

OPERATING AND MAINTENANCE INSTRUCTIONS

P/N 107077-001

MODEL 1590 AXIAL HEATER BLOWER

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EXPLODED VIEW DRAWING (P/N 107070)
WIRING DIAGRAM (P/N E-1187)
ACCESSORIES/OPTIONS



T. A. PELSUE COMPANY
2500 S. Tejon St., Englewood, CO 80110
Phone: (303) 936-7432 or (800) 525-8460
Fax: (303) 934-5581

PELSUE 1590 PROPANE-FUELED HEATER/BLOWER

1.0 GENERAL

1.01 This manual covers the description, operation and maintenance of the Pelsue Model 1590 propane-fueled portable heater/blower.

PLEASE TAKE THE TIME TO READ THIS PAMPHLET BEFORE OPERATING HEATER/BLOWER.

1.02 The heater is specifically designed to provide a completely portable source of heated fresh air. The heater is powered by an external AC electrical source and L.P. fuel.

2.0 SAFETY PRECAUTIONS

! GENERAL HAZARD WARNING

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

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

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT CUSTOMER SERVICE: 1-800-525-8460.

! WARNING

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

! WARNING

NOT FOR HOME OR RECREATIONAL VEHICLE USE.

The heater is designed and approved for use as a construction heater under ANSI Z83.7.

We cannot anticipate every use which may be made of our heaters. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE QUESTIONS ABOUT APPLICATIONS.

Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you about these.

2.01 The heater is primarily intended for the temporary heating of manholes, vaults, and buildings under construction, alteration or repair. Do not use the heater for other than its intended use.

2.02 The heater can be connected to any liquid propane vapor cylinder meeting ANSI/NFPA 58-1986, 20 lb. to 100 lb. cylinders being the most widely used.

2.03 The heater and fuel supply installation must conform with the local codes or, in the absence of local codes, with the standard for the storage and handling of liquefied petroleum gases, ANSI/NFPA 58-1986. In Canada follow CAN/CGA B149.2 Installation Code and other applicable code requirements specified by the authority having jurisdiction.

2.04 Always keep the propane cylinder in an upright position. The heater is designed to work only with liquid propane vapor.

2.05 All propane cylinders that supply fuel to the heater shall incorporate an in-line filter, regulator and excess flow valve per UL 125-1980. Regulator assemblies are available through the Pelsue Company but are not supplied with this appliance.

2.06 Prior to connecting the propane supply to the heater, verify that the supply pressure is regulated down to the input requirements of the heater (15-50 PSI, 1.03 - 3.5 BAR). A regulator assembly external of this appliance must be used for this purpose, see above paragraph 2.05.

2.07 Always check for leaks after connecting or disconnecting the propane supply. The distinctive odor of propane gas should alert you that a connection is leaking. Check for leaks by applying a solution of soapy water at each connection. Never check for leaks with an open flame. An undetected leak can cause extreme danger as a potential explosion hazard. Shut off the supply of propane at the cylinder prior to tightening any connection, then open the supply and re-check for leaks by applying more soapy water.

2.08 Avoid subjecting propane cylinders to excessive heat. Never direct the outlet of the heater toward any propane cylinder within 20 feet. Locate the heater at least six feet from any propane cylinder. Exercise care in handling the cylinder to avoid dropping or other abusive treatment.

2.09 Maintain 24" clearance along sides and at inlet of heater, and maintain 60" clearance above heater from combustible and fuel containers. When used with a hose, maintain 24" clearance from end of hose. When used without hose, maintain 60" clearance from end (outlet) of heater.

2.10 Make sure the heater is level and stable prior to operation. Locate the heater so that its electric cords are not laying in water or other liquids.

2.11 The heater should be inspected before each use and at least annually by a qualified service agency. Contact the Pelsue service department for the factory authorized service center nearest you.

2.12 The hose assembly shall be visually inspected prior to each use of the heater. If it is evident that there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation. See the enclosed parts list for the replacement hose part number.

2.13 Always maintain adequate ventilation when operating this heater.

2.14 The appliance should be installed and grounded in accordance with CSA C22.1 Canadian Electrical Code Part 1 or local authority having jurisdiction. Always use a three-prong ground fault interrupter receptacle to power the heater. Test the receptacle for ground fault prior to plugging in heater.

2.15 Do not wear loose clothing that can become tangled in the operating heater or blower.

2.16 Never handle energized power cords with wet hands. Do not place fingers or any other objects in the inlet or outlet openings.

2.17 Always face blower inlet into the wind to keep exhaust gases away from air intake.

2.18 Always keep the inlet, outlet and exhaust clear of obstructions.

2.19 Before shutting off heater, first turn off fuel at the cylinder and allow the fuel in the hoses and piping to evacuate and burn. Then switch off the heater.

2.20 Never transport or store the heater while it is connected to its fuel supply. Make sure the valve on the cylinder is tightly closed. Always disconnect propane from heater prior to transporting. Always store the propane cylinders in accordance with Chapter 5 of the standard for the storage and handling of liquefied petroleum gases, ANSI/NFPA 58-1986.

2.21 The minimum ambient temperature for operating this heater is -20°F (-29°C).

2.22 The electrical connections and grounding of the appliance shall be in compliance with National Electrical Code ANSI/NFPA 70.

3.0 MAINTENANCE AND REPAIR

3.01 Be sure all equipment is unplugged from the electric power, the appropriate circuits are disconnected and the propane supply is shut off before doing any maintenance or repair work on the heater.

3.02 Be sure burner, orifices, igniter and sensor are cleaned at least once a year to prevent poor combustion.

3.03 Check all power cords for cuts, frayed ends, or brittle insulation. See the enclosed parts list for the replacement cord part number.

3.04 See page 6 for the trouble shooting chart.

3.05 For additional service information, contact:

Pelsue Service Department
2500 South Tejon Street
Englewood, Colorado 80110
Phone 303-936-7432 or
1-800-525-8460
Fax (303) 934-5581.

4.0 PRODUCT DESCRIPTION:

The Pelsue 1590 Heater Blower

A. An aluminum heater housing containing the heat exchanger with five burner jets, spark igniter, flame sensor, and an electric motor with fan blade.

B. An aluminum control box, mounted to the side of heater housing that contains a transformer, electronic circuit board, regulator, solenoid valve, fuse-holder, pilot light, ON-OFF switch, air pressure differential switch, thermostat, spare fuse and power cord.

4.01 DIMENSIONS & WEIGHTS

Width: 14.5"
Length: 27.0"
Height: 14.0"
Weight: 35.0 lbs.

4.02 MODEL SPECIFICATIONS & PERFORMANCE:

Model 1590 - 120V AC, 60 HZ
BTU: 45,000 Heat Rise: 150° F
Free Air: 432 cfm
One 90° Bend: 406 cfm
Two 90° Bends: 398 cfm

5.0 MAJOR COMPONENT DETAILS:

5.01 Burner Jets: The burner jets (five each) emit propane gas which, when mixed with the proper air volume, provide high temperature flames.

NOTE: Burner jets cannot be ignited unless the blower is in operation, the pressure switch is activated, and the heater housing has not become overheated, which causes the internal thermostat to open. The thermostat will automatically reset once the unit has cooled to a safe temperature.

5.02 Transformer: The transformer provides a means of converting incoming 120V AC to 24V AC. This voltage powers the circuit board and solenoid valve that controls the L.P. gas to the burners. The transformer is activated by the control switch.

5.03 Fuse Holder and Fuse: The fuse protects the transformer and circuit board from excessive currents. A spare fuse is located inside of the control box.

5.04 Spark Igniter: The spark igniter furnishes a high voltage spark to one of the burner jets to provide initial combustion of the propane gas present at the burner jets. If the flame is extinguished during the duty cycle, the igniter will provide one immediate retry for ignition before going into lockout. To reactivate or retry for ignition, simply turn the control switch off for 30 seconds.

Note: Electrodes are designed for a gap sparking of 0.125" \pm 0.032" (3.2mm \pm 0.8mm). If this spacing is not as specified, the electrodes should be replaced. Electrode assemblies should not be adjusted or disassembled.

5.05 Flame Sensor: This component monitors the burner to insure that a flame exists. Should a flame-out occur, the sensor signals the circuit board to interrupt power to the solenoid and shut off fuel to the burner.

5.06 Heat Exchanger: The heat exchanger is constructed of stainless steel to provide high efficiency, high heat tolerance, and no corrosion.

5.07 Internal Regulator: The regulator provides a factory preset pressure of 10" w.c. to the burners. This unit should not be adjusted in the field.

5.08 Propane Solenoid Valve: The solenoid valve turns the flow of propane to the heater burners on or off. The solenoid valve is controlled by the electronic circuit board. A pilot light in the control switch indicates when the solenoid is energized. The solenoid valve will close due to a flame-out, an over-temperature condition in the heater housing, shut-down of the blower or from turning the control switch to "OFF".

5.09 Air Pressure Differential Switch: The air pressure differential switch is activated by the air stream whenever the blower is turned on. This switch controls the input power to the electronic circuit board. **DO NOT** obstruct the inlet tube. **DO NOT** tamper in any way with the switch.

5.10 Solid State Circuit Board: The circuit board provides constant monitoring of combustion chamber flame so as to shut off system if the flame is extinguished. In the event of flame-out, if a flame is not established during the required period (approximately 6.8 seconds) the electronic circuit will close the solenoid valve and lock out. The circuit must then be reset as described in 5.04.

NOTE: There is a 4 second delay after switched is turned on and prior to ignition for a safety purge.

5.11 Thermostat: The thermostat controls the input power to the electronic circuit board and opens when an excessive temperature rise inside the heater housing occurs. It automatically resets after a few minutes of cool down.

6.0 START UP/OPERATING PROCEDURES

READ ENTIRE START UP & OPERATING PROCEDURE BEFORE OPERATING HEATER.

6.01 PRE-START PROCEDURE

CAUTION: Read section 2.0 SAFETY PRECAUTIONS.

- A. Make sure the heater switch is "OFF".
- B. Check chimney screen and heater intake for obstructions.
- C. Position the heater upwind of the manhole with the inlet facing the wind.
- D. Check blower inlet and outlet guard screens for obstructions. Check immediate area around blower for objects that could be sucked into the inlet and remove from area.
- E. Plug in heater power cord to receptacle.
- F. Connect and fully open propane bottle. Use a propane gas bottle with an in-line filter, regulator and excess flow valve per UL 125-1980. Regulator assemblies are available through the Pelsue Company but are not supplied with this appliance. Set regulator pressure between 15 PSI (1.03 BAR) and 50 PSI (3.5 BAR).

6.02 START PROCEDURE

CAUTION: BEFORE STARTING, MAKE CERTAIN THAT NO OBJECTS ARE PLACED ON TOP OF THE HEATER CHIMNEY. DO NOT TOUCH, LOOK INTO OR LEAN OVER CHIMNEY WHILE HEATER IS STARTING OR OPERATING!

- A. Turn heater control switch on. There will be a 4 second delay prior to ignition once switch is turned on to facilitate a safety purge of the combustion chamber. After this delay, the pilot light should be on and the heater should fire.

- B. Connect Pelsue heat resistant blower hose to the heater outlet. BE SURE NO TOXIC FUMES CAN BE BLOWN INTO AN UNVENTILATED AREA.

- C. If using a windbag at the end of the blower hose, insure that the windbag ports are not blocked or restricting free air flow.

6.03 SHUT-OFF PROCEDURE

- A. Turn propane off at the bottle(s) and allow heater to burn off residual fuel.
- B. Turn control switch to "OFF".
- C. Disconnect propane bottle from heater. Be sure no connections are leaking.
- D. Leave blower on for five (5) minutes to cool heat exchanger.
- E. Remove Blower Hose.

TROUBLE SHOOTING CHART

CAUTION; If a generator is being used for the power supply, voltage must be checked periodically. Low voltage will affect the blower CFM and the circuit board.

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>	<u>REMEDY</u>
1. Yellow flame	A. Dirt in orifice(s)	A. Clean orifice(s).
2. Erratic flame at burner.	A. Orifice(s) loose or dirty. B. Loose connections in fuel fuel plumbing.	A. Tighten or clean orifice(s). B. Check and tighten connections leading to burner.
3. Flame will not go out when burner is switched off.	A. Faulty or dirty solenoid valve. B. Circuit board failure.	A. Clean or replace solenoid valve. B. Replace circuit board.
4. Gas will not ignite when burner is turned on and spark is present.	A. L.P. Bottle is empty. B. Faulty solenoid valve. C. Faulty regulator. D. L.P. bottle valve is shut. E. Heater outlet is blocked. F. Fuel pressure to manifold is too low.	A. Fill L.P. Bottle. B. Replace solenoid valve. C. Replace regulator. D. Turn on valve. E. Remove blockage. F. Reset to 10" w.c.
5. No spark when control switch is turned on.	A. Circuit board has locked out system for safety reasons. B. Circuit board failure. C. Pressure switch "OFF" or faulty.	A. Recycle heater by turning off switch. B. Replace circuit board. C. Check that blower is on. Replace switch.
6. Burner lights for 3-4 seconds and then shuts off.	A. Circuit board failure.	A. Replace circuit board.

7.0 PARTS LIST, MODEL 1590 HEATER BLOWER

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	107070	Dwg: - Heater Blower, 120V AC, 50 HZ	1
3	115410-001	Housing, Tubular, Alum.,1590 Heater Blower	1
4	106978-001	Base, Alum., 1590 Heater Blower	1
5	106856-002	Ring, Outer, Intake & Outlet Spinning, 1590 & 1690 Series Heaters	1
6	106858-002	Ring, Outer, Inner Outlet Spinning, 1590 & 1690 Series Heaters	1
7	107310-001	Ring, Outlet Restrictor, for 1590 & 1690 Series Heaters	1
8	103797-001	Spinning - Intake, Blower Assembly as modified	1
9	106860-001	Gasket - Spark Igniter/Flame Sensor	1
10	118292-001	Chimney - for 1590 Series Heaters	1
11	106862-001	Plate - Heat exchanger base for 1590 & 1690 Series Heaters	1
12	106979-001	Control Box, 1590 Heater Blower	1
13	106980-001	Top Panel, Control Box, 1590 Heater Blower	1
14	106981-001	Bottom Panel, Control Box, 1590 Heater Blower	1
15	106982-001	Door, Control Box, w/ louver, 1590 Heater Blower	1
16	106867-001	Heat Exchanger, for 1590 & 1690 Series Heaters	1
17	106868-001	Tab - Heat Exchanger Mounting, 1590 & 1690 Series Heaters	2
18	106636-002	Burner - Casting, as machined, 1590 & 1690 Series Heaters	1

7.0 PARTS LIST, MODEL 1590 HEATER BLOWER (cont.)

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
19	106869-001	Shutter - Air, 1590 & 1690 Series Heaters	1
20	101040-003	Rivet - Blind, Pop, Alum., .125" dia., 1/8" Grip Range	1
21	110283-001	Motor Mount Assembly, 1590 Heaters	1
22	104977-001	Grille - Intake, Blower, Circular Wire	1
23	106984-001	Deflector - Air Flow, 1590 & 1690 Series Heaters	1
24	1012	Filter - Propane, 312 psi max working pressure	1
25	26E-041400	Valve - Solenoid 24V AC	1
26	35G-010100	Regulator - Propane, 10" w.c.	1
27	107166-001	Main Baffle	1
28	109264-001	Dust Cap	1
29	26E-005700	Cord & Plug Set, 3-wire, 12' LG	1
30	107336-001	Fuse Holder - Panel Mounted	1
31	100097-006	Fuse - 1 amp	2
32	107056-001	Fuse Clip 101002	1
33	120959-001	Rocker Switch, SPST, with W/O light	1
34	26E-002800	Transformer - 120V AC Primary 24V AC Secondary	1
36	117524-001	Circuit Board, 24V AC Direct Spark Ignition	1
37	103768-001	Switch, Air Pressure	1
38	107602-001	Thermostat - Close 110°, Open 120°	1
39	100405-004	Strain Relief, .38" dia. cable	1

7.0 PARTS LIST, MODEL 1590 HEATER BLOWER (cont.)

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
40	100188-002	Rubber Foot	4
41	106031-001	Spark Igniter/Flame Sensor Electrode	1
42	62I-006800	Hose Assembly, LPG 1/4" x 10'	1
43	107128-001	Orifice, 1/4-28, Drilled to #59	5
44	26E-041310	Cable Assembly, - Circuit Board	1
45	107323-001	Ignition Wire - 12V DC Direct Spark	1
46	107110-001	Screw - Fillister Hd, 1/4-20 UNC x 1" LG	2
47	68N-035300	Screw - Sheet Metal #8	6
48	110002-001	Motor - 120V AC, 1/3 HP, 60 Hz, 3.6 amp	1
49	110007-001	Capacitor - 7.5 MFD, 370 VAC, 60 Hz	1
50	110001-001	Fan Blade - 10" O.D.	1
51	101427-002	Screw - Cap, Hex Hd, 1/4-20 UNC x 3/4" Plated	5
52	100050-009	Washer - Flat, 1/4", Plated	5
53	100060-010	Locknut - Hex, 1/4-20 UNC, Plated w/ Nylon Insert	5
54	68N-002800	Screw - Machine, Truss Hd, 8-32 UNC x 3/8" Plated	24
55	68N-004200	Washer, Lock, Internal Tooth, #8, Plated	24
56	106985-001	Rating Plate, 1590 Heater Blower	1
57	106942-001	Handle - Black Plastic	1
58	111518-001	Rivet - Blind, Pop, Black Zinc Plated, .188" dia. x.126-.250 Grip Range	51
59	104151-001	Washer - Rivet Back Up	63

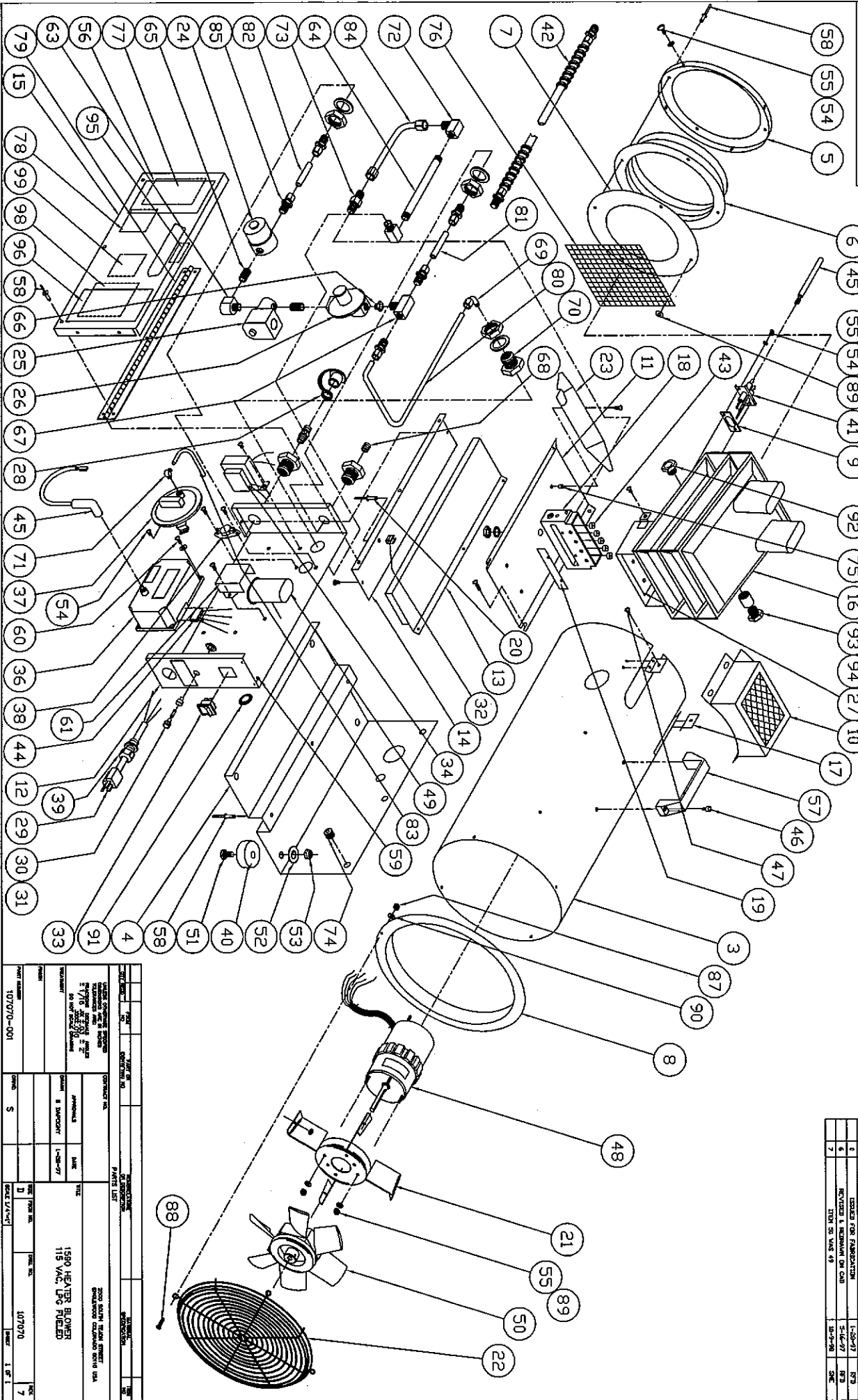
7.0 PARTS LIST, MODEL 1590 HEATER BLOWER (cont.)

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
60	68N-023500	Screw - Machine, Truss HD, #8-32 UNC x 3/4" Plated	2
61	114628-001	Capacitor Bracket	1
62	E-1187	Dwg: Wiring Diagram, 1590	1
63	107059-001	Fitting - 1/4" NPT, Street Elbow, 90° low profile	2
64	32F-013600	Nipple - Pipe 1/4" x 3 1/2" LG	1
65	32F-151500	Fitting - Close Nipple, 1/4" NPT, Brass	2
66	107061-001	Fitting - 3/8" NPT x 1/4" NPT, Reducer Bushing, Brass	1
67	107062-001	Fitting - 1/4" NPT Tee, Male Branch, Brass	1
68	107067-001	Fitting - 1/4" NPT Socket Hd, Plug, Brass	2
69	107065-001	1/4" NPT x 1/4" Tube, Compression, Male Elbow, Brass	1
70	107064-001	Fitting - 1/4" NPT, Anchor Coupling, Brass	3
71	107066-001	Fitting - 1/8" NPT x 3/16" Tube Compression, Male Elbow, Brass	1
72	107609-001	Fitting - 1/4" NPT x 1/4" Tube 90 ° Compression Adapter, Steel, Ferulock	1
73	107069-001	Fitting - 1/8" NPT x 1/4" Tube Compression Adapter, Steel, Ferulock	1
74	62E-011200	Grommet - .375" I.D., .500 Groove Dia.	4
75	107013-001	Insert - Threaded, #8-32 UNC	35
76	107089-001	Screen - Outlet, 1590 & 1690 Heaters	1
77	107038-001	Decal - Schematic, 1590	1
78	107038-002	Decal - Legend, Schematic, 1590	1

7.0 PARTS LIST, MODEL 1590 HEATER BLOWER (cont.)

<u>ITEM</u>	<u>P/N</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
79	107102-001	Hinge - Control Box Door	1
80	107104-001	Tube - Copper 1/4 O.D. x 13.00	1
81	107275-001	Tube - Copper 1/4 O.D. x 4.75	1
82	107106-001	Tube - Copper 3/16 O.D. x 3.00	1
83	107107-001	Tube - Copper 1/4 O.D. x 7.00	1
84	107108-001	Tube - Steel 1/4 O.D.	1
85	107076-001	Fitting - Adapter, 1/4" NPT x 1/4 Tube, Male, Brass	4
86	68N-035100	Screw - Machine, Hex Hd, #10-24 UNC x 3/4"	2
87	100060-008	Locknut - Hex, 10-24 UNC, w/ Nylon Insert	6
88	103978-000	Screw - Machine, Truss HD, #10-24 UNC x 5/8"	4
89	100050-005	Washer - Flat, #8, Type A.W., Plated	4
90	100050-006	Washer - Flat, #10, Type A.W., Plated	8
91	44E-017900	Plug - Snap in Blank, .875" Dia., Plated	1
92	107299-001	Fitting - Adapter, 1/4" NPT, Hex Hd.	1
93	107572-001	Fitting - Coupling, Merchant 1/4" NPSF, Galvanized	1
94	107298-001	Sight Glass - 1/4" NPT, Hex Hd., Clear Lens	1
95	107343-001	Decal - Grounding Instructions	1
96	107243-001	Instruction Plate, 1590 Heater Blower	1
97	107672-001	Support Bracket, 1590 Pilot Tube	1
98	107426-001	Decal Wiring Diagram, 1590	1
99	107426-002	Decal Wiring Diagram, 1590	1

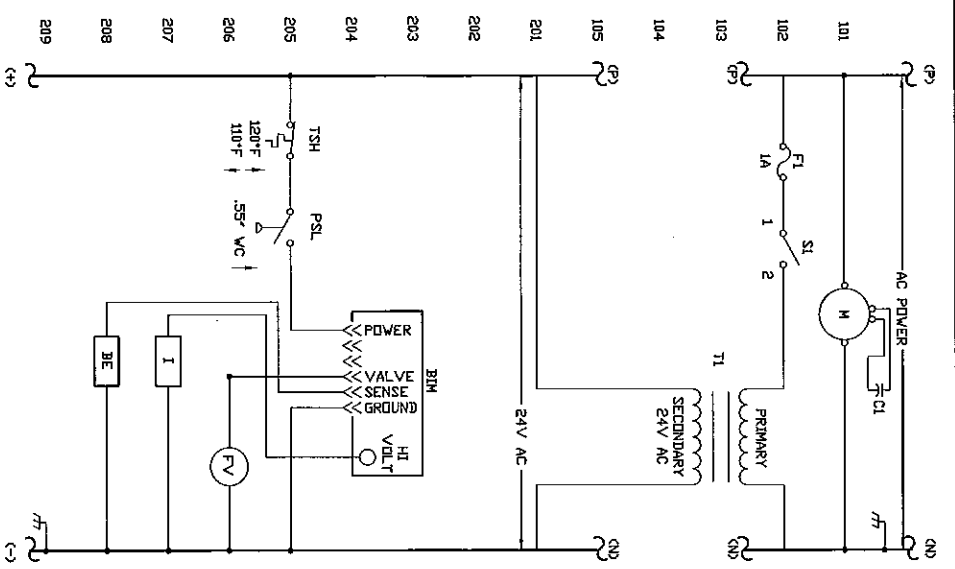
FOR INFORMATION ONLY. THIS DRAWING IS NOT TO BE USED FOR REPAIR OR RECONSTRUCTION OF THE ORIGINAL EQUIPMENT.



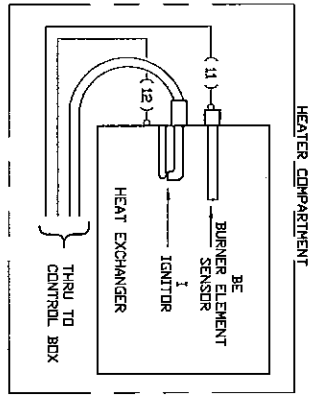
ZONE	REV	DESCRIPTION	DATE	BY
7	1	ISSUED FOR MANUFACTURE	10/27/70	SS
	2	REVISED & REWORKED ON CAD	11/16/70	SS
	3	ISSUED FOR MANUFACTURE	12/1/70	SS

1390 HEATER BLOWER 115 VAC, 1P6 FUELED	
TITLE 1390 HEATER BLOWER	PART NO. 107070
DRAWN BY S	CHECKED BY 107070
DATE 10/27/70	SCALE 1 OF 1

THIS DOCUMENT AND THE DATA DISCLOSED HEREIN OR HEREWITH IS NOT TO BE REPRODUCED, USED, OR DISCLOSED IN WHOLE OR IN PART TO ANYONE WITHOUT THE PERMISSION OF THE U. S. RESERVE COMPONENT.

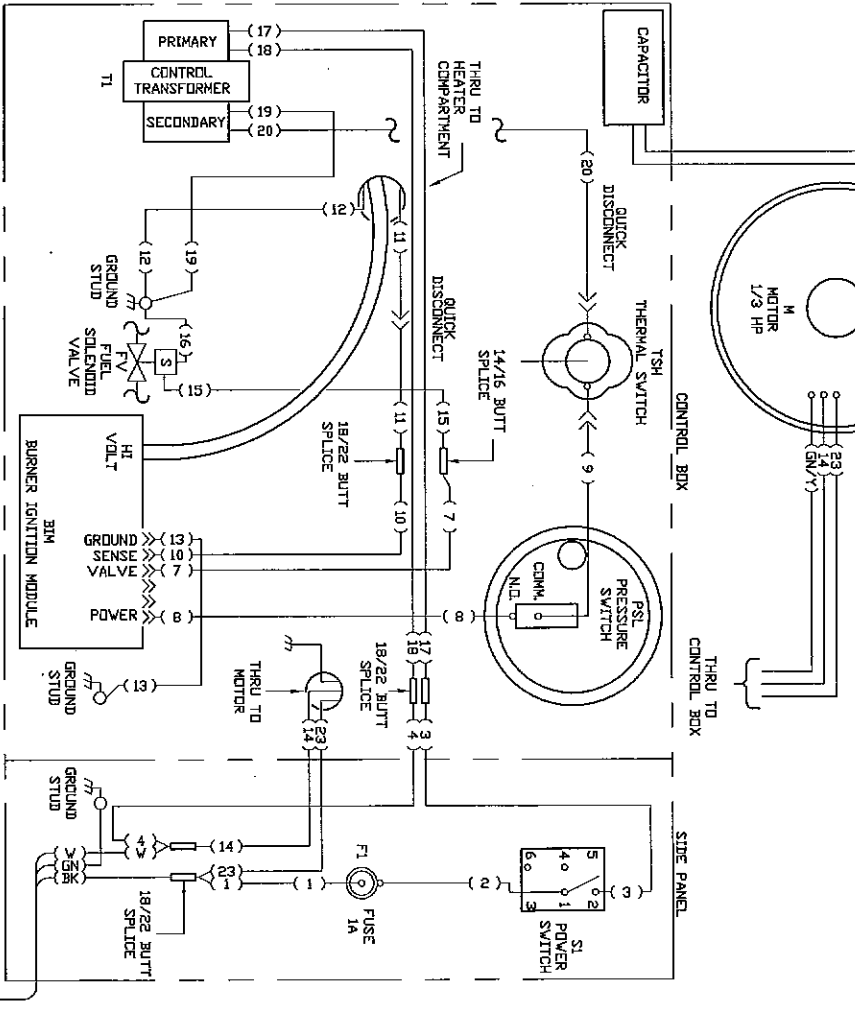


- LEGEND**
- BE BURNER ELEMENT (SENSOR)
 - BIM BURNER IGNITION MODULE
 - F1 FUSE
 - FV FUEL SOLENOID VALVE
 - I IGNITOR
 - M MOTOR
 - CI CAPACITOR
 - S1 POWER SWITCH
 - TSH TEMPERATURE SWITCH-HIGH
 - PSL PRESSURE SWITCH-LOW
 - T1 CONTROL TRANSFORMER



7	ADDED MOTOR GRND WIRE & 2nd. DISCONT.	3-30-01	DHAM
9	DELETED LITED SWITCH WIRE #3 & 6	2-20-02	DHAM

REVISIONS		DATE	APPROVED
0	ISSUED FOR FABRICATION	4-05-90	
1	VARIOUS CHANGES	8-29-90	
2	VARIOUS CHANGES	11-14-90	
3	SEE ECN #1015	1-21-91	
4	DELETED RECTIFIER AND UPDATED DWG	4-11-94	
5	NEW MOTOR & CAPACITOR, ECN P-1877	9-23-96	C ROBBINS
6	REVISED FOR ALL 1590 SERIES HEATERS	4-17-98	SNE

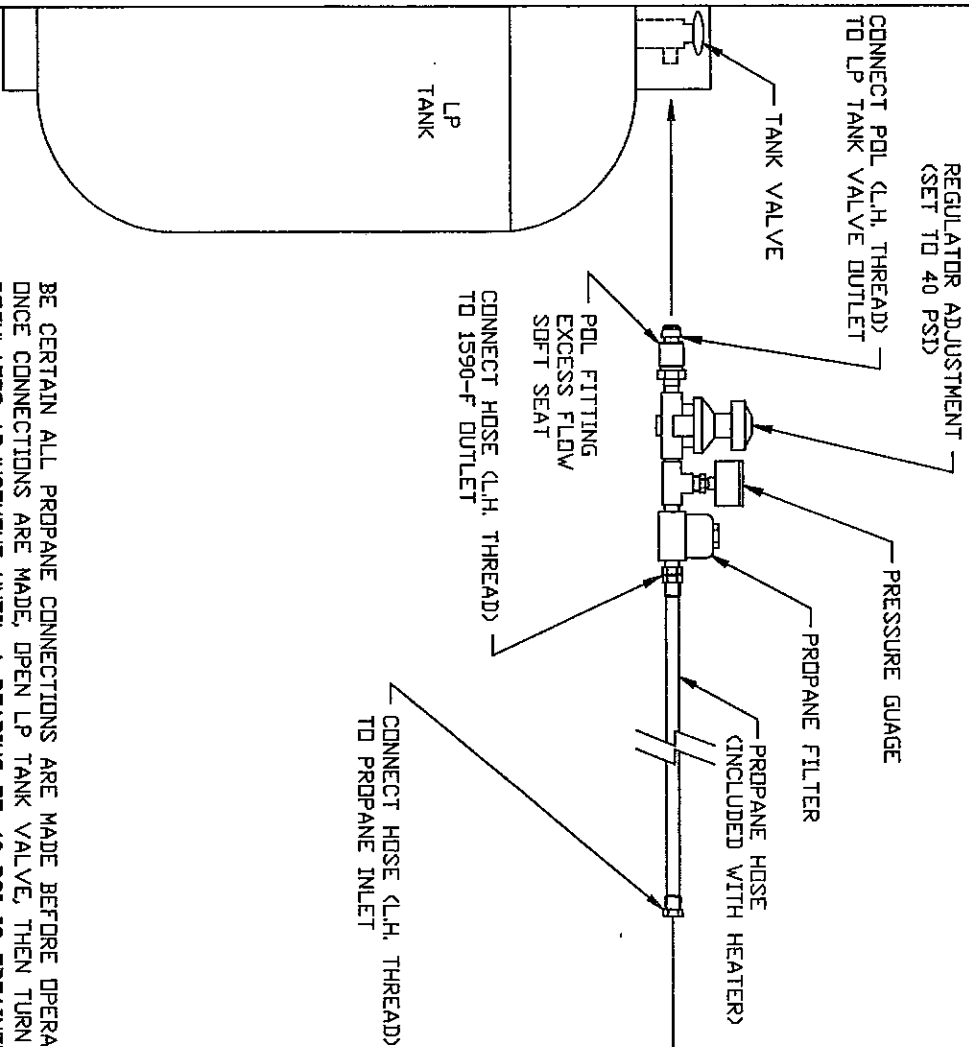


- NOTES**
1. HEATER COMPARTMENT WIRED WITH HIGH TEMPERATURE WIRE
 - A) WIRES - 11, 12, ARE 18 GA. TFE.
 - B) SPARK PLUG WIRE 7MM Q2657.
 2. ALL WIRES ARE TO BE 18 GA. UNLESS OTHERWISE SPECIFIED.
 3. WIRES SUPPLIED WITH FUEL SOLENOID VALVE (FV) ARE 18 GA. THESE WIRES ARE SUBJECT TO CHANGE COLORS DEPENDING ON THE MANUFACTURER.

WIRE COMPARTMENT WIRING REVISIONS AND WIRE TREATMENT DO NOT SCALE DRAWING		CONTRACT NO. P-11-10	
APPROVALS DATE 4-06-90		TITLE WIRING DIAGRAM/SCHEMATIC 1590 HEATER/BLOWER	
FINISH CHECKED ISSUED		SCALE NONE	
2500 SOUTH TEXON STREET ENGLEWOOD COLORADO 80110 USA		DWG. NO. E-1187	
SHEET 9		REV. 8	

OPERATING INSTRUCTIONS

PELSUE MODEL 1590-F REGULATOR ASSEMBLY FOR USE WITH 1590, 1690 & 1500S HEATERS (SOLD SEPARATELY)



BE CERTAIN ALL PROPANE CONNECTIONS ARE MADE BEFORE OPERATING. ONCE CONNECTIONS ARE MADE, OPEN LP TANK VALVE, THEN TURN THE REGULATOR ADJUSTMENT UNTIL A READING OF 40 PSI IS OBTAINED AT THE PRESSURE GAUGE. OPERATE HEATER PER INSTRUCTION MANUAL.

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT PELSUE CUSTOMER SERVICE: 1-800-525-8460

