K-PAC

PLUM CREEK ENVIRONMENTAL

APARTMENT COMPACTORS

OPERATION, MAINTENANCE, AND INSTALLATION MANUAL

K-PAC

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K-PAC Operator Manual Rev. 9/29/25

1. STANDARD 810/820 OPERATION

INTRODUCTION

THANK YOU FOR PURCHASING A K-PAC APARTMENT COMPACTOR.

The purpose of this manual is to provide the owner and operator with the necessary information to properly and safely install, operate, and maintain your apartment compactor. Also included are sections regarding troubleshooting and service procedures. The manual is not intended as a primary training source, but as a reference guide for authorized, trained personnel. Each person involved in the operation, maintenance and installation of the machine must read and thoroughly understand the instructions in this manual and follow **ALL WARNINGS.**

The employer involved in the operation, maintenance, and installation of the compactor must also read and understand the most current version of the following applicable standards:

ANSI Standard No. Z245.2, "Apartment Compactors Safety Requirements"

A copy of this standard may be obtained from:
ANSI
25 West 43rd Street
New York, NY 10036
OSHA 29 CFR, Part 1910.147

Any service or repair instructions contained in this manual should be performed by factory authorized personnel only. If you should need assistance with your Compacts, please contact your distributor.
When contacting your distributor, you will need to provide:
Compactor Serial Number:_____

Installation Date:_____

IF YOU HAVE ANY SAFETY CONCERNS WITH EQUIPMENT, OR NEED FURTHER INFORMATION, PLEASE CONTACT US AT:

K-PAC
1302 East Industrial Access Rd
West Point, MS 39773
662-327-4183

1. STANDARD 810/820 OPERATION

PRE-OPERATION INSTRUCTIONS

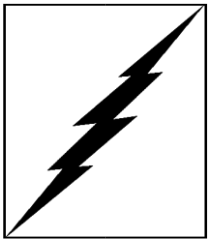
FEDERAL REGULATION PROHIBITS THE USE OF THIS EQUIPMENT BY ANYONE UNDER 18 YEARS OF AGE.

THE EMPLOYER SHOULD ALLOW ONLY AUTHORIZED AND TRAINED PERSONNEL TO OPERATE THIS COMPACTOR. This compactor is equipped with a key operated locking system. The key (s) should be in the possession of authorized personnel.

STAY CLEAR OF ALL INTERNAL PARTS OF THE APARTMENT COMPACTOR/CONTAINER DURING OPERATION. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH!

NEVER ENTER ANY PART OF THE COMPACTOR UNLESS THE DISCONNECT SWITCH HAS BEEN LOCKED-OUT AND TAGGED-OUT.
Use OSHA approved Lock-Out & Tag-Out Process.
Before starting the compactor, be sure no one is inside. Be certain that everyone is clear of all points of operation and pinch point areas before starting.

DO NOT REMOVE ACCESS COVERS EXCEPT FOR SERVICING. Only authorized service personnel should be allowed inside. All access doors on the compactor body should always be secured in place when the unit is operating.
See Lock-Out & TagOut instructions in the Maintenance section.



ONLY AUTHORIZED PERSONNEL SHOULD BE ALLOWED INSIDE THE MOTOR CONTROL PANEL.
The motor control panel contains high voltage components.
See Lock-Out & Tag-Out Instructions in the Maintenance section.

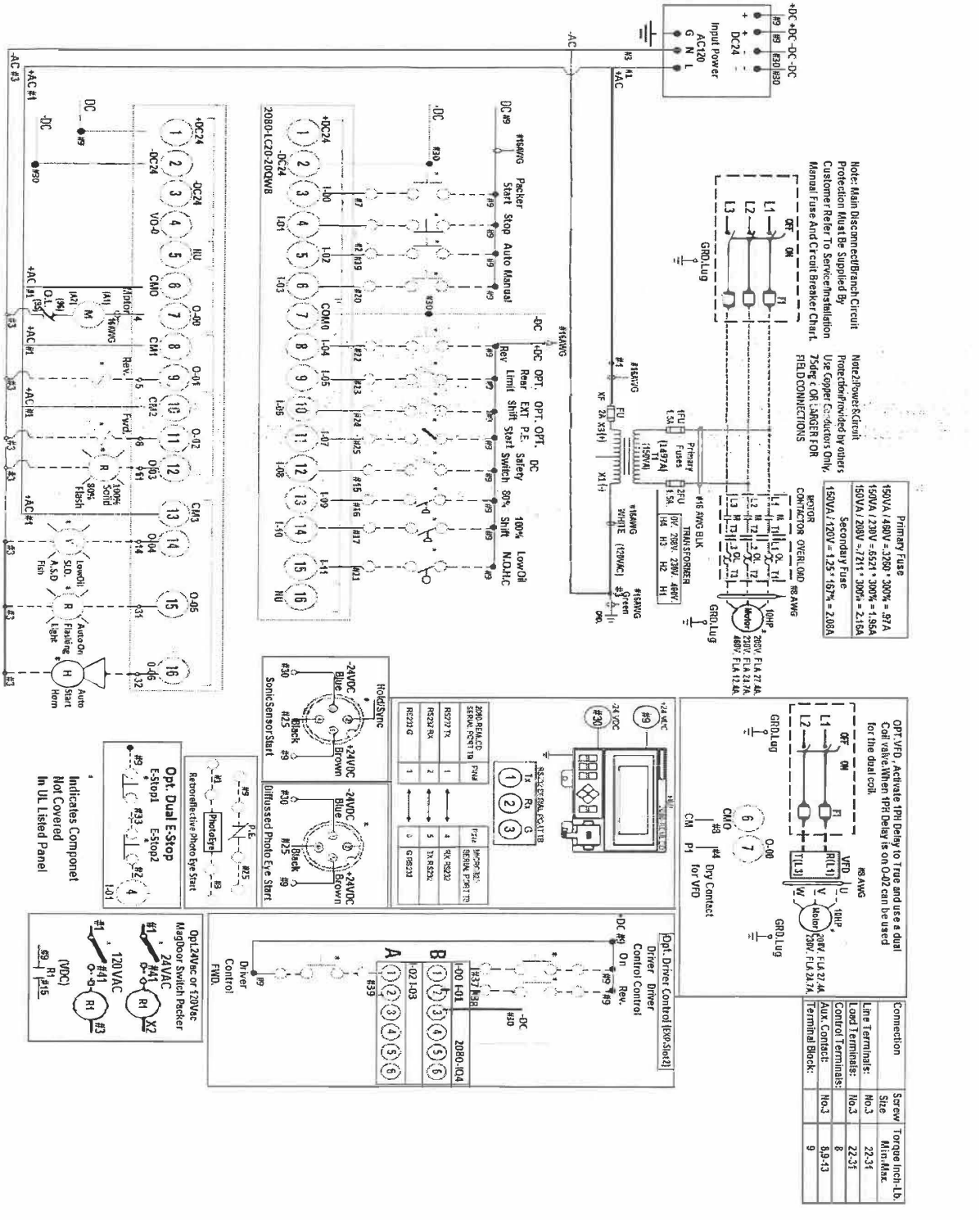
If the compactor is equipped with a security gate or doghouse with security door, **BE SURE THAT THE SECURITY GATE OR DOOR IS CLOSED BEFORE THE COMPACTOR IS STARTED**

1. STANDARD 810/820 OPERATION

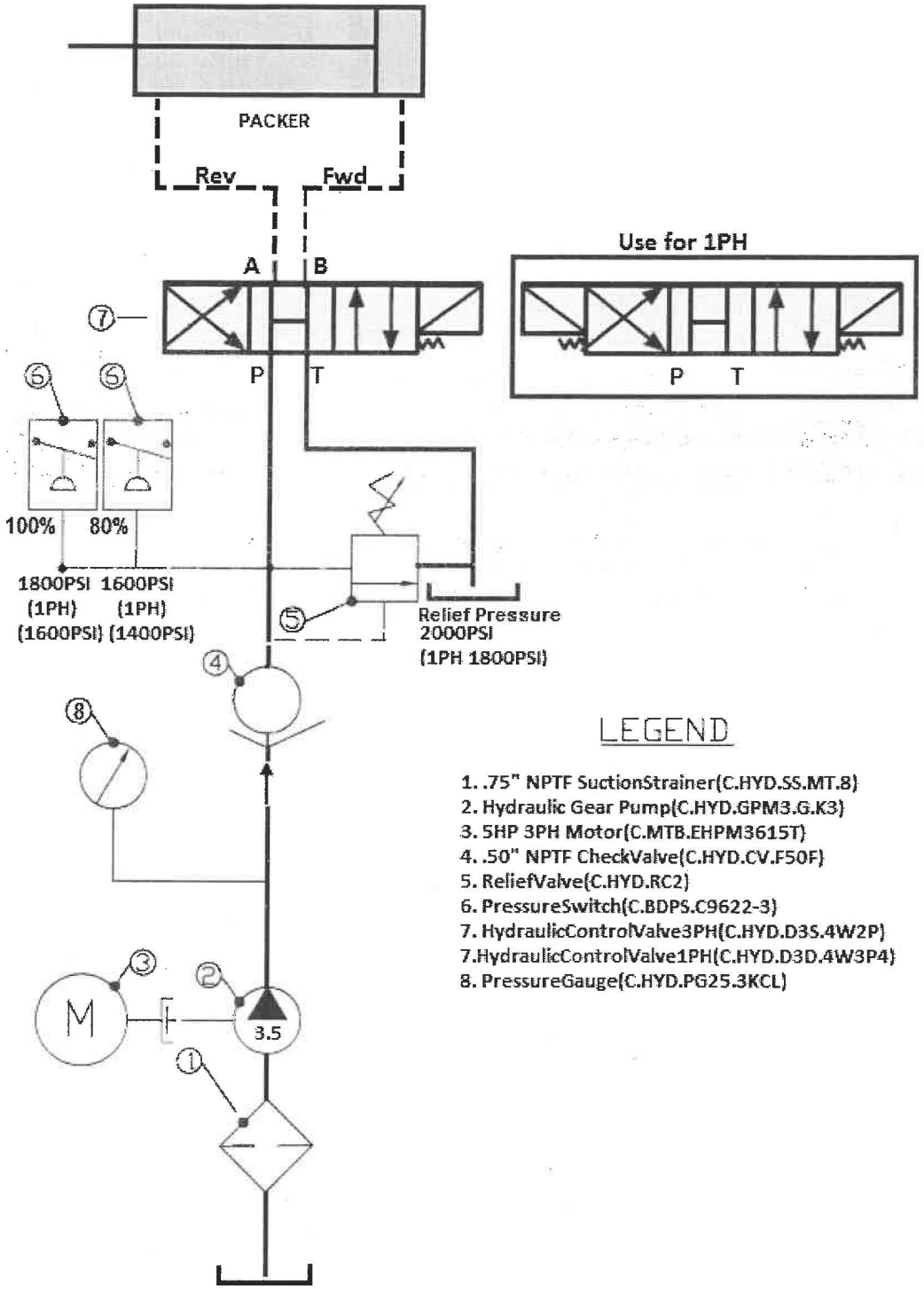
POWER UNIT STANDARD FEATURES

1. AUTO-OFF-HAND KEY SWITCH (C.AB30.J44)
2. GREEN START PUSH BUTTON (C.AB30.A1)
3. Red Maintain Stop Push Button (C.AB30.FXQ10R)
4. FED./REV. SELECTOR SWITCH (C.AB30.J91)
5. Yellow Low Oil Light (C.CH22.22DS4Y) (Optional)
6. Safety Door Switch Input (if the door is open mid – cycle. Turn the machine on. The ram will fully retract and shut off the machine)
7. Safe – Stop (ANSI Z245.2-2008 5.7.1 standard requires that after the Emergency Stop is pushed and the machine is turned on. The ram will fully retract and shut off the machine.
8. Ram stop in the forward (the unit will stop at the end of the forward position)
9. Other options are available please contact the factory.

Electrical Information



Hydraulic Information



1. STANDARD 810/820 OPERATION

FEATURES

1. **Safe Stop Mode:** All of our function modes that are on the HMI, are all set up with Safe – Stop (Ansi Z245.2-2008 5.7.1 standard requires that after the Emergency Stop is pushed and the machine is turned on. The ram will fully retract and shut off the machine. In this mode the machine will look for three things to shut off and clear safe stop (Retract time, Rear limit input activating, or pressure switch reaching 1700Psi for 1second). Once safe stop is cleared out the next time the machine is started up normal operation will accrue.

2. **Start Packer (I-00):** this input activates the start of the machine in Manual Mode. This input also activates Auto mode.

3. **Emergency Stop (I-01):** when this input in not activated the machine will not start up. Also when this input is deactivated and then activated the system will go into Safe Stop. Safe Stop is cleared by start the machine and the cylinder fully retracting and shutting off by the retract time, rear limit input, or pressure switch is activated.

4. **Auto On (I-02):** when this input is activated this allows the system to be activated into Auto Start Mode. Auto mode is either used with a Photo Eye or the Timer Start. To activate Auto mode hold in the Packer Start input for 20 seconds. If the Packer Start input is deactivated the 20 seconds will start all over. The first 5 seconds of activating Auto mode the Auto Alarm output will turn on. At the same time the Auto flashing light output will turn on, the Auto flashing light will flash the entire 20 seconds. Once the 20 seconds has timed out the machine will start up and fully retract and shut off. Depending on what Auto mode is running, once the Auto Start signal is activated the Auto Alarm output will turn on 5 seconds before the machine turns on. The machine can also be start up in Auto mode by pushing the Green Start button.

5. **Manual On (I-03):** when this input is activated this allows the system to run in Manual mode by powering the Packer Start Input.

6. **Manual Reverse (I-04):** this input will only function when it gets momentarily activated and deactivated, and only when motor output and forward output are active. Once the reverse input is activated the direction of the cylinder will go from forward to reverse and the motor output will stay on as well. Once the Rear Limit input activated, pressure transducer in retract (1700psi), or the retract time times out. The machine will shut off, the next time it is started up normal operation will accrue.

1. STANDARD 810/820 OPERATION

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7. **Rear Limit Switch (I-05):** when this Rear Limit Switch input is activated, while the motor and reverse coil outputs are activated the cylinder will either shutoff if in Safe Stop, Shift to forward for a complete cycle, or shut the machine down when the cycle is complete and the cylinder stops in the fully retracted position. You still want to set the reverse time.

8. **Forward Limit Switch (I-06):** when this Forward Limit Switch input is activated, while the motor and forward coil outputs are activated. The cylinder will travel forward and activate the forward Limit Switch input and shift form the forward output off to the reverse output on.

9. **Auto Start Sensor (I-07):** This input works when Auto Start is implemented to function. When this input is active it will start the machine up automatically after the safety start up warning happens. If this input is active for 20 straight minutes the Auto Shut Down output will turn on and shut the machine down.

10. **Packer Safety Door Switch (I-08):** when this input is not active the machine will not start up in any mode when the Packer Start input is activated. If the machine is running in any mode and if this Packer Safety Door Switch becomes non active the machine will shut off and go into Safe Stop. If any automatic mode is being used the Packer Safety Door Switch has to be activated to activate any Auto mode. Once Automatic mode is active and if the machine is running and the Packer Safety Door Switch becomes non active while the machine is running, the machine will shut off and Automatic mode will become deactivated. If in Automatic mode and the machine is not running if the Packer Safety Door Switch becomes non active the Automatic mode will not deactivate or if the Automatic Start Sensor activates while the Packer Safety Door Switch is deactivated the machine will not start up until the Packer Safety Door Switch becomes active.

11. **(80% / Advance Warning) (I-09):** After any Safe Stop is cleared out and when the motor and forward output are active. Once pressure reaches 80%PSI and holds for 2 seconds, this will turn on the 80% output which will turn a light on. This light will stay on until the E-stop is pushed in to reset the 80% full or if the 100% output full light is activated the 80% output will turn off.

1. STANDARD 810/820 OPERATION

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12. **(100% / Container Full Warning) (I-10):** After any Safe Stop is cleared out and when the motor and forward output are active. Once pressure reaches 1700PSI and holds for 2 seconds, this will turn on the 100% output which will turn a light on and will also shut the main motor off and kick the logic into Safe Stop mode. This will also shut off the 80% output. The 100% output will stay on until the E- Stop is pushed in to reset this light. If the start button is pushed in the ram needs to fully retract and shut off (Safe Stop Mode) and the 100% light can stay on. If the start button is pushed in again the system can run a normal cycle and can run with the 100% full light on. If the system is running forward and the 100%PSI holds again for 2 seconds the same thing happens and the system will shut off again and the 100% light stays on.

13. **Low Oil Float (I-11):** when this Low Oil input is deactivated it will not allow the machine to run in any mode. If this input is deactivated it will also turn on the Low Oil Warning Light output. If this input is activated, once the oil leak is fixed and the tank is filled back up with oil the machine can run normal operation and the Low Oil light will clear out. Also when this Low Oil Input is deactivated, it will also set off the Safe Stop for the next start up after Low Oil has been cleared out.

14. **Motor Starter Out Put (O-00):** This output turns on the Motor Start Coil which turns on the main motor on.

15. **Reverse Coil Out Put (O-01):** This output turns on the Reverse directional valve coil when it is time to reverse the cylinder.

16. **Forward Coil Out Put (O-02):** This output turns on the Forward directional valve coil when it is time

17. **80% flashing light Out Put (O-03):** This output turns on the 80% light when the compactor reaches 80% full. The pressure transducer sensor is what activates this Out Put. This 80% light is reset by pushing the Emergency Stop button and deactivating the Emergency Stop input. Once the Emergency Stop Input is reactivated the 80% light will clear out. 80% light will also shut off if the 100% light is activated.

1. STANDARD 810/820 OPERATION

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18. **100% full Solid light Out Put (O-03):** This output turns on the 100% light when the compactor reaches 100% full. The pressure transducer sensor is what activates this Out Put. When this light activates it will also shut the machine down. This 100% light is reset by pushing the Emergency Stop button and deactivating the Emergency Stop input. Once the Emergency Stop Input is reactivated the 100% light will clear out.

19. **Low Oil Solid light (O-04):** This output turns on when the Low Oil Float input is deactivated.

20. **Auto Shut Down Flashing light (O-04):** This output turns on when Auto mode is active and the Auto Start Sensor (I-07) is active for 20 straight minutes or set time. If this happens the machine will shut down and clear out the Auto Start active mode and go into Safe Stop and this Auto Shut Down output will turn on. To reset this output push the Emergency Stop button and pull it back out.

21. **Flashing light for Auto Start Out Put (O-05):** This output turns on when Auto mode is being activated and when Auto mode is activated. Once Auto mode is deactivated for any reason this output will deactivate. If Door counter is used this output will turn on for twenty seconds after the final count has been accomplished and before the machine start up.

22. **Horn for Auto Start (O-06):** This output turns on when Auto mode is being activated and also turns on when Auto mode is active and the Auto Sensor is active, this output will turn on five second before the machine start up. If Door counter is used this output will turn on for twenty seconds after the final count has been accomplished and before the machine start up.

1. STANDARD 810/820 OPERATION

OPERATING INSTRUCTIONS (AUTOMATIC MODE)

1. Place the material to be discarded into the compactor.
   NOTE: If you are loading the compactor through a door or gate, close it before starting the compactor
2. Insert the key into the "Auto – Off – Hand" key switch and turn to the "Auto" position.
3. Push in the green start button and hold it "Continuously" for 20seconds.
   - Both the audible and visual star-up alarms will energize
   - After 5 seconds the audible alarm will stop, but the visual alarm will continue for additional 15 seconds (for a total of 20 seconds)
   - After 20 seconds the motor and the retract coil will energize and the ram will fully retract "if by- pass cylinders are used the retract time will time and the motor and retract coil will de- energize" "if pressure cylinders are being used once the ram fully retracts and relief pressure activates the pressure switch to I-07. The motor and retract coil will de-energize shutting off the unit.
   - The light will continue to flash, which is a sign of "Auto Mode Active". What will deactivate Auto Mode is pressing the E-Stop button, breaking the safety switch for the door while the machine is running, Turning the key switch to off or Hand Mode, Container full, Low Oil/High Temp. Shut Down and Auto Shut Down.
   - If the unit runs continuously for 20 minutes the system with activate "Auto Shut Down"
4. When the photo eye is blocked there is a 20 second delay before it activates the motor coil and the forward coil. After 15 seconds the audible alarm will activate. The audible alarm will activate for 5 seconds and the motor and the forward coil will energize.
5. The unit will complete a cycle, if the photo eye is unblocked the system will shut off. If the photo eye continues to stay blocked. The system will continue to run. If the Photo Eye is blocked for 20 min. continuously the Auto Shut Down will activate.

2. MAINTENANCE

TROUBLE-SHOOTING

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Motor won't start or makes growling noise	Start switch turned but nothing happens	Check reset button on starter
		Check wiring to panel
		Check for defective switch block
	No electrical power to unit	Turn on main disconnect
		Replace fuses or reset breakers
	No electrical power to control circuit	Check primary and secondary sides of transformer
		Check for correct voltage, check control fuses
	Thermal overload tripped	Reset. Be sure proper sized overload relays are used and amp setting is correct
	Open motor leads	Check continuity. Clean and tighten
	Very low voltage	Check power source
	Single phased	Check power source (3-Phase)
	Rotor or bearings locked	Check shaft for freeness of rotation
	Contactor coil burned out	Replace contactor coil
Motor runs excessively hot	Blocked ventilation	Clean external and internal ventilation system
	High ambient temperature of 105 Fahrenheit	Provide outside source of cooler air
		Reduce number of cycles per hour
Motor runs noisy	Bad bearings	Disconnect from pump coupling and check. If noise does not stop, replace bearings.
	Bad pump or coupler	Disconnect from coupling and check
Thermal overload relays tripping	Incoming leads to incorrect terminals	Correct lead terminal locations
	Low voltage at motor terminals	Improve power supply and/or increase line size
	Single phasing	Check power source, must have all 3 phases (for 3-Phase models only)
	Excessive voltage drop	Eliminate
	Overload amps set too low	Correct setting per nameplate current on motor
	Incorrect overload for voltage used	Replace per nameplate current on motor
	Loose electrical connections	Clean and retighten

2. MAINTENANCE

TROUBLE-SHOOTING (CTD)

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Thermal overload does not trip soon enough	Overload setting to high	Set correctly
	Line voltage too high for motor	Rewire motor and starter. Match to line voltage. Replace overload with correct one or reset if applicable
Excessive vibration (out of balance)	Motor mounting	Check alignment between motor and pump. Be sure motor mounting is tight and solid.
	Pump	Disconnect pump from coupling and restart motor. If vibration stops, the unbalance is in the pump. Replace the pump.
	Coupling	Remove coupling and restart motor. If the vibration stops, the unbalance is in the coupling. Replace spider coupling.
Packer does not develop full packing force	Main relief set to low	Re-adjust.
Motor and pump run, but compactor does not operate	Low oil level	Add oil
	Hoses not properly connected	Check quick coupler connections
	Loading chamber lid or door open	Compactor ram will not run with lid or door open. Close lid or door.
	Incorrect pump motor rotation	Reverse any two motor leads on the starter (3 Phase only)
	Pump suction screen plugged	Clean suction screen
	Key sheared on pump motor shaft	Replace key and any damaged parts. Make sure set screw is tight and Loctite.
Cycle time to long	Restriction or kink in hose	Check hose
	Pump worn or damaged	Replace pump
	Pump suction screen plugged	Clean suction screen
Power unit does not shut off at end of packing cycle	On multicycle units the setting may be incorrect	Readjust counter or timer to desired cycles.
	Return timer setting (T2)	Decrease timer setting (T2)
System operates continuously over main relief and ram does not operate	Main relief set too low	Adjust main relief
	Pressure switch set too high or solenoid stuck in "pack" position	Adjust pressure switch or disassemble and clean solenoid valve
Power unit shuts off before end of cycle	Return timer setting (T2)	Decrease timer setting (T2)

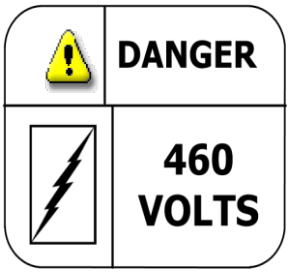
2. MAINTENANCE

TROUBLE-SHOOTING (CTD)

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Erratic operation	Valve sticking or binding	Disassemble and clean as necessary
	Viscosity of oil too high	Change oil to factory recommended viscosity
	Air in system	Check for leaks, tighten fittings.
	Low oil	Fill reservoir
	Low voltage	Check primary & secondary sides of transformer for correct voltage
Pump makes noise (sounds like gravel)	Partly clogged intake strainer or restricted intake pipe	Pump must receive intake fluid freely or cavitation results. Flush the system. Clean intake pipe and clean or replace strainer. Add clean fluid
	Defective bearing	Replace pump
	Air leak at pump intake pipe joints	Tighten joints as required
Pump shaft seal leak	Seal worn or damaged	Replace seals or pump
Rapid pump wear	Abrasive matter in hydraulic oil bearing circulated through pump	Install adequate filter or clean
	Viscosity of oil too low	Replace with factory recommended oil
	Pressure to high	Reduce pump pressure to factory specifications
	Air recirculation causing pump noise	Tighten all fittings
Excessive heat	Continuous running	When over 140 or hot in comparison with circuit lines, pump should shut down immediately before restarting, insure the fluid cooling capacity is adequate to remove system generated heat
		Install cooler oil
		Install oil temperature shut down switch
	Undersize hydraulic lines added; power unit too far from compactor for hose size	Replace with larger hoses
	High ambient temperature in relation to oil temperature	Use lower viscosity oil
	Excessive system leakage	Check and replace contact block necessary
Container 80% Full light is on before container is full	Pressure switch setting	Readjust pressure switch. Increase pressure setting.
Container 80% Full light does not come on when container is full	Pressure switch setting	Readjust pressure switch. Decrease pressure setting.
	Light bulb burned out	Replace bulb
AVOID THE FOLLOWING: EXCESSIVE GREASING OF MOTOR, MISALIGNMENT OF MOTOR AND PUMP, AND CONTAMINATION ON MOTOR AND ELECTRICAL COMPONENTS.		

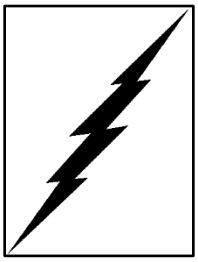
3. INSTALLATION

ELECTRICAL & HYDRAULIC INSTALLATION



The motor control panel contains high voltage components.

Only authorized service personnel should be allowed inside. See Lock-Out & Tag-Out instructions in the maintenance section.



A lockable fused disconnect switch (customer furnished) must be installed and be within sight of the compactor motor control panel location, not to exceed 50'0" from the compactor. This fused disconnect switch should be sized in accordance with the compactor (see Fuse and Circuit Breaker Chart).

DANGER: All equipment must be grounded per National Electric Code.

GROUNDING INSTRUCTIONS

This appliance must be connected to a grounded, metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the compactor.
If there is any doubt whether the appliance is properly grounded, a qualified electrician should be consulted.

REMOTE POWER PACK INSTALLATION

1. The remote power pack should be installed and anchored as required by the customer. If the operator station is mounted in the face of the motor control panel, be certain these controls are located as to be in a convenient, but not hazardous, location to the customer.
   CAUTION: Operator Station must be located so that the Emergency Stop Button is readily accessible to the operator and within three (3) feet of the charging chamber access door.
   If installation requires the operator station to be located in a more remote area, a second Emergency Stop Button should be added and installed in the manner described above.
2. Connect the hydraulic hoses to the power pack, exercising care to follow the port decals (A or B) on the packer and the power pack. In the event the decals have been obliterated, the hose leading from the rear of the cylinder should be installed in the side port of the block to which solenoid valve is bolted (A Port). The hose leading from rod end of the cylinder should be connected to the end of the block to which the solenoid valve is bolted (B Port). Refer to Power Unit diagrams in the Maintenance section of this manual.

3. INSTALLATION

ELECTRICAL & HYDRAULIC INSTALLATION

PUSHBUTTON CONTROL PANEL

If a remote operator station is furnished, it will be factory wired using Sealtite. If it is necessary to disconnect it from the wires (to install the operator station inside a building), exercise care that these wires are reconnected as originally furnished. (Check local codes to be certain that sealtite is acceptable.)

CAUTION: Operator Station must be located so that the Emergency Stop Button is readily accessible to the operator and within three (3) feet of the charging chamber access door. If installation requires this operator station to be located in a more remote area, a second Emergency Stop Button should be added and installed in the manner described above.

ELECTRICAL CONNECTIONS

Run power lines, between fused disconnect switch (customer furnished) and compactor's motor control panel, in accordance with local electrical codes, using knock-outs in bottom of motor control panel. See Fuse & Circuit Breaker Chart for Motors and Wire Size Chart, in the Maintenance Section, to determine the proper service disconnect amperage rating and the proper wire size.

NOTE: High legs should be installed to L3 on motor starter.

Check voltage at fused disconnect switch to be certain it is the same as is shown on compactor or remote power pack. If voltage is correct, put fused disconnect switch in "ON" position.

START-UP INSTRUCTIONS

1. With the ram fully retracted, check to be sure the oil reservoir is full to the 3/4 level on the sight gauge (Refer to the maintenance chart for hydraulic oil recommendations). The hydraulic system pressure has been factory set and the entire unit has been operated prior to shipment.
2. **CAUTION:** MAKE SURE PERSONS AND MATERIAL ARE CLEAR OF CHARGE BOX AREA.
3. Depress the start button and check the pump shaft for proper rotation.

   CAUTION: If the pump rotates backward, stop immediately. The pump will be damaged if it is operated in reverse even for short periods. Reversing any two incoming power lines will change the motor/pump rotation.
4. **Make sure that the operators are trained in the proper use of this equipment.**