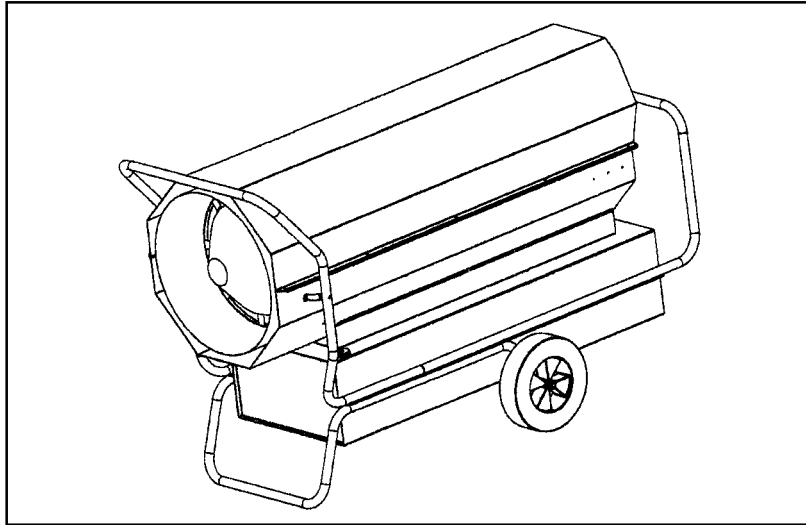


# **FORCED AIR HIGH PRESSURE KEROSENE CONSTRUCTION HEATERS INSTRUCTIONS AND PARTS LIST**



## **MODELS**

350,000 BTU/HR  
K350-FA  
SPC-K350

620,000 BTU/HR  
K650-FA  
SPC-K650



**YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS,  
SO PLEASE READ THESE INSTRUCTIONS BEFORE YOU  
OPERATE THIS HEATER.**



### **GENERAL HAZARD WARNING:**

FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.

ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT THE MANUFACTURER.

**RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE**

## SAFETY INSTRUCTIONS

This is an oil, direct-fired, forced air heater. It's intended use is primarily temporary heating of buildings under construction, alternation or repair.



**WARNING**

**NOT FOR HOME OR RECREATIONAL VEHICLE USE**

### GENERAL PRECAUTIONS

This is an oil direct-fired forced air heater.

Direct-Fired means that all of the combustion products enter the heated space. Even though this heater operates very close to 100 percent combustion efficiency, it still produces small amounts of carbon monoxide. Carbon monoxide (called CO) is toxic. We can tolerate small amounts but not a lot. OSHA says that 50 parts per million (ppm) in the air we breathe is okay if it does not average more than that during an 8 hour working period. Regardless, CO can build up in a heated space and failure to provide adequate ventilation could result in death. The symptoms of inadequate ventilation are:

headache  
dizziness  
burning eyes and nose  
nausea  
dry mouth or sore throat

So be sure to follow requirements about ventilation in these operating instructions.

Forced Air means that a blower or fan pushes the air through the heater. Proper combustion depends upon this air flow; therefore, the heater must not be revised, modified, or operated with parts removed or missing. Likewise, safety systems must not be circumvented or modified in order to operate the heater.

**When the heater is to be operated in the presence of other people the user is responsible for properly acquainting those present with the safety precautions and instructions, and of the hazards involved.**

### SAFETY PRECAUTIONS

1. Check the heater thoroughly for damage. Never operate a damaged heater.
2. Never modify the heater or operate the heater if it has been modified from its original condition.
3. Use only Kerosene or #1 fuel oil. Never use gasoline, naphtha, paint thinner, alcohol or other fuels of any kind.
4. For indoor use only.
5. Use only in well ventilated areas. Provide at least 9 sq. ft. (K350 - 5 sq. ft.) of opening near the floor and 9 sq. ft. (K350 - 5 sq. ft.) of opening near the ceiling.
6. Always keep combustibles, like paper and wood at least 10 ft. from the heater outlet and 4 ft. from the top, sides and inlet. Locate 10 ft. from canvas or plastic coverings and secure them to prevent flapping or movement. This heater produces carbon monoxide, which is listed by the State of California as a reproductive toxin under proposition 65.
7. Never use in places where exposure to flammable vapors or high dust content is possible. This includes gasoline, paint thinners, solvents, coal-dust, sawdust, etc.
8. Install the heater such that it is not directly exposed to water spray, rain and/or dripping water or wind.
9. Never use in areas normally for habitation and/or where children may be present.
10. Operate only on a stable, level surface.
11. Do not use with ductwork. Do not restrict inlet or exit.
12. Use only the electrical power specified.
13. Use only a properly grounded 3 wire extension cord.
14. Unplug heater from electrical supply when not in use.
15. Do not move, handle or service while hot or burning.
16. Heater is equipped with a thermostat, and may start at any time.
17. Use only in accordance with State and Federal ordinances.



**WARNING: FIRE, BURN, INHALATION, AND EXPLOSION HAZARD.**

KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES OR UNKNOWN CHEMICALS.

# OPERATING INSTRUCTIONS

## FUELING

1. Only qualified personnel familiar with these instructions and applicable local, state, and federal regulations and codes may fuel this heater.
2. Use only kerosene or #1 fuel oil in this heater.
3. All flames shall be extinguished and the heater allowed to cool, before fueling.
4. When the heater is removed from service for fueling, all lines and connections in the fuel system shall be inspected and any repairs made before returning heater to operation.
5. The fuel cap gasket and vent hole shall be inspected to insure that they are clear and clean from contaminants.
6. Only the fuel in the internal tank may be stored in the heated building.
7. In the absence of local regulations and codes bulk fuel storage must be a minimum of 25 feet from the heaters, or other sources of ignition.
8. All fuel must pass through the tank inlet screen to remove foreign material before it enters the tank.
9. **CAUTION:** Make sure that the fuel used is free of water.
10. Never operate a heater that does not have a factory purchased vented fuel cap.

## UNPACKING

1. Remove all protective material, which may have been applied to the heater for shipment.
2. Remove the heater from carton or crate.
3. Check the heater for possible shipping damage. If any is found immediately notify the dealer from whom you purchased the heater.

## OPERATION

### TO FUEL

**IMPORTANT:** Be sure the fuel storage container is clean. Foreign matter such as rust, dirt, or water will cause the flame control to shut down heater. Foreign matter will also require more frequent cleaning of the fuel system.

**IMPORTANT:** Before filling fuel tank for the first time or after extended storage periods drain the fuel tank of any moisture or condensation.

Follow instructions under safety precautions before filling.

**CAUTION:** Hot while in operation. Do not touch. Keep children, clothing and combustibles away.

Fill the fuel tank with clean kerosene, No. 1 fuel oil or No. 1 diesel fuel only. Do not use heavy fuels such as No. 2 fuel oil or No. 2 diesel, because it will build up carbon in combustion chamber and clog fuel filters. Kerosene is recommended for use when the temperature drops below zero degrees Fahrenheit (-18° Celsius). In extremely cold weather, condensation may develop in the tank and it is recommended that a tablespoon of de-icer be added for each gallon (4 liters) of fuel in the tank.

When filling the heater use at least 2 gallons (8 liters) of fuel. Be sure heater is level and do not overfill. Use a funnel or can with a long fill spout.

**WARNING:** To avoid fire, wipe up any spilled fuel immediately.

### TO LOCATE

**WARNING:** To avoid fire, place the unit in a level location away from volatile substances and at a safe distance from combustible materials. Adequate ventilation is essential. Refer to the SAFETY PRECAUTION page for advice on adequate ventilation.

### TO START

1. Turn thermostat knob to highest setting. Push reset button.
2. Heater will start when plug heater into electrical power.  
**WARNING:** Use only a three-prong, grounded extension cord.
3. Set thermostat to desired temperature. Heater will cycle on / off to maintain temperature.

### TO STOP

1. Set thermostat to lowest temperature setting.
2. Never unplug heater until purge / cool down cycle is complete.

### TO RESTART

1. Wait 5 minutes.
2. Push reset button.
3. If heater continues to cycle off on flame safety, see a service person.

### STORAGE AND TRANSPORTING

**WARNING:** NEVER TRANSPORT THE HEATER WITH FUEL IN THE INTERNAL TANK.

1. Drain the fuel filters, fuel lines, and pump.
2. Drain the fuel from the tank.
3. If fuel drained from the tank is dirty, flush tank with clean fuel.
4. Store heater in a dry location free from fumes or dust.

## SERVICING

A hazardous condition may result if a heater is used that has been modified or is not functioning properly. When the heater is working properly:

- The flame is contained within the heater with perhaps some yellow tipping from the exit cone.
- There is no strong disagreeable odor, eye burning or other physical discomfort.
- There is no smoke or soot internal or external to the heater.
- There are no unplanned or unexplained shutdowns of the heater.

The parts list and wiring diagram show the heater as it was constructed. Do not use a heater which is different from that shown. Heater performance is effected by pressure setting. If there is any uncertainty about the pressure setting, have it checked.

A heater which is not working right must be repaired, but only by a trained, experienced service person. Contact the factory for the service center closest to you, phone 909/981-534 3.

You may also obtain in warranty or out of warranty service by returning the product freight prepaid to:

Scheu Products Company  
8855 Baker Avenue

Rancho Cucamonga, CA 91730

Contact customer service for Return Goods Authorization Number.

In warranty products returned to the Service Department will be repaired with no charge for either parts or labor and will be returned to you freight prepaid. Please include a brief statement indicating date and place of purchase and the nature of the problem, and proof of purchase.

Out of warranty products returned to the Service Department will be repaired with a charge for parts and labor and will be returned to you freight collect.

## MAINTENANCE

**WARNING:** To prevent personal injury, unplug the heater from electrical source before servicing.

For maximum efficiency and trouble-free service make the following periodic maintenance, cleaning and inspections.

### DAILY SCHEDULE

1. GENERAL. Make general visual inspection of heater for loose or damaged parts. Check nuts and bolts to insure against looseness caused by vibration or rough handling. Damaged parts should be repaired or replaced before using heater again. Check heater operation to be sure it is operating normally.
2. Check for foreign matter in the fuel when filling the tank. If any is found flush the tank.

### 200 HOUR SCHEDULE

1. Flush tank using 2-3 gal of fresh kerosene.
2. Clean the fuel screens in the tank or replace if needed.
3. Clean the pump filter element.
4. Remove, inspect and clean the ignition electrode.
5. Clean the glass portion of the cad cell with a soft dry cloth.
6. Clean the heater at least twice a season (more often in dusty conditions). Remove accumulated dust from the fan, burner, and deflector fins.

### ANNUAL SCHEDULE

1. Check and adjust the pump pressure to the proper setting as specified on the ratings label.

## HEATER SPECIFICATIONS

### MODELS

Input Rating, BTU/hr  
Type of Fuel  
Fuel Consumption, Gal/Hr  
Pump pressure, psig  
Fuel Tank Capacity, gals.  
Electrical Input  
Minimum Operating  
Fan Motor  
Ignition  
Spark Generator  
Electrode  
Dry Weight (#)  
Wet Weight (#)

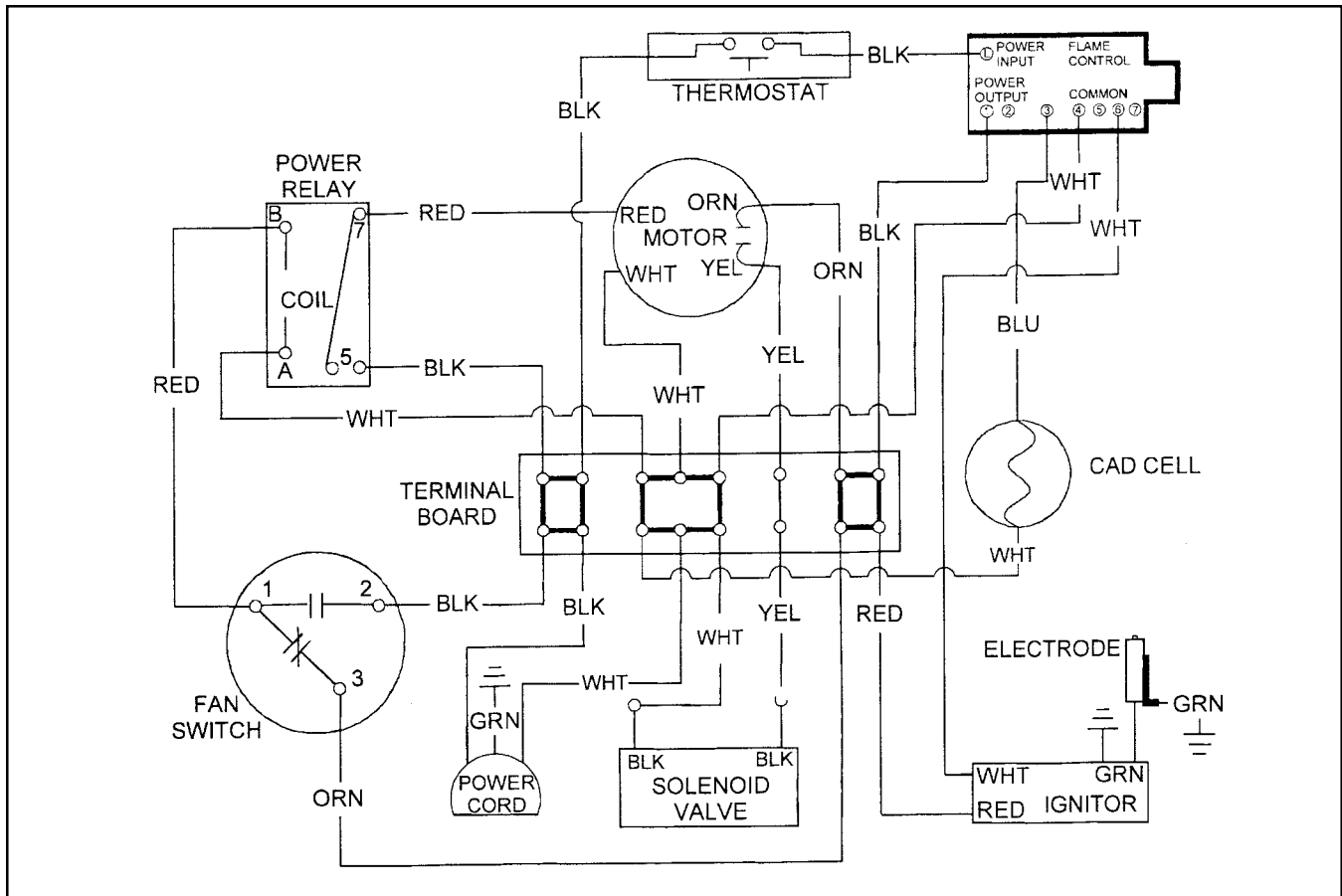
### K350

350,000  
Kerosene or #1 Fuel Oil Only  
2.5  
100  
30  
115V, 60Hz, 1Ø, 9 amps  
100V  
1750 rpm, 1500 cfm  
Over Surface, continuous  
Ignitor, 13k secondary  
Single post electrode  
195  
405

### K650

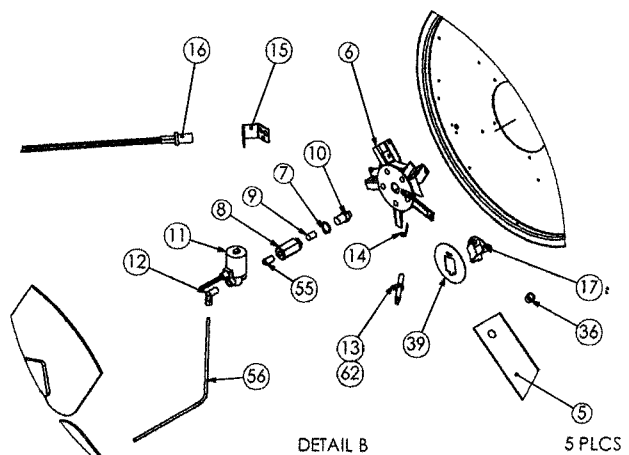
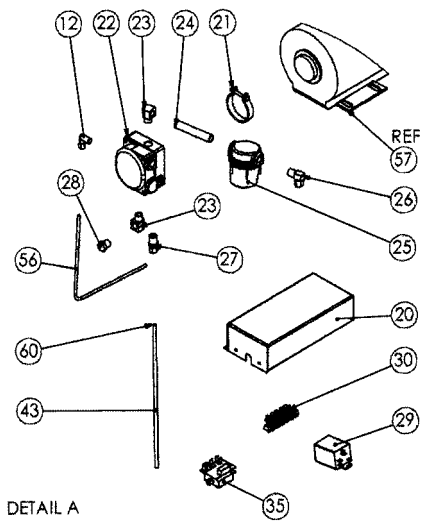
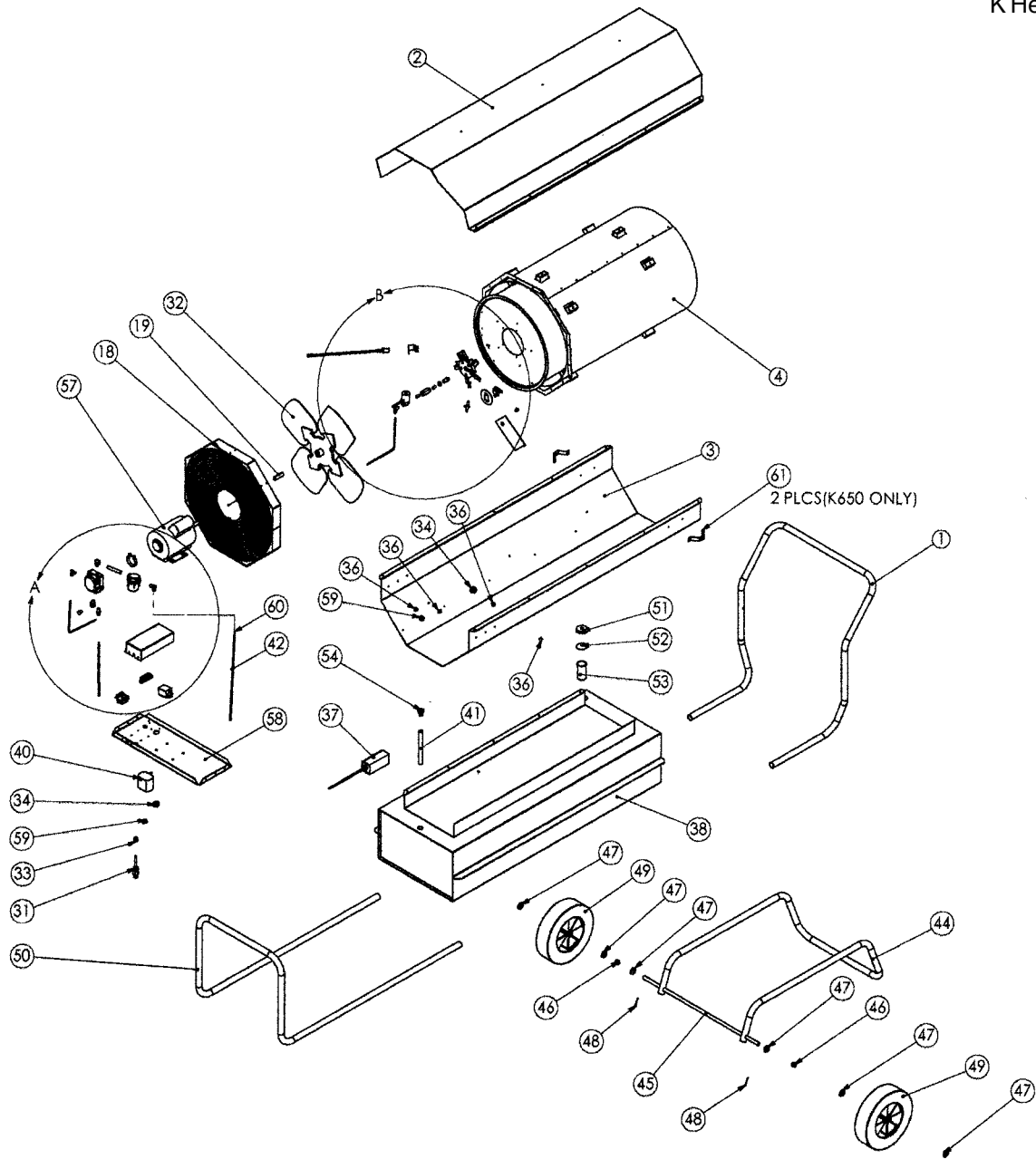
620,000  
Kerosene or #1 Fuel Oil Only  
4.3  
110  
49  
115V, 60Hz, 1Ø, 11 amps  
100V  
3450 rpm, 3000 cfm  
Over Surface, continuous  
ignitor, 13k secondary  
Single post electrode  
300  
643

# WIRING CHART



**Wiring Connection Table for the K350 and K650**

Part No.	Color	From	To	Use
	White	Power Cord	Terminal Board 5	Common
	Black	Power Cord	Terminal Board 3	Line
	Black	Thermostat	Terminal Board 3	Line
	White	Thermostat	Flame Control Line In	(Circuit Breaker)
	Red	Igniter	Terminal Board 2	
	Black	Igniter	Flame Control Term. 4	Common
1040	Black	Flame Control Term. 1 (line out)	Terminal Board 2	
1040	Black	Power Relay Term. 5 (center term)	Terminal Board 3	Line
1153	White	Flame Control term. 5 (common)	Terminal Board 5	Common
1153	White	Power Relay Term. A (coil lowest left)	Terminal Board 5	Common
2053	White	Fuel Valve	Terminal Board 5	Common
2053	White	Cad Cell White Wire	Terminal Board 5	Common
2054	Yellow	Fuel Valve	Terminal Board 1	
2058	Orange	Fan Switch Term. 3 (solitary term.)	Terminal Board 2	
2056	Black	Fan Switch Term. 2	Terminal Board 3	
2055	Blue	Cad Cell Blue Wire	Flame Control Term. 3	
2057	Red	Fan Switch Term. 1	Power Relay Term. B (coil right)	
2059	Green	Combustion Chamber Ground	Ground Screw	
1799	Green	Igniter High Voltage Ground	Ground Screw	
	Green	Power Cord	Ground Screw	
	Green	Thermostat	Ground Screw	
	Yellow	Motor	Terminal Board 1	
	Orange	Motor	Terminal Board 2	
	Red	Motor	Power Relay Term. (top left)	
	White	Motor	Terminal Board 5	Common
2049	Orange	Igniter High Voltage Out	Electrode	



INSTRUCTIONS FOR ORDERING PARTS - All parts orders must show heater Model No., Item No., Part No. and Description. We recommend that only parts supplied by the manufacturer be used on this unit. A locally purchased part may appear to be identical, although in reality it might endanger the heater or the persons operating the heater.

The heater should be serviced only by a trained, experienced service person.

Read the section on "Servicing" before ordering parts.

For parts order, call (909) 981-5343.

### High Pressure Kerosene Heaters Parts List

Item	Part No. K350	Part No. K650	Description	Qty.	Item	Part No. K350	Part No. K650	Description	Qty.
1	4135	4126	Handle	1	45	4130	4130	Axle	1
2	4118	4074	Upper shell	1	46	7959	7959	Spacer wheel	2
3	2066	2042	Lower shell	1	47	7960	7960	Washer	6
4	2033	2020	Comb. chamber and shield	1	48	7955	7955	Cotter pin	2
5	4106	4056	Air deflector	5	49	7951	7951	Wheel, 12" Dia.	2
6	2025	2025	Burner head assembly	1	50	4137	4128	Guard	1
7	7429	7429	Retaining ring	1	51	7803	7803	Fuel cap	1
8	4064	4064	Adapter, nozzle	1	52	3994	3994	Gasket, fuel cap	1
9	4100	4100	Flow straightner plug	1	53	7946	7946	Filter tank inlet	1
10	7950	7945	Nozzle	1	54	7994	7994	Grommet, fuel tank outlet	1
11	2061	2061	Solenoid valve	1	55	8066	8066	Fitting, nipple 1/8 x close	1
12	7958	7958	Fitting, male elbow	1	56	2037	2024	Fuel tube	1
13	7788	7788	Electrode	1	57	7939	7939	Motor	1
14	4058	4058	Electrode ground	1	58	4109	4077	Motor support	1
15	4122	4070	Cad cell mounting bracket	1	59	7158	7158	Bushing, snap 3/4"	1
16	2151	2151	Cad cell sensor	1	60	7982	7982	Fitting, tube insert	2
17	7949	7949	Fan switch	1	61		4129	Bracket, handle mounting	2
18	2034	2021	Fan guard/grille	1	62	6037	6037	Nut, hex cap 10-24 blk	1
19	4080	4080	Fan spacer	1	*	1040	1040	Wire assembly, black	2
20	4150	4150	Controls cover	1	*	1153	1153	Wire assembly, white	2
21	7943	7943	Clamp, motor/pump	1	*	1799	1799	Wire assembly, green	1
22	7941	7941	Pump	1	*	2051	2051	Wire harness	1
23	6142	6142	Fitting, elbow	2	*	2053	2053	Wire assembly, white	2
24	7957	7957	Fitting, nipple 3"	1	*	2054	2054	Wire assembly, yellow	1
25	7942	7942	Filter, pump inlet	1	*	2055	2055	Wire assembly, blue	1
26	7979	7979	Fitting, male elbow	1	*	2056	2056	Wire assembly, black	1
27	7980	7980	Fitting, male connector	1	*	2057	2057	Wire assembly, red	1
28	7981	7981	Fitting, male plug	1	*	2058	2058	Wire assembly, orange	1
29	7944	7944	Relay, power	1	*	2059	2059	Wire assembly, green	1
30	4151	4151	Terminal board	1	*	4147	4147	Sleeving, pvc	1
31	1036	1036	Power cord	1	*	6080	6080	Wire tie	4
32	7954	7940	Fan	1	*	7990	7984	Label, Model	1
33	6223	6223	Bushing, strain relief	1	*	7985	7985	Label, operating instructions	1
34	7424	7424	Bushing, snap 1"	2	*	6410	6410	Label, warning thermostat	1
35	6863	6863	Flame control	1	*	7348	7348	Label, Prop. 65	1
36	6224	6224	Snap bushing, 1/2"	5	*	6910	6910	Label, fuel warning	1
37	2038	2038	Thermostat assembly	1	*	7986	7986	Label, pump water warning	1
38	2035	2022	Tank assembly	1	*	7987	7987	Label, thermostat oper.	1
39	4152	4152	Shield, fan switch	1	*	7991	7989	Label, pump pressure	1
40	2138	2138	Ignitor assembly	1	*	8005	8005	Label, pump operating	1
41	7963	7947	Filter tank outlet	1	*	7732	7732	Label, Logo	2
42	4224	4148	Tube pump inlet	1	*	7993	7993	Manual, operating instr.	1
43	4225	4149	Tube return	1	*	2049	2049	Ignition Wire Assembly	1
44	4136	4127	Heater support	1	*	3705	3705	Igniter Mounting Bracket	1

\* Not shown on exploded view

SCHEUPRODUCTSCOMPANY, INCORPORATED  
Mail: P.O. Box 250, Upland, CA 91785  
Plant: 8855 Baker Ave., Rancho Cucamonga, CA 91730  
Telephone: 909/981-5343