

EXCELL™

PRESSURE WASHER OPERATION MANUAL for model PWZ0142700.01

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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 - DEFINITIONS

- 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.

<p>⚠ DANGER Indicates an imminently hazardous situation which, if not avoided, WILL result in DEATH OR SERIOUS INJURY.</p>	<p>⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, MAY result in MINOR OR MODERATE INJURY.</p>
<p>⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, COULD result in DEATH OR SERIOUS INJURY.</p>	<p>CAUTION Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, MAY result in PROPERTY DAMAGE.</p>

CONSUMER SAFETY INFORMATION

- SAVE ALL INSTRUCTIONS

⚠ WARNING 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.

⚠ 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

⚠ DANGER RISK OF EXPLOSION FOR FIRE



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> • Spilled gasoline and it's vapors can become ignited from cigarette sparks, electrical arcing, exhaust gases and hot engine components such as the muffler. 	<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • Heat will expand fuel in the tank, which could result in spillage and possible fire explosion. 	<ul style="list-style-type: none"> • Fill tank to ½" (12.7 mm) below bottom of filler neck to provide space for fuel expansion.
<ul style="list-style-type: none"> • Operating the pressure washer in an explosive environment could result in a fire. 	<ul style="list-style-type: none"> • Operate and fuel equipment in well-ventilated areas free from obstructions. Equip areas with fire extinguisher suitable for gasoline fires.

IMPORTANT SAFETY INFORMATION (CONT.)

- SAVE ALL INSTRUCTIONS

DANGER RISK OF EXPLOSION FOR FIRE (CONT.)

WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> • Materials placed against or near the pressure washer can interfere with its proper ventilation features causing overheating and possible ignition of the materials. 	<ul style="list-style-type: none"> • Never operate pressure washer in an area containing dry brush or weeds.
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Always keep pressure washer a minimum of 4' (1.2m) away from surfaces (such as houses, automobiles or live plants) that could be damaged from muffler exhaust heat.
<ul style="list-style-type: none"> • Improperly stored fuel could lead to accidental ignition. Fuel improperly secured could get into the hands of children or other unqualified persons. 	<ul style="list-style-type: none"> • Store fuel in an OSHA-approved container, in a secure location away from work area.
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Do not spray flammable liquids.

DANGER RISK TO BREATHING (ASPHYXIATION)



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> • Breathing exhaust fumes will cause serious injury or death! Engine exhaust contains carbon monoxide, an odorless and deadly gas. 	<ul style="list-style-type: none"> • Operate pressure washer in a well-ventilated area. Avoid enclosed areas such as garages, basements, etc. • Never operate unit in a location occupied by humans or animals.
<ul style="list-style-type: none"> • Some cleaning fluids contain substances which could cause injury to skin, eyes or lungs. 	<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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 style="list-style-type: none"> • Inspect the high-pressure hose regularly. Replace the 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. • 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. • Never place hands in front of nozzle. • Direct spray away from self and others. • Make sure hose and fittings are tightened and in good condition. Never hold onto the hose or fittings during operation. • Do not allow hose to contact muffler. • Never attach or remove wand or hose fittings while system is pressurized.
<ul style="list-style-type: none"> • Injuries can result if system pressure is not reduced before attempting maintenance or disassembly. 	<ul style="list-style-type: none"> • 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.

IMPORTANT SAFETY INFORMATION (CONT.)

• SAVE ALL INSTRUCTIONS

⚠ DANGER RISK OF INJURY FROM SPRAY



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> • High-velocity fluid spray can cause objects to break, propelling particles at high speed. • Light or unsecured objects can become hazardous projectiles. 	<ul style="list-style-type: none"> • Always wear ANSI-approved z87.1 safety glasses. Wear protective clothing to protect against accidental spraying. • Never point wand at or spray people or animals. • Always secure trigger lock when wand is not in service to prevent accidental operation. • Never permanently secure trigger in pull-back (open) position.

⚠ DANGER RISK OF FLUID INJECTION AND LACERATION



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> • Unsafe operation of your pressure washer could lead to serious injury or death to you or others. 	<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • If proper starting procedure is not followed, engine can kickback causing serious hand and arm injury. 	<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • The spray gun/wand is a powerful cleaning tool that could look like a toy to a child. 	<ul style="list-style-type: none"> • Keep children away from the pressure washer at all times.
<ul style="list-style-type: none"> • 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 style="list-style-type: none"> • Do not overreach or stand on an unstable support. • Do not use pressure washer while standing on a ladder. • Grip gun/wand firmly with both hands. Expect the gun to kickback when triggered.

⚠ DANGER RISK OF INJURY OR PROPERTY DAMAGE WHEN TRANSPORTING OR STORING



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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.

IMPORTANT SAFETY INFORMATION (CONT.)

• SAVE ALL INSTRUCTIONS

WARNING RISK OF BURSTING



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> Over inflation of tires could result in serious injury and property damage. 	<ul style="list-style-type: none"> Use a tire pressure gauge to check the tires pressure before each use and while inflating tires; see the tire sidewall for the correct tire pressure. <p>NOTE: Air tanks, compressors and similar equipment used to inflate tires can fill small tires similar to these very rapidly. Adjust pressure regular on air supply to no more than the rating of the tire pressure. Add air in small increments and frequently use the tire gauge to prevent over inflation.</p>

WARNING RISK OF HOT SURFACES



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> Contact with hot surfaces, such as engines exhaust components, could result in serious burn. 	<ul style="list-style-type: none"> During operation, touch only the control surfaces of the pressure washer. Keep children away from the pressure washer at all times. They may not be able to recognize the hazards of this product.

WARNING RISK OF CHEMICAL BURN



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.

WARNING RISK OF ELECTRICAL SHOCK



WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> Spray directed at electrical outlets or switches, or objects connected to an electrical circuit, could result in a fatal electric shock. 	<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Serious injury can result from attempting to lift too heavy an object. 	<ul style="list-style-type: none"> The pressure washer is too heavy to be lifted by one person. Obtain assistance from others before lifting.

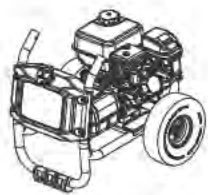
SPECIFICATIONS

• SAVE ALL INSTRUCTIONS

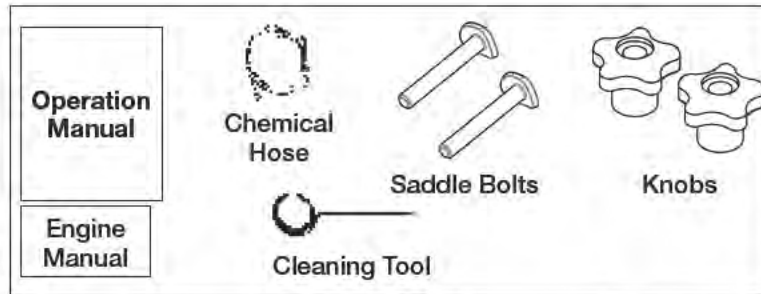
MODEL	PWZ0142700.01	GPM MAX	2.3
PSI MAX	2700	OPERATING GPM	2.1
OPERATING PSI	2440		

CARTON CONTENTS

• SAVE ALL INSTRUCTIONS



Engine Frame and Wheel Assembly



Bagged Parts



High Pressure Hose



Spray Gun



Spray Wand

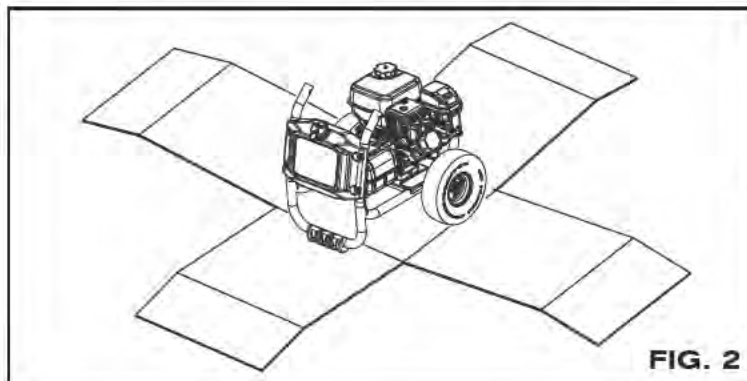
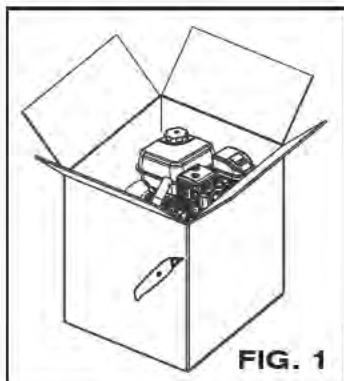


Handle

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. Remove handle from beneath unit. (Fig. 2)

ASSEMBLY INSTRUCTIONS (CONT.)

• SAVE ALL INSTRUCTIONS

4. Slide handle onto bottom portion of frame assembly. (Fig. 3)
5. Insert saddle bolts into appropriate hole location and attach with knobs (both sides). Tighten securely. (Fig. 3)
6. Roll the unit off the carton and discard carton.
7. Connect high-pressure hose to pump outlet. Tighten securely. (Fig. 4)
8. Connect wand to gun. Tighten securely. (Fig. 5)
9. Attach high-pressure hose to gun. Tighten securely. (Fig. 6)

NOTE: The pump on this unit is maintenance free and requires no oil, if there is a problem with the pump contact an Authorized Service Center.

⚠ WARNING RISK OF BURSTING. Use a tire pressure gauge to check the tires pressure before each use and while inflating tires; see the tire sidewall for the correct tire pressure.

NOTE: Air tanks, compressors and similar equipment used to inflate tires can fill small tires similar to these very rapidly. Adjust pressure regulator on air supply to no more than the rating of the tire pressure. Add air in small increments and frequently use the tire gauge to prevent over inflation.



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 (located inside the shroud, not shown): 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 wand and spray gun.

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. $GPM \times PSI = CU$

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 present at the factory to achieve optimum pressure and cleaning. If you need a lower the 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

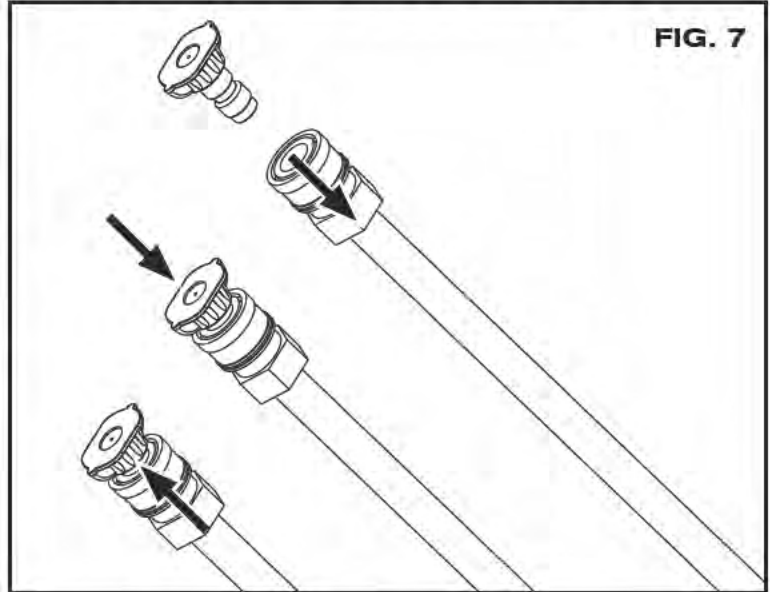
The nozzles for the spray wand are stored on the top storage panel. See chart to choose the correct nozzle for the job to be performed.

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.

⚠ WARNING 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 quick connect collar on the spray wand and hold it in place.
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 cleaning of small areas	Intense cleaning of medium areas	Intense cleaning of larger areas	Applies cleaning 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

* **CAUTION** 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 located near high-pressure hose. (Fig. 8)
2. The other end of the chemical hose should be connected to the nipple on the bottom of the chemical tank. (Fig. 9)



FIG. 8

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



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

3. Fill chemical tank with appropriate cleaning solution.
4. Insert chemical nozzle into spray wand, see Use Spray Wand paragraph in this section.

⚠ 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

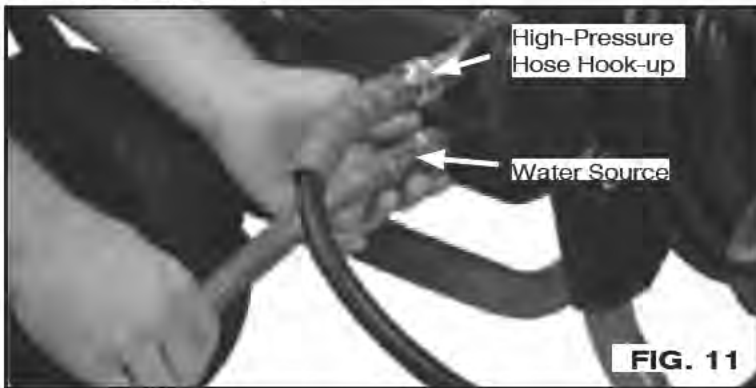
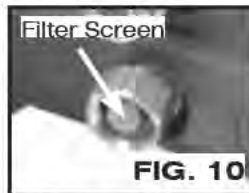
OPERATING INSTRUCTIONS (CONT.)

• SAVE ALL INSTRUCTIONS

STARTING

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

1. 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.
2. Check engine oil level. See Engine Owners Manual for correct procedure.
3. 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.
4. Verify the filter screen is in water inlet of pump. (Fig. 10)
NOTE: Cone side faces out.
5. Connect water source to pump inlet. **NOTE:** Water source must provide a minimum of 5 gallons per minute at 20 PSI. (Fig. 11)



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

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



8. Insert the quick connect nozzle for the task being performed. See How To Use Wand instructions in this section.

9. Turn water source on.

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

10. Remove all air from the pump and high pressure hose by depressing trigger until a steady stream of water is present.

11. 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.

12. 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.

13. 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, fill the chemical tank with clean water and 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.

CAUTION 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

⚠ WARNING 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.

⚠ WARNING 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. **NOTE:** The frame is equipped with an oil drain hole to help make changing the engine oil easier.

PUMP

The pump on this unit is maintenance free and requires no oil, if there is a problem with the pump contact an Authorized Service Center.

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. 13)



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.

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

2. Disconnect spark plug wire.
3. Connect length of garden hose to water inlet of pump.

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.

4. Add RV antifreeze or windshield washer fluid to hose as shown. (Fig. 14)



5. 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 Manual for further engine troubleshooting)	<ol style="list-style-type: none"> 1. No fuel 2. Pressure builds up after two pulls on the recoil starter or after initial use. 3. Choke lever in the "No Choke" position. 4. Spark plug wire not attached. 5. Engine ON/OFF switch in OFF position. 6. Choke lever in the "Choke" position on a "hot" engine or an engine that has been exposed to thermal heat for a long period of time. 	<ol style="list-style-type: none"> 1. Add fuel. 2. Squeeze gun trigger to relieve pressure. 3. Move choke to the "Choke" position. 4. Attach spark plug wire. 5. Place engine ON/OFF switch in ON position. 6. Move choke to the "No Choke" position.
No or low pressure (initial use)	<ol style="list-style-type: none"> 1. High pressure nozzle is not installed. 2. Low water supply. 3. Leak at high pressure hose fitting. 4. Nozzle obstructed. 5. Water filter screen clogged. 6. Air in hose. 7. Choke lever in the "Choke" position. 8. High pressure hose is too long. 	<ol style="list-style-type: none"> 1. See How to Use Spray Wand instructions in the Operation Section. 2. Water supply must be at least 5 GPM @ 20 PSI. 3. Repair leak. Apply sealant tape if necessary. 4. See Nozzle Cleaning instructions in the Maintenance section. 5. Remove and clean filter. 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. 8. Use high pressure hose under 100 feet.
Will not draw chemicals	<ol style="list-style-type: none"> 1. Low pressure soap nozzle not installed. 2. Chemical filter clogged. 3. Chemical screen not in cleaning solution. 4. Chemical too thick. 5. Pressure hose too long. 6. Chemical build up in chemical injector. 	<ol style="list-style-type: none"> 1. See How to Use Spray Wand paragraph in the Operation Section. 2. Clean filter. 3. Make sure end of chemical hose is fully submerged into cleaning solution. 4. Dilute chemical. Chemical should be in the same consistency as water. 5. Lengthen water supply hose instead of high pressure hose. 6. Have parts cleaned or replaced by AWSC.
No or low pressure (after period of normal use)	<ol style="list-style-type: none"> 1. Worn seal or packing. 2. Worn or obstructed valves. 3. Worn unloaded piston. 	<ol style="list-style-type: none"> 1. Have replaced by AWSC. 2. Have replaced by AWSC. 3. Have replaced by AWSC.
Water leaking at gun/spray wand connection	<ol style="list-style-type: none"> 1. Worn or broken O-ring. 2. Loose hose connection. 	<ol style="list-style-type: none"> 1. Check and replace. 2. Tighten.
Water leaking at pump	<ol style="list-style-type: none"> 1. Loose connections. 2. Piston packing worn. 3. Worn or broken O-rings. 4. Pump head or tubes damaged from freezing. 	<ol style="list-style-type: none"> 1. Tighten. 2. Have replaced by AWSC. 3. Have replaced by AWSC. 4. Have replaced by AWSC.
Pump Pulsates	<ol style="list-style-type: none"> 1. Nozzle obstructed. 	<ol style="list-style-type: none"> 1. See Nozzle Cleaning paragraph in the Maintenance section for the correct procedure.

AWSC= Authorized Warranty Service Center

PARTS LIST & EXPLODED VIEW

PRESSURE WASHER ITEM # E104480

ITEM	KIT #	PART NO.	QTY	DESCRIPTION	ITEM	KIT #	PART NO.	QTY	DESCRIPTION
1		E104107	1	Assm, Hose, 15 Foot, 20MPA Pressure Rating	23		E104588	1	Weldmend, Tubing (Front, Base) - Vette
2		E104577	1	Panel, Accessory - Vette	24		E104573	1	Foot, Plastic - Vette
3			6	Screw, M6x1.0x16 SBHCS	25		E104574	1	Tank, Chemical - Vette
4			6	Washer, Lock M6	26			4	Bolt, M8x1.25x25 SBHCS
5			6	Washer, Flat 6MM - 18.5MM OD	27			4	Washer, Lock 8mm
6		E104126	5	Grommet, Nozzle	28			4	Washer, Flat 8mm X 19mm
7		E104112	1	Nozzle, 0 Degree Red	29		E104575	1	Cap, Chemical Tank - Vette
8		E104114	1	Nozzle, 15 Degree Yellow	30		E104063	2	Bolt, Saddle M8x45
9		E104115	1	Nozzle, 40 Degree White	31		E104064	2	Knob, Five Prong
10		E104598	1	Nozzle, 25 Degree - Green	32			6	Screw, #8-16x.75 Pan Head Plastite T20
11		E104113	1	Nozzle, Low Pressure Black	33		E104587	1	Cover, Pump Bottom - IC2
12		E104591	1	Assembly, Handle - Vette	34	1		1	Pump, IC2
13		E104430	1	Assembly, Engine, 180cc RATO, R180-3	35	1		1	Shaft, Couple Spline
14		E104811	1	Gun, Pressure Washer, BIT 101	36	1		1	Screw Set 5/16-24 X.438 SM DG PT
15		E104102	1	Assy, wand & quick connect, 15.125 inch	37			4	Bolt, SHC, M8 X 1.25 X 20MM
16			2	Nut, M8x1.25 Nyloc	38		E104586	1	Cover, Pump Top - IC2
17			2	Washer, M8 - 30 OD	39	1	E104788	1	Injector, Chem, 1.8mm, Fixed, JE#4343
18		E104611	2	Wheel, 10" Pneumatic	40	1,2		1	Nut, Swivel, Garden Hose
19		E104054	2	Spud, Wheel (Short)	41	1,2		1	Swivel, 3/8 NPT Male
20			4	Nut, M8X1, Serrated Flangehead	42	1	E104787	1	Screen, 3/4 Garden Hose
21			2	Screw, M6x1.0x10 Hex	43		E104141	1	Chemical Hose
22			4	Bolt, M8x1.25x35 Hex Serrated Flange					

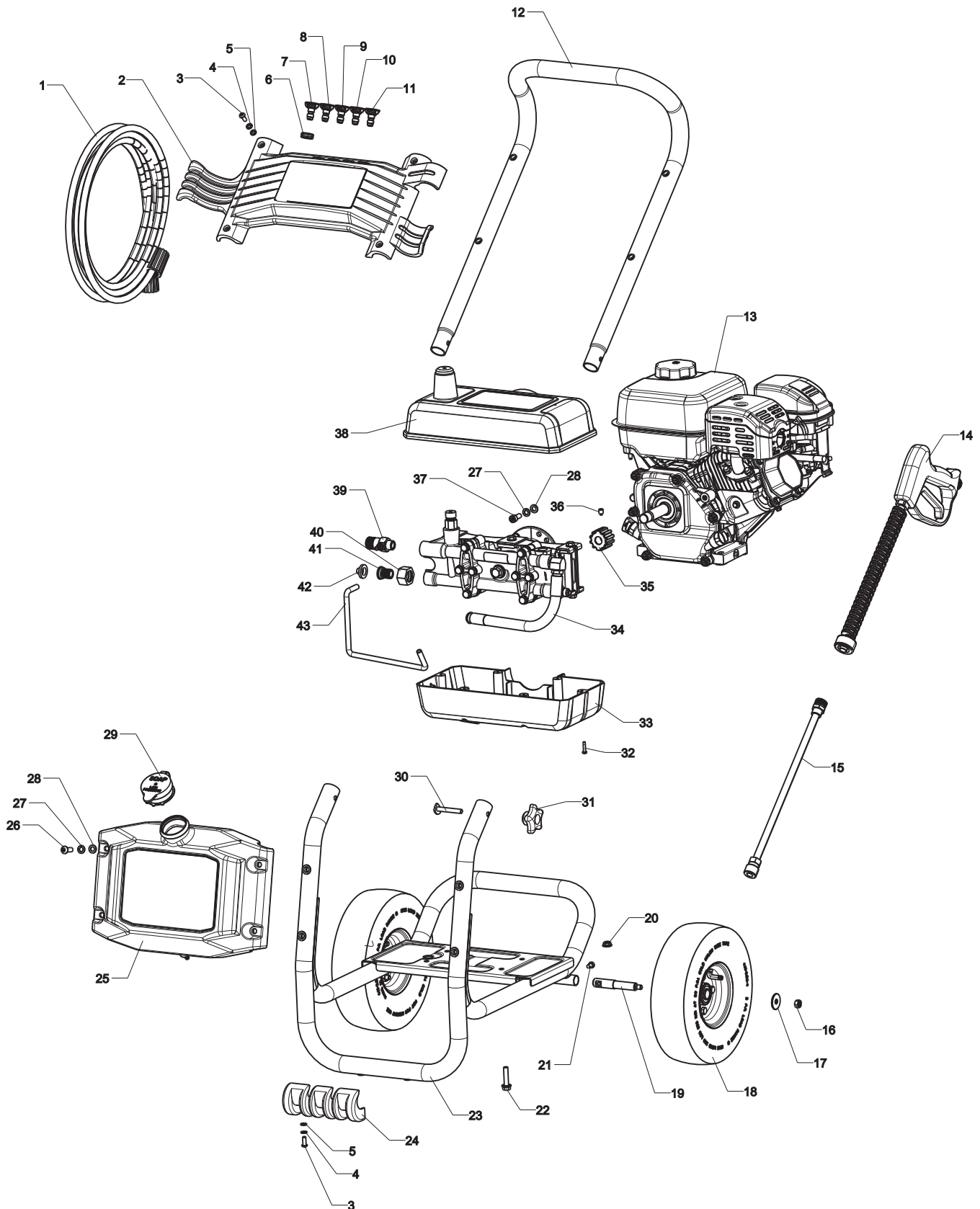
- Note: Any part number field without a number listed is not available
- Descriptions are provided for reference only.

KIT NUMBERS, DESCRIPTIONS, AND INCLUDED COMPONENTS ARE LISTED BELOW:

KIT #	ORDER NO.	DESCRIPTION	COMPONENT REFERENCE #
1	E104797	Kit, Assy IC2	34-36, 39-42
2	E104789	Kit, Swivel	40-41

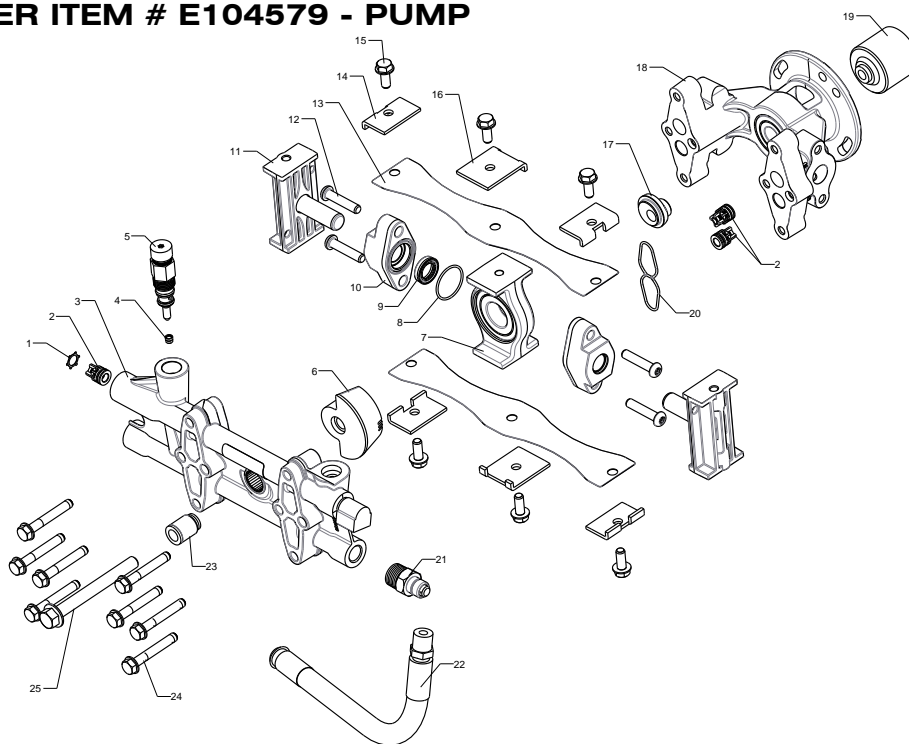
PARTS LIST & EXPLODED VIEW

PRESSURE WASHER ITEM # E104480



PARTS LIST & EXPLODED VIEW

PRESSURE WASHER ITEM # E104579 - PUMP



ITEM	KIT #	PART NO.	QTY	DESCRIPTION	ITEM	KIT #	PART NO.	QTY	DESCRIPTION
1	1		1	Ring, Retaining, Internal, .600, IC2	14			4	Clamp, Block End
2	1,5		5	Assembly, Valve, IC2	15			6	Screw, IHW 5/16 - 18 X .75 GRD 8
3			1	Assembly, Head IC2	16			2	Clamp, Block Mid-Strap
4	2		1	Seat, Unloader, IC2	17			1	Coupler, Shaft Bearing IC2
5	2		1	Unloader, IC2	18			1	Assembly, Pump Body Radial, IC2
6			1	Shaft, Counterweight 2.5GPM	19			1	Spline, Bearing Coupler
7			1	Assembly, Ring Radial	20	5		2	O-ring, Custom, Head Pump Body, IC2
8	3		2	O-ring, Journal Body, IC2	21			1	Thermal Relief, IC2
9	3		2	Seal, 16mm, IC2	22			1	Pulse Hose, IC2
10	3		2	Assembly, Journal Body and Bushing, IC2	23			1	Assembly, Shaft Inner Ring
11	4		2	Assembly, Piston and Cap	24			8	Screw, 5/16 - 18 X 2.125 THD FRM
12			4	Screw, 5/16 - 18 X 1.5 THD FRM	25			1	Bolt, 7/16 - 14 X 4.00 GRD 8
13			2	Strap, IC2					

KIT NUMBERS, DESCRIPTIONS, AND INCLUDED COMPONENTS ARE LISTED BELOW:

KIT #	ORDER NO.	DESCRIPTION	COMPONENT REFERENCE #	KIT #	ORDER NO.	DESCRIPTION	COMPONENT REFERENCE #
1	E104784	Kit, Valve, In/Out	1,2	4	E104785	Kit, Piston w/Cap	11
2	E104782	Kit, Unloader	4,5	5	E104783	Kit, Valves All	2,20
3	E104786	Kit, Seals w/O-ring	8,9,10				

- Note: Any part number field without a number listed is not available
- Descriptions are provided for reference only.

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

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| <ul style="list-style-type: none">· 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. | <ul style="list-style-type: none">· 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. |
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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.