



Operator's Manual

This manual contains important
warnings and instructions

Read and retain for future reference

MODEL	_____
SERIAL	_____
PUMP	7AQ
PSI	_____
GPM	_____
HP	_____
VOLTS	_____

DIRT KILLER PRESSURE WASHERS
1708 WHITEHEAD ROAD
BALTIMORE, MD 21207

800.544.1188
www.dirtkiller.com

March, 2000

DANGER

1. Only those who have read this manual should use your Dirt Killer Pressure Washer.
2. **Never** fill gas when the unit is running or hot.
3. **Never** leave the unit unattended while running or on.
4. **Never** point the nozzle at yourself or others. This may lead to bodily harm or fatality.

WARNING

1. Always wear eye, ear and body protection. Shoes need to be steel reinforced in the toe.
2. Maintain a grounded machine. Respect your electrical supply and use a GFI.
3. Respect and use caution when using hot water pressure washers.
4. Respect and use caution when using chemical. Read the MSDS sheets before using any chemical.
5. Always wear protective clothing, gloves and face shield when using chemicals.

AVOID CAVITATION DAMAGE

Cavitation is the formation and collapse of gaseous cavities in a liquid causing severe wear or eroding of the metal surfaces in the pump.

The most common cause of cavitation is when the pump is starved for water. The most obvious sign of cavitation is a hammering noise. This noise can be either constant or intermittent depending upon the degree of cavitation and damage to the pump. Persistent cavitation will eventually cause flow and pressure to decrease.

It is important to carefully check your system during assembly and operation to avoid the serious damage that can be caused by cavitation.

Check your system for these conditions which may contribute to, or directly cause, cavitation:

1. Inadequate inlet line size
2. Insufficient inlet flow or excessive suction
3. Excessive inlet line length
4. Rigid inlet plumbing
5. Too many elbows and/or fittings
6. Excessively hot inlet water
7. Air leak in inlet plumbing
8. Agitation in supply reservoir
9. Inadequate increase of inlet flow for fluids of higher specific gravity
10. Inadequate increase of inlet flow for higher temperature fluids
11. Clogged inlet filters

PUMP STRUCTURE

The Kranzle axial pump used on Dirt Killer pressure washers is equipped with three ceramic coated stainless steel plungers and Teflon graphite backup rings. This allows the unit to run dry. However, since the pump self-primers it must be fed the amount of water specified for that model. Inadequate water supply causes cavitation. Prolonged cavitation will damage pump parts. (Cavitation is not covered under warranty).

HOT WATER-START UP

1. Connect your unit to water, making sure that your supply hose is at least 5/8" diameter and has no leaks, or kinks. If so, make necessary repairs. **Note**- On larger Dirt Killer Pressure Washers (2800 psi or more) use 3/4" hose.
2. Filter all incoming water and be sure your unit receives its full water flow requirement.
3. Assemble your high pressure hose, gun/wand, and nozzle by quick coupling them together.
4. Mix your cleaning agents in a separate clean container adhering to manufacturer's recommended dilution ratios. Submerge the chemical pickup line into the solution. For soap injectors with an adjustable valve, open the valve one full turn to allow the maximum amount of solution. (*Max. dilution ratio is 10 parts water to 1 part chemical*).
5. Make sure burner fuel tank is filled with diesel fuel.
6. If your pressure washer is electric, plug the cord into an outlet that will provide sufficient voltage to the unit. On 110v machines always use ground 12-3 gauge U.L. approved extension cords. Never run more than 50 feet of extension cord from the source. Dirt Killer endorses the use of U.L. approved ground fault interrupters (GFI). (Warranty will be void if a GFI equipped model has the GFI plug cut off).
7. If your pressure washer is gasoline driven, always check and fill the gas tank prior to starting.
8. Turn on inlet water and purge air from the system by squeezing the gun trigger.
9. Turn gas valve on, close choke lever per manufacturers instructions, advance throttle lever approximately 1/3 of the way open, and turn the engine switch to **on**.
10. Start engine with the pull cord (For easier starting, squeeze the trigger on spray gun as you start the unit). **Note**- If unit has

optional electric start turn switch to **start** and crank the engine until it runs.

11. Allow the machine to warm-up before switching to **burner**.
12. Adjust the temperature control knob to desired temperature (*Max. water temp is 210°*) on hot water burner units.
13. Advance the throttle to **full**.
14. You are now ready to clean.

COLD WATER-START UP

1. For gas powered cold water units, follow steps 1-4 as outlined in **hot water start up**.
2. Always check and fill the gas tank prior to starting.
3. Turn on inlet water and purge air from the system by squeezing the gun trigger.
4. Turn gas valve on, close choke lever per manufacturers instructions, advance throttle lever approximately 1/3 of the way open, and turn the engine switch to **on**.
5. Start engine with the pull cord (For easier starting, squeeze the trigger on spray gun as you start the unit). **Note**- If unit has optional electric start turn switch to **start** and crank the engine until it runs.
6. Allow the machine to warm-up a few seconds.
7. Open the throttle to **full**.
8. You are now ready to clean.

ELECTRIC START-UP

Be aware of **voltage** and **amps** stamped on motor. Use only U.L. approved grounded cord and plug. 110V units must use 12-3 gauge extension cords. Never run more than 50 feet of extension cord from your power source. When starting an electric pressure washer **pull the gunjet trigger** as you turn on the machine to insure longer motor life.

SOAP INJECTOR

To draw chemical/detergent, be sure the pick-up tube is inserted into the chemical container with the tube submerged in the solution. Change nozzle to the soap nozzle (nozzle with black plastic cover and large orifice); or if using a Variojet nozzle, push the nozzle body to the forward position, and squeeze the gunjet trigger. The gauge will register a couple hundred pounds of pressure and chemical/soap will mix into water stream at a 10-1 ratio. Soap will take several seconds to pass through the high pressure hose.

UNLOADER

To adjust the pressure turn the unloader handle. Rotate handle in a counter-clockwise direction to reduce pressure. Rotate in a clockwise direction to increase the pressure back to the maximum. (Maximum pressure is set at the factory. Tampering with the setting will void pump warranty).

HOT WATER-SHUT DOWN

1. Turn chemical injector **off**.
2. Turn switch from **burner** to **pump**. Allow fresh water flow through unit for 1-3 minutes. This enables the burner coil to cool down.
3. If unit is gasoline powered, throttle down to **idle**.
4. Turn engine switch to **off**.
5. Turn water supply **off**.
6. Squeeze gun jet trigger to release any remaining water pressure.
7. Disconnect supply hose, uncouple high pressure hose, gun, wand.
8. When traveling with unit always turn the gas lever **off**.
9. In colder climates you must keep the heater coil from freezing (*refer to freeze protection*).

COLD WATER-SHUT DOWN

1. Move throttle lever to **idle** position (*Gas powered*)
2. Turn engine switch to **off**.
3. Turn water source **off**.
4. Squeeze gun jet trigger to relieve remaining pressure.
5. Disconnect water supply hose and quick disconnect the hose, gun, wand and nozzle.
6. In colder climates it is necessary to protect the pump from freezing. (*refer to freeze protection*).

PUMP LUBRICATION

Use **Synthetic Oil, 5-W50**. Change the oil after the first 50 hours of operation and every 200 hours thereafter. Always check oil prior to using. Fill until either oil just touches the bottom of dip stick or is visible in sight glass. Do not overfill. See Tool Chart for pump oil capacities.

ENGINE LUBRICATION

Honda 5.5, 6.5, 11, and 13 HP use 10-W30 oil. Change the oil after the first 15 - 20 hours of operation and every 50 hours thereafter. Check oil prior to using.

AIR FILTER

Clean or change filter every 50-100 hours of operation depending on the work environment.

SPARK PLUGS

Clean after 100 hours of operation and change every 200 hours thereafter.

CHEMICALS

The exit side or down stream chemical injector allows you to apply chemical without the chemicals coming into contact with the pump. Use the down-stream injector to apply soap, pesticides, acids, alkaline and plant protective agents. Contact your local Dirt Killer distributor regarding use of the correct chemical for your Dirt Killer Pressure Washer.

HOT WATER MAINTENANCE

Periodically check the fuel filter for dirt or water contamination. Remove filter and clean it. If necessary, replace the nylon mesh filter element. We suggest periodic maintenance using **Red Devil** additive to burn off trouble-causing soot. Use 2 oz. per full tank of fuel. Make sure that coil is protected from freezing. Dirt Killer Pressure Washers use the **Wayne Burners**. If you have a hot water unit, please read the enclosed Wayne instruction manual.

FREEZE PROTECTION

You can run the Kranzle pump **dry** without damage in order to drain the pump and water hoses to protect cold water units. However, to fully protect hot water coils from freezing, we recommend the use of antifreeze. Simply hook up suction hose from inlet water connection to container of antifreeze. Run the unit long enough to fill the coil with the antifreeze mixture.

PRESSURE SWITCH

Dirt Killer hot water pressure washers use a pressure switch to control burner ignition. When the gunjet trigger is pulled the flow switch detects the pressure in system and ignites the burner. When the gunjet is closed, and the pump is in by-pass mode and no pressure is registered on gauge; the pressure switch shuts down the burner. At no time should the burner be on when the gunjet is closed. If this occurs, shut off the pressure washer immediately and consult a service technician.

H3212/H3612 OPERATIONS

These units are equipped with a 12 volt burner. This burner is powered by both rectifier from the Honda engine and the marine battery installed on the pressure washer when operating in the hot water mode. The system can operate for 12 hours in the hot water mode before the battery needs to be recharged. This 12 hours can be con-

tinuous or through periodic operation. When the battery is depleted the burner will no longer run. Recharge the battery with a slow trickle charger with automatic shut-off. An overnight charge should completely recharge the battery. The battery will also recharge when operating as a cold water unit; the rectifier of the Honda engine provides a charge to the marine battery. However, this process is much slower than a battery recharger.

DIRT KILLER NOZZLE

The Dirt Killer nozzle hits much harder than regular spray nozzles and should be used carefully to avoid damage to surfaces to be cleaned. To insure long life of your Dirt Killer nozzle follow these simple rules: 1) always point the nozzle down when starting to spray, 2) do not use with water over 180° F., 3) keep dirt out of the nozzle.

VARIOJET NOZZLE

Models H200, H357, H260, E340 come equipped with the variojet nozzle. For high pressure spray pull back on the nozzle body. For low pressure application of soap/chemical, push the nozzle body forward. To vary the fan spray angle twist the nozzle body to desired angle.

WARRANTY

Dirt Killer pressure washers are warranted against manufacturer defects for one year from the original purchase date with the following exceptions: the Kranzle pump manifold has a ten year warranty, the stainless steel frame has a three year warranty. Engines and motors are under separate warranty and are reviewed by that manufacturer for consideration. Honda GX series engines have a two year warranty, while Baldor, Leeson and Kranzle electric motors have one year warranties. Warranties apply only for manufacturing defects and do not apply to normal wear, misapplication, or misuse. All warranties require the original receipt. Warranty does not cover any costs associated with production downtime or rentals. To request warranty consideration, call customer service for a return authorization number and instructions on our warranty procedure. Consideration is performed F.O.B. in Glen Burnie or Owings Mills, MD. Warranty is non-transferable.

TROUBLE SHOOTING

If you experience difficulties with your Pressure Washer, consult the trouble shooting chart below.

All repairs can be performed by **YOU**, with common tools as indicated on the tool chart.

If problem continues, contact your local Dirt Killer Pressure Washer distributor.

TOOL CHART					
	valve cap	pump head	y strainer	bolt torque	pump oil capacity
AP PUMP	13 mm wrench	6 mm allen wrench	20 mm wrench	225 in lbs.	.5 quarts
APG PUMP	19 mm wrench	6 mm allen wrench	20 mm wrench	225 in lbs.	.5 quarts
AY PUMP	22 mm wrench	10 mm allen wrench	20 mm wrench	250 in lbs. (engine mount) 300 in lbs. (pump manifold)	1.0 quarts
AQ PUMP	22 mm wrench	10 mm allen wrench	20 mm wrench	250 in lbs. (engine mount) 300 in lbs. (pump manifold)	1.0 quarts

PROBLEM	DIAGNOSIS	REMEDY
<i>Low Pressure</i>	worn nozzle air leak in inlet plumbing inlet suction strainer clogged worn packing inadequate water supply fouled or dirty inlet discharge valves leaky discharge hose	replace nozzle disassemble, reseal and reassemble clean and check frequently check and replace packing check water supply and inlet filter check and replace valves check and replace hose
<i>Pump Runs Rough</i>	restricted inlet or air in plumbing inlet restrictions or air leaks	proper size inlet plumbing check for air tight seal
<i>Pump Pulsates</i>	stuck inlet or discharge valve	clean out foreign material replace worn valves
<i>Slight Water Leakage</i>	worn packing	install new packing
<i>Packing Failure</i>	scored, damaged or worn plunger overpressure to inlet manifold abrasive material in fluid excessive temp. or pressure of fluid over pressure of pumps	replace plungers reduce inlet pressure install proper filtration check for proper temp. and pressure reduce pressure
<i>No Water</i>	nozzle plugged kinks in water hose clogged soap injector	clean or replace nozzle unkink hose clean soap injector
<i>Oil Leak between Pump Head and Transmission</i>	oil seal leaking chipped plunger	renew oil seal or O-ring replace plunger
<i>Oil Leaking Between Transmission and Motor</i>	screw loosened flat gasket leaks	tighten screw replace original
<i>Water in Oil (milky color)</i>	worn high pressure seals water condensation chipped plunger	change high pressure seals (packings) change oil replace plunger
<i>Motor is Hot</i>	larger gauge drop cord shorter length drop cord unloader sticking wrong nozzle orifice size	110 V needs 12-3 gauge cord remove drop cord length replace unloader install proper nozzle
<i>Oil Leakage from Drain Plug</i>	loose drain plug worn drain plug O-ring	tighten drain plug replace O-ring