

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 Heater

Description

Dayton Model 3VG79B is a 200,000 Btu/Hr heater. This heater uses only Kerosene or No. 1 fuel oil for combustion and electricity to run the motor. It is primarily intended for indoor and outdoor temporary heating of well-ventilated buildings under construction, alteration, or repair. It may be used in agricultural, industrial, and commercial environments.



Figure 1 - Model 3VG79B

Unpacking

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



ELECTRICAL SPECIFICATIONS

Electrical Input	Amperage (during normal run)
120 Volt/60 Hertz	3.6

GENERAL SPECIFICATIONS

Output	Hot Air Output	Fuel Tank Capacity	Fuel Consumption
200,000	600	Kerosene or No. 1 fuel oil 13.5	1.4
Motor RPM	Air Pump Pressure (psi)	Heater Weight (Pounds - with fuel)	Heater Weight (Pounds - without fuel)
3400	6.2	77	66

Dayton® Portable Forced Air Heater

Product Identification

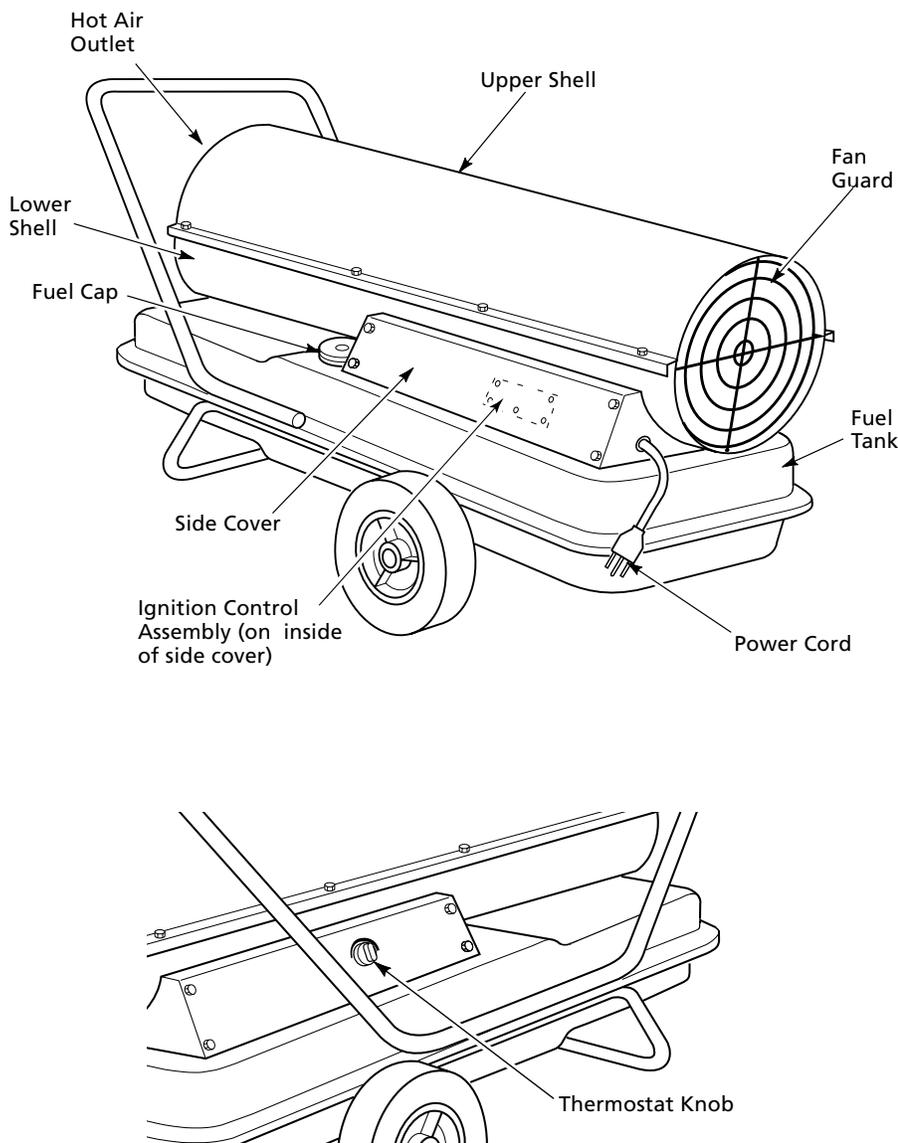


Figure 2 - Model 3VG79B

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, MAY 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.

Model 3VG79B

⚠ DANGER Carbon monoxide poisoning may lead to death! Some people are more affected by carbon monoxide than others. 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 operating properly, or the areas may not be sufficiently ventilated. Get fresh air at once! Have heater serviced.

⚠ 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.

- 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.
- **Warning to New York City Residents** For Use Only At Construction Sites in accordance with applicable NYC codes under NYC FD certificate of approval #4803, #4899, #4908, #4909, or #4934.

Dayton® Portable Forced Air Heater

Theory of Operation

THE FUEL SYSTEM

The air pump forces air through the air line. The air is then pushed through the 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 ignition control assembly provides power to the ignitor. This ignites the fuel/air mixture in the combustion chamber.

THE FLAME-OUT CONTROL SYSTEM

This system causes the heater to shut down if the flame goes out.

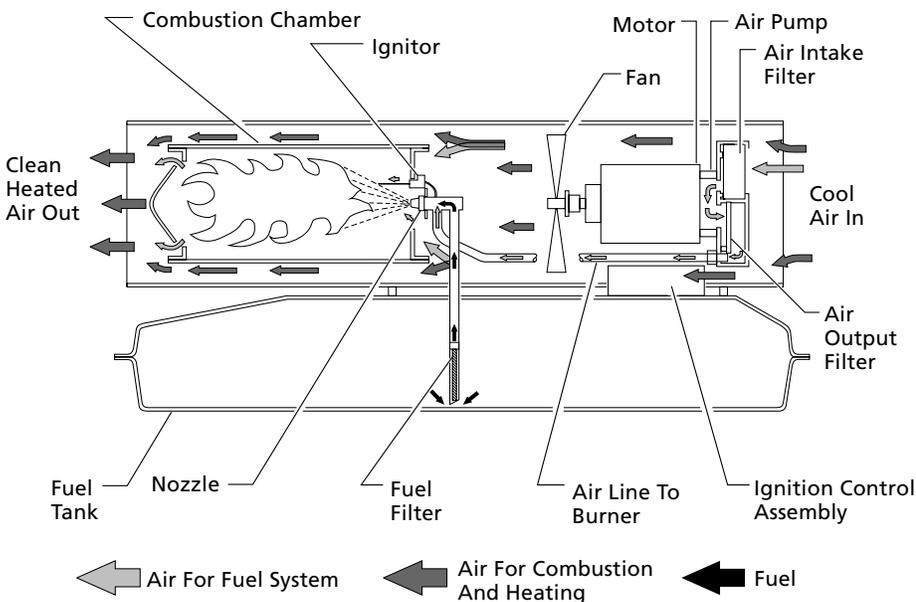


Figure 3 - Cross Section Operational View

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
- 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 flameout control to shut down heater. Foreign matter may also require you to clean fuel system often.

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).

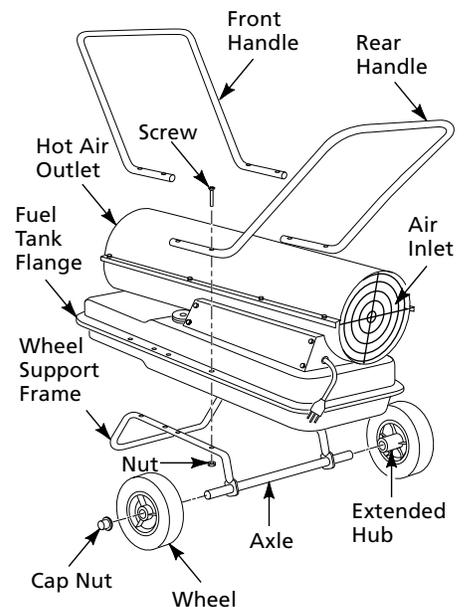


Figure 4 - Wheel and Handle Assembly

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.

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Assembly (Continued)

- Place handles on top of fuel tank flange. Insert screws through handles, fuel tank flange, and wheel support frame. Attach nut finger tight after inserting each screw.
- After inserting all screws, 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 a fresh air opening at least three square feet 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 foot wide opening) raised five inches
- a single-car garage door (9 foot wide opening) raised eight inches
- two 30-inch windows 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

- Follow all ventilation and safety information.

- Fill fuel tank with Kerosene or No. 1 fuel oil.
- Attach fuel cap.
- Turn thermostat knob clockwise to the HIGH position.
- 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
- Plug extension cord into standard 120 volt/60 hertz, three-hole, grounded outlet. *Note:* Ignitor will preheat for five seconds then heater will start.
 - Adjust thermostat knob to the desired setting.

NOTE: A cold heater may affect the thermostat setting. This thermostat is a general-heating control. It is not intended for precise temperature control. Adjust thermostat until heater cycles at the desired setting.

TO STOP HEATER

Unplug extension cord from outlet.

TO RESTART HEATER

- Unplug extension cord from outlet and wait 10 seconds (two minutes if heater has been running).
- Turn thermostat knob clockwise to the HIGH position.
- Plug extension cord into standard 120 volt/60 hertz, three-hole, grounded outlet. *Note:* Ignitor will preheat for five seconds then heater will start.
- Adjust thermostat knob to the desired setting.

Maintenance

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

UPPER SHELL REMOVAL

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

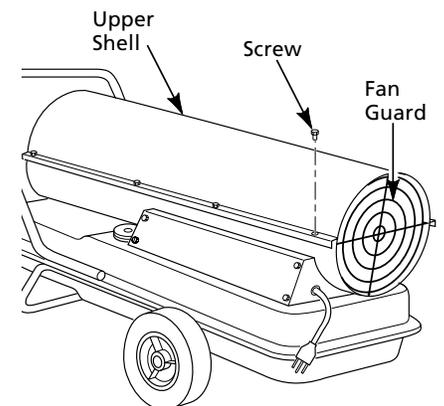


Figure 5 - Upper Shell Removal

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.

- Remove upper shell (See Figure 5).
- Use 1/8" Allen wrench to loosen setscrew which holds fan to motor shaft.
- Slip fan off motor shaft.
- Clean fan using soft cloth moistened with Kerosene or solvent.

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Maintenance (Continued)

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

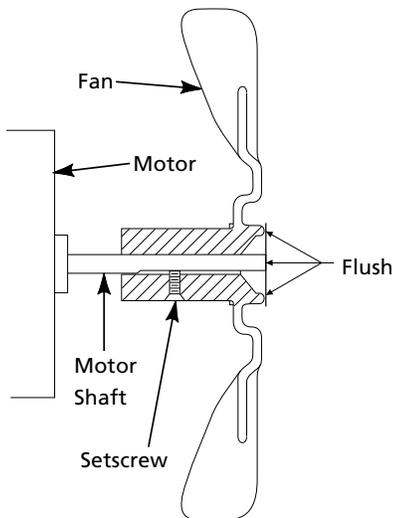


Figure 6 - Fan Cross Section

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

AIR OUTPUT, AIR INTAKE, AND LINT FILTERS

1. Remove upper shell (See Figure 5, page 5).
2. Remove filter end cover screws using 5/16" nut-driver (See Figure 7).
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.

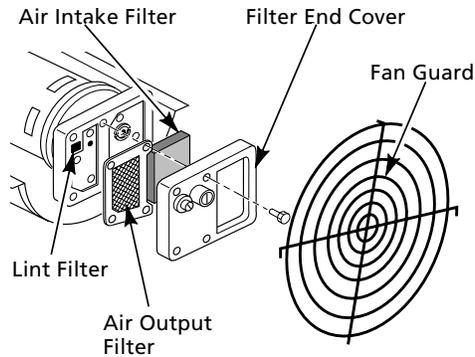


Figure 7 - Air Output, Air Intake, and Lint Filters

PUMP PRESSURE ADJUSTMENT

1. Remove pressure gauge plug from filter end cover (See Figure 8).
2. Install accessory pressure gauge (Part Number HA1180) (See Figure 9).
3. Start heater (See *Operation*, page 5). Allow motor to reach full speed.
4. Adjust pressure to 6.2 psi. Turn relief valve to right to increase pressure. Turn relief valve to left to decrease pressure (See Figure 9).
5. Stop heater. Remove pressure gauge. Replace pressure gauge plug in filter end cover.

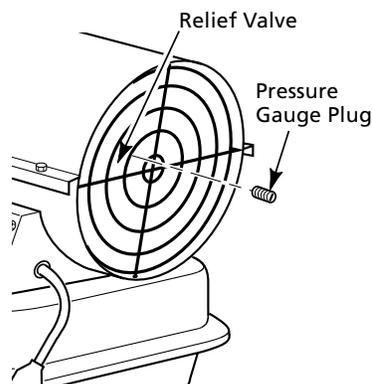


Figure 8 - Pressure Gauge Plug Removal

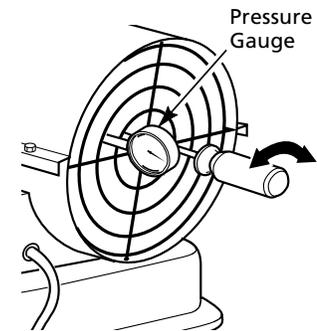


Figure 9 - Adjusting Pump Pressure

FUEL FILTER

1. Remove side cover screws using 5/16" nut-driver.
2. Remove side cover (See Figure 10, page 7).
3. Pull lower fuel line off 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 10), fan guard, and upper shell (See Figure 5, page 5) screws using 5/16" nut-driver.
2. Remove fan (See *Fan*, pages 5 and 6).
3. Pull lower fuel line off the fuel valve fitting (See Figure 11, page 7).

▲ WARNING High Voltage.

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Maintenance (Continued)

4. Disconnect red and white wires from fuel valve (See Figure 11).
5. Using 1/4" nut driver remove 2 screws/lockwashers holding fuel valve and bracket to lower shell (See Figure 11). Save these screws/lock washers.
6. Using 1/4" nut driver remove 2 screws holding fuel valve to bracket. Save these screws.
7. Attach new fuel valve to bracket with 2 screws.
8. Install new fuel valve and bracket on lower shell with 2 screws/lockwashers.
9. Connect red and white wires (polarity not important). Connect upper and lower fuel lines to fuel valve.
10. Replace fan, fan guard, upper shell, and side cover.

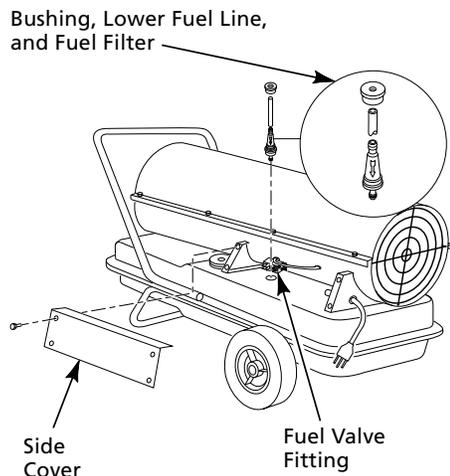


Figure 10 - Fuel Filter Removal

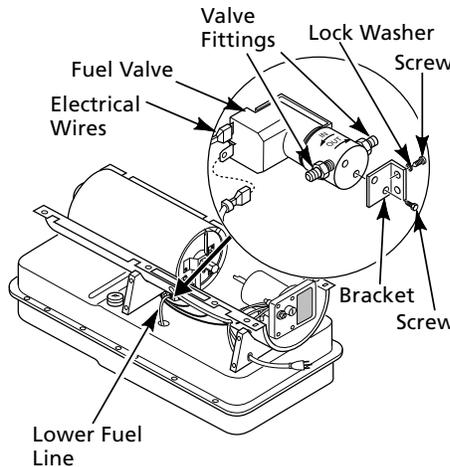


Figure 11 - Fuel Valve Replacement

IGNITOR

1. Remove upper shell and fan guard (See Figure 5, page 5).
2. Remove fan (See pages 5 and 6).
3. Remove 4 side cover screws with a 5/16" nut driver. Remove side cover (See Figure 10).
4. Disconnect ignitor wires (black) from ignition control assembly (See Figure 12). Pull the ignitor wires up through the hole in the lower shell.
5. Disconnect fuel line hose and air line hose. Remove photocell from photocell bracket (See Figure 12).
6. Remove combustion chamber. Stand combustion chamber on end with nozzle adapter bracket on top (See Figure 13, page 8).
7. Remove ignitor screw with a 1/4" nut driver. Carefully remove ignitor from nozzle adapter bracket.

CAUTION Do not bend or strike ignitor element. Handle with care.

8. Carefully remove replacement ignitor from styrofoam packing.
9. Carefully guide ignitor into opening in nozzle adapter bracket. Do not strike ignitor element. Attach ignitor to nozzle adapter bracket with screw using a 1/4" nut driver (See Figure 13, page 8). Torque 8 to 15 in. lbs. Do not over torque.
10. Replace combustion chamber.
11. Route the ignitor wires back down through the hole in the lower shell. Connect wires to the ignition control assembly.
12. Replace side cover (See Figure 10).
13. Connect and route fuel line hose and air line hose to nozzle assembly (See Figure 14, page 8).
14. Replace photocell in photocell bracket.
15. Replace fan (See pages 5 and 6).
16. Replace fan guard and upper shell (See pages 5 and 6).

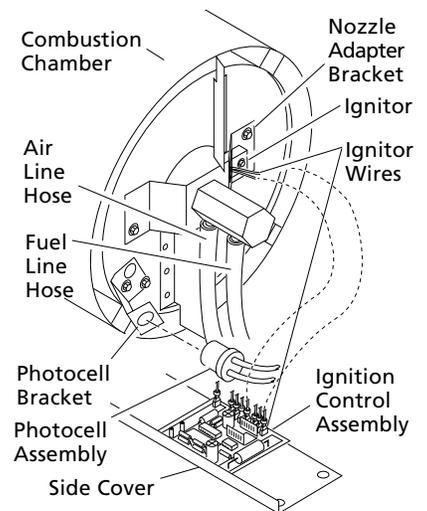


Figure 12 - Disconnecting Ignitor Wires from Ignition Control Assembly

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Maintenance (Continued)

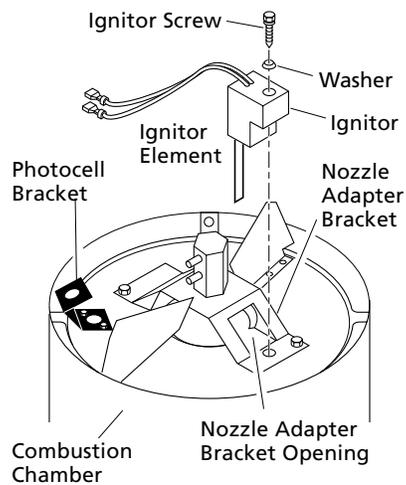


Figure 13 - Ignitor Replacement

NOZZLE ASSEMBLY

1. Remove combustion chamber and ignitor by following steps 1 through 7 under *Ignitor*, page 7.
2. Carefully place the ignitor in a safe location.
3. Remove two nozzle adapter bracket screws (See Figure 14).
4. Place hex-shaped aluminum nozzle adapter into vise (do not overtighten).
5. Carefully remove nozzle from nozzle adapter using 5/8" socket wrench (See Figure 15).
6. Blow compressed air through face of nozzle. This will remove any debris in nozzle.
7. Inspect nozzle seal for damage.
8. Replace nozzle into nozzle adapter until nozzle seats. Tighten 80-110 inch-pounds.
9. Attach nozzle adapter bracket to combustion chamber with two screws removed in step 3.
10. Repeat steps 9 through 16 under *Ignitor*, page 7.

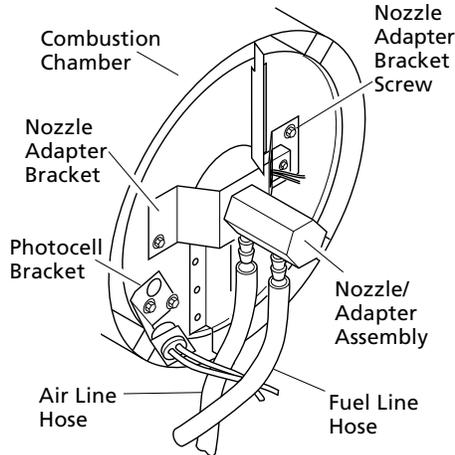


Figure 14 - Removing Air and Fuel Line Hoses

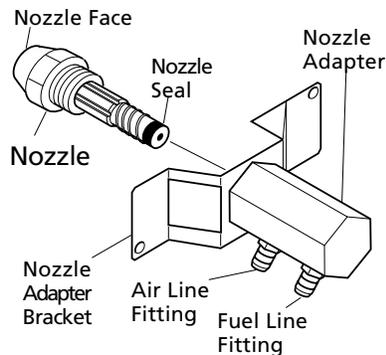


Figure 15 - Nozzle and Nozzle Adapter

PUMP ROTOR

(Refer to Figure 16)
(Procedure if rotor is binding)

1. Remove upper shell (See page 5).
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.
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 17).

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 6).

NOTE: If rotor is still binding, proceed as follows.

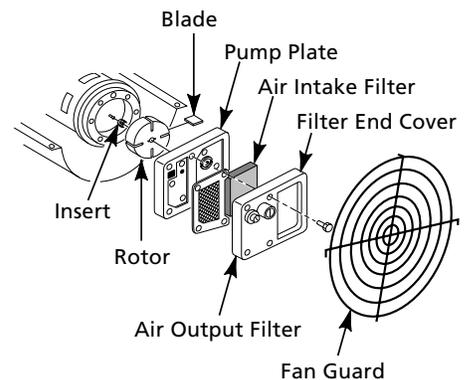


Figure 16 - Rotor Location

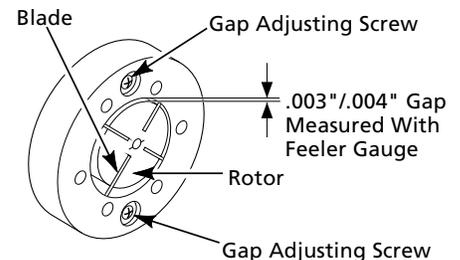


Figure 17 - Gap Adjusting Screw Locations

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Maintenance (Continued)

13. Perform steps 1 through 6, page 8.
14. Place fine grade sandpaper (600 grit) on flat surface. Sand rotor lightly in "figure 8" motion four times (See Figure 18).
15. Reinstall insert and rotor.
16. Perform steps 10 through 12, page 8.

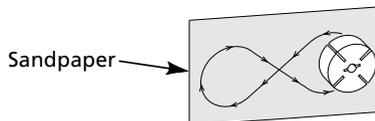


Figure 18 - Sanding Rotor

IGNITION CONTROL ASSEMBLY (Procedure for Replacing Fuse)

1. Unplug heater

⚠ WARNING High Voltage!

2. Remove side cover screws (4) using 5/16" nut-driver to expose ignition control assembly.
3. Remove fuse cover (See Figure 19).

4. Remove fuse from fuse clips.
5. Replace fuse with fuse of the same type and rating (GMA-10). Do not substitute a fuse with a higher current rating.
6. Replace fuse cover.
7. Replace side cover.

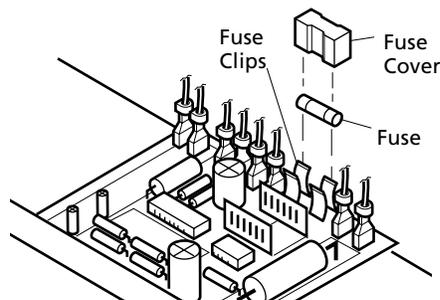


Figure 19 - Replacing Fuse

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 6
Ignitor	No Maintenance Required	
Fan Blades	Clean every season or as needed	See <i>Fan</i> , page 5
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
 P.O. Box 3074
 1657 Shermer Road
 Northbrook, IL 60065-3074 U.S.A.

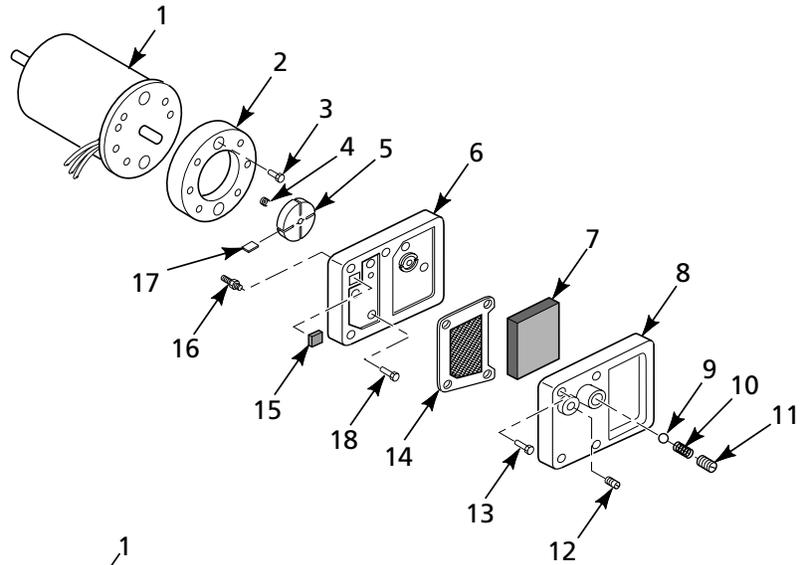


Figure 20 - Motor and Pump Assembly

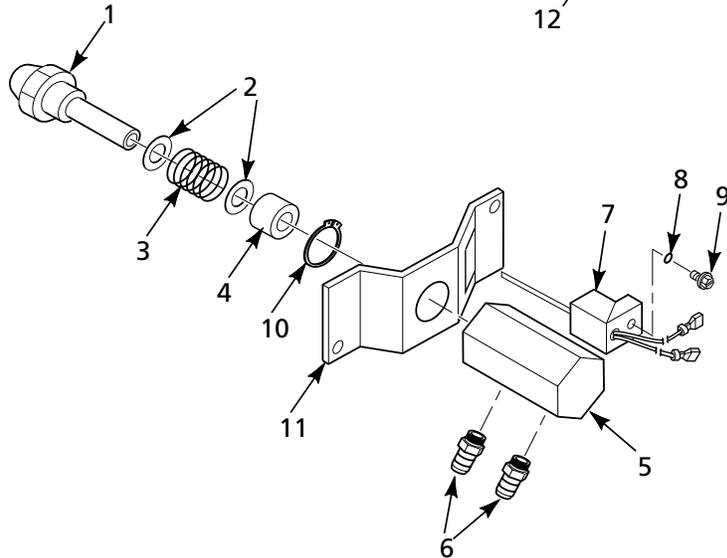


Figure 21 - Nozzle Assembly

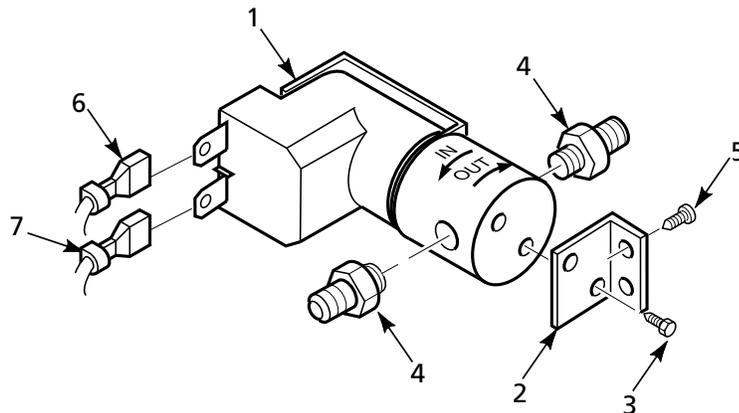


Figure 22 - Fuel Valve Assembly

Model 3VG79B

Replacement Parts List - Motor and Pump Assembly - Figure 20

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Motor	102001-27	1	10	Relief spring	**M10993-1	1
2	Pump body	079975-03	1	11	Adjusting screw	**M27694	1
3	#10-32 x 5/8" Screw	*FHPF3-6C	2	12	Plug	**M22997	1
4	Rotor insert	**M22009	1	13	#10-32 x 1" Screw	*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	1	17	Blade	**M8643-2	4
9	1/4" Diameter steel ball	**M8940	1	18	#10-32 x 1.12" Screw	*M12461-32	6

(*) Standard hardware item, available locally.

(**) See MAINTENANCE KITS, page 14.

Replacement Parts List - Burner Head Assembly - Figure 21

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Nozzle	100735-13	1	7	Ignitor kit	102548-06	1
2	Nozzle washer	M10659-1	2	8	Belleville washer	103347-01	1
3	Nozzle spring	M10809-1	1	9	Screw, #6-32 x .88	M10908-75	1
4	Nozzle sleeve	M8882	1	10	Retaining ring	107272-01	1
5	Nozzle adapter	107273-01	1	11	Bracket	102336-03	1
6	Barb fitting	M50820-02	2				

Replacement Parts List - Fuel Valve Assembly - Figure 22

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Fuel valve	107643-01	1	5	10-16 x 1/2" Hex sems		
2	Fuel valve bracket	103129-01	1		screw ext "B"	*102432-01	2
3	8-32 x 1/4" Hex head screw	*M12461-13	2	6	Red wire assembly	107274-01	1
4	Fitting barb	M50820-02	2	7	White wire assembly	107274-02	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
 P.O. Box 3074
 1657 Shermer Road
 Northbrook, IL 60065-3074 U.S.A.

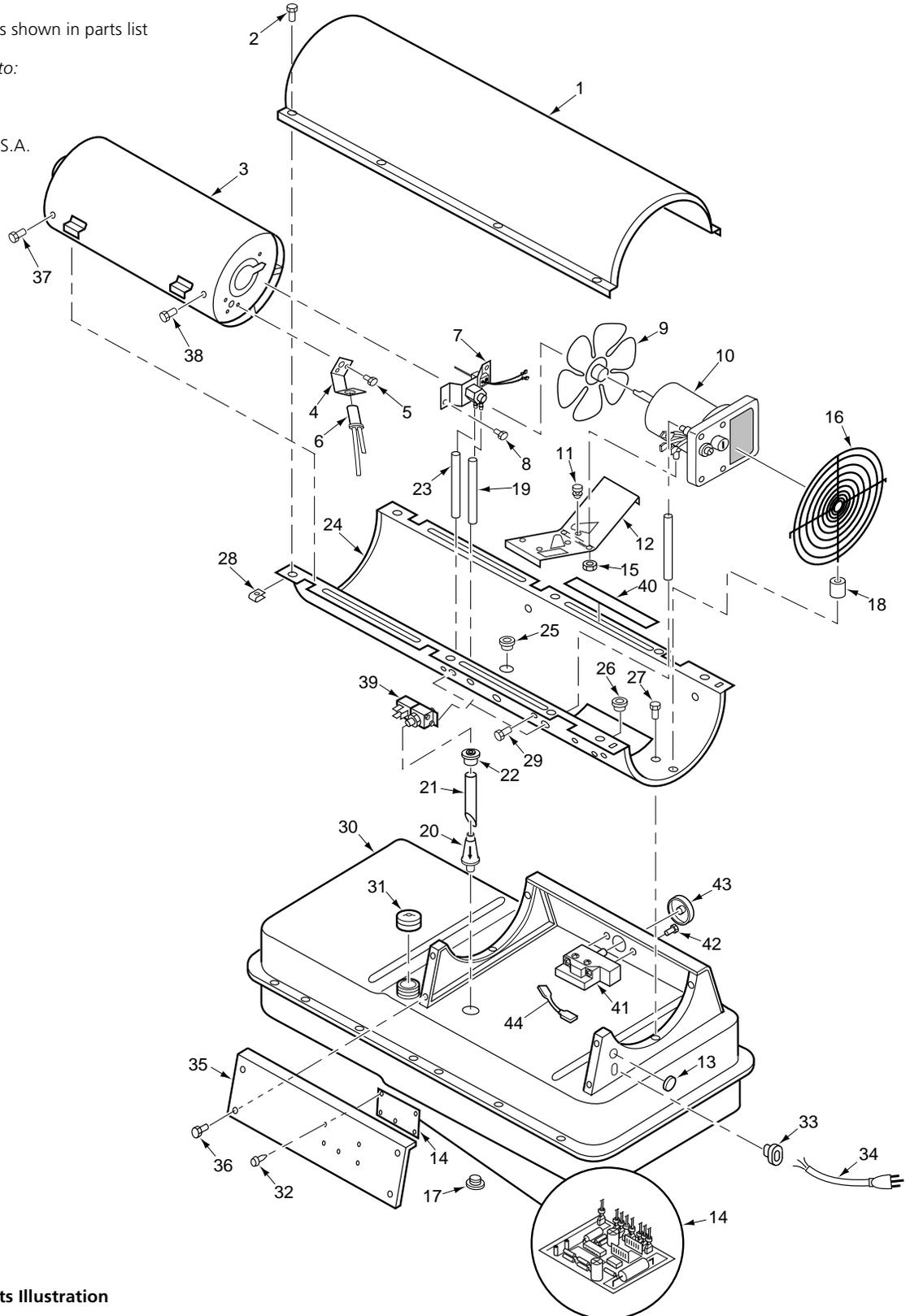


Figure 23 - Replacement Parts Illustration

Model 3VG79B

Replacement Parts List

Ref. No.	Description	Part Number	Qty.	Ref. No.	Description	Part Number	Qty.
1	Upper shell	107353-04	1	23	Airline	M50814-03	1
2	#10-16 x 1/2" Screw	*100647-01	8	24	Lower shell	107353-08	1
3	Combustion chamber	098512-69	1	25	Bushing	M30865-02	1
4	Photocell bracket	103154-05	1	26	Bushing	M50104-01	1
5	#6-32 x 3/8" Screw	*M10908-2	2	27	#10-16 x 1/2" Screw	*M11084-27	6
6	Photocell assembly	M16656-24	1	28	Clip nut	M11271-8	8
7	Burner head assembly	†	1	29	#8-32 x 3/8" Screw	*M10908-14	1
8	#10-16 x 1/2" Screw	*M11084-27	2	30	Fuel tank	098513-105	1
9	Fan	102042-01	1	31	Fuel cap (includes gasket)	097702-01	1
10	Motor and pump assembly	†	1	32	P.C. board support	102349-01	5
11	Rubber bumper	M50631	2	33	Strain relief bushing	M11143-1	1
12	Motor mounting bracket	101206-01	1	34	Power cord	098219-38	1
13	Button plug	101695-01	1	35	Side cover	107333-04AA	1
14	Ignition control assembly	104068-02		36	#10-16 x 1/2" Screw	*M11084-27	4
15	1/4-20 Hex lock nut	*NTC-4C	2	37	Special screw	099230-01	2
16	Fan guard	102756-01	1	38	#10-16 x 1/2" Screw	*M11084-27	2
17	Drain plug (includes O ring)	M27417	1	39	Fuel valve assembly	†	1
18	Rubber bushing	103523-01	1	40	Foam gasket	097785-04	2
19	Fuel line	M51345-03	1	41	Thermostat	097657-03	1
20	Fuel filter	**M51150-01	1	42	#6-32 x 1/4" Screw	M10908-1	2
21	Fuel line tube	M51345-04	1	43	Thermostat knob	104905-01	1
22	Rubber bushing	M10990-3	1	44	Wire assembly	079010-35	1

(*) Standard hardware item, available locally.

(**) See MAINTENANCE KITS, page 14.

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

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Replacement Parts List for Handle and Wheel Group

Ref. No.	Description	Part Number	Qty.
1	Handles	HA2204	2
2	#10-24 x 1 3/4" Screw	*M12345-33	8
3	Wheel support frame	M12831-3	1
4	#10-24 Hex nut	*NTC-3C	8
5	Wheel	107426-01	1
6	Cap nut	M28526	2
7	Axle	M16801-2	1
Δ	Thermostat decal	100621-06	1
Δ	Tradename decal	097409-13	2

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

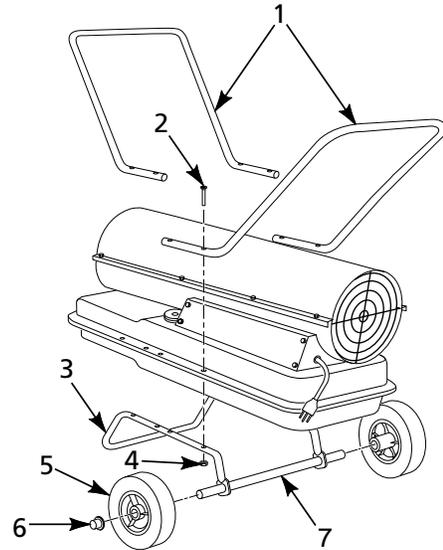


Figure 24 - Handle and Wheel Assembly

Accessories

	Part Numbers
Air gauge kit	HA1180
Flame-out control/photocell tester	HA1170
Fuel tank filter screen	HA2210

Maintenance Kits

	Part Numbers
Ignition control	104068-02
Ignitor	102548-06
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	M16656-24
Pump adjustment (M27694, M10993-1, M22997, M8940)	HA3020

Wiring Diagram

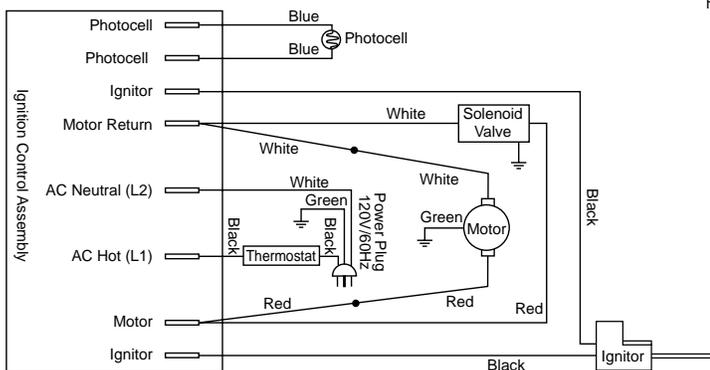


Figure 25 - Wiring Diagram

Model 3VG79B

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
Motor does not start five seconds after heater is plugged in	1. No power to heater	1. Check circuit breaker in electrical panel
	2. Thermostat setting to low	2. Turn thermostat knob clockwise to a higher setting
	▲WARNING High Voltage!	
	3. Bad electrical connection between motor and ignition control assembly or ignition control assembly and power cord	3. Check all electrical connections. See <i>Wiring Diagram</i> , page 14
	4. Blown fuse on ignition control assembly	4. See <i>Ignition Control Assembly</i> , page 9
	5. Binding pump rotor	5. If fan does not turn freely, see <i>Pump Rotor</i> , page 8
	6. Defective ignition control assembly	6. Replace ignition control assembly
Motor starts and runs but heater does not ignite	7. Defective motor	7. Replace motor
	1. No fuel in tank	1. Fill tank with kerosene
	2. Pump pressure incorrect	2. See <i>Pump Pressure Adjustment</i> , page 6
	3. Dirty fuel filter	3. See <i>Fuel Filter</i> , page 7
	4. Obstruction in nozzle assembly	4. See <i>Nozzle Assembly</i> , page 8
	5. Water in fuel tank	5. Drain and flush fuel tank with clean kerosene. See <i>Storing, Transporting, or Shipping</i> , page 9
	▲WARNING High Voltage!	
	6. Defective fuel valve	6. See <i>Fuel Valve</i> , page 7
	7. Bad electrical connection between ignitor and ignition control assembly	7. Check electrical connections. See <i>Wiring Diagram</i> , page 14
	8. Defective ignitor	8. Replace ignitor, see page 7
9. Defective ignition control assembly	9. Replace ignition control assembly	
Heater ignites but ignition control assembly shuts heater off after a short period of time	1. Pump pressure incorrect	1. See <i>Pump Pressure Adjustment</i> , page 6
	2. Dirty air intake, air output, and/or lint filter	2. See <i>Air Output, Air Intake, and Lint Filters</i> , page 6
	3. Dirty fuel filter	3. See <i>Fuel Filter</i> , page 7
	4. Obstruction in nozzle assembly	4. See <i>Nozzle Assembly</i> , page 8
	5. Photocell assembly not properly installed (not seeing the flame)	5. Make sure photocell boot is properly seated in bracket
	▲WARNING High Voltage!	
	6. Dirty photocell lens	6. Clean photocell lens
	7. Bad electrical connection between photocell and ignition control assembly	7. Check electrical connections. See <i>Wiring Diagram</i> , page 14
	8. Defective photocell	8. Replace photocell
	9. Defective ignition control assembly	9. Replace ignition control assembly

Dayton® Portable Forced Air Heater

LIMITED WARRANTY

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



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