

## **EASY-KLEEN HOT WATER OIL FIRED**

## **HIGH PRESSURE CLEANING MACHINE**

**MODEL NO:** \_\_\_\_\_

### **INTRODUCTION**

Thank you for selecting a quality EASY-KLEEN product. We are pleased to have you included among the many satisfied owners of EASY-KLEEN cleaning machines.

Years of engineering have gone into the development of these fine products and only top quality components and materials are used throughout. Each machine is carefully tested and inspected before leaving our plant to ensure years of dependable performance.

The rest is up to you. To continue to receive satisfactory performance, remember that this machine represents a substantial investment on your part, but properly cared for and maintained it will return this investment many times. As with all mechanical equipment, your machine requires proper installation, proper operation and maintenance as outlined in this manual.

PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLING AND OPERATING MACHINE. EXAMINE MACHINE AND UNCRATE CAREFULLY FOR SHIPPING DAMAGE OR MISSING PARTS. REPORT PROMPTLY ANY SHORTAGES OR DAMAGE CLAIMS TO FREIGHT CARRIER.

### **OPERATING CHARACTERISTICS**

#### **Maximum Working Pressure:**

The PSI is indicated on the rating plate of your machine. This machine is designed to operate at this pressure on a continuous basis. Do not operate at a High Pressure as severe damage or personal injury may occur.

#### **Gallons Per Minute:**

The GPM is indicated on the rating plate of your machine. Make sure you operate with proper orifice nozzles and larger orifice nozzle will decrease your operating temperature.

### High Limit Temperature Control

Placed in the outlet of the machine is a High Limit Control. This device is to ensure safety by shutting down burner due to excessive outlet water temperature.

### Adjustable Temperature Control

This is standard feature on all units (except EZ01020 and EZ01503). Place on the outlet of machine which has adjustment knob to range your temperature at outlet water for different applications.

### Pressure Switch

A pressure switch is installed on the high-pressure pump to control burner on and off. When the trigger gun is pulled the machine pressurizes the water which engages the pressure switch to turn on and the release of trigger gun puts pump in by-pass mode (or no pressure) and pressure shuts down burner.

### Relief Valve

The pressure relief valve is installed on the outlet of machine, it may be recognized by a 1/2" drain hose which ran through body of machine. This valve is preset (and not be tampered with) if the machine should exceed a certain pressure this valve will blow-off to prevent component and personal injury.

### Pump

The pump is a triplex plunger oil bath crankcase positive displacement pump.

### Unloader Valve

Is a valve installed on the head of pump for unloading water back into bypass when trigger gun is shut-off and releasing water when trigger gun is pulled. The valve is preset at factory and should not be adjusted.

### Burner

The oil burner is conventional type that is factory preset for most efficient operation.

### Control Switch

The control switch reads OFF pump burner. The OFF position is when machine is not operating; the pump position for cold water washing and cool down period; the burner position indicated all systems ready for hot water washing.

### INSTALLATION INSTRUCTIONS

- A). These machines are certified for installations on non combustibile floors.
- B). Electric connection is made by power cord from power source to the top of the motor, starter in the electrical connection box. Check to the rating plate on machine for correct voltage, Phase and Total AMP Draw.  
ATTENTION:  
All electrical work is to be performed by a qualified electrician and adhere to all local and provincial electrical codes. (Make sure power extension cord are of proper size).  
CAUTION: This machine must be properly grounded to prevent electrical shock.
- C). Fill Fuel tank with kerosene.
- D). Provide clean water to the water inlet connection via water hose supply line.  
CAUTION: Determine the water supply source and supply line is of adequate size to provide sufficient water to match GPM on rating plate with a residual line pressure of at least 20 PSI at the unit. (otherwise severe pump damage may occur).  
CAUTION: Supply feed to pump should not exceed 60 PSI.
- E). Connect the high pressure discharge hose to unit outlet quick coupler.
- F). Must be installed where unit can get sufficient supply of free air for combustion; care should be taken to keep base of unit free from trash or any objects that could interfere with combustion.
- G). This machine is not to be connected to a Type B Gas Vent.

### OPERATIONS

- A). Turn on water supply line to unit. Open the trigger gun to ensure that the water is running through nozzle. (Check supply line to make sure there is no kinks in the hose.)
- B). Hold gun and wand firmly.
- C). Turn on the motor starter switch to pump for cold water washing and burner for hot water washing. \_\_\_

NOTE:

- 1). This machine pressure rating is taken at pump; through restriction of water passing through pipe and discharge hose 3% in pressure is lost when water reaches nozzle.
- 2). You will enjoy a 150 degree F. water temperature rise at full volume.
- 3). If IGNITION Failure: Do not attempt to restart burner when excess oil has accumulated, when heating chamber is full of vapors or when the combustion chamber is hot.
  - Wait until unit has cooled down and attempt to restart burner, if it does not restart call your dealer or a local oil burner service man.

D). Operation Detergent Application

I). Standard downstream chemical injection

If your pressure washer is equipped with a downstream chemical injection system, chemical is applied at reduced pressure to avoid chemical wastage and over-spray.

- To apply chemical first release the trigger gun.
- Open the chemical valve on the wand by completely turning the hand knob counter clockwise.
- Pull trigger on spray gun to start water flow.

NOTE: It takes 5 to 15 seconds of spraying for the detergent to reach the spray jet due to the volume of clear water in the hose.

II). Optional upstream chemical injection

If your pressure washer is equipped with an upstream chemical injection system, chemical is applied at high pressure.

When chemical is desired, open the chemical valve located next to the chemical injector on the machine.

NOTE: It takes 5 to 15 seconds or spraying for the detergent to reach the spray jet due to the volume of clean water in the hose.

E). Operation Chemical Adjustment

The amount of chemical may be varied by turning the brass adjustment knob on the machine end of that the chemical pick-up tube is immersed in the chemical solution. NOTE: Dried chemical can plug the injector unit.

F). Operation Unloader / Pressure Valve

This high pressure washer has been adjusted at the factory to operate at its rated line pressure (P.S.I.) and volume (U.S.G.P.M.). The unloader/pressure valve has been preset.

DO NOT READJUST IN AN ATTEMPT TO INCREASE PUMP PRESSURE

Readjustment will only increase the unloading pressure which will cause internal damage or motor overload.

G). Do not run machine with trigger gun off for more than two minutes as water in bypass hose will heat up as it passes through pump and destroys pump coils.

H). Shut Down:

- 1). Turn the control switch to pump.
- 2). Operate for 2 minutes to ensure heating is cooled down and that there is no chemical in system.
- 3). Turn control switch to Off.
- 4). Turn water supply off.
- 5). Release pressure in the machine by squeezing trigger gun.
- 6). Disconnect the electrical power source.
- 7). Disconnect the discharge water hose and gun.

CAUTIONS

- A). Keep fuel tank filled.
- B). Do not fill fuel tank while burner in operation.
- C). Do not tamper with burner or control - call your service man.
- D). Do not use gasoline, crankcase drainings or oil containing gasoline or solvents.
- E). Warning: Risk of injection or severe injury. Keep clear of nozzle. Do not direct discharge stream at Persons. This equipment is to be used only by Trained Operators.

GENERAL MAINTENANCE

- A). Fuel, oil, filter change regularly.
- B). Check oil level in sight glass at the back of the pump. The correct oil level is indicated by the red dot in the middle of the sight glass. Use only SAE 20 or SAE 30 Non-detergent Mineral Oil. Do not over fill.
- C). Replace worn spray nozzles regulators as wear over loads motor and decreases water temperature.
- D). Do not allow systems to have any water leaks, replace fittings and hoses as required.
- E). Check and inflate tires as required.
- F). Winterizing:
  - To winterize your unit you are required to:
    - Disconnect your water supply.
    - Run unit until water in float tank is gone down to bottom.
    - Add windshield anti-freeze to float tank, keep adding until you see coming out the end of the nozzle while running machine.
  - NOTE: Coil will not drain by disconnecting hoses.
- G). Descaling heater coil - provide yourself with Easy-Kleen Scale-X descale:
  - Disconnect fitting from your inlet and outlet to coil
  - Have a drill recirculating pump at hand and connect it to the inlet and outlet and recirculate Scale-X for five minutes for at least 3 applications.
  - Depending on water hardness, this should be done every one or two years.

## OPERATING INSTRUCTIONS

### START UP

1. Place control to "OFF" position before connecting to electrical service.
2. Connect machine to water supply.
3. Submerge chemical pick-up line in chemical solution.
4. Grasp gun firmly and turn control switch to "PUMP" position. Allow machine to run until spray is smooth before turning switch to "BURNER" position.
5. Adjust chemical valve for desired strength of chemical.

### WASHING

1. Hold gun firmly and wash with 8" to 15" from surface, wash from the bottom to the top.
2. To rinse, turn chemical valve to "OFF" and allow system to clear before rinsing.  
ALWAYS RINSE FROM TOP TO BOTTOM.

### SHUT DOWN

1. Turn the control switch to "PUMP" and allow to cool for two minutes.
2. Turn control switch of "OFF" position.

THE MACHINE MUST BE ELECTRICALLY GROUNDED

THIS MACHINE MUST BE ATTENDED DURING OPERATION

