

# OIL FIRED HOT BOX 12VDC

## OPERATOR'S MANUAL



**BE POWER EQUIPMENT USA, INC.**

**DECATURVILLE, TN 38329**

# MACHINE SPECIFICATIONS

## **96012V – SPECIFICATIONS**

- Pump Volume: 4.0 – 5.0 GPM
- Pump Pressure: 3500 PSI
- Burner Fuel: #1 - #2
- Vertical Burner Exhaust Stack: 8"
- Burner: 12V SDC
- Coil: 147

## **98012V – 98012 HZ SPECIFICATIONS**

- Pump Volume: 5–7GPM
- Pump Pressure 3500 PSI
- Burner Fuel: #1 - #2
- Vertical Burner Exhaust Stack: 8"
- Burner: 12V SDC
- Coil: 230

## **99012V – 99012HZ SPECIFICATIONS**

- Pump Volume: 8 -10 GPM
- Pump Pressure: 3500 PSI
- Burner Fuel: #1 - #2
- Vertical Burner Exhaust Stack: 8"
- Burner: 12V SDC
- Coil: 230

## **SPRAY TIPS: DISCARD ANY OLD SPRAY TIPS AND NEVER USE A SPRAY TIP THAT IS NOT THE CORRECT SIZE FOR THIS MACHINE.**

The wrong spray tip will force the pump to by-pass water back into the pump inlet decreasing the water flow volume thru the heating coil. This will cause a rapid increase of water temperature which could damage you, what you are cleaning and/or the machine. Spray Tip Colors only indicate the spray pattern and not the orifice size. Order your tips from Your Distributor.

## **READ THIS MANUAL**

This manual contains important information for the use and safe operation of your Hot Box.

**FAILURE TO READ THIS MANUAL AND FOLLOW ITS INSTRUCTIONS PRIOR TO OPERATING OR ATTEMPTING ANY SERVICE OR MAINTENANCE PROCEDURE COULD RESULT IN SERIOUS INJURY OR DEATH TO YOU OR OTHER PERSONS AND/OR DAMAGE TO THE MACHINE OR TO OTHER PROPERTY.**

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### Unpacking Instructions

#### INSPECTION

CAREFULLY UNPACK YOUR NEW HOT BOX REMOVING THE BANDING AND CARDBOARD BOX FROM PALLET. REMOVE THE HOT BOX FROM THE PALLET AND CHECK FOR ANY PHYSICAL DAMAGES THAT MAY HAVE OCCURRED DURING SHIPMENT. CHECK FOR ALL PARTS SPECIFIED AND SHOWN BELOW.

#### INCLUDED PARTS:

- Pallet
- Packing Material
- Outer Box
- Installation Information
- Operator Manuals

## Safety Instructions & Warnings



**READ THIS FIRST!** FAILURE TO READ AND OBSERVE ALL WARNING STATEMENTS COULD RESULT IN SEVERE BODILY INJURY OR DEATH, POSSIBLE INJURY TO OTHER PERSONS, DAMAGE TO MACHINE OR OTHER PROPERTY.

THANK YOU FOR PURCHASING A BE POWER HOT BOX. THIS MACHINE IS DESIGNED TO GIVE YOU MANY HOURS OF SERVICE; HOWEVER, REASONABLE CARE, ROUTINE MAINTENANCE AND PROPER OPERATOR INSTRUCTIONS FOR USE IS REQUIRED. WE RESERVE THE RIGHT TO MAKE CHANGES AT ANYTIME WITHOUT INCURRING ANY OBLIGATION.

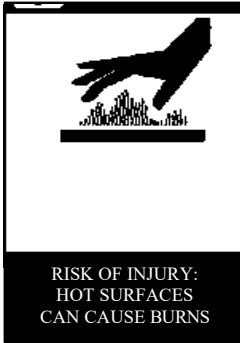
### **OWNER/USER RESPONSIBILITY:**

THE OWNER AND/OR USER MUST HAVE AN UNDERSTANDING OF THE EQUIPMENT'S OPERATING INSTRUCTIONS AND WARNINGS BEFORE USING THIS PRESSURE WASHER. WARNING INFORMATION SHOULD BE EMPHASIZED AND UNDERSTOOD. THE OPERATOR MUST UNDERSTAND THE OPERATION OF EQUIPMENT AND NEVER PERMIT ANYONE TO OPERATE EQUIPMENT WITHOUT PROPER INSTRUCTIONS.

**This manual should be considered a permanent part of the machine and should remain with it if machine is resold.**

**When ordering parts, please specify model and serial number. (Use only identical replacement parts.)**

## Safety Instructions & Warnings



### WARNING:

**RISK OF INJURY: HOT SURFACES CAN CAUSE BURNS. USE ONLY DESIGNATED GRIPPING AREAS OF THE SPRAY GUN AND WAND. DO NOT PLACE HANDS OR OTHER LIMBS ON NON-INSULATED AREAS OF THE EQUIPMENT.**



### CAUTION:

**HOT DISCHARGE FLUID: DO NOT TOUCH OR DIRECT SPRAY AT PERSONS.**

### WARNING:

**THIS MACHINE PRODUCES HOT WATER AND MUST HAVE INSULATED COMPONENTS FOR OPERATOR'S.**



### DANGER:

**HIGH PRESSURE DEVELOPED BY EQUIPMENT WILL CAUSE PERSONAL INJURY. KEEP CLEAR OF NOZZLE. DO NOT DIRECT TOWARDS PEOPLE, SEVERE INJURY OR DEATH WILL OCCUR.**



**WARNING:**

GRIP TRIGGER GUN WITH BOTH HANDS, FAILURE TO DO SO COULD RESULT IN INJURY. NEVER MAKE ADJUSTMENTS WHILE IN OPERATION.



**DANGER:**

AVOID INSTALLING EQUIPMENT IN SMALL AREAS AND/OR NEAR EXHAUST FANS. ADEQUATE AIR FLOW IS NEEDED FOR VENTILATION OR DANGEROUS CARBON MONOXIDE WILL OCCUR.



**WARNING:**

FLAMMABLE LIQUIDS CAN CREATE FUMES WHICH CAN IGNITE, CAUSING PROPERTY DAMAGE OR SEVERE INJURY.

**DANGER:**

RISK OF EXPLOSION: OPERATE ONLY WHERE AN OPEN FLAME IS PERMITTED.



**DANGER:**

DO NOT USE GASOLINE, CRANKCASE DRAINING OR OIL CONTAINING GASOLINE, SOLVENTS OR ALCOHOL. THIS WILL RESULT IN FIRE AND/OR EXPLOSION.

**WARNING:**

DO NOT ADD FUEL WHEN EQUIPMENT IS OPERATING OR STILL HOT.

## Safety Instructions & Warnings



### **WARNING:**

**RISK OF INJURY: TO AVOID PERSONAL INJURY, EYE, HAND AND FOOT SAFETY EQUIPMENT MUST BE WORN WHEN OPERATING THIS EQUIPMENT.**



### **WARNING:**

**PROTECT MACHINE FROM FREEZING. FAILURE TO DO SO COULD CAUSE MALFUNCTION OF MACHINE AND RESULT IN DEATH, SERIOUS BODILY INJURY AND/OR PROPERTY DAMAGE.**



# Installation Instructions

## INSTALLATION

1. **GENERAL INFORMATION:** Ensure that all codes are followed in the installation of your BE POWER Oil-Fired Hot Box. Installation is easy, but good plumbing and electrical practices must be followed. If uncertain, a qualified electrician and plumber should be consulted along with your BE POWER Distributor. **PLEASE REFER TO THE Installation Instruction Guide included with this Operator's Manual,**
2. **LOCATION:** Place the Hot Box in a clean, well ventilated, dry location allowing access for normal maintenance. DO NOT install where overspray will be directed toward or around the unit. DO NOT install unit in an area where combustible materials are used or stored. Place unit on a solid, fire proof foundation. Protect from dust, dirt, rain, and severe weather. Allow 5' of service space around unit (at least 24" Off back wall) and at least 3' clearance above.
3. **WATER SUPPLY:** Test the water source to determine water hardness. If the hardness exceeds seven (7) grains, a suitable water softener should be installed. Installing a water softener greatly improves chemical action and prevents "spotting" on glass, chrome and other washed surfaces.
4. **FRESH AIR SUPPLY:** Your unit is equipped with an air-cooled burner motor and requires fresh air ventilation. This Hot Box uses an Oil-Fired Burner that requires oxygen for a clean burn. **SEE THE INCLUDED BURNER MANUAL.** DO NOT enclose unit or stack items around unit that could prevent proper air flow.

**WARNING: FAILURE TO PROVIDE ADEQUATE AIR SUPPLY COULD SERIOUSLY AFFECT THE BURNER PERFORMANCE AND RESULT IN DAMAGE TO THE EQUIPMENT, ASPHYXIATION, EXPLOSION OR FIRE HAZARDS.**

## **INSTALLATION INSTRUCTIONS**

### **REFER TO THE INSTALL GUIDE**

**BATTERY: ONLY USE A 1000MCA 800 CCA MARINE TYPE BATTERY.**

We highly recommend a Delco Voyager II M24C with built in Hydrometer. This will allow you to easily check the battery status before operation.

**OUTLET PIPING:** Any outlet piping must be supported and secured to prevent any strain on the connections or equipment to prevent vibration. Outlet lines longer than 50' should be insulated to reduce heat loss. Outlet piping should be at least ½" IPS for a distance up to 50'. For 50 to 100', ¾" piping should be used.

**FUEL SUPPLY: USE ONLY # 1 OR #2 CLEAN FUEL. THE MACHINE COMES WITH AN ON-BOARD FUEL TANK OR IT MAY BE ORDERED WITHOUT A TANK AND CONNECTED TO YOUR EXISTING FUEL SUPPLY TANK.** The Beckett burner is equipped with a fuel pump that can be used to supply fuel from your tank to the burner. Install a reliable fuel filter for the installation to your existing tank. A return line must also be installed.

**If you use the onboard fuel tank, only add fuel when the machine is not hot or not in use and only use clean fuel from clean supply container approved for #1/#2 Fuel.**

**COMBUSTION AIR:** Oil Fired Burners must have adequate fresh air for Proper combustion. Provide a minimum of 3 square feet at the top of all closed Rooms. If ventilating fans are used, be sure that down drafts are not created in the stack. If installed in an enclosed room make sure outside air supply is provided or Construct an air opening at the top and the bottom of the room. Consult with your local Distributor for assistance in your installation. A room with just a door that will open is not a sufficient air supply.

## Operating Instructions

### **DON'T AND NEVER**

1. **NEVER** run the burner without water flowing through it (except for short periods for testing the burner.)
2. **DON'T** run acids or hard caustics through the pump and heating coil.
3. **DON'T SUBJECT YOUR HOT BOX TO FREEZING TEMPERATURES UNLESS IT HAS BEEN WINTERIZED.** Consult preventative maintenance section for winterizing instructions.
4. **NEVER** allow children or untrained adults to operate the machine. Keep children at a safe distance when an adult is using the machine.
5. **NEVER** clean off machine using its own spray wand. The machine is water protected but not water proof. Damage could occur to components from high pressure spray.

### **CONNECTING YOUR HOT BOX TO A COLD WATER PRESSURE WASHER:**

1. **YOU WILL NEED A JUMPER HOSE TO RUN FROM YOUR COLD WATER (18-20 AMP) PRESSURE WASHER TO THE HOT BOX. USE A R2 3/8" HOSE (YOUR SELECTED LENGTH) TO THE COIL INLET OF THE HOT BOX FROM THE UNLOADER VALVE OUTLET. CONNECT YOUR WASH HOSE TO THE COIL BENEATH THE THERMOSTAT.**
2. **INITIAL STARTING** - AFTER INITIAL INSTALLATION, COIL DESCALING, OR A LONG PERIOD OF NON-USE YOUR UNIT SHOULD BE RUN WITH THE NOZZLE OR WAND REMOVED TO FLUSH OUT DIRT, RUST OR LOOSE SCALE WHICH COULD PLUG THE NOZZLE. STOP THE ENGINE, INSERT THE NOZZLE AND RUN THE UNIT UNDER HIGH PRESSURE. ONCE WATER IS FLOWING OUT THE SPRAY TIP TURN ON THE BURNER SWITCH AS FOLLOWS:

**BURNER:** (MAKE SURE YOU HAVE ADDED CLEAN #1 OR #2 FUEL TO THE FUEL TANK. DO NOT OVERFILL, TO THE BOTTOM OF THE FILLER NECK IS BEST). SET THE GP THERMOSTAT TO THE DESIRED OPERATING TEMPERATURE. TURN THE BURNER SWITCH TO THE ON POSITION. SQUEEZE THE TRIGGER GUN AND THE BURNER WILL HEAT THE WATER. IF THE BURNER DOES NOT COME ON **STOP** AND RESOLVE THE PROBLEM OR IF UNSURE THE ISSUE, STOP AND CONTACT YOUR DISTRIBUTOR OR CALL THE FACTORY FOR ASSISTANCE.

**CONTINUED**

## **SHUTTING DOWN AFTER USE**

**FOLLOWING THESE SIMPLE TECHNIQUES CAN PROLONG THE LIFE OF YOUR HOT BOX AND HELP PREVENT SERVICE PROBLEMS:**

- A. FINISH CLEANING IN RINSE MODE OR STRAIGHT WATER THROUGH THE MACHINE.**
- B. TURN THE BURNER SWITCH OFF AND ALLOW THE MACHINE TO COOL DOWN.**
- C. TURN THE PUMP OFF.**

### **PREVENTIVE MAINTENANCE**

#### **ROUTINE INSPECTION:**

**REGULAR, ROUTINE INSPECTION OF THE MACHINE'S SUB-SYSTEM AND CRITICAL COMPONENTS IS THE KEY TO PROLONGING THE LIFE OF THE MACHINE. TO PREVENT BREAKDOWNS AND TO PROLONG THE LIFE OF YOUR UNIT FOLLOW THESE ROUTINES:**

#### **DAILY:**

- 1. CHECK WATER SUPPLY BEFORE STARTING.**
- 2. CHECK FUEL SUPPLY.**
- 3. CHECK NOZZLE FOR CLOGGING.**
- 4. CHECK THE WASH HOSE FOR TEARS & LEAKS.**
- 5. REPORT TO A SUPERVISOR ANY FLAWS OR ISSUES WITH THE EQUIPMENT.**

#### **WEEKLY:**

- 1. CHECK THE PRESSURE HOSE FOR WEAR AND/OR DAMAGE.**
- 2. CHECK THE FUEL FILTER FOR DIRT AND SEDIMENT.**
- 3. REPORT ANY ISSUES OBSERVED WITH YOUR SUPERVISOR.**

# Maintenance Instructions

**PRELIMINARY CHECKPOINTS:** YOUR BE POWER HOT BOX WILL PROVIDE TROUBLE FREE PERFORMANCE IF IT IS PROPERLY MAINTAINED. MOST MALFUNCTIONS ARE THE RESULT OF IMPROPER OPERATION OR LACK OF PROPER MAINTENANCE.

IN THE EVENT OF A PROBLEM, CHECK THE FOLLOWING BEFORE CALLING YOUR DISTRIBUTOR.

1. **WATER SYSTEM:**

- A. IS THE WATER TURNED ON?
- B. IF INSTALLED ARE INLINE FILTERS FREE OF DEBRIS?
- C. IS THE INLET WATER HOSE KINKED?
- D. IS CHEMICAL HOSE PRIMED AND FULLY SUBMERGED IN CHEMICAL CONTAINER?

2. **ELECTRICAL SYSTEM:**

- A. ARE YOU USING A FULLY CHARGED BATTERY
- B. IS THE FUSE BLOWN?
- C. IS THE UNIT LOCATED WHERE SUFFICIENT VENTILATION IS AVAILABLE FOR THE MOTOR TO RUN WITHOUT OVERHEATING?

3. **PRESSURE WASHER GUN AND HOSE:**

- A. DOES PRESSURE WASHER HOSE APPEAR DAMAGED, TORN OR SHOW EXPOSED WIRING?
- B. IS THE GUN LEAKING? STOP AND HAVE REPLACED.
- C. IS THE SPRAY TIP WORN, DISPLAYING DISTORTED SPRAY PATTERN OR DECREASED PRESSURE?

4. **FUEL:** USE ONLY #1 OR #2 (DIESEL OR KEROSENE) DO NOT USE GASOLINE, LUBE OILS, OR FUEL CONTAMINATED WITH WATER. DIESEL MAY BE USED BUT MAY CONTAIN ADDITIVES MEANT FOR HIGH COMPRESSION ENGINES THAT MAY SOOT UP THE COMBUSTION CHAMBER AND MAY REQUIRE FREQUENT CLEANING TO MAINTAIN EFFICIENT PERFORMANCE. #2 DIESEL MAY VARY IN BTU'S OR HEAT CONTENT. CONTACT YOUR SUPERVISOR AND/OR YOUR DISTRIBUTOR IF EXCESSIVE HEATING OR CYCLING OCCURS. ALWAYS USE A CLEAN CONTAINER IF ADDING FUEL TO THE ONBOARD FUEL TANK. CHECK YOUR FUEL FILTER OFTEN.

5. **REPORT TO YOUR SUPERVISOR:** ANY SMOKE OR FUEL LEAKS. IF NOTICED STOP THE BURNER, COOL DOWN THE MACHINE AND TURN THE CAM SWITCH TO THE OFF POSITION. TAG OUT THE MACHINE UNTIL REPAIRED.

## **WARNING**

**IMMEDIATELY REPORT ANY PROBLEMS  
WITH THIS MACHINE TO YOUR SUPERVISOR**

### **1. DAILY MAINTENANCE:**

- A. PERFORM A VISUAL INSPECTION OF YOUR UNIT PRIOR TO AND DURING START UP.
- B. IMMEDIATELY REPAIR ANY LEAKS OR MALFUNCTIONS BEFORE CONTINUING TO USE THE WASHER.
- C. CHECK THE FOLLOWING:
  - 1. CHECK THE BATTERY - #1 REASON FOR BURNER ISSUES WITH SDC BURNERS
  - 2. CHECK WASH HOSE COUPLING TO BE SURE THEY ARE SECURE.
  - 3. CHECK SPRAY TIP FOR WEAR OR DRAG DAMAGE AND REPLACE IF REQUIRED.
  - 4. FILL BURNER FUEL TANK WITH CLEAN WATER-FREE FUEL.
  - 5. CHECK WAND ASSEMBLY AT GUN CONNECTION FOR LEAKS.

### **2. MONTHLY INSPECTION – DISCONNECT FROM POWER**

- A. VISUALLY CHECK OVERALL AS FOLLOWS:
  - 1. Hose for wear, tears or exposed wires.
  - 2. Electrical connections to insure they are dry and tight.
  - 3. Electrical supply line and ground for tight dry connections.
- B. CONNECT TO POWER AND ENSURE:
  - 1. Function lights are operative (If equipped).
  - 2. Pump runs smooth, quiet and without vibration.
  - 3. Wearing protective wear, remove chemical hose from container and check to see if it is clean and serviceable.
  - 4. Check all fittings for leaks (thread tape and tighten if required).

## CONTINUED

**BURNER MAINTANCE:** FOR DETAILED INFORMATION AND SERVICE INSTRUCTIONS REFER TO BECKETT BURNER MANUAL INCLUDED WITH THIS OPERATORS' MANUAL. KEEP A FULLY CHARGED BATTERY. A weak battery will cause the burner motor and fuel pump to slow down and the result will be smoke and unburnt fuel (soot) accumulation on the coil. This could lead to serious machine damage or excessive heat build up that could fracture the coil, coil fittings and or hose. See Coil Cleaning Below.

**COIL MAINTENANCE – FUEL:** Your Hot Box Beckett Burner may be equipped with a Genisys Primary Control. You will need a contractor's tool available to service the burner. Refer to the instructions in the contractors' tool guide for assistance. You may also review the videos at [www.beckettcorp.com/support](http://www.beckettcorp.com/support). If your Hot Box does not have a Primary Control you will need to pay attention to the burner functions and especially the loss of heat. At first sight of a heat loss STOP, address the problem before continuing. Failure to do so could lead to raw unburnt fuel build up which would require the removal of the heating coil and saturated insulation before using the burner again. If your igniter fails, DO NOT simply replace it and think the unburnt fuel will burn out, it will not. Remove the coil, clean it and replace the insulation with new.

**COIL MAINTENANCE – SOOT:** Poor Grade fuel oil or inadequate combustion air will cause soot build up on the outside surfaces of the heating coil. This deposit of soot retards heating and restricts airflow through the coil. To clean off soot deposits periodically add liquid "Red Devil" Soot Remover or mix a similar product to the fuel oil using the manufacturer's instructions. If sooting is severe, remove the coil, presoak it with a degreaser/detergent and wash it with a pressure washer.

**COIL MAINTENANCE - RELIEF VALVE:** Your Hot Box is equipped with a **thermal relief valve**. If you notice a drip or leak from the valve DO NOT REMOVE the Valve and Plug the line. Replace the Valve before continued use. It is located at the coil outlet above where your wash hose connects.

**FREEZE PROTECTION** – MOST PRESSURE WASHER DAMAGE IS THE RESULT OF WATER FREEZING AND RUPTURING PLUMBING, PUMPS AND WASH HOSES. ALWAYS INSTALL YOUR MACHINE IN A WARM AREA, ABOVE 32 DEGREES FAHRENHEIT, WHICH COULD PREVENT FREEZE DAMAGE. WASH HOSES SHOULD NEVER BE LEFT EXPOSED TO FREEZING CONDITIONS AND PLACING THEM IN A WARM AREA WOULD PREVENT THIS PROBLEM WHEN NOT IN USE. IF IT IS NECESSARY TO KEEP YOUR UNIT IN AN AREA WHERE FREEZING IS LIKELY TO OCCUR, FOLLOW THESE INSTRUCTIONS TO PREVENT DAMAGE TO YOUR EQUIPMENT:

1. DISCONNECT THE WATER INLET HOSE FROM THE WATER SOURCE (HYDRANT OR REMOTE TANK).
2. OBTAIN A 5 GALLON CONTAINER OF WATER WITH ANTI-FREEZE ADDED.
3. LAY WASH HOSE AND WAND FLAT ON THE FLOOR AND REMOVE SPRAY TIP.
4. OBTAIN A 5' HOSE WITH CONNECTION ON ONE END AND ATTACH TO WATER INLET CONNECTOR.
5. PLACE HOSE AND CHEMICAL TUBES INTO 5 GALLON CONTAINER OF ANTI-FREEZE.
6. TURN ON PUMP ALLOWING ANTI-FREEZE TO BE DRAWN INTO THE SYSTEM. ALLOW PUMP TO CONTINUE UNTIL ANTI-FREEZE APPEARS AT THE END OF WAND.
7. TURN OFF PUMP.
8. WHEN PREPARING TO RESTART UNIT, CONNECT WATER INLET AND START UNIT, PUMPING ANTI-FREEZE BACK INTO 5 GALLON CONTAINER FOR REUSE.

## **DESCALING COIL INSTRUCTIONS**

THE BUILDUP OF LIME OR MINERAL SCALE DURING THE NORMAL USE OF YOUR UNIT WILL DECREASE THE OPERATING EFFICIENCY OF THE HEATING COILS. HOW OFTEN YOU NEED TO CLEAN THE HEATING COIL DEPENDS ON YOUR WATER CONDITION. IF YOUR WATER IS KNOWN TO BE HARD OR HAVE HIGH MINERAL CONTENT, A PREVENTATIVE MAINTENANCE SCHEDULE TO CLEAN THE COIL **EVERY 90 DAYS** IS RECOMMENDED.

1. IN A FIVE GALLON CONTAINER, MIX DELIMING ACID WITH WATER ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. **CAUTION: DO NOT USE RAW MURIATIC ACID. ACID MUST BE PROPERLY INHIBITED TO PROTECT PUMP AND COIL.**
2. TURN OFF YOUR WATER SUPPLY. DISCONNECT THE HOSE AT THE INLET PUMP. CONNECT FIVE TO SIX FEET OF HOSE TO THE HOSE BARB AT THE PUMP INLET. TIGHTEN THE HOSE CLAMP SECURELY. REMOVE THE SPRAY NOZZLE FROM THE GUN AND PLACE THE DISCHARGE END OF THE GUN AND THE SUCTION END OF THE WATER HOSE INTO THE CONTAINER. ELEVATE THE CONTAINER ABOVE THE LEVEL OF THE PUMP, SECURE THE PUMP SUCTION HOSE APPROXIMATELY 5 INCHES ABOVE THE BOTTOM OF THE CONTAINER. WE RECOMMEND THE USE OF A STRAINER SCREEN ON THE SUCTION HOSE.
3. TURN ON THE PUMP AND CIRCULATE THE ACID SOLUTION THROUGH THE COIL FOR 30 MINUTES OR UNTIL THE DISCHARGE SOLUTION STOPS FOAMING. WHEN FOAMING STOPS, THE COIL WILL BE CLEAN.
4. REMOVE THE ACID SUCTION HOSE FROM THE PUMP AND CONNECT THE SUPPLY LINE FROM THE FLOAT TANK. TURN ON THE WATER SUPPLY AND ALLOW THE FLOAT TANK TO FILL. TURN THE MACHINE OFF AND REPLACE THE NOZZLE.
5. **SPRAY TIPS:** USE THE CORRECT SPRAY TIPS FOR YOUR UNIT. WHEN ADDING A SURFACE CLEANER OR OTHER ADD ON DEVICES MAKE ABSOLUTELY SURE THE RIGHT SPRAY TIP IS USED. FAILURE TO DO SO WILL DAMAGE YOUR EQUIPMENT.



## Machine Care

### **WINTERIZING**

**NOTE: DAMAGE DUE TO FREEZING IS NOT COVERED BY WARRANTY.**

1. DISCONNECT WATER SUPPLY.
2. OPERATE PUMP TO EXPEL ALL WATER FROM SYSTEM. SHUT OFF PUMP AND REMOVE NOZZLE FROM WAND.
3. FILL FLOAT TANK WITH DILUTED PERMANENT ANTI-FREEZE.
4. RESTART PUMP, WHEN ANTI-FREEZE STARTS FLOWING FROM WAND LET IT FLOW INTO FLOAT TANK TO CIRCULATE THROUGH SYSTEM FOR SEVERAL MINUTES. ADD ENOUGH ANTI-FREEZE TO FLOAT TANK TO BE SURE SYSTEM IS COMPLETELY FILLED. UNIT IS NOW WINTERIZED UNTIL READY TO USE AGAIN.

### **MORE PREVENTATIVE MAINTENACE**

1. CHECK TO SEE THAT WATER PUMP IS PROPERLY LUBRICATED.
2. FOLLOW WINTERIZING INSTRUCTIONS TO PREVENT FREEZE DAMAGE TO PUMP AND COIL.
3. ALWAYS NEUTRALIZE AND FLUSH DETERGENT FROM SYSTEM AFTER USE.
4. IF WATER IS KNOWN TO HAVE HIGH MINERAL CONTENT, USE A WATER SOFTENER IN YOUR SYSTEM, OR DESCALE AS NEEDED.
5. DO NOT ALLOW ACIDIC, CAUSTIC OR ABRASIVE FLUIDS TO BE PUMPED THROUGH SYSTEM.
6. ALWAYS USE HIGH GRADE QUALITY CLEANING PRODUCTS.
7. NEVER RUN PUMP DRY FOR EXTENDED PERIODS OF TIME.
8. USE CLEAN FUEL. AVOID WATER CONTAMINATED FUEL, AS IT WILL DAMAGE THE FUEL PUMP.
9. IF MACHINE IS OPERATED WITH SMOKY OR EYE BURNING EXHAUST, COILS WILL SOOT UP, PREVENTING WATER FROM REACHING MAXIMUM OPERATING TEMPERATURE.
10. NEVER ALLOW WATER TO BE SPRAYED ON OR NEAR THE MOTOR OR BURNER ASSEMBLY OR ANY ELECTRICAL COMPONENTS.
11. PERIODICALLY DELIME COIL AS PER INSTRUCTIONS.
12. IT'S ADVISABLE TO PERIODICALLY VISIBLY INSPECT THE BURNER. CHECK AIR INLET TO MAKE SURE IT IS NOT CLOGGED OR BLOCKED. KEEP EQUIPMENT CLEAN AND DRY. THE FLOW OF COMBUSTION AND VENTILATION AIR TO THE BURNER MUST NOT BE BLOCKED OR OBSTRUCTED IN ANY MANNER. THE AREA AROUND THE WASHER SHOULD BE KEPT CLEAN AND FREE OF COMBUSTIBLE MATERIALS, GASOLINE AND OTHER FLAMMABLE VAPORS AND LIQUIDS.

# Troubleshooting

## SUPERVISORS TROUBLESHOOTING GUIDE

<b>PROBLEM</b>	<b>POSSIBLE CAUSES</b>	<b>SOLUTION</b>
1. BURNER DOES NOT TURN ON	<ol style="list-style-type: none"><li>1. FUSE BLOWN</li><li>2. DEFECTIVE POWER CORD.</li><li>3. DEFECTIVE ON/OFF SWITCH.</li><li>4. FAULTY GROUND OR LOOSE WIRING.</li></ol>	<ol style="list-style-type: none"><li>1. REPLACE INLINE 30 AMP FUSE</li><li>2. REPAIR OR REPLACE BAD WIRE.</li><li>3. TEST SWITCHES AND REPLACE IF DEFECTIVE.</li><li>4. CHECK SWITCH AND MOTOR WIRING FOR SOLID CONNECTIONS.</li></ol>
2. BATTERY WEAK - NOT CHARGING	<ol style="list-style-type: none"><li>1. BAD BATTERY OR CHARGING SYSTEM</li></ol>	<ol style="list-style-type: none"><li>1. REPLACE BATTERY WITH 1000MCA BATTERY 800 CCA DELCO MARINE</li></ol>

# WARRANTY

## LIMITED WARRANTY

ALL BE POWER CLEANING SYSTEMS HOT BOXES ARE WARRANTIED BY BE POWER TO THE ORIGINAL PUCHASHER TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP UNDER NORMAL USE, FOR THE PERIODS INDICTED BELOW. THIS LIMITED WARRANTY IS SUBJECT TO THE EXCLUSIONS SPECIFIED BELOW AND APPLIES TO ORIGINAL COMPONENTS ONLY. ANY PART OR PARTS REPLACED UNDER THIS WARRANTY WILL ASSUME THE REMAINDER OF THE ORIGINAL WARRANTY PERIOD. THE MANUFACTURER'S OBLIGATION UNDER THIS WARRANTY SHALL BE LIMITED TO THE REPAIR OR EXCHANGE OF ANY PART OR PARTS THAT MAY PROVE DEFECTIVE SUBJECT TO NORMAL USE. REPAIRS MUST BE PREAUTHORIZED. IN NO EVENT SHALL THE MANUFACTURER BE LIABLE FOR INCIDENTAL NOR CONSEQUENTIAL DAMAGES NOR LABOR CHARGES, WHICH RESULTS FROM ANY DEFECT IN THE PRODUCT OR BREACH OF THIS WARRANTY. THIS WARRANTY SHALL NOT APPLY TO ANY PART OR PARTS, WHICH HAVE BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATIONS, ABUSE OR MISUSE. IF ANY DEFECTS APPEAR, IMMEDIATELY CONTACT THE DEALER FROM WHICH THE HOT BOX WAS PURCHASED. RETURNED PART OR PARTS MUST BE SHIPPED TO THE MANUFACTURER PREPAID ONLY. A DATED INVOICE SHOWING PROOF OF PURCHASE AND THE SERIAL NUMBER OF THE UNIT IS REQUIRED FOR ALL WARRANTY CLAIMS. A RETURNED GOODS AUTORIZATION NUMBER (RGA) MUST BE ISSUED BY BE POWER PRIOR TO RETURNING ANY PART OR PARTS FOR WARRANTY EVALUATION.

**PUMPS: AR, CAT, GENERAL OR OTHER PUMP MANUFACTURERS** – PUMPS ARE WARRANTIED TO THE ORIGINAL PUCHASHER FOR A PERIOD SPECIFIED BY THE PUMP MANUFACTURER. WARRANTY COVERS MANUFACTURING DEFECTS OR WORKMANSHIP THAT MAY DEVELOP UNDER NORMAL USE. WARRANTY DOES NOT APPLY TO MISUSE OR WHEN THE PUMP OR ACCESSORY TO THE PUMP IS ALTERED OR USED IN EXCESS OR RECOMMENED SPEEDS, PRESSURES, TEMPERATURES, OR FLUIDS NOT SUITABLE FOR THE PUMP OR THE PUMP ACCESSORY MATERIAL CONSTRUCTION. WARRANTY DOES NOT APPLY TO NORMAL WEAR, FREIGHT DAMAGE, FREEZE DAMAGE OR DAMAGE CAUSED BY PART, PARTS OR ACCESSORIES NOT SUPPLIED BY THE MANUFACTURER.

**ELECTRIC MOTORS** - BE POWER USES BALDOR AND MARATHON ELECTRIC MOTORS. WE ARE NOT AN AUTHORIZED REPAIR CENTER FOR THESE MANUFACTURERS. WHILE WE WILL ASSIST WITH FINDING THE NEAREST REPAIR CENTER FOR THESE MANUFACTURERS, WE CANNOT SHIP REPLACEMENT MOTORS WITHOUT THEIR CONSENT. YOUR BE POWER DEALER MAY BE OF SERVICE IN LOCATING REPAIR FACILITES WITHIN YOUR AREA. CHECK OUR WEB PAGE UNDER THE SUPPORT SECTION AT GCALARGO.COM. INVOICE SHOWING PROOF OF PURCHASE AND THE SERIAL NUMBER OF THE UNIT IS REQUIRED FOR ALL WARRANTY CLAIMS. A RETURNED GOODS AUTHORIZATION NUMBER (RGA) MUST BE ISSUED BY BE POWER PRIOR TO THE RETURN OF SUSPECTED WARRANTY PART OR PARTS.

## **CONTINUED**

**ACCESSORIES** - ACCESSORIES CARRY A 90 DAY WARRANTY. THIS WARRANTY DOES NOT APPLY TO MISUSE, NEGLIGENCE OF IMPROPER USE.

### **THIS WARRANTY DOES NOT COVER THE FOLLOWING ITEMS:**

1. NORMAL WEAR ITEMS, SUCH AS: SPRAY TIPS, WASH GUNS, PRESSURE WASHER HOSES, WANDS/LANCES, QUICK COUPLERS, SEALS, FILTERS, GASKETS, O-RINGS, BELTS, PUMP PACKINGS, PUMP PISTONS, PUMP CHECK VALVES, FUSES, RELIEF VALVES, AND UNLOADER VALVES.
2. DAMAGE OR MALFUNCTIONS RESULTING FROM MISUSE, ABUSE, MODIFICATION, ALTERATION, INCORRECT INSTALLTION, IMPROPER SERVICING, ACCIDENTS OR FAILURE TO COMPLY WITH THE MANUFACTURERS MAINTENANCE INSTRUCTIONS.
3. NORMAL MAINTENANCE REQUIRED FOR CONTINUED GOOD WORKING ORDER, (I.E) OIL CHANGES, MINOR ADJUSTMENTS, AND REPLACEMENT OF FUEL FILTERS, TIPS AND OTHER ROUTINE MAINTENANCE.
4. FREEZE DAMAGE, CHEMICAL (SOAP/ACID) DAMAGE, SCALE OR SOAP BUILDUPS, RUST/CORROSION OR THERMAL EXPANSION.
5. ELECTRICAL COMPONENT FAILURES DUE TO POWER SUPPLY MALFUNCTIONS.
6. SUPPLIED WATER FAILTURES RESULTING IN PREMATURE PUMP FAILURE.
7. LEAKING GUNS, WANDS, HOSES, AND FITTINGS RESULTING IN FREQUENT SYSTEM RESTARTS THAT MAY CAUSE PREMATURE PUMP FAILURE.
8. NEGLIGENCE OF OPERATORS WHO FAIL TO FOLLOW OPERATING INSTRUCTIONS, (I.E) ATTEMPTING TO REFUEL A HOT ENGINE, INSTALLING THE HOT BOX IN AN ENCLOSED TRUCK/VAN THAT FAILS TO PROVIDE ADEQUATE VENTILATION AND AIR SUPPLY, OR IMPROPER VENTING OF THE BURNER, RESUTLING IN DAMAGE TO VEHICLE AND/OR THE HOT BOX.

### **LIMITATION OF LIABILITY**

BE POWER LIABILITY FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IS EXPRESSLY DISCLAIMED. IN NO EVENT SHALL BE POWER LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT IN QUESTION. BE POWER OBLIGATION UNDER THIS WARRANTY IS EXPRESSLY LIMITED AT OUR OPTION TO REPLACEMENT OR REPAIR AT A SERVICE FACILITY DESIGNATED BY BE POWER, OF SUCH PARTS, AS INSPECTION SHALL DISCLOSE TO HAVE BEEN DEFECTIVE. BE POWER DOES NOT AUTHORIZE ANY OTHER PARTY INCLUDING BE POWER DEALERS TO MAKE ANY REPRESENTATION OR PROMISE ON BEHALF OF BE POWER OR TO MODIFY THE TERMS, CONDITIONS, OR LIMITATIONS IN ANY WAY. IT IS THE BUYERS RESPONSIBILITY TO ENSURE THAT THE INSTALLATION AND USE OF BE POWER PRODUCTS CONFORMS TO LOCAL CODES. THE WARRANTY CONTAINED IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTY OF MERCHANT-ABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WARRANTY.

THE WARRANTY PERIOD IS 1 YEAR FOR FRAME ASSEMBLIES AND PRODUCTION ITEMS BUILT BY BE POWER (FOAT TANKS, ELECTRICAL BOXES, FUEL TANKS AND OTHER FABRICATED COMPONENTS). THE HEATING COIL IS WARRANTED ON A PRO-RATED BASES OF 5 YEARS.

**BE POWER EQUIPMENT USA, INC.**

DECATURVILLE, TN 38329