

DIESEL PRESSURE WASHER



IMPORTANT:

Please make certain that everyone who use the pressure washer thoroughly reads and understands these instructions prior to operation

PREFACE

Thank you for purchasing our company products, we appreciate your business. The following manual is only a guide to assist you and is not a complete or comprehensive manual of all aspects of maintaining and repairing your pressure washer. The equipment you have purchased is a complex piece of machinery. We recommend that that you consult with a dealer if you have doubts or concerns as to your experience or ability to properly maintain or repair your equipment. You will save time and the inconvenience of having to go back to the store if you choose to write or call us concerning missing parts, service questions, operating advice, and/or assembly questions. Our diesel pressure washers have some of the following features:

- Lightweight construction
- Air cooled
- Four-stroke diesel engine
- Recoil starter (optional electric start)
- Large fuel tank
- Included high pressure hose
- Included high pressure spray gun

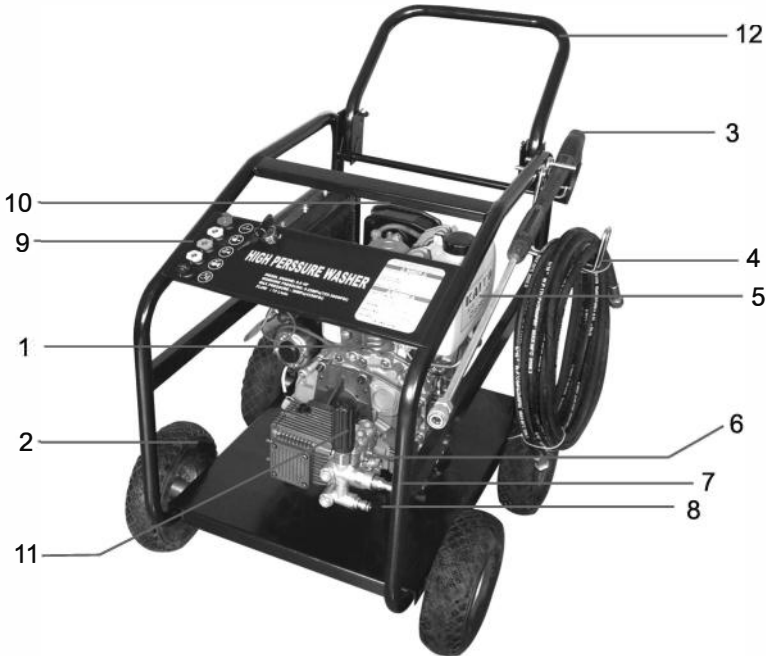
This manual will explain how to operate and service your pressure washer set.

If you have any questions or suggestions about this manual, please contact your local dealer or us directly. ***Consumers should notice that this manual might differ slightly from the actual product as more improvements are made to our products. Some of the pictures in this manual may differ slightly from the actual product as well. Reserves the right to make changes at any time without notice and without incurring any obligation.***

EQUIPMENT DESCRIPTION & KNOWING YOUR PRESSUR WASHER

Please read this manual and follow the procedures covered in this manual. Bec familiar with the pressure washers functions, applications, and limitations.

Below is a diagram of the locations of the various controls and functions of the pressure washer.



No.	Description	No.	Description
1	Diesel engine	7	Water Outlet connector
2	Wheel	8	Water inlet
3	Spray Gun	9	Gun nozzle
4	High pressure hose	10	Air filter
5	Fuel tank	11	Pressure regulator
6	Pump head	12	Handle

REMOVING PRESSURE WASHER FROM CARTON

- Open the box and remove the high-pressure hose, handle, and parts bag included with the pressure washer.
- Cut the vertical corners of the carton and roll the pressure washer out of the box instead of picking it up.

CARTON CONTENTS

Items included in carton

- Main unit
- Handle
- High pressure hose
- Spray gun
- Owner's manual
- Engine manual
- Quick connect nozzles

SAFETY PRECAUTIONS

In order to ensure safety for the consumer, please carefully follow instructions on being careful with the pressure washers.

Operate the pressure washer **ONLY** outdoors. **NEVER** operate the pressure washer indoors as the engine gives off poisonous carbon monoxide, an odorless, and colorless gas. Inhaling carbon monoxide will cause nausea, fainting or death. Also, keep the pressure washer at least 3 feet away from flammable matter for adequate ventilation.

REFUELING PRECAUTIONS

Please follow the guidelines listed below when adding fuel.

- Turn the pressure washer OFF and let it cool at least 2 minutes before removing the gas cap.
- Always fill the fuel tank outdoors.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other igniting sources.
- Never overfill the tank and also allow some extra space for fuel expansion.
- Do not smoke or light cigarettes.

WHEN OPERATING EQUIPMENT

- Operate the pressure washer on level surfaces only. Inclined surfaces reduce the effective lubrication of the engine.
- Do not spray flammable liquids

WHEN TRANSPORTING OR REPAIRING EQUIPMENT

- Transport / repair with the fuel tank empty or with fuel shutoff valve in the OFF position.

WHEN STORING FUEL OR EQUIPMENT WITH FUEL IN TANK

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

SPRAYING

- Always keep the water spray away from electrical wiring or a fatal electric shock may occur.
- The high pressure of the equipment can pierce skin and its underlying

tissues. Leading to serious injury and possible amputation.

- Never aim the spray gun at people, animals, or plants.
- Never let children operate or get new the pressure washer.
- Do not repair the high pressure hose; replace it.
- Always wear eye protection when near or using this equipment.
- When in jet spray mode, do not point spray gun at glass.
- Never aim the spray gun at plants.

BATTERY (optional: for electric start models only)

Batteries contain battery acid or electrolyte fluid or battery acid. Batteries emit hydrogen gases as battery is being charged. The slightest spark will ignite hydrogen and cause an explosion.

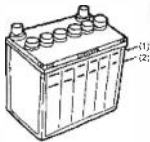
Note: Our units come shipped with a dry battery for safety shipping purposes. Dry batteries need to be filled with electrolyte solution (battery acid) before use. During use, the battery level should be checked at least once a month to make sure they are between the high and low marks.



4. BATTERY (only for Model)

Check to make sure that the electrolyte level in each cell to be sure they are all between upper and lower limits.

- (1) Upper limit
- (2) Lower limit



ENGINE SAFETY PRECAUTIONS

Do not touch hot surfaces. Allow equipment to fully cool down before touching.

After the pressure washer has been run, the engine produces heat. The temperatures of the muffler and nearby

areas can reach or exceed 160°F. Severe burns will occur on contact with skin.

Do not modify the pressure washer in anyway. The pressure washer supplies the rated pressure and rated flow rate at its governed speed.

PREPARATION BEFORE OPERATION

If you have any problems with the assembly of your pressure washer or if parts are missing or damaged, please call your local dealer.

Please follow the following guidelines to prepare your pressure washer for operation.

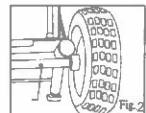
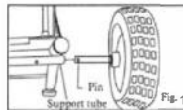
- Fill out and send in the registration card from the owners manual
- Attach the handle to the main unit.
- Add 15W40 oil to the engine.
- Add diesel fuel to the fuel tank.
- Attach the high-pressure hose to the pump and to the spray gun.
- Connect the water supply to the pump.
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ASSEMBLE HOOK

Align the hole on the machine frame, insert the bolt provided, then assemble the hose and gun hook.

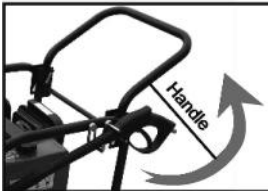
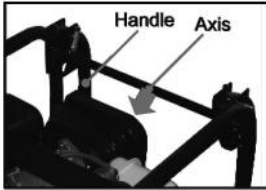
ASSEMBLE WHEELS

Hold the location pin in the wheel set backward in horizontal level and press the locating pin into supporting tube until the click is heard, which indicates the pin clutches at the supporting tube (Fig.1). Until the pin is higher than the thickness of supporting wall (Fig.2).



ASSEMBLE HANDLE

Press the axis to the lowest position, meanwhile rotate the handle position (see picture blew).



ADDING ENGINE OIL

- Make sure pressure washer is on a level surface
- Fill the engine with SAE15W40 engine oil until the dipstick reads full. This is approximately 40 ounces.

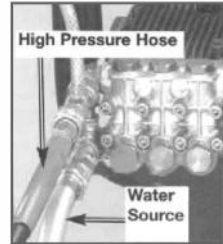
NOTE: Please check the engine oil frequently during engine break in. Refer to the engine owner's manual for recommendations.

ADDING FUEL

- Do not fill fuel tank indoors as there is not enough proper ventilation.
- Do not smoke while filling fuel tank
- Do not overfill the fuel tank and always leave extra space for fuel expansion. Always wipe away any fuel spillage.
- Clean the area around the fuel fill cap and place the fuel cap back into place.

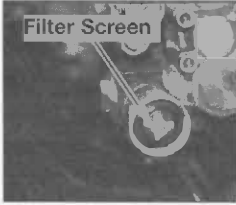
CONNECTING THE HOSE AND WATER SUPPLY TO PUMP HEAD

WARNING: All hoses must be attached before starting the engine. Starting the engine without all the hoses connected and water supplied will damage the pump.



- Uncoil the high-pressure hose and attach the female connector on the hose to the male connector on the pump.
- Attach the other connector on the high-pressure hose to the spray gun. Pull on the hose to verify a tight connection.
- Before connecting your garden hose to the pump head, verify to make sure the filter screen is clean. Also,

if the screen is damaged, please replace the filter before connecting the garden hose to the pump head. To prevent buildup of debris on your pump head filter, run the garden hose for 30 seconds to clean out any debris in the garden hose before connecting it to your pump head.



- Tighten the garden hose by hand.
- Turn on water and squeeze trigger on the gun to purge the pump system of air and debris.

NOTE: Before starting the pressure washer, be sure you are wearing adequate eye protection.

HOW TO OPERATE YOUR PRESSURE WASHER

STARTING THE ENGINE.

Before starting the engine, verify that the engine oil is full, fuel is full, and air filter is in place. Be sure that all hoses are tightened and the handle is secure. Provide a proper water supply (not to exceed 100 degrees F) with a minimum flow of 3.3 gallons per minute.

- Make sure the unit is in a level position.
- Turn the fuel valve to the “ON” position.
- Set the speed governor switch to the “RUN” position.

- Pull on the recoil handle until the engine starts. **NOTE:** Do not let the rope snap back against the starter.
- If your unit comes with an optional electric starter, please turn the key to the start position until the engine starts. Once the engine turns over, release the key so it can automatically return to the “ON” position.

STOPPING THE PRESSURE WASHER

- Push the stop lever on the speed governor of the engine.
- Move the fuel valve to the “Off” position.
- Wait for the engine to idle down.
- To relieve the system pressure, squeeze the spray gun trigger to relieve the pressure in the hose.

USING THE NOZZLES

Always be sure that the trigger is locked and that there is no pressure at the nozzle before changing the nozzle.

Please follow these guidelines to change nozzles.

- Engage the safety latch on the spray gun.
- Twist the nozzle on the spray gun off and put it in a safe place.
- Choose the desired nozzle and twist it back on the spray gun being careful to not over-tighten the nozzle.
- Always keep the spray nozzle about 1 to 2 feet away from the cleaning surface. Having the spray nozzle too close to the cleaning surface may damage your cleaning surface.

CLEANING AND USING CHEMICALS

All hoses must be attached to the pump head before starting. Starting the pump head without all the hoses connected will damage the pump.

Do not use household detergents for the pressure washer. Use only specially designed detergents for the pressure washer.

Please follow these guidelines to apply detergents

- Use the proper nozzles.
- Prepare the detergent as required by the manufacturer of the detergent.
- Place the strainer and chemical injection siphon/filter into the detergent container.
- Make sure the garden hose is connected to the pump head. Many users prefer to use a container supply of water with the garden hose water running into the container. There is a hose connected from the container of water to the pump head. Just be sure the water level is full in the container.
- Apply the detergent to a dry surface, starting at lower portion of area to be washed and work upward, using long, even, overlapping strokes. Do not allow the detergent to dry on the surface (prevents streaking).

PRESSURE WASHER RINSING

When using the pressure washer spray gun, be careful of the backwards kick from the spray gun, especially while on a ladder or on an elevated position.

- Remove the chemical nozzle from the spray gun extension.
- Choose the desired high-pressure nozzle following the guidelines for installing a nozzle.
- Always keeping a good distance from the surface, adjust the desired pressure by turning the knob clockwise and counterclockwise respectively. Use lower pressure to wash items that have nice painting finishing. Use higher pressure to strip paint and degrease driveways.



- A high-pressure spray could be applied to a small area for maximum cleaning pressure. Before continuing, make sure there is no damage found. If no damage is found it is okay to continue cleaning.
- Start at the top of the area to be rinsed, working down with same overlapping strokes as you used for cleaning.

PRESSURE WASHER MAINTENANCE

Before using your pressure washer

- Always check engine oil before using
- Always check the water inlet screen for debris or damage. If damaged, replace if necessary.
- Check high-pressure hose for leaks.
- Check spray gun, nozzle extension, and nozzles for leaks.

- Check detergent siphoning tube and filter for damage.
- Always flush out debris from garden hose by running water through it before connecting it to the pump head.

PUMP MAINTENANCE

Change the pump oil after the first 50 hours of operation; this is the break in period. Then every oil change will be after 200 hours of use or 3 months; whichever comes first.

To change the pump oil, please follow the guidelines below

- Clean the area around the oil drain plug at the bottom of the pump.
- Remove the drain plug and drain all the oil into a container.
- When oil has completely drained, install the oil drain plug back into place and tighten firmly.
- Clean the area around the pump oil dipstick and remove the dipstick. Fill with SAE30 weight oil until the "FULL" mark on the dipstick has been reached.
- Install the oil dipstick.
- Wipe up any spilled oil and take the used oil to a recycling center.

ENGINE MAINTENANCE

See the engine owner's manual for instructions on how to properly maintain the engine as well as a complete parts list of the various engine components.

PREPARING THE UNIT FOR STORAGE

Water causes deposits and rust. If you do not plan to use the pressure washer for more than a month, please follow these procedures.

- Flush the detergent siphoning tube by placing the filter into a bucket of clean water while running the pressure washer in low-pressure mode. Repeat this procedure for a few times.
- Shut the engine off and let it cool, then remove all the hoses.
- Clear out the liquids remaining in the pump by pulling the recoil handle about 6 times. This should flush out the remaining liquid within the pump.
- Store the unit in a clean and dry place.
- Also, refer the engine owner's manual for instructions on storing the engine for long periods of time.

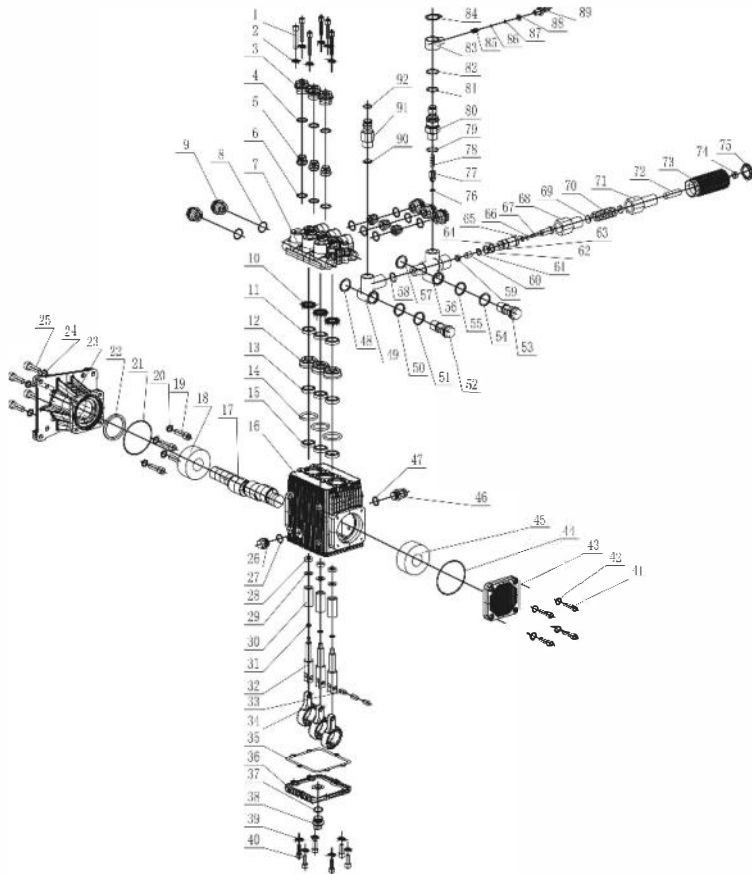
TECHNICAL SPECIFICATION

Outlet Pressure 20MPa/ 25MPa
 Max.outlet Pressure 25MPa/ 30MPa
 Max.inlet Pressure 0.3MPa
 Pump oil Type SAE 30W nondetergent
 Engine outlet Power 6/9HP

TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
<p>Engine will not start (see Engine Manual for further engine troubleshooting)</p>	<p>No fuel. Low oil Pressure builds up after two pulls on the recoil starter or after initial use. Choke lever in the "No Choke" position. Spark plug wire not attached. Engine ON/OFF switch in OFF position 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. Fuel valve closed</p>	<p>Add Fuel. Add required amount of oil. Squeeze gun trigger to relieve pressure. Move choke to the "Choke" position. Attach spark plug wire. Place engine ON/OFF switch in on position. Move choke to the "No Choke" position. Move the fuel valve lever to the "Open" position.</p>
<p>No or low pressure (initial use)</p>	<p>Spray wand not in high pressure. Low water supply. Leak at high pressure hose fitting. Nozzle obstructed. Water filter screen clogged. Defective E-Z start valve. Air in hose. Choke lever in the "Choke" position. Throttle control lever is not in the "Fast" position. High pressure hose is too long.</p>	<p>See How to Use Spray Wand paragraph in the Operation Section. Water supply must be at least 5 GPM @20 PSI. Tighten. Apply sealant tape if necessary. See Spray Wand paragraph in the Maintenance section for the correct procedure. Remove and clean filter. Check with Authorized Warranty Service Center(AWSC.) 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 Move choke to the "No Choke" position. Move throttle control lever to the "Fast" position. Use high pressure hose under 100 feet.</p>

PROBLEM	CAUSE	CORRECTION
Will not draw chemicals	Spray wand not in low pressure. Chemical filter clogged. Chemical screen not in chemical Chemical too thick. Pressure hose is too long Chemical build up in chemical injector.	See How to Use Spray Wand paragraph in the Operation Section. Clean filter. Ensure end of chemical hose is fully submerged into chemical. Dilute chemical. Chemical should be the same consistency as water. Lengthen water supply hose instead of high pressure hose. Have parts cleaned or replaced by AWSC.
No or low pressure (after period of normal use)	Worn seal or packing Worn or obstructed valves. Worn unloader piston. Worn E-Z start valve.	Have replaced by AWSC. Have replaced by AWSC. Have replaced by AWSC. Have replaced by AWSC.
Water leaking at gun/spray wand connection	Worn or broken o-ring. Loose hose connection.	Check and replace. Tighten.
Water leaking at pump	Loose connections. Piston packings worn. Worn or broken o-rings. Pump head or tubes damaged from freezing.	Tighten. Have replaced by AWSC. Have replaced by AWSC. Have replaced by AWSC.
Oil leaking at pump	Oil seals worn. Loose drain plug. Worn drain plug, o-ring Worn fill plug o-ring. Pump overfilled. Incorrect oil used. Vent plug is clogged.	Have replaced by AWSC. Tighten. Check and replace. Check and replace. Check for correct amount. Drain and fill with correct amount and type of oil. Clean vent plug; blow air through it to remove any blockage. If problem persists, replace plug.
Pump Pulsates	Nozzle obstructed.	See Spray Wand paragraph in the Maintenance section for the correct procedure.



No.	Name	Qty	No.	Name	Qty	No.	Name	Qty	No.	Name	Qty
1	columnar Bolt	6	24	stretch washer	4	47	O-ring	1	70	spring	1
2	stretch washer	6	25	Bolt	4	48	O-ring	1	71	adjust pressure plus	1
3	valve cap	6	26	screw cap	3	49	three-direction	1	72	two head bolt	1
4	O-ring	6	27	O-ring	3	50	O-ring	1	73	adjust pressure handle	1
5	Inlet and Outlet valve	6	28	Nut	3	51	O-ring	1	74	Bolt	1
6	O-ring	6	29	washer	3	52	Inlet connected pipe	1	75	adjust pressure handle cover	1
7	suprum pump body	1	30	ceramic plunger	3	53	Outlet connected pipe	1	76	O-ring	1
8	O-ring	2	31	O-ring	3	54	O-ring	1	77	backwater valve	1
9	backwater stem	2	32	plunger core	3	55	O-ring	1	78	backwater spring	1
10	water seal washer	3	33	column pin	3	56	four-direction	1	79	O-ring	1
11	water seal	3	34	connection pole	1	57	O-ring	1	80	Outlet connection	1
12	mesosphere	3	35	crankcase paper washer	1	58	O-ring	1	81	O-ring	1
13	water seal	3	36	crankcase cap(big)	1	59	adjusted pressure valve	1	82	O-ring	1
14	O-ring	3	37	O-ring	1	60	adjusted pressure valve	1	83	revolving connection	1
15	oil seal	3	38	oil plug	6	61	O-ring	1	84	O-ring	1
16	crankcase	1	39	stretch washer	6	62	O-ring	1	85	pagoda spring	1
17	brace	1	40	Bolt	4	63	O-ring	1	86	steel ball	1
18	bearing	1	41	Bolt	4	64	valve core	1	87	O-ring	1
19	Bolt	4	42	stretch washer	1	65	O-ring	1	88	O-ring	1
20	stretch washer	4	43	crankcase cap(small)	1	66	O-ring	1	89	soap connect	1
21	O-ring	1	44	O-ring	1	67	adjust pressure valve	1	90	O-ring	1
22	oil seal	1	45	bearing	1	68	coper connection	1	91	Inlet connect	1
23	connection base	1	46	screw cap	1	69	spring washer	1	92	O-ring	1