



## Pressure Washer

# Operation Manual

for model VR2320

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

Purchase Date: \_\_\_\_\_

Serial #: \_\_\_\_\_

**Do Not return this product to the retailer!**

**Questions? 1-800-888-2468**

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

**[www.excellpressurewasher.com](http://www.excellpressurewasher.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 - DEFINITIONS

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><b>⚠ DANGER</b> Indicates an imminently hazardous situation which, if not avoided, <u>will</u> result in <u>death or serious injury</u>.</p>	<p><b>⚠ CAUTION</b> Indicates a potentially hazardous situation which, if not avoided, <u>may</u> result in <u>minor or moderate injury</u>.</p>
<p><b>⚠ WARNING</b> Indicates a potentially hazardous situation which, if not avoided, <u>could</u> result in <u>death or serious injury</u>.</p>	<p><b>CAUTION</b> Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, <u>may</u> result in <u>property damage</u>.</p>

## CONSUMER SAFETY INFORMATION



**⚠ 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 in the state of California. It is a violation of California statutes section 130050 and/or sections 4442 and 4443 of the 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** Engine exhaust contains chemicals known, in certain quantities, to cause cancer, birth defects or other reproductive harm.


## IMPORTANT SAFETY 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*


HAZARD	
<p><b>⚠ DANGER</b> RISK OF EXPLOSION OR FIRE</p>	 
WHAT CAN HAPPEN	HOW TO PREVENT IT
<ul style="list-style-type: none"> <li>Spilled gasoline and it's vapors can become ignited from cigarette sparks, electrical arcing, exhaust gases, and hot engine components such as the muffler.</li> <li>Heat will expand fuel in the tank which could result in spillage and possible fire explosion.</li> <li>Operating the pressure washer in an explosive environment could result in a fire.</li> </ul>	<ul style="list-style-type: none"> <li>Shut off engine and allow it to cool before adding fuel to the tank.</li> <li>Use care in filling tank to avoid spilling fuel. Move pressure washer away from fueling area before starting engine.</li> <li>Keep maximum fuel level ½" below top of tank to allow for expansion.</li> <li>Operate and fuel equipment in well ventilated areas free from obstructions. Equip areas with fire extinguisher suitable for gasoline fires.</li> </ul>


HAZARD			
<b>▲ DANGER</b> RISK OF EXPLOSION OR FIRE (continued)			
WHAT CAN HAPPEN	HOW TO PREVENT IT		
<ul style="list-style-type: none"> <li>Materials placed against or near the pressure washer can interfere with its proper ventilation features causing overheating and possible ignition of the materials.</li> <li>Muffler exhaust heat can damage painted surfaces, melt any material sensitive to heat (such as siding, plastic, rubber, or vinyl), and damage live plants.</li> <li>Improperly stored fuel could lead to accidental ignition. Fuel improperly secured could get into the hands of children or other unqualified persons.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Never operate pressure washer in an area containing dry brush or weeds.</li> <li>Always keep pressure washer a minimum of four feet away from surfaces (such as houses, automobiles, or live plants) that could be damaged from muffler exhaust heat.</li> <li>Store fuel in an OSHA approved container, in a secure location away from work area.</li> <li>Do not spray flammable liquids.</li> </ul>		


HAZARD		
<b>▲ DANGER</b> RISK TO BREATHING		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"> <li>Breathing exhaust fumes will cause serious injury or death! Engine exhaust contains carbon monoxide, an odorless and deadly gas.</li> <li>Some cleaning fluids contain substances which could cause injury to skin, eyes, or lungs.</li> </ul>	<ul style="list-style-type: none"> <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> <li>Use only cleaning fluids specifically recommended for high pressure washers. Follow manufacturers recommendations. Do not use chlorine bleach or any other corrosive compound.</li> </ul>	


HAZARD		
<b>▲ DANGER</b> RISK TO FLUID INJECTION		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"> <li>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. <b>DO NOT TREAT FLUID INJECTION AS A SIMPLE CUT!</b> See a physician immediately!</li> <li>Injuries can result if system pressure is not reduced before attempting maintenance or disassembly.</li> </ul>	<ul style="list-style-type: none"> <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> <li>To relieve system pressure, shut off engine, turn off water supply, and pull gun trigger until water stops flowing.</li> <li>Use only hoses and accessories rated for pressure higher than your pressure washer's PSI.</li> </ul>	


HAZARD		
<b>⚠ WARNING RISK OF CHEMICAL BURN</b>		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Wear protective clothing to protect eyes and skin from contact with sprayed materials.</li> </ul>	

HAZARD		
<b>⚠ WARNING RISK OF ELECTRICAL SHOCK</b>		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"> <li>Spray directed at electrical outlets or switches, or objects connected to an electrical circuit, could result in a fatal electrical shock.</li> </ul>	<ul style="list-style-type: none"> <li>Unplug any electrically operated product before attempting to clean it. Direct spray away from electric outlets and switches.</li> </ul>	

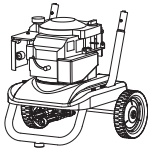
HAZARD		
<b>⚠ WARNING RISK OF ELECTRICAL SHOCK RISK OF ELECTRICAL SHOCK RISK OF HOT SURFACES</b>		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"> <li>Contact with hot surfaces, such as engines exhaust components, could result in serious burn.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>	

HAZARD		
<b>⚠ DANGER RISK OF INJURY OR PROPERTY DAMAGE WHEN TRANSPORTING OR STORING</b>		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"> <li>Fuel or oil can leak or spill and 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.</li> </ul>	<ul style="list-style-type: none"> <li>If pressure washer is equipped with a fuel shut-off valve, turn the valve to the 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.</li> </ul>	

HAZARD		
<b>⚠ DANGER</b> RISK OF UNSAFE OPERATION		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"><li>Unsafe operation of your pressure washer could lead to serious injury or death to you or others.</li></ul>	<ul style="list-style-type: none"><li>Do not use chlorine bleach or any other corrosive compound.</li><li>Become familiar with the operation and controls of the pressure washer.</li><li>Keep operating area clear of all persons, pets, and obstacles.</li><li>Do not operate the product when fatigued or under the influence of alcohol or drugs. Stay alert at all times.</li><li>Never defeat the safety features of this product.</li><li>Do not operate machine with missing, broken, or unauthorized parts.</li><li>Never leave wand unattended while unit is running.</li></ul>	
<ul style="list-style-type: none"><li><b>If proper starting procedure is not followed, engine can kickback causing serious hand and arm injury.</b></li></ul>	<ul style="list-style-type: none"><li><b>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.</b></li></ul>	
<ul style="list-style-type: none"><li>The spray gun/wand is a powerful cleaning tool that could look like a toy to a child.</li></ul>	<ul style="list-style-type: none"><li>Keep children away from the pressure washer at all times.</li></ul>	
<ul style="list-style-type: none"><li>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.</li></ul>	<ul style="list-style-type: none"><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>	

HAZARD		
<b>⚠ WARNING</b> RISK OF INJURY FROM SPRAY		
WHAT CAN HAPPEN	HOW TO PREVENT IT	
<ul style="list-style-type: none"><li>• High velocity fluid spray can cause objects to break, propelling particles at high speed.</li><li>• Light or unsecured objects can become hazardous projectiles.</li></ul>	<ul style="list-style-type: none"><li>• Always wear ANSI approved Z87 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>	

## CARTON CONTENTS

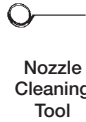


Engine Frame and Wheel Assembly

Operation Manual



Chemical Hose



Nozzle Cleaning Tool

Engine Manual

Registration card

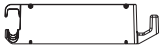


Handle

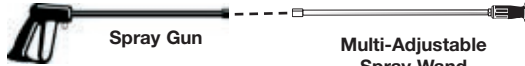


High Pressure Hose

Bagged Parts



Accessories Panel



Spray Gun

Multi-Adjustable Spray Wand

## ASSEMBLY INSTRUCTIONS

1. **Place handle assembly onto frame**, depress the snap buttons, and slide the handle assembly onto the frame until snap buttons snap into place.



2. **Connect wand to gun.** Tighten securely.



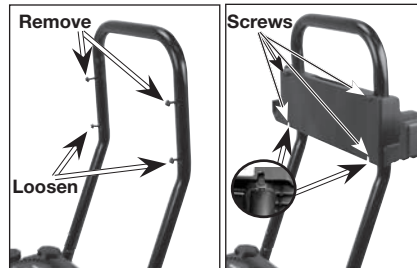
3. **Attach high pressure hose to gun.** Tighten securely.



4. **To Assemble Accessories Panel**

- a. Remove top screws on handle assembly.
- b. Loosen bottom screws on handle assembly.

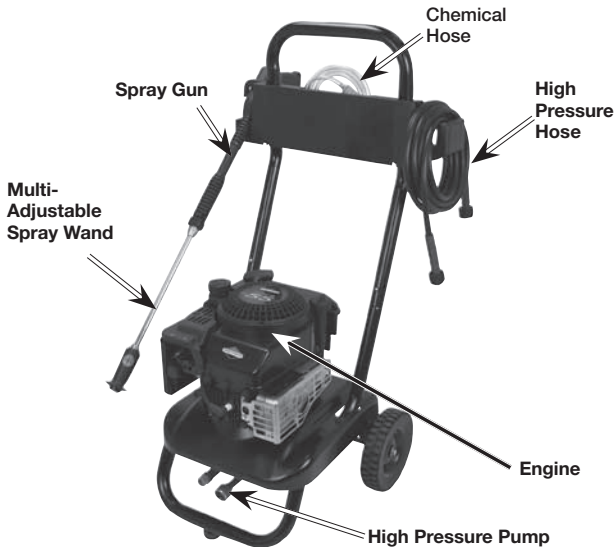
- c. Place grooves in accessories panel assembly onto screws and slide panel assembly into place.
- d. Place screws (removed earlier) into the top holes and secure accessories panel assembly to handles. Do not overtighten.



**NOTE:** The high pressure pump was filled with oil at the factory. The oil in the high pressure pump was designed to last the life of the pump. If there is a problem with the pump contact an Authorized Service Center.

## OPERATING 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.

**Multi-Adjustable Spray Wand:** Allows the user to use high or low pressure and adjusts from a pencil stream (0°) to a wide angle fan spray (40°). See How To Use Wand instructions in this section.

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

### 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

**Throttle Control Lever:** Controls engine speed.

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

### 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.

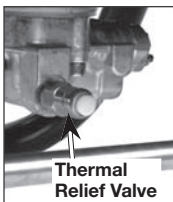
**CU:** Cleaning Units. GPM multiplied by PSI.  $GPM \times PSI = CU$

**Bypass Mode:** Allows water to re-circulate within 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.**

**Thermal Relief Valve:**

When the temperature inside the pump rises too high the valve will open and release a gush of water in an effort to lower the temperature inside the pump. The valve will then close.



**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.

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

The pressure setting is preset at the factory to achieve optimum pressure and cleaning. If you need to 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. **Rotate the nozzle at the end of the multi-adjustable spray wand to widen the fan spray.** The wider fan spray will minimize the pressure on the surface to be cleaned.

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

3. **Reduce the speed of the gasoline engine (RPM).** Slow the engine down and the water pressure will go down with it.

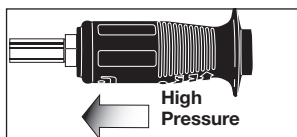
## **HOW TO USE SPRAY WAND**

Your pressure washer is equipped with both high and low pressure settings. The high pressure setting is for cleaning and rinsing, the low pressure setting is for applying chemicals or cleaning solutions to surfaces.

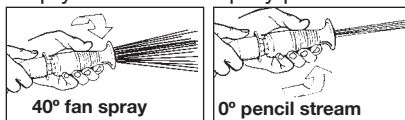
**⚠ DANGER** **When using the high pressure setting, DO NOT allow the jet-like spray to come in contact with unprotected skin, eyes, or with any pets or animals. Serious injury can occur.**

**⚠ WARNING** **Risk of injection or injury to person. DO NOT direct discharge stream toward persons.**

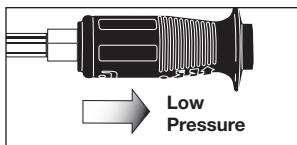
For high pressure operation, pull back the nozzle of the multi-adjustable spray wand as shown.



The nozzle at the end of the multi-adjustable spray wand can be rotated to change the high pressure spray pattern from a 0° pencil stream to a 40° fan spray, as shown. Markings have been placed on the nozzle to help you select the spray pattern.



For low pressure operation, extend the nozzle of the multi-adjustable spray wand as shown.





**⚠ CAUTION**

The powerful spray from your pressure washer is capable of causing damage to surfaces such as wood, glass, automobile 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.

**READ AND UNDERSTAND ALL WARNINGS BEFORE STARTING UNIT**

**⚠ DANGER**

**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 can 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**

**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 indoors 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**

**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 1-800-888-2468 to speak to a service representative for further instructions.**

## HOW TO APPLY CHEMICALS AND CLEANING SOLVENTS

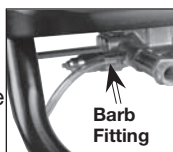
Applying chemicals or cleaning solvents is a low pressure operation.

**NOTE:** Use only soaps and chemicals designed for pressure washer use. **Do not use bleach.**

### To Apply chemicals:

1. **Press chemical hose** onto barbed fitting located near high pressure hose connection of pump as shown.
2. **Place other end** of chemical hose with filter on it into container holding chemical/cleaning solution. **NOTE:** For every 7 gallons of water pumped 1 gallon of chemical/cleaning solution will
3. **Set multi-adjustable nozzle** to low pressure setting. See How To Use Wand paragraph in this section.
4. **After use of chemicals**, place chemical hose into container of clean water and draw clean water through chemical injection system to rinse system thoroughly. If chemicals remain in the pump it could be damaged. Pumps damaged due to chemicals will not be covered under warranty.

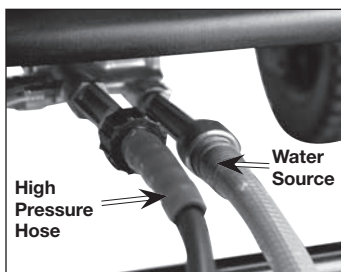
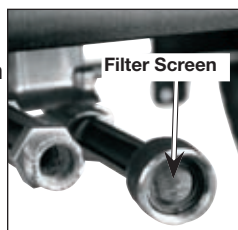
**NOTE:** Chemicals and soaps will not siphon when spray wand is in the high pressure setting.



## 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. **Verify the filter screen** is in water inlet of pump. **NOTE:** Cone side faces out.
4. **Connect** water source to pump inlet. **NOTE:** Water source must provide a minimum of 5 gallons per minute at 20 PSI.
5. **Connect** high pressure hose to pump outlet.



6. **If applying a chemical or cleaning solution**, see How To Apply Chemicals/Cleaning Solvents instructions in this section.
7. **Turn water source on.** **NOTE:** Failure to do so could cause damage to the pump.

8. **Start engine.** See Engine Owners Manual for correct procedure. **NOTE:** When engine rope is pulled, pressure starts building in the gun. If the engine does not start after two pulls, pull the gun trigger to relieve this pressure.
9. **Depress trigger on gun to start water flow.** **NOTE: Stand on a stable surface** and grip gun/spray wand firmly with both hands. Expect the gun to kick when triggered.
10. **Release trigger to stop water flow.**
11. **Adjust nozzle spray for the task** being performed. See How To Use Wand instructions in this section.

## SHUTTING DOWN

1. **After each use,** if you have applied chemicals, place chemical hose into container of clean water and draw clean water through chemical injection system to rinse system thoroughly. **NOTE:** Failure to do so could cause damage to the pump.
2. **Turn engine off.** See Engine Owner's Manual. **NOTE: 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

**⚠ WARNING** When performing maintenance, you may be exposed to hot surfaces, water pressure, or moving parts that can cause serious injury or death!

**Before performing any maintenance or repair, disconnect spark plug wire, let engine cool and release all water pressure. 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. 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 oil in the high pressure pump was designed to last the life of the pump. If there is a problem with the pump contact an Authorized Service Center.

### NOZZLE CLEANING

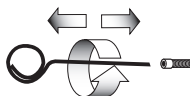
If the nozzle becomes clogged with foreign matter, such as dirt, excessive pressure may develop. If the nozzle becomes partially clogged or restricted, the pump pressure will pulsate. Clean the nozzle immediately using the nozzle kit supplied and the following instructions:

1. **Shut off the pressure washer** and turn off the water supply.
2. **Disconnect spark plug wire** to insure the unit will not start while performing maintenance.

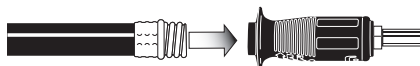
3. **Pull trigger on gun handle** to relieve any water pressure.
4. **Disconnect the wand from the gun.**



5. **Remove the nozzle from the end of the wand** with the 2mm allen wrench provided as shown.



6. **Clean the nozzle** using the nozzle cleaner provided or a straightened paper clip. Insert into the nozzle end and work back and forth until obstruction is



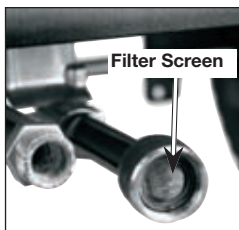
removed.

7. **Direct water supply into nozzle end** to backflush loosened particles for 30 seconds.
8. **Reconnect spark plug wire**
9. **Reassemble the nozzle to the wand.** Tighten securely to prevent leaks.
10. **Reconnect wand to gun** and turn on water supply.
11. **Start pressure washer** and place wand into high pressure setting to 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.



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

### ENGINE

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

### PUMP

The manufacturer recommends using a pump protector/winterizer, such as, 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 needs to be run through the pump as outlined in the steps below.

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

1. Obtain a funnel, six ounces of \*RV antifreeze, and 16 - 36 inches of garden hose with a male hose connector attached to one end.

### ⚠ CAUTION

**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 to hose as shown.



5. Pull engine starter rope slowly several times until antifreeze comes out of high pressure hose connection of pump.
  6. Remove garden hose from water inlet of pump.
  7. Reconnect spark plug wire.
- \*Windshield washer fluid may also be used

### PRESSURE WASHER

1. Drain all water from high pressure hose, coil it, and store it in cradle of the pressure washer handle.
2. Drain all water from spray gun and wand by holding spray gun in a vertical position with nozzle end pointing down and squeezing trigger. Store in gun holder.
3. Store chemical hose so it is protected from damage.

## TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	CORRECTION
<b>Engine will not start (see Engine Manual for further engine troubleshooting)</b>	No fuel.	Add Fuel.
	Pressure builds up after two pulls on the recoil starter or after initial use.	Squeeze gun trigger to relieve pressure.
	Choke lever in the "No Choke" position.	Move choke to the "Choke" position.
	Spark plug wire not attached.	Attach spark plug wire.
	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.	Move choke to the "No Choke" position.
<b>No or low pressure (initial use)</b>	Spray wand not in high pressure.	See How to Use Spray Wand instructions in the Operation Section.
	Low water supply.	Water supply must be at least 5 GPM @ 20 PSI.
	Leak at high pressure hose fitting.	Repair leak. Apply sealant tape if necessary.
	Nozzle obstructed.	See Nozzle Cleaning instructions in the Maintenance section.
	Water filter screen clogged.	Remove and clean filter.
	Air in hose.	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 the 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 air
	Choke lever in the "Choke" position.	Move choke to the "No Choke" position.
	Throttle control lever is not in the "Fast" position.	Move throttle control lever to the "Fast" position.
	High pressure hose is too long.	Use high pressure hose under 100 feet.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTION</b>
<b>Will not draw chemicals</b>	Spray wand not in low pressure.	See How to Use Spray Wand paragraph in the Operation Section.
	Chemical filter clogged.	Clean filter.
	Chemical screen not in cleaning solution.	Make sure end of chemical hose is fully submerged into cleaning solution.
	Chemical too thick.	Dilute chemical. Chemical should be the same consistency as water.
	Pressure hose is too long	Lengthen water supply hose instead of high pressure hose.
	Chemical build up in chemical injector.	Have parts cleaned or replaced by AWSC.
<b>No or low pressure (after period of normal use)</b>	Worn seal or packing	Have replaced by AWSC.
	Worn or obstructed valves.	Have replaced by AWSC.
	Worn unloader piston.	Have replaced by AWSC.
<b>Water leaking at gun/spray wand connection</b>	Worn or broken o-ring.	Check and replace.
	Loose hose connection.	Tighten.
<b>Water leaking at pump</b>	Loose connections.	Tighten.
	Piston packings worn.	Have replaced by AWSC.
	Worn or broken o-rings.	Have replaced by AWSC.
	Pump head or tubes damaged from freezing.	Have replaced by AWSC.
<b>Pump Pulsates</b>	Nozzle obstructed.	See Nozzle Cleaning paragraph in the Maintenance section for the correct procedure.

## LIMITED WARRANTY

**DeVilbiss Air Power** Company warrants to the original purchaser who uses the product in a consumer application (personal, residential or household usage) that all products covered under this warranty are free from defects in material and workmanship for one year from the date of purchase. All products covered by this limited warranty which are used in commercial applications (i.e., income producing) are warranted to be free of defects in material and workmanship for 90 days from the date of original purchase. Products covered under this warranty include air compressors, air tools, service parts, pressure washers, and generators.

**DeVilbiss Air Power** Company will repair or replace, at DeVilbiss' option, products or components which have failed within the warranty period. Service will be scheduled according to the normal work flow and business hours at the service center location, and the availability of replacement parts. All decisions of DeVilbiss Air Power Company with regard to this limited warranty shall be final.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### RESPONSIBILITY OF ORIGINAL PURCHASER (initial User):

- To process a warranty claim on this product, DO NOT return it to the retailer. The product must be evaluated by an Authorized Warranty Service Center. For the location of the nearest Authorized Warranty Service Center call 1-800-888-2468, 24 hours a day, 7 days a week or visit our web site @ devap.com.
- Retain original cash register sales receipt as proof of purchase for warranty work.
- Use reasonable care in the operation and maintenance of the product as described in the Owners Manual(s).
- Deliver or ship the product to the nearest Authorized Warranty Service Center. Freight costs, if any, must be paid by the purchaser.
- Air compressors with 60 and 80 gallon tanks will be inspected at the site of installation. Contact the nearest Authorized Warranty Service Center that provides on-site service calls for service call arrangements.
- If the purchaser does not receive satisfactory results from the Authorized Warranty Service Center, the purchaser should contact DeVilbiss Air Power Company.

### THIS WARRANTY DOES NOT COVER:

- Merchandise sold as reconditioned, used as rental equipment, or floor or display models.
- Merchandise that has become damaged or inoperative because of ordinary wear, misuse\*, cold, heat, rain, excessive humidity, freeze damage, use of improper chemicals, negligence, accident, failure to operate the product in accordance with the instructions provided in the Owners Manual(s) supplied with the product, improper maintenance, the use of accessories or attachments not recommended by DeVilbiss Air Power Company, or unauthorized repair or alterations.
- \* An air compressor that pumps air more than the recommended duty cycle during a one hour period may be considered misuse.
- Repair and transportation costs of merchandise determined not to be defective.
- Costs associated with assembly, required oil, adjustments or other installation and start-up costs.
- Expendable parts or accessories supplied with the product which are expected to become inoperative or unuseable after a reasonable period of use, including but not limited to sanding disks or pads, saw and shear blades, grinding stones, springs, chisels, nozzles, o-rings, air jets, washers and similar accessories.
- Merchandise sold by DeVilbiss Air Power Company which has been manufactured by and identified as the product of another company, such as gasoline engines. The product manufacturer's warranty, if any, will apply.
- **ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT IS NOT COVERED BY THIS WARRANTY.** 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.
- **IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.



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