# PRESSURE WASHER OPERATION MANUAL

for model PWZC164000

## Record All Information and attach sales receipt here for future reference:

Purchase Date:_	
Serial #	

### Questions? 1-888-895-4549

Learn more about your pressure washer, get answers to frequently asked questions, and register on line at

www.powermate.com



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**IMPORTANT:** Please make certain that the person who is to use this equipment carefully reads and understands these instructions before operating.

### SAFETY GUIDELINES - DEFINITONS

SAVE ALL INSTRUCTIONS

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols below. Please read the manual and pay attention to these symbols.

$\Lambda$	ΠΔ	NG	FR

Indicates an imminently hazardous situation which, if not avoided , WILL result in DEATH OR SERIOUS INJURY.

### A WARNING

Indicates a potentially hazardous situation which, if not avoided, COULD result in DEATH OR SERIOUS INJURY.

### A CAUTION

Indicates a potentially hazardous situation which, if not avoided, MAY result in MINOR OR MODERATE INJURY.

### CAUTION

Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, MAY result in PROPERTY DAMAGE.

### CONSUMER SAFETY INFORMATION

SAVE ALL INSTRUCTIONS

This product may not be equipped with a spark arresting muffler. If the product is not equipped and will be used around flammable materials, or on land covered with materials such as agricultural crops, forest, brush, grass, or other similar items, then an approved spark arrester must be installed and is legally required by the state of California. It is a violation of California statutes section 130050 and/or sections 4442 and 4443 of California Public Resources Code, unless the engine is equipped with a spark arrester, as defined in section 4442, and maintained in effective working order. Spark arresters are also required on some U.S. Forest Service land and may also be legally required under other statutes and ordinances.

### **A WARNING** CALIFORNIA PROPOSITION 65 WARNING

This product contains chemicals known to the State of California to cause cancer, birth defects and/or reproductive harm.

### IMPORTANT SAFETY INFORMATION

SAVE ALL INSTRUCTIONS

WARNING
Do not operate this unit until you have read and understand this Operators Manual and the Engine Owners Manual for Safety, Operation, and Maintenance Instructions.

### READ AND SAVE THESE INSTRUCTIONS

### A DANGER RISK OF EXPLOSION FOR FIRE





WHAT CAN HAPPEN	HOW TO PREVENT IT
Spilled gasoline and it's vapors can become ignited from cigarette sparks, electrical arcing, exhaust gases and hot engine components such as the muffler.	Shut off engine and allow it to cool before adding fuel to the tank.     Use care in filling tank to avoid spilling fuel. Move pressure washer away from fueling area before starting engine.
Heat will expand fuel in the tank, which could result in spillage and poss ble fire explosion.	• Fill tank to ½" (12.7 mm) below bottom of filler neck to provide space for fuel expansion.
Operating the pressure washer in an explosive environment could result in a fire.	Operate and fuel equipment in well-ventilated areas free from obstructions.  Equip areas with fire extinguisher suitable for gasoline fires.
Materials placed against or near the pressure washer can interfere with its proper ventilation features causing overheating and possible ignition of the materials.	Never operate pressure washer in an area containing dry brush or weeds.
• Muffler exhaust heat can damage painted surfaces, melt any material sensitive to heat (such as siding, plastic, rubber, vinyl, or the pressure hose, itself), and damage live plants.	Always keep pressure washer a minimum of 4′ (1.2m) away from surfaces (such as houses, automobiles or live plants) that could be damaged form muffler exhaust heat.

### **IMPORTANT SAFETY INFORMATION (CONT.)**

• SAVE ALL INSTRUCTIONS

### DANGER RISK OF EXPLOSION FOR FIRE (CONT.)

WHAT CAN HAPPEN	HOW TO PREVENT IT
Improperly stored fuel could lead to accidental ignition. Fuel improperly secured could get into the hands of children or other unqualified persons.	Store fuel in an OSHA-approved container, in a secure location away from work area.
Use of acids, toxic or corrosive chemicals, poisons, insecticides, or any kind of flammable solvent with this product could result in serious injury or death.	Do not spray flammable liquids.

### A DANGER RISK TO BREATHING (ASPHYXIATION)



WHAT CAN HAPPEN	HOW TO PREVENT IT
Breathing exhaust fumes will cause serious injury or death! Engine exhaust contains carbon monoxide, an odorless and deadly gas.	<ul> <li>Operate pressure washer in a well-ventilated area. Avoid enclosed areas such as garages, basements, etc.</li> <li>Never operate unit in a location occupied by humans or animals.</li> </ul>
Some cleaning fluids contain substances which could cause injury to skin, eyes or lungs.	Use only cleaning fluids specifically recommended for high-pressure washers. Follow manufacturers recommendations. Do not use chlorine bleach or any other corrosive compound.

### DANGER RISK OF FLUID INJECTION AND LACERATION



WHAT CAN HAPPEN	HOW TO PREVENT IT
Your pressure washer operates at fluid pressures and velocities high enough to penetrate human and animal flesh, which could result in amputation or other serious injury. Leaks caused by loose fittings or worn or damaged hoses can result in injection injuries. DO NOT TREAT FLUID INJECTION AS A SIMPLE CUT! See a physician immediately!	<ul> <li>Inspect the high-pressure hose regularly. Replace the hose immediately if it is damaged, worn, has melted from contacting the engine, or shows any signs of cracking, bubbles, pinholes, or other leakage. Never grasp a high-pressure hose that is leaking or damaged.</li> <li>Never touch, grasp or attempt to cover a pinhole or similar water leak on the high-pressure hose. The stream of water IS under high pressure and WILL penetrate skin.</li> <li>Never place hands in front of nozzle.</li> <li>Direct spray away from self and others.</li> <li>Make sure hose and fittings are tightened and in good condition. Never hold onto the hose or fittings during operation.</li> <li>Do not allow hose to contact muffler.</li> <li>Never attach or remove wand or hose fittings while system is pressurized.</li> </ul>
• Injuries can result if system pressure is not reduced before attempting maintenance or disassembly.	To relieve system pressure, shut off engine, turn off water supply and pull gun trigger until water stops flowing. Use only hoses and accessories rated for pressure higher than your pressure washer's PSI.

### A DANGER RISK OF INJURY FROM SPRAY



WHAT CAN HAPPEN	HOW TO PREVENT IT
High-velocity fluid spray can cause objects to break, propelling particles at high speed.     Light or unsecured objects can become hazardous projectiles.	<ul> <li>Always wear ANSI-approved z87.1 safety glasses. Wear protective clothing to protect against accidental spraying.</li> <li>Never point wand at or spray people or animals.</li> <li>Always secure trigger lock when wand is not in service to prevent accidental operation.</li> <li>Never permanently secure trigger in pull-back (open) position.</li> </ul>

### **IMPORTANT SAFETY INFORMATION (CONT.)**

SAVE ALL INSTRUCTIONS

### ↑ DANGER RISK OF FLUID INJECTION AND LACERATION



WHAT CAN HAPPEN	HOW TO PREVENT IT
Unsafe operation of your pressure washer could lead to serious injury or death to you or others.	Do not use chlorine bleach or any other corrosive compound. Become familiar with the operation and controls of the pressure washer. Keep operating area clear of all persons, pets and obstacles. Do not operate the product when fatigued or under the influence of alcohol or drugs. Stay alert at all times. Never defect the safety features of this product. Do not operate machine with missing, broken or unauthorized parts. Never leave wand unattached while unit is running.
If proper starting procedure is not followed, engine can kickback causing serious hand arm injury.	If engine does not start after two pulls, squeeze trigger of gun to relieve pump pressure. Pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent hand or arm injury.
The spray gun/wand is a powerful cleaning tool that could look I ke a toy to a child.	Keep children away from the pressure washer at all times.
Reactive force of spray will cause gun/wand to kickback, and could cause the operator to slip or fall or misdirect the spray. Improper control of gun/wand can result in injuries to self and others.	<ul> <li>Do not overreach or stand on an unstable support.</li> <li>Do not use pressure washer while standing on a ladder.</li> <li>Grip gun/wand firmly with both hands. Expect the gun to kickback when triggered.</li> </ul>

### DANGER RISK OF INJURY OR PROPERTY DAMAGE WHEN TRANSPORTING **OR STORING**



WHAT CAN HAPPEN	HOW TO PREVENT IT
• Fuel or oil leak or spill could result in fire or breathing hazard. Serious injury or death can result. Fuel or oil leaks will damage carpet, paint or other surfaces in vehicles or trailers.	• If pressure washer is equipped with a fuel shut-off valve, turn the valve to OFF position before transporting to avoid fuel leaks. If pressure washer is not equipped with a fuel shut-off valve, drain the fuel from tank before transporting. Only transport fuel in an OSHA- approved container. Always place pressure washer on a protective mat when transporting to protect against damage to vehicle from leaks. Remove pressure washer from vehicle immediately upon arrival at your destination.

### A WARNING RISK OF HOT SURFACES



WHAT CAN HAPPEN	HOW TO PREVENT IT
Contact with hot surfaces, such as engines exhaust components, could	During operation, touch only the control surfaces of the pressure washer. Keep
result in serious burn.	children away from the pressure washer at all times. They may not be able to
	recognize the hazards of this product.

### A WARNING RISK OF CHEMICAL BURN



WHAT CAN HAPPEN	HOW TO PREVENT IT
Use of acids, toxic or corrosive chemical, poisons, insecticides, or any kind of flammable solvent with this product could result in serious injury or death.	•Do not use acids, gasoline, kerosene, or any other flammable materials in this product. Use only household detergents, cleaners and degreasers recommended for use in pressure washers.  • Wear protective clothing to protect eyes and skin from contact with spraying materials.

### **IMPORTANT SAFETY INFORMATION (CONT.)**

• SAVE ALL INSTRUCTIONS

WARNING RISK OF ELECTRICAL SHOCK



WHAT CAN HAPPEN	HOW TO PREVENT IT
Spray directed at electrical outlets or switches, or objects connected to an electrical circuit, could result in a fatal electric shock.	Unplug any electrically operated product before attempting to clean it. Direct spray away from electric outlets and switches.

WARNING RISK OF INJURY FROM LIFTING



WHAT CAN HAPPEN	HOW TO PREVENT IT
, , ,	•The pressure washer is too heavy to be lifted by one person. Obtain assistance from others before lifting.

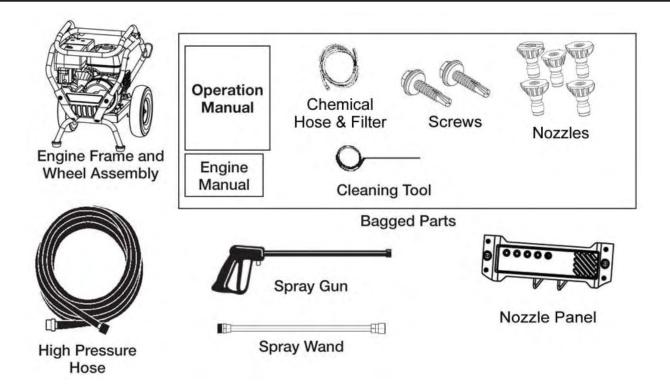
### **SPECIFICATIONS**

• SAVE ALL INSTRUCTIONS

<b>MODEL</b> PWZC164000	PUMP OIL CAPACITY 11 oz.
<b>OPERATING PSI</b> 4000	PUMP OIL TYPECommercial tractor fluid
OPERATING GPM 4.0	

### **CARTON CONTENTS**

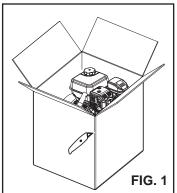
SAVE ALL INSTRUCTIONS

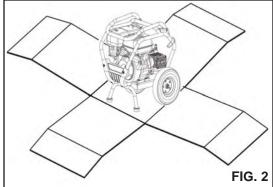


### **ASSEMBLY INSTRUCTIONS**

SAVE ALL INSTRUCTIONS

- 1. Locate and remove all loose parts from the carton. (Fig. 1)
- 2. Cut four corners of the carton from top and bottom and lay the panels flat. (Fig. 2)

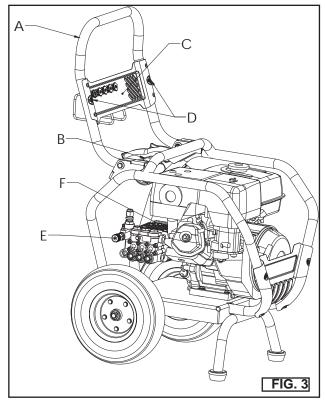


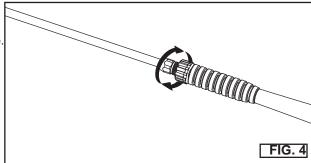


- 3. Rotate the handle (A) up away from the pressure washer until it stops, pull out the pin (B) and rotate the handle until it stops. Let go of the pin and move the handle slightly to lock in place.
- 4. Roll the unit off the carton and discard carton.
- 5. Attach the nozzle panel (C) to the handle (A) with the 2 screws (D) provided as shown in Fig. 3. Insert the 5 nozzle tips into the grommets on the panel.
- 6. Connect high-pressure hose to pump outlet (E). Tighten securely. (Fig. 3)
- 7. Connect wand to gun. Tighten securely. (Fig. 4)
- 8. Attach high-pressure hose to gun. Tighten securely. (Fig. 5)

**NOTE:** The pump on this unit is shipped with oil and a plug in the head that needs to be switched with the dipstick before operating the pressure washer for the first time.

Remove the plug (F) from the pump head and replace it with the dipstick supplied with the pump. To check and change oil, refer to the "Maintenance" section of this manual.







### **OPERATING INSTRUCTIONS**

SAVE ALL INSTRUCTIONS

Compare the illustrations with your unit to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.



# BASIC ELEMENTS OF A PRESSURE WASHER

High Pressure Pump: Increases the pressure of the water supply.

Engine: Drives the high-pressure pump.

**High Pressure Hose**: Carries the pressurized water from the pump to the gun and spray wand.

**Spray Gun**: Connects with spray wand to control water flow rate, direction, and pressure.

**Chemical Hose**: Feeds cleaning agents into the pump to mix with the water. See How To Apply Chemicals/Cleaning Solvents instructions in this section.

**Quick Connect Nozzles**: Allow the user to quickly and easily change the degree of spray to fit the job at hand.

### **BASIC ELEMENTS OF AN ENGINE**

Refer to the engine manual for location and operation of engine controls.

Choke Control: Opens and closes carburetor choke valve.

**Starter Grip**: Pulling starter grip operates recoil starter to crank engine.

Engine Switch: Enables and disables ignition system

### PRESSURE WASHER TERMINOLOGY

PSI: Pounds per Square Inch. The unit of measure for water pressure. Also used for air pressure, hydraulic pressure, etc.

**GPM:** Gallons Per Minute. The unit of measure for the flow rate of water.

CU: Cleaning Units. GPM multiplied by PSI. GPM x PSI = CU

Bypass Mode: Allows water to re-circulate within the pump when the gun trigger is not pulled.

CAUTION
Allowing the unit to run for more than two minutes without the gun trigger pulled could cause overheating and damage to the pump.

Chemical Injection System: Mixes cleaners or cleaning solvents with the water to improve cleaning effectiveness.

**Water Supply:** All pressure washers must have a source of water. The minimum requirements for a water supply are 20 PSI and 5 gallons per minute.

### **OPERATING INSTRUCTIONS (CONT.)**

SAVE ALL INSTRUCTIONS

### PRESSURE WASHER OPERATING FEATURES PRESSURE **ADJUSTMENTS**

The pressure setting is preset at the factory to achieve optimum pressure and cleaning. If you need a lower pressure, it can be accomplished by these methods.

- 1. Back away from the surface to be cleaned. The further away you are, the less the pressure will be on the surface to be cleaned.
- 2. Change to the 40° nozzle this nozzle delivers a less powerful stream of water and a wider spray pattern.

CAUTION DO NOT attempt to increase pump pressure. A higher pressure setting than the factory set pressure may damage pump.

### TO USE SPRAY WAND

The nozzles for the spray wand are stored on the top storage panel. See chart to choose the correct nozzle for the job to be performed.

### **CHANGING NOZZLES ON SPRAY WAND**

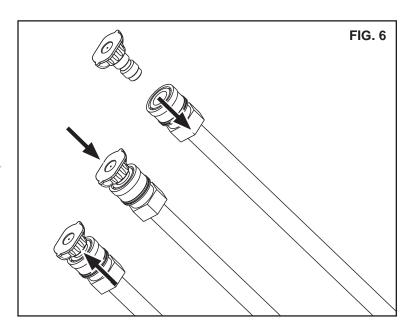
DANGER RISK OF FLUID INJECTION. DO NOT

direct discharge stream toward persons, unprotected skin, eyes or any pets or animals. Serious injury will occur.

MARNING RISK OF FLUID INJECTION. DO NOT

attempt to change nozzles while pressure washer is running. Turn engine off before changing nozzles.

- 1. Pull back the guick connect collar on the spray wand and hold it in
- 2. Insert the desired quick connect nozzle and hold in place.
- 3. Slide the quick connect collar forward until it locks into place.
- 4. Check that the quick connect nozzle is securely locked into the spray wand.



	0°	15°	25°	40°	Soap
Spray Pattern					
Uses	Powerful pinpoint for very intensive cleaning	Intense clean- ing of small areas	Intense clean- ing of medium areas	Intense cleaning of larger areas	Applies clean- ing solutions
Surfaces*	Metal or concrete DO NOT use on wood	Metal, concrete, or wood	Metal, concrete, or wood	Metal, concrete, or wood	Metal, concrete, or vinyl

The high pressure spray from your pressure washer is capable of causing damage to surfaces such as wood, glass, automotive paint, auto striping and trim, and delicate objects such as flowers and shrubs. Before spraying, check the item to be cleaned to assure yourself that it is strong enough to resist damage from the force of the spray.

### **OPERATING INSTRUCTIONS (CONT.)**

SAVE ALL INSTRUCTIONS

# HOW TO APPLY CHEMICALS AND CLEANING SOLVENTS

Applying chemicals or cleaning solvents is a low pressure operation.

**NOTE:** Use only soaps and chemicals designed for pressure washer use. DO NOT USE BLEACH.

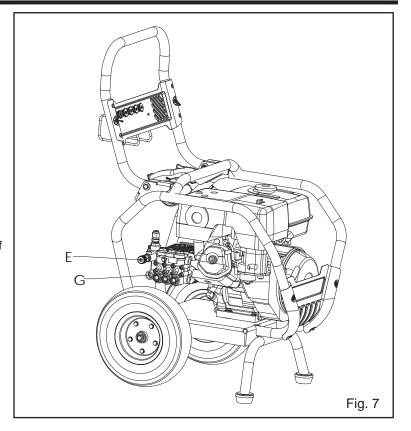
### To Apply Chemicals:

- 1. Make sure the chemical hose is pressed onto the barbed fitting (G) located near high-pressure hose (E). (Fig. 7)
- The other end of the chemical hose should be inserted into a chemical container containing the appropriate pressure washer cleaning solution.

**NOTE:** For approximately every 7 gallons of water pumped 1 gallon of chemical/cleaning solution will be used.

3. Insert soap nozzle (per previous chart) into spray wand, see Use Spray Wand paragraph in this section.

**NOTE:** Chemicals and soaps will not siphon when using any quick connect nozzle other than the black soap nozzle.



WARNING
To reduce the risk of injury, read the pressure washer instruction manual and the engine instruction manual before starting pressure washer.

DANGER RISK OF FLUID INJECTION AND LACERATION. When using the high-pressure setting, DO NOT allow the high-pressure spray to come in contact with unprotected skin, eyes, or with any pets or animals. Serious injury will occur.

• Your washer operates at fluid pressures and velocities high enough to penetrate human and animal flesh, which could result in amputation or other serious injury. Leaks caused by loose fittings or worn or damaged hoses can result in injection injuries. DO NOT TREAT FLUID INJECTION AS A SIMPLE CUT! See a physician immediately!

WARNING RISK OF FIRE, ASPHYXIATION AND BURN. NEVER fill fuel tank when engine is running or hot. Do not smoke when filling fuel tank.

- NEVER fill fuel tank completely. Fill tank to 1/2" below bottom of filler neck to provide space for fuel expansion. Wipe any fuel spillage from engine and equipment before starting engine.
- NEVER run engine in doors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
- DO NOT let hoses come in contact with very hot engine muffler during or immediately after use of your pressure washer. Damage to hoses from contact with hot engine surfaces will NOT be covered by warranty.

CAUTION
RISK OF PROPERTY DAMAGE. NEVER pull water supply hose to move pressure washer. This could damage hose and/ or pump inlet.

- DO NOT use hot water, use cold water only.
- NEVER turn water supply off while pressure washer engine is running or damage to pump will result.
- DO NOT stop spraying water for more than two minutes at a time. Pump operates in bypass mode when spray gun trigger is not pressed. If pump is left in bypass mode for more than two minutes internal components of the pump can be damaged.

If you do not understand these precautions, please call 1-888-895-4549 to speak to a service representative for further instructions

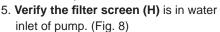
### **OPERATING INSTRUCTIONS (CONT.)**

SAVE ALL INSTRUCTIONS

### **STARTING**

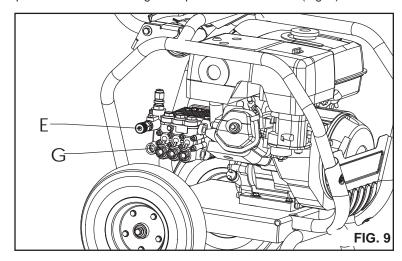
Prior to starting, refer to your engine manual for proper starting procedure.

- In a well ventilated outdoor area add fresh, high quality, unleaded gasoline with a pump octane rating of 86 or higher. Do not overfill.
   Wipe up spilled fuel before starting the engine. Refer to Engine Owners Manual for correct procedure.
- Check engine oil level. See Engine Owners Manual for correct procedure.
- 3 Check pump oil level. See "Maintenance" section in this manual.
- 4. Connect the water hose to the water source. Turn the water source on to remove all air from the hose. When a steady stream of water is present, turn the water source off.



NOTE: Cone side faces out.

6. **Connect** water source to pump inlet (G). **NOTE:** Water source must provide a minimum of 5 gallons per minute at 20 PSI. (Fig. 9)



To reduce the possibility of contamination always protect against back flow when connected to a portable water system.

- 7. **Connect** high pressure hose to pump outlet (E).
- 8. **If applying a chemical or cleaning solution**, see How To Apply Chemicals/Cleaning Solvents instructions in this section.

- Insert the quick connect nozzle for the task being performed.See How To Use Wand instructions in this section.
- 10. Turn water source on.

CAUTION
RISK OF PROPERTY DAMAGE. Failure to do so could cause damage to the pump.

- 11. Remove all air from the pump and high pressure hose by depressing trigger until a steady stream of water is present.
- 12. Start engine. See Engine Owners Manual for correct procedure.

WARNING
RISK OF UNSAFE OPERATION. If engine does not start after two pulls, squeeze trigger of gun to relieve pump pressure. Pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent hand or arm injury.

13. Depress trigger on gun to start water flow.

WARNING RISK OF UNSAFE OPERATION. Stand on a stable surface and grip gun/spray wand firmly with both hands. Expect the gun to kick when triggered.

14. **Release trigger** to stop water flow.

DANGER RISK OF
INJURY FROM SPRAY. Always
engage the trigger lock when gun
is not in use. Failure to do so could
cause accidental spraying.



### SHUTTING DOWN

1. **After each use**, if you have applied chemicals, draw clean water through chemical injection system to rinse system thoroughly.

CAUTION RISK OF PROPERTY DAMAGE. Failure to do so could cause damage to the pump.

2. Turn engine off. See Engine Owner's Manual.

RISK OF PROPERTY DAMAGE. NEVER turn the water off with the engine running.

- 3. Turn water source off.
- 4. **Pull trigger on spray gun** to relieve any water pressure in hose or spray gun.
- 5. See Storage section in this manual for proper storage procedures.

### **MAINTENANCE**

SAVE ALL INSTRUCTIONS

RISK OF BURN HAZARD. When performing maintenance, you may be exposed to hot surfaces, water pressure or moving parts that can cause serious injury or death.

RISK OF FIRE HAZARD. Always disconnect, spark plug wire, let the engine cool and release all water pressure before performing any maintenance or repair. The engine contains flammable fuel. Do not smoke or work near open flames while performing maintenance.

To ensure efficient operation and longer life of your pressure washer, a routine maintenance schedule should be prepared and followed. If the pressure washer is used in unusual conditions, such as high-temperatures or dusty conditions, more frequent maintenance checks will be required.

### **ENGINE**

Consult the Engine Owners Manual for the manufacturer's recommendations for any and all maintenance.

### **PUMP**

The pump on this unit requires oil. The recommended oil type to use is Commercial Tractor Fluid (Tractor Hydraulic Fluid). Pump oil capacity is 11 oz.

To check the oil, remove the dipstick located on top of the pump. The oil level should be between the max and min lines. Make sure the oil does not go below the min line.

To add oil, remove the dipstick and add oil unitl it is between the max and min line. Replace dipstick. If there is a problem with the pump, contact an Authorized Service Center.

# - Max.

### **NOZZLE CLEANING**

If the nozzle becomes clogged with foreign materials, such as dirt, excessive pressure may develop. If the nozzle becomes partially clogged or restricted, the pump pressure will pulsate. Clean the nozzle immediately using the nozzle kit supplied and the following instructions:

- 1. Shut off the pressure washer and turn off the water supply.
- 2. Pull trigger on gun handle to relieve any water pressure.
- 3. Remove quick connect nozzle from the spray wand.
- 4. Remove any obstructions from the quick connect nozzle with the nozzle cleaning tool provided and flush with clean water.
- 5. Re-attach the quick connect nozzle to the spray wand and turn on the water supply.
- 6. Start pressure washer and test.

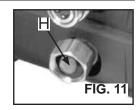
# HOW TO CLEAN THE WATER INLET FILTER

This screen filter should be checked periodically and cleaned if necessary.

1. **Remove filter** by grasping end and removing it from water inlet of pump as shown. (Fig. 11)

- 2. **Clean filter** by flushing it with water on both sides.
- 3. **Re-insert filter** into water inlet of pump. **NOTE:** Cone side faces out.

**NOTE:** Do not operate pressure washer without filter properly installed.



### **STORAGE**

• SAVE ALL INSTRUCTIONS

### **ENGINE**

Consult the Engine Owners Manual for the manufacturer's recommendations for storage.

### **PUMP**

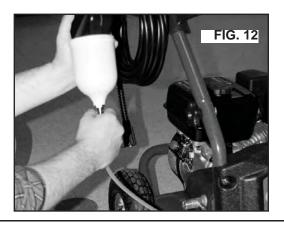
The manufacturer recommends using a pump protector/winterizer when storing the unit for more than 30 days and/or when freezing temperatures are expected. If a pump protector/winterizer is not available, RV antifreeze or windshield washer fluid needs to be run through the pump as outlined in the steps below.

**NOTE:** Using a pump protector/ winterizer, RV antifreeze or windshield washer fluid is to provide proper lubrication to the internal seals of the pump regardless of temperature or environment.

1. Obtain a funnel, 6 oz. of RV antifreeze or windshield washer fluid, and 16–36" of garden hose with a male hose connector attached to one end.

RISK OF PROPERTY DAMAGE. Use only RV antifreeze. Any other antifreeze is corrosive and can damage pump.

- 2. Disconnect spark plug wire.
- 3. Connect length of garden hose to water inlet of pump.
- 4. **Add RV antifreeze** or windshield washer fluid to hose as shown. (Fig. 12)
- Pull engine starter rope slowly several times until antifreeze/ washer fluid comes out of high-pressure hose connection of pump.
- 6. Remove garden hose from water inlet of pump.
- 7. Reconnect spark plug wire.



### TROUBLESHOOTING GUIDE

• SAVE ALL INSTRUCTIONS

Problem	Cause	Correction
Engine will not start (see Engine	1. No fuel	1. Add fuel.
Manual for further engine trouble-	2. Pressure builds up after two pulls on the recoil starter	2. Squeeze gun trigger to relieve pressure.
shooting)	or after initial use.	
	3. Choke lever in the "No Choke" position.	3. Move choke to the "Choke" position.
	4. Spark plug wire not attached.	4. Attach spark plug wire.
	5. Engine ON/OFF switch in OFF position.	5. Place engine ON/OFF switch in ON position.
	6. Choke lever in the "Choke" position on a "hot" engine	6. Move choke to the "No Choke" position.
	or an engine that has been exposed to thermal heat for	
	a long period of time.	
No or low pressure (initial use)	High pressure nozzle is not installed.	See How to Use Spray Wand instructions in the Operation
		Section.
	2. Low water supply.	2. Water supply must be at least 5 GPM @ 20 PSI.
	3. Leak at high pressure hose fitting.	3. Repair leak. Apply sealant tape if necessary.
	4. Nozzle obstructed.	4. See Nozzle Cleaning instructions in the Maintenance sec-
		tion.
	5. Water filter screen clogged.	5. Remove and clean filter.
	6. Air in hose.	6. Turn off the engine, then the water source. Disconnect
		the water source from the pump inlet and turn the water
		source on to remove all air from hose. When there is a
		steady stream of water present, turn water source off. Re-
		connect water source to pump inlet and turn on water source.
		Squeeze trigger to remove remaining water.
		7. Move choke to the "No Choke" position.
	7. Choke lever in the "Choke" position.	8. Use high pressure hose under 100 feet.
	8. High pressure hose is too long.	
Will not draw chemicals	Low pressure soap nozzle not installed.	See How to Use Spray Wand paragraph in the Operation Section.
	2. Chemical filter clogged.	2. Clean filter.
	3. Chemical screen not in cleaning solution.	Make sure end of chemical hose is fully submerged into
	3. Chemical screen not in cleaning solution.	cleaning solution.
	4. Chemical too thick.	4. Dilute chemical. Chemical should be in the same consis-
	4. Offermedition thick.	tency as water.
	5. Pressure hose too long.	Lengthen water supply hose instead of high pressure
	o. 1 recours need too long.	hose.
	6. Chemical build up in chemical injector.	6. Have parts cleaned or replaced by AWSC.
No or low pressure (after period of	Worn seal or packing.	Have replaced by AWSC.
normal use)	2. Worn or obstructed valves.	2. Have replaced by AWSC.
·	3. Worn unloader piston.	3. Have replaced by AWSC.
Water leaking at gun/spray wand	1. Worn or broken O-ring.	Check and replace.
connection	2. Loose hose connection.	2. Tighten.
Water leaking at pump	1. Loose connections.	1. Tighten.
3 T	Piston packing worn.	2. Have replaced by AWSC.
	3. Worn or broken O-rings.	3. Have replaced by AWSC.
	4. Pump head or tubes damaged from freezing.	4. Have replaced by AWSC.
Pump Pulsates	1. Nozzle obstructed.	See Nozzle Cleaning paragraph in the Maintenance sec-
rump ruisales	1. NOZZIE ODSTRUCIEU.	tion for the correct procedure.
AWSC - Authorized Warranty Service	<u> </u>	I normal the correct procedure.

**AWSC**= Authorized Warranty Service Center

### **REPAIRS**

• SAVE ALL INSTRUCTIONS

To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment should be performed by an Authorized Warranty Service Center. Always use identical replacement parts. For the location of the nearest Authorized Warranty Service Center call 1-888-895-4549 or visit our website www.powermate.com.

### LIMITED WARRANTY

SAVE ALL INSTRUCTIONS

### WARRANTY COVERAGE: MAT Industries, LLC (the Company)

Warrants to the original retail customer in North America that it will repair or replace, free of charge, any parts found by the Company or its authorized service representative to be defective in material or workmanship. This warranty covers the cost of replacement parts and labor for defects in material or workmanship.

### **NOT COVERED**

- Transportation charges for sending the product to the Company or its authorized service representative for warranty service, or for shipping repaired or replacement products back to the customer; these charges must be borne by the customer.
- Engine may be covered exclusively by a separate warranty from the engine manufacturer as set forth in the engine Manual (if included).
- · Damages caused by abuse or accident, and the effects of corrosion, erosion and normal wear and tear.
- · Warranty is void if the customer fails to maintain and operate the product as instructed and recommended by the Company in the owner's manual.
- · Warranty applies only if the product is used solely for consumer applications, and does not apply if the product is used for commercial or business applications, or as rental equipment.
- The Company will not pay for repairs or adjustments to the product, or for any costs or labor, performed without the Company's prior authorization.

### **WARRANTY PERIOD**

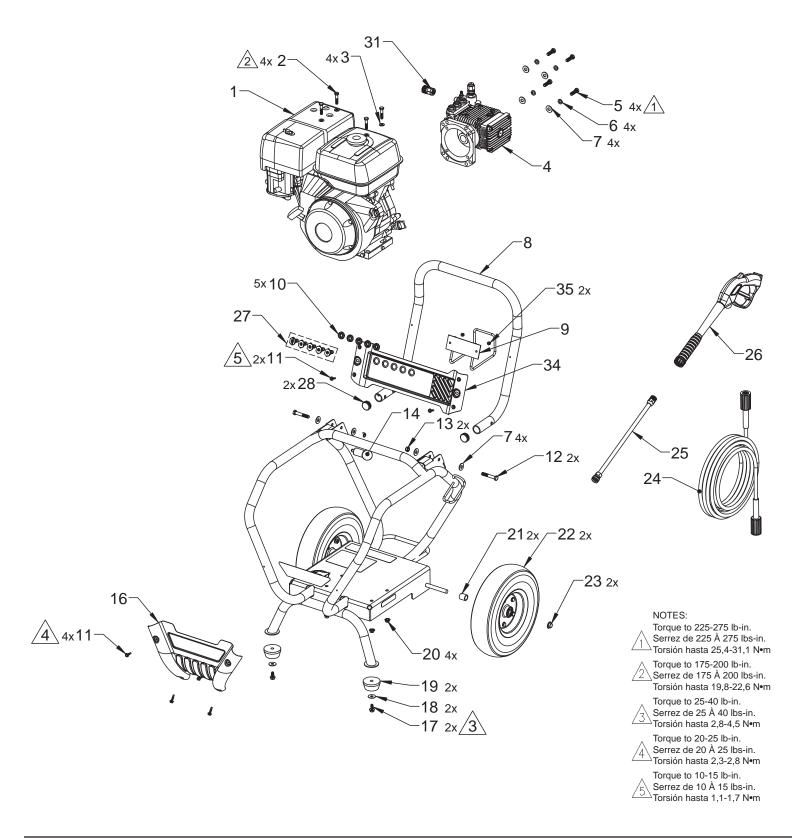
Two (2) year from the date of purchase. For warranty service, the customer must provide dated proof of purchase and must notify the Company within the warranty period.

For warranty service: Call toll free 888-895-4549, or write to Sanborn Manufacturing Co., Product Services, 118 West Rock Street, P. O. Box 206, Springfield, MN 56087.

### **EXCLUSIONS AND LIMITATIONS**

THE COMPANY MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED. THE WARRANTY SERVICE DESCRIBED ABOVE IS THE EXCLUSIVE REMEDY UNDER THIS WARRANTY; LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES IS EXCLUDED TO THE EXTENT PERMITTED BY LAW.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow a disclaimer of implied warranties, or the exclusion or limitation of incidental and consequential damages, so the above disclaimers and exclusions may not apply to you.



### **PARTS LIST & EXPLODED VIEW**

PRESSURE WASHER PWZC164000

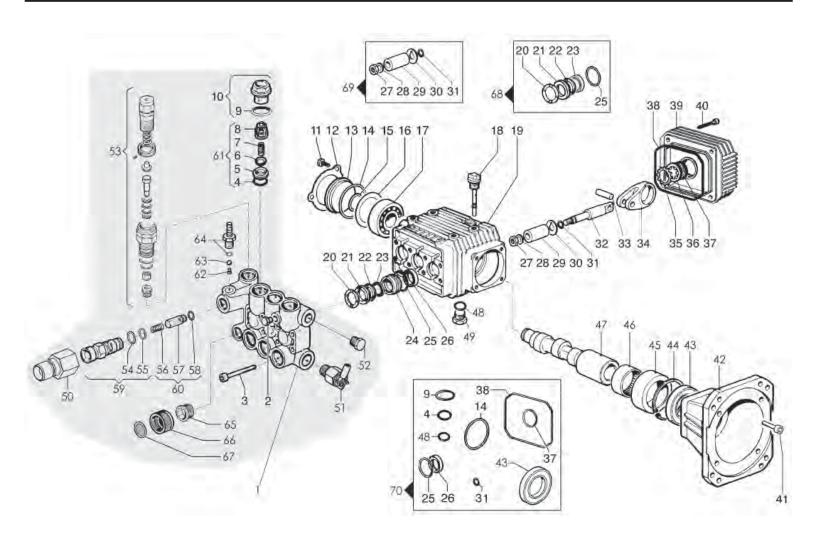
ITEM ART	PART# N°/P NÚM/P	QTY. QTÉ CANT	DESCRIPTION	DESCRIPTION	DESCRIPCÓN
1	025-0096	1	Engine	Moteur	Motor
2	N/A	4	Bolt, 5/16NC HHCS X1 1/2	Boulon	Perno
3	N/A	4	Washer, flat 5/16	Rondelle	Arandela
4	040-0437	1	Pump assy	Ensemble du pompe	Conjunto de bomba
5	N/A	4	Bolt, 3/8-16 UNC X 1.375"	Boulon	Perno
6	N/A	4	Washer, lock, 3/8	Rondelle	Arandela
7	N/A	8	Washer, flat, 3/8	Rondelle	Arandela
8	114-0779	1	Handle	Poignée	Empuñadura
9	114-0780	1	Hose hook	Crochet pour tuyau	Manguera gancho
10	093-0103	5	Grommet, .45 ID X .94 OD X .31	Grommet	Ojal
11	N/A	6	Screw #10 X 1	Vis	Tornillo
12	N/A	2	Bolt, 3/8"-16 x 2.25"	Boulon	Perno
13	N/A	2	Nut, nyloc 3/8-16	Écrou	Tuerca
14	107-0077	1	Pin assy	Assemblée Pin	Ensamblaje
15	114-0770	1	Frame	Frame	Marco
16	115-0546	1	Panel	Panneau	El panel
17	N/A	2	Screw-5/16"-18 self tapping	Vis	Tornillo
18	N/A	2	Washer, fender, 5/16" ID X 1" OD	Rondelle	Arandela
19	094-0186	2	Vibration pad	Tampon	Almohadilla
20	N/A	4	Nut 5/16-18	Écrou	Tuerca
21	110-0063	2	Wheel spacer	Entretoise de roue	Rueda espaciador
22	095-0084	2	Wheel, 12" flat free, 1/2" bore	Roue	Rueda
23	033-0001	2	Hub cap 1/2"	Chapeau de moyeu	Tapacubo
24	012-0168	1	Hose, 4000 PSI 3/8 X 50'	Tuyau	Manguera
25	145-0651	1	Lance, 28"	Lance	Lance
26	010-0030	1	Gun, 4000 PSI	Gun	Pistola
27	57835	1	Nozzle pack, 5 tips	Pack buse	Boquilla paquete
28	077-0179	2	Plastic cap 1.25"	Сар	Сар
29	57700	1	Chemical filter	Filtre chimique	Filtro químico
30	57701	1	Chemical hose, 1/4 ID 36"	Boyau de produit chimique	Química de la manguera
31	036-0109	1	Quick coupler	Acoplador rápido	Raccord rapide
32	098-4392	1	Warning label (not shown)	D'avertissement étiquette	Etiqueta de advertencia
33	098-4394	1	Warning label (not shown)	D'avertissement étiquette	Etiqueta de advertencia
34	115-0548	1	Nozzle panel (includes item 35)	Panneau de tuyère (inclut l'article 35)	Boquilla del panel (in- cluye el artículo 35)
35	N/A	2	Nut, #10-24	Écrou	Tuerca

<sup>\*</sup>N/A - These are standard parts available at your local hardware store.

\*N/A - Estas son piezas estándar disponibles en su ferretería local.

\*N/A - Ces pièces sont des pièces standard disponibles en quincaillerie.

### PRESSURE WASHER ITEM # 040-0437 - PUMP



ITEM ART	PART # N°/P NÚM/P	QTY. QTÉ CANT	DESCRIPTION	DESCRIPTION	DESCRIPCÓN
1	042-0134	1	Pump head (includes entire gray area)	Tête de pompe	Cabeza de bomba
2	062-0072	1	Plug	Bouchon	Tapón
3		8	Screw	Vis	Tornillo
4		6	O-Ring	Joint torique	Anillo tórico
5		6	Suct./Del. Valve Seat	Siège de valve	Asiento de válvula
6		6	Suct./Del. Valve	Soupape	Válvula
7		6	Spring	Ressort	Resorte
8		6	Suct./Del. Valve Cage	Camp de valve	Jaula de la válvula
9		6	O-Ring	Joint torique	Anillo tórico
10	062-0071	6	Plug and O-Ring	Bouchon et joint torique	Tapón y anillo tórico
11		3	Screw	Vis	Tornillo
12		1	Crankcase Flange	Bride de carter de vilebrequin	Reborde del cárter del motor
13		1	Alluminum Cover	Couverture	Cubierta
14		1	O-Ring	Joint torique	Anillo tórico
15		1	Ring	Segment	Anillo
16		1	Spacer	Entretoise	Espaciador
17		1	Ball Bearing	Roulement	Cojinete
18	056-0095	11	Oil Dipstick	Jaugeur d'huile	Varilla graduada del aceite
19		1	Housing	Corps	Compartimiento

### PARTS LIST & EXPLODED VIEW

### PRESSURE WASHER ITEM # 040-0437 - PUMP

ITEM ART	PART # N°/P NÚM/P	QTY. QTÉ CANT	DESCRIPTION	DESCRIPTION	DESCRIPCÓN
20		3	Packing Head Ring	Segment	Anillo
21	i	3	Packing	Emballage	Embalaje
22	i	3	Back Ring	Segment	Anillo
23	i	3	Packing	Emballage	Embalaje
24		3	Packing Retainer	Arrêtoir	Detenedor
25	1	3	O-Ring	Joint torique	Anillo tórico
26		3	Oil Seal	Joint	Sello de aceite
27	1	3	Bolt	Boulon	Perno
28		3	Washer	Rondelle	Arandela
29	<del> </del>	3	Ceramic Bushing	Douille	Buje
30	<del> </del>	3	Washer	Rondelle	Arandela
31		3	O-Ring	Joint torique	Anillo tórico
32		3	Piston Guides	Guides de piston	Guías del pistón
33		3	Gudgeon Pin	Pin	Pin
34	<u> </u>	3	Con. Rod Assembly	Assemblée de bielle	Asamblea de biela
35		1	Outer Seeger	Agrafe	Clip
36		1 1	Oil Indicator	Indicateur d'huile	Indicador del aceite
37		1 1	O-Ring	Joint torique	Anillo tórico
38		1 1	O-Ring	Joint torique	Anillo tórico
39	1	1 1	Cover	Couverture	Cubierta
40		4	Screw	Vis	Tornillo
41		4	Screw	Vis	Tornillo
42		1 1	Flange	Bride	Reborde
43	1	1 1	Oil Seal	Joint	Sello de aceite
44		1 1	Inner Seeger	Agrafe	Clip
45		1 1	Bushing	Douille	Buje
46		1	Bearing	Roulement	Cojinete
47		1 1	Eccentric Shaft	Arbre	Túnel
48	1	1 1	O-Ring	Joint torique	Anillo tórico
49	077-0202	1 1	Cap	Chapeau	Casquillo
50	036-0113	1 1	Suction Coupling	Accouplement	Acoplador
51	1000 0110	1 1	Thermo Valve Coupling	Accouplement	Acoplador
52	077-0201	1 1	Conical Cap	Chapeau	Casquillo
53	043-0226	1	Reg. Valve Kit + Seat	Kit de valve de régulateur	Kit de la válvula del regu-
<u> </u>		1		In institucion of	lador
54		1 1	O-Ring	Joint torique	Anillo tórico
55		1 1	O-Ring	Joint torique	Anillo tórico
56		1 1	Spring Chapty Valva	Ressort	Resorte
57		1 1	Check Valve	Clapet anti-retour	Válvula de cheque
58	004 0000	1 1	O-Ring	Joint torique	Anillo tórico
59	031-0098	1 1	Injector Body	Injecteur	Inyector
60	031-0099	1	Check Valve Kit	Kit de clapet anti-retour	Kit de la válvula de cheque
61	043-0227	6	Valves Kit	Jeu de Soupapes	Juego de Válvulas
62	055-0084	1 1	Detergent Spring	Ressort	Resorte
63	079-0021	1 1	Detergent Ball	Balle	Pelota
64	036-0112	1 1	Hose nipple	Manchon fileté	Niple
65	068-0102	1 1	Suction fitting	Raccord de succion	Adaptador de succión
66	058-0183	1 1	Wing Nut	Écrou	Tuerca
67	118-0036	1 1	Water Filter	Filtre	Filtro
68	046-0334	1	Water Seal Kit	Jeu de Joints l'eau	Juego de Sello del agua
69	048-0134	1	Piston Kit	Jeu de Piston	Juego de Pistón
70	046-0335	1	Oil Seal Kit	Jeu de Joints l'eau	Juego de Sello del agua