



Part #114605-001



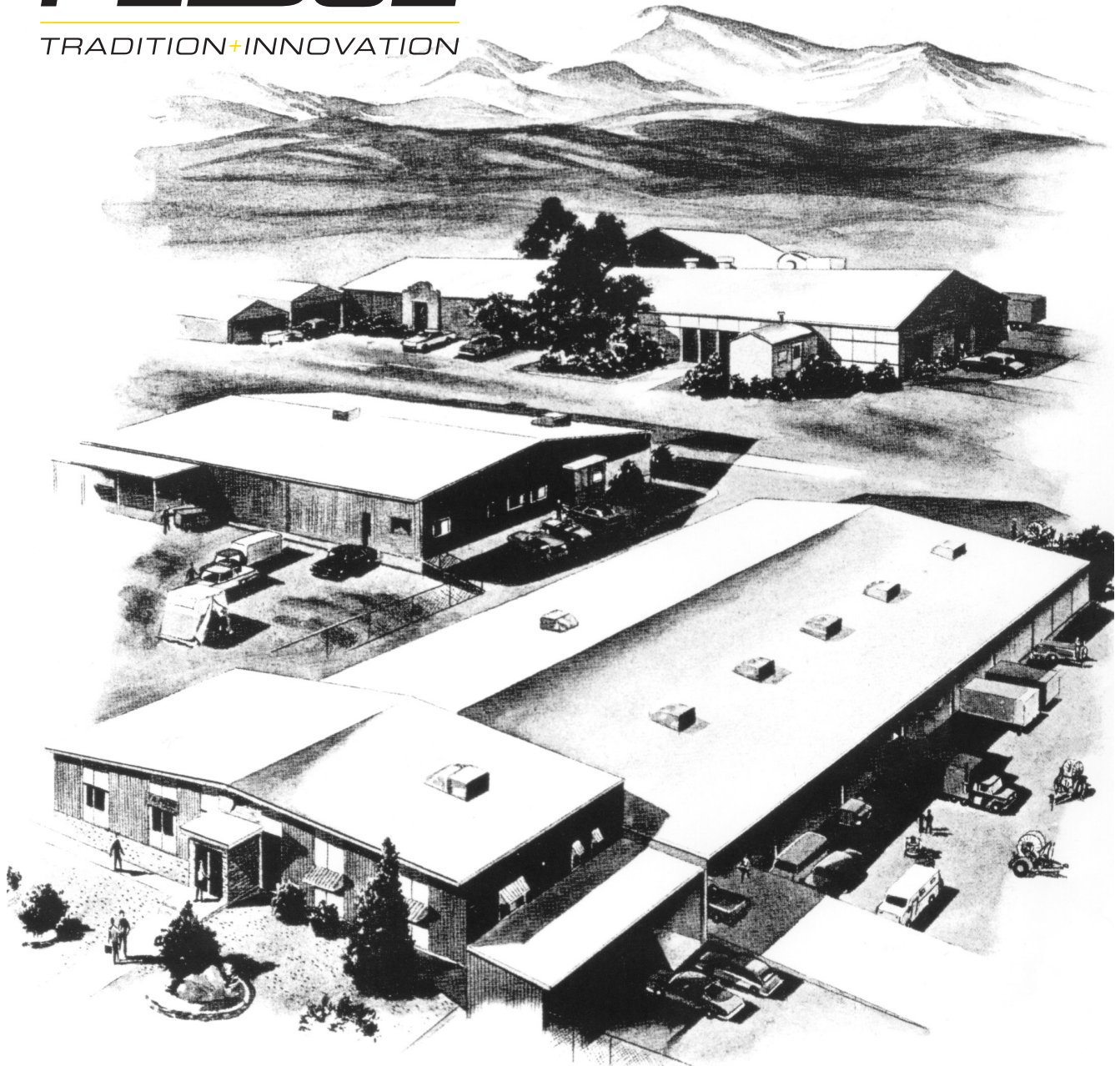
Product Manual:

Model #1557
Infrared Construction Heater




PELSUE[®]
ISO 9001 Certified

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Since our inception in 1963 – the T.A. Pelsue Company has designed and manufactured high quality equipment to improve the personnel efficiency and working conditions in various underground, confined, and outdoor areas.

Founded by T. Allen Pelsue, the company has established a continuing reputation for excellence in the production of fine products for a broad spectrum of industry throughout the world.

Now, in our second generation of family direction, continued commitment to innovation and quality makes Pelsue a leading source of equipment for many types of confined spaces. We specialize in safety, retrieval, fall arrest, ventilation, cable placing, splicing, and maintenance nationally and abroad. With more than 70,000 square feet of facilities available, Pelsue continues the dedication that has made it pre-eminent in this field.

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T.A. Pelsue Company

Quality Policy

OUR GOAL IS THE PURSUIT OF NEVER-ENDING IMPROVEMENT IN PRODUCT QUALITY AND BUSINESS SYSTEMS.

METHODS TO BE EMPLOYED IN ATTAINING THIS GOAL WILL INCLUDE NEW PRODUCT QUALITY PLANNING, EMPLOYEE TRAINING, AND UTILIZATION OF EMPLOYEE INVOLVEMENT GROUPS TO SOLVE PROBLEMS.

IN AN INCREASINGLY COMPETITIVE MARKETPLACE, ENSURING CUSTOMER SATISFACTION IS ONE OF THE DIFFERENTIATORS THAT SETS YOU APART FROM THE PACK AND YIELDS A COMPETITIVE ADVANTAGE.

THEREFORE, WE WILL SUPPORT TOTAL CUSTOMER SATISFACTION BY IMPLEMENTING THE **ISO 9001 QUALITY SYSTEM** AND PROVIDING THE NECESSARY ATMOSPHERE AND TRAINING TO NURTURE THIS CONCEPT THROUGHOUT OUR ORGANIZATION.

WE WILL MAKE EVERY BUSINESS DECISION AS THOUGH THE QUALITY OF THE PART OR SERVICE PROVIDED WAS DESTINED FOR OUR OWN OR OUR FAMILY'S USE. WE WILL ALWAYS THINK **QUALITY FIRST**.

EVERY T.A. PELSUE COMPANY EMPLOYEE IS EXPECTED TO COMMIT TO THIS PHILOSOPHY IN THE PERFORMANCE OF HIS OR HER DAILY TASKS.

QUALITY FIRST!

T.A. PELSUE COMPANY SENIOR MANAGEMENT TEAM

1.2 - Pelsue Product Warranty

PELSUE PORTABLE PRODUCT WARRANTY

- Pelsue products are designed and engineered to perform as stated in published specifications. Quality materials and workmanship are used in the manufacture of this product. With regular maintenance and proper care, Pelsue equipment provides many trouble free hours of operation.
- The T.A. Pelsue Company warrants to the buyer that material furnished will conform to specifications and will be free from defects in material and workmanship from the date of shipment to the original buyer, for the period listed by product description on the reverse side of this warranty statement.
- In the event of failure of any components of a Pelsue product within the warranty period, service must be pre-approved by the T.A. Pelsue Company and service must be performed by the T.A. Pelsue Company Parts and Service Department in Englewood Colorado, or at the option of T.A. Pelsue Company, service may be performed at any designated service center, which may include any authorized service center for the component manufacture.
- Damage or failure due to misuse, mishandling, or unauthorized modifications will not be covered by this warranty. Unless otherwise agreed, the T.A. Pelsue Company shall repair or replace the defective components within (30) calendar days of notice of failure. T.A. Pelsue Company's obligation hereunder, shall be limited to the repair or replacement of the product or component as set forth above, and shall not include any liability whatsoever for damages caused by such failure, including but not limited to consequential or incidental damages flowing from use or lack of use of product.
- Any replacement, repair, modification, installation or other service performed by the T.A. Pelsue Company shall be warranted by the remainder of the unexpired period of the warranty, or for a period of (90) calendar days, whichever is longer.
- All materials or parts returned for credit or warranty shall be returned only with prior approval, and will be subject to factory inspection before credit is allowed. Parts claimed defective will be replaced upon request and will be invoiced as purchased, subject to credit when the parts claimed to be defective have been received and examined by the factory.
- This warranty is expressly in lieu of all other warranties expressed or implied, including any warranties of merchantability or warranties of fitness for any particular use and all other obligations or liabilities in connection with the sale of this equipment.

<u>Product Description</u>	<u>Warranty Coverage*</u>
• Ventilators.....	1 year
• Heaters.....	1 year
• Blower Hoses/Ducts.....	3 months
• Pel-Cans and Caddys.....	1 year
• Hose Adapters.....	1 year
• Manhole Shields & Manhole Guards.....	1 year
• Pel-Brite Work Lights.....	6 months
• Planks and Plank Supports.....	6 months
• Duct Rodders and Accessories.....	6 months
• Submersible Pumps.....	6 months
• Discharge and Suction Hoses for Pumps.....	3 months
• Wheel Chocks.....	1 year

*From date of shipment to original buyer.

T.A. Pelsue Company, 2500 South Tejon Street, Englewood, Colorado 80110, 800-525-8460

2.0 - Introduction & Product Information

Congratulations on your choice of a **Pelsue Model #1557 Infrared Construction Heater**. The Pelsue Infrared Heater is specifically designed to provide means of heating ventilated shelters or work areas. Such use includes, but is not limited to Fire, Police & Hazmat response crews in bio-terror and mass casualty incidents. This equipment has been designed and manufactured to exceed durability requirements in order to meet the needs of the discriminating operator. Safe, efficient and trouble-free operation and maintenance of the system requires that anyone who will be operating, maintaining, or inspecting the equipment, read, understand and follow all the operation, safety, maintenance, and inspection instructions contained within this manual. This manual covers the Pelsue Model #1557 Infrared Construction Heater. Use the Table of Contents as a guide to find specific information.

Keep this manual available for future reference if required, and as a tool in the training of new operators.

! WARNING

This product is part of a system intended for use in a climate control scenario. The user must read, understand and follow the instructions contained in this manual before using this equipment. Failure to follow these instructions could result in serious injury or death.

2.1 - Serial Number

Product Serial Number

Always give your dealer the serial number of your Pelsue portable infrared heater product when ordering parts or requesting service or other information. The rating and serial number decal is permanently embossed with a serial number. The serial number decal is located on the rear heat shield as shown in *Fig. 2a*. The serial number decal will appear as shown in *Fig. 2b*. A space has been provided below for the recording of the serial number for future reference.

MODEL: _____ **#1557**

Serial Number : _____

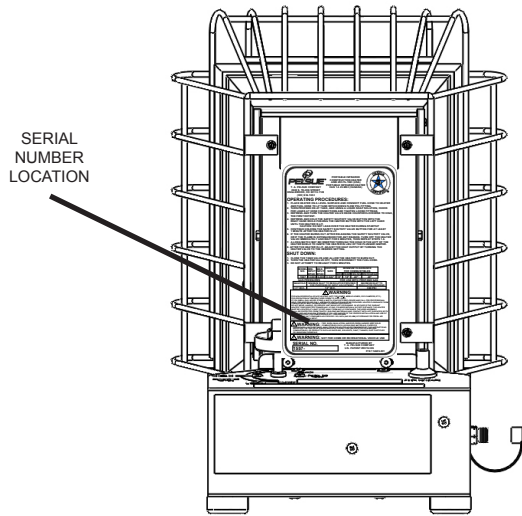


Figure 2a: Serial Number Location

PORTABLE INFRARED CONSTRUCTION HEATER (ANSI Z33.7-1988 (USA)) PORTABLE INFRARED HEATER (CAN 1-2-23-M82 (CANADA))

T. A. PELSUE COMPANY
2500 S. TEJON STREET
ENGLEWOOD, CO 80110-1128
(303) 698-7432

**DESIGN
CERTIFICATION**

OPERATING PROCEDURES:

- PLACE HEATER ON A LEVEL SURFACE AND CONNECT FUEL HOSE TO HEATER AND FUEL HOSE TO LP TANK WITH EXCESS FLOW POL FITTING.
- TURN PROPANE ON AT TANK, AND USING A LIQUID SOAP SOLUTION, CHECK FOR LEAKS AT HOSE CONNECTIONS AND TIGHTEN LOOSE FITTINGS.
- DEPRESS AND TURN THE HEATER VALVE KNOB COUNTERCLOCKWISE TO THE FIRST DETENT.
- DEPRESS AND HOLD THE SAFETY SHUTOFF VALVE BUTTON WITH THE RIGHT HAND WHILE PUSHING THE IGNITER BUTTON WITH THE LEFT HAND UNTIL THE HEATER IS LIT.
CAUTION: DO NOT LEAN OVER THE HEATER DURING STARTUP 1 MINUTE AFTER THE HEATER IS LIT.
- CONTINUE HOLDING THE SAFETY SHUTOFF VALVE BUTTON FOR AT LEAST 1 MINUTE AFTER THE HEATER IS LIT.
- IF THE HEATER BURNS OUT AFTER RELEASING THE SAFETY SHUTOFF VALVE, OR IF THE FLAME IS EXTINGUISHED FOR ANY REASON, TURN OFF THE HEATER VALVE IMMEDIATELY AND WAIT FOR 5 MINUTES, THEN REPEAT STEPS 1-5.
- A LONG MATCH MAY BE INSERTED THROUGH THE HOLE IN THE LEFT OF THE HEATER SHIELD TO IGNITE THE HEATER IN LIEU OF THE PLUNGER IGNITER.
- AFTER THE HEATER IS LIT, ADJUST THE HEAT OUTPUT BY TURNING THE HEATER VALVE TO THE DESIRED SETTING.

SHUT DOWN:

- CLOSE THE TANK VALVE AND ALLOW THE HEATER TO BURN OUT.
- TURN THE HEATER VALVE OFF, THEN DISCONNECT THE FUEL HOSE.
- DO NOT ATTEMPT TO RELIGHT FOR 5 MINUTES.

MODEL NO.	MIN. INPUT BTUH	MAX. INPUT BTUH	ORIFICE SIZE	MINIMUM CLEARANCE FOR COMBUSTIBLES		
				SIDE	REAR	DISCHARGE
1557	12,000	16,000	0.046"	18"	18"	48"

GAS PRESSURES FOR USE WITH PROPANE GAS

MANIFOLD FOR PURPOSES OF INPUT ADJUSTMENT	MINIMUM INLET TO REGULATOR PROVIDED FOR PURPOSES OF INPUT ADJUSTMENT	MAXIMUM INLET TO REGULATOR PROVIDED
11" W.C.	12" W.C.	350 PSI

! WARNING

FOR NON-RESIDENTIAL SPACE HEATING (NOT FOR HOMES, MOBILE HOMES, RV'S CAMPERS, ETC.) FOR OPERATION IN TEMPERATURES DOWN TO -20° F. (-28° C.). IF YOU SMELL GAS, NEVER STRIKE A MATCH, EVACUATE ENCLOSURE AND CALL FOR PROFESSIONAL HELP. ALWAYS PROVIDE HEATER CLEARANCE FROM COMBUSTIBLES. MUST BE MAINTAINED TO ENSURE USER SAFETY. DO NOT MOVE HANDLE OR SERVICE UNIT WHILE HOT OR RUNNING. IN NO CASE IS THE RADIANT HEATER TO BE DIRECTED TOWARD ANY LP GAS CYLINDER WITHIN A 20 FOOT DISTANCE. THE HEATER MUST BE LOCATED AT LEAST 3 FEET AWAY FROM ANY LP CONTAINER. THE HOSE ASSEMBLY SHALL BE PROTECTED FROM HEAVY PRESSURE AND SHALL BE KEPT AWAY FROM HOT SURFACES BOTH DURING USE AND WHILE IN STORAGE. IF YOU ARE UNSURE OF THE PROPER INSTALLATION AND USE OF THIS HEATER CALL CUSTOMER SERVICE AT 1-888-252-4445.
CAUTION: THE UNIT CONSUMES AIR. PROVIDE 1 SQ. INCH (645 SQ. MM) OF OPENING FOR FRESH AIR FOR EACH 1000 BTUH INPUT.

! WARNING: FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARDS, AWAY FROM THE HEATER AS RECOMMENDED BY THE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT, THINERS, DUST PARTICLES OR UNKNOWN CHEMICALS.

! WARNING: NOT FOR HOME OR RECREATIONAL VEHICLE USE

SERIAL NO. 1557-

MANUFACTURED BY
T. A. PELSUE COMPANY
U.S. PATENT #0319,305
PIN 114609-001

Figure 2b: #1557 Serial Number Decal

3.0 - Configuration & Assembly

Upon initial receipt of the Model #1557 Infrared Construction Heater, inspect the packaging for any evidence that the product may have been damaged in shipment. While unpacking the product, inspect all of the components for damage. If damage to any of the components is discovered, Alert the shipping carrier immediately of the damage to the shipment.

3.1 Parts Diagram & List

Refer to the following parts breakdown diagram (Figure #3.1a) and the accompanying parts list (Table #3.1a) for identification of parts in the event replacements become necessary. The parts list table displays applicable part numbers, descriptions, and quantity per assembly.

* Replacement parts can be ordered from the T.A. Pelsue Company at 800-525-8460.

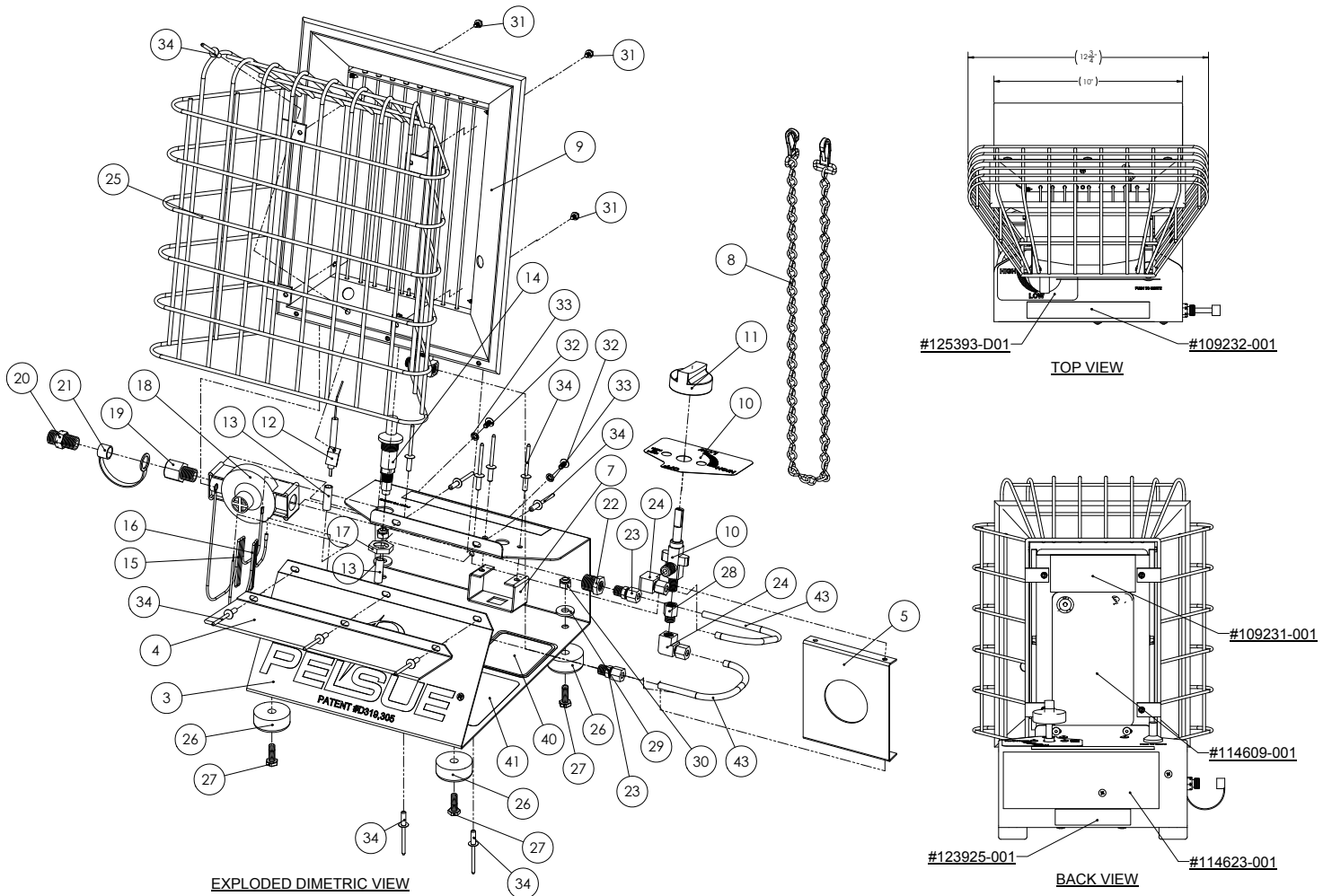


Figure 3.1a: #1557
Parts Diagram

3.1 Parts Diagram & List (continued)

18 IN	59Z-011000	TUBING - RD, 1/4" OD, .032" WALL, COPPER	PURCHASED	43	
1	123925-001	DECAL - HAZARD SYMBOL, FIRE, BURN, INHALATION	PCH: REF. DWG #123925	42	
1	110289-001	DECAL - WARNING, HAZARDOUS CONDITIONS, 1590/1690	PCH: REF. DWG #110289	41	
1	110292-001	DECAL - WARNING, GENERAL HAZARD	PCH: REF. DWG #110292	40	
1	109232-001	DECAL - CAUTION - DO NOT MOVE WHILE IN USE	PCH: REF. DWG #109232	39	
1	114623-001	DECAL - WARNING & INSTRUCTIONS IN FRENCH, 1557	PCH: REF. DWG #114623	38	
1	114609-001	PLATE DECAL - I.D. & SERIAL NO. 1557 CONSTRUCTION HEATER	PCH: REF. DWG #114609	37	
1	109231-001	DECAL - WARNING, INFRARED CONSTRUCTION HEATER	PCH: REF. DWG #109231	36	
1	116051-001	1557 TROUBLE SHOOTING, AS LAMINATED, 8.5" X 5.5"	PCH: REF. DWG #116051	35	
12	118518-001	RIVET - STAVEX, BLIND FLANGE DOME, BLACK, .188" DIA	PURCHASED	34	
2	68N-004200	WASHER - LOCK, INTERNAL TOOTH, #8, PLATED	PURCHASED	33	
2	111844-001	SCREW - MACHINE, PHIL TRUSS HD, 8-32 UNC X 3/8, BLK	PURCHASED	32	
4	112179-001	SCREW - SHEET METAL, #8 X 3/8", HEX HD SLOTTED, BLACK	PURCHASED	31	
4	100048-114	Lock Nut-Hex, 1/4-20, Nylon Insert	PURCHASED	30	
4	100050-009	WASHER - FLAT, 1/4 IN, TYPE A, W, PLATED	PURCHASED	29	
1	125359-001	FITTING - COUPLING, 3/8"-27 FEMALE X 1/8" MPT, BRASS	PURCHASED	28	
4	101427-002	SCREW - CAP, HEX HEAD, 1/4"-20 UNC X 3/4"	PURCHASED	27	
4	100188-002	FOOT - RUBBER, 1-1/2" OD, W/REC WASHER	PURCHASED	26	
1	114604-001	GRILLE - WIRE GUARD, .188 DIA. WIRE, NICKLE PLATED, 1557	PCH: REF. DWG #114604	25	
2	32F-157700	FITTING - MALE CONN, 90°, 1/4" OD TUBE COMP X 1/8" FNPT, BRASS	PURCHASED	24	
2	112307-001	FITTING - MALE CONN, 1/4" OD TUBE COMPRESSION X 1/8" MNPT, BRASS	PURCHASED	23	
1	114621-001	FITTING - REDUCER BUSHING, 3/8" MNPT X 1/8" FNPT, BRASS	PURCHASED	22	
1	109264-001	CAP - DUST, YELLOW RUBBER W/ RETAINER, 1/2" I.D.	PURCHASED	21	
1	32F-154200	FITTING - ADAPTER, 9/16" L.H. W/ INV. FLARE X 1/4" MNPT	PURCHASED	20	
1	108618-001	FITTING - ADAPTER, 1/4" FNPT X 1/4" MNPT, BRASS	PURCHASED	19	
1	35G-010100	REGULATOR - PROPANE WITH PINK SPRING, RATED TO 11" WC	PURCHASED	18	
1	109494-001	NUT - IGNITER RETAINING, STAMPING, 1500 SERIES	PURCHASED	17	
1	109293-001	WIRE ASSY - 18 AWG, BLACK, 23" LONG	PCH: REF. DWG #109222	16	
1	109292-001	WIRE ASSY - 18 AWG, WHITE, 23" LONG	PCH: REF. DWG #109222	15	
1	109170-001	IGNITER - PLUNGER, ELECTRIC	PURCHASED	14	
2	109291-001	SLEEVE - VINYL, FOR IGNITIER	PCH: REF. DWG #109222	13	
1	109176-001	PROBE - IGNITER, FOR P/N #109170-001	PCH: REF. DWG #109176	12	
1	114613-001	KNOB - ROTARY, BLK PLASTIC W/WHITE DOT	PURCHASED	11	
VALVE KIT #125393-K01	1	125393-D01	DECAL - BURNER VALVE CONTROLS, YELLOW/BLK, FOR #125393-001	PCH: REF. DWG #125393D	10
		125393-001	VALVE - LP GAS BURNER, 1/8" MNPT INLET, 3/8"-27 OUTLET	PURCHASED	
1	109164-001	RAYHEAD ASSY - CERAMIC ELEMENT, 16,000 INFRARED CONS. HEATER	PCH: REF. DWG #109164	9	
1	109233-001	HANGER CHAIN ASSY - #12 JACK CHAIN W/ 2 SNAP HOOKS	ASSY: REF. DWG #109233	8	
1	123179-001	MOUNTING BRACKET - GAS RANGE ROTARY VALVE	MFD: REF. DWG #123179	7	
1	119869-001	PANEL - REAR, REPLACEMENT, RAYHEAD, 1557 INFRARED HEATER	MFD: REF. DWG #119869	6	
1	114601-001	SUPPORT - HEATER BASE, W/CONTROL PANEL, 1557	MFD: REF. DWG #114601	5	
1	114611-001	SHIELD - HEAT, INFRARED CONSTRUCTION HEAD, HEMMED	MFD: REF. DWG #114611	4	
1	114600-002	BASE - HEATER, 1557 IR CONSTRUCTION HEATER, AS PAINTED	MFD: REF. DWG #114600	3	
QTY. REQD.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.	
PARTS LIST					

4.0 - Safety

The following section will address the safety precautions which must be adhered to when working with the Pelsue Infrared Construction Heater. Any user must familiarize themselves with the information in this section before utilizing the equipment.

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

- DANGER-** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations or for hidden or unseen hazards.
- WARNING-** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury and includes obvious and hidden hazards. It may also be used to alert against unsafe practices.
- CAUTION-** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

You are responsible for the safe operation of your Pelsue Infrared Construction Heater. You must ensure that anyone who will operate or work around the equipment be familiar with it and general safety practices when working around gases. This manual will take you step-by-step through the workings and capabilities of the #1557 Infrared Construction Heater and alert you to good safety and operating practices while using the system.

Remember, you are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Do not risk injury or death by ignoring good safety practices.

- The most important safety device on this equipment is a safe operator. It is the operator's responsibility to read and understand all of the safety and operating instructions in the manual and to follow them. Most accidents can be avoided.
- A person must understand the operation of this equipment and be trained in its usage before operating the equipment. An untrained operator exposes himself and others to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

4.1 - Safety Alert Symbol

SAFETY ALERT SYMBOL

This Safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

The Safety Alert symbol identifies important safety messages on your Pelsue Confined Space Product and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instruction in the safety message.

Why is this symbol important to you?

- 3 BIG Reasons:**
- Accidents Disable and Kill.**
 - Accidents Cost You Money.**
 - Accidents Can Be Avoided.**



Safety Precautions:

It is necessary to follow these safety precautions, each time, prior to using the product.

The Safety Precautions are not limited to, but must include the following items;

1. Do not use the heater for anything other than its intended use.
2. This heater is designed to function as a two-stage regulator system. A first stage regulator is required at the bottle dropping the pressure down to 10 P.S.I. (pounds per square inch). The regulator built into the unit then drops the 10 P.S.I. down to 11" WC (water column).
3. Make sure all L.P. fittings are tight. Only a pipe joint compound that is resistant to liquified petroleum gases should be used.
4. The propane bottle must be vapor draw style, DOT (for U.S.) or CTC (for Canada) approved, 20 or 40 lbs gas cylinder. Do not use a forklift or liquid withdrawal cylinder. Use only LPG (propane) fuel.
5. Propane gas is very flammable. Propane is scented and its strong odor is readily detectable. If a gas odor is detected at any time, do not operate or continue to operate the unit until the source of the gas odor has been located. In the event of a leak, propane is heavier than air and will accumulate in low areas. **Never strike a match, create a spark or flame when you smell gas.** Move the heater outside and ventilate the area. Find and correct the source of the leak before attempting to light the heater. If the leak cannot be corrected, do not tamper with the heater. Turn the heater off and consult the manufacturer or a qualified technician.
6. **Do not lean over the heater when lighting.** When lighting with a match, light through the hole provided on the side of the reflector. **Do not light at the orifice.**
7. Do not move, handle or service the unit while hot or burning. Permanent skin tissue damage can occur if contact is made with the unit. Let the heater cool down after it has been shut off.
8. Never direct this infrared construction heater toward any LP gas cylinder within 20ft. The heater must be a minimum of six feet from any LP Gas cylinder. Keep away from fabric or combustibles. **Refer to clearance table below for distances.** Survey the work area for any potential hazards and correct them before operating the heater.
9. Unit should be used in a well ventilated area. When heater is in use, a positive air displacement of at least 4-CFM per 1,000 BTUH of the heaters rated output should be provided.
10. Heater should be inspected before each use and at least annually by a qualified service agency.

Heater Clearance

Side:	18"
Rear:	18"
Ceiling:	48"
Discharge End (Front)	48"



! CAUTION ! - The heater is not recommended for home or recreational vehicle use. The heater should not be used in aerial bucket truck.

! CAUTION ! - Do not use heater in a space where gasoline or other liquids having flammable vapors are present.

! CAUTION ! - Heater produces radiant infrared heat which is an open flame. Keep solid combustibles, such as building materials, paper or cardboard, a safe distance away from the heater as recommended. Never use the heater in spaces which may contain volatile or airborne combustibles, dust particles, paint, thinner, solvents or unknown chemicals.

5.0 - Product Operation

The following section will address the capabilities and the general operation of the Pelsue Model #1557 Infrared Construction Heater. The instructions contained within this section should be adhered to each and every time the product is used. Any person tasked with installing or operating this piece of equipment should be familiar with these procedures.

5.1 - Product Description & Capabilities

The Pelsue Model #1557 Infrared Construction Heater is built from a rugged lightweight aluminum housing and base. The Pelsue #1557 Infrared Construction Heater is specifically designed to provide means of heating ventilated shelters or work areas. All specifications, instructions, and procedures provided within this manual or upon Pelsue Specification Documents are based upon and only valid for usage with Pelsue accessories. The T.A. Pelsue Company can not verify equipment safety and/or compliance when utilized with anything other than Pelsue approved confined space accessories.

Infrared Heater - #1557

General Specifications

• Weight	-	13 lbs.
• Height	-	19-1/4"
• Width	-	12-3/4"
• Length	-	11-5/8"
• LPG Consumption	-	0.25 lb/hr (Low Setting) 0.50 lb/hr (High Setting)

Materials & Construction

- Aluminum Base & Housing
- Chrome-Plated Guard
- Ceramic Heating Element
- Brass & Copper Plumbing

Features:

- Low Maintenance
- Includes piezoelectric spark
(Design also allows for backup ignition via a match)
- Equipped with a certified safety control & thermocouple
- Equipped with a tip-over safety shut-off

Additional Requirements & Notes

- This heater is only intended for use in a well-ventilated space and is not for home or recreational vehicle use.

5.2 - Start-Up & Operating Procedures

Prior to Operation, the #1557 Infrared Construction Heater should be configured and prepared according to the following guidelines.

1. Pre-Operation Inspection:

It is necessary to perform a visual inspection, each time, prior to using the product. If deficiencies are found, remove the product from service and contact the T.A. Pelsue Company regarding repair. The following checklist coupled with *Figure #5.1a* should be used as a guide to determine whether the equipment is in good operating condition prior to usage. Equipment that is not in good condition can endanger the safety of the entrant and attendant during use.

The Pre-Operation Visual Inspection is not limited to, but must include the following items;

- Check that the heater's surrounding guard is present and properly installed.
- Remove any objects or combustibles around the immediate area that could come into contact or ignite with the from use of the heater.
- The valve control is rotating according to the valve decal and the knob is present.
- The rubber feet are attached.
- There are no kinks or breaks in the copper piping.
- There are no leaks in the plumbing.

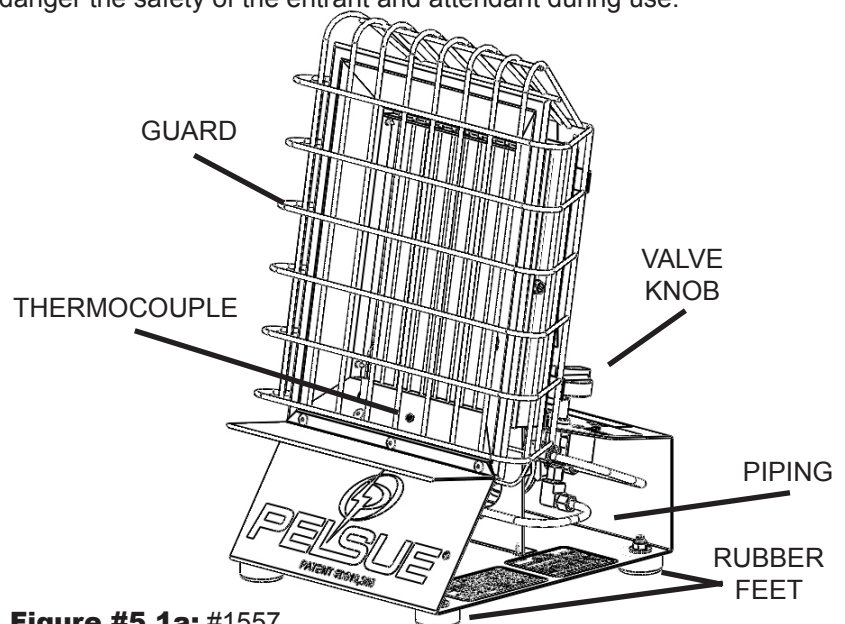


Figure #5.1a: #1557
Pre-Inspection Points

5.2 - Start-Up & Operating Procedures (continued)

2. Operation of 1557 Infrared Heater:

Choose a location where installation will provide suitable proximity to the work area yet minimize obstructions during use and in the event a rescue is necessary. Once a location is chosen;

- a. Inspect the heater orifice, fuel inlet, and base for signs of liquid fuel or oil contamination. If present, DO NOT USE THE HEATER. Have a qualified technician disassemble the LPG supply line and components to remove the liquid fuel or oil before use of the heater.
- b. Place the heater on a secure and level surface. The heater must be positioned such that it is not directly exposed to wind, water, spray, rain, and/or dripping water.
- c. Connect the LPG supply hose with the first stage regulator assembly to a 20 or 40 lb approved cylinder. (First stage regulator should take bottle pressure down to 10 - 35 psi) Connect the hose to the heater and tighten all connections. Locate the LPG gas cylinder as least 6 ft away from the heater in a position away from the direct path of radiant heat from the heater.
- d. Turn on the fuel at the LPG cylinder and recheck all fittings for possible leaks using a soap solution. Tighten any leaks found and retest. Never use a match to check for leaks. NOTE: The longer the fuel hose length, the longer period of time to purge the hose of air from the initial hookup.
- e. **IGNITION:** First depress and turn the rotary knob to the HIGH position. Kneeling behind the heater (DO NOT STAND OVER THE HEATER) depress and hold the safety shut off valve located under the heater's ceramic head in the middle of the base. (Figure 5.2b) While still holding down on the button, push down the igniter button repeatedly until the heater ignites. Continue holding the safety valve button in for approximately one minute to heat the thermocouple. When the thermocouple is hot enough, release the safety valve button and the heater will stay lit. If the heater goes out, turn off the fuel valve and the take valve and wait for five minutes and repeat the lighting procedure.
- f. **ALTERNATE LIGHTING PROCEDURE:** A long match may be inserted through the opening in the heater shield on the left side in lieu of the piezoelectric igniter while observing all other safety precautions. Once the heater has been lit, you can adjust the heat output to the desired setting.
- g. **TO TURN HEATER OFF:** First turn off the fuel supply at the LPG bottle. This burns off any excess fuel in the supply hose and lowers the line pressure. When the heater flame goes out, turn the rotary knob to the off position. Let the heater cool down and then disconnect the hose and store away. NOTE: The unit must not be relit for 5 minutes after shut off.
- h. In the event the heater is inadvertently tipped over while operating, the gas flow will be cut off by the safety ball check valve. To reignite, the heater must first be stood upright. Then to release the safety ball check valve, you must turn the rotary valve and the cylinder valve to the off position. Then turn the valves on again to reset for ignition.
- i. Use of the heater in a drafty area may result in a loss of heater efficiency. Operate the unit in a draft free area or turn the back of the heater into the wind.
- j. NOTE: The hose assembly shall be visually inspected prior to each use. If it is evident that there is excessive abrasion or wear, of the hose is cut, it must be replaced prior to heater operation. The replacement hose assembly must be that specified by the manufacturer.

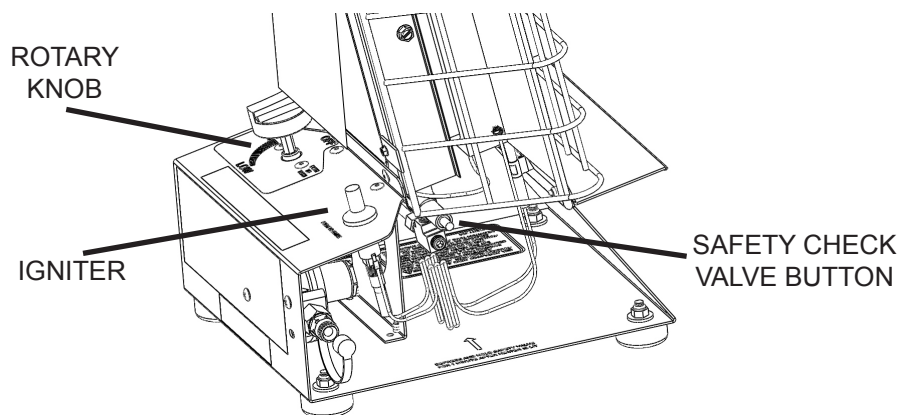


Figure #5.2b: 1557 Infrared Heater Controls

6.0 - Troubleshooting

SYMPTOM	CAUSE	REMEDY
Heater fails to ignite	<ol style="list-style-type: none"> 1. Cylinder's gas valve closed 2. Manual shutoff valve closed 3. Heater inlet pressure too low. 4. Heater safety control valve defective 5. Obstruction in orifice spud 6. Spark igniter wired disconnected or grounded 7. Electrode out of alignment 8. Electrode ceramic cracked 9. Spark igniter defective 	<ol style="list-style-type: none"> 1. Open Valve 2. Open valve 3. Verify adequate fuel supply is available. Check regulator outlet pressure is 11" WC on high position 4. Replace 5. Clean or replace 6. Reconnect or replace 7. Adjust to 1/8" from heat rods 8. Replace 9. Replace
Heater lights - flame extinguishes when releasing safety valve button after depressing for 60 seconds	<ol style="list-style-type: none"> 1. Inadequate gas pressure 2. Insufficient fuel supply 3. Thermocouple defective or loose 4. Heater safety valve defective 	<ol style="list-style-type: none"> 1. Increase to 11" WC on high 2. Provide adequate fuel supply 3. Replace or tighten electrical connections 4. Replace
Fuel mixture burning within Rayhead assembly	<ol style="list-style-type: none"> 1. Gas connection loose 2. Inlet pressure too high 3. Cracked or broken ceramic 4. Improper lighting 	<ol style="list-style-type: none"> 1. Tighten & check for leaks 2. Reduce to 11" WC on High setting 3. Replace rayhead assembly 4. Light ceramic burner element & not at the orifice
Ceramic temperature below 1700 F	<ol style="list-style-type: none"> 1. Orifice spud misaligned 2. Obstruction in orifice spud 3. Inadequate gas pressure 4. Cylinder's gas valve not fully open 5. Manual shutoff valve not fully open 6. Kinked or obstructed fuel line/ hose 7. Ceramic separated or cracked 	<ol style="list-style-type: none"> 1. Replace orifice mounting bracket 2. Clean or replace 3. Increase to 11" WC on high setting 4. Open 5. Open 6. Straighten or clean 7. Replace
Heater Flare-Up	<ol style="list-style-type: none"> 1. Contaminated fuel 2. Liquid fuel reaches heater 3. Wind or drafty conditions 	<ol style="list-style-type: none"> 1. Disassemble, thoroughly clean unit and LPG filter 2. Possible overfilled LP bottle or using liquid withdrawal bottle. Replace with vapor draw style bottle 3. Relocate heater so the wind comes behind the unit
Heater extinguishes on low setting	<ol style="list-style-type: none"> 1. Control valve turned beyond low position 2. Dirty orifice 3. Inadequate gas pressure 	<ol style="list-style-type: none"> 1. Adjust valve to proper range 2. Clean orifice 3. Increase to 11" WC on high setting

7.0 - Storage

Prior to storage, the heater should be thoroughly inspected and maintained. Repair or replace any worn or damaged components to prevent any unnecessary down time at the next use.

Follow this procedure:

1. Visually inspect daily for oil or liquid fuel contaminant present in the heater or fuel supply hose. If any is evident, heater should be cleaned and or repaired by a qualified technician before use.
2. If the heater has not been in service for a long period of time, the following procedure should be initiated before placing it back into operation. Use an air hose (not to exceed 30 psi) to blow off any dust/dirt that has accumulated on the heater. Pass the air hose over the entire exposed area of ceramic. (Vacuuming is acceptable)
3. Clean the orifice spud allowing the air pressure to flow for approximately one minute. If a residue or deposit inside the orifice spud remains after an attempt has been made to clean it, it must be replaced with a new orifice and a tip-over ball check valve obtained from the factory. **DO NOT CLEAN ORIFICE WITH A DRILL OR OTHER METAL OBJECTS.**
4. Wipe the reflector clean using a soap and water solution or a nonabrasive aluminum cleaner.
5. If a malfunction in the pressure regulator or safety shut-off control valve is found after placing the heater into operation, consult the factory or an experienced heating contractor or repair or replacement.

8.0 - Contact Information

For More Information...



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