

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Dayton® Portable Forced Air Heaters

Description

Dayton Model 3VG79 is a 200,000 Btu/Hr heater. This heater uses Kerosene or #1 fuel oil for combustion and electricity to run the motor. It is primarily intended for indoor or outdoor temporary heating of buildings under construction, alteration, or repair. It may be used in agricultural, industrial, and commercial environments.



Figure 1 - Model 3VG79



Unpacking

1. Remove all packing items applied to heater for shipment.
2. Remove all items from carton.
3. Check items for shipping damage. If heater is damaged, promptly inform dealer where you bought heater.

ELECTRICAL SPECIFICATIONS

Model	Electrical Input	Amperage (during normal run)
3VG79	120 Volt/60 Hertz	4.5

GENERAL SPECIFICATIONS

Model	Output Rating Btu	Fuel	Fuel Tank Capacity (U.S. Gallons)	Fuel Consumption (U.S. Gallons/Hr.)	Motor RPM
3VG79	200,000	Kerosene or No. 1 fuel oil	13.5	1.4	3450

Model	Fuel Pump Pressure (PSI)	Heater Weight (Pounds - with fuel)	Heater Weight (Pounds - without fuel)	Spark Plug Gap (Inches)
3VG79	6	77	66	.110

Dayton® Portable Oil-Fired Heaters

Product Identification

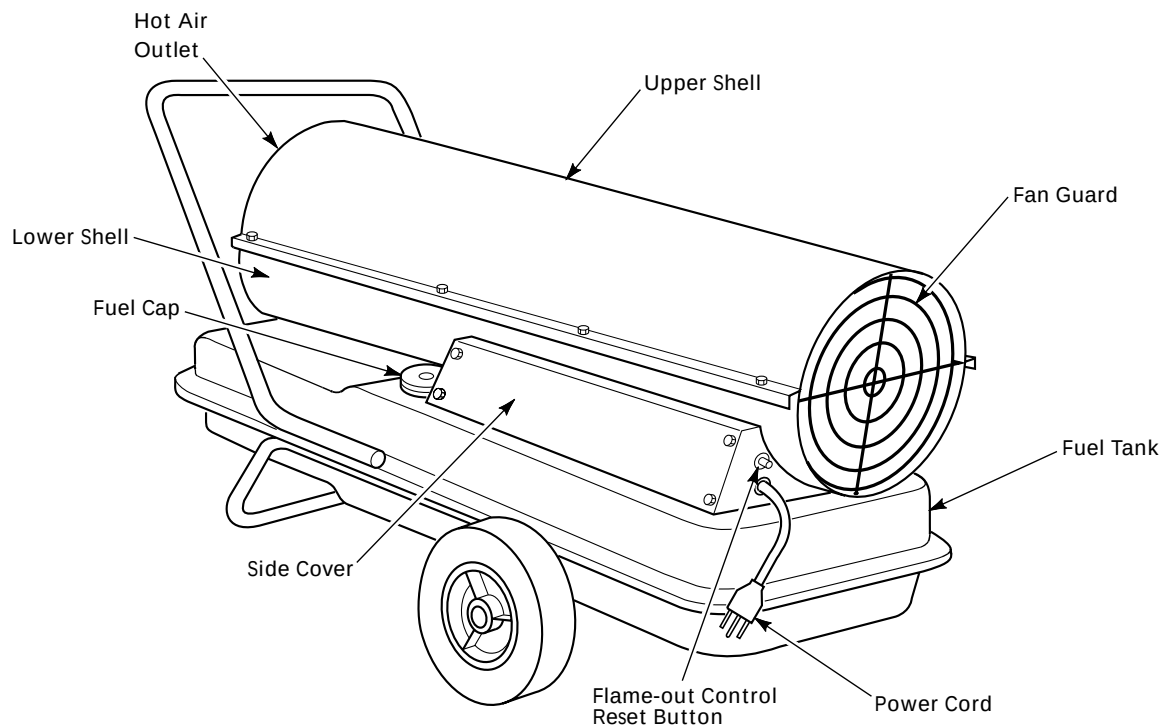


Figure 2 - Model 3VG79

Model 3VG79

General Safety Information

Make certain you read and understand all warnings. Keep these instructions for reference. They are your guide to safe and proper operation of this heater.

Safety information appears throughout these instructions. Pay close attention to them. Below are definitions for the safety information listed throughout this manual.

▲ DANGER

Under this heading, installation, operating and maintenance procedures or practices will be found that, if not carefully followed, WILL result in IMMEDIATE serious personal injury or death.

▲ WARNING

Under this heading, installation, operating, and maintenance procedures or practices will be found that, if not carefully followed, COULD result in severe personal injury or death.

▲ CAUTION

Under this heading, installation, operating, and maintenance procedures or practices will be found that, if not carefully followed, COULD result in minor personal injury, product or property damage.

IMPORTANT: Every possible circumstance that might involve a hazard cannot be anticipated. The warnings in this manual and on tags or decals affixed to the unit are therefore not all-inclusive. If a procedure, work method, or operating technique not specifically recommended by Dayton is used, you must make sure it is safe for you and others. You should also ensure that equipment will not be damaged or made unsafe by the operating or maintenance method you choose.

▲ DANGER

Carbon monoxide poisoning may lead to death!

Carbon monoxide poisoning: Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, and or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

▲ WARNING

Improper use of this heater can cause serious injury or death from burns, fire, explosion, electrical shock, and carbon monoxide poisoning. Make certain you read and understand all warnings. Keep these instructions for reference. They are your guide to safe and proper operation of this heater.

▲ WARNING

• Use only kerosene or No. 1 fuel oil to avoid risk of fire or explosion. Never use gasoline, naphtha, paint thinners, alcohol, or other highly flammable fuels.

• Fueling

- a) Personnel involved with fueling shall be qualified and thoroughly familiar with the manufacturer's instructions and applicable federal, state, and local regulations regarding the safe fueling of heating units.**
- b) Only the type of fuel specified on the heater's data plate shall be used.**
- c) All flame, including the pilot light, if any, shall be extinguished and the heater allowed to cool, prior to fueling.**

d) During fueling, all fuel lines and fuel-line connections shall be inspected for leaks. Any leaks shall be repaired prior to returning the heater to service.

e) At no time shall more than one day's supply of heater fuel be stored inside a building in the vicinity of the heater. Bulk fuel storage shall be outside the structure.

f) All fuel storage shall be located a minimum of 25 feet from heaters, torches, welding equipment, and similar sources of ignition (exception: the fuel reservoir integral with the heater unit).

g) Whenever possible, fuel storage shall be confined to areas where floor penetrations do not permit fuel to drip onto or be ignited by a fire at lower elevation.

h) Fuel storage shall be in accordance with the federal, state, or local authority having jurisdiction.

- Never use heater where gasoline, paint thinner, or other highly flammable vapors are present.**
- Follow all local ordinances and codes when using heater.**
- Heaters used in the vicinity of tarpaulins, canvas, or similar enclosure materials shall be located a safe distance from such materials. The recommended minimum safe distance is 10 feet. It is further recommended that these enclosure materials be of a fire retardant nature. These enclosure materials shall be securely fastened to prevent them from igniting or from upsetting the heater due to wind action.**

Dayton® Portable Oil-Fired Heaters

General Safety Information (Continued)

- **Use only in well-vented areas.** Provide at least three square feet of fresh, outside air for each 100,000 Btu/Hr of rating. This heater produces carbon monoxide, which is listed by the State of California as a reproductive toxin under Proposition 65.
- **Use only in places free of flammable vapors or high dust content.**
- **Use only with the electrical voltage and frequency specified on model plate.**
- **Use only a three-prong, grounded extension cord.**
- **Minimum heater clearances from combustibles:**
 Outlet: 8 Ft. Sides: 4 Ft.
 Top: 4 Ft. Rear: 4 Ft.
- **Locate heater on a stable and level surface while hot or running or a fire may occur.**
- **When moving or storing heater, keep heater in a level position or fuel spillage may occur.**
- **Keep children and animals away from heater.**
- **Unplug heater when not in use.**
- **When used with thermostat, heater may start anytime.**
- **Never use heater in living or sleeping areas.**
- **Never block air inlet (rear) or air outlet (front) of heater.**
- **Never move, handle, refuel, or service a hot, operating, or plugged-in heater.**
- **Never attach duct work to front or rear of heater.**

Theory of Operation

The Fuel System: The air pump forces air through the air line. The air is then pushed through the burner head nozzle. This air causes fuel to lift from the tank. A fine mist of fuel is sprayed into the combustion chamber.

The Air System: The motor turns the fan. The fan pushes air into and around the combustion chamber. This air is heated and provides a stream of clean, hot air.

The Ignition System: The electronic ignitor sends voltage to the spark plug. The spark plug ignites the fuel and air mixture.

The Flame-out Control System: This system causes the heater to shut down if the flame goes out.

Fuels

⚠ WARNING

Use only kerosene or No. 1 fuel oil to avoid risk of fire or explosion. Never use gasoline, naphtha, paint thinners, alcohol, or other highly flammable fuels.

Do not use heavy fuels such as No. 2 fuel oil or No. 2 Diesel. Using heavy fuels will result in:

- clogged fuel filter and nozzle
- carbon buildup on spark plug
- the need of nontoxic anti-icer in fuel during very cold weather

IMPORTANT: Use a KEROSENE ONLY container. Be sure storage container is clean. Foreign matter such as rust, dirt, or water will cause the flame-out control to shut down heater. Foreign matter may also require you to clean fuel system often.

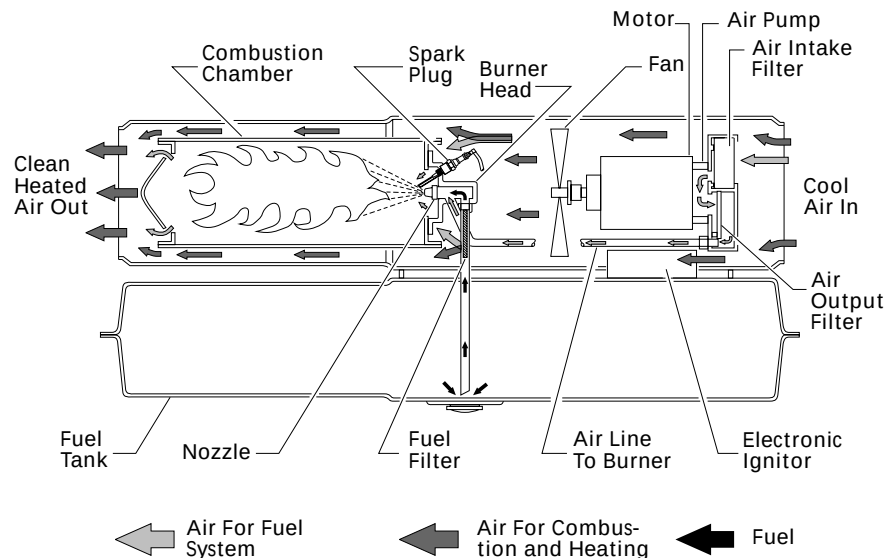


Figure 3 - Cross Section Operational View

Model 3VG79

Assembly

This model is furnished with wheels and handles. Wheels, handles, and the mounting hardware are found in the shipping carton.

TOOLS NEEDED

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

1. Slide axle through wheel support frame. Install wheels on axle.

IMPORTANT: When installing wheels, point extended hub of wheels toward wheel support frame (See Figure 4).

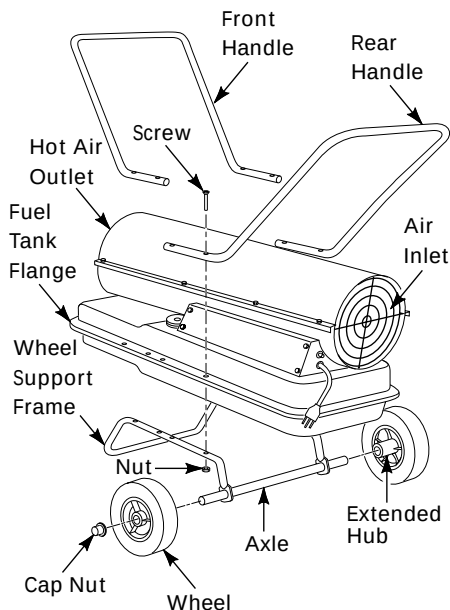


Figure 4 - Wheel and Handle Assembly

2. Place cap nuts on axle ends. Gently tap with hammer to secure.
3. Place heater on wheel support frame. Make sure air inlet end (rear) of heater is over wheels. Line up holes on fuel tank flange with holes on wheel support frame.

4. Place handles on top of fuel tank flange. Insert screws through handles, fuel tank flange, and wheel support frame. Attach nut finger tight after each screw is inserted.
5. After all screws are inserted, tighten nuts firmly.

Ventilation

▲WARNING Follow the minimum fresh, outside air ventilation requirements. If proper fresh, outside air ventilation is not provided, carbon monoxide poisoning can occur. Provide proper fresh, outside air ventilation before running heater.

FRESH AIR OPENING REQUIREMENTS

Heater Size	Square Feet Opening
200,000 Btu/Hr	6.0

Provide at least a three-square-foot opening of fresh, outside air for each 100,000 Btu/Hr rating. Provide extra fresh air if more heaters are being used.

Example: A 200,000 Btu/Hr heater requires one of the following:

- a two-car garage door (16 feet wide opening) raised five inches
- a single-car garage door (9 feet wide opening) raised eight inches
- two windows (30 inches wide opening) raised fifteen inches

Operation

▲WARNING Review and understand the warnings in the Safety Information Section. They are needed to safely operate this heater. Follow all local codes when using this heater.

TO START HEATER

1. Follow all ventilation and safety information.
2. Fill fuel tank with kerosene or No. 1 fuel oil.
3. Attach fuel cap.
4. Plug power cord of heater into three-prong, grounded extension cord. Extension cord must be at least six feet long.

EXTENSION CORD WIRE SIZE REQUIREMENTS

- 6 to 10 feet long, use 18 AWG rated cord
 - 11 to 100 feet long, use 16 AWG rated cord
 - 101 to 200 feet long, use 14 AWG rated cord
5. Plug extension cord into standard 120 volt/60 hertz, three-hole, grounded outlet. Heater will start when extension cord is plugged into outlet. If not, push in flame-out control reset button (See Figure 5).

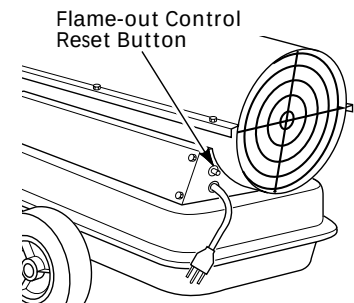


Figure 5 - Flame-out Control Reset Button

TO STOP HEATER

1. Unplug extension cord from outlet.

TO RESTART HEATER

1. Wait two minutes after stopping heater.
2. Repeat steps under To Start Heater.

Dayton® Portable Oil-Fired Heaters

Maintenance

⚠ WARNING *Never service heater while it is plugged in, operating, or hot. Severe burns and electrical shock can occur.*

UPPER SHELL REMOVAL

1. Remove screws along each side and top of heater using 5/16" nut-driver. These screws attach upper and lower shells together (See Figure 6).
2. Lift upper shell off.
3. Remove fan guard.

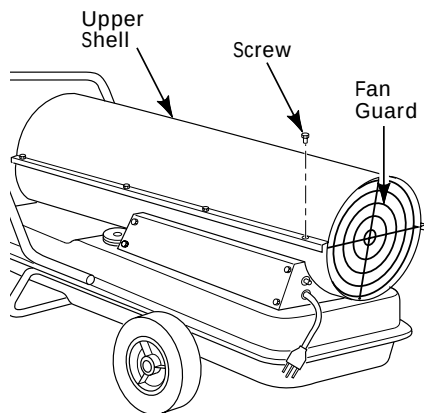


Figure 6 - Upper Shell Removal

FAN

IMPORTANT: Remove fan from motor shaft before removing motor from heater. The weight of the motor resting on the fan could damage the fan pitch.

1. Remove upper shell (See Figure 6).
2. Use 1/8" allen wrench to loosen setscrew which holds fan to motor shaft.
3. Slip fan off motor shaft.
4. Clean fan using soft cloth moistened with kerosene or solvent.

5. Dry fan thoroughly.
6. Replace fan on motor shaft. Place fan hub flush with end of motor shaft (See Figure 7).

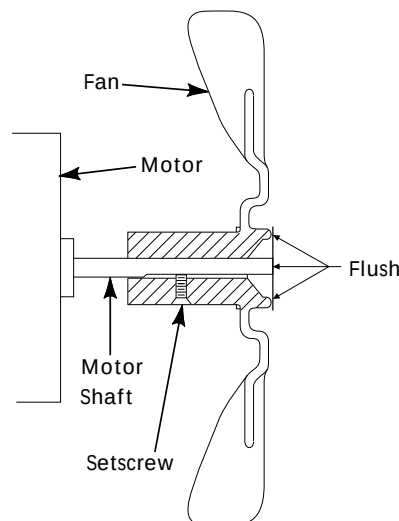


Figure 7 - Fan Cross Section

7. Place setscrew on flat of shaft. Tighten setscrew firmly (40-50 inches-pounds).
8. Replace fan guard and upper shell.

AIR OUTPUT, AIR INTAKE, AND LINT FILTERS

1. Remove upper shell (See Figure 6).
2. Remove filter end cover screws using 5/16" nut-driver.
3. Remove filter end cover.
4. Replace air output and lint filters.
5. Wash or replace air intake filter (See Preventative Maintenance Schedule, page 9).
6. Replace filter end cover.
7. Replace fan guard and upper shell.

IMPORTANT: Do not oil filters.

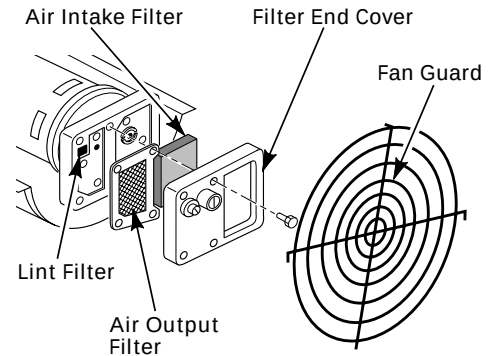


Figure 8 - Air Output, Air Intake, and Lint Filters

PUMP PRESSURE ADJUSTMENT

1. Remove pressure gauge plug from filter end cover.
2. Install accessory pressure gauge (part number HA1180).
3. Start heater (See Operation, page 5). Allow motor to reach full speed.
4. Adjust pressure to 6.0 PSI. Turn relief valve to right to increase pressure. Turn valve to left to decrease pressure (See Figure 10, page 7).
5. Stop heater. Remove pressure gauge. Replace pressure gauge plug in filter end cover.

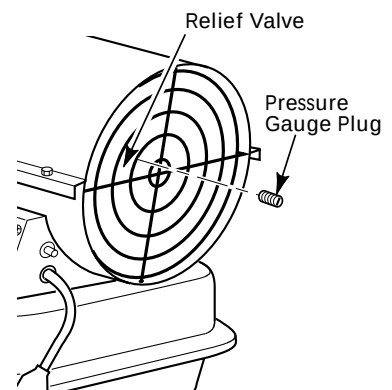


Figure 9 - Pressure Gauge Plug Removal

Model 3VG79

Maintenance (Continued)

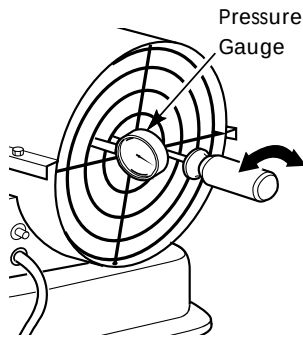


Figure 10 - Adjusting Pump Pressure

FUEL FILTER

1. Remove side cover screws using 5/16" nut-driver.
2. Remove side cover (See Figure 11).
3. Pull lower fuel line off the fuel valve fitting.
4. Carefully pry bushing, lower fuel line, and fuel filter out of fuel tank.
5. Wash fuel filter with clean fuel and replace in tank.
6. Attach lower fuel line to fuel valve fitting.
7. Replace side cover.

FUEL VALVE

1. Remove side cover (See Figure 11), fan guard, and upper shell (See Figure 6, page 6) screws using 5/16" nut-driver.
2. Remove fan (See *Fan*, page 6).
3. Pull lower fuel line off the fuel valve fitting (See Figure 12).

⚠ WARNING High Voltage.

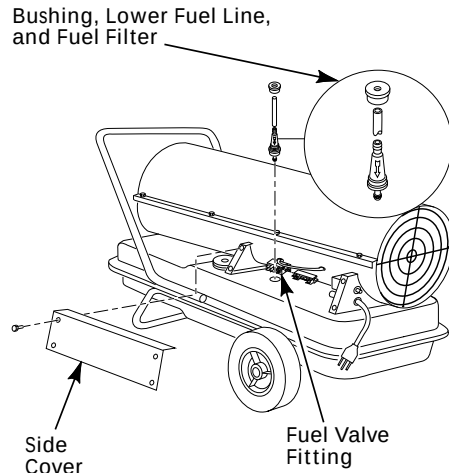


Figure 11 - Fuel Filter Removal

4. Disconnect 3 electrical wires from fuel valve. Note location of green ground wire (See Figure 12).
5. Using 1/4" nut driver remove 2 screws holding fuel valve and bracket to lower shell (See Figure 12). Save these screws.
6. Using 1/4" nut driver remove 2 screws holding fuel valve to bracket. Save these screws.

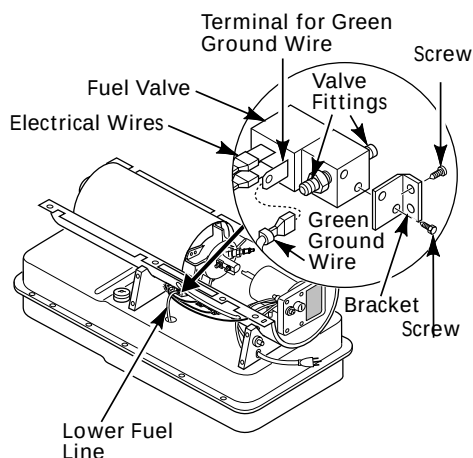


Figure 12 - Fuel Valve Replacement

7. Attach new fuel valve to bracket with 2 existing screws.
8. Install new fuel valve and bracket on lower shell.
9. Connect wiring and upper and lower fuel lines to fuel valve. Make sure green ground wire is connected to correct terminal (See Figure 12).
10. Replace fan, fan guard, upper shell, and side cover.

SPARK PLUG

1. Remove upper shell (See Figure 6, page 6).
2. Remove fan (See page 6).
3. Remove spark plug wire from spark plug.

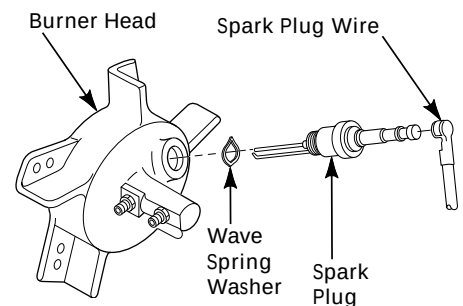


Figure 13 - Spark Plug Removal

4. Remove spark plug and wave spring washer from burner head using 13/16" open-end wrench.
5. Clean and regap spark plug electrodes to .110 gap.

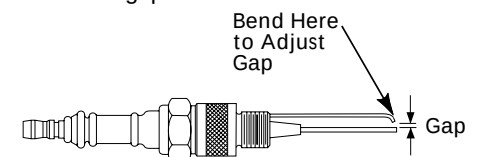


Figure 14 - Spark Plug Gap

Dayton® Portable Oil-Fired Heaters

Maintenance (Continued)

6. Install spark plug and wave spring washer in burner head. Torque 40 to 60 inch-pounds. Then adjust (if necessary) to bring side electrode into the acceptable range (See Figure 15).

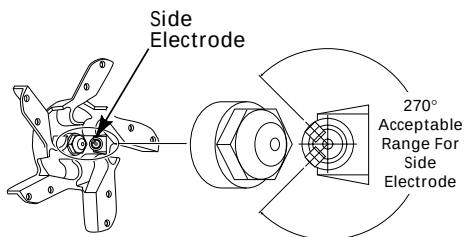


Figure 15 - Acceptable Range For Side Electrode

7. Attach spark plug wire to spark plug.
8. Replace fan (See page 6).
9. Replace fan guard and upper shell.

NOZZLE

1. Remove upper shell (See page 6).
2. Remove fan (See page 6).
3. Remove fuel and air line hoses from burner head.
4. Remove spark plug wire from spark plug.
5. Remove spark plug from burner head using 13/16" open-end wrench.
6. Remove three screws using 5/16" nut-driver and remove burner head from combustion chamber.

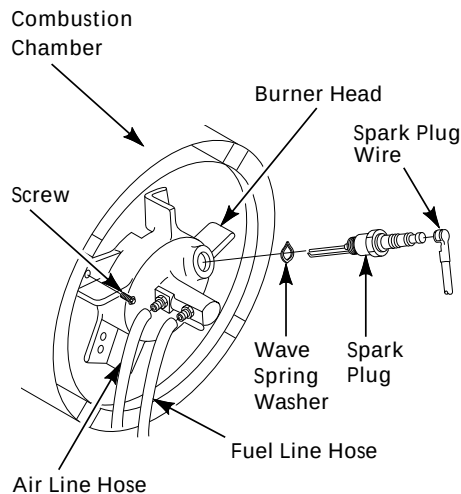


Figure 16 - Removing Burner Head

7. Place burner head into vise and lightly tighten.
8. Carefully remove nozzle from burner head using 5/8" socket wrench (See Figure 17).

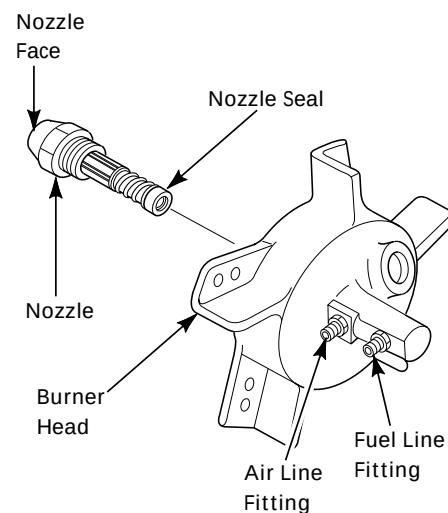


Figure 17 - Removing Nozzle

9. Blow compressed air through face of nozzle. This will free any dirt in nozzle area.
10. Inspect nozzle seal for damage.
11. Replace nozzle into burner head and tighten firmly (80-110 inch-pounds).
12. Attach burner head to combustion chamber.
13. Install spark plug in burner head.
14. Attach spark plug wire to spark plug.
15. Attach fuel and airline hoses to burner head.
16. Replace fan (See page 6).
17. Replace fan guard and upper shell.

PUMP ROTOR

(Procedure if rotor is binding)

1. Remove upper shell (See page 6).
2. Remove filter end cover screws using 5/16" nut-driver.
3. Remove filter end cover and air filters.
4. Remove pump plate screws using 5/16" nut-driver.

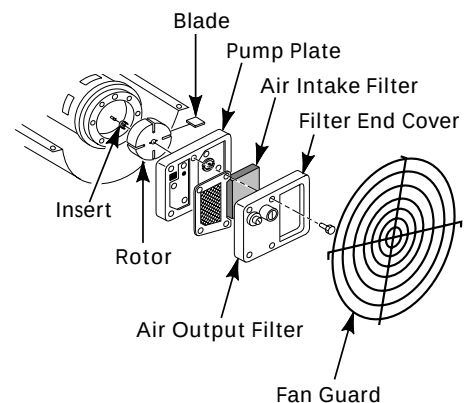


Figure 18 - Rotor Location

Model 3VG79

Maintenance (Continued)

5. Remove pump plate.
6. Remove rotor, insert, and blades.
7. Check for debris in pump. If debris is found, blow out with compressed air.
8. Install insert and rotor.
9. Check gap on rotor. Adjust to .003"/.004" if needed (See Figure 19).

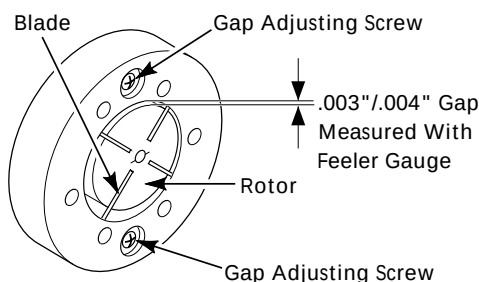


Figure 19 - Gap Adjusting Screw Locations

NOTE: Rotate rotor one full turn to insure the gap is .003"/.004" at tightest position. Adjust if needed.

10. Install blades, pump plate, air filters, and filter end cover.

11. Replace fan guard and upper shell.
 12. Adjust pump pressure (See page 16).
- NOTE:** If rotor is still binding, proceed as follows.
13. Perform steps 1 through 6 above.
 14. Place fine grade sandpaper (600 grit) on flat surface. Sand rotor lightly in "figure 8" motion four times (See Figure 19).

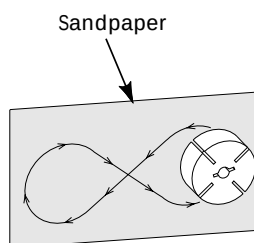


Figure 20 - Sanding Rotor

15. Reinstall insert and rotor.
16. Perform steps 10 through 12 above.

STORING, TRANSPORTING, OR SHIPPING

NOTE: If shipping, transport companies require fuel tanks to be empty.

1. Drain fuel tank.

NOTE: This model has a drain plug on underside of fuel tank. Remove drain plug to drain all fuel. Be sure all fuel is removed.

2. Replace drain plug.
3. If any debris is noted in old fuel, add 1 or 2 quarts of clean kerosene to tank, stir, and drain again. This will prevent excess debris from clogging filters during future use.
4. Replace fuel cap and drain plug. Properly dispose of old and dirty fuel. Check with local automotive service stations that recycle oil.
5. If storing, store heater in dry place. Make sure storage place is free of dust and corrosive fumes.

IMPORTANT: Do not store kerosene over summer months for use during next heating season. Using old fuel could damage heater.

Preventative Maintenance Schedule

⚠ WARNING

Never service heater while it is plugged in, operating, or hot. Severe burns and electrical shock can occur.

Item	How Often	How To
Fuel tank	Flush every 150-200 hours of operation or as needed.	See <i>Storing, Transporting, or Shipping</i> , above.
Air output and lint filters	Replace every 500 hours of operation or once a year.	See <i>Air Output, Air Intake, and Lint Filters</i> , page 6.
Air intake filter	Wash and dry with soap and water every 500 hours of operation or as needed.	See <i>Air Output, Air Intake, and Lint Filters</i> , page 6.
Fuel filter	Clean twice a heating season or as needed.	See <i>Fuel Filter</i> , page 7.
Spark plug	Clean and regap every 600 hours operation or replace as needed.	See <i>Spark Plug</i> , page 7.
Fan blades	Clean every season or as needed.	See <i>Fan</i> , page 6.
Motor	Not required/permanently lubricated.	

For Replacement Parts, call 1-800-323-0620 24 hours a day - 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address parts correspondence to:

Grainger Parts Operations
P.O. Box 3074
1657 Shermer Road
Northbrook, IL 60065-3074 U.S.A.

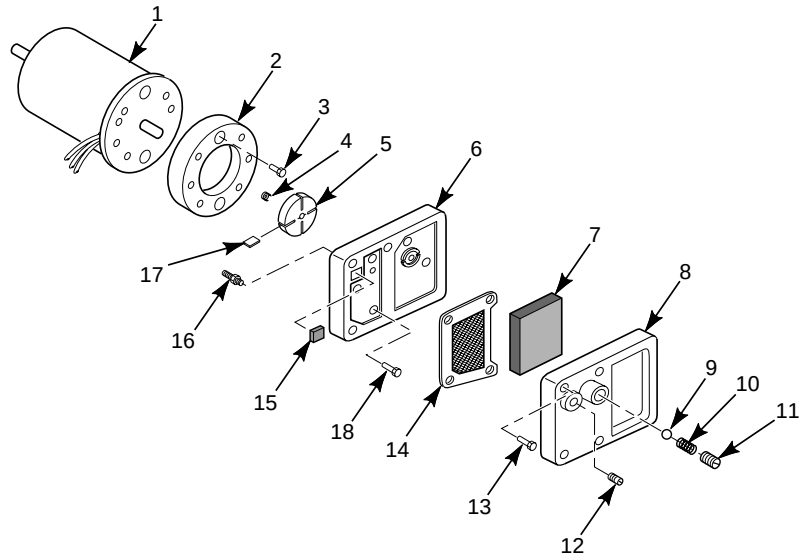


Figure 21 - Motor and Pump Assembly

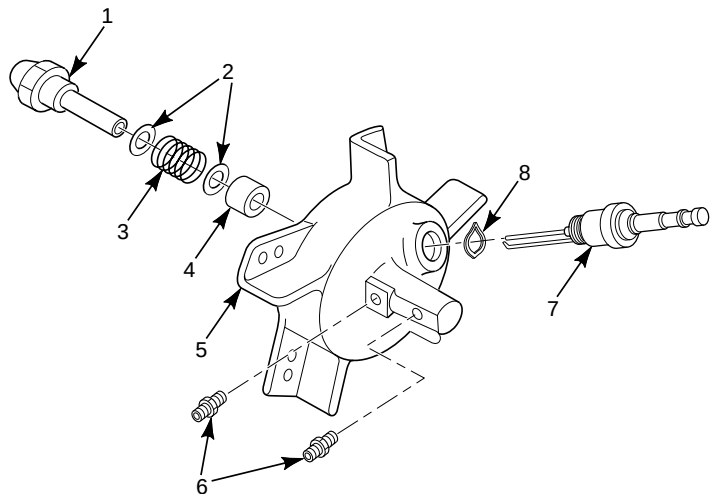


Figure 22 - Burner Head Assembly

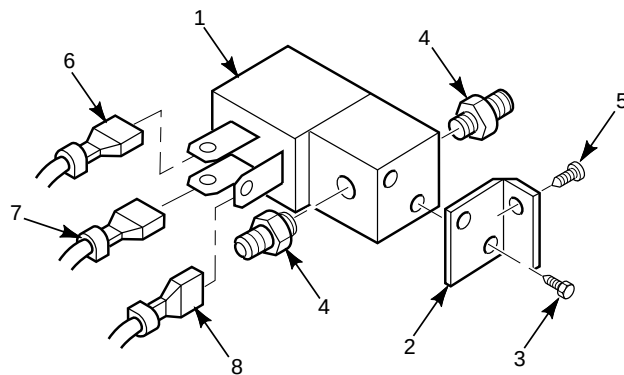


Figure 23 - Fuel Valve Assembly

Replacement Parts List

Motor and Pump Assembly - Figure 21

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Motor	102001-07	1	10	Relief Spring	**M10993-1	1
2	Pump Body	079975-03	1	11	Adjusting Screw	**M27694	1
3	Screw, #10-32 x 5/8"	*FHPF3-6C	2	12	Plug	**M22997	1
4	Rotor Insert	**M22009	1	13	Screw, #10-32 x 1"	*M12461-31	4
5	Pump Rotor	**M22456-2	1	14	Output Filter	**M12244-1	1
6	Pump End Cover	M50545	1	15	Lint Filter	**M11637	1
7	Intake Filter	**M12179	1	16	Barb Fitting	M50820-02	1
8	Filter End Cover	M16545-02	1	17	Blade	**M8643-2	4
9	Steel Ball, 1/4" Diameter	**M8940	1	18	Screw, #10-32 x 1.12"	*M12461-32	6

(*) Standard hardware item, available locally.

(**) See MAINTENANCE KITS, page 14.

Burner Head Assembly - Figure 22

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Nozzle	100735-13	1	5	Burner Head Body	M50924-08	1
2	Nozzle Washer	M10659-1	2	6	Barb Fitting	M50820-02	2
3	Nozzle Spring	M10809-1	1	7	Spark Plug	HA3012	1
4	Nozzle Sleeve	M8882	1	8	Wave Spring Washer	103409-01	1

Fuel Valve Assembly - Figure 23

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Fuel Valve	103128-01	1	5	Hex TPG Screw, 8-18 x 3/8"	*M11084-38	2
2	Fuel Valve Bracket	103129-01	1	6	Wire Assembly, Red	079010-31	1
3	Hex Head Screw, 3-32 x 1/4"	*M12461-13	2	7	Wire Assembly, White	079010-32	1
4	Fitting Barb	M50820-02	2	8	Fuel Valve Ground Wire	M16841-62	1

(*) Standard hardware item, available locally.

For Replacement Parts, call 1-800-323-0620 24 hours a day - 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

Address parts correspondence to:

Grainger Parts Operations
P.O. Box 3074
1657 Shermer Road U.S.A.

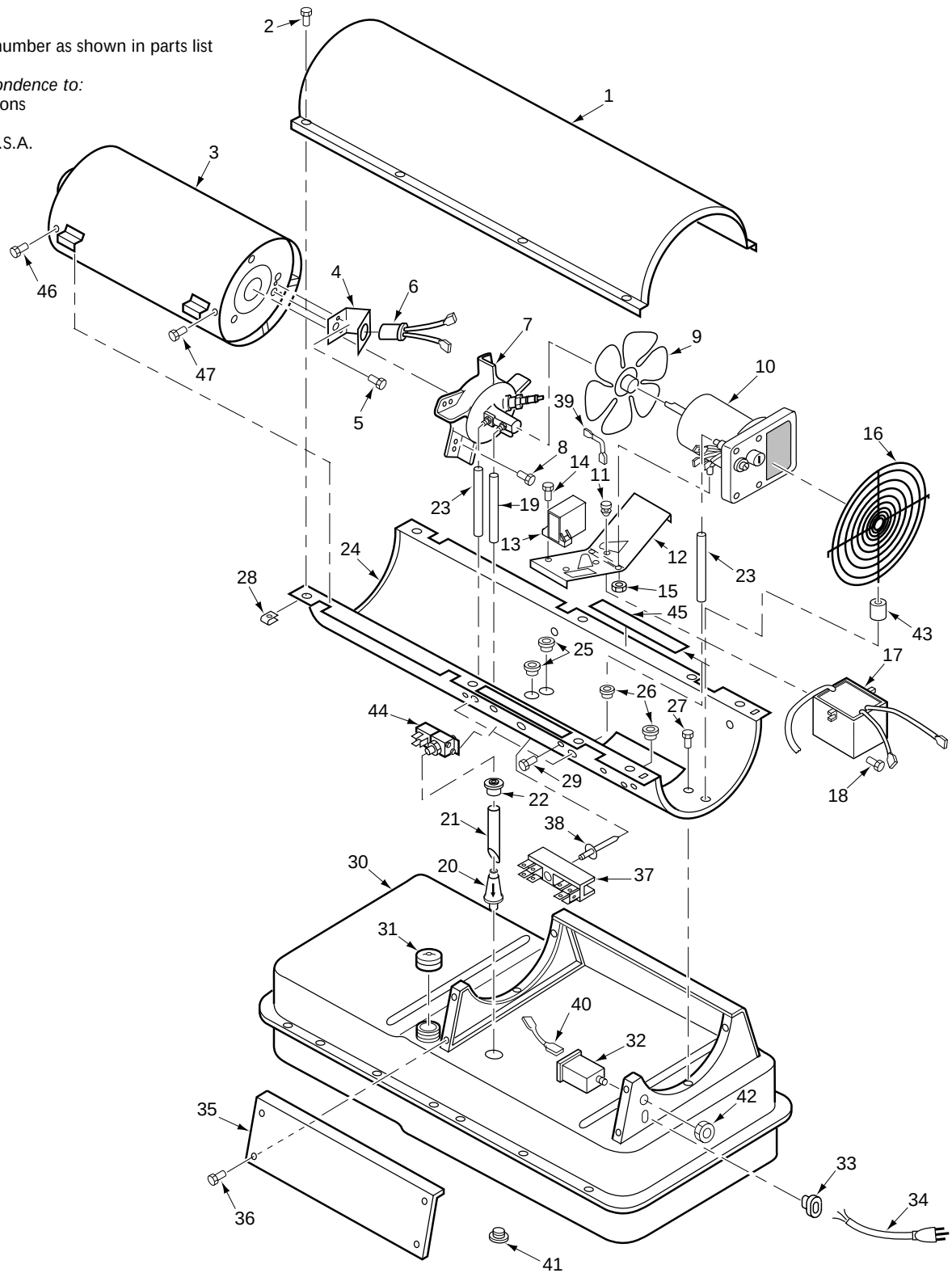


Figure 24 - Replacement Parts Illustration for Model 3VG79

Replacement Parts List

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Upper Shell	098511-227	1	25	Bushing	M50104-03	2
2	Screw, #10-16 x 1/2"	*100647-01	8	26	Bushing	M50104-01	2
3	Combustion Chamber	098512-48	1	27	Screw, #10-16 x 1/2"	*M11084-27	6
4	Photocell Bracket	099229-01	1	28	Clip Nut	M11271-8	8
5	Screw, #6-32 x 3/8"	*M10908-2	2	29	Screw, #8-32 x 3/8"	*M10908-14	1
6	Photocell Assembly	HA3019	1	30	Fuel Tank	098513-86	1
7	Burner Head Assembly	†	1	31	Fuel Cap (Includes Gasket)	097702-01	1
8	Screw, #10-16 x 1/2"	*M11084-27	3	32	Flame-out Control	HA3003	1
9	Fan	102042-01	1	33	Strain Relief Bushing	M11143-1	1
10	Motor and Pump Assembly	†	1	34	Power Cord	098219-19	1
11	Rubber Bumper	M50631	2	35	Side Cover	102562-01AA	1
12	Motor Mounting Bracket	101206-01	1	36	Screw, #10-16 x 1/2"	*M11084-27	4
13	Solid State Relay	097061-01	1	37	Terminal Board	099125-12	1
14	Screw, #8-18 x 1/2"	*M15823-39	2	38	Rivet	099157-01	1
15	Hex Lock Nut, 1/4-20	*NTC-4C	2	39	Wire Assembly (Red, 18")	079010-20	1
16	Fan Guard	102756-01	1	40	Wire Assembly (Red, 6")	M16841-57	1
17	Ignitor Kit	102482-01	1	41	Drain Plug (Includes "o" Ring)	M27417	1
18	Screw, #10-16 x 3/4"	*M11084-29	2	42	Hex Nut, 3/8 - 27	*099177-01	1
19	Fuel Line	M51345-03	1	43	Rubber Bushing	103523-01	1
20	Fuel Filter	**M51150-01	1	44	Fuel Valve Assembly	†	1
21	Fuel Line Tube	M51345-04	1	45	Foam Gasket	097785-04	2
22	Rubber Bushing	M10990-3	1	46	Screw, Special	099230-01	2
23	Airline	M50814-03	1	47	Screw, #10-16 x 1/2"	*M11084-27	2
24	Lower Shell	098511-228	1				

(*) Standard hardware item, available locally.

(**) See MAINTENANCE KITS, page 14.

(†) Not available as an assembly, see pages 10 and 11.

Dayton® Portable Oil-Fired Heaters

Replacement Parts List for Handle and Wheel Group

Ref. No.	Description	Part Number	Qty.
1	Handles	HA2204	2
2	Screw, #10-24 x 1 3/4"	*M12345-33	8
3	Wheel Support Frame	M12831-3	1
4	Hex Nut, #10-24	*NTC-3C	8
5	Wheel	079023-01	2
6	Cap Nut	M28526	2
7	Axle	M16801-2	1
Δ	General Information Decal	098493-01	1
Δ	Tradename Decal	097409-13	2
Δ	Combustion Chamber Grounding Wire	M9900-192	1

(*) Standard hardware item, available locally.
(Δ) Not shown.

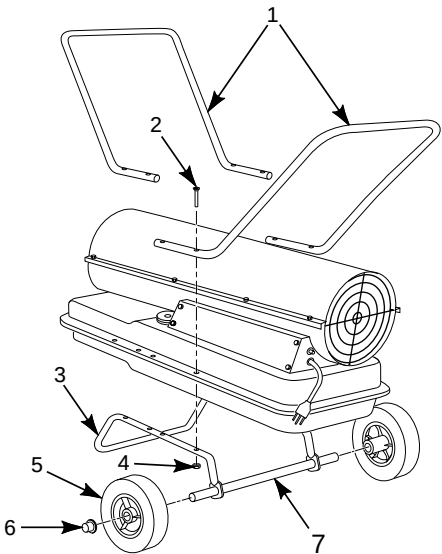


Figure 25 - Handle and Wheel Assembly

Accessories

	Part Numbers
Air Gauge Kit	HA1180
Hang-up Thermostat kit	HA1210
Flame-out Control/Photocell Tester	HA1170
Fuel Tank Filter Screen	HA2210

Wiring Diagram

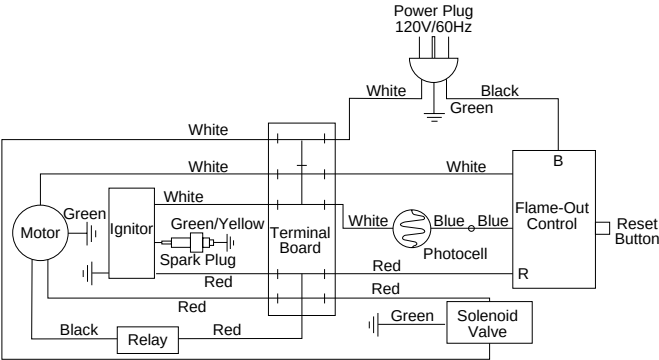


Figure 26 - Wiring Diagram

Maintenance Kits

	Part Numbers
Flame-out Control	HA3003
Spark Plug	HA3012
Filter Kit (M11637, M12179, M12244-1, M51150-01)	HA3017
Nozzle	100735-13
Rotor/Air Pump Kit (M22456-2, M22009, M8643-2)	HA3005
Handle	HA2204
Photocell	HA3019
Pump Adjustment (M27694, M10993-1, M22997, M8940)	HA3020

Model 3VG79

Troubleshooting Chart

▲ WARNING

Never service heater while it is plugged in, operating, or hot. Severe burns and electrical shock can occur.

Symptom	Possible Cause(s)	Corrective Action
Heater ignites, but flame-out control shuts off heater after a short period of time	1. Wrong pump pressure 2. Dirty air output, air intake and lint filters 3. Dirty fuel filter 4. Dirt in nozzle 5. Dirty photocell lens 6. Bad flame-out control	1. See <i>Pump Pressure Adjustment</i>, page 6 2. See <i>Air Output, Air Intake and Lint Filters</i>, page 6 3. See <i>Fuel Filter</i>, page 7 4. See <i>Nozzle</i>, page 8 5. Clean photocell lens 6. Replace flame-out control
Heater will not ignite, but motor runs for a short period of time	1. Wrong pump pressure 2. Carbon deposits on spark plug and/or improper gap 3. Dirty fuel filter 4. Dirt in nozzle 5. Water in fuel tank 6. Bad fuel valve	1. See <i>Pump Pressure Adjustment</i>, page 6 2. See <i>Spark Plug</i>, page 7 3. See <i>Fuel Filter</i>, page 7 4. See <i>Nozzle</i>, page 8 5. Drain and flush fuel tank with clean kerosene. See <i>Storing, Transporting, or Shipping</i>, page 9 6. See <i>Fuel Valve</i>, page 7
	▲ WARNING High Voltage! 7. Electronic ignitor not grounded 8. Bad electronic ignitor 9. Spark plug not oriented properly	7. Make sure electronic ignitor mounting is tight 8. Replace electronic ignitor 9. See <i>Spark Plug</i>, page 7
Motor does not start when heater is plugged in, fan rotates slowly or does not turn	1. Flame-out control not reset 2. Solid state relay not allowed to reset 3. Binding pump rotor	1. Press flame-out control reset button 2. Wait two minutes before trying to restart heater 3. If fan is hard to turn, see <i>Pump Rotor</i>, page 8

Dayton® Portable Oil-Fired Heaters

Limited Warranty

Dayton One-Year Limited Warranty. Portable Oil-Fired heater, Models covered in this manual, are warranted by Dayton Electric Mfg. Co. (Dayton) to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as Dayton designates, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at Dayton's option. For limited warranty claim procedures, see PROMPT DISPOSITION below. This limited warranty gives purchasers specific legal rights which vary from jurisdiction to jurisdiction.

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Prompt Disposition. Dayton will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first write or call dealer from whom product was purchased. Dealer will give additional directions. If unable to resolve satisfactorily, write to Dayton at address below, giving dealer's name, address, date and number of dealer's invoice, and describing the nature of the defect. Title and risk of loss pass to buyer on delivery to common carrier. If product was damaged in transit to you, file claim with carrier.

Manufactured for Dayton Electric Mfg. Co., 5959 W. Howard St., Niles, Illinois 60714 U.S.A.