

TROUBLE SHOOTING

	◆ Most Likely	● Less Likely	♣ Least Likely
Symptom	Cause	Remedy	
1. Heater shuts off	◆ Manual reset	◆ Requiring manual restart by reset button on.	
2. Loss of prime overnight Won't hold vacuum	◆ Vacuum air leak in fuel line ♣ Plugged pump screen	◆ Check all fuel connections. Tighten fittings. ♣ Check pump screen, may need cleaning—to access, remove pump cover	
IS TANK EMPTY?	● Plugged filter or tank oil empty	● Clean filter. Using vent port, reprime pump (See Figure 6 & 7).	
3. Fails to start.	◆ Vacuum Leak ◆ Inadequate Fuel Supply ● No Pressure ● No Pre-heat ● Auto start circuit not functioning ● No Arc ● No Air Pressure	◆ Open bleeder port if air present. Check and tighten fittings. ◆ Clean filter. Check all fuel connections. Tighten fittings. ● Check, may need cleaning—to access, remove pump cover. ● Using vent port, reprime pump (See Figure 6 & 7) ● Be sure all wiring to pre-heater is tight—no loose connections. ● Bad firerod—Replace. Continuity at terminals. ● Check circuit control board and replace if necessary.(Call Factory) ● Check continuity at terminals of firerod limit snap switch. Replace if needed. ● Check springs to electrode rod adjustment (under transformer) make sure they make good contact. Open burner door and make sure electrode tips aren't touching flame cone. Readjust. ● Check pressure regulator and adjust. Check air supply line for restrictions or leaks. Pull compressor cover and inspect carbon vanes. May need to replace. Check filter, clean if needed.	
4. Reduced air pressure, cannot increase.	◆ Gauge may be bad. ◆ Intake filter muffler is plugged with dust or dirt. ♣ Compressor vanes may be worn. ● Exposed to water.	◆ Replace gauge. ◆ Remove & Clean with carburetor cleaner, dry thoroughly. Do Not Use. ♣ Replace carbon canes. ● Remove cover, clean rust with emery cloth.	
5. Hard starting diminished flame.	◆ Partially plugged filter. ♣ Out of fuel ♣ No oil to burner ● Restriction in nozzle usually only when initially installed. New lines may have foreign material in them. ● Air band open too far	◆ Clean filter. Using vent port—reprime pump (See Figure 6 & 7) ♣ Refill Storage. ♣ Clean pump screen—Remove pump cover. Using vent port, reprime pump. (See figure 6 & 7) ● Remove nozzle and check for foreign objects. (See Figure 9 and 11) ● Aluminum Block Pre-heater inside burner should not build up carbon. If carbon is present, pre-heat circuit is malfunctioning. Thermocouple heat sensor wire could have open circuit. Heat control board may have blown circuit and circuit board fuse. Inspect both and replace either if needed. (See Figure 11). ● Close air band—while viewing flame; open air band slowly until combustion chamber is clear, not orange.	
6. Heater cycles frequently, without thermostat temperature setting being achieved in area to be heated.	◆ Heater over firing. ♣ Temperature setting wrong On high limit fan safety switch. ● High limit safety switch bad	◆ Investigate and locate reason for over firing. I.e., nozzle eroded, pump not functioning properly, decrease pump motor speed. (See #6 for remedy) ♣ Check temperature setting and adjust as necessary. ● Replace high limit fan safety switch.	

7. Heater rumbles and excessive heat blow back from flame vision port.	<ul style="list-style-type: none"> ◆ Pump setting wrong ◆ Draft incorrect. If proper draft can't be achieved, heater could have excessive amount of ash and wont allow sufficient draft. 	<ul style="list-style-type: none"> ◆ Pump not functioning properly—over firing. May need RPM readjust. Reset flame slightly less than ½ way down tube combustion chamber. Use adjustment knob on pump motor. (See Figure 7). ◆ Set draft. Clean out combustion chamber and exchangers of ash. Check draft—reset if needed.
8. Heater establishes flame but locks out or shuts off. Need to reset primary.	<ul style="list-style-type: none"> ◆ Photo eye cant see flame. ◆ Due to back draft. Flame end cone may have ash. ◆ Flame too small 	<ul style="list-style-type: none"> ◆ Clean photo eye which is smoked up by back draft smoke. ◆ Swing open burner door and clean ash build up from flame end cone. (See Figure 5 & 8). ◆ Increase pump motor speed (See Figure 7).
9. Proper draft setting cannot be achieved	<ul style="list-style-type: none"> ◆ Negative draft in building or exhaust fans present. ◆ Excessive ash buildup/Heater 	<ul style="list-style-type: none"> ◆ May need to install power vent/draft inducer's in stack. (See Figure 2 for wiring). ◆ Clean ash and soot from combustion chamber and heat exchangers.
10. Poor or reduced heat production.	<ul style="list-style-type: none"> ◆ Flame too small ◆ Entire fuel supply may be plugged. ◆ Excessive ash buildup exchangers ◆ Through vision port, check flame to see if flame is smaller than usual. 	<ul style="list-style-type: none"> ◆ Nozzle may be plugged with debris—usually after filter is cleaned. ◆ Clean filter both, oil strainer and oil pump screen. ◆ Clean ash from combustion chamber and exchangers. ◆ May need to readjust pump RPM. (Use knob on pump motor). (See Figure 7).

EconoHeat Inc.

Omni Unit Heaters 150, 250, 350, 500 Limited Warranty

Econo Heat (manufacturer) warrants to the purchaser of Unit Heaters listed above will be free from defects in materials and workmanship for the durations specified below, which duration begins on the date of delivery to the customer. Customer is responsible for maintaining proof of date of delivery.

If return is deemed necessary for warranty evaluation and determination of repair or replacement, unit heater is to be sent to the factory with freight. Econo Heat reserves the right to determine appropriate action for repair or replacement.

No parts will be accepted by Econo Heat without RA# (return authorization number) clearly marked on outside of shipping package. Obtaining RA# requires model and serial numbers, description of part being replaced and nature of defect. Call factory to receive RA#.

Warranty Covers:

1. Combustion Chamber and Heat Exchanger five (5) years *full repair or replacement, additional five (5) years prorated. (Parts Only)
2. Oil Heater Block, twenty (20) years. (Parts Only)
3. Oil Heater Block Controller PCB, three (3) years. (Parts Only)
4. All other components, one (1) year. (Parts Only)

This warranty is void if:

1. Warranty registration card is not returned within thirty (30) days of purchase.
2. Any part or component subject to abuse or altered from original manufactures specifications.
3. Installation not in accordance with instructions.
4. Has not been properly maintained, operated or has been misused.
5. Wiring not in accordance with diagram furnished with unit heater.
6. Unit heater is operated in the presence of chlorinated vapors.
7. Air through unit heater is not in accordance with rating plate and specifications.

Warranty is limited to the original purchaser.

The above warranty is in lieu of all other warranties expressed or implied. Econo Heat does not authorize any person or representative to make or assume any other obligation or liability that is not in accordance with above warranty. **Econo Heat is not responsible for any labor cost unless prior authorization in writing has been obtained.**

NOTE: Combustion Chamber Warranty is specific to material and workmanship. Workmanship means Econo Heat warranties the welds are good and will hold. Material means they won't corrode through due to sulfur in the ash that accumulates during operation. **Warranty does not apply to units that experience overheating stress cracks.** These are not incurred because the materials are inadequate for the application nor are they a result of a weld broke lose because of bad penetration. Which is easily recognized by the material being left underneath the weld. These cracks occur as a direct result of improper draft, either by inadequate initial installation and setup which requires (1) establishing a proper draft during installation (2) back draft has occurred due to ash buildup, backing up hot gas passageways either in the exchangers, the stack, or both. (3) Over firing by setting oil supply pressure too high (see manual for proper setting) these are all cases of **thermal overload.**

* Under normal use only. If misuse or abuse is deemed apparent after inspection, warranty is void.

WARRANTY CARD

Please fill out, tear off and return to manufacturer

Return following warranty information to manufacturer within thirty (30) days of purchase or warranty will not be valid. (Please print or type).

Date of Purchase _____

Serial # _____ Model _____

Customer Name _____

Address _____

City _____ State _____ Zip Code _____

Dealer _____

Address _____

City _____ State _____ Zip Code _____

Installed at _____