FROM THE DATE OF ORIGINAL PURCHASE AS STATED IN THE DURATION. If this pressure washer is used for commercial, industrial or rental purposes, the warranty will apply for ninety (90) days from the date of purchase. Some States do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you.
 - B. ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF THE CAMPBELL HAUSFELD pressure washer. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
 - C. Any failure that results from shipping damage, accident, purchaser's abuse, neglect or failure to install and operate pressure washer in accordance with instructions provided in the owner's manual(s) supplied with product.
 - D. Pre-delivery service, e.g. assembly, oil or lubricants and adjustment.
 - E. Items or service normally required to maintain the pressure washer.
 - F. Gasoline engine and components are expressly excluded from coverage under this limited warranty. Such components should be returned by the purchaser to the original manufacturer or to its authorized repair stations for service.
 - G. Additional items not covered under the warranty:
 1. Motor brushes (Electric models only).
 2. Cosmetic defects that do not interfere with functionality.
 3. Rusted components.
 4. Pump wear or valve damage caused by using improper oil, oil contamination or by failure to follow proper oil maintenance guidelines.
7. **RESPONSIBILITIES OF WARRANTOR UNDER THIS WARRANTY:** Repair or replace, at Warrantor's option, pressure washer or component which is defective, has malfunctioned and/or failed to conform within duration of the warranty period.
8. **RESPONSIBILITIES OF PURCHASER UNDER THIS WARRANTY:**
 - A. Provide dated proof of purchase and maintenance records.
 - B. Call Campbell Hausfeld (800-330-0712) to obtain your warranty service options. Freight costs must be borne by the purchaser.
 - C. Use reasonable care in the operation and maintenance of the pressure washer as described in the owner's manual(s).
9. **WHEN WARRANTOR WILL PERFORM REPAIR OR REPLACEMENT UNDER THIS WARRANTY:** Repair or replacement will be scheduled and serviced according to the normal work flow at the servicing location, and depending on the availability of replacement parts.

This Limited Warranty applies in the U.S., Canada and Mexico only and gives you specific legal rights. You may also have other rights which vary from state to state or country to country.

REMINDER: Keep your dated proof of purchase for warranty purposes!
Attach it to this manual or file it for safekeeping.
