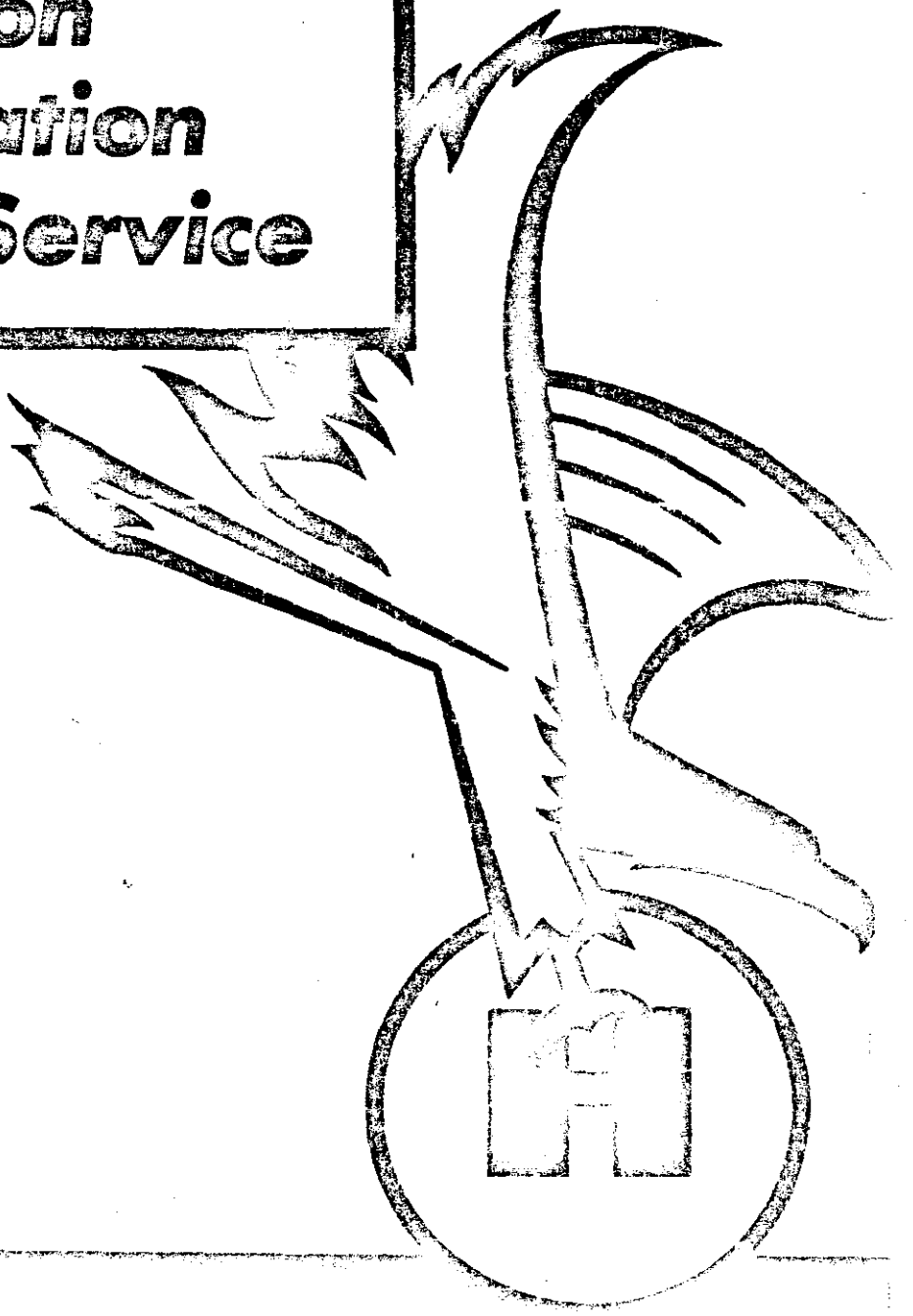
HUNTER HEATERS

Installation
Operation
Service



Model UH-47-6

HUNTER MANUFACTURING CO
[illegible] Alliance Road Salem Ohio

WARNING

DO NOT OPERATE HEATER IN AN ENCLOSED AREA UNLESS THE EXHAUST GASES ARE PIPED TO THE OUTSIDE. EXHAUST GASES MAY CONTAIN CARBON MONOXIDE, A COLORLESS, ODORLESS AND POISONOUS GAS.

BEFORE PERFORMING ANY MAINTENANCE OR INSPECTION OTHER THAN OPERATING TESTS OF THE UNIT, DISCONNECT THE POWER SOURCE.

DO NOT OPERATE THE HEATER WITH THE COVERS OFF.

ADDENDUM SHEET

UH-47-6 INSTALLATION, OPERATION
AND SERVICE INSTRUCTIONS
(FORM H-313)

PLEASE NOTE: The information contained on this page will supplement that in the manual and should be given careful consideration.

1. Since annual service is recommended, make certain that heater is installed so it is readily accessible for removal or service.

2. Pay particular attention to the requirements for good circulation of air into and out of the heater.

3. Do not install exhaust pipe in such a way that rising hot exhaust gas can be picked up by the combustion air inlet hose.

4. Before initial operation of heater, make sure that no foreign matter has entered fuel lines, tank etc. during installation.

5. When pump is used, be sure that both fuel supply and pump are below the level of the heater.

6. When gravity feed is used, lowest part of fuel tank must be higher than top of heater.

Add to Reassembly of solenoid valve at carburetor, page 11: If difficulty is experienced in holding solenoid plunger gasket ("O" Ring) in place, use rubber cement sparingly. Do not block fuel part.

On page 7, figure 4, control box assembly number (index 4) should read 1-130039-02.

HUNTER MANUFACTURING COMPANY
30525 AURORA ROAD
CLEVELAND (SOLON) OHIO 44139

TABLE OF CONTENTS

47471
Form No. H-313

DESCRIPTION, INSTALLATION AND SERVICE INSTRUCTIONS

FOR HUNTER MODEL UH-47-6 HEATER, GASOLINE BURNING

SECTION I

DESCRIPTION

The UH-47-6 Heater is a gasoline burning, thermostatically controlled heating device. A completely isolated combustion system is utilized which permits the heater to be operated within the compartment being heated with no offensive or dangerous fumes being emitted. Both air for combustion and air for heat circulation are provided for by a two-speed, 12-volt motor/blower assembly. Spark for combustion is provided by a 12-volt ignition system, which consists of a high tension coil, vibrator, and igniter.

This product is the result of controlled testing, experimentation and a background of experience in the design and manufacture of military and civilian heating equipment.

The UH-47-6 Heater is primarily intended to heat truck cabs and medium size truck bodies. However, the compact and relatively lightweight design allows this heater to be used in many special applications where additional heat is required but space is limited.

SPECIFICATIONS

Basic Case Dimensions with Control Box	6-1/4" x 12" x 15-1/2"
Weight	24 lbs.
Shipping Weight	30 lbs.
Diameter Heated Air Outlet	5"
Exhaust Outlet	1-1/4" Dia. Standard Steel Pipe
Combustion Air Inlet Hose	1-1/8" Flexible Fibreglass Hose 1" I.D.
Exchanger Overflow Line	3/16" Copper Tube
Heat Exchanger	Stainless Steel Cross Flow Air Delivery
Electrical Supply	12 Volt D.C. 8 Amp. Max.
Fuel Consumption (Input)	1/6 Gallon Per Hour - on high thermostat setting Electrically Operated Solenoid Valve
Burner	Low Pressure Atomizing Type
Ignition	Vibrator and High Tension Coil
Control on Heater	Standard
Remote Control	Optional

AUXILIARY EQUIPMENT - TO BE ORDERED SEPARATELY

Electric Fuel Pump	Part No. 15421, 12 Volt, Neg. Grd.
	Part No. 15422, 12 Volt, Pos. Grd.
Fuel Tanks	Commercial 2.1 Gallon - Part No. A-47354
	I.C.C. Approved 3 Gallon - Part No. A-47348
Fuel Strainer	Part No. A-47329
Defroster Kit	Part No. A-47060
Duct Adapter for 4" Duct with Tubing	Part No. 47744
Solenoid Valve	Part No. 47396
Remote Control Kit	Part No. A-47797

BEFORE INSTALLING

1. Inspect the entire heater for lost parts or damage which may have occurred during shipment.

2. Inspect the controls for loose or missing hardware.

3. Inspect all lines, tubing, and fittings to see that they are secure and free of breaks, kinks or other damage.

NOTE: A Warranty Card is packed with each heater leaving the factory. Attached is a return postal card. It is the duty of the dealer to insure that both the owner's copy and the registration card be completed and the registration card returned to Hunter Manufacturing Company. To be certain that you obtain the benefits of the above warranty, this card should be returned within ten (10) days from the date you purchased this equipment.

SECTION II

INSTALLATION INSTRUCTIONS

THE FOLLOWING GENERAL INSTRUCTIONS ARE INTENDED TO PROVIDE SUFFICIENT INFORMATION TO INSTALL THE HEATER PROPERLY.

The heater is normally installed within the compartment being heated. It can be installed at some point not within the compartment being heated by using a flexible heat duct and remote control kit.

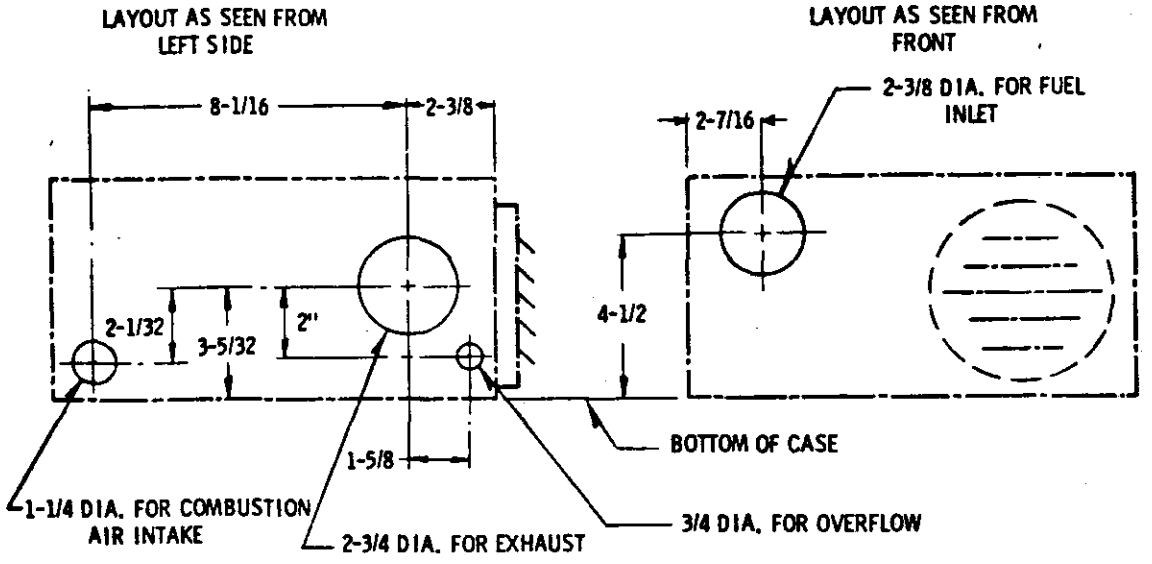


Figure 1. Model UH-47-6 Heater, Mounting Dimensions.

A. LOCATION

THE FOLLOWING POINTS SHOULD BE OBSERVED WHEN DETERMINING AN INSTALLATION LOCATION FOR THE HEATER:

1. There should be sufficient clearance allowed to permit air to circulate around the heater case. Minimum 2" for top and sides.

2. The exhaust must be piped directly to the outside, well away from the heated compartment. DO NOT terminate exhaust pipe where exhaust gas can reenter personnel compartment through windows or other openings, or gather in pockets beneath vehicle.

3. The heated air outlet or heat deflector, Fig. 2, must not be blocked in any way. Blockage of the air outlet will cause a short cycle of heated air resulting in vapor locking and generally poor operation of the heater.

4. If the heater is placed in an area removed from the heated area, provisions must be made to allow circulating air to reach the heater. An opening(s) with approximately the same area as a 7-inch circle must be provided to allow circulating air to reach the heater. If the opening is between the heater compartment and the heated compartment, the opening should be as far from the heater outlet as possible. Do not restrict the flow of air through the grille in the side panel of the heater or the combustion air intake on the opposite side of the heater. Use only the 1" hose supplied with the heater for combustion air pickup. Do not operate the heater without the side cover in place.

5. The fuel overflow line, Fig. 3, must be extended outside the heated compartment in a downward direction to a point where any fuel discharged from it will fall unobstructed to the ground.

Figure 1. Model UH-47-6 Heater,

A. LOCATION (Cont'd)

6. The combustion air inlet, Fig. 3, must be extended to the exterior of the vehicle, away from any possible road splash. Do not block.

7. Before making any permanent connections or bolted installations, cut or drill all holes which may be required by the following paragraphs B through I. Also see Figure 1.

B. EXHAUST SYSTEM

Temporarily secure heater using angle brackets supplied with heater.

Parts furnished:

One 90° elbow 1-1/4" standard steel pipe, Part No. 46006

One nipple 1-1/4" standard steel pipe, Part No. 47008

One insulator, Part No. A-47023

The parts furnished should be sufficient to properly direct the exhaust outside the heated compartment.

1. Determine where the exhaust pipe will pass through the heated compartment and cut a 2-3/4" diameter hole for mounting the exhaust insulator.

2. Bolt the exhaust insulator in position.

   NOTE: The exhaust gases must not be permitted to collect in pockets or to return to the heated compartment through leaks.

3. Connect the exhaust system using the 90° elbow or 1-1/4" pipe coupling and pipe nipple provided.

4. Once outside, the exhaust system should be further extended so that the exhaust gases are carried well away from the heated compartment. Extension of the exhaust system can be accomplished with standard 1-1/4" steel pipe. If the installation necessitates an elaborate exhaust system, with bends, etc., it may be more advantageous to use thinwall electric conduit or flexpipe. By using an ESM box connector and adapter either 1-1/4" or 1" conduit can be connected to the 1-1/4" standard steel pipe to extend the exhaust.

C. FUEL OVERFLOW (Refer to Fig. 3)

By using the union and a 3/16" copper line, extend the overflow line in a downward direction to a point where any fuel discharged from it will fall unobstructed to the ground. (This will occur only in the event of malfunction.)

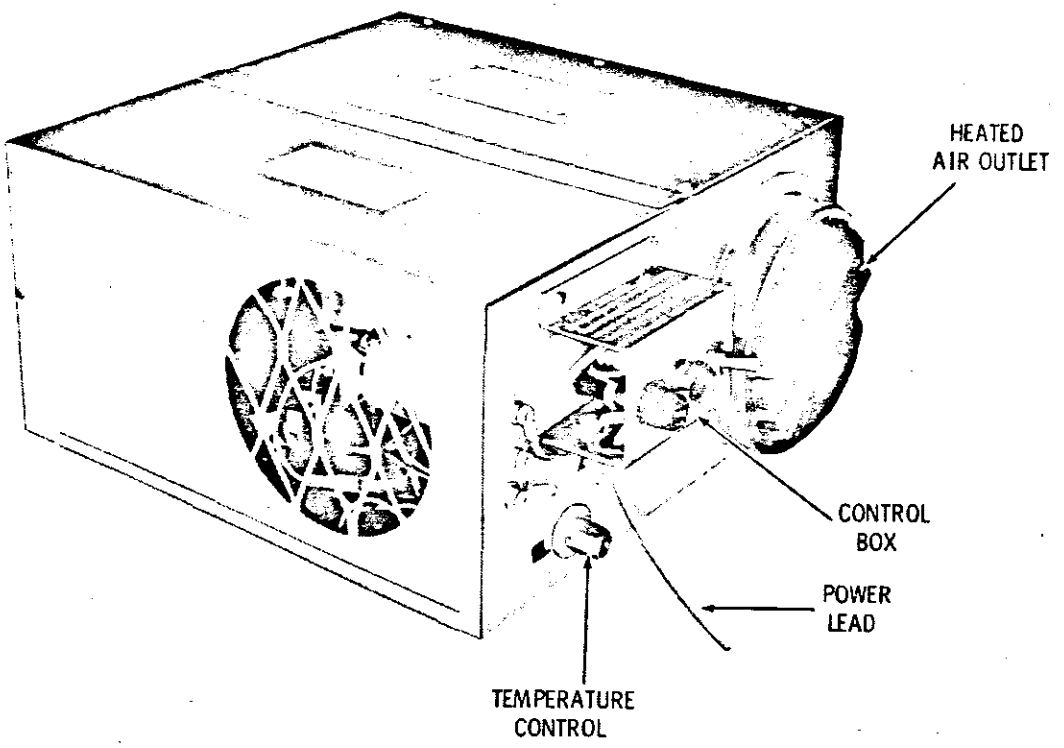


Figure 2. Model UH-47-6 Heater, 3/4 front view.

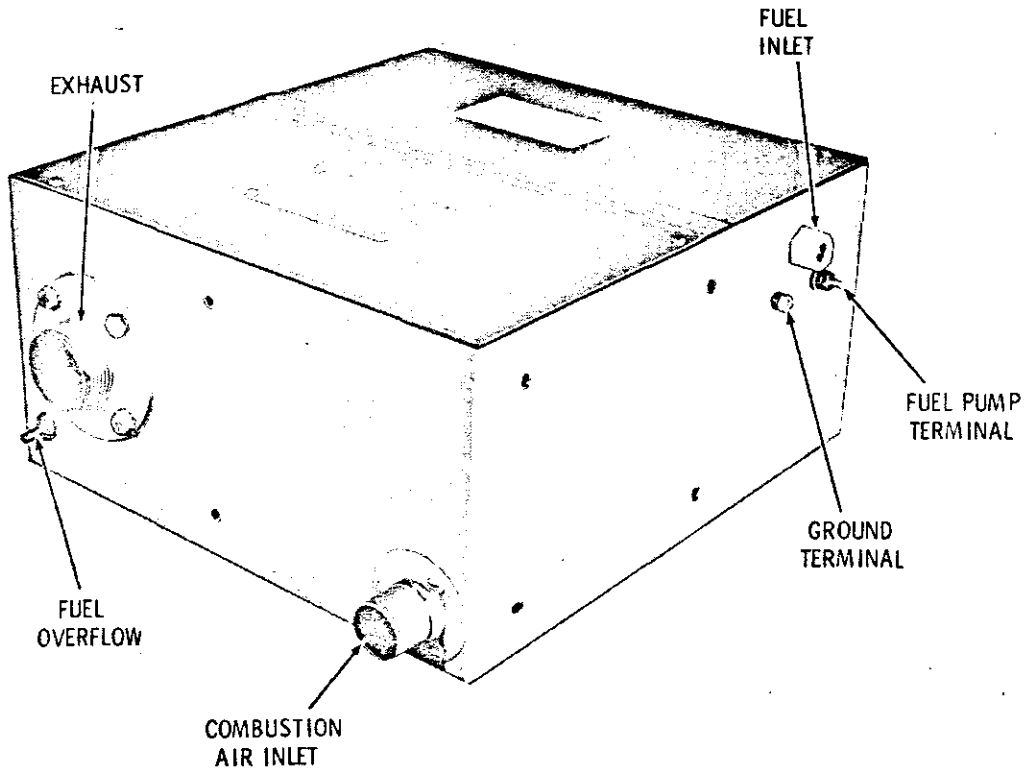


Figure 3. Model UH-47-6 Heater, 3/4 rear view.

D. FUEL SYSTEM

NOTE: Whenever the fuel source is above the heater, gravity feed exists.

Gravity feed is not allowed or approved by I.C.C. Gravity feed may be desired when compliance to I.C.C. regulations is not required. However, a solenoid valve must be used in the fuel line when gravity feed is used.

NOTE: FUEL

When an auxiliary fuel tank is used to supply the heater with fuel, it is recommended that a regular grade of gasoline, and not high-test, be used. This is to reduce the chances of residue buildup and/or vapor locking. While white gas may be used, it is not a requirement for proper operation.

1. Fuel tank. Mount the fuel tank in a convenient location, preferably below the level of the fuel inlet on the heater.

2. Electric fuel pump. An electric fuel pump is necessary in all installations except when gravity feed is used. The fuel pump should be mounted at the level of, and near the fuel tank, preferably on the vehicle frame. Connect the fuel pump power lead to the pump terminal on heater case.

3. Fuel line. Connect a fuel line from the fuel supply (tank or pump) to the fuel bulkhead fitting on heater.

4. Fuel strainer. The fuel strainer, when used, is installed in the fuel line ahead of the heater or at the tank with the manual shutoff valve.

5. Solenoid valve. If the solenoid valve is used to control fuel flow in a gravity feed fuel system, the valve should be installed in the fuel line near the heater. Attach the electrical lead of the solenoid valve to the fuel pump terminal of the heater.

E. COMBUSTION AIR INLET (Refer to Fig. 3)

Connect the flexible air hose to the combustion air inlet and extend the hose through a 1-1/4" hole to the exterior.

F. GROUND CONNECTION (Refer to Fig. 3)

A ground wire should be connected between the heater ground terminal and the vehicle motor block or chassis.

G. ELECTRICAL LEAD (Refer to Fig. 3)

A 6-foot length of #12 insulated copper wire is included with the heater. Connect the electrical lead to a good power source; i.e., battery, starter solenoid, or accessory panel of the vehicle.

H. REMOTE CONTROL HOOKUP KIT (Refer to Fig. 4) (Optional)

NOTE: Disconnect electrical power supply before installing this kit.

1. Remove the control box from the front of heater.
2. Mount the control box in a convenient location which is within reach of the wiring harness provided.
3. Hook up the color coded 3 cable harness. Use one color wire to connect the Number 1 terminals. Use another color wire to connect the Number 2 terminals. Use the remaining wire to connect the Number 3 terminals.
4. Determine a mounting location for the push pull control cable. The location should be such that the cable can reach the heater with a minimum number of bends. Mount the bracket with the screws provided. Remove the large locknut from the cable. Thread the cable through the hole in the bracket and then through the locknut. Lock the cable in the bracket using the locknut behind the bracket.
5. To attach the cable to the heater, push the cable knob all the way "in" and place the heater control knob in the extreme LO position.
6. Using the hex key provided, loosen the setscrew in the heater control knob. Thread the cable wire through the cross drilled hole in the heater control knob. Fasten the cable in place between the rod clip and spacer provided with the kit. The rubber cable sheath should be even with the inside edge of the rod clip. Once the cable is clamped in place and the heater control knob is in the extreme low position, the setscrew must be tightened to hold the cable wire in position. The heater control knob should move freely from the LO to HI positions as the cable control knob is pulled and pushed.
7. The control cable may be installed from the opposite side of the heater. Remember that the control knobs will operate in reverse of the installation described above.
8. The ON-OFF switch on the control box must still be used to shut the heater off completely.

Index Number	Part Number	Description
1	13802	Setscrew
2	8104	Rod Clip
3	S47792	Harness (3 cable)
4		Control Box (part of Heater Assembly)
5	5762	Lock Nut
6	6357	Push Pull Control
7	47657	Spacer
8	47483	Bracket
9	6318	Hex Key

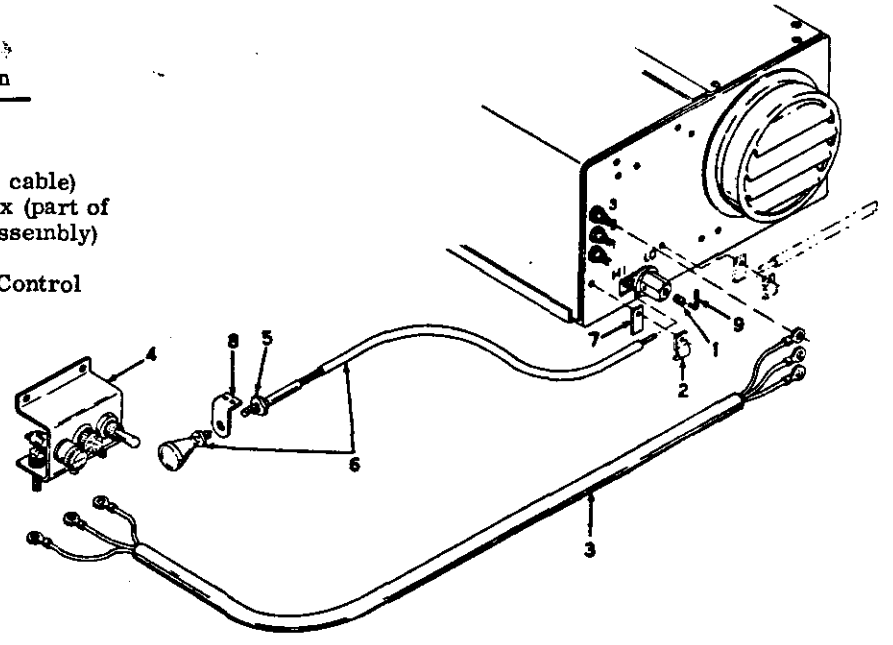


Figure 1. Model UH-47-6 Heater,

Figure 4. (Optional) Remote control hookup.

I. UPRIGHT MOUNTING KIT (Refer to Fig. 5) (Optional)

NOTE: Disconnect electrical power supply before installing this kit.

1. To utilize this kit, select a location where the heater may be mounted with the exhaust outlet and combustion air inlet pointing in a straight down direction.

2. Disconnect the fuel overflow line from the float bowl.

3. Disconnect and discard the fuel inlet line.

4. Unscrew the float bowl from the fuel mixer block. Remove and discard the threaded orifice connector.

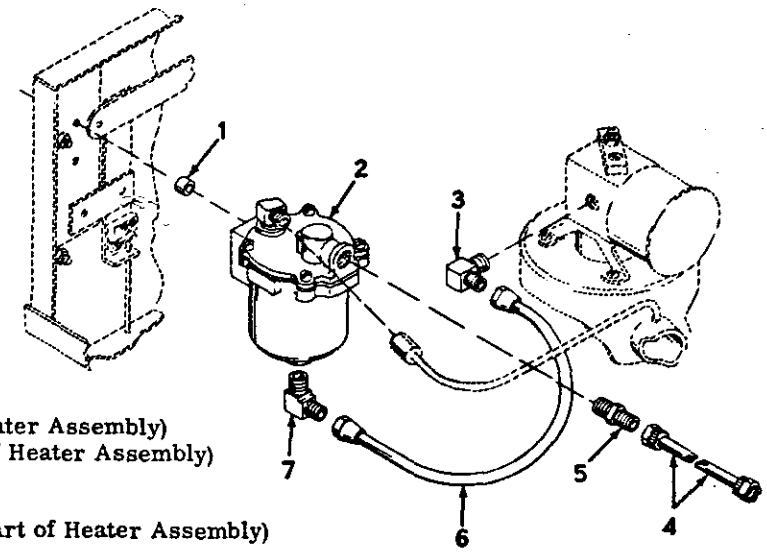
5. Mount the float bowl to the heater case using the screws and spacers which also secure the temperature control rack to the heater case. The spacers are used between the control rack and the float bowl.

6. The elbow with the small orifice should be screwed into the bottom of the float bowl. The other elbow screws into the mixer block.

7. Reconnect the overflow line. Connect the new fuel lines provided in the kit.

8. The mercury "tipover" switch must be rotated so the switch is in the vertical position with the wires pointing down.

9. Reconnect the power supply and operate the heater. If the heater does not operate properly, it may be necessary to turn the fuel adjustment needle in until it seats, let the heater burn for approximately one minute, and then back the needle out until a smooth sound is obtained.



Index Number	Part Number	Description
1	47958	Spacer (Part of Heater Assembly)
2	A48307	Float Bowl (Part of Heater Assembly)
3	22319	Elbow
4	S68300	Fuel Line
5	4374	Male Connector (Part of Heater Assembly)
6	S47466	Fuel Line
7	A47775	Elbow with Orifice

Figure 1. Model UH-47-6 Heater,

Figure 5. (Optional) Upright mounting kit.

SECTION III

OPERATING INSTRUCTIONS

A. TO START

To start the heater, depress the toggle switch on the control box to the START position. Hold the switch in this position approximately 30 to 45 seconds. When the switch is released, the green pilot light should remain on. If the light goes out, repeat the start cycle. If the light still goes out, move the temperature control knob to a slightly higher setting and repeat the start cycle.

If the pilot light goes out while the heater is operating, a malfunction has occurred in the heater. Turn to the troubleshooting section for possible remedies.

NOTE: On initial installation or whenever fuel system has run dry, it may be necessary to open fuel adjusting needle approximately one-quarter turn counterclockwise. Return to original setting in approximately 30 seconds.

NOTE: The proper setting of the carburetor adjusting screw is vital to good heater performance. Absence of exhaust smoke and a smooth sound in heater exhaust are the best indications of proper needle setting. A correctly adjusted gasoline burning heater will produce a light gray deposit on the inner surface of the exhaust pipe. There should be no perceptible odor present in the exhaust. Except for the conditions already stated, there should not be any reason for moving the adjusting needle, once it has been properly set.

B. TO STOP

Place the toggle switch in the OFF position. This heater is equipped with a purge thermostat and will stop automatically when it has cooled to a factory predetermined point. This feature will prevent the collecting of raw fuel and vapor in the heat exchanger.

SECTION IV

SERVICE INSTRUCTIONS

REMOVAL, DISASSEMBLY AND REPLACEMENT OF MAJOR COMPONENTS

CARBURETOR ASSEMBLY (Refer to Figs. 6 and 12)

A. TO REMOVE

1. Disconnect fuel line at float bowl.
2. Disconnect fuel overflow line.

A. TO REMOVE (Cont'd)

3. Disconnect electrical leads (solenoid valve and motor step switch).

4. Remove four machine screws holding carburetor bracket to burner head and withdraw carburetor.

B. TO DISASSEMBLE

1. Remove screw and nut holding bi-metal to choke bracket; slide bi-metal from choke rod.

2. Remove the fuel adjusting needle, then the choke rod.

3. The fuel nozzle should not be removed.

C. TO REPLACE

Replacement is reverse of above.

SOLENOID VALVE

A. TO REMOVE AND DISASSEMBLE

1. Remove carburetor assembly.

2. Remove the screw holding the microswitch bracket.

3. By pivoting the switch and bracket to the side, the disc, needle and spring can then be removed. Note the disassembly sequence of these items, as assembly is just the reverse sequence.

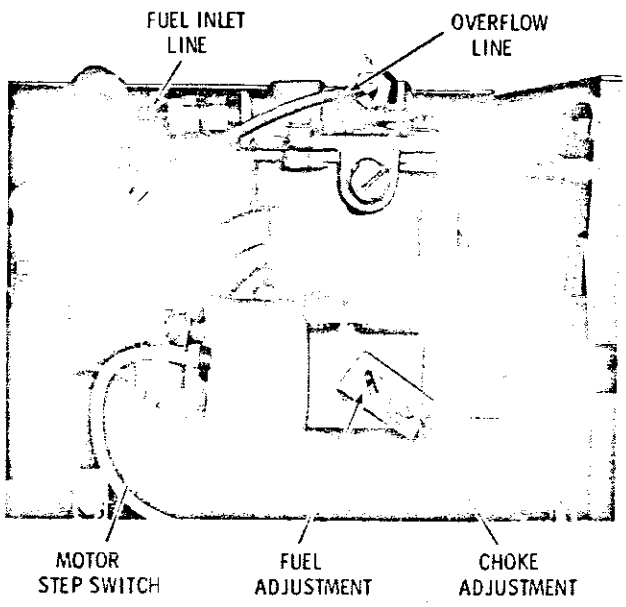


Figure 6. Carburetor.

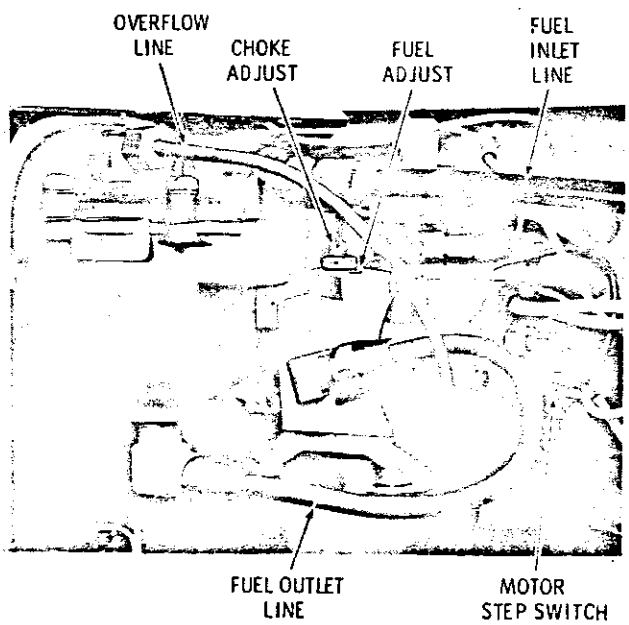


Figure 7. Carburetor (optional upright mounting)

A. TO REMOVE AND DISASSEMBLE (Cont'd)

4. The solenoid valve housing and end plate are removed by turning them counterclockwise.

5. The core is removed by turning it counterclockwise (using pliers).

6. The fuel block can now be cleaned and inspected. If "O" rings are damaged or deteriorated, replace.

B. REASSEMBLY (Reverse of Disassembly)

1. Hold valve core big end up, insert spring, needle.

2. Center dimpled disc on needle.

3. Hold fuel block upside down and screw core into block.

4. Continue with operations A 1 through A 4 above in reverse order.

5. Adjust motor step switch (microswitch). With switch assembled, the adjusting locknut should be tightened down to a point where the switch will click when the disc is depressed and released.

BURNER HEAD (Refer to Fig. 10)

A. REMOVAL

1. Remove carburetor assembly.

2. Disconnect high tension lead at igniter.

3. Remove the five screws holding burner head to heat exchanger and remove burner head and head gasket.

4. Disconnect combustion air hose.

B. REPLACEMENT

Replacement is reverse of above.

HEAT EXCHANGER (Refer to Figs. 9 and 14)

A. REMOVAL

1. Remove carburetor and float bowl assembly.

2. Remove burner head assembly.

A. REMOVAL (Cont'd)

3. Remove control assembly by removing two retaining screws and heater control knob. Slide the control assembly off the actuating rod.

4. Remove the four screws holding the heat exchanger. Push the overflow line grommet into the case and withdraw the exchanger.

B. REPLACEMENT

Replacement is the reverse of the above.

NOTE: Be sure the actuating rod is through the "V" bi-metal blade and bracket on the exchanger before attempting to install the control assembly.

TEMPERATURE CONTROL ADJUSTMENT (Refer to Fig. 14)

NOTE: This adjustment is preset at the factory and does not usually require resetting. The factory setting is made at room temperature. If field adjustments are made at lower temperatures, it may be necessary to reset the temperature control.

1. Place the temperature control knob in the extreme LO position.

2. Loosen setscrew in the brass stop.

3. Hold the actuating rod firmly against the switch actuating lever. Move the brass stop to allow the bi-metal blade approximately 1/16" of free movement. Tighten the setscrew in brass stop.

4. Move the temperature control knob through the complete HI-LO range and check to be sure the bi-metal blade does not bind against the brass stop.

MOTOR BLOWER ASSEMBLY (Refer to Fig. 11)

A. REMOVAL (COMPLETE ASSEMBLY)

1. Remove heater covers.

2. Remove thumbscrew and lift off motor mounting bracket.

3. Disconnect combustion air hose at burner head.

4. Disconnect combustion air hose.

5. Loosen nut on ignition pack, hold down stud and disconnect the motor ground connection.

6. Disconnect electrical leads from motor to terminal strip and motor speed switch.

A. REMOVAL (COMPLETE ASSEMBLY) (Cont'd)

7. Remove spark igniter.

8. Rotate motor blower assembly (toward center of heater) and lift out of case.

B. CIRCULATING AIR BLOWER DISASSEMBLY

1. Remove the air inlet flange on the circulating air blower housing.

2. Turn the fan so that the setscrew is pointed toward the air outlet and loosen setscrew.

3. Remove fan.

4. Remove back-up plate.

C. CIRCULATING AIR BLOWER REASSEMBLY

1. Reassembly is reverse of the above.

2. When replacing fan, check clearance between inlet flange and top of fan; clearance should be 0.060".

D. COMBUSTION AIR BLOWER DISASSEMBLY

1. Carefully remove tape from outside of combustion air housing.

2. Match-mark air inlet housing cover with scribe and pry off evenly on edge.

3. Loosen setscrew in blower wheel and remove. When refitting, fan should be flush with end of motor shaft.

4. Match-mark position and remove inner blower housing.

5. Loosen setscrew on blower wheel and remove. (Note clearance between fan wheel and back plate is 1/4").

6. Remove back plate.

E. COMBUSTION AIR BLOWER REASSEMBLY

Reassembly is the reverse of the above.

IGNITION COIL (Refer to Fig. 13)

A. TO REMOVE

1. Disconnect the high tension lead at the coil.

2. Remove the two nuts and washers holding the ignition pack in the heater case.

3. Lift out the ignition pack and unscrew the two electrical, twist connectors on the underside of the ignition pack wraparound.

4. Loosen the hose clamp on the coil and remove coil.

5. Replacement is the reverse of the above. Do not forget to replace the motor ground terminal, black wire and spade type lug.

FLOAT BOWL ASSEMBLY (Refer to Fig. 12)

A. TO REMOVE COVER

1. Disconnect the fuel and fuel overflow lines.

2. Remove the four screws. Break loose the cover and remove.

   NOTE: When cleaning or servicing, do not use compressed air to blow out float assembly. A flattened out float will result.

SECTION V

ANNUAL SERVICE OPERATIONS

The following service instructions, if performed each year, will help assure proper operation and longevity of the heater.

1. Drain all gasoline from fuel lines and fuel system.

2. Igniter. Remove the igniter, clean and inspect. The electrode should be centered.

3. Carburetor. Remove the carburetor assembly and clean. Remove float bowl cover and clean. Do not apply compressed air to assembled float assembly.

4. Burner Head. Remove the burner head and remove excessive carbon deposits.

   NOTE: When cleaning, do not mistake the heat insulating material on the inner surfaces of the burner head for dirt; the material helps to reduce heat transfer to the carburetor. Use new gasket when refitting burner head.

5. Motor Blower Assembly. Clean by using compressed air on combustion air inlet.

6. If the heater is cleaned in the Spring of the year, run the heater at least once every week. This will help prevent varnish build up caused by evaporating gasoline.

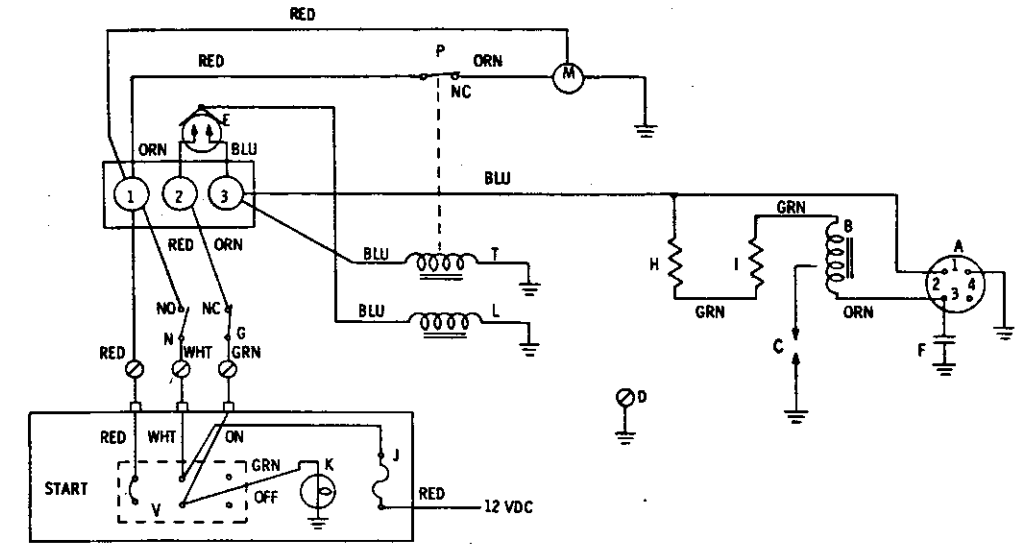
7. When starting heater in the Fall, add several ounces of methanol to the first two or three tankfuls of fuel.

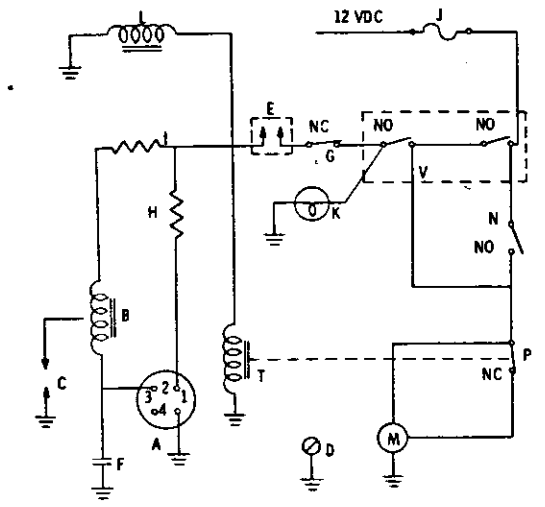
SECTION VI

TROUBLE SHOOTING

TROUBLE	CAUSE AND/OR REMEDY
A. If the heater fails to start (motor doesn't run)	1. Check fuse.
	2. Check all connections to power supply.
	3. Check for power at the heater; at least 11 VDC.
B. If the motor runs, but there is no combustion	1. Check for fuel at the float bowl. Remove the brass plug from the top of the float bowl and gently depress the float. If fuel is present, it will show on the object used to depress the float and buoyancy can be felt.
	2. Check for spark by holding an insulated handle screwdriver with the shaft grounded and the tip approximately 1/8" away from the high tension lug of the coil. There should be a continuous strong blue spark. If no spark or a weak yellow spark is produced, the vibrator should be replaced.
	3. Check the igniter. To check, remove and examine. The electrode should be centered. Visually check operation with the igniter removed from the burner head, but connected to the high tension lines. Shut off fuel and lay igniter on heater case. The igniter must be grounded when testing. Replace if defective.
	4. Check mercury overturn switch. The switch must be secure in its bracket and be in the vertical position with the electrical

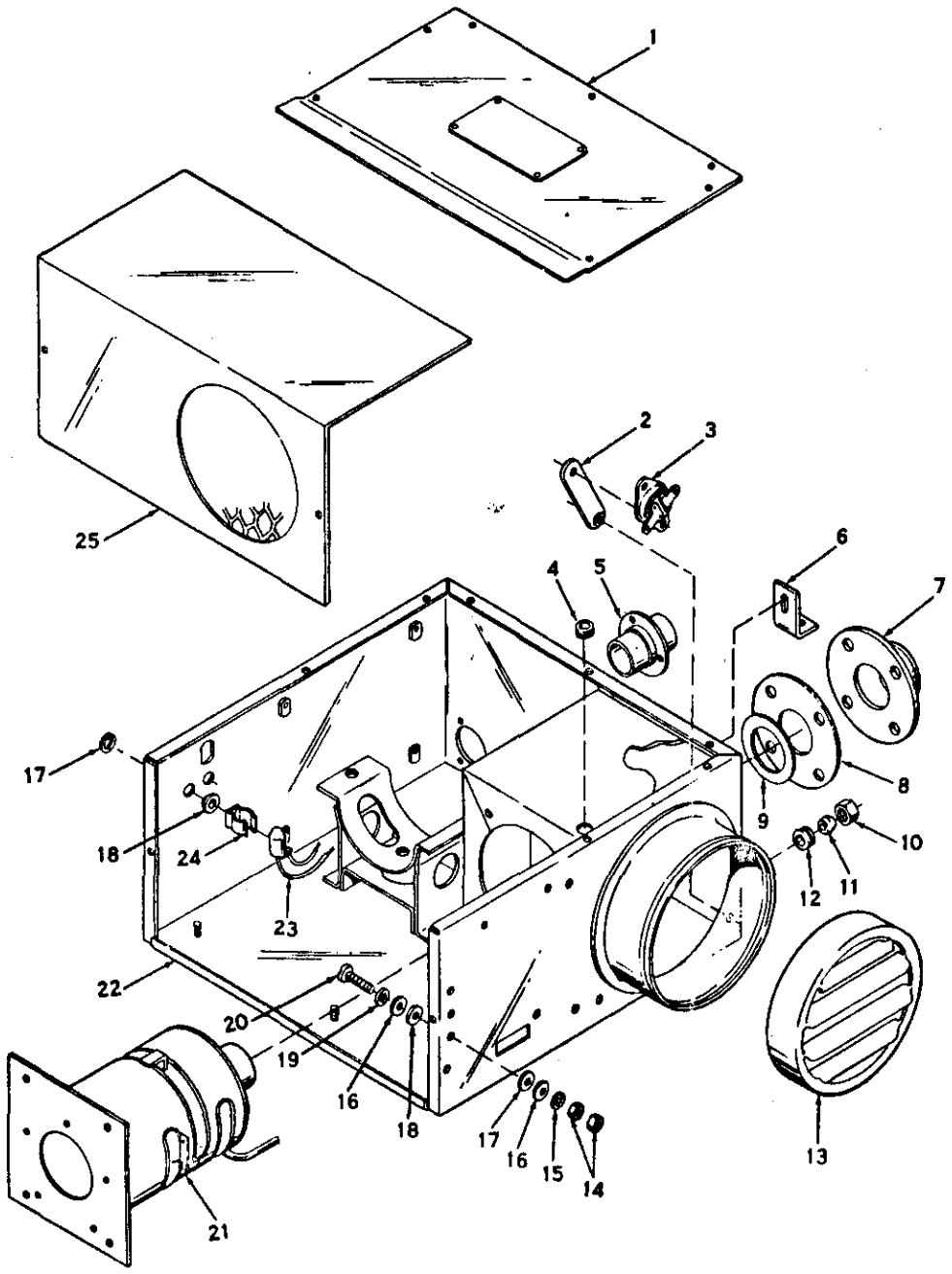
TROUBLE	CAUSE AND/OR REMEDY
B. If the motor runs, but there is no combustion (cont'd)	leads pointing down. Check leads on both sides of switch for power. Replace if defective.
C. Excessive backfiring or popping	1. Check for water in the fuel supply.
	2. Using voltmeter, check to be sure full voltage is available for heater operation, 11 VDC minimum.
	3. Check solenoid. Dirt in the solenoid will cause an uneven flow of fuel and back-firing upon recycling. Clean as needed.
	4. Check vibrator as in B2.
D. Fan fails to go to high speed during burning cycle	1. Motor step switch (microswitch) is probably out of adjustment. Adjust switch by turning the adjusting nut at the motor step switch shown in Fig. 6. The switch should be adjusted with the power off. When properly adjusted, the disc in the end of the fuel solenoid valve will produce an audible click when de-pressed. This disc is Item 32 in Fig. 12.
	2. If adjustment does not correct problem, replace the switch.





KEY TO DIAGRAM		12 VDC
ITEM		HUNTER PART NO.
VIBRATOR	A	43215
SPARK COIL	B	47399
IGNITER	C	S-47183
GROUND SCREW	D	
MERCURY SWITCH	E	70294
CONDENSER	F	43238
TEMP. CONTROL SW.	G	2282
RESISTOR	H	43228
RESISTOR	I	43227
FUSE 15 AMP.	J	510272
LAMP	K	26243
FUEL PUMP	L	
MOTOR	M	S-47630-A
FLAME SWITCH	N	47431
HI-LO SWITCH	P	2282
TERMINAL BLOCK	R	6367
TERMINAL SCREWS	S	
SOLENOID VALVE	T	A-47451-A
ON-OFF SWITCH	V	2084

Figure 8. Wiring.

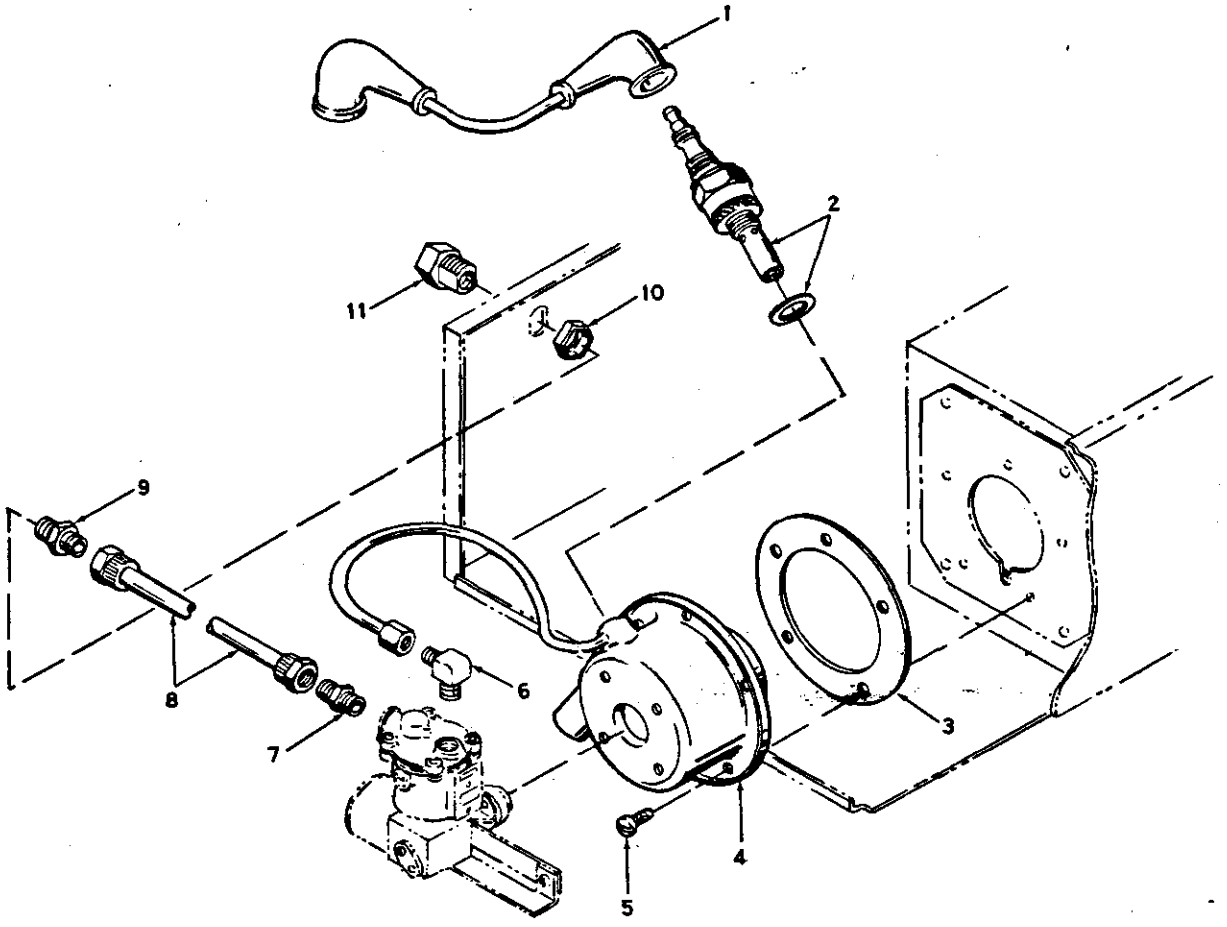


Index Number	Part Number	Description
1	47512C	Top Cover
2	47617	Thermostat Bracket
3	47431	Thermostat
4	3657	Rubber Grommet
5	S47732	Combustion Air Inlet Flange
6	47083	Mounting Bracket
7	S47506	Exhaust Connector
8	47074	Exhaust Gasket
9	47035	Exhaust Washer
10	8057	Compression Nut
11	1160	Compression Sleeve
12	4125	Rubber Grommet
13	47678-C	Air Deflector
14	1036	Hex Nut
15	1169	Lockwasher
16	1580	Flat Washer
17	3259	Fiber Washer
18	8008	Shouldered Washer
19	1037	Lockwasher
20	1503	Machine Screw
21	S47596-B	Heat Exchanger
22	S47760-E	Case
23	S47843-C	Mercury Switch
24	3901	Clip
25	*S47063-05	Front and Top Cover

* For 24-Volt Heater use:
2-47063-08 Front and Top Cover

FIGURE 9

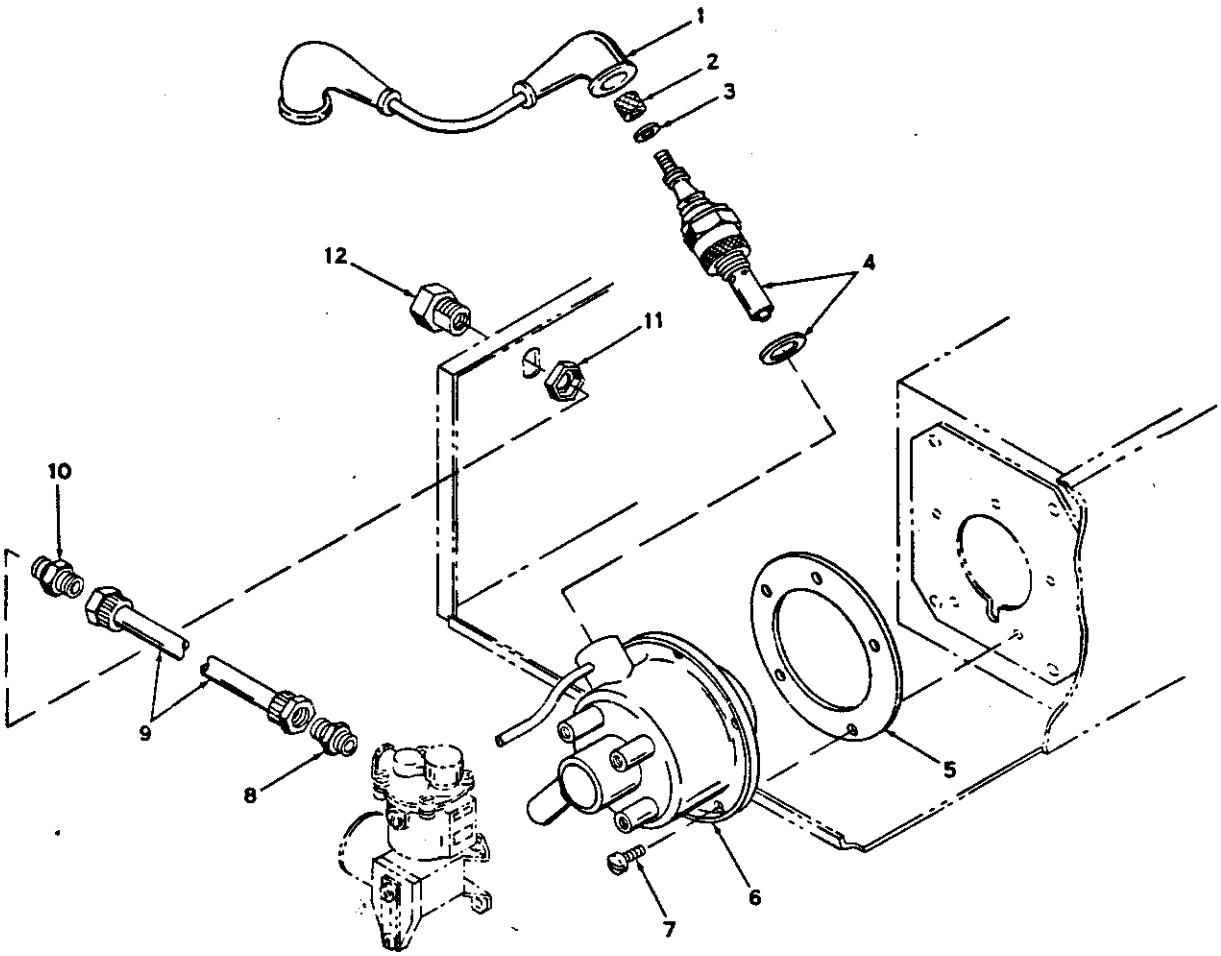
Case and heat exchanger.



Index Number	Part Number	Description
1	A47456-A	Igniter Wire
2	47183	Igniter
3	58111	Burner Head Gasket
4	S47168	Burner Head
5	5746	Machine Screw
6	7008	Male Elbow
7	4374	Male Connector
8	S47666	Fuel Line
9	4374	Male Connector
10	5697	Lock Nut
11	47632	Bulkhead Fitting

Burner head assembly
(Serial No. 1784 and below).

FIGURE 10

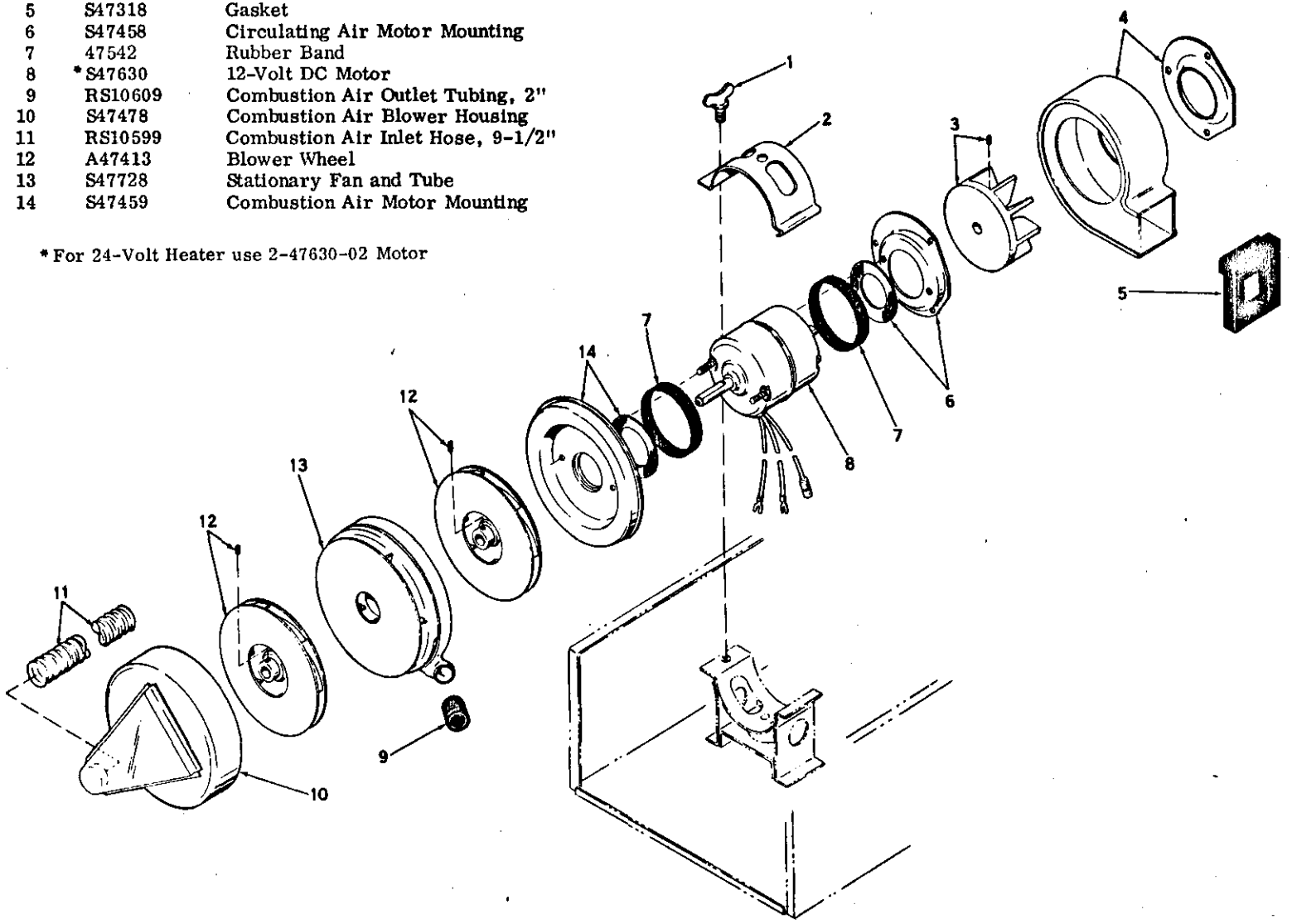


Index Number	Part Number	Description
1	2-47456-01	Igniter Wire
2	3505	Knurled Nut
3	1523	Flat Washer
4	S47183	Igniter
5	58111	Burner Head Gasket
6	2-47723	Burner Head
7	5746	Machine Screw
8	4374	Male Connector
9	S47666	Fuel Line
10	4374	Male Connector
11	5697	Lock Nut
12	47632	Bulkhead Fitting

Figure 10A. Burner head assembly (Serial No. 1785 and above).

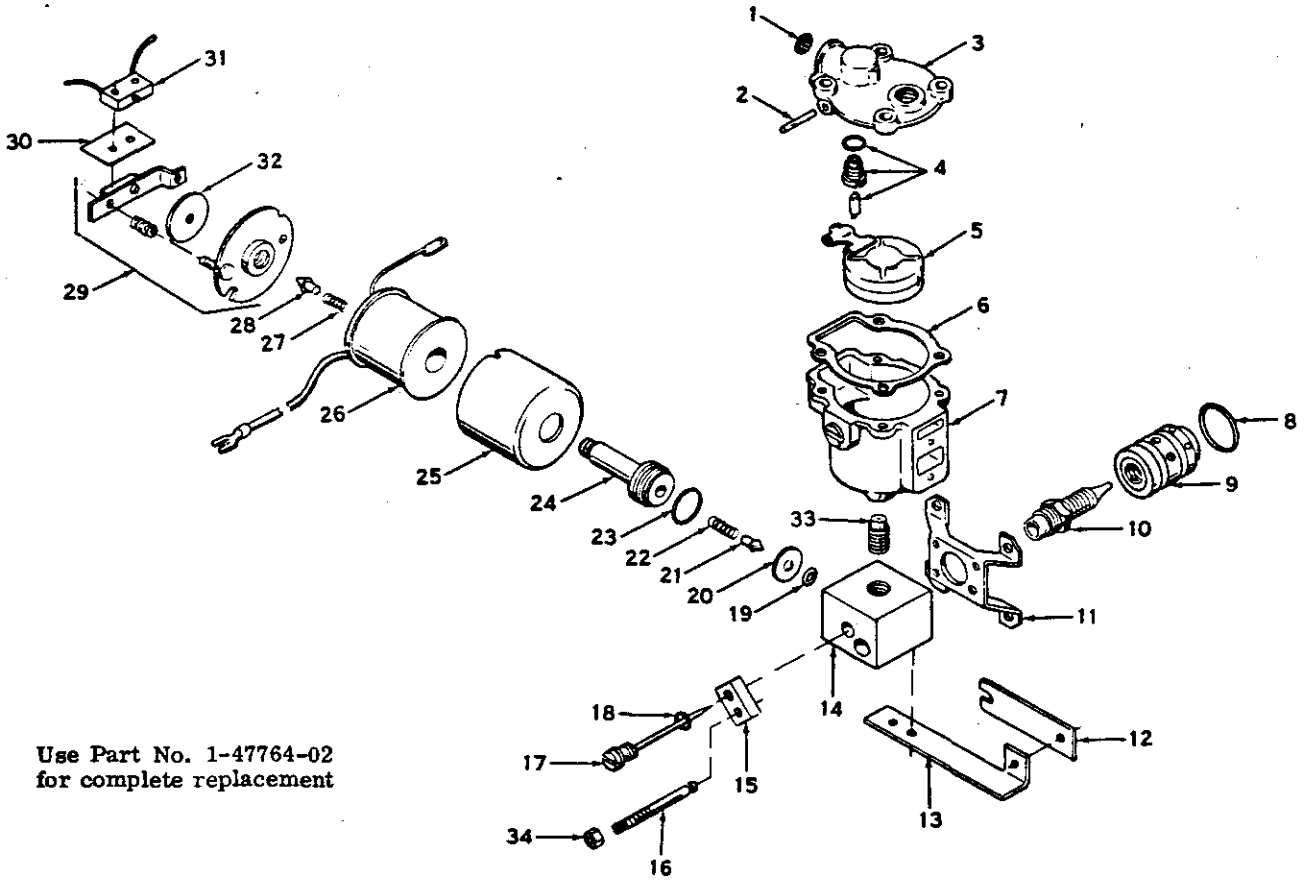
Index Number	Part Number	Description
1	43825	Thumbscrew
2	47725	Motor Mounting Clamp
3	47434	Nylon Fan
4	47714	Circulating Air Blower Housing
5	S47318	Gasket
6	S47458	Circulating Air Motor Mounting
7	47542	Rubber Band
8	*S47630	12-Volt DC Motor
9	RS10609	Combustion Air Outlet Tubing, 2"
10	S47478	Combustion Air Blower Housing
11	RS10599	Combustion Air Inlet Hose, 9-1/2"
12	A47413	Blower Wheel
13	S47728	Stationary Fan and Tube
14	S47459	Combustion Air Motor Mounting

*For 24-Volt Heater use 2-47630-02 Motor



Motor and blower assembly
Part No. 1-47726
(Clamps and Hose not included).

FIGURE 11



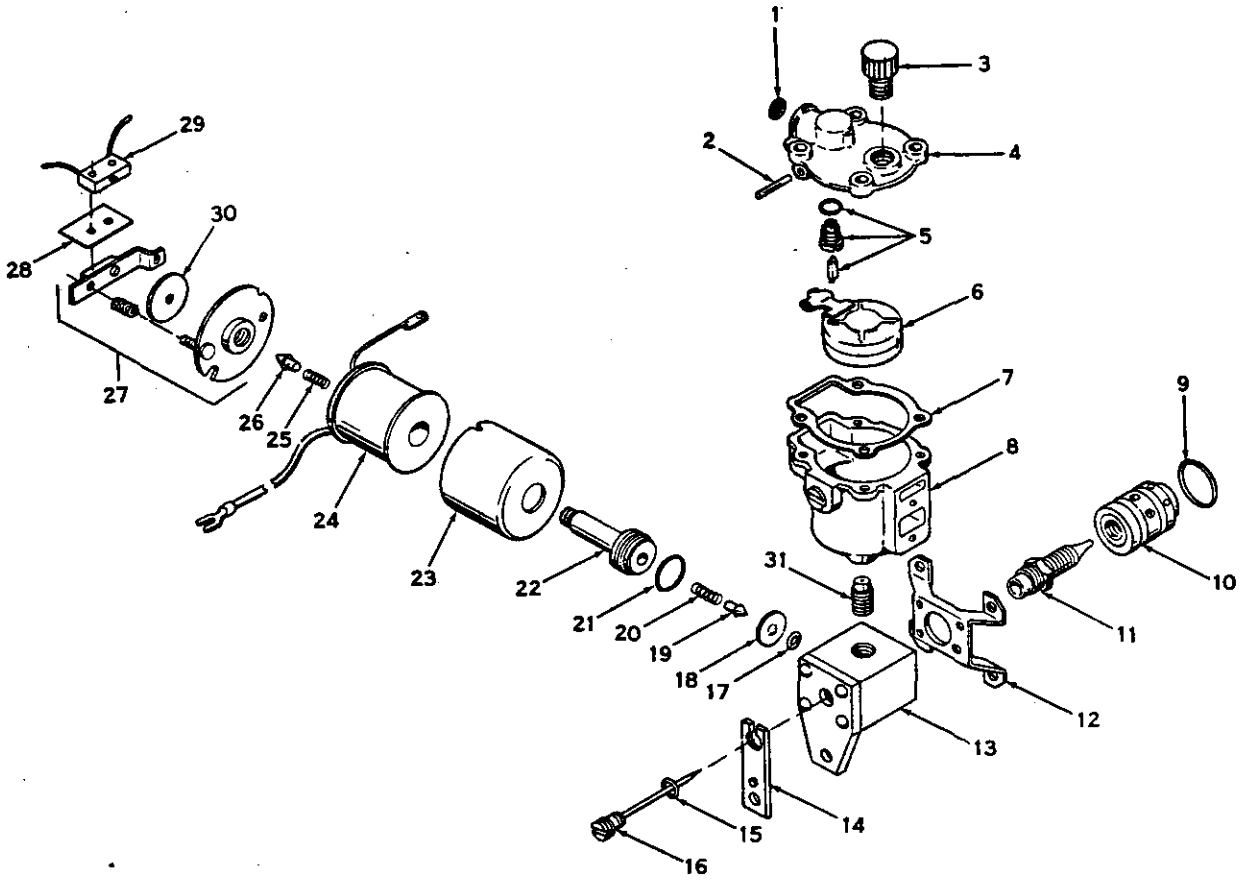
Use Part No. 1-47764-02
for complete replacement

Index Number	Part Number	Description
1	26370	Screen
2	1591	Float Pin
3	*	Float Bowl Cover
4	48389	Needle and Seat
5	48390	Float
6	1601	Gasket
7	*	Float Bowl Body
8	5360	Mixer Barrier Gasket
9	S48113-B	Mixer Housing
10	48138-C	Fuel Jet
11	47333	Bracket
12	47759	Bi-Metal Strip
13	47757	Bracket
14	47755	Carburetor Body
15	47516-A	Needle Collar
16	47474	Choke Rod
17	S48195	Fuel Needle
18	5361	Fuel Needle Gasket
19	3504	Solenoid Plunger Gasket
20	48343	Disc
21	48336	Plunger
22	47316	Plunger Spring
23	4034	Gasket Core
24	S47343	Solenoid Valve Core
25	47752	Coil Housing
26	A-47451	Solenoid Valve Coil
27	47316	Plunger Spring
28	48336	Plunger
29	A47754	Housing Cover Assembly
30	47649	Insulation
31	2282	Microswitch
32	47631	Disc
33	47738	Orifice
34	8064	#10-24 Jam Nut

*Not available separately

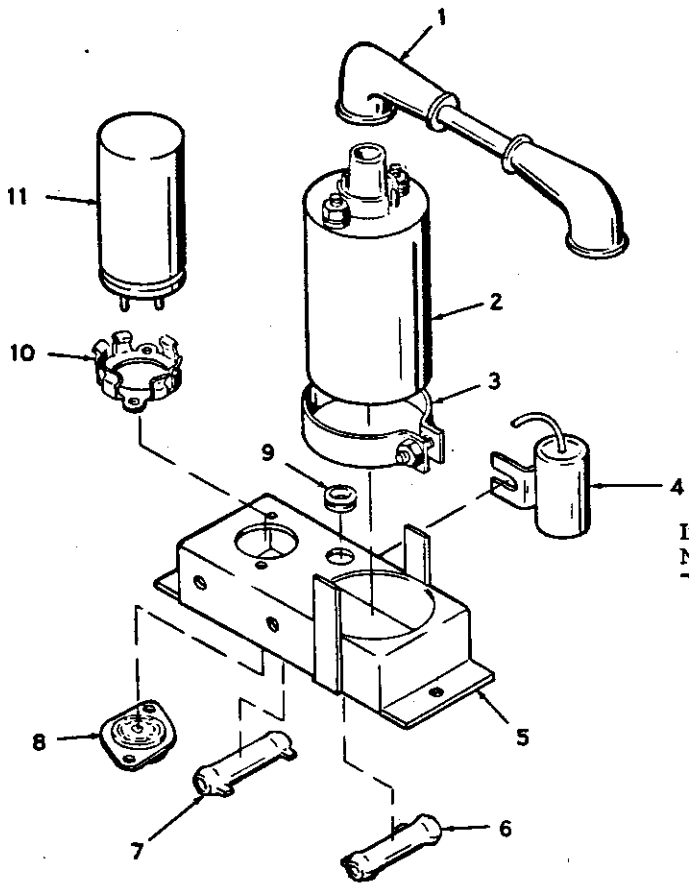
Carburetor assembly
(Serial No. 1734 and below).

FIGURE 12



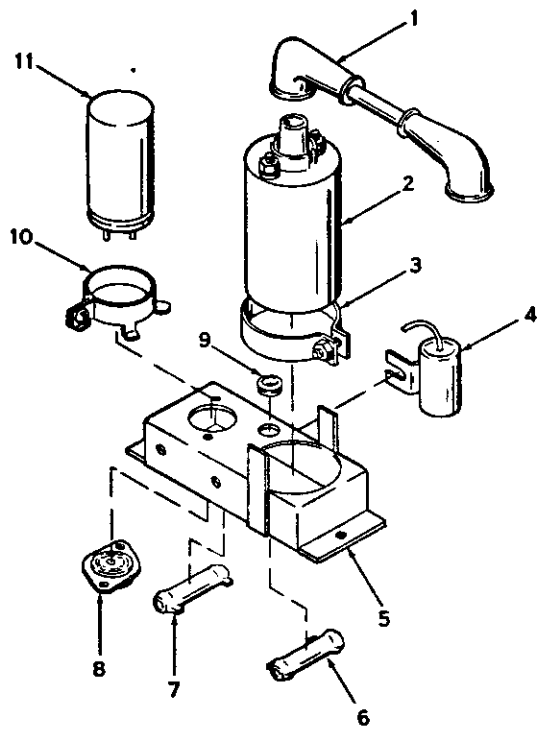
Index Number	Part Number	Description
1	26370	Screen
2	1591	Float Pin
3	7011	Overflow Fitting
4	3670	Float Bowl Cover
5	48389	Needle and Seat
6	48390	Float
7	1601	Gasket
8	3671	Float Bowl Body
9	5360	Mixer Barrier Gasket
10	2-48113-02	Mixer Housing
11	48138-03	Fuel Jet
12	47333	Bracket
13	47685	Body
14	47742	Bimetal Strip
15	5361	Fuel Needle Gasket
16	2-48195	Fuel Needle
17	3504	Solenoid Plunger Gasket
18	48343	Disc
19	48336	Plunger
20	47316	Plunger Spring
21	4034	Gasket Core
22	2-47343	Solenoid Valve Core
23	47752	Coil Housing
24	1-47451-01	Solenoid Valve Coil
25	47316	Plunger Spring
26	48336	Plunger
27	1-47754	Housing Cover Assembly
28	47649	Insulation
29	2282	Microswitch
30	47631	Disc
31	47738	Orifice

Figure 12A. Carburetor assembly (Serial No. 1785 and above).



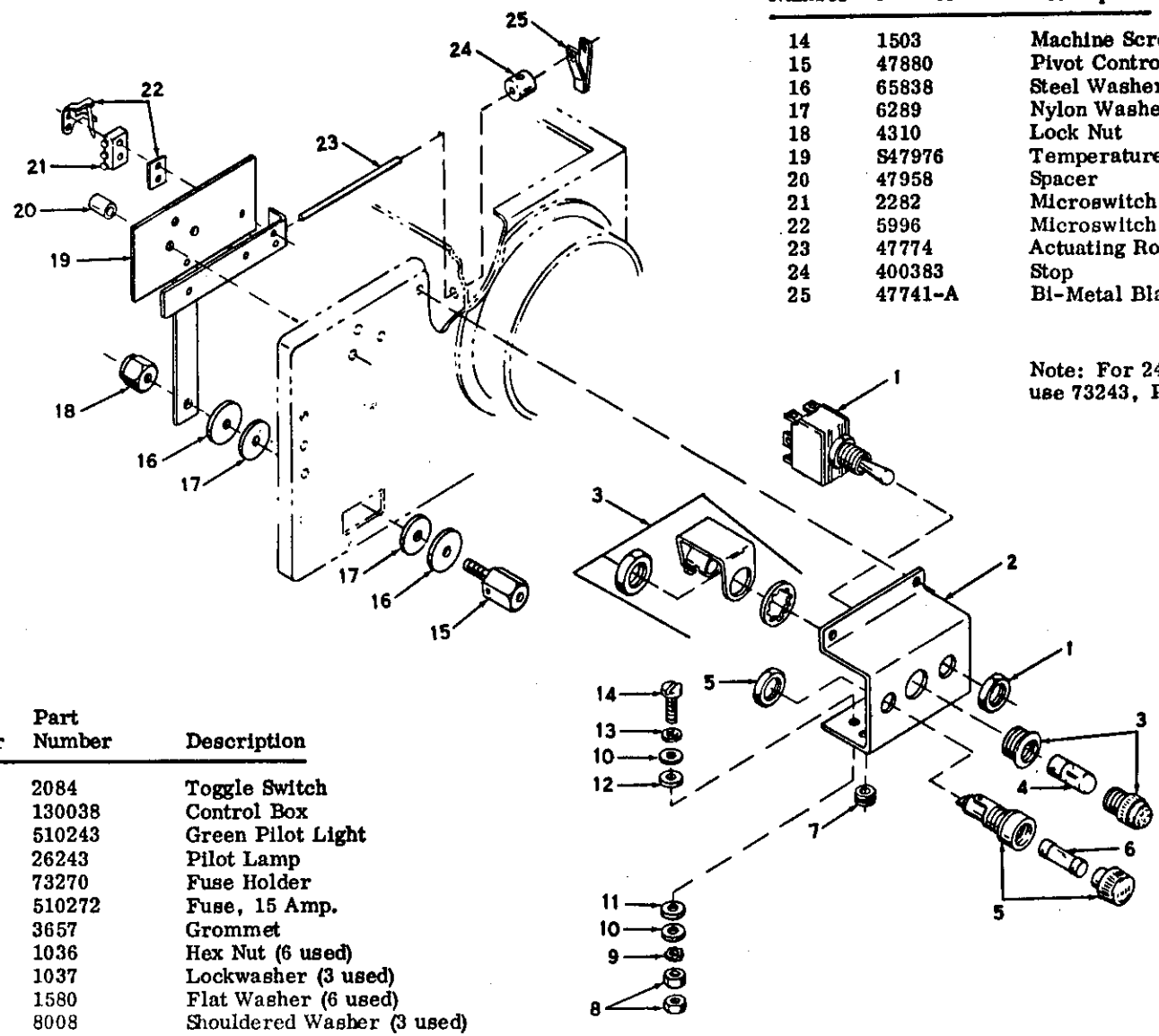
Index Number	Part Number	Description
1	2-47456-01	Igniter Wire
2	47399	Coil
3	47578	Coil Clamp
4	43238	Condenser
5	2-47765	Ignition Pack Wraparound
6	43228	Resistor, 15 Ohm, 12 Watt
7	43227	Resistor, 2 Ohm, 12 Watt
8	46236	Socket
9	3657	Rubber Grommet
10	47204	Vibrator Cup
11	43215	Vibrator

Figure 13. Power pack assembly (Serial No. 1784 and under).



Index Number	Part Number	Description
1	S47456-A	Igniter Wire
2	47399	Coil
3	47578	Coil Clamp
4	43238	Condenser
5	S47765	Power Pack Wraparound
6	43228	Resistor, 150 Ohm, 12 Watt
7	43227	Resistor, 2 Ohm, 12 Watt
8	46236	Socket
9	3657	Rubber Grommet
10	47586	Vibrator Clamp
11	43215	Vibrator

Figure 13A. Power pack assembly (Serial No. 1785 and above).



Index Number	Part Number	Description
14	1503	Machine Screw (3 used)
15	47880	Pivot Control
16	65838	Steel Washer
17	6289	Nylon Washer
18	4310	Lock Nut
19	S47976	Temperature Control
20	47958	Spacer
21	2282	Microswitch
22	5996	Microswitch Actuating Kit
23	47774	Actuating Rod
24	400383	Stop
25	47741-A	Bi-Metal Blade

Note: For 24-Volt unit use 73243, Pilot Lamp

Index Number	Part Number	Description
1	2084	Toggle Switch
2	130038	Control Box
3	510243	Green Pilot Light
4	26243	Pilot Lamp
5	73270	Fuse Holder
6	510272	Fuse, 15 Amp.
7	3657	Grommet
8	1036	Hex Nut (6 used)
9	1037	Lockwasher (3 used)
10	1580	Flat Washer (6 used)
11	8008	Shouldered Washer (3 used)
12	3259	Fiber Washer (3 used)
13	1169	Lockwasher (3 used)

FIGURE 14

Control Panel Assembly
Part No. 1-130039-02
(1-130039-04, 24-Volt only)

SUPPLEMENT SHEET - UH-47-6 GASOLINE

CHOKE AND CHOKE ADJUSTMENT

Earlier Models (Below S/N 1785) Fig. 6 Carburetor

A. If the choke has been disassembled, assemble the choke components as illustrated in Figure 12. The "X" on the bi-metal bracket should be facing the burner head.

B. Back out the fuel needle until it is flush with the needle collar and loosen the jam nut on the choke rod.

C. Using a screw driver, adjust the choke rod so the needle collar is just snug against the carburetor body. The bi-metal bracket may be deflected slightly. Snug the jam nut down, but do not allow the choke rod to turn. The needle collar should move back up against the carburetor body when pulled with the fingers and then released. All of this adjustment (C) is applicable at room temperature and this is the temperature at which the choke should be adjusted.

D. The fuel needle will have to be adjusted with the heater running. It should be adjusted until the burning is smooth and even. It is preferable to have the heater burning on the rich side rather than the lean.

Later Models (S/n 1785 and Above) See Figure Below

A. Fasten the bi-metal strip to the carburetor body and choke bracket using the nut and screw. The "X" on the bi-metal should be facing the choke bracket.

B. Adjust the fuel needle until the heater burns with a smooth, even sound. It is better to have the heater burning a little on the rich side rather than the lean.

Note: Do not attempt to adjust the setscrew in the bi-metal bracket.