

Part #115057-001

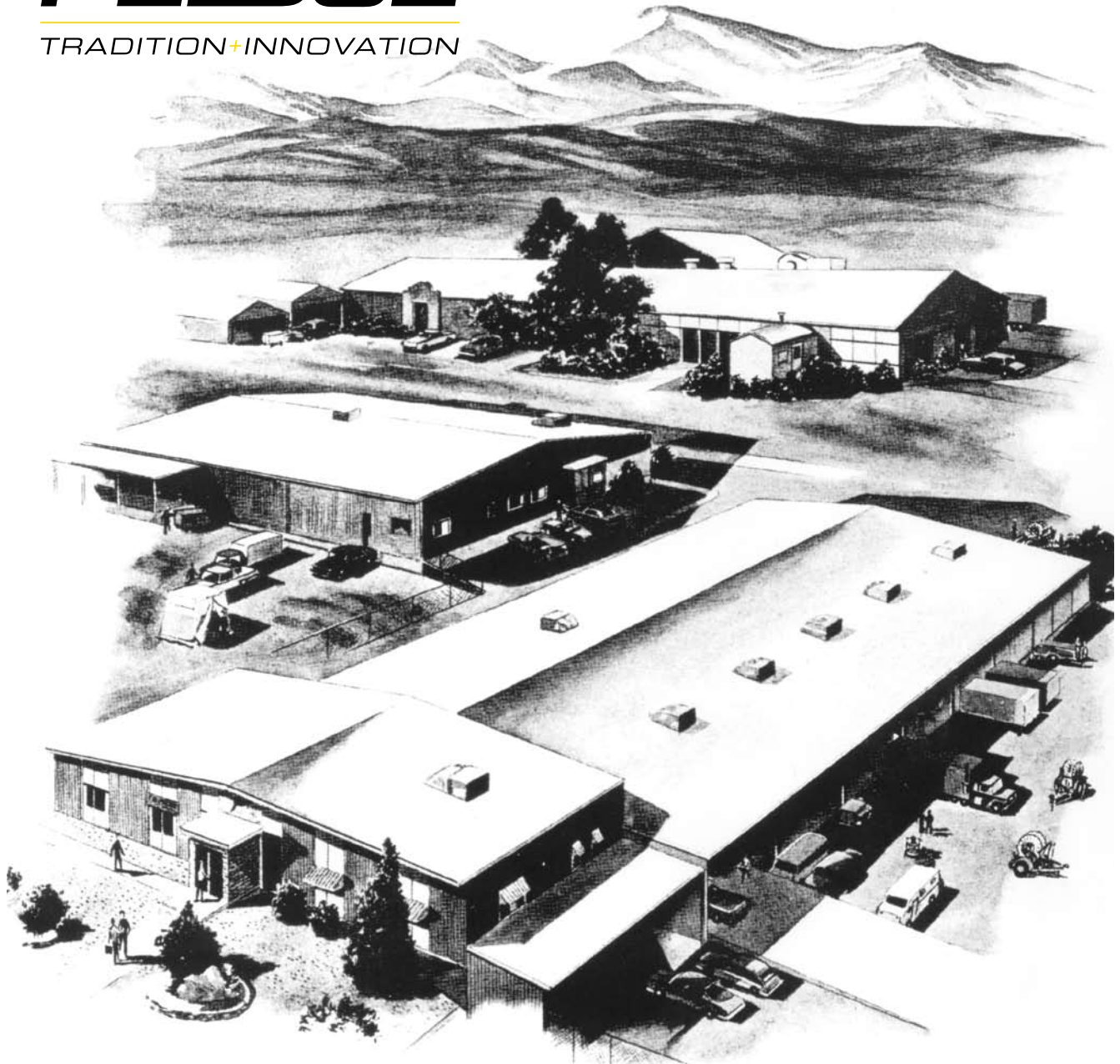
Product Manual:

Model #1400P
Axial Ventilator (12VDC)




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 us 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
• Ventilator 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.

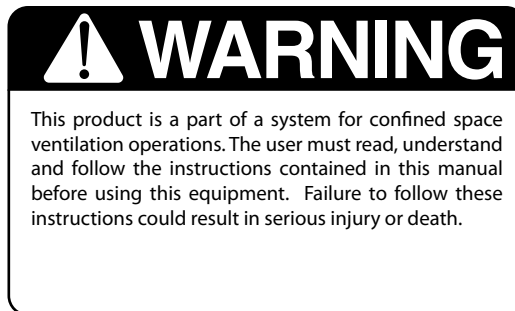
T.A. Pelsue Company, 2500 South Tejon Street, Englewood, Colorado 80110, 800-525-8460

2.0 - Introduction & Product Information

Congratulations on your choice of a **Pelsue Model #1400P Axial Ventilator** to compliment your confined space ventilation operation. The Model #1400P Ventilator is specifically designed to provide a completely portable source of fresh air. This ventilator is powered by a 12-volt DC electrical supply. This equipment has been designed and manufactured to exceed confined space requirements and regulations in order to meet the needs of the discriminating operator for the efficient and safe operations of personnel in a confined space.

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 #1400P Axial Ventilator. Use the Table of Contents as a guide to find specific information.

Keep this manual handy for frequent reference and to pass on to new operators.



2.1 - Serial Number

Product Serial Number

Always give your dealer the serial number of your Pelsue confined space ventilator product when ordering parts or requesting service or other information.

The serial number plate is permanently embossed with a serial number. The serial number will be located on the plate location at the bottom of the axial ventilator as shown in *Fig. 2a*. The serial number plate will appear as shown to the right in *Fig. 2b*. A space has been provided below for the recording of the serial numbers for future reference.

MODEL: **#1400P** _____

Serial Number : _____

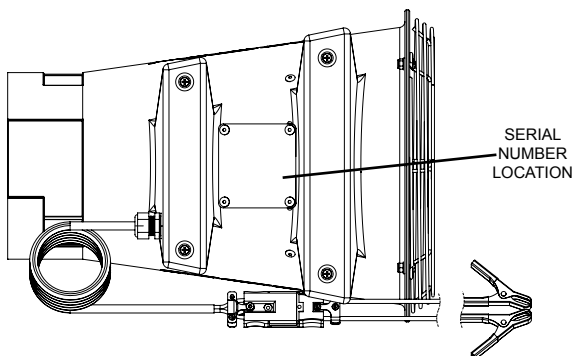


Figure 2a: Serial Number Location

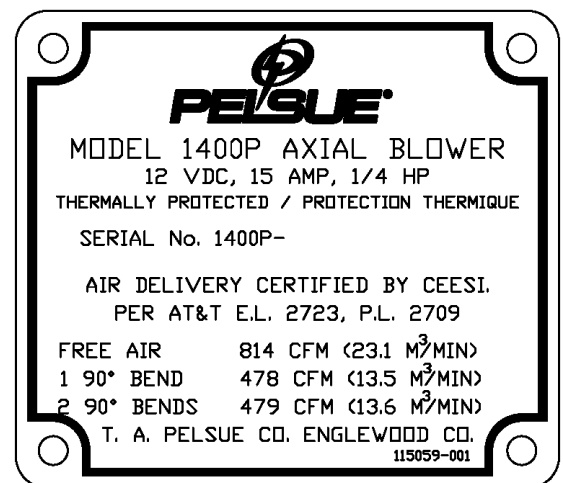


Figure 2b: #1400P Serial Number Plate

3.0 - Configuration & Assembly

Upon initial receipt of the #1400P Axial Ventilator, 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.

**Refer to parts list above if replacement parts are required. Replacement parts can be ordered from the T.A. Pelsue Company at 800-525-8460.

Item Number	Part Number	Description	Quantity
3	100405-004	STRAIN RELIEF - WATERTIGHT, 1/2" HUB, 0.250"- 0.375" DIAM.	1
4	119268-001	FAN BLADE - 10" DIA., 3/8" SHAFT, 3450 RPM, ALUM, CW	1
5	118809-001	MOTOR MOUNT - AXIAL BLOWERS, HDPE / STEEL BLOWER HOUSINGS	1
6	100188-001	FOOT - RUBBER, 3/4" OD, W/ WASHER	4
7	118284-001	SCREW - MACHINE, PAN HD, PHILLIPS, 10-32 X 5/8, STAINLESS	4
8	121861-001	SHAFT EXTENSION - 1400 SERIES BLOWERS, CARBON STEEL	1
9	104638-001	SCREW - SET, CUP POINT, #8-32 X 3/8, GRADE 5, PLATED	1
10	122592-001	PLUG & BATTERY CLIP ASSEMBLY, 12 VDC, 30 AMP	1
11	110000-001	GRILLE - OUTLET, 1300D/1400D, AS POWDER COATED IN BLACK	1
12	118518-001	RIVET - STAVEX, CLEAR ZINC, 0.188 DIAMETER	8
13	122619-001	ASSEMBLY - CORD SET, 14/2 X 12 FT., 12-VOLT DC, MODEL 1400 SERIES AXIAL	1
14	104977-001	GRILLE - INTAKE, 1300D/1400D, AS POWDERCOATED BLK	1
15	100050-006	WASHER - FLAT, #10, TYPE A, W, PLATED	8
16	112178-001	LOCKNUT - NYLON INSERT, #10-24 UNC, BLK	4
17	115166-001	SCREW - TRUSS HEAD, PHILLIPS, 10-24 X 5/8", BLK	4
18	114761-P01	HOUSING, AXIAL FAN - ROTATIONALLY MOLDED	1
19	110733-001	LOCKNUT - HEX WITH NYLON INSERT, 10-32, BLACK	4
20	110004-001	MOTOR - 12VDC, 1/4 HP, .312" DIA. SHAFT, FOR 1400 SERIES AXIAL BLOWERS	1
21	115059-001	PLATE DECAL - 1400P, I.D. & SERIAL, ALUMINUM	1
22	122084-001	LABEL - "! CAUTION !, 15 AMP POWER SOURCE REQUIRED..."	1
23	26E-014100	TERMINAL - BUTT SPLICE, 16GA - 14 GA, NYLON INSUL (NOT SHOWN)	2
24	105343-001	TUBING - HEAT SHRINK, BLK, 3/8" (NOT SHOWN)	1

Table 3.1a: #1400P
Parts List

3.1 Parts Diagram & List (continued)

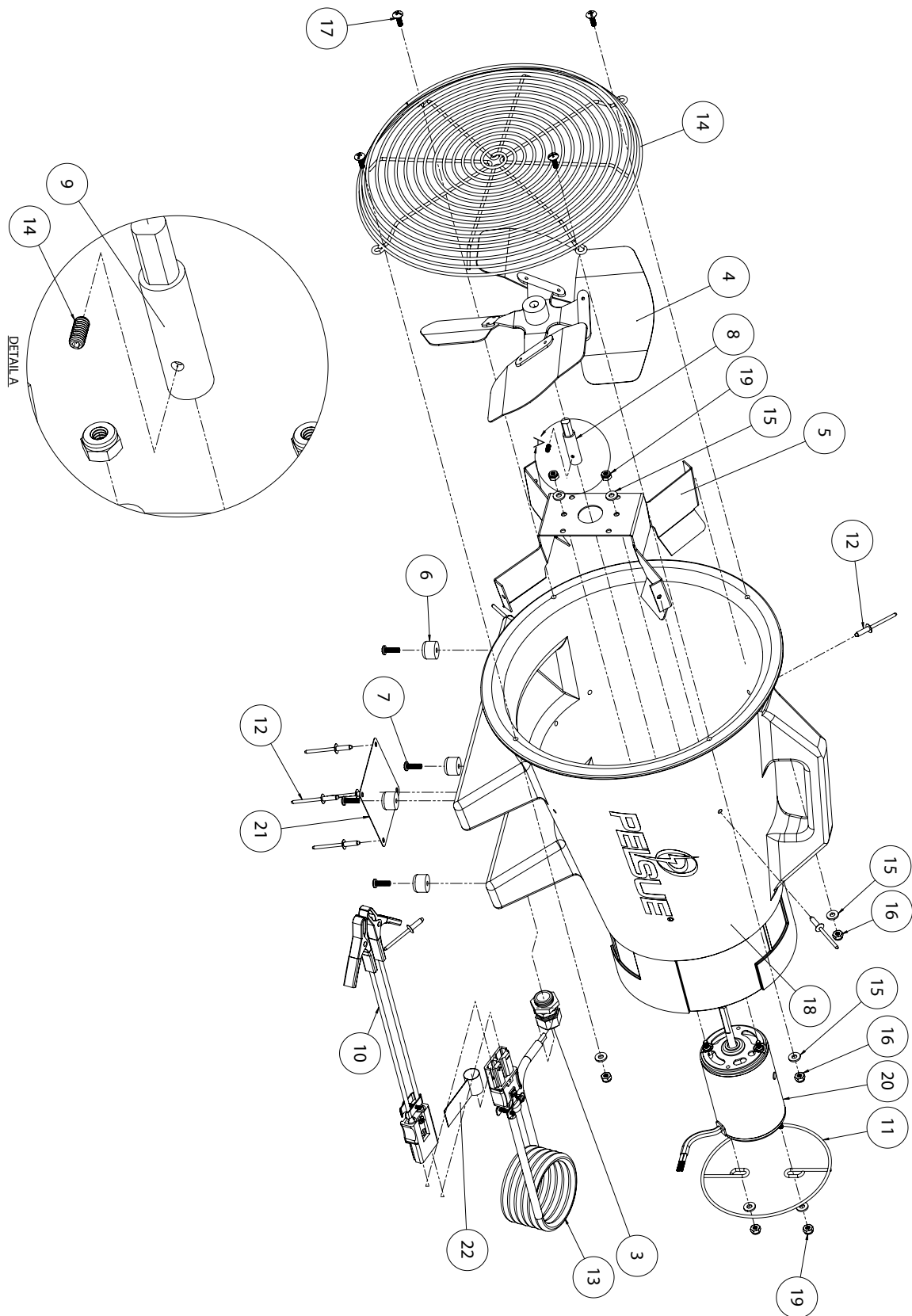


Figure 3.1a: #1400P
Parts Diagram

4.0 - Safety

The following section will address the safety precautions which must be adhered to when working with Pelsue confined Space Ventilation equipment such as the #1400P Axial Ventilator. 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 #1400P Axial Ventilator. You must ensure that anyone who will operate or work around the equipment be familiar with confined space ventilation procedures. This manual will take you step-by-step through the workings and capabilities of the #1400P Axial Ventilator and alert you to all 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. Be certain that everyone operating in or around a confined space is familiar with the procedures recommended and follows safety precautions. Remember, most accidents can be prevented. 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 safety and operating instructions in the manual and to follow these. 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 is not limited to, but must include the following items;

- 1.** Do not use the ventilator for anything other than its intended use.
- 2.** Do not wear loose clothing that can become entangled in operating machinery. Do not operate the ventilator without inlet or outlet screen guards in place. (If guards are missing or damaged, contact the factory for replacements.)
- 3.** Do not place fingers or any other object through inlet or outlet screens.
- 4.** Always operate the ventilator from a properly wired & configured 12VDC power source.
- 5.** Never handle energized power cords with wet hands.
- 6.** Never let extension cords or plug connection lay in water. Locate the ventilator so that it cannot fall into water inadvertently.
- 7.** Never use this ventilator if it is not in good working condition. Never use power cords with frayed , cut, or brittle insulation. Check the cord for sound connections to the power source.
- 8.** Never use this ventilator in an explosive environment (i.e. gaseous or airborne dust).
- 9.** Ensure that toxic fumes are not blown into a confined space.
- 10.** Unattended use of equipment is not recommended.



! CAUTION ! - Be sure the ventilator is disconnected from the power source before performing any maintenance or repair work on the ventilator.

! CAUTION ! - Check all power cords for cuts, frayed ends, or brittle insulation. See parts list for replacement cord part number.

! CAUTION ! - The user must ensure that the ventilator is located where it cannot fall into water inadvertently and the extension cords or plug connections do not lay in water.

5.0 - Product Operation

The following section will address the capabilities and the general operation of the Pelsue #1400P Axial Ventilator. 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 the piece of equipment should be familiar with these procedures.

5.1 - Product Description & Capabilities

The Pelsue Model #1400P Axial Ventilator is a single-speed, fresh-air ventilator equipped with 12 foot 12VDC power plug connection and alligator clips for a direct battery connection.

The Pelsue #1400P Axial Ventilator is built from a high density polyethylene housing (HDPE), which has a high resistance to chemicals and extreme temperatures, as well as a favorable strength to weight ratio. The Pelsue #1400P Axial Ventilator is specifically designed for confined space applications. 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.

Power Source***

The recommended power supply for the Model #1400P ventilator is a direct connection to a 12VDC automotive-type battery. Another dedicated 12VDC power source can be used with a minimum in-rush rating amperage of 50 amps and a continuous duty of 15 to 18 amps. ! Many automotive power ports & cigarette lighter outlets are not rated for the required 15 amp draw, the T.A. Pelsue Company is not liable for any damage incurred when connecting the ventilator to an under-rated 12VDC power supply source !

Axial Ventilator - #1400P

General Specifications

• Weight	-	12 LBS. (5.5 Kg.)
• Height	-	15"
• Width	-	13"
• Length	-	17.5"

Model Specifications & Performance

#1400P

• Voltage	12 VDC
• Amperage	15A - 18A
• H.P.	1/4 (0.187 kW)
• Free Air	814 CFM (23.1 m3/min)
• One 90° Bend	478 CFM (13.5 m3/min)
• Two 90° Bends	479 CFM (13.6 m3/min)

Features:

- Low Maintenance
- Specifically designed to provide a completely portable source of fresh air

Materials & Construction

- Main Structure: - Polyethylene Housing
- Hardware - Plated Steel

Additional Requirements & Notes

- The #1400P Axial Ventilator is a single-speed ventilator.

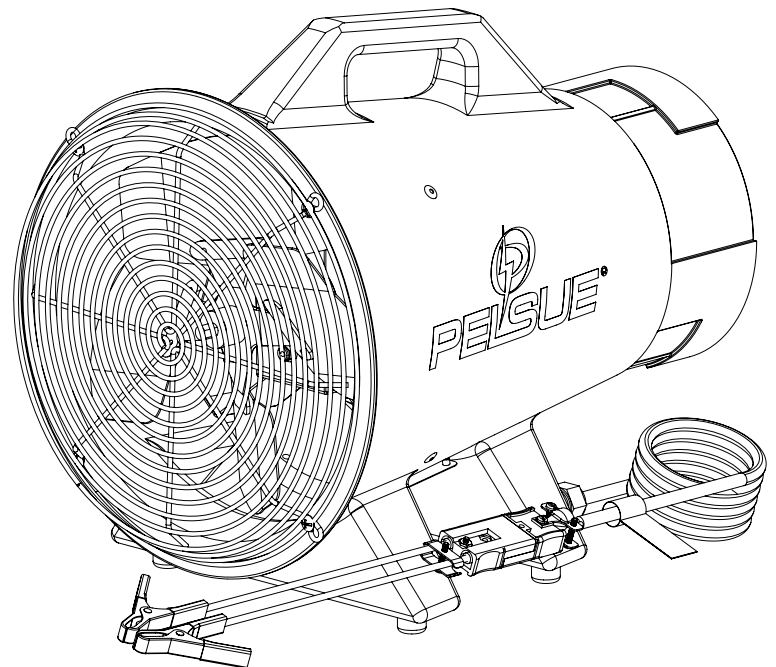


Figure #5.1a: #1400P
Axial Ventilator

5.2 - Start-Up & Operating Procedures

Prior to Operation, the #1400P Axial Ventilator 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 regarding repair. The following checklist coupled with *Figure #5.2a* 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;

- a. Check the ventilator inlet and outlet guard screens for obstructions.
- b. Remove any objects around the immediate area that could be sucked into the ventilator.
- c. The cord & plug set is properly attached to the ventilator.
- d. The rubber feet are attached.

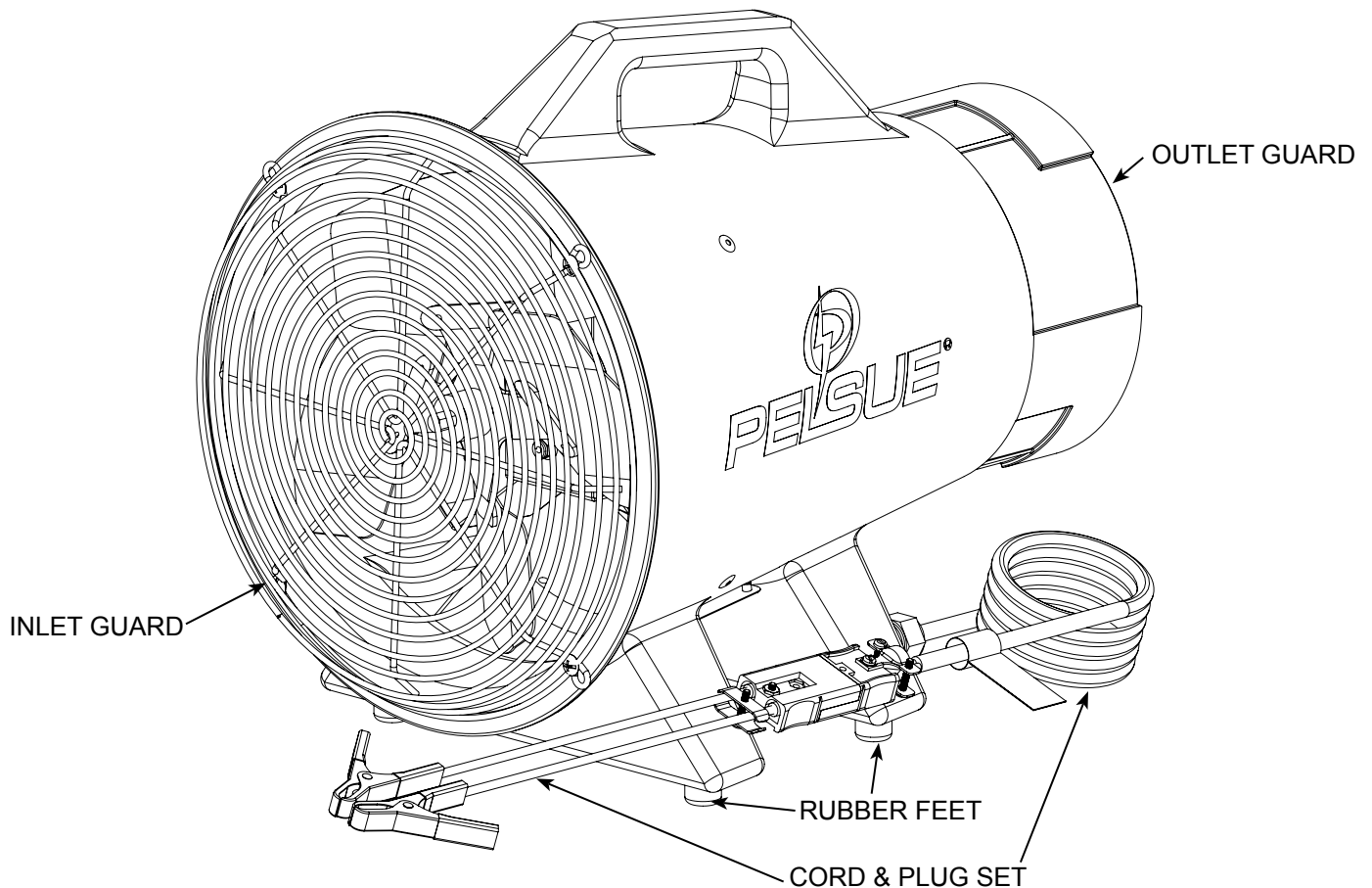


Figure #5.2a: #1400P Axial Ventilator
Pre-Operation Inspection Points

5.2 - Start-Up & Operating Procedures (continued)

2. Setup of 1400P Axial Ventilator:

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;

- Ventilator should be placed 1.5 meters upwind where possible, from the confined space, and have its inlet pointed into the wind. This will reduce the chance of contamination being blown into the confined space. (Refer to Fig. #5.2b)
- Connect the ventilator to a suitable 12VDC power source as described in section 5.1
- Extend and place the ventilator hose as required.
- When ventilator operation is no longer required, unplug the power cord. Coil and store the power cord in the opening of the molded handle, or wrap the cord around the molded legs.

Important Notes:

- During confined space entry operations, it should not be assumed that the ventilator will maintain the air inside the confined space at a safe condition. When the ventilator is in use, the air inside the confined space should be monitored continuously for the presence of poisonous gases and/or toxic fumes.
- Ensure that the ventilator provides positive airflow the entire time during usage. The axial ventilator can be used with an accessory Pelsue Air Flow Alarm (#FLO-CHEK) in order to alert the entrants that positive ventilation is lost.
- The Axial ventilator can also be used in conjunction with a Pelsue Airpac that connects to the ventilator and has storage built-in for the hose.

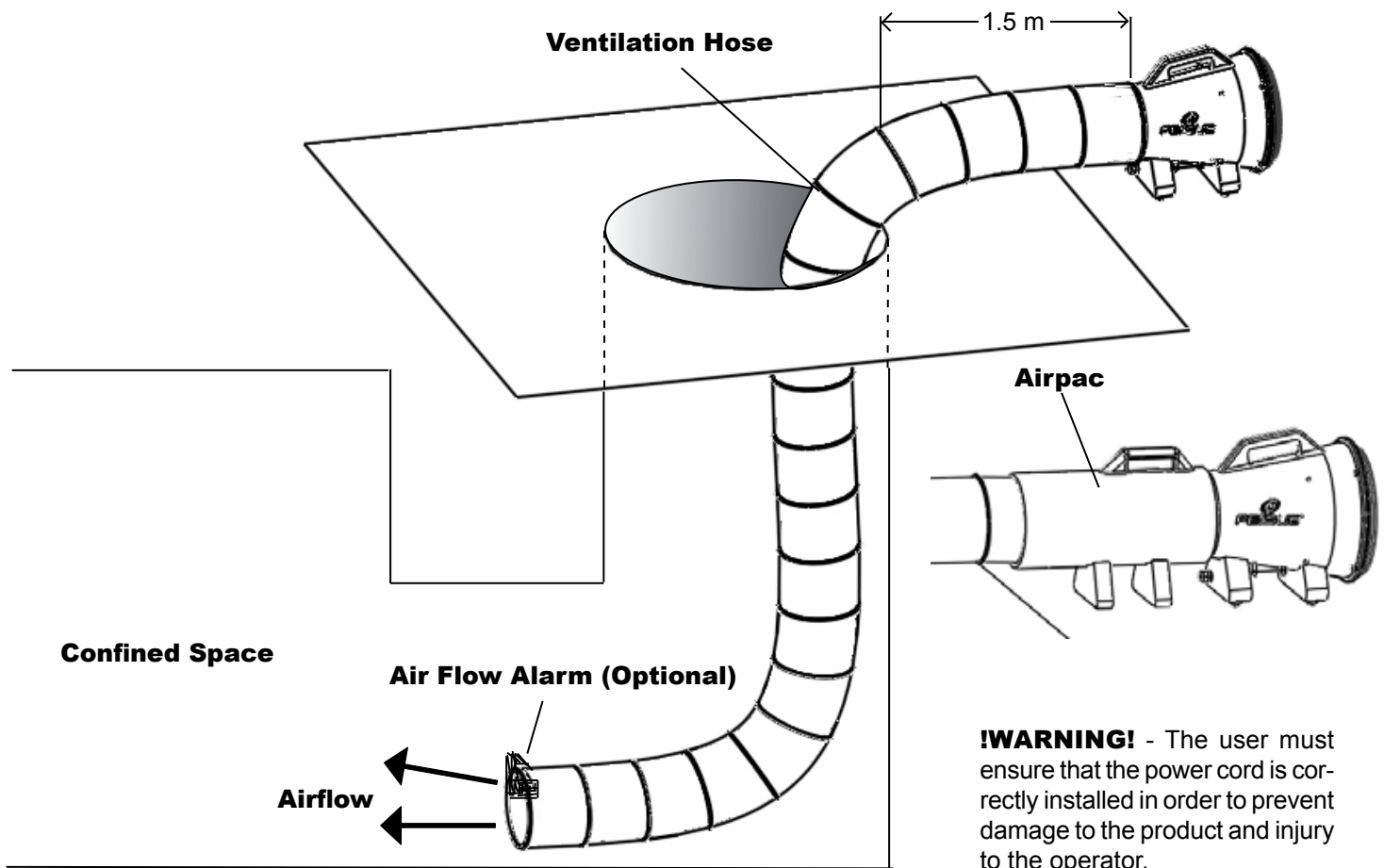


Figure #5.2b: Axial Ventilator Setup in Confined Space



T.A. Pelsue Company

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