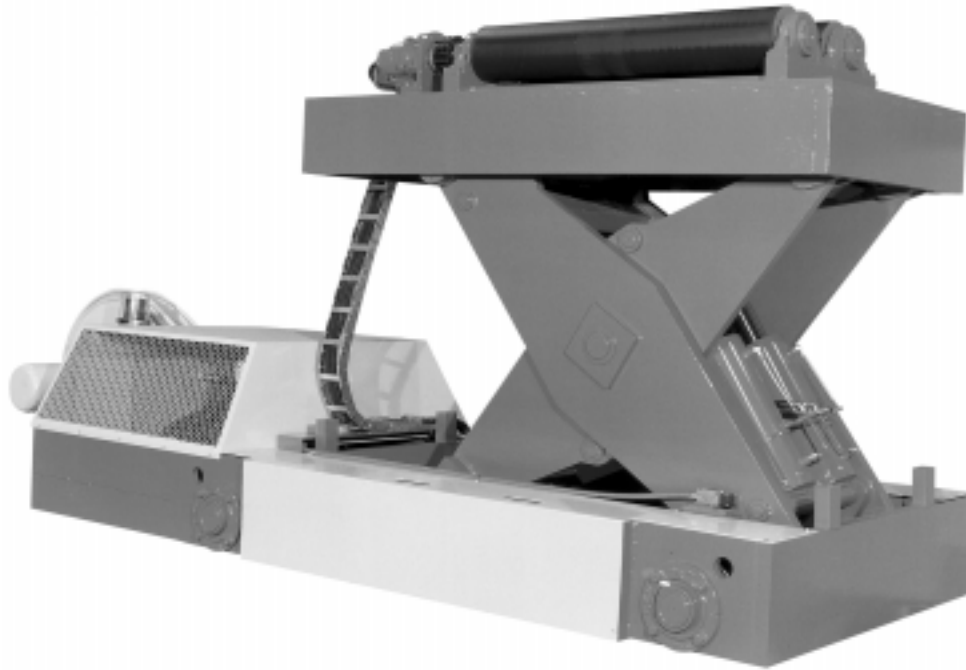


Owner's Manual
Coil Car
Powered Lift



Model # _____

Serial # _____

Date placed in service _____



SOUTHWORTH

Southworth Products Corporation

P.O. Box 1380 • Portland, ME 04104-1380

Telephone 1-800-743-1000 • FAX 207-797-4734

www.SouthworthProducts.com

service@SouthworthProducts.com

TABLE OF CONTENTS

INTRODUCTION	2
Safe Servicing of the Coil Car	2
SAFETY	3
Hazards	4
INSTALLATION INSTRUCTIONS	6
OPERATING INSTRUCTIONS	7
Operating Procedure	7
MAINTENANCE	8
Routine Periodic Maintenance	8
Monthly	9
Annually	9
PARTS INFORMATION	9
Ordering Replacement Parts	9
Contacts	9

LIST OF FIGURES

Figure 1 Safe Servicing of the Coil Car	1
Figure 2 Labels and Precautionary Markings	5
Figure 3 Hydraulic Fluid Specification	9
Figure 4 Grease Fitting Arrangement	10
Figure 5 Pinch Points	10

COIL CAR OWNER'S MANUAL

INTRODUCTION

Southworth's coil car series is designed to lift and transport coils. This series contains many different combinations of load capacities, vertical travel, tabletop size and types, power sources and other characteristics.

This manual contains information to acquaint you with the safe and proper installation, use, and upkeep of a coil car series lift table. You should ensure that this manual is available to personnel working with and on the coil car and require its use by these personnel. The instructions set forth 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 entire manual carefully, and be familiar with its contents before you install, use, or service the coil car. If you have any questions about any of the instructions in this manual,

please contact your dealer or Southworth Products Corporation.

Southworth's product warranty is shown on the back 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 expressed 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, or consequential damage of any kind resulting from the coil car.

SAFE SERVICING OF THE LIFT

This is the only safe way to work under a coil car. In this manual, we will refer you to this procedure many times. **In the interest of safety please follow all of these steps whenever you work under the coil car:**

WARNING!

As the lift moves up and down, "pinch points" are created. If you are standing too close to the coil car when it is moving, your arm or leg may be caught in the moving parts, and you may be hurt. Stay away from the pinch points when the lift is moving see Figure 5.

WARNING!

Be sure to use both the left and right maintenance device. Both the left and right devices supplied with your machine must be used to support the table safely.

- **Remove the payload** from the tabletop
- **Raise the coil car platform** to the full-up position. Don't let the table stop part way up.
- **Move the maintenance devices** into position as shown in Figure 1. Lower the table so the rollers are resting firmly against the devices. **Note:** Some

Coil Cars are designed so that the scissors legs lower only when powered down by the hydraulic power unit. In this event a manually operated ball valve is located in the drive housing so that the scissors leg set and tabletop may be lowered by gravity. Please refer to the hydraulic schematic for more information. **DO NOT** power the table down onto the maintenance devices as it may damage the machine. With the maintenance devices properly installed the pressure in the hydraulic system will be relieved. After maintenance has been performed the ball valve must be returned to the closed position so that the lift table may be powered up and the maintenance devices removed.

If you do not do this, pressure may remain in the hydraulic system. If this pressure is released suddenly, you may be hurt, or the Coil Car may be damaged. Once in position the devices will keep the legs from moving, and prevent the lift from dropping suddenly.

- **Complete the work** under the lift, then reverse the process to get the coil car ready for operation.
- **Repeat this process** every time you must work under the coil car. Do this even if you will only be under the table for a moment!

SAFETY

In the interest of safety, please read this entire manual carefully. Please understand the material in this manual before you operate the Southworth coil car. Please be sure that everyone who uses or services the coil car has read this manual. If you have any questions about any of the instructions in this manual, please contact your dealer or the Southworth Products Corporation.

Southworth is concerned about the safety of everyone who operates, maintains, repairs, or works near the Southworth coil car. It is a powerful ma-

chine with moving parts, and can cause personal injury if you do not take proper precautions.

For this reason, through out this manual, we have pointed out some of the hazards that may occur as you use the machine. We have also listed the instructions or precautions you should take to avoid these hazards. In some cases, we have also pointed out the consequences that may occur if you do not follow these instructions or precautions. We will use the following system to identify the severity of the hazards:

- “DANGER”** Immediate hazard which will result in severe personal injury or death.
- “WARNING”** Hazardous or unsafe practice which could result in severe personal injury or death.
- “CAUTION”** Hazardous or unsafe practice which could result in minor personal injury or property damage.

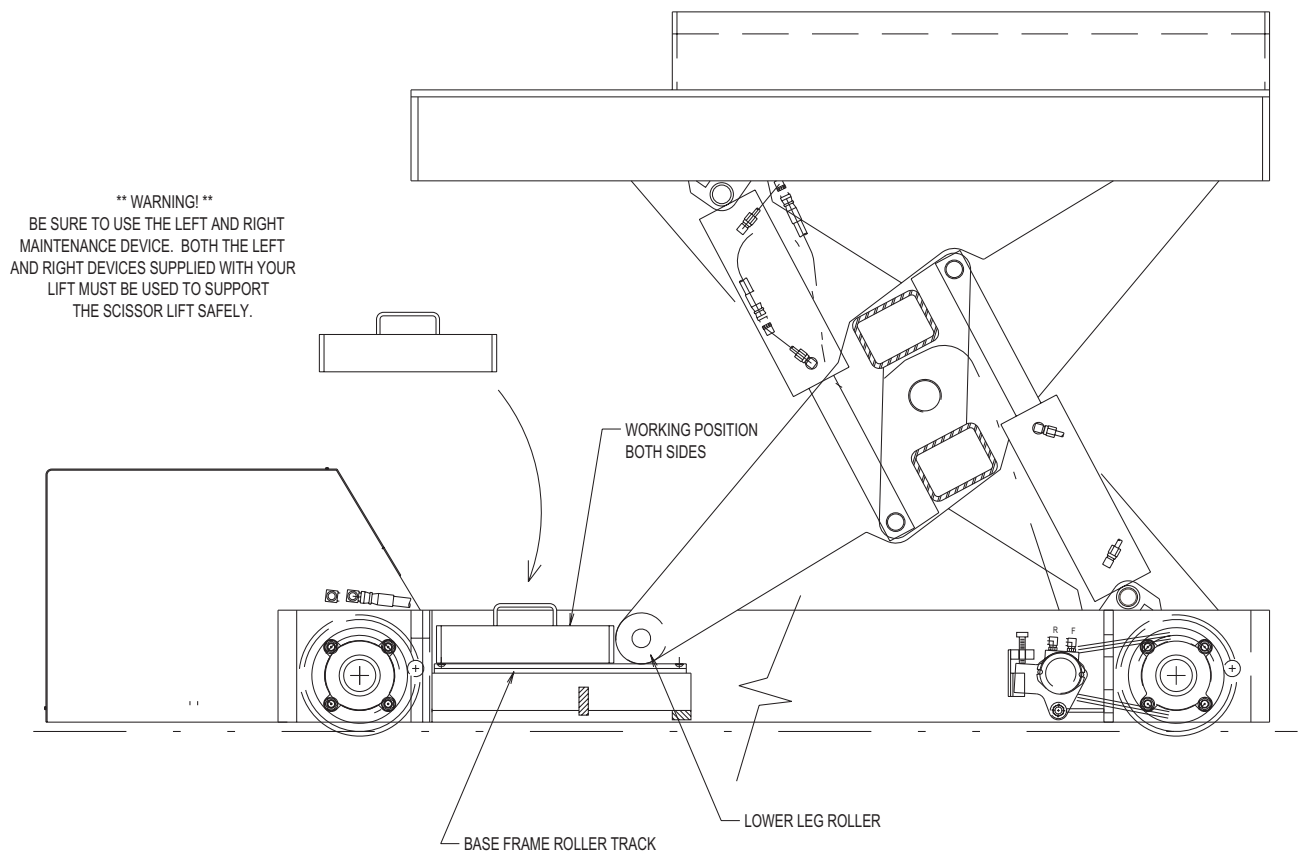


Figure 1 Safe Servicing of the Lift

COIL CAR OWNER'S MANUAL

HAZARDS

DANGER!

In the interest of safety, please read all of this manual carefully, and be familiar with its contents before you install, use, or service the coil car. If you have any questions about any of the instructions in this manual, please contact your dealer or Southworth Products Corporation.

DANGER!

The coil car may use a power supply of up to 575 volts AC. This voltage can kill you. Do not work with the electrical parts unless you are qualified electrician.

DANGER!

Protect the power unit from rain or moisture. If the electrical parts in the power unit get wet, workers may be hurt by electrical shock. The electrical parts may fail if they are wet.

DANGER!

Safety guards need to be incorporated to ensure people and mobile equipment are kept from the traverse path of the coil car. If not, serious personnel injury or equipment damage may result.

DANGER!

The coil car must *never* be operated without all pin keepers properly installed. If not properly installed serious personnel injury or equipment damage may result.

WARNING!

Do not use to lift people. No riders.

WARNING!

Do not change the relief valve setting. This valve has been included for the protection of operators. Contact Southworth Products Corp. for instructions on the relief valve.

WARNING!

Be sure to use both the left and right maintenance devices. Both the left and right devices supplied with your machine must be used to support the table safely during routine maintenance see Figure

1.

WARNING!

As the lift moves up and down, "pinch points" are created. If you are standing too close to the coil car when it is moving, your arm or leg may be caught in the moving parts, and you may be hurt. Stay away from the pinch points when the lift is moving see Figure 5.

WARNING!

When adjusting the flow control, always raise the lift table and insert both maintenance devices. Do not try to adjust the flow control while pressing the "down" button. If you try this, the lift table may suddenly drop causing personal injury.

WARNING!

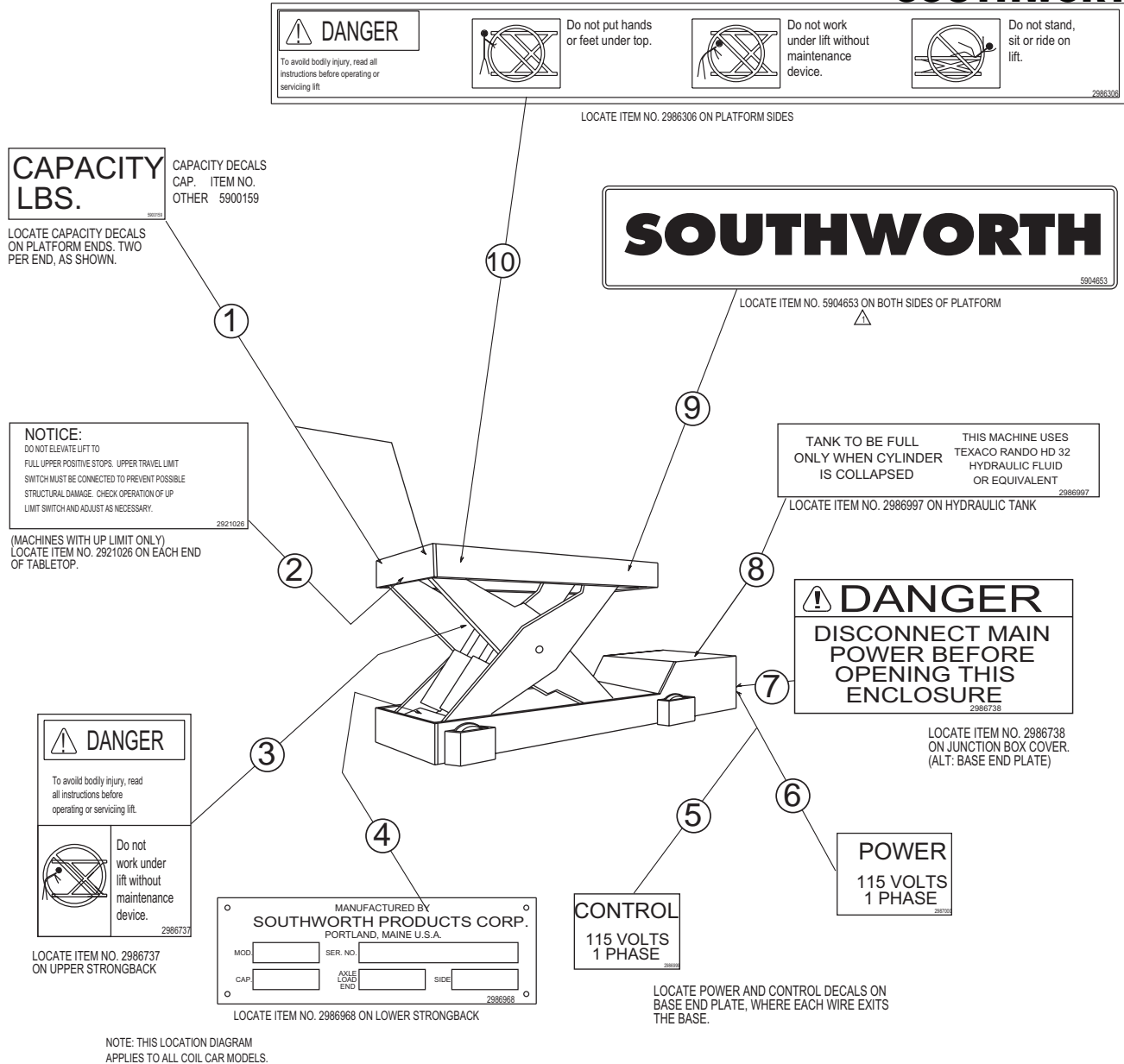
Do not try to lift or lower a load that exceeds the maximum rated capacity. If you try this, the lift may fail suddenly. Someone may be hurt, and the lift and load may be damaged.

WARNING!

The warning labels on the coil car are there for the safety of the operators. If the labels are worn or missing, or have been painted over, replace them before releasing the coil car for operation. Contact Southworth Products or your dealer for free replacement labels.

WARNING!

If a hydraulic fitting becomes loose, or if a hydraulic hose breaks, the hydraulic fluid may escape from the system under pressure. If the lift is raised when this happens, it can drop quickly. Someone may be hurt, or the lift or load may be damaged.



Item	Part #	Location
1	5900159	On platform ends
2	2921026	On tabletop ends
3	2986737	On upper strongback
4	2986968	On lower strongback
5	Control Decals:	
	2986999 (115/1/60)	
	2986998 (24/1/60)	
	5900166 (24VDC)	
	5900167 (110/1/50)	
	On base end plate where wire exits base	
6	Power Decals:	
	2987000 (115/1/60)	2991783 (12VDC)
	5900160 (230/1/60)	5900161 (24VDC)
	2987001 (208/3/60)	5900163 (10/1/50)
	2987002 (230/3/60)	5900164 (220/1/50)
	2987003 (460/3/60)	2999416 (380/3/50)
	5900162 (575/3/60)	5900165 (415/3/50)
	On base end plate where wire exits base	

Item	Part #	Location
7	2986738	On junction box cover (alt: on base end plate)
8	2986997	On hydraulic tank
9	5904653	On both sides of platform
10	2986306	On platform sides

Figure 2 Labels and Precautionary Markings

COIL CAR OWNER'S MANUAL

INSTALLATION

- 1) Before you start to install the coil car, check for local codes and ordinances that may apply. It is your responsibility to obtain any necessary permits.

Read all of these installation instructions carefully and familiarize yourself with both the electrical and hydraulic schematic of the machine. Be sure to read and understand all of the warnings!

WARNING!

Do not change the relief valve setting. This valve has been included for the protection of operators. Contact Southworth Products Corp. for instructions on the relief valve.

CAUTION!

All valves are factory preset, only minor adjustment may be needed.

DANGER!

The coil car may use a power supply of up to 575 volts AC. This voltage can kill you. Do not work with the electrical parts unless you are qualified electrician.

- 2) Position the coil car on the tracks and make all necessary electrical and hydraulic connections.

DANGER!

Safety guards need to be incorporated to ensure people and mobile equipment are kept from the traverse path of the coil car. If not, serious personnel injury or equipment damage may result.

- 3) Make sure the coil car tracks are installed to specification. Remove any debris or obstacles so the coil car can traverse safely.

OPERATING INSTRUCTIONS USING THE SOUTHWORTH COIL CAR

Please read the whole section on “Safety” Before you operate the unit. The coil car has been designed to be as safe as possible for the operator. However, the unit is a powerful piece of machinery. You can be badly hurt if you bypass the safety switches or break some other safety rules.

This coil car has been designed and built by Southworth Products with hydraulic components & other material referenced within this manual. The controls & control logic for the operation of this equipment is supplied by others and the operating instructions must be provided by them.

DANGER!

The coil car may use a power supply of up to 575 volts AC. This voltage can kill you. Do not work with the electrical parts unless you are qualified electrician

DANGER!

Protect the power unit from rain or moisture. If the electrical parts in the power unit get wet, workers may be hurt by electrical shock. The electrical parts may fail if they are wet.

DANGER!

Safety guards need to be incorporated to ensure people and mobile equipment are kept from the traverse path of the coil car. If not, serious personnel injury or equipment damage may result.

WARNING!

Do not try to lift or lower a load that exceeds the maximum rated capacity; someone may be hurt and the lift and load may be damaged.

CAUTION!

Brake valve – factory set – do not readjust.

- 1) Once all connections are made, the following checks need to be performed:
 - check all limit switches
 - check interlocks
 - traverse the coil car forward and reverse
 - Test the coil car manually
 - Test the coil car under load

- 2) As a final step, clean up any spilled hydraulic fluid. Spilled hydraulic fluid is slippery, and may present a fire hazard. Also, if you clean up any spilled fluid, you will be able to detect any leaks right away.
- 3) For proper operation of the coil car, the coil must be firmly seated on the cradle prior to the release of the winder chucks. This will ensure the coil can not fall onto the coil car possibly resulting in damage to the coil car, or the coil.
- 4) Coil cars equipped with “Blocker Rolls” or “Vee Cradle”. (Reference the hydraulic schematic). The pressure switch for the reduced pressure lift valve is pre set at the factory. It should require no field adjustment.

The intended function is to allow the lift table “blocker rolls” to remain in contact with the coil during the final wraps onto the coil. When the blocker rolls meet up with the coil, the pressure switch senses this. The lifting circuit is then switched to holding. When the pressure applied, due to the final wraps of the coil enlarging the diameter, exceeds the setting of the relief valve in the line, hydraulic fluid is directed to tank.

The reduced pressure lift valve is to be open as the lift table raises to the coil and during the final wraps. This allows the leg sets to collapse just enough to allow the “blocker rolls” position to adjust to the face of the coil. The blocker rolls will not drift down due to the setting of the relief valve in the line.

Sometimes this arrangement is requested to be supplied with coil cars that are equipped with a “Vee Cradle” instead of the blocker rolls. In this case the pressure switch is used to indicate that there is intimate contact between the vee cradle and the coil. It is not to be used for final wraps to the coil. In either case it is important to make certain that the reduced pressure lift valve is in load check position prior to the release of the coil. At locations away from the winder, where coils must be lifted, the reduced pressure lift valve must remain un-energized, in the load check position.

- 5) Be sure all workers are clear of the coil car. Remove any lumber, debris or material that may fall in or around the coil car.

MAINTENANCE

All servicing should be done by qualified personnel. Qualified personnel should be able to read and understand wiring and hydraulic diagrams. They should be able to trouble shoot live electrical circuits safely and in accordance with accepted practice.

For safety sake, if in doubt, please contact Southworth Products Customer Service Department at (800) 743-1000.

Before servicing the coil car, read and understand this entire section and the section entitled "Operating Instructions".

HAZARDS

There are hazards you should be aware of as you service the coil car:

DANGER!

The coil car may use a power supply of up to 575 volts AC. This voltage can kill you. Do not work with the electrical parts unless you are qualified electrician.

DANGER!

Protect the power unit from rain or moisture. If the electrical parts in the power unit get wet, workers may be hurt by electrical shock. The electrical parts may fail if they are wet.

WARNING!

Be sure to use both the left and right maintenance devices. Both the left and right devices supplied with your machine must be used to support the table safely during routine maintenance (See Fig 1).

WARNING

As the lift moves up and down, "pinch points" are created. If you are standing too close to the coil car when it is moving, your arm or leg may be caught in the moving parts, and you may be hurt. Stay away from the pinch points when the lift is moving see Fig 5.

WARNING!

Release of fluids under high pressure can cause personal injury. Before you open any part of the hydraulic system, be sure

to release the hydraulic pressure.

WARNING

The warning labels on the coil car are there for the safety of the operators. If the labels are worn or missing, or have been painted over, replace them before releasing the lift for operation. Contact Southworth Products or your dealer for free replacement labels (See Fig 2).

ROUTINE PERIODIC MAINTENANCE

- * Raise the lift and insert the maintenance devices see Fig 1.

Every month:

WARNING!

If a hydraulic fitting becomes loose, or if a hydraulic hose breaks, the hydraulic fluid may escape from the system under pressure. If the lift is raised when this happens, it can drop quickly. Someone may be hurt, or the lift or load may be damaged.

CAUTION!

It is very important to keep the hydraulic fluid free of dirt, dust, metal chips, water and other contamination. Most of the problems with hydraulic systems are caused by contamination in the oil.

- * Visually inspect the leg rollers, center pivot bushings and pins, cylinder clevis pins and bushings, and the leg set hinge pins and bushings for signs of wear. Look for loose or broken bolts or cotter pins, repair and replace as required.
- * Apply light weight oil or WD-40 to all non-greased pivot points or rollers described above.
- * Check the level and appearance of the hydraulic fluid if equipped inspect gauges or dial indicators. Add oil if necessary, change the oil if it has darkened, or feels gritty or sticky (See Fig. 3).

Southworth supplies the unit Texaco Rando HD 32. This may be replaced by any other good-quality oil with 150 SSU at 100° F and rust and oxidation in-

hibitors, and anti-foaming properties.

Type	Manufacturer
D.T.E.24	Mobil Oil Company
Energol HLP32	Standard Oil Company
AW HYD32	Cities Service Oil Company
Survis 816 WR Oil	Sun Refining and Marketing Company
Magnus A32	Exxon Corporation
Amoco AW32	Amoco Corporation

Fig. 3 Hydraulic Fluid Specifications

The following are equivalent to Texaco Rando HD32:

Once a month or 2500 cycles:

- * Grease all grease fittings (See Fig. 4)

Every six months or 15,000 cycles:

- * Check all of the hydraulic fittings and hoses, and tighten the connections as necessary. Sometimes the vibrations from the power unit can work the fittings loose.
- * Inspect the hydraulic oil and replace if necessary. The spin on hydraulic filter may be equipped with a gauge to indicate when replacement is necessary, otherwise, replace filter element. When the gauge has reached this point

If the labels are missing or have been painted over, replace them.

**PARTS INFORMATION
ORDERING REPLACEMENT
PARTS:**

Southworth has carefully chosen the components in your coil car 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 of the machine.** Southworth will gladly supply you with replacement parts for your coil car.

With your order, please include the model number and the serial number of the coil car. You will find these numbers on the nameplate attached to the lower cylinder strongback.

replace at once.

- * Refill the tank with new hydraulic fluid. For any specific hydraulic fluid questions refer to the Material Safety Data Sheet in the back of the manual. For hydraulic fluid specifications refer to Fig 3.
- * Be sure all Labels and Precautionary Markings are in position and legible. (See Fig 2)

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.

Telephone: (207) 878-0700
(800) 743-1000

FAX: (207) 797-4734

repairparts@SouthworthProducts.com

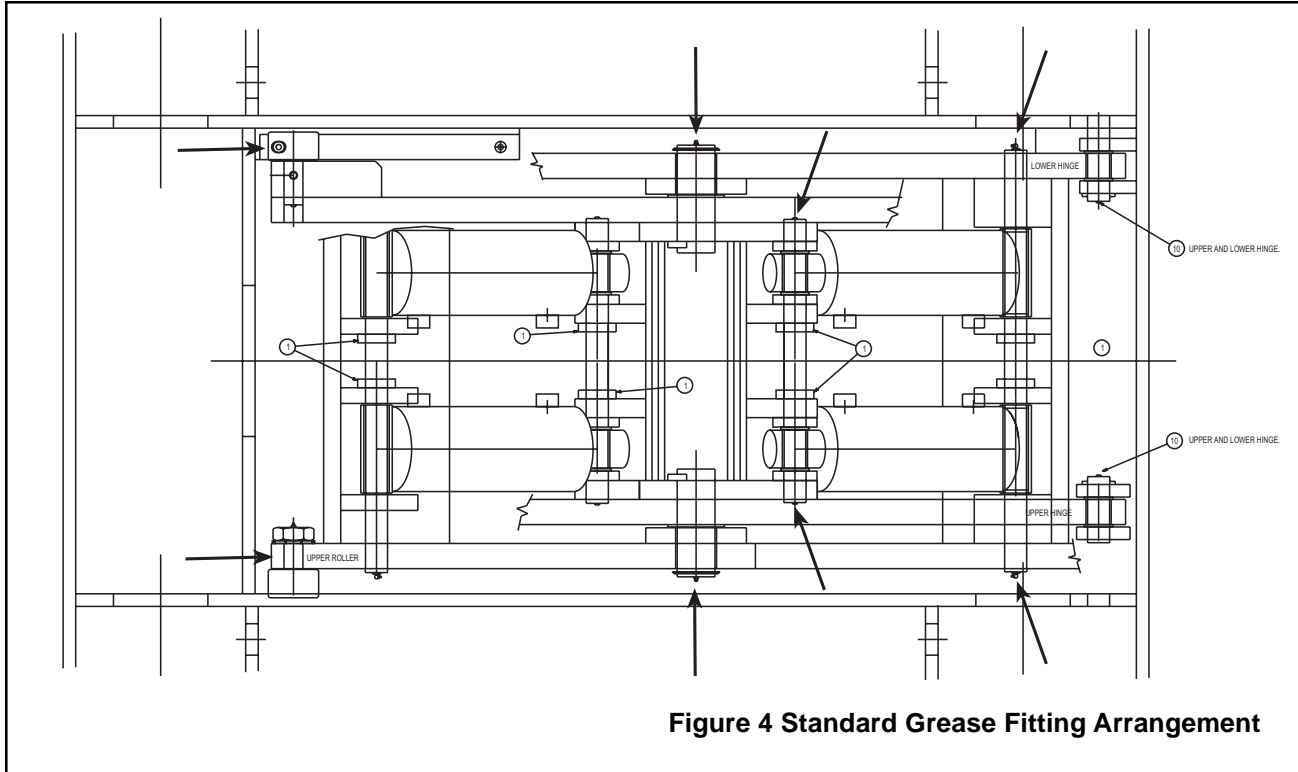


Figure 4 Standard Grease Fitting Arrangement

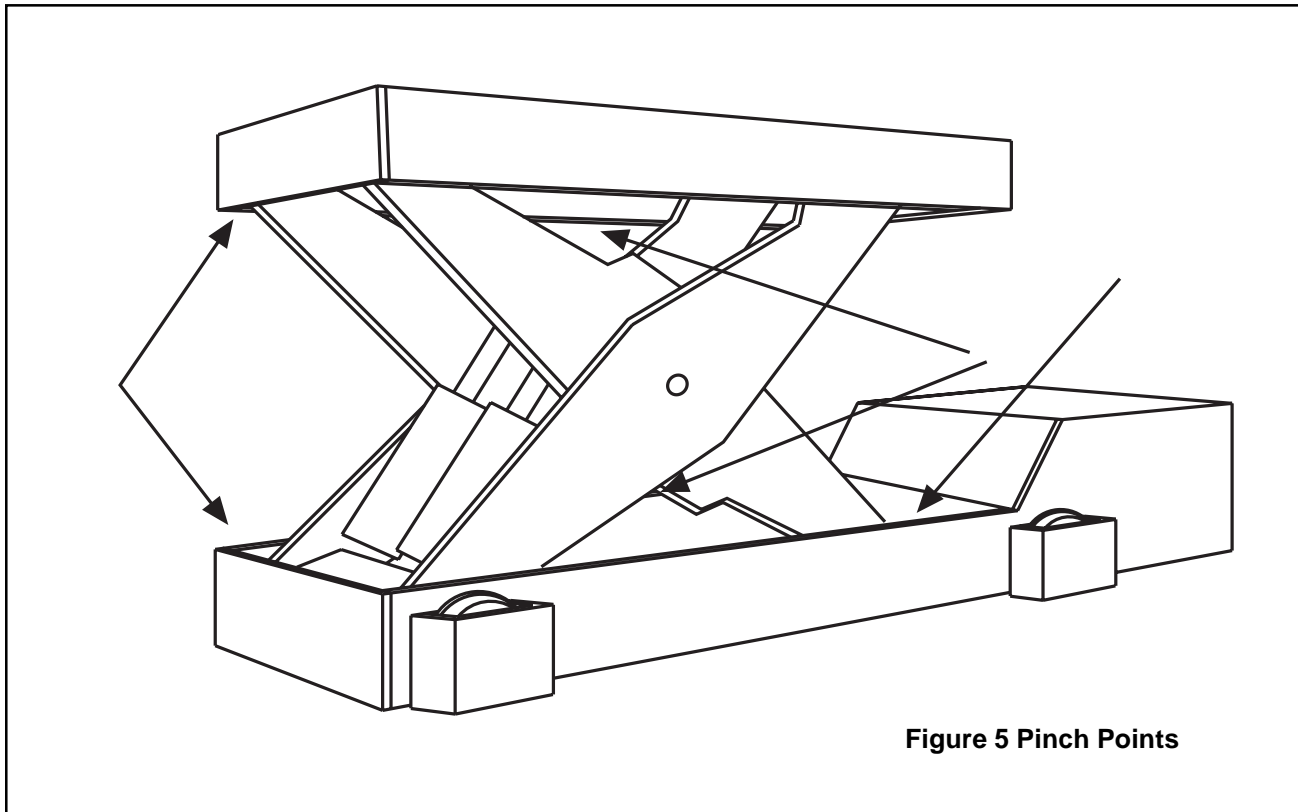


Figure 5 Pinch Points

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.



SOUTHWORTH

P.O. Box 1380
Portland, ME 04104-1380
Telephone 1-800-743-1000 • FAX 207-797-4734

www.SouthworthProducts.com
service@SouthworthProducts.com