

Allied Specialized Products

1102 East Cherry St.
Vermillion, SD 57069

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1.800.658.3977



Hot Water Operating Manual

Model No.

Serial No.

“We Operate in an Atmosphere of Concerned Courtesy.”

Dear Customer,

Enclosed you will find a copy of our limited warranty. There are a few things we would like to clarify in our policy in regard to this warranty and our warranty procedure.

1. In Paragraph number 3 “Our obligation under this warranty is expressly limited, at our option to the replacement or repair at **Allied Manufacturing Co., 1102 East Cherry St., Vermillion, SD** to such part or parts as inspection shall disclose to have been defective.
 - a. We do reserve the right to replace or repair.
 - b. This service and decision will be made when the part or machine has been returned to the main plant in Vermillion, SD.

2. Any part or machine which is to be considered for warranty must be sent back prepaid to the main plant. (Returned items sent collect will be refused)
 - A) No machine or part will be accepted unless it has a RGA (Returned Goods Authorization) attached and properly filled out.
 1. Enclosed you will also find a sample form, and additional forms will be sent upon request.
 - a. The RGA is an easy form to fill out. State why you feel the part is not working properly. Be sure to include Model No. and Serial No. on a machine warranty.

 - B) The decision on whether to grant warranty will be delayed if the item has to be sent back to the supplier for warranty configuration.

3. Our dealers and distributors should carry an adequate inventory to be able to replace most parts which need replacing. The returned part when proven defective will either be replaced or repaired at ALLIED’S option and then returned to you.

Sincerely,

Allied Manufacturing Corporation

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Limited Warranty

Allied warrants each new machine manufactured by us to be free from material or workmanship defects for a period of one year from date of service; however, the one year warranty excludes the following:

1. Stuck check valves
2. Pump packing, and/or seals
3. Hose
4. Fuel pump damage due to moisture(pertains to hot water machines only)
5. Clogged filters and screens
6. Nozzles and orifices
7. Paint
8. Gauges
9. Damage caused by improper use of chemicals.

Components warranted by other manufacturers should be referred to their manufacturers nearest factory service center for repair or replacement.

Conditions resulting from misuse, negligence, alterations, accident, or improper repair are not covered under warranty. Our obligation under this warranty is expressly limited, at our option, to the replacement or repair at Allied Manufacturing Co., 1102 East Cherry St., Vermillion, SD 57069, to such part or parts as inspection shall disclose to have been defective.

A mileage charge, coupled with a minimum fee, is many times assessed for local warranty consideration at your place of business. The fee, if assessed, is up to the local distributor.

Thank you for purchasing a quality Allied pressure washer.

IMPORTANT SAFETY INSTRUCTIONS! WARNING:

When using this product the basic precautions should always be followed:

1. Read all the instructions before using the product.
2. When operating, use basic protective clothing.
3. To reduce risk of injury, close supervision is necessary when the product is used near children.
4. Be thoroughly familiar with the controls and know how to stop the product.
5. Stay alert – and closely pay attention to the work at hand.
6. **Do Not** operate the product when fatigued or under the influence of alcohol or certain prescription drugs.
7. Keep the operating area clear of all persons not helping/using the product.
8. **Do Not** over reach or stand on unstable ground. Keep good footing and balance at all times.
9. Follow the maintenance instructions specified by the manual
10. Consult the factory before changing the basic design or operating procedure of this machine.
11. Have trained and qualified technicians connect your machine.
12. Always use proper spray tip for the type of cleaning being done.
13. Use only recommended fuel in machine.

14. For a grounded or double insulated products rated 250volts or less: “This product is provided with a ground fault circuit interrupter built into the power cord plug. If replacement of the plug or cord is needed, use only identical replacement parts.”
15. For grounded or double insulated products rated more than single phase, or over 250volts: “This product should only be connected to the power supply. Receptacle is protected by a ground fault circuit interrupter.”

Warning: Because of Risk of Injury: Do Not Direct Discharge Stream at Persons!!

Grounding Instructions

THIS PRODUCT MUST BE GROUNDED. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of serious shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER- Improper connection to the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service personnel if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product-if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use any type of adaptor with this product.

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

Extension Cords

Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from the product. Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking: “Acceptable for use with outdoor appliances; store indoors while not in use.” Use only extension cords having an electrical rating not less than the rating of the product. Do not use damaged extension cords. Examine extension cord before using and replace if damaged. Do not abuse extension cord and do not yank on any cord to disconnect. Keep cord away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

WARNING- To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

Caution

1. Protect machine from freezing.
2. Gun kicks back – hold with both hands.
3. Hot discharge fluid – **Do not** touch or direct discharge stream at persons.
4. Hot surfaces – use only designated gripping areas of lance (wand or gun).
5. Risk of asphyxiation. Use this product only in a well ventilated area.
6. Connect to individual branch circuit only.

7. If connected to a circuit protected by fuses, use time-delay fuses with this product.
8. When servicing or cleaning needs to be done, disconnect machine from supply circuit.
9. Risk of fire. **Do not** add fuel when the product is operating or still hot.
10. Use on a noncombustible surface, 18 inches (457 MM) or more above the floor.

Manufacturer's Note

The following parts **must** be resealed with **silicone sealant** if they are in any way dismantled for repairs, service, etc. In the process of resealing make sure that all electrical terminals and wires are coated. If silicone is used for gasket purposes be sure and replace with an adequate amount to provide proper seal.

1. Motor Capacity Cover (gasket)
2. Motor Shroud (gasket inside circle on end of motor)
3. Switch Mounting Plate
4. Vacuum Switch
5. High Limit Switch
6. Thermostat.

Pre Set Up

1. Please examine machine and crate carefully for shipping damage.
2. Assemble the pressure gun and hose.
3. Position the machine for easy access from all sides for servicing.
4. Always protect the machine from freezing.
5. Place the machine on a solid level surface.
6. Protect the machine from external damage.

Set Up

1. Have only a trained and qualified person connect and service your machine.
2. Connect the machine to a water supply with a capacity of 1 ½ times the GPM output of the machine.
3. Connect the machine to the proper electrical supply. Comply with all national, state, and local codes. **MAKE SURE THAT IT IS PROPERLY GROUNDED.**

Start Up

Note: The first time the machine is operated after set up or any repairs have been made, always run the machine for a few minutes with the water spray tip removed to flush out the system.

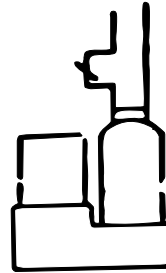
Connect the machine to the proper electrical supply. Comply with all national, state and local codes; make sure it is properly grounded. The machine must be supplied from an adequate sized fused disconnect. If an extension cord is used, keep it as short as possible. (It is better to use a longer hose than to use a long extension cord.) Keep cords off the floor and out of the water.

Follow your chemical manufacturer's recommended mix instructions when using chemicals. Fuel pressure adjustment: Burner air adjustment is factory set for approximately 1100 feet elevation. Adjustment may be required for different altitudes. If unit is smoking, open the air bend. Make slight adjustments and allow a little time for burner to react to adjustments. Supply the machine with proper stacking.

Note: STACKING.



**Single Acting
Draft Control
for Oil**



**Location
for Oil**

The stacking and draft control are not furnished. Contact your local heating sales and service person or your dealer for proper hardware and installation instructions. The following statements are suggestions for stack installation:

- a. Never reduce the diameter of the stack
- b. Prevent cold down drafts from freezing the coil when the machine is not in use.
- c. Oil fired machines must have a single acting draft control installed.
- d. Gas fired machines must have a "draft diverter" installed above the machine.
- e. Install a U.L. listed weather cap.
- f. Comply with all national, state, and local codes.

Start Up Instructions:

1. Turn on water.
2. Turn on electricity.
3. Start the pump
4. If equipped, set temperature control to desired temperature
5. When a steady stream of water flows from the gun, start the burner.
6. Adjust the soap metering valve as required.
7. Open the "vari-head" (turn counter clockwise) on end of wand to lower pressure on units equipped with low pressure chemical application(down stream chemical injection)

Shut Down

1. Turn off the soap valve.
2. Stop the burner.
3. When the water flowing from the gun has cooled and is free of soap, stop the pump.

Changing combination machines from high pressure to steam cleaners

Steam Cleaning

1. Turn off machine and allow it to cool.
2. Exchange the high pressure trigger gun for the steam gun on units so equipped.
The steam gun will not be able to shut off the water flow.
(Caution: Do not use the trigger gun when in steam mode)
3. Set temperature control to steam if equipped.
4. Open the bypass valve.
5. Turn on the pump.

High Pressure Cleaning

1. Turn off the machine and allow it to cool.
2. Exchange the steam gun for the high pressure trigger gun on units so equipped.
The high pressure gun will be able to shut off the water flow.
3. Close the bypass valve.
4. Follow the start up procedures.

CHANGING THE OPERATION MODE FOR NON-BYPASS

Steam Cleaning

1. Turn off machine and allow it to cool.
2. Install the steam tip on the water outlet gun. The steam tip will have a larger hole than the pressure tip.
3. Select steam on the temperature control if so equipped.
4. Follow the start up procedure.

High Pressure Cleaning

1. Turn off the machine and allow it to cool.
2. Install the high pressure tip on the water outlet gun. The high pressure tip will have a smaller hole than the steam tip.
3. Select from steam to 200 degrees on the temperature control if so equipped.
4. Follow the start up procedures.

Trouble Shooting

<u>Trouble</u>	<u>Possible Cause</u>	<u>Remedy</u>
Low pressure	Loose belt on pump	Tighten pump
	Leak in water system	Tighten all fittings

	Insufficient water supply	Increase water supply or line size to the machine.
	Outlet orifice worn	Replace with correct orifice. Caution -Do not use smaller than recommended. Excessive pressure will damage the machine.
	(Gun control) unloader valve bypass leak	Repair or replace unloader valve
	Dirty or worn check valves in Pump	Replace or clean. Refer to manual on high pressure pumps.
	Pump seals leaking	Replace. Refer to HP pump Manual.
	Chemical injector partly plugged (actually creates too much pressure, but appears too low at the gun)	Remove and clean injector orifice.
Excessive back pressure	Outlet orifice restricted	Remove orifice at tip of gun pressure and clean. (Flush coil with water before reinstalling.)
	Chemical injector partly plugged	Remove and clean injector orifice.
	Scale or dirt in coils	Descale coils.
	Pump speed too high (check engine RPM)	Check water output GPM.
Relief valve operates	Machine is creating too much pressure	Refer to excessive pressure
	Scale or dirt in coils	Repair unloader valve.
Excessive vibration to the gun and hose	Defective belt	Replace
	Defective or worn check valves in pump.	Replace-refer to HP manual
Weak or no chemical at outlet orifice.	Chemical in container is weak	Increase concentration.
	Clogged soap screens.	Clean or replace.
	Air leak around soap siphon and/or metering valve leaking	Tighten all fitting and tubing

	Pressure hose too long	Shorten hose to 50ft or move injector to within 50' of gun.
Pump motor heating	Electrical service insufficient and/or undersize extension cord.	Loose connection-insufficient voltage under 1 load. Check machine specs. Use heavier extension cord.
	Outlet orifice restricted	Allow to dry. Have motor checked by qualified repair station.
	Undersize outlet orifice	Remove orifice at tip of gun and clean.
	Chemical injector plugged	Remove and clean.
	Coil scaling up	Remove and clean.
	Water pump out of oil.	Fill to correct levels. Check for leaks.
	Overload switch cuts off	Allow motor to cool. (Caution: switch may automatically reset.) Refer to motor over heating.
	Faulty motor	Replace or repair.
Burner won't ignite	No fuel	Fill fuel tank and check filter for water and other contaminates.
	Electrodes out of alignment	Adjust per diagram.
	Electrode insulator failure.	Check for breaks, cracks, or spark trails-replace
	Water flow switch not closing	Adjust, repair, or replace. (Adjust by moving probe up or down.)
	Temperature control switch not closing	Adjust or replace
	Fuel solenoid valve not opening	Clean, repair or replace.
	Weak transformer	Clean and check terminals. Replace if necessary. Check for spark.
	Faulty cad cell (if equipped)	Test cad cell, replace if required.

	Faulty primary control	Replace
	Plugged oil nozzle	Replace. (<i>Do not clean</i>)
	Faulty burner oil pump	Adjust or replace.
Unit Smokes	Improper fuel	Use home heating oil or kerosene.
	Air to burner insufficient	Air adjustment on burner -remove soot from coils.
	Fuel nozzle interior loose	Replace nozzle. (leaky or loose fitting will cause improper combustion and smoke, especially after shut down.)
	Gun out of alignment	Bend oil pipe to center burner nozzle.
	Too high fuel pressure	Adjust fuel pressure (100 to 125 psi)
Water Temperature	Thermostat adjustment	Adjust the thermostat to desired temperature
	Coils liming up	Descale
	Improper combustion	Readjust burner and clean combustion chamber.

Combination System

Dry Steam (low water flow) (low bypass pressure)	Bypass pressure regulator	Adjust or replace.
	Bypass unloader valve leaking	Repair or replace
	Low water to machine	Check chart
	Obstructed steam orifice	Replace
Wet steam (high water flow) (high bypass pressure)	Large or worn steam orifice	Replace
	Bypass regulator	Replace or adjust
	Burner failure	Check chart

Non By-Pass Machine

Dry steam	Low pump output	Repair or adjust motor pulley to proper GPM. Loose belt, poor water supply.
	Dirty or worn check valves	Replace or clean. Refer to manual on high pressure pumps
	Coil liming	Delime
	Burner output high	Repair burner
Wet steam GPM	High pump output	Adjust motor pulley to proper
	Steam orifice	Replace if orifice is larger than proper number
	Burner output low	Repair burner
	Burner cycles off	Repair temperature control or repair burner as required
High Pressure (cleaner mode)	Pump output high	Adjust to proper GPM
	Partly blocked or undersized outlet orifice	Clean or replace
	Coil liming	De-lime
Low Pressure (cleaner mode)	Pump output low	Repair or adjust motor pulley to proper GPM. Tighten belt.
	Oversized or worn outlet orifice	Replace
High Temperature (cleaner mode)	Burner cycles too fast	Replace temp. control or repair burner to original specs.
	Low water	Refer to low water
Low Temperature (cleaner mode)	Burner cycles too fast	As above (High temp.)
	Low burner heat	Repair burner
	High water flow	Adjust motor pulley to proper GPM.

Steam Cleaner

Dry steam	Low pump output	Loose belt, poor water supply
	Leaking pump check valve	Clean or replace check valves

	Blockage or Restriction	De-lime
	Burner output too high	Repair burner
Wet steam	Steam orifice	Replace orifice
	Burner output low	Repair burner

Periodic Maintenance

Belts

1. Always keep belts tight and in proper alignment.

Lubrication

2. Lubricate machine as required, change oil in the pump every 500 hours.

Fuel

3. Fill with clean #1 home heating oil or kerosene.

Screens

4. Clean strainer screens in water inlet fitting and float tank periodically (if equipped)

Hoses and Periodic Leaks

5. Inspect the machine for possible leaks before each operation. If a leak is found, **DO NOT OPERATE**. Disconnect power and repair. Check hoses for fatigue and for wear where they might be rubbing on other objects. Tighten hose connections and seal pipe connections with Teflon tape when finished. **DO NOT RUN OVER HOSE OR KINK IT.**

Engine Maintenance

6. Maintain engines as required in your engine manual. Use only recommended fuels. Never overuse the engine. Take engine to an authorized service station for repairs.
7. Check water outlet orifice for partial blockage, which will cause high pressure and excessive heating, and for wear, which will cause low pressure.

Coil Maintenance

Before



Build-up begins Combined build-up Chemical build-ups Hard water build-up Lime & calcium build-ups Plugged by ALL

After



In alkaline water areas, lime deposits can accumulate rapidly in the coil pipes. This deposit is increased by the extreme heat build up in the coil. Periodic cleaning of the coil will remove lime and rust deposits before they become a serious problem. Coils should be cleaned three or four times per year. In extreme alkaline water areas cleaning may be required more often, sometimes daily.

Allied Coil Cleaner is formulated with inhibitors and water conditioners to remove lime without causing severe damage to the coil, pump, and piping. Mix one pound of Allied Coil Cleaner to each gallon of water. Remove Nozzle from the gun and tie a sock or rag around end of gun to catch loosened deposit. Then place gun in the pail and run the washer for one to three hours. When a pail is used, a suction hose must be in the pail and have a screen on it. Be sure to keep the intake screen clean during cleaning. After re-circulating chemical for 2-3 hours, drain pail and flush system with clear water for several minutes to remove cleaner and any remaining deposits.

Checking for Scale or Liming in Coil

Note: Change combination machines to the pressure cleaning mode before checking for scale or liming in coils.

1. Remove outlet orifice and check for liming. Clean orifice if needed.
2. Remove outlet gun and chemical injection(if equipped with low pressure chemical applicator.)
3. Install a pressure gauge between the water pump and coil inlet.
4. Check condition of your water pump and unloader valve. Water pump and unloader valve failure will cause low pressure readings.
5. Turn on the pump without water outlet gun or outlet orifice. If pressure reading is above the maximum pressure reading on the chart, have your machine de-scaled.
6. If your machine is satisfactory, reassemble.
7. Coil should be de-scaled on a periodic schedule.

Note: Check model number for GPM of machine

<u>GPM</u>	<u>De-scaling Test PSI</u>
2-3	50
3.8	75
4-5	100
6	175
8-10	150

Oil Burner Maintenance

Adjusting Electrode Assembly

1. Disconnect the fuel line from the gun assembly oil line. Loosen the other end of the line(fuel pump end) and swing line out of the way. Remove retaining nut.
2. Loosen the bolt and open the transformer cover.
3. Carefully remove the gun assembly.
4.
 - a. Check and replace electrode insulators if cracked.
 - b. Clean burnt electrode strips.
 - c. Clean carbon off electrodes.
 - d. Clean carbon off oil nozzle. (Use caution not to scratch face of nozzle.)
 - e. Check for loose oil nozzle. Replace nozzle if loose.

Note: Check with dealer and/or replace nozzle with proper nozzle.

5. Loosen screws holding electrodes.
6. Raise electrode tips 5/32 inches above surface plane or end of foil nozzle.

7. Place each electrode tip 5/16 inches from center of spray nozzle hole, maintaining previous measurement.
8. Spread electrode tips to 3/16 inches gap maintaining previous measurements.
9. When the proper measurements are reached, gently tighten screws that hold electrodes in place. **Caution:** Do not over tighten as this will cause electrode failure.
10. Gently replace burner electrode assembly in drawer. **Caution:** Do not force. Forcing will cause electrode misalignment.
11. Partially close the transformer cover. Check if the electrode strips align and contact the transformer buttons. If electrode strips do not contact, gently bend them into place.
12. Close the transformer cover and tighten the bolts.

Pumps

General Features

The pumps should only be used for clean water or water/detergent mixtures. Please contact our technical department before using the pumps with corrosive additives such as acids. The pump can be used with water at a temperature of up to 150 degrees Fahrenheit. If higher temperatures are required, please contact our technical department on the modifications necessary.

Installation

Pump installation is easy providing you follow these instructions carefully. Correct installation will ensure the best performance and maximum life of the pump.

Suction Pipe Work

Arrange the suction hose so that air cannot be trapped and make sure all joints are airtight to prevent air being sucked into the pump. All threaded connections should be taped with teflon tape for this reason. The suction hose must have an internal diameter equal (or greater than) the internal diameter of the suction connection on the pump. We also recommend that a filter is fitted on the suction line to protect the pump from foreign matter. The maximum suction is 8 inches of water column, while temperature maximum is 150 degrees Fahrenheit. The maximum positive pressure is 100 PSI.

Deliver Pipe Work

It is important that the internal diameter of the hose is at least the same diameter as that of the pump outlet, to avoid excessive pressure loss down the hose. The pumps should not be allowed to work more than 10% higher than the maximum operating pressure shown on the pump.

Starting Procedure

If pulley sets are being used to drive the pump, check that they are in alignment to prevent possible damage and excessive belt wear. On no account must the pump be run dry for longer than a few seconds. Check that the filter is clean and then start the pump, priming the pump as rapidly as possible by opening the discharge valve to allow air to escape.

Lubrication

Check the oil level from time to time. Change the oil after 50 hours of operation and then after 500 hours. Use non-detergent (SAE 30) oil.

Shut Down Procedure

Ideally, the pump should be wiped down after each session of use and if detergent has been used. Run the pump on water only for a minute or so to flush it out. Then empty the pump by running for 20 seconds without a supply. This is especially important if freezing conditions are likely to be met.

Trouble Shooting

<u>Trouble</u>	<u>Possible Cause</u>	<u>Remedy</u>
Pump running normally but	Pump sucking air	Check water supply possibility of air ingress
Pressure low on	Valves sticking	Check & clean or replace installation if necessary.
	Unloader valve seat faulty	Check & replace if necessary
	Nozzle incorrectly sized	Check & replace if necessary
	Worn piston packing	Check & replace if necessary
Fluctuating pressure	Valves worn	Check & replace if necessary
	Blockage in valve	Check & clean out if necessary
	Pump sucking air	Check water supply & air ingress at joints in suction line
	Worn piston packing	Check & replace if necessary
Pump noisy	Air in suction line	Check water supply and connections on suction line
	Broken or weak suction or delivery valve spring	Check & replace if necessary
	Foreign matter in valves	Check & clean if necessary
	Worn bearings	Check & replace if necessary
	Excessive temp of liquid	Reduce to below 75 degree C
Presence of water in oil	Oil Seal worn	Check & replace if necessary
	High humidity in air	Check & change oil twice as often
	Piston packing worn	Check & replace if necessary
Water dripping from under pump	Piston packing worn	Check & replace if necessary
	Plunger retainer worn	Check & replace if necessary
Oil dripping	Oil seal worn	Check & replace if necessary
Excessive vibration in delivery line	Irregular functioning of check valves	Check & replace if necessary

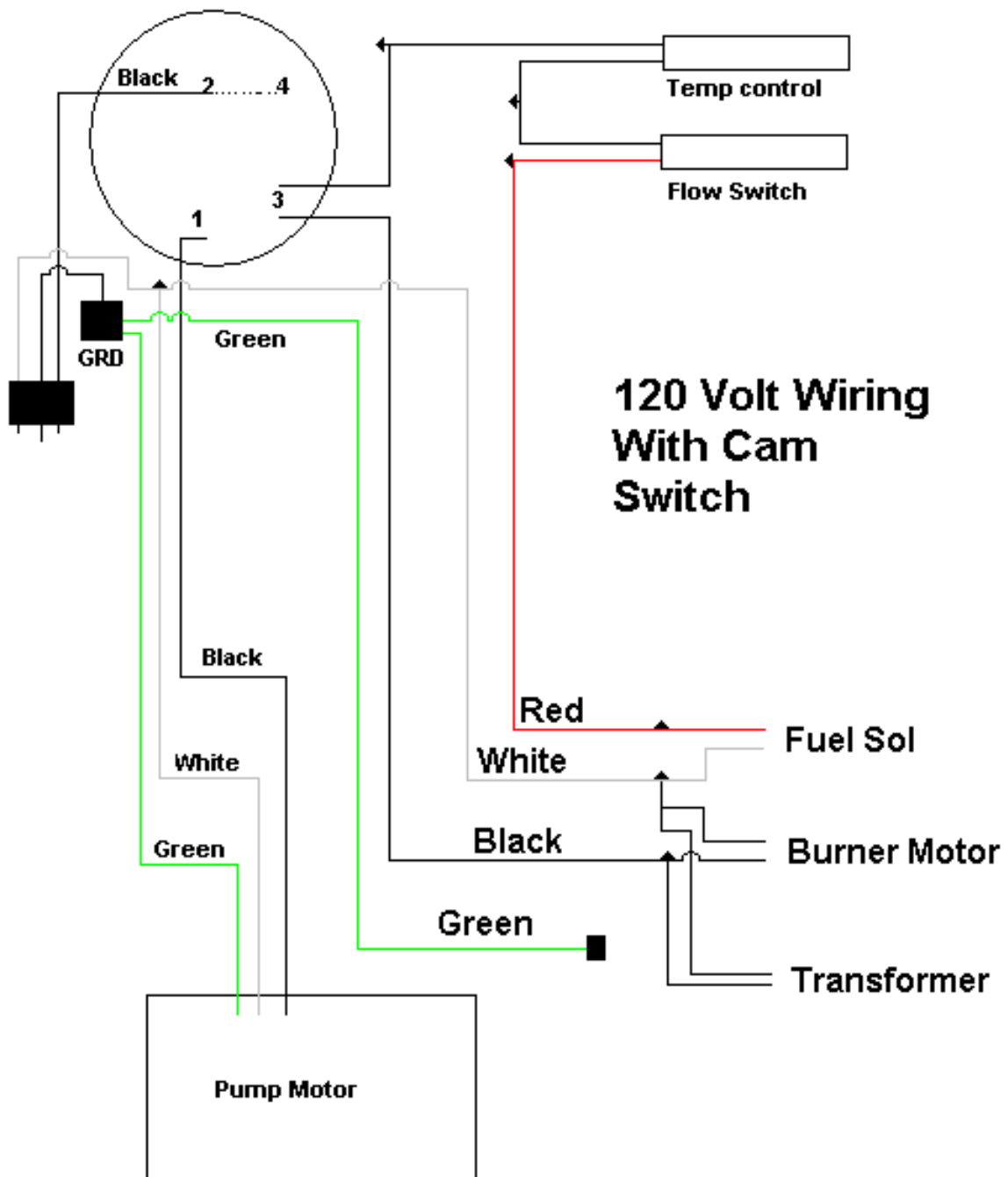
Transformer Check

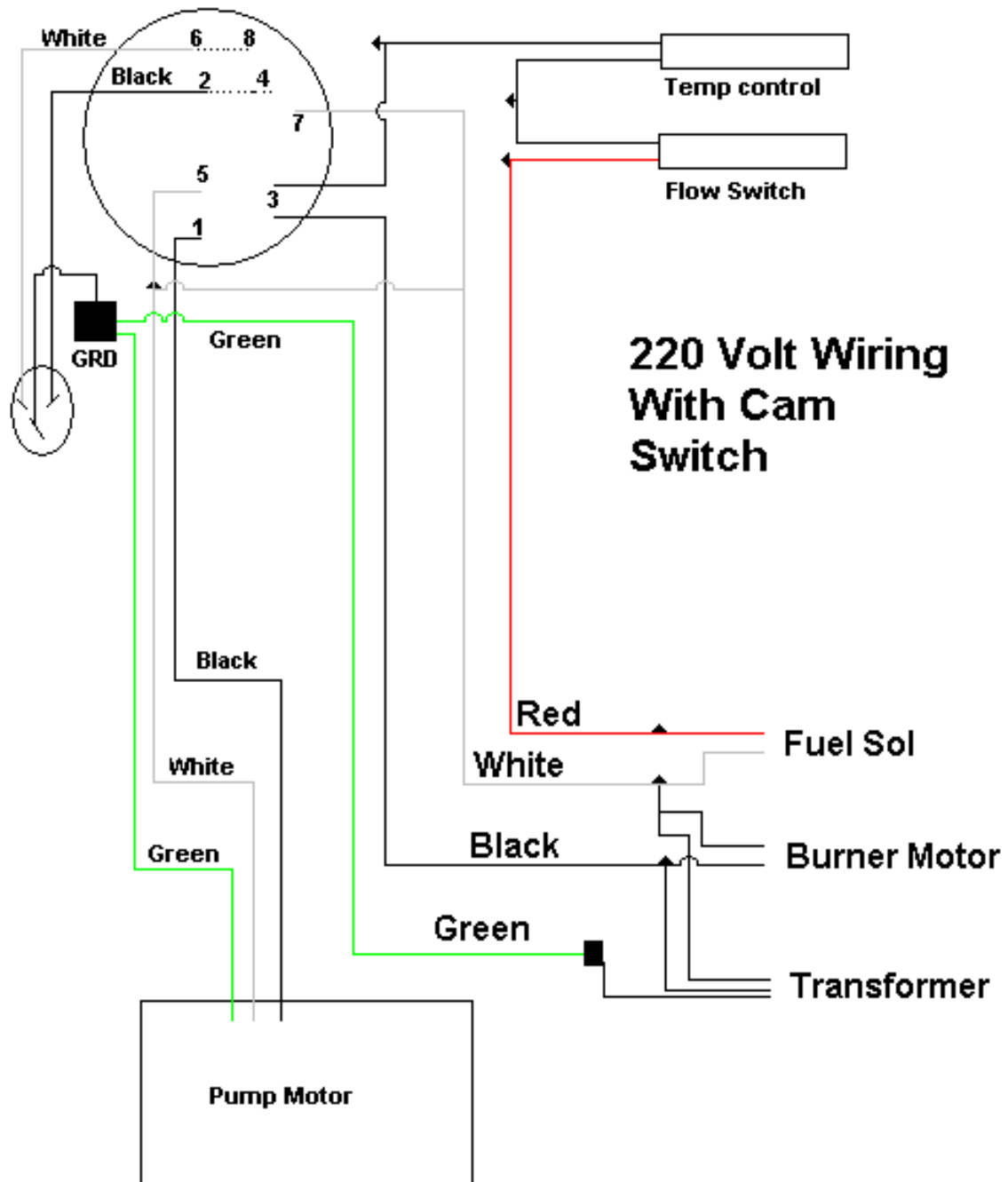
1. Loosen bolt and swing transformer away from the gun assembly.
2. Dry porcelain insulators if wet. Clean contact if pitted or discolored.
3. Turn on burner switch and make sure transformer is receiving proper voltage.
4. Short high voltage terminals. **Caution:** Use screwdriver with well insulated handle to avoid shock
5. Open gap by drawing screwdriver away from one electrode while touching the other.
6. Replace transformer if the spark does not jump between 5/8" and 3/4"
7. Turn off burner switch.
8. Partially close transformer cover. Check if electrode strips align and contact transformer buttons. If electrode strips do not contact, gently bend them into place.
9. Close transformer and tighten bolts.

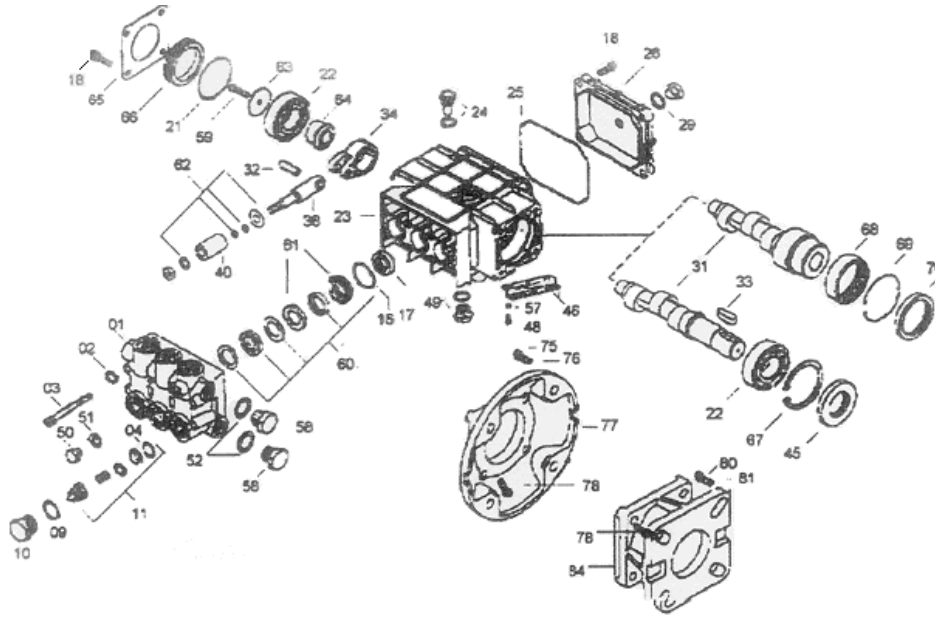
Winter Maintenance Prevents Freezing

1. Turn off and disconnect water supply.
2. Empty float tank (if equipped).
3. Remove outlet orifice.
4. Fill float tank and with over-strength anti-freeze. Check anti-freeze before each use. The anti-freeze will dilute with each use.
5. Use a short length of hose connected to garden hose adapter on direct fed machines. Install a screen on the hose and place in an elevated pail of anti-freeze.
6. Run water pump until anti-freeze flows out of the machine. Trigger gun 2-3 times to get anti-freeze into bypass.
7. When the machine is needed, drain the anti-freeze from the float tank into containers for re-use. Connect the water supply and pump the anti-freeze out. When water flowing from the gun becomes clear, stop machine. Anti-freeze installation kits are available from your dealer.

(The following pages consist of diagrams and parts lists necessary for operation or repairing of the machine)







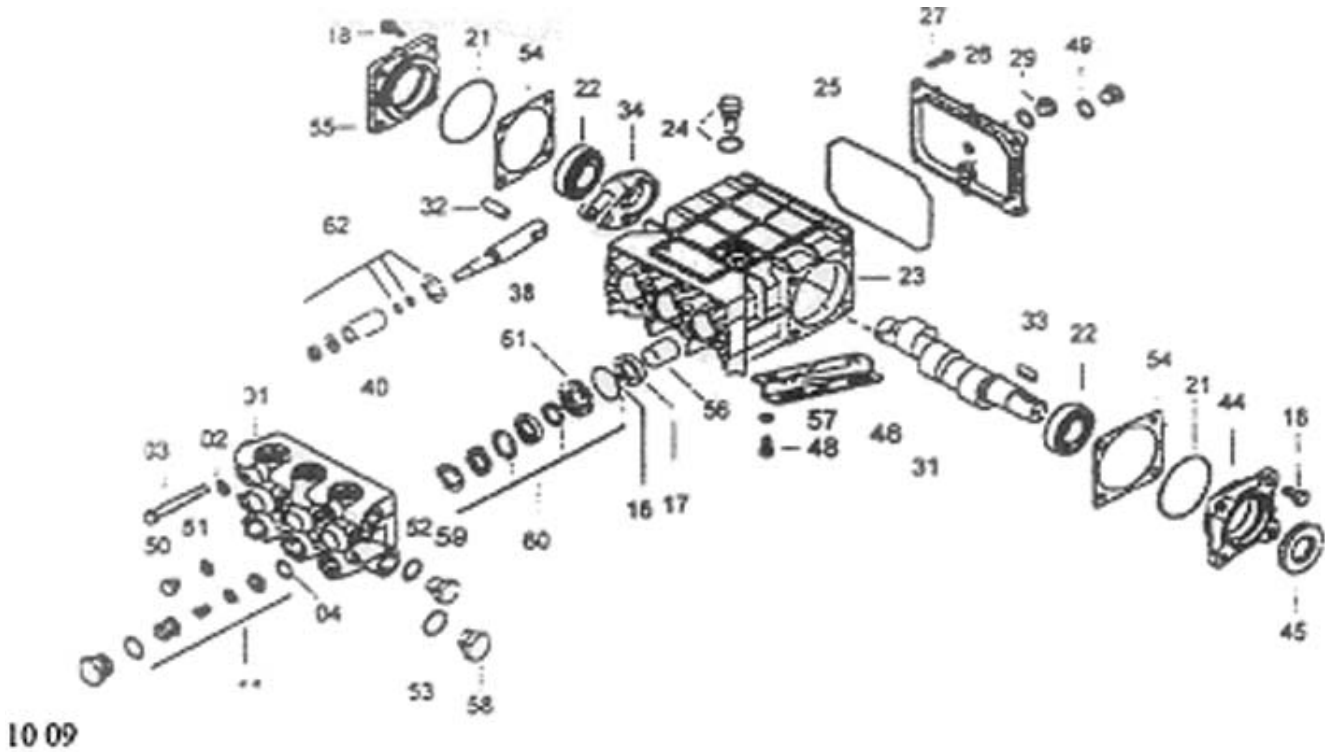
08-01301(PD3.0/22-S)

08-01302(PD2.0/22-Z)

08-01303(PD3.0/22-Z)

08-01307(PL3.0/22-Z)

REF	Part #	Quan	Description	REF	Part #	Quan	Description
1	08-45101	1	Head, brass	48	08-45148	4	Bolt, rail mnt
2	08-44235	8	Washer, Head bolt	49	08-45149	1	Plug, oil drain
3	08-45103	8	Head bolt	50	18-45150	1	Plug, head
4	08-45104	6	O-ring, check valve	51	08-45454	1	Seal, headplug
9	08-45109	6	O-ring, valve cap	52	08-45452	2	Seal, 3/8" plug
10	08-45110	6	Cap, check valve	57	02-20105	4	Washer, Rail mounting
11	08-45111	6	check valve	58	08-45158	2	Head side plud, 3/8"
16	18-45116	3	O-ring, seal retainer	59	08-45159	1	Bolt, crankshaft ret.
17	08-45117	3	Oil seal, plunger	60	08-45191	1	Seal kit, plunger rod
18	08-44127	4	Bolt, seal retainer	61	08-45190	3	Brass retainer kit
21	08-45121	1	O-ring, crank retainer	62	08-45192	3	Seal kit, plunger rod
22	08-45122	2	Bearing, crankshaft	63	08-45163	1	Washer, crank retain
23	08-45123	1	Crankcase	64	08-45164	1	Bushing, crank retain
24	08-45124	1	Dipstick with Gasket	65	08-45165	1	Retainer, crank cap
25	08-45125	1	O-ring, rear cover	66	08-45166	1	Cap, crankshaft
26	08-45126	1	Rear cover	67	08-45167	1	Snap ring, crank brg
29	08-45129	1	Oil sight glass	68	08-45168	1	Bearing, crankshaft
31	08-45131	1	Crankshaft, 08-01302	69	08-45169	1	Snap ring, crank brg
31	08-45231	1	Crankshaft, 08-01303	70	08-45170	1	Seal, crankshaft oil
31	08-45331	1	Crankshaft, 08-01301	75	02-20330	4	Bolt, flange to motor
31	08-45431	1	Crankshaft, 08-10307	76	02-20205	4	Washwer, flange/motor
32	08-45132	3	Wrist pin	77	08-45177	1	Flange, electric(56C)
33	08-45133	1	Key, crankshaft	78	08-45178	4	Bolt, flange to pump
34	08-45134	3	Connecting rod	80	02-20231	4	Bolt, flange/engine
38	08-45138	3	Plunger push rod	81	02-20205	4	Washer, flange/engine
40	08-45140	3	Plunger, ceramic	84	08-45184	1	Flange, gas engine DD
46	08-45146	2	Rail, mouting				



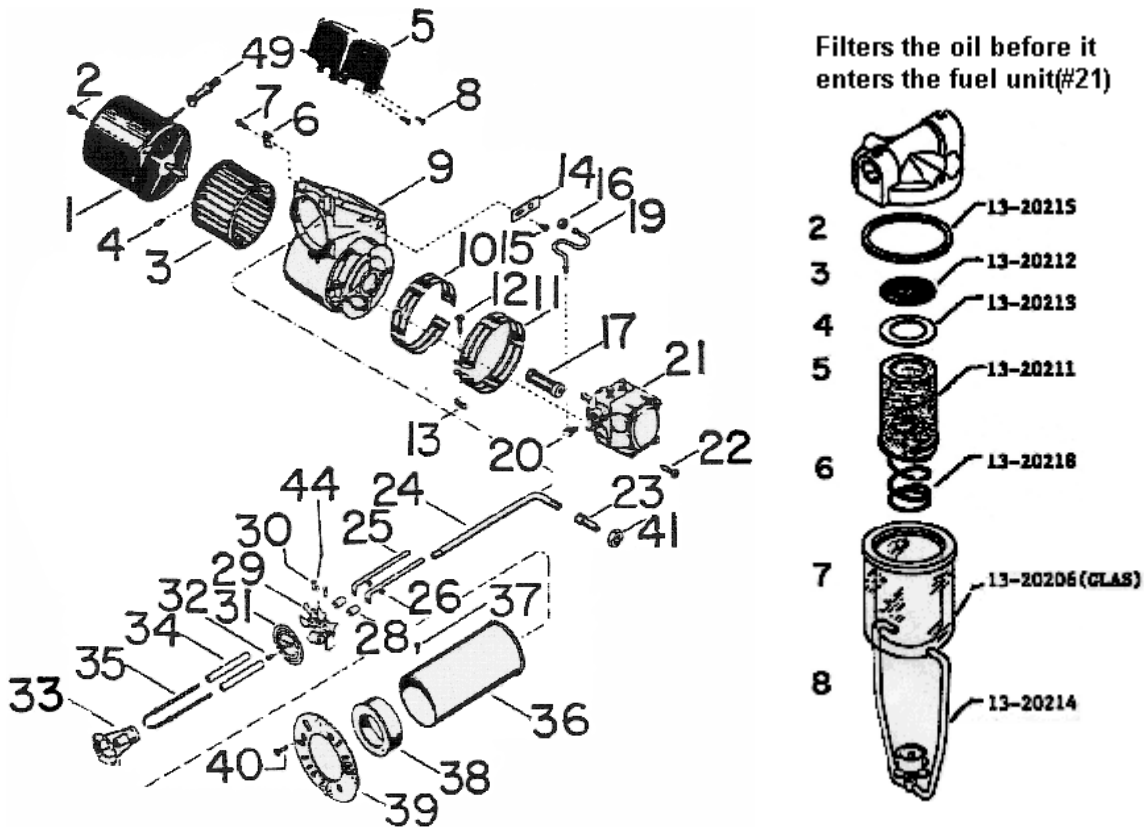
08-03121 (MC 12.20/S)

08-01325 (MC 18.20/S)

Ref	Part #	Quan	Description	Ref	Part #	Quan	Description
1	08-45201	1	Brass head	40	08-45240	3	Plunger, ceramic, 08-10321
2	08-45202	8	Washer, head bolt	40	08-45440	3	Plunger, ceramic, 08-10325
3	08-45203	8	Head bolt	44	08-45244		Bearing ret, drive end
4	08-45104	6	O-Ring, check valve	45	08-45245		Seal, oil, crankshaft
9	08-45109	6	O-Ring, valve cap	46	08-45146	2	Rail, mounting
10	08-45210	6	Check valve cap	48	08-45248	4	Bolt, rail mounting
11	08-45211	6	Check valve with o-ring	49	08-45149		Plug & seal, oil drain
16	08-44116	3	O-Ring, packing retainer	50	08-45150		Plug, head
17	08-45217	3	Oil seal, plunger	51	08-45151	1	Seal, head plug
18	08-45218	8	Bolt, crank BRG retain	52	08-45152	1	Gasket, side plug 3/8"
			O-Ring, crank BRG	53	08-45253	1	Gasket, side plug, 1/2"
21	08-45221	2	retain	54	08-45254	2	Shim, Crankshaft Ret
22	08-44222	2	Crankshaft bearing	55	08-45255	1	Bearing ret, closed end
23	08-45223	1	Crankcase	56	08-45256	3	Guide, plunger rod
24	08-45124	1	Crankcase Vent W/GSKT	57	08-20105	4	Washer, rail mounting
25	08-45225	1	O-Ring, rear cover	58	08-45258	6	Head plug, side, 1/2"
26	08-45226	1	Cover, rear crankcase	59	08-45158		Head plug, side, 3/8"
27	08-45227	5	Bolt, rear cover	60	08-45291		Seal kit, plunger, 08-01321
29	08-45129	1	Oil sight glass w/seal	60	08-45391		Seal kit, plunger, 08-01325
31	08-45631	1	Crankshaft, 08-03121	61	08-45290	3	Brass parts, plung, 08-01321
31	08-45731	1	Crankshaft, 08-01325	61	08-45390	3	Brass parts, plung, 08-01325
32	08-45232	3	Wrist pin	62	08-45292	3	Seal Kit, plunger rod
33	08-45233	1	Key, crankshaft				
34	08-45234	3	Connecting rod				
38	08-45238	3	Plunger Rod				

Wayne Oil Burner Parts List

Ref	Part#	Description	Ref	Part#	Description
1	11-10105	Motor 110 volt	21	10-20330	Fuel Unit
	11-10110	Motor 230 volt	22	10-20249	Fuel Unit Mount Screw
2	10-20249	Motor Mounting Screw	23	20-20172	Oil Line Fitting
3	10-20220	Fan	24	10-20175	Oil Pipe
4	****	Fan Set Screw(In Fan)	25	10-20061	Buss Bar
5	04-80144	Transformer 240V	26	****	Palnut
	04-80164	Transformer 120V	28	10-20044	Insulator Bushing
6	10-20245	Trans, Hold Down Clip	29	10-20238	Electrode Holder
7	10-20248	Trans, Hold Down Screw	31	10-14055	Baffle Plate
8	10-20246	Trans, Hinge Screw	33	10-10330	Flaming Assy
9	10-10210	Fan Housing Assy.	34	****	Insulator
10	10-20250	Air Adj. Band-inner	35	****	Electrode Stem & Washer
11	10-20260	Air Adj. Band-outer	36	10-20235	Air Tube
12	10-20249	Air Band Screw	38	10-14055	Baffle Plate
14	10-20171	Oil Line Adj. Slot Cover	39	10-20270	Flange
15	02-21355	Oil Line Slot Cover Screw	44	10-20045	Electrode Clip
16	10-10173	Oil Line Locknut	49	10-20287	Motor Cord Cover
17	10-10205	Pump Coupling		10-20050	Electrode Set Complete(ref 25,26,34,35)
19	10-20170	Oil Line Assembly		10-10200	Gun Assembly
20	10-20280	Oil Line Elbow		10-20360	Fuel Solenoid
				10-20370	Fuel Solenoid



Parts List

REF	DESCRIPTION	1200-2JGT	1000-3JGT	1700-3JGT	2300-4JGT	3000-4JGT
01	Chassis w/Wheels	18-20200	18-20200	18-20200	18-20205	18-20205
02	Coil Assembly	16-10100	16-10100	16-10100	16-10106	06-10106
03	Fuel Tank	18-10100	18-10100	18-10100	18-10100	18-10100
04	Fuel Tank Cap	01-14535	01-14535	01-14535	01-14535	01-14535
05	Pipe Elbow	01-16140	01-16140	NA	NA	NA
06	Tire and Wheel	17-10100	17-10100	17-10100	17-10100	17-10100
06-1	Axle Cap	02-21250	02-21250	02-21250	02-21250	02-21250
07	Electric Motor	11-10135	11-10135	11-10169	11-10186	11-10190
08	Water Pump	08-01430	08-01430	08-01300	08-01321	08-01321
09	Burner Assembly	10-10110	10-10110	10-10120	10-10120	10-10120
10	Fuel Filter Assembly	13-10210	13-10210	13-20210	13-20210	13-20210
10-1	Filter Element	13-20111	13-20111	13-20211	13-20211	13-20211
11	Burner Motor	11-10105	11-10105	11-10110	11-10110	11-10110
12	Fuel Pump	10-20330	10-20330	10-20330	10-20330	10-20330
13	Fuel Solenoid	10-20360	10-20360	10-20370	10-20370	10-20370
13-1	Fuel Solenoid Coil	10-20390	10-20390	10-20385	10-20385	10-20385
14	Garden Hose Adapter	01-10101	01-10101	10-10103	01-10103	01-10103
14-1	Washer Screen	02-72110	02-72110	02-72110	02-72110	02-72110
14-2	Spring, Hose Adapter	01-10100	01-10100	01-10100	01-10100	01-10100
15	Hose Barb	01-12200	01-12200	01-12280	01-12280	01-12280
16	Hose Clamp	02-10100	02-10100	02-10100	02-10100	02-10100
17	By-Pass Hose	09-50125	09-50125	09-50125	09-50125	09-50125
18	Hose Barb	01-12270	01-12270	01-12270	01-12270	01-12270
19	Unloader	06-17112	06-17112	06-17112	06-17125	06-17125
20	Pipe Nipple	01-17105	01-17105	01-17170	01-17170	01-17170
21	Pipe Elbow	01-16140	01-16140	01-16220	01-16220	01-16220
22	Pipe Nipple	NA	NA	NA	01-17165	01-17165
23	Pipe Nipple	01-17170	01-17170	01-17170	01-17170	01-17170
24	Flow Switch	06-13109	16-13109	06-13109	06-13109	06-1319
24-1	Flow Switch Probe	06-13110	06-13110	06-13110	06-13110	06-13110
25	Surge Hose	09-55024	09-55024	09-55013	09-55013	09-20301
26	Quick Coupler	01-07217	01-07217	01-07217	01-07217	01-07217
27	O Ring	01-07420	01-07420	01-07420	01-07420	01-07420
28	Quick Plug	01-07197	01-07197	01-07197	01-07197	01-07197
29	Chemical Injector	06-12220	06-12230	06-12230	06-12230	06-12230
30	Chemical Hose	09-00160*	09-00160*	09-00160*	09-00160*	09-00160*
31	Chemical Screen	06-18730	06-18730	06-18730	06-18730	06-18730
32	Pipe Tee	01-20100	NA	01-20110	01-20110	01-20110
33	Relief Valve	06-18320	06-18320	06-186323	06-18325	06-18325
34	Temperature Control	06-11180	06-1180	06-1180	06-11180	06-11180
35	Cord, Temperature Control	04-00310*	07-00310*	04-00310*	04-00310*	04-00310*
36	Pipe Elbow	01-16110	01-16110	01-16110	01-16110	01-16510
37	Pipe Bushing	01-14110	01-14110	01-14110	01-14110	01-14110
38	Pipe Bushing	01-14110	01-14110	01-14110	01-14110	01-14110
39	Pipe Nipple	**	**	**	**	**
40	Pipe Nipple	**	**	**	**	**
41	Pressure Hose	09-20350	09-20350	09-20350	09-20350	09*20350
42	Trigger Gun	14-10100	14-10100	14-10100	14-10100	14-10100
43	Wand, 1/4"	14-61431	14-61431	14-61431	14-61431	14-61431
44	Insulator, Wand	14-50100	14-50100	14-50100	14-50100	14-50100
45	Motor Pulley	NA	NA	05-24734	05-24739	05-24751
45-1	Hub, Motor Pulley	NA	NA	NA	NA	NA
46	Pump Pulley	NA	NA	05-24282	05-24290	05-24260
46-1	Hub, Pump Pulley	NA	NA	05-23107	05-23105	05-23105
47	Drive Belts	NA	NA	05-40127	05-40133	05-40133
48	Pipe Nipple	01-17170	01-17170	NA	NA	NA
49	Vari-Head Tip Hold	14-62100	14-62100	14-62100	14-63100	14-62100
50	Water Spray Tip	14-40111	14-40131	14-40116	14-40121	14-40116
50-1	Water Spray Tip	NA	NA	14-40115	14-40120	14-40115
52	Power Cord	04-00520	04-00520	04-00305*	04-00486*	04-00486*
53	Power Plug	With Cord	With Cord	04-00550	04-00550	04-00550
54	Power Switch	04-74160	04-74160	04-74150	04-74150	04-74165
55	Cord, Burner	04-00212*	04-00212*	04-00212*	04-00212*	04-00212*
56	Fuel Line Hose	09-00200*	09-00200*	09-00200	09-00200*	09-00200*

57	Hose Clamp	02-10100	02-10100	02-10100	02-10100	02-10100
58	Fuel Nozzle	10-30420	10-30470	10-30470	10-30500	10-30500
63	Hose Barb	01-12422	01-12422	01-12422	01-12230	01-12230
64	Handle Grip	18-00100	18-00100	18-00100	18-00100	18-00100
65	Pipe Nipple	01-17105	01-17105	01-17105	01-17105	01-17105
66	Switch Box	04-73204	04-73204	04-73204	04-73210	04-73212
67	Box Connector	04-71120	04-71120	04-71120	04-71120	04-71120
68	Box Connector	04-71121	04-71121	04-71121	04-71143	04-71143
69	Switch Box Cover	04-73206	04-73206	04-73211	04-73211	04-73213
71	Quick Coupler	NA	NA	01-07214	01-07214	01-07214
72	O-Ring	NA	NA	01-07410	01-07410	01-07410
83	Quick Plug	NA	NA	01-07203	01-07203	01-07203
74	Pipe Nipple	NA	NA	01-17125	01-17125	01-17125
75	Belt Guard	NA	NA	18-10121	18-10121	18-10121
76	Chemical Metering Valve	06-18176	06-18176	06-18176	06-18176	06-18176
77	Pipe Nipple	01-17110	01-17110	01-17175	01-17175	01-17175
78	Pipe Bushing	NA	NA	14-14110	01-14110	01-14110
79	Garden Hose Adapter	01-10101	01-10101	01-10101	01-10101	01-10101
80	HI PSI Chemical(option)	06-18360	06-18360	06-18360	06-18360	06-18360
	Decal Set	03-10400	03-10400	03-10400	03-10400	03-10400

* Sold by foot.
 ** Length may Vary, Measure
 NA Not Applicable

