

SOUTHWORTH

Owner's Manual
Pneumatic PalletPal Lite™
Level Loader



Model # _____

Serial # _____

Placed in Service _____

Southworth Products Corp

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To obtain the latest, most updated version, please contact
Southworth's Customer Service Department or go
to our website: www.SouthworthProducts.com under E
Parts & Service you will find a complete list of
current owner's manuals to print.

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INTRODUCTION

The Air PalletPal Lite™ Level Loader is a simple device that will automatically maintain a load at the ideal height for manual loading and unloading. If a palletized load is placed on the unit, the unit gradually rises as boxes or parts are removed. This automatically maintains the top of the load at the correct working height.

The unit may also be used for the reverse application. An empty pallet may be placed on the Pneumatic PalletPal Lite. The unit gradually lowers as boxes or parts are added. Again, this keeps the top of the load at the correct height. Complete pallets may be loaded or unloaded using a fork lift. See Figures 3 & 4.

This manual contains information to help you to learn about the safe and proper installation, use, and upkeep of your Pneumatic PalletPal Lite unit. Please be sure that this manual is available to anyone who uses or services the Pneumatic PalletPal Lite unit.

Pneumatic PalletPal Lite units may be used in a wide variety of industrial settings. The instructions in this manual are not necessarily all-inclusive, as Southworth cannot anticipate all conceivable or unique

situations. **In the interest of safety, please read this whole manual carefully. Be familiar with the contents of this manual before you install or use the Pneumatic PalletPal Lite unit. If you are not sure of the proper procedure to be followed, please call Southworth Products Corporation for more information.**

Southworth's product warranty is shown on the rear cover of this manual. **This instruction manual is not intended to be or to create any other warranty, express or implied, including any implied warranty of merchantability or fitness for a particular purpose, all of which are hereby expressly excluded.** As set forth more specifically in the product warranty, Southworth's obligation under that warranty is **limited** to the repair or replacement of defective components, which shall be the buyer's **sole remedy**, and Southworth shall not be liable for any loss, injury, or damage to persons or property, nor for any direct, indirect, or consequential damage of any kind resulting from the Pneumatic PalletPal Lite unit.

Safety

The Pneumatic PalletPal Lite unit has been carefully designed to be as safe as possible for operators and service workers. If you take a few common-sense precautions, you will be able to use the unit safely. However, the Pneumatic PalletPal Lite is a powerful unit with moving parts, and is capable of causing personal injury if proper precautions are not taken.

Therefore, throughout this manual, Southworth has identified certain hazards which may occur in the use and servicing of the Pneumatic PalletPal Lite unit, and provided appropriate instructions or precautions which should be taken to avoid these hazards. In some cases, Southworth has also pointed out the consequences which may occur if Southworth's instructions or precautions are not followed. Southworth uses the following system of identifying the severity of the hazards associated with its products:

DANGER! Immediate hazard which will result in severe personal injury or death.

WARNING! Hazard or unsafe practice which could result in severe personal injury or death.

CAUTION! Hazard or unsafe practice which could result in minor personal injury or property damage.

Please read and follow this instruction manual, including all safety instructions and precautions, carefully and completely.

WARNING!

Do not inflate the system to more than 61 psi at the fully raised position. If the actuation system pressure is higher than 61 psi under any circumstance it may cause the failure of the air actuation system thus resulting in severe injury.

WARNING!

Never try to service the machine without carefully reading the maintenance part of this manual. Otherwise severe personal injury may result.

Figure 1 shows the safety labels on this unit. Please be sure that all of the labels are in place, and are visible to the machine operators. Never paint over the labels. If any of the labels are missing, please contact Southworth for replacements. **The safety labels help to protect your workers.**

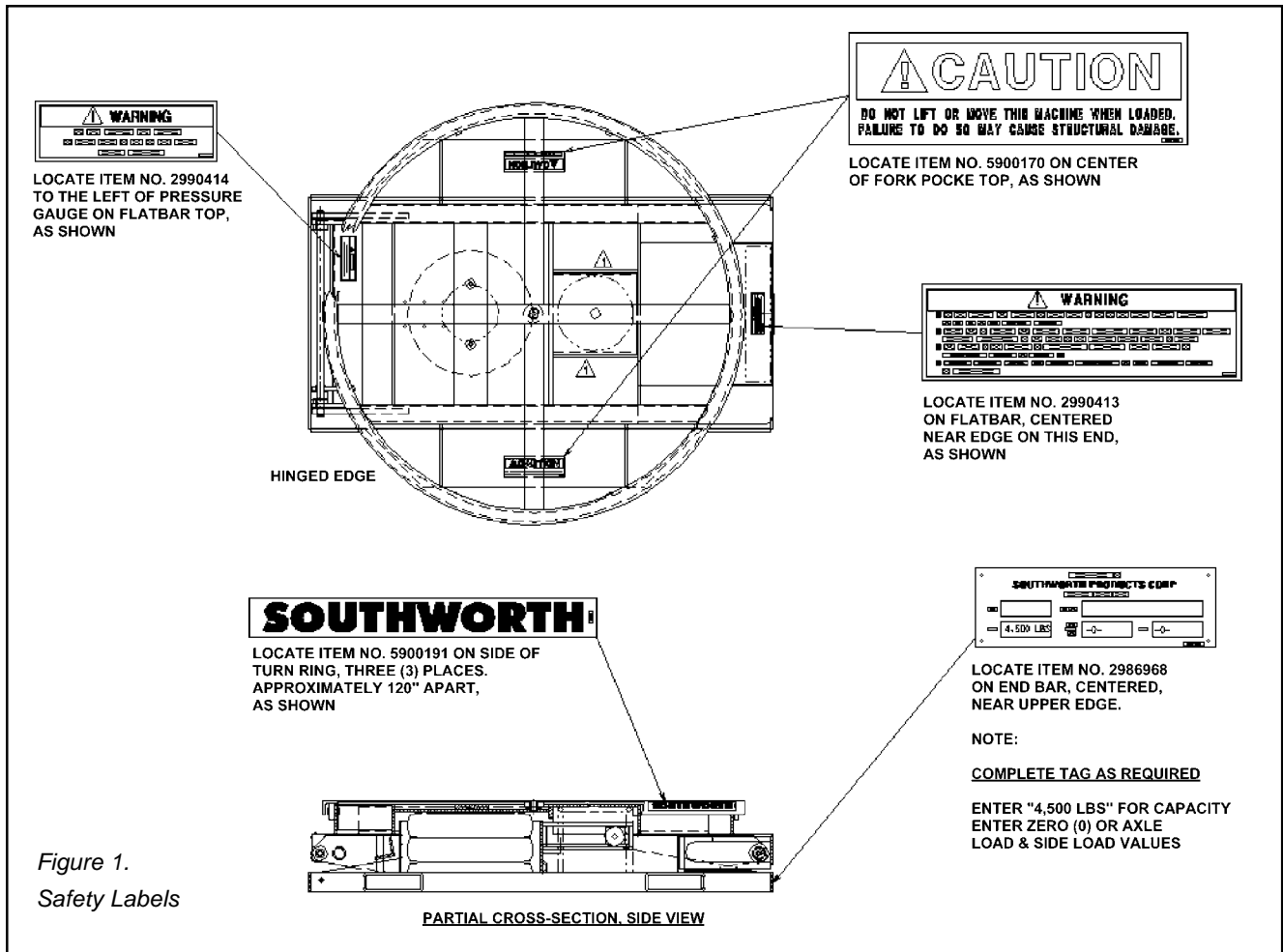


Figure 1.
Safety Labels

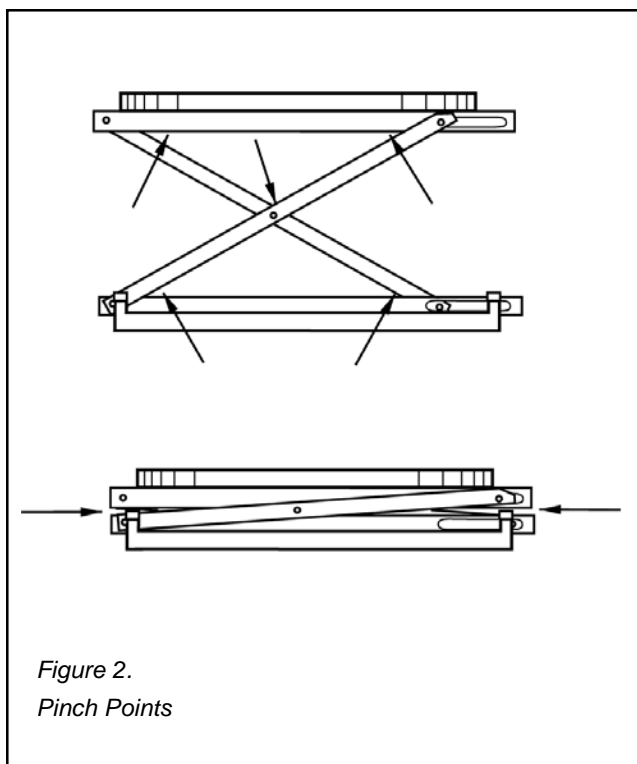


Figure 2.
Pinch Points

INSTALLATION NOTES

WARNING!

The unit is attached to the skid using metal bands. These bands are under high tension. The edges are sharp. Wear safety glasses and gloves when you handle or cut the banding.

NOTICE!

The unit must be installed on a firm level surface. The frame of the unit must sit firmly on the floor, and the floor must be level. If the frame is not supported correctly, stresses may develop in the frame. The unit may bind or not work easily. The rotating top may not rotate correctly.

OPERATION NOTES

Manual Use

WARNING!

Never sit or ride on the turntable or operate the unit if anyone is on it.

WARNING!

Never operate the unit if the load is off center. The load may shift, and you may be injured. This can also damage the unit.

WARNING!

As the unit moves, keep away from the "pinch points" where metal parts meet. See Figure 2.

WARNING!

Keep the area around the unit clean. Do not allow any dirt, debris, spilled oil, or excess grease to collect. These materials may cause you to slip while the unit is operating, and you may be injured.

WARNING!

Stay clear of the turntable when it is moving. As the pallet turns, a part of the load may rotate around and hit you. Never turn the load when anyone is standing beside the unit.

WARNING!

Do not try to use this unit with damaged or broken pallets. Broken pallets may have boards or nails which hang down below the main part of the pallet. As the pallet is turned, these boards or nails may catch on the frame of the unit. This can cause the pallet to stop turning suddenly, causing the load to shift.

You may be injured, and the unit may be damaged. The boards or nails on the bottom of the pallet should not extend down more than 1/8 inch.

CAUTION!

Do not use this unit with a load greater than the rated capacity. This includes the weight of the payload and the weight of the pallet. If you overload the unit, it may be damaged.

INSTALLATION INSTRUCTIONS

Unpacking the Unit

1. Before you start to install the unit, check for local codes and ordinances that may apply. It is your responsibility to obtain any necessary permits.
2. Please read all of these instructions carefully. Be sure to read and understand all of the warnings.
3. Inspect the shipping pallet carefully for any damage which may have affected the unit. If you see signs of damage, notify the shipper immediately. Also make a note of this on the shipping papers that you are asked to sign.

4. Choose the place where you want to mount the unit. It is very important that the Pneumatic PalletPal Lite be set up on a smooth and flat surface. Check the floor surface carefully and make sure that it is free of all loose debris and dirt.

Caution!

The unit must be installed on a smooth flat surface. If the floor is not flat, this can create stresses in the frame of the unit. The unit may not work properly, or parts of the unit may wear more quickly than they should. You may be hurt or the load may be damaged.

5. Position the Pneumatic PalletPal Lite beside the point where the unit will be setup.

WARNING!

The unit is attached to the skid using metal bands. These bands are under high tension. The edges are sharp. Wear safety glasses and gloves when you handle or cut the banding.

6. Remove the metal banding that secures the unit to the pallet. Remove all packing material. Shift the unit to the floor. Support the base as you do this.
7. Check to see that the frame of the unit is sitting firmly on the floor. Try to move or rock the frame of the unit. The base frame should be stable, and should not move. Check to see that the base frame is level. (If any part of the frame is more than 1/2" out of level in relation to any other part, you must install the optional adjustable feet to level the unit. See the instructions which follow.)
8. If you have any questions about the steps in the installation process, please call Southworth Customer Service at 1-800-743-1000.

Set-Up and Instructions

The Pneumatic PalletPal Lite can be setup to handle pallet loads of any weight within the unit's capacity range. Load capacity depends on the initial actuator pressure. The actuator pressure can be set from 6 psi to 61 psi to achieve capacities ranging from approximately 100 lbs to 1000 lbs. Either an air compressor or shop air can be used as the air source to setup the unit. Maximum air pressure needed from the air source is 61 psi. Once air is inflated into and kept captive within the unit's air actuation system, a corresponding load capacity has been set. The unit will then lower or rise as the load is being added or removed from the unit, and thus works as an automatic pallet leveler. A rule of thumb for setting up the unit is that the amount of air inflated into the air actuator should allow the unit to be lowered to its com-

<i>SET-UP REFERENCE TABLE</i>			
Capacity (lbs.)	100	500	1000
Capacity X 75%		375	750
Initial Pressure (psi)	6 - 15	19 - 35	36 - 61

pressed height with load equal to 75% of the set capacity (including the weight of the pallet). The Height vs. Load Curve below describes the automatic leveling behavior and the Capacity-setting Table can be used to estimate the initial pressure in setting up the unit to a specific capacity.

Setup Procedures

1. The Pneumatic PalletPal Lite must be properly installed according to the installation section of this manual.
2. With no load on the unit use shop air or an air compressor to pressurize the air actuation system to the required initial pressure. If the shop air is used, set the air regulator to the required initial pressure. The unit is equipped with an air pressure gauge and an air manifold valve that includes a valve stem, a manual relief knob, and a safety relief valve. Add air to the actuator system through the valve stem, and release air from the system by loosening the manual relief valve.
3. Gradually load the Pneumatic PalletPal Lite to 75% of the setup capacity. Check to see if the Pneumatic PalletPal Lite is compressed. If not, turn the manual relief knob to slowly bleed air out of the system until the platform reaches minimum height. Then turn the manual

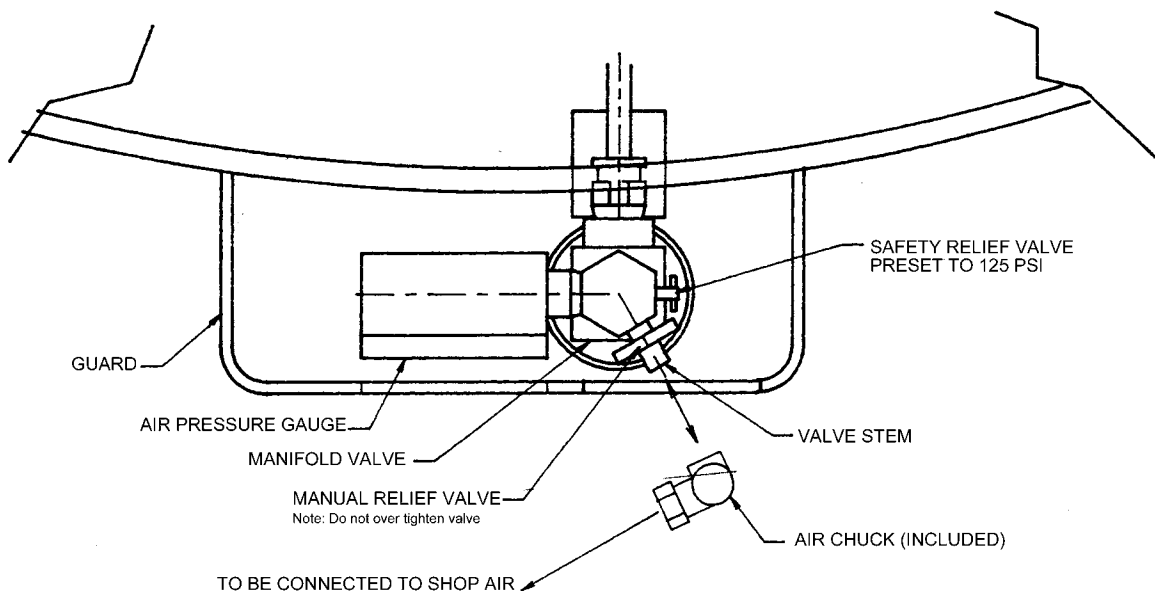
relief knob to shut off the relief. The setup procedure is now complete and the Pneumatic PalletPal Lite is ready for use.

4. If a different load is to be handled, or if the operator prefers a higher or lower loading/unloading position from that of the standard setup, add air to, or bleed air from the actuation system to achieve the necessary height. The gauge should never be more than 120 psi under any circumstances.

*** NOTE:** *The actuation system of the Pneumatic PalletPal Lite contains captive air much like an automotive tire and will lose small amounts of air over time. Therefore, air may have to be occasionally added to the system to compensate for the loss.*

Quick Setup

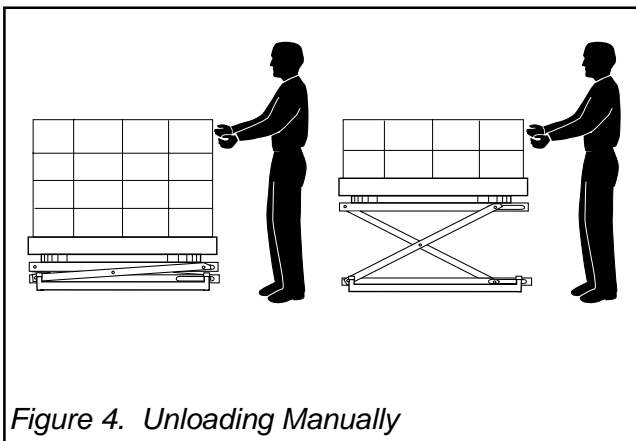
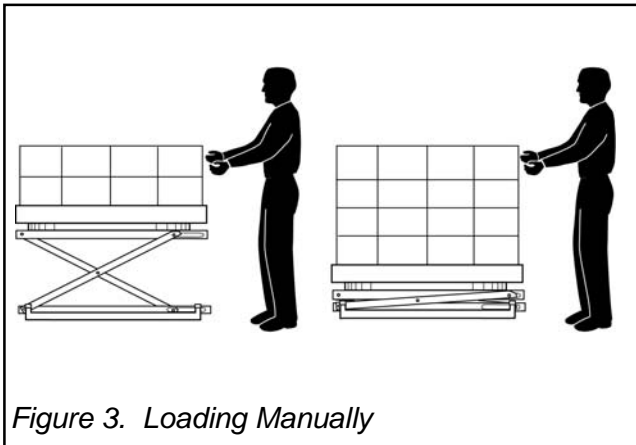
If you do not know or cannot estimate the weight of the pallet load to be handled, use the following instructions: With no load on the unit, pressurize the actuation system to 61 psi. Place about half of the pallet load onto the unit, then slowly bleed air from the system using the manual relieve knob until the pallet reaches the most convenient height for the operator to continue loading the pallet.



OPERATING INSTRUCTIONS

Loading Manually

Add boxes or parts until the pallet is full. The unit will gradually lower the pallet until it reaches the bottom. See Figure 3.

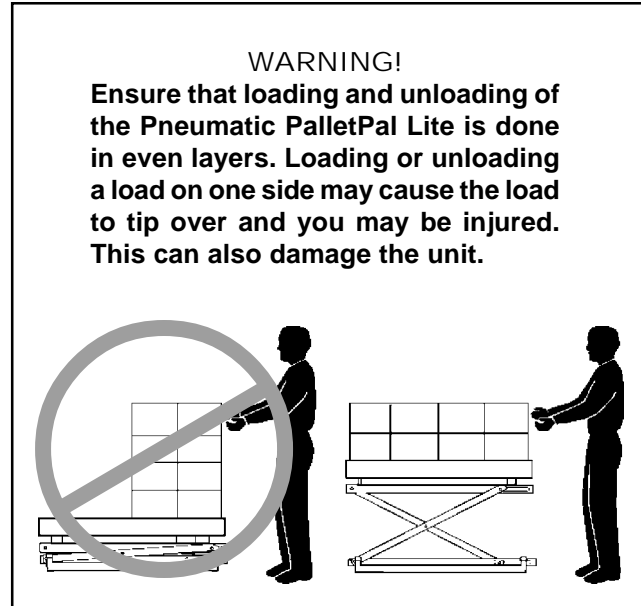


Removing Loads Manually

Remove boxes or parts until the pallet is empty. The unit will gradually raise the pallet. See Figure 4.

Operating Safety -- Manual Use

1. Do not use this unit with a load greater than the rated load. This includes the weight of the payload and the weight of the pallet. If you overload the unit, it may be damaged.
2. Never push the load off of the side of the unit. If you do this, the frame of the unit may jump upward.



3. Never use the unit when anyone is sitting or riding on the turntable.

4. Do not try to use this unit with damaged or broken pallets. Broken pallets may have boards or nails which hang down below the main part of the pallet. As the pallet is turned, these boards or nails may catch on the frame. The pallet may stop turning suddenly and this can cause the load to shift. You may be injured and the unit may be damaged. If the boards or nails on the bottom of the pallet extend down more than $\frac{1}{8}$ inch, they will interfere with the turning action.

5. Stay clear of the turntable when it is moving. As the pallet turns, a part of the load may rotate around and hit you.

6. Keep the area around the unit clean. Do not allow any dirt, debris, spilled oil, or excess grease to collect. These materials may cause you to slip while the unit is operating and you may be injured.

Loading with a Fork Lift

1. Place the load on the lift, then lower the fork lift. Before removing the load, be sure the unit is carrying the weight, not the fork lift. See Figure 5.

- Lower the load until the springs on the Pneumatic PalletPal Lite are fully compressed.
- Be sure the forks on the lift are clear of the inside of the pallet.

Figure 5. Loading with a Fork Lift



WARNING!

If you skip these steps, the load may drop suddenly when you remove the fork lift. You may be hurt or the unit or load may be damaged.

WARNING!

Never drop the load on the turntable. If you do this while the turntable is moving, the load may shift. You may be injured or the unit may be damaged. If you drop the load while the turntable is stopped, the unit may be damaged.

2. Be sure the load is centered on the unit.

WARNING!

If the load is off-center, it may shift when the turntable is turned. You may be hurt or the unit or load may be damaged.

Unloading with a Fork Lift

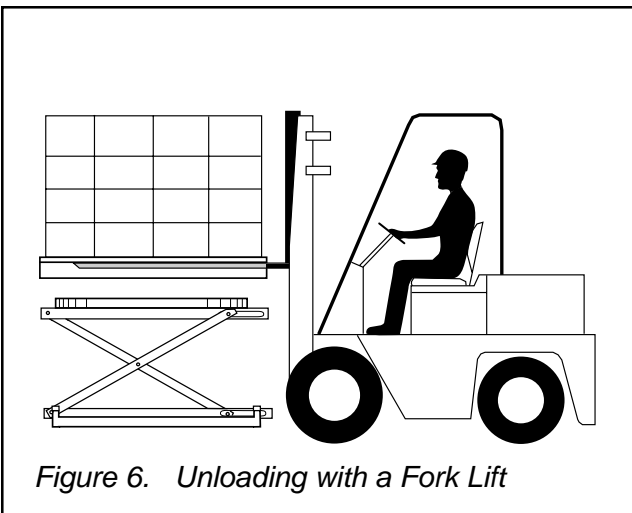


Figure 6. Unloading with a Fork Lift

1. Insert the forks into the pallet, and lift the pallet clear of the top of the unit. See Figure 6.

- Be sure the pallet clears the top of the turntable before you move the fork lift.

WARNING!

If you skip these steps, the unit may jump up suddenly when you remove the pallet. You may be hurt or the unit or load may be damaged.

Moving the Pneumatic PalletPal Lite

CAUTION!

Do not move the Pneumatic PalletPal Lite while it is loaded. This will damage the base frame of the unit. The pockets on the base frame are designed to support an unloaded Pneumatic PalletPal Lite, but cannot support any extra weight.

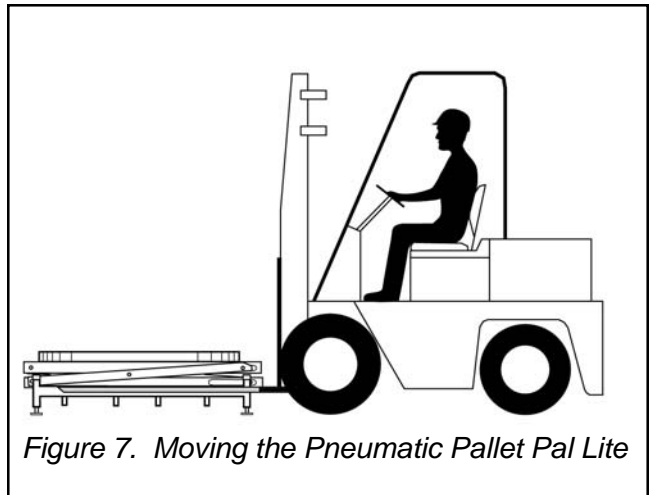


Figure 7. Moving the Pneumatic Pallet Pal Lite

1. Remove any load from the top of the Pneumatic PalletPal Lite.
2. Insert the forks into the pockets in the base frame. See Figure 7.

Troubleshooting

Troubleshooting Check List

<i>Problem</i>	<i>Possible Cause</i>	<i>Check This</i>
The top of the unit rotates away from you.	The frame of the unit may not be level.	Move the unit to a level surface or install the optional adjusting feet.
Excessive "rumble" when unit operates.	Wear or lack of lubrication to bearings under turntable.	Remove turntable, replace bearings.
Wear on underside of turntable.	Normal condition caused by wear-hardening of metal.	No repair necessary.

Ordering Replacement Parts

Southworth has carefully chosen the components in your unit to be the best available for the purpose. Replacement parts should be identical to the original equipment. Southworth will not be responsible for equipment failures resulting from the use of incorrect replacement parts or from unauthorized modifications to the unit.

Southworth can supply all replacement parts for your PalletPal. With your order, please include the model number and the serial number of the unit. You can find these numbers on the name plate. This plate is located within the scissors mechanism.

To order replacement parts, please call the Parts Department at (207) 878-0700 or (800) 743-1000. Parts are shipped subject to the following terms:

- FOB factory
- Returns only with the approval of our parts department.
- Payment net 30 days (except parts covered by warranty).
- Freight collect (except parts covered by warranty).

Parts replaced under warranty are on a "charge-credit" basis. We will invoice you when we ship the replacement part, then credit you when you return the worn or damaged part.

Parts Department
Southworth Products Corp.
P.O. Box 1380, Portland, ME 04104-1380

Telephone: 800-743-1000 or 207-878-0700
FAX: 207-797-4734
Email: service@SouthworthProducts.com

www.SouthworthProducts.com

Maintenance

Routine Periodic Maintenance

Every 90 days -

- Apply grease or heavy oil to the pivot shafts.
- Check for loose hardware and signs of excessive wear.
- Check to be sure that the unit is placed on a firm level surface.

NOTES:

WARRANTY

Southworth Products Corp. warrants this product to be free from defects in material or workmanship for a **period of one (1) year** from date of shipment, providing claim is made in writing within said year. This warranty shall not cover failure or defective operation caused by misuse, misapplication, negligence or accident, exceeding recommended capacities, or altering or repairing, unless alteration is authorized by Southworth Products Corp. Except as set forth herein, there are no other warranties, express or implied, including the warranties of merchantability and fitness for a particular purpose, all of which are hereby excluded.

Southworth Products Corp. makes no warranty or representation with respect to the compliance of any product with state or local safety or product standard codes, and any failure to comply with such codes shall not be considered a defect of material or workmanship under this warranty. Southworth Products Corp. shall not be liable for any direct or consequential damages arising out of such noncompliance.

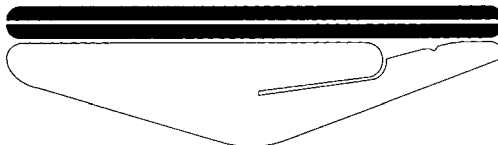
Southworth Products Corp.'s obligation under this warranty is **limited** to the replacement or repair of defective components at its factory or another location at Southworth Products Corp.'s discretion. This is buyer's sole remedy. Except as stated herein, Southworth Products Corp. will not be liable for any loss, injury, or damage to persons or property, nor for direct, indirect, or consequential damage of any kind resulting from failure or defective operation of said material or equipment.

This warranty may be altered only in writing by Southworth Products Corp., Portland, Maine.

Southworth Products Corp. is widely acknowledged as the leading maker of hydraulic lifts and materials-handling equipment. Southworth machines are rugged and reliable, and are designed to provide years of trouble-free service.

The designs are based on extensive engineering experience.

These are good reasons for specifying Southworth machines in your plant.



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