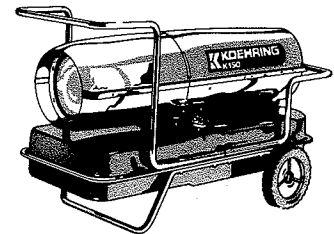
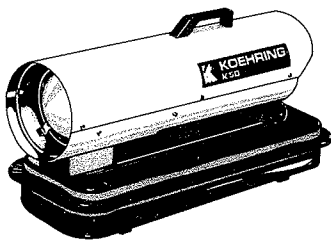
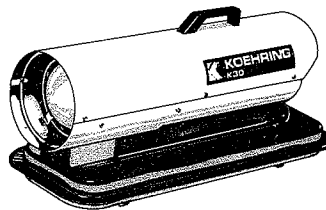




OPERATING, MAINTENANCE AND SERVICE MANUAL

MODELS	K30	K50A	K100A	K150
SPEC. No.'S	5000G16	5003G11	5060G03	3199G19



DESA
AMCA INTERNATIONAL
BOWLING GREEN, KENTUCKY 42101

WARNING

Safety Requirements

IMPORTANT: Read and Understand Instruction Manual before Starting or servicing!

IMPROPER USE OF THIS HEATER CAN RESULT IN SERIOUS BODILY INJURY DUE TO HAZARDS OF FIRE OR EXPLOSION, CARBON MONOXIDE POISONING, BURN, AND ELECTRICAL SHOCK.

For Best Results, Use **ONLY** Kerosene or No. 1 Fuel Oil, Refer to Owner's Manual for suitable alternate fuels. **NEVER USE GASOLINE, NAPHTHA, PAINT THINNERS, ALCOHOL OR OTHER VOLATILE FUELS.**

NEVER USE HEATERS IN AREAS OF HIGH DUST CONTENT, OR FLAMMABLE VAPORS, SUCH AS GASOLINE OR PAINT THINNER.

Make sure hot air outlet is **AT LEAST 5 FEET FROM COMBUSTIBLE MATERIALS.**

Fill fuel tank or move heater **ONLY WHEN** heater is **UNPLUGGED.**

NEVER USE HEATER IN ROOMS USED FOR HUMAN HABITATION.

USE ONLY IN WELL VENTILATED ROOMS. Provide ventilation of **AT LEAST 3 SQUARE FEET FOR EACH 100,000 BTU OF RATING.**

When used with **THERMOSTAT, HEATER MAY START ANYTIME!**

NEVER LEAVE "PLUGGED IN" HEATER UNATTENDED IF CHILDREN OR ANIMALS ARE LIKELY TO BE PRESENT.

Use **ONLY** with electrical voltage and frequency specified on model plate.

Use **ONLY A PROPERLY GROUNDED THREE-WIRE EXTENSION CORD.**

DO NOT MOVE, HANDLE OR SERVICE WHILE HOT OR BURNING.

Use **ONLY** in accordance with local Ordinances and codes.

NEVER attach duct work to front of heater.

HEATER MUST BE LEVEL WHILE HOT OR OPERATING, OR A FIRE MAY OCCUR.

STORE HEATER IN A LEVEL POSITION, WHEN FILLED OR FUEL LEAKAGE CAN OCCUR.

Safety requirements and model plate data
comply with **AMERICAN NATIONAL
STANDARD INSTITUTE, INC.**

Safety Requirements—**ANSI A10.10-1970**

CAUTION:

"Keep children and animals away from the heater at all times. Never leave a heater plugged into a service outlet without an adult present, if children or animals are likely to be present."

UNPACKING AND ASSEMBLY

Unpacking

1. Remove all protective material which may have been applied to the heater for shipment.
2. Remove the heater from the carton.
3. Check the heater for possible shipping damage, if any damage is found, IMMEDIATELY notify the dealer where you purchased the heater.
4. Follow the assembly instructions.

Some models are equipped with wheels and handles. These models are shipped with these items removed from the unit and can be found in the shipping carton along with the mounting hardware. The wheels, axle and mounting hardware are in a plastic package. The following items should be included.

- | | |
|--------------------------------|----------------------------|
| A) Heater Body | G) Eight (8) Screws |
| B) One (1) Front Handle | no. 10-24x1-3/4 in. |
| C) One (1) Rear Handle | H) Eight (8) Nut no. 10-24 |
| D) One (1) Wheel Support Frame | J) Two (2) Cap Nut |
| E) One (1) Axle | K) One (1) Fuel Cap |
| F) Two (2) Wheels | |

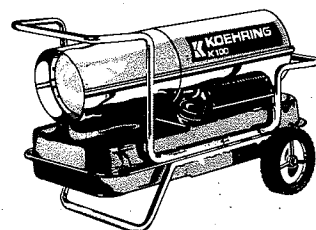
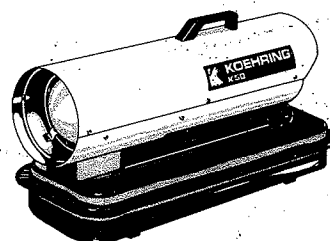
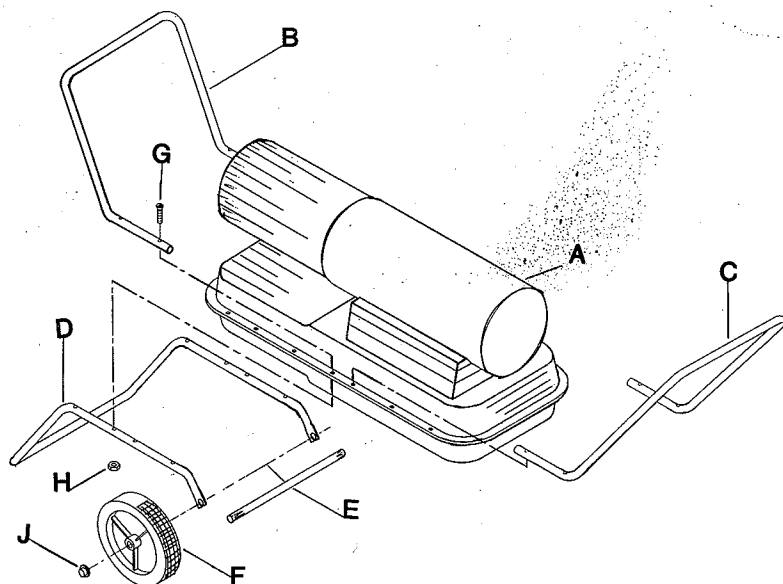
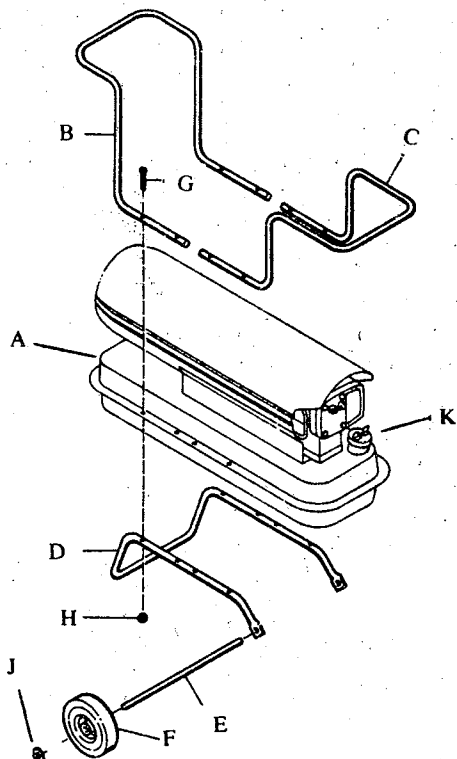
Tools Required

Medium Phillips Screwdriver, 3/8" Open or Adjustable Wrench, Hammer.

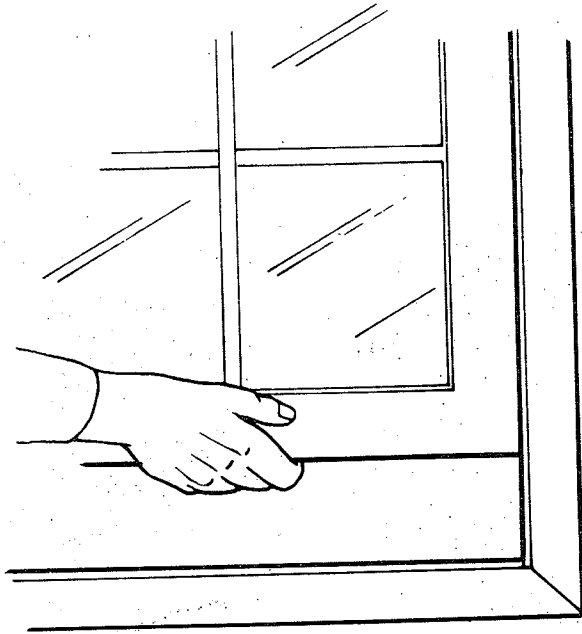
Assembly Instructions

DO NOT TIGHTEN NUTS UNTIL STEP 5

1. Slide the axle (E) through the wheel support frame (D). Install the wheels (F) on the axle (E). **IMPORTANT:** The extended hub of the wheel should be positioned toward the wheel support frame. Position the cap nuts (J) on the axle ends and gently tap with a hammer to secure.
2. Position the heater on the wheel support frame assembly with the motor end over the wheels.
3. Use four screws (G) and nuts (H) to attach the front handle (B) to the top of the tank flange. The screws will go through the front handle, the tank flange and the wheel support frame. Install the four nuts (H) finger tight only.
4. Using four screws (G) and nuts (H) install the rear handle (C) as outlined in step 3.
5. Tighten all nuts.
6. Remove tape from the fuel filler neck and install the fuel cap.



VENTILATION



CAUTION

Use only in well ventilated areas—see chart below.

FRESH AIR OPENING REQUIREMENTS

Note: If more than one heater is being used provide additional fresh air.

Heater Size	Sq. Ft. Opening
30,000 BTU	1.0
50,000 BTU	1.5
100,000 BTU	3.0
150,000 BTU	4.5

EXAMPLE: A 50,000 BTU heater will require a two car garage door, raised two inches or a single garage door raised four inches. A window can also be used for ventilation. The 50,000 BTU heater requires at least 2 thirty inch windows raised 3½ inches.

FUELS

1. Use only kerosene, # 1 fuel oil, or jet "A" fuel.
2. Never use gasoline, naptha, paint thinners, alcohol or other volatile fuels.
3. Use of # 2 fuel oil or # 2 diesel oil may result in:
 - a) More frequent clogging of fuel filters and nozzles.
 - b) The formation of carbon on the spark plug.

Do not allow your spark plug to get a carbon buildup on the electrodes.

Carbon deposits on the spark plug can cause interrupted starting and raw fuel emission from the heater.

FUEL SOURCE

1. FUELS CAN BE PURCHASED AT YOUR LOCAL GASOLINE SERVICE STATION OR LOOK IN THE TELEPHONE DIRECTORY UNDER "KEROSENE" TO FIND ANOTHER SOURCE.

SPECIFICATIONS

	30,000	50,000	100,000	150,000
OUTPUT Rating (BTU Per Hour)	30,000	50,000	100,000	150,000
Fuel: See Fuel Chart	Same All Models			
Fuel Tank Capacity, U. S. Gallons	2.25	3.50	9.00	13.50
Fuel Consumption, Approx. U. S. Gal. Per Hour	0.23	0.36	0.75	1.10
Electric Requirements:	115 V, 60Hz	115 V, 60Hz	115V, 60Hz	115V, 60Hz
.Amperage (During Normal Run)	2.35	2.90	4.50	5.00
.Starting Amps	4.00	4.00	9.00	10.00
Motor RPM	1665	1730	3450	3450
Air Output (CFM)	103	145	260	360
Air Pump Pressure	3.00	3.60	4.00	5.00
Shipping Weight (Approx. Lbs.)	32.00	38.00	65.00	94.00
Without Fuel (Approx. Lbs.)	28.00	34.00	55.00	77.00
Duct		No Duct Recommended	No Duct Recommended	No Duct Recommended

OPERATION

THEORY OF OPERATION

There are four basic systems within the heater. The fuel system, the air system, the ignition system, and the flame-out control system.

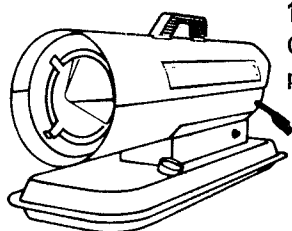
An air pump on one end of the motor shaft forces air through the air tube and out of the burner nozzle. The moving air creates a pressure differential in the burner head causing fuel to be drawn from the tank. The fuel and air mix is sprayed into the combustion chamber in a fine mist.

Additional air is supplied to the combustion chamber by a fan on the opposite end of the motor shaft. Ports around the burner head allow a portion of the air being moved by the fan to enter the combustion chamber to support combustion.

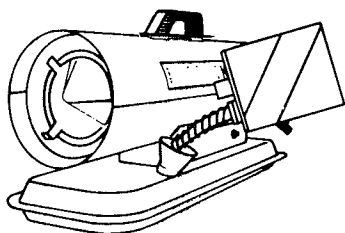
The remaining air is directed around and over the combustion chamber. This air mixes with the heated air from the combustion chamber and is ejected as a jet of clean, heated air.

The ignition system consists of a transformer and spark plug. The transformer creates a spark between the electrodes of the spark plug and ignites the fuel and air mixture within the combustion chamber. The spark plug fires constantly during operation.

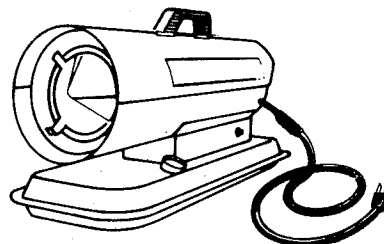
A light sensitive cell detects a flame, which the flame-out control automatically trips if the flame fails, thereby causing the heater to shut down.



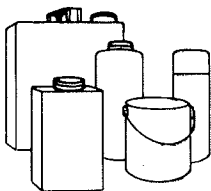
1.
Check reset button to be sure it is pushed in.



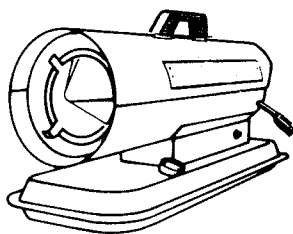
2.
Fill fuel tank with correct fuel. See charts on fuel.



3.
The heater has a short power cord; use an extension cord of at least six (6) feet long.



4.
Make sure the front, Hot Air outlet, is at least five (5) feet from any flammable materials.

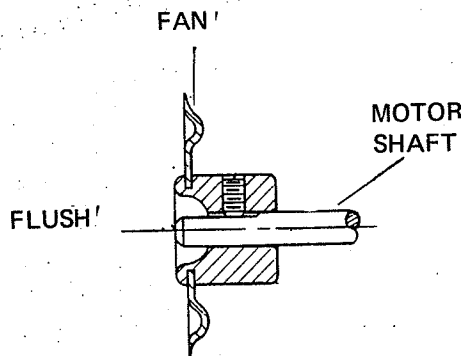


5.
Heater will start when plugged in. Outlet must be a grounded 110-120 volt, 60 cycles a.c.



WARNING – HEATER MUST BE LEVEL, WHILE HOT OR OPERATING. A FIRE MAY OCCUR IF IT IS NOT LEVEL.

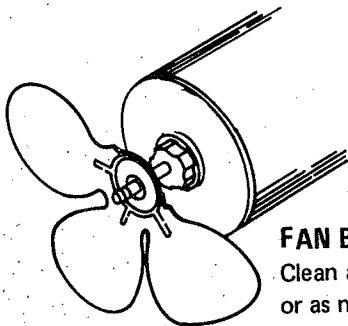
MAINTENANCE



CAUTION:

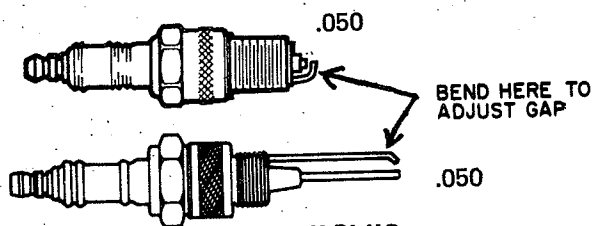
When removing the motor from the Heater, always remove the FAN first. The weight of the Motor resting on the FAN could damage the FAN pitch.

When replacing the FAN on the motor shaft, place the FAN hub flush with the motor shaft as shown.



FAN BLADES

Clean after every 500 hours of operation or as necessary. Use a soft cloth moistened with kerosene or solvent, then dry thoroughly.



SPARK PLUG

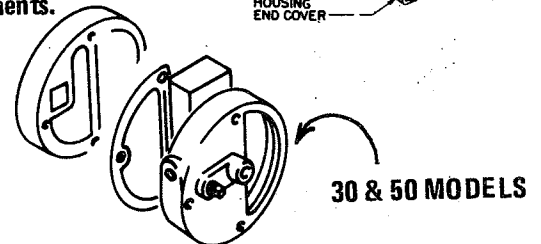
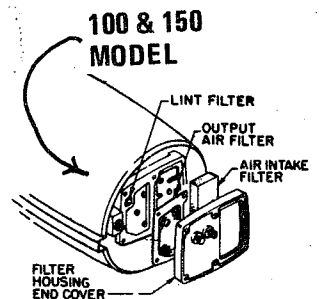
After every 300 hours of operation, clean and adjust spark plug electrodes. Adjust gap or replace spark plug as required. CAUTION: BE SURE heater is unplugged.

AIR FILTERS

Check frequently for dust film. To clean, remove the filter from housing, wash with mild detergent and dry thoroughly before replacing. Replace once each season.

IMPORTANT:

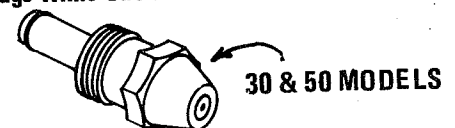
Do Not oil the filter elements.



NOZZLE

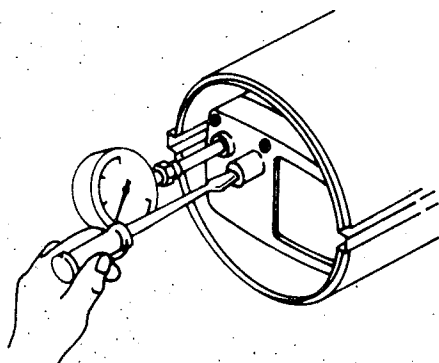
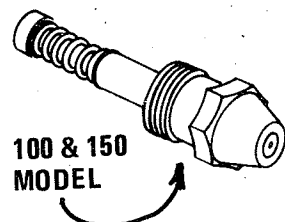
Clean at least once during heater season. Remove burner head. Use a socket wrench only to remove nozzle. Blow through the face (outlet) end ONLY.

IMPORTANT: Protect nozzle face from damage while out of the heater.



ADJUSTMENT OF PUMP PRESSURE

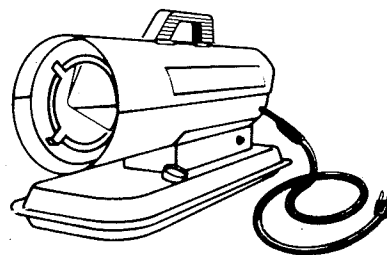
- Remove the plug from the air filter housing and install the pressure gauge. (HA1180)
- To adjust the pump pressure, turn the pressure relief valve in to raise, out to lower.
- After adjustment, remove the gauge and replace the plug.



STORAGE

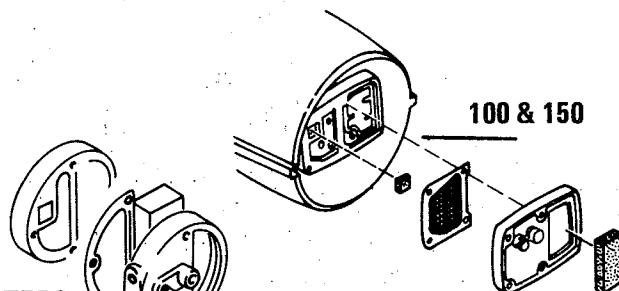
Store the heater in level position when filled, or fuel leakage can occur.

WARNING: Always unplug heater before servicing.



FUEL TANK

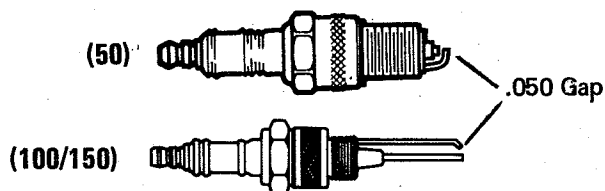
Drain all fuel from tank. Clean and flush tank before storing.



AIR FILTERS

Remove and clean or replace filters if necessary.

30 & 50 MODELS



SPARK PLUG

Clean and adjust spark plug, or replace if necessary.

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Motor does not start; thermostat (if used) is set to call for heat.	Electrical Troubles	
	1. No power or low voltage at heater.	1a. Be sure power is reaching heater; check condition of heater cord. Repair or replace b. Use extension cord with wires heavy enough to carry the electrical load of the heater. c. Be sure voltage at outlet is same as shown on heater instruction plate.
	2. Damaged motor, binding front-end bearing. Motor start relay.	2a. Check motor. b. Replace a defective motor. c. Lubricate motor (Fan-end only).
	3. Thermostat damaged (if used).	3. Replace. Not a serviceable part.
	Mechanical Troubles	
Heater will not ignite, but motor runs for a short time.	1. Dry bearing on fan-end of motor.	1a. Lubricate motor. b. If lubrication does not solve problem, check pump.
	2. Fan obstructed by mechanical damage or dirt.	2a. Check for bent outer shell. b. Check for damaged fan; replace if defective. c. Check for damaged motor mount.
	Fuel System Troubles	
	1. Fuel tank empty, water in fuel, wrong fuel.	1a. Check for water in tank; clean tank and fuel filter if water is found. (Water in the tank will form globules in the bottom which you can see.) b. Fill tank with fresh, clean fuel.
	2. Fuel filter clogged.	2. Remove and wash in clean fuel. Blow dry and replace.

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
(Continued) Heater will not ignite, but motor runs for a short time.	3. Nozzle plugged or defective.	3a. Clean by blowing compressed air through nozzle from outlet end of nozzle. b. Replace nozzle if cleaning does not solve the problem.
	4. Very low temperature may cause fuel to thicken and not flow.	4. Use a non toxic anti-icer such as "Heet", "Methanol Alcohol", or "Frostex."
	5. Dirty air filters.	5. Be sure air filters are clean.
	6. Air leak at fuel filter.	6. Check fuel filter for air leaks and for tightness of fit where it is connected to fuel line.
	Ignition Troubles	
	7. Defective spark plug. (Wrong gap, plug wet with fuel or electrodes carboned, or plug damaged.)	7. Gap between electrodes should be .050" or about thickness of a dime. Adjust electrode gap. Inspect plug for worn or eroded electrodes. Replace a damaged spark plug.
	3. Spark plug wire disconnected from plug or from terminal of transformer.	CAUTION: Disconnect heater cord! 8. Check at plug and transformer to be sure wire is tight at both ends.
	9. Defective transformer.	9. Disconnect spark plug wire from transformer, and check transformer for spark; replace if no spark can be obtained.
Heater burns, but puffs of smoke can be seen; heater will not burn steady; heater burns with odor; heater smokes continuously.	Improper Fuel-Air Mixture (Not enough fuel)	
	1. Heater running out of fuel; water condensation in fuel tank; wrong fuel.	1a. Shut heater off; check fuel tank. If you can see globules of water in the bottom. drain and flush the tank and filter with clean fuel. b. Refill with fresh, clean fuel.

TROUBLE SHOOTING

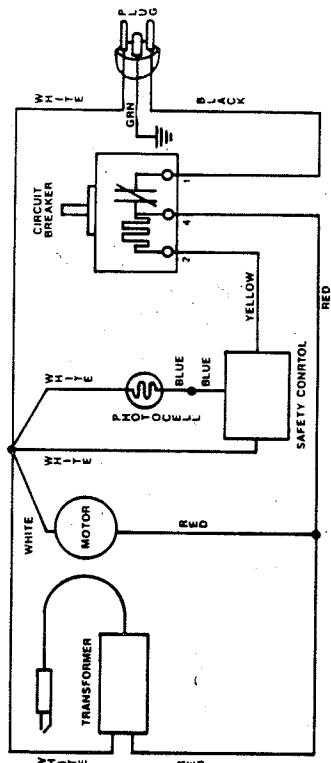
SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
(Continued) Heater burns, but puffs of smoke can be seen; heater will not burn steady; heater burns with odor; heater smokes continuously.	2. Dirty air filters causing reduced air flow through nozzle, resulting in low fuel flow.	2. Remove and clean the air filters. Be sure air intake is not blocked.
	3. Fuel filter loose, dirty or connection loose.	3a. Remove and wash fuel filter in clean fuel. b. Check condition of connection between fuel line and burner. c. Replace with new fuel line.
	4. Dirty nozzle.	4a. Remove and clean the burner head. b. Blow compressed air through nozzle from outlet end. c. Never use a drill, wire, or other tool to open a nozzle passage.
	5. Fan blade.	5. Check for excessive dirt accumulation on fan blade which could be causing motor to slow down.
	6. Loose air output line connections between filter housing and burner.	6. Be sure connections are tight.
	7. (Remote possibility). Rubber sleeve on shank of nozzle is leaking.	7. If heater puffs intermittently, replace the rubber sleeve. (Handle parts carefully to prevent damage, assemble them carefully to preserve airtightness).
Flames come out front of heater.	Improper Fuel-Air Mixture (Too much fuel, or not enough air for amount of fuel being supplied.)	
	1. Dirty fan, or air passageway through heater blocked by dirt or trash.	1. Clean the fan. Be sure the air passageway through the heater is clean. Keep the heater clean.
	2. Fan loose or improperly located on shaft.	2. Check fan; correct if not right.
	3. Bent or damaged fan.	3. Replace. Do not attempt repair of fan.
	4. High pump pressure.	4. Check pressure.
	5. Air intake blocked.	5. Check filters.

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
(Continued)		
Heater cycles intermittently.	1. Thermostat set too low. (if used)	1. Set thermostat to a higher temperature for more even operation.
	2. Defective thermostat. (if used)	2. Replace a defective thermostat.
	3. Low voltage causing tripout of safety control.	3. Check power line voltage. Use extension cord with proper size wire.
	4. Defective electrical supply or defective connections.	4a. Be sure extension cord and heater service cord are in good condition, without intermittent open circuits. b. Check mechanical and electrical soundness of all wiring connections in the heater and service cord.
Heater ignites, but button of safety control circuit breaker pops out anyway.	1. Defective photo cell.	1. Check to see if glass face of cell is so dirty it can't "see" the flame; clean glass if dirty. Replace with a cell that is known to be good.
	2. Defective safety control.	2. Replace with a control that is known to be good.
	3. Defective electrical-connections through cell and control.	3. Be sure all solder joints and wiring connections are secure. Check wiring diagram.
Safety Control circuit breaker fails to trip when a no-flame condition exists.	1. Defective circuit breaker.	1a. Replace with a circuit breaker that is known to be good.
	2. Control dirty or defective.	2a. Replace defective control with one that is known to be good.
	3. Photocell electrical leads shorted.	3. Check photocell leads for shorted leads. Replace photocell if damaged.
Button on safety control circuit breaker won't stay in when pressed.	1. Resetting is tried too soon after the breaker trips.	1. Wait 5 minutes and try again.
	2. Defective circuit breaker.	2a. Replace with a circuit breaker that is known to be good.
	3. Photo cell circuit open.	3. Check photocell for open condition. Replace if damaged.

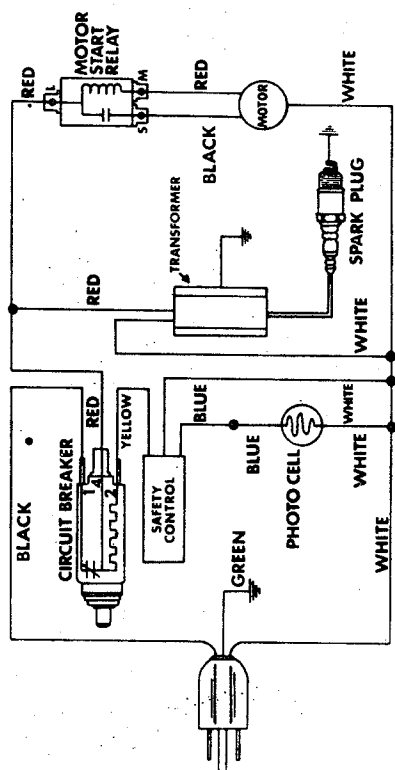
PARTS

WIRING DIAGRAM



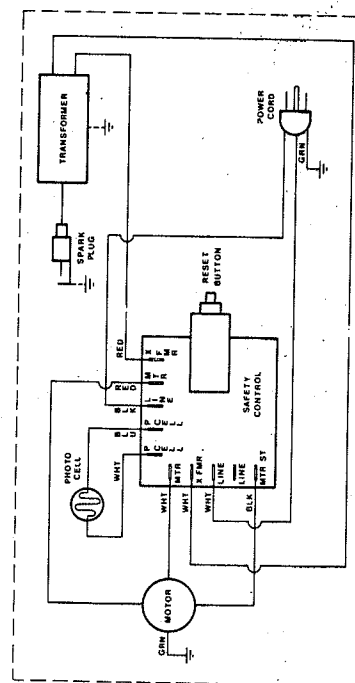
K30 & K50

WIRING DIAGRAM



K150

WIRING DIAGRAM



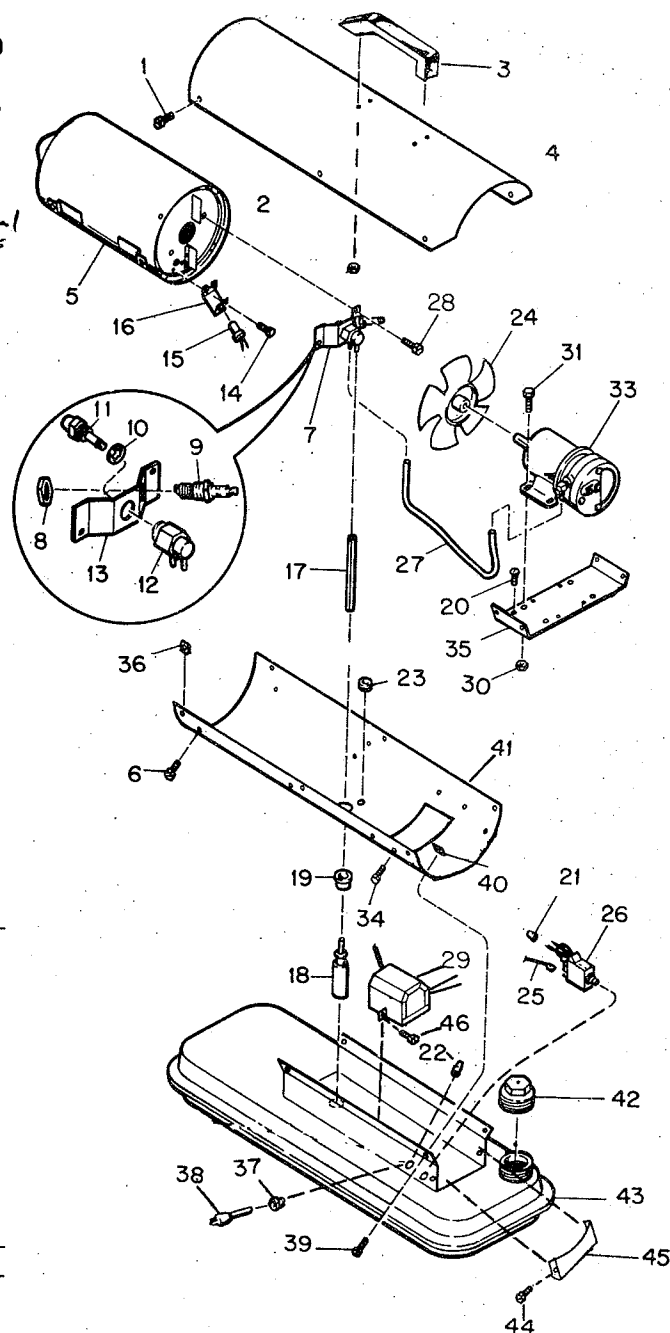
K100A

When ordering your part, be sure to provide all pertinent facts when you call or visit your service dealer.
The model and serial number of your portable heater will be found on a decal toward the rear (motor end) of your unit.
When ordering repair parts always give the following:

A) Part Number B) Model Number C) Description

K30 and K50A Heater Exploded View

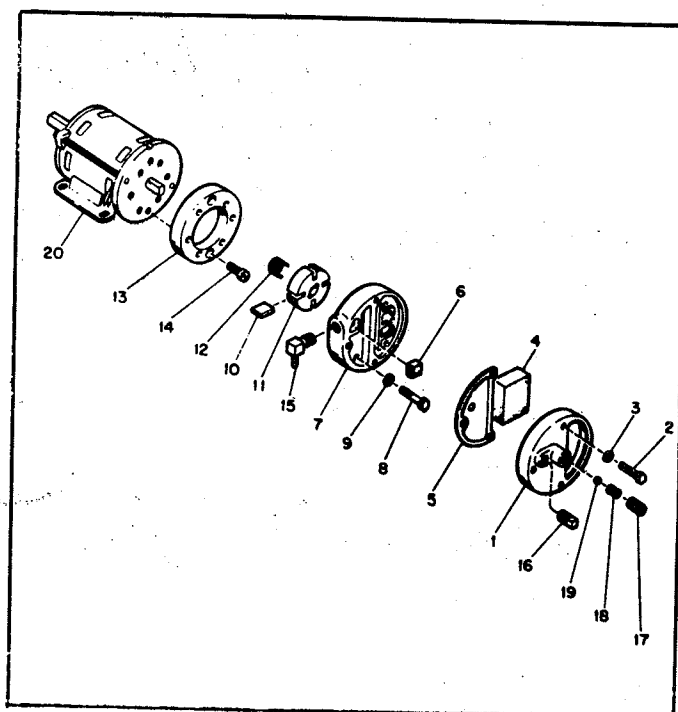
Key No.	Part Number	Part Name or Description	Qty. K50A	K30
1	M11084-26	Screw, Hex Head, #10-12x3/8 in.	6	6
2	M50589-01	Screw, Holds Handle to Shell	2	2
3	M51104-01	Handle	1	1
4	M51391-01AZ	Shell, Upper	1	1
5	M29634-01	Chamber, Combustion Assembly	2	2
	M30883-01	Chamber, Combustion Assembly	1	1
6	M11084-26	Screw, Hex Head, #10-12x3/8 in.	4	4
7	M29707-02	Burner Head Assembly	1	1
8	M29824	Nut, Special 14mm	1	1
9	M29834	Spark Plug	1	1
10	M16741018	Ring, Retainer	1	1
	M29705-02	Nozzle Adaptor Assembly	1	1
11	M30875	Nozzle Siphon	1	1
12	M29805	Adaptor, Nozzle	1	1
13	M29615-01	Bracket, Assembly	1	1
14	M10908-1	Screw, Hex Head, #6-32x3/8 Secures Photo Cell Bracket to Combustion Chamber	2	2
15	M16656-4	Photo Cell and Bushing Assembly	1	1
16	M16660	Bracket, Photo Cell	1	1
17	M29803-02	Tubing, Fuel Line	1	1
18	M29814-01	Filter, Fuel	1	1
19	M10990-3	Bushing, Rubber	1	1
20	M11084-26	Screw, Hex Head, #10-12x3/8 in. (Ground)	1	1
21	M13942-5	Connector, Wire	2	2
22	M13942-7	Connector, Wire	1	1
23	1000576	Grommet	2	2
24	M30884	Fan	1	—
	M29678	Fan	—	1
25	M16841-16	Wire Assembly	1	1
26	M50671-1	Flame Out Control Assembly (safety)	1	1
27	M29803-03	Tubing, Airline	1	1
28	M11084-26	Screw, Hex Head, #10-32x3/8 in. secures Burner Head Assembly to Combustion Chamber	2	2
29	M16697-02	Transformer Assembly 5000 volt	1	1
30	NTC-3C	Nut, #10-24	4	4
31	M12461-50	Screw, Hex Head, #10-24x3/8	4	4
32	—	Not Used	—	—
33	M29750-01	Motor and Pump Assembly	1	—
	M29750-01	Motor and Pump Assembly	—	1
34	M11084-26	Screw, Hex Head, #10-12x3/8 (Secures Motor Support Bracket to Lower Shell)	4	4
35	M29616	Motor Support Bracket	1	1
36	M11271-6	Nut, Clip	6	6
37	M11143-1	Bushing, Strain Relief	1	1
38	M10813-74	Power Cord	1	1
39	M11084-26	Screw, Hex Head, #10-12x3/8 (Secures Lower Shell in Position)	4	4
40	M11271-6	Nut, Clip	4	4
41	M30727AZ	Shell, Lower	—	1
	M30763AZ	Shell, Lower	1	—
42	M51027-08	Kit, Cap Fuel	1	1
43	M30873-01AA	Tank, Fuel Assembly	1	—
	M30723-01AA	Tank, Fuel Assembly	—	1
44	M11084-26	Screw, Hex Head, #10-12x3/8	2	2
45	M30726AA	Bracket, End Cover	1	1
46	M11084-26	Screw, Hex Head, #10-12x3/8	2	2



PARTS AVAILABLE—NOT SHOWN

M51295-02	Decal, Tradename
M30728	Decal, Wiring Diagram
M50011	Decal, Spark Plug
M51393-01	Decal, Warning
M51392-02	Decal, Information (K50A)
M51392-01	Decal, Information (K30)
M29870-160	Manual, Instruction

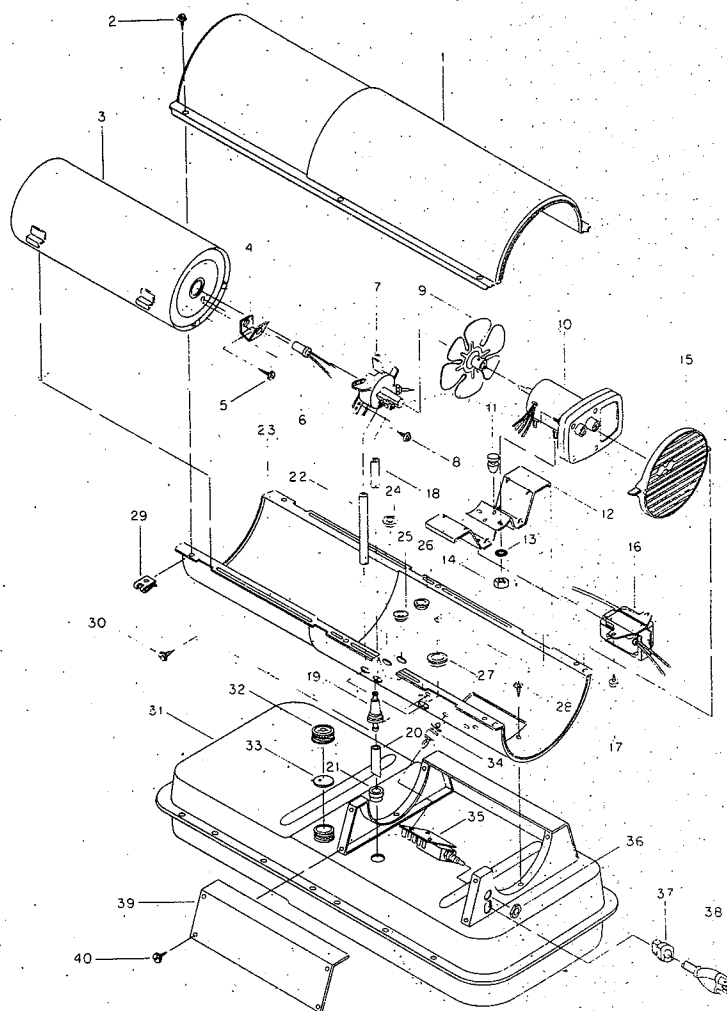
Key No.	Part Number	Part Name or Description	Qty.
1A	M29750-02	Motor Package Assembly	1
1	M29609	• End Cover, Filter	1
2	M12461-31	• Screw (Filter End Cover to Pump End Cover)	3
4	M29633	• Intake Air Filter	1
5	M29612-01	• Output Filter Assembly	1
6	M29632	• Filter, Lint	1
7	M29608	• End Cover, Pump (Port Plate)	1
8	M12461-31	• Screw (End Cover to Motor)	6
10	M8643	• Blade	4
11	M22456-1	• Rotor, Pump	1
13	M30821	• Pump Body	1
14	FHPF-4C	• Screw (Pump Body to Motor)	2
15	M50016	• Elbow	1
16	M22997	• Plug, Socket Hd.	1
17	M27694	• Screw, Pressure Adjustment	1
18	M10993-1	• Spring, Compression (Pressure Relief)	1
19	M8940	• Ball, ¼ in. dia.	1
20	M30876-01	• Motor	1



K30 and K50A — Motor And Pump Assembly

Key No.	Part No.	Description	Qty.
1	M51072-01AZ	Upper Shell	1
2	M15823-27	Screw, Hex Hd., No. 10x½	6
3	M51075-01	Assembly, Combustion Chamber	1
4	M16660	Bracket, Photo Cell	1
5	M10908-2	Screw, Hex Hd., No. 6x 3/8 (Attaches Photo Cell Bracket to Combustion Chamber)	2
6	M16656-10	Photo Cell Assembly	1
7	M51126-01	Burner Head Assembly (See Figure For Details)	1
8	M11084-26	Screw, Hex Hd., No 10x 3/8	3
9	M51153-01	Fan	1
10	M23149-14	Motor & Pump Assembly (See Figure For Details)	1
11	M50631	Bumper, Rubber	2
12	M51074-01	Bracket, Motor Mounting	1
13	WL1-4C	Washer, Lock ¼ in.	2
14	NJC-4C	Nut, Hex Jam	2
15	M51114-01	Guard, Fan	1
16	M50570-04	Transformer, 5000 Volt	1
17	M11084-26	Screw, Hex Hd., No. 10x 3/8	2
18	M51345-01	Fuel Line	1
19	M51150-01	Filter, Fuel	1
20	M51151-01	Tube, Fuel Line	1
21	M10990-3	Bushing, Rubber	1
22	M50814-06	Airline, Rubber	1
23	M51073-01AZ	Shell, Lower	1
24	M30865-02	Bushing (Photo Cell Wires)	1
25	M30865-02	Bushing (Transformer Lead to Spark Plug)	1
26	M30865-02	Bushing (Transformer Lead to Spark Plug)	1
27	M50104-02	Bushing (Airline & Wires Thru Shell)	1
28	M11084-26	Screw, Hex Hd., No. 10x 3/8 (Secures Lower Shell to Tank Brackets)	6
29	M11271-8	Nut, Tinnerman	6
30	M15823-37	Screw, Grounding No. 8x¼	1
31	M51115-01AA	Tank, Fuel	1
32	M51000-01	Cap, Filler Neck (Order M51027-06)	1
33	M51002-01	Gasket-Cap (Order M51027-06)	1
34	M51122-01	Support - Circuit Board	3
35	M51060-03	Control Board, Safety, PCB Order M50671-02	1
36	M51157-01	Nut Hex 12 M M (Secures PCB to Bracket)	1
37	M11143-1	Bushing, Strain Relief	1
38	M10813-84	Assembly, Extension Cord	1
39	M51077-01AA	Cover, Side	4
40	M11084-26	Screw, Hex Hd., No. 10x 3/8	

K100A Heater Exploded View



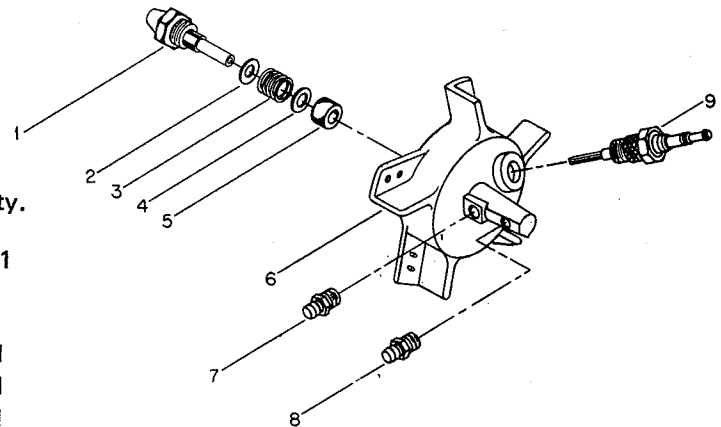
**Parts Available—Not Shown
DECALS**

M51296-02	Tradename
M51138-07	Wiring Diagram
M51146-02	General Information

PARTS

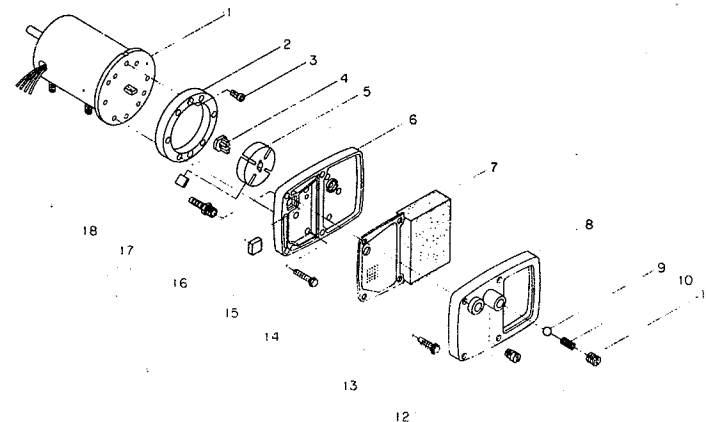
K100A Burner Head Assembly

Key No.	Part Number	Part Description	Qty.
	M51126-01	Burner Head Assembly (Does not include M10962-2 spark plug)	1
1	M51120-01	Nozzle	1
2	M10659-1	Washer, Nozzle Seal	1
3	M10809-1	Spring, Nozzle Seal	1
4	M10659-1	Washer, Nozzle Seal	1
5	M8882	Seal, Nozzle, Sleeve	1
6	M50924-03	Body, Burner Head	1
7	M50820-02	Fitting, Barb	1
8	M50820-02	Fitting, Barb	1
9	M10962-2	Spark Plug	1



K100A Motor And Pump Assembly

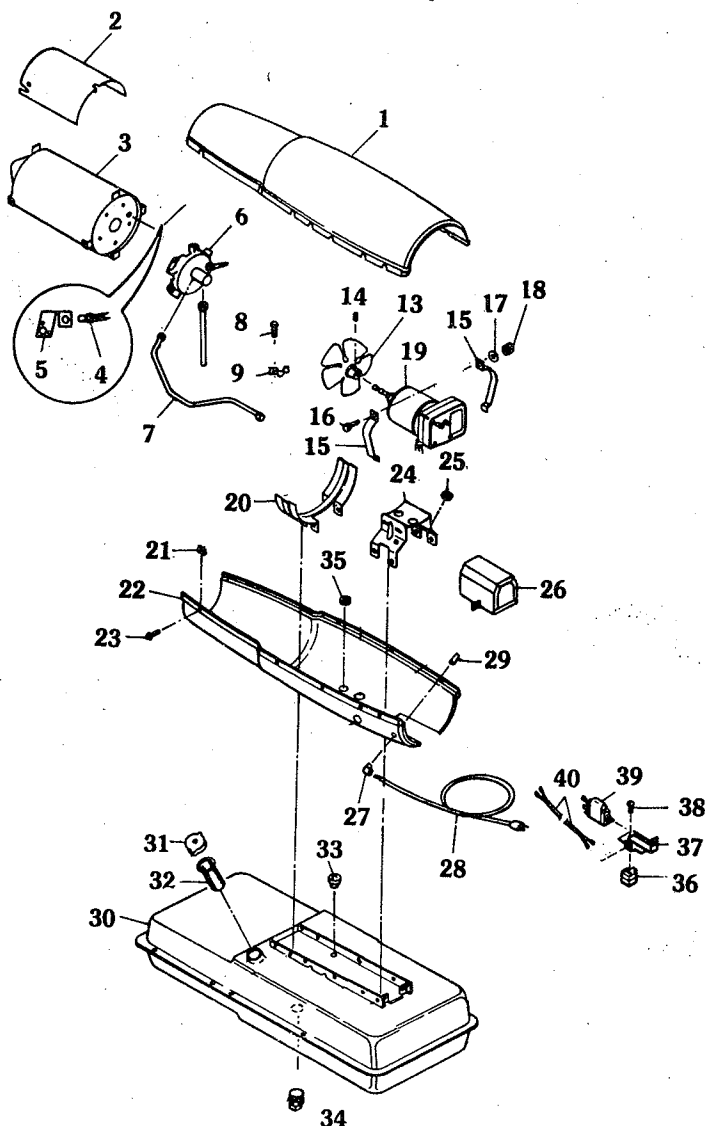
Key No.	Part Number	Part Description	Qty.
	M23149-14	Motor and Pump Assembly	1
1	M51131-01	Motor-Split Single Phase	1
2	M8645	Pump Body	1
3	FHPF3-4C	Screw #10-32x½	2
4	M22009	Insert	1
5	M22456-1	Rotor, Pump	1
6	M50545	Cover, End Pump	1
7	M12179	Filter, Intake	1
8	M16545	Cover, End, Filter	1
9	M8940	Ball, Steel ¼ Dia.	1
10	M10993-1	Spring-Pressure Relief	1
11	M27694	Screw, Adjusting	1
12	M22997	Plug, Pipe	1
13	M12461-31	Screw, Hex Hd., #10-32x1 in. (Attaches Filter End Cover to Pump End Cover)	4
14	M12244-1	Filter Assembly, Output	1
15	M12461-32	Screw, Hex Hd., #10-32x1 1/8	6
16	M11637	Filter, Lint	1
17	M50820-02	Fitting, Barb	1
18	M8643	Blade	4



PARTS

Part No.	Number	Part Name	
1	M17014AZ	Shell Assembly, Upper	1
2	M16679	Deflector, Heat (M150 only)	1
3	M16887-6	Chamber Combustion, Assembly	1
	M11084-27	Screw, Hex Hd., 10-12x½ Attaches Combustion Chamber Front	4
	M11084-29	Screw, Hex Hd., 10-12x½, Attaches Combustion Chamber, Rear	2
4	M16656-4	Photo Cell Assembly	1
5	M16660	Bracket, Photo Cell	
	M10908-1	Screw, Hex Hd., 6-32x¼, Attaches Photo Cell Bracket	2

K150 Heater Exploded View

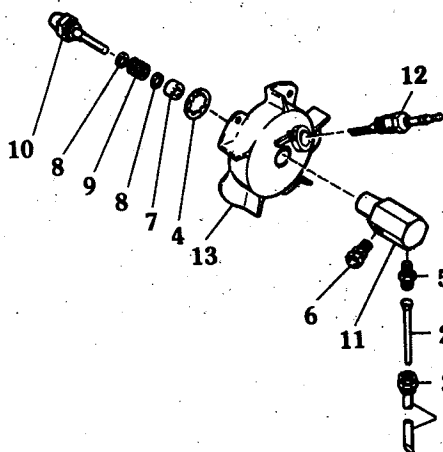


6	M16803-8	Burner Head Assembly (See Figure For Details)	1
	M11084-27	Screw, Hex Hd., 10-12x½, Attaches Burner Head	3
7	M50814-03	Airline, Includes Sleeves, Nuts	1
8	M12461-27	Screw, 10-32x½	1
9	M50873-01	Clip, Airline	2
13	M17058	Fan	1
14	SF4-2-5K	Setscrew, Socket Hd., Cup Point ¼-20, Attaches Fan to Motor	2
15	M16661	Clamp, Motor	4
16	M51043-01	Screw, Motor Clamp, ¼-20x1½	2
17	WLM-4	Lockwasher ¼ in.	2
18	NPC-4C	Nut, Hex ¼-20	2
19	M17875-14	Motor & Pump Assembly (See Figure For Details)	1
20	M12828	Bracket, Shell Support	1
	M11084-27	Screw, Hex Hd., 10-32x½ Attaches Support Bracket to Shell and Fuel Tank	4
21	M11271-6	Nut, Tinnerman	8
22	M16810AZ	Shell, Lower	1
23	M11084-27	Screw, Hex Hd., 10-12x½ (Attaches Lower Shell to Upper Shell)	8
24	M16645	Bracket, Motor Support	1
25	1000577	Grommet	1
26	M16697-02	Transformer, 5000 Volt	1
27	M11143-1	Bushing, Strain Relief	1
28	M10813-88	Cord, Power	1
29	M13942-7	Connector, (Wire Nut)	2
30	M51011-01AA	Tank, Fuel	1
31	M51027-06	Cap, Fuel	1
33	M10990-3	Bushing, Rubber, Fuel Line Into Fuel Tank	1
34	M27417	Plug, Drain—Includes "O" Ring	1
35	1000576	Grommet—Leads Thru Lower Shell	2
36	M12462-6	Relay, Motor Start	1
37	M25296-1	Bracket, Safety Control	1
38	M11084-27	Screw, 10-12x½, Grounding	1
39	M50671-01	Control, Flame Out	1
40	M16841-40	Assembly, Wire, Red	1

PARTS

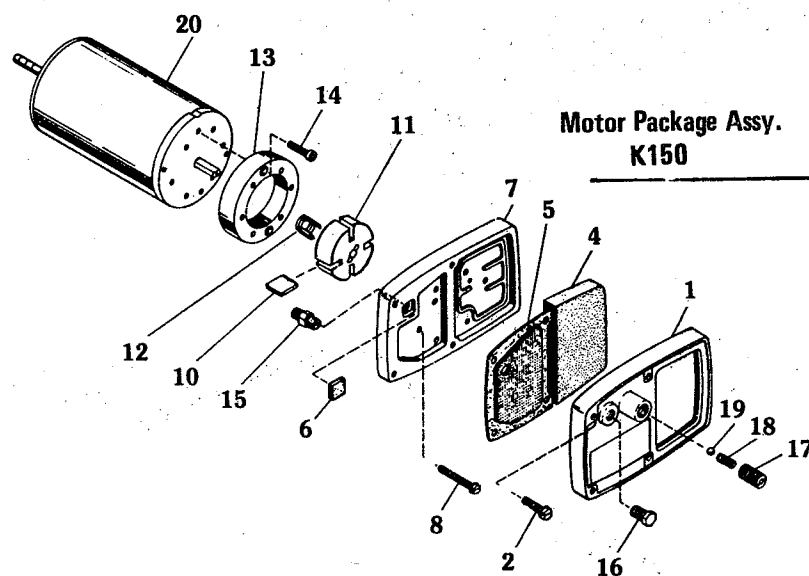
No.	Part Number	Part Name	
	M16803-8	Burner Head Assembly	1
1	M16790-12	Tube, Filter, (Fuel Line)	1
2	M19630	Filter, Fuel	1
3	M13849	Nut, Flare	1
4	M16741-18	Ring, Retaining	1
	M16787-9	Nozzle Adapter Assembly	1
5	M16791	. Connector, Male	1
6	M50817-01	Fitting Barb	1
7	M8882	. Sleeve, Nozzle Seal	1
8	M10659-1	. Washer, Nozzle	2
9	M10809-1	. Spring, Nozzle Seal	1
10	M18022	. Nozzle, 1.1 GPH	1
11	M16535	. Adapter, Nozzle	1
12	M10962-2	Spark Plug	1
13	M23090	Body, Burner Head	1

BURNER HEAD ASSEMBLY K150



No.	Part Number	Part Name	
	M51158-01	Motor & Pump Assembly—Complete	1
1	M16545	End Cover, Filter	1
2	M12461-31	Screw, Hex Hd., 10-32x1 in. (Attaches Filter End Cover To Pump End Cover)	4
4	M12179	Filter, Air, Intake	1
5	M12244-1	Filter Assembly, Output	1
6	M11637	Filter, Lint	1
7	M50545	Cover, End Pump (Port Plate)	1
8	M12461-34	Screw, Hex Hd., 10-32x1½ in.	6
10	M8643-3	Blade, Pump	4
11	M22456-3	Rotor, Pump	1
12	M22009	Insert, Hold Rotor To Motor Shaft	1
13	M8645-3	Body, Pump	1
14	FHPF-4C	Screw, No. 10-32x 7/8	1
15	FHPF3-7C	Fitting Barb	1
16	M22997	Plug, Solid	1
17	M27694	Screw, Pressure Adjustment	1
18	M10993-1	Spring, Compression Pressure Relief	1
19	M8940	Ball ¼ in. dia.	1
20	M50450-01	Motor	1

**Motor Package Assy.
K150**



KEEP THIS WARRANTY

Model/Spec. No. _____

Serial No. _____

Date Purchased _____

Fill in above information for your own record

ALWAYS SPECIFY MODEL, SPECIFICATION, AND SERIAL NUMBERS WHEN COMMUNICATING WITH THE FACTORY.

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K4213-06