

Ergonomic Solutions

OWNER'S MANUAL

AIR HYDRAULIC SCISSOR TABLE MODEL AHLT

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SAFETY PRECAUTIONS

Read owner's manual completely before operating unit! The model number and capacity of the table is incribed on its (green or red) nameplate. Please remember to include these numbers with any correspondence with your dealer or factory. Have only qualified personnel perform maintenance and repairs on this unit.

- The lifting capacity of your unit is based on a uniformly centered load. This capacity should never be exceeded, as permanent damage and/or personnel injury could result. Consult the factory for side or end loading capacities.
- Never lower the unit onto the safety maintenance prop while the table is loaded. Never go under the platform unless the maintenance prop is in position.
- Use AW-32 hydraulic oil (or equivalent), or Dexron II transmission fluid in the tables reservoir. Do not use brake fluids or jack oils.
- Check the setting and conditions of all safety switches and stickers frequently.
- Never operate the table if it or any of its components are **in need of repair**. Notify the appropriate personnel in the event of any unusual noises, movements, or noticeable damage to the table's understructure of controls, or if the table doesn't respond normally to its controls.

OPERATION

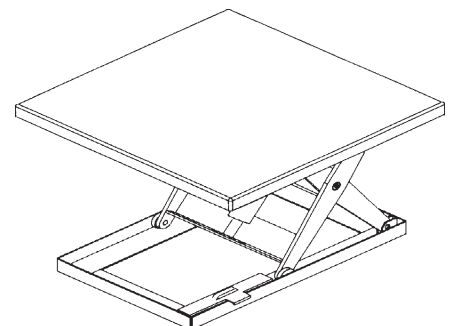
The table is furnished with a remote "deadman" style control. This type of operation, also called "push to run", allows the operator to move the unit as much or as little as necessary. Each press of the air control valves opens a seperate pilot-operated valve to initaiate the desired movement, and movement is creased when the valve is released.

The "RAISE" control opens the motor air supply valve to run the power unit and thereby pump hydraulic fluid to the cylinder(s). When the table raises to the previously determined

upper travel **upper travel** setpoint, and air valve is closed which in turn disables the pilot-operated motor air supply valve and causes the unit to stop.

The "LOWER" control opens a hydraulic "dump" valve to allow that same oil in the cylinder(s) to return **back** to the reservoir. When the unit has completely lowered it will simply stop **lowering**.

- The power **unit's** air motor requires a minimum air supply of 70 CFM at 70 PSI.
- A good quality air filter/lubricator is required for proper, long-term operation of the **table's** power unit. Operation of this machine without **one will void** the warranty!
- Refer to the hydraulic troubleshooting guide if problems arise with the table's operation.
- Regular inspections should be performed on all pneumatic and hydraulic hoses, as will as a visual inspection of all structural members, hinges and components. Check for cracking or scraped paint, oil leaks, noticeable wear at **any pivoting** points, loose or missing fastners and components, etc.



**AIR HYDRAULIC SCISSOR TABLE
MODEL AHLT**

INSTALLATION INSTRUCTIONS

Review Complete Owner's Manual Before Commencing Installation.

For installation you will need the following:

- 1.) A fork truck or hoisting means.
- 2.) Lag bolts, masonry drill, masonry bit, wrench for lag bolt, grout, and steel shims.

Move the lift with straps or forks under frame.

Read all the warning labels on the lift and be sure all of the labels are on the lift.

Check local codes pertaining to your application.

If the power unit is to be mounted externally, be sure to blow out the connecting hydraulic line with compressed air.

Be sure maintenance prop is in place before getting under platform.

After anchoring to floor, shim or grout the full length on the frame sides.
The entire length of the frame sides must be supported.

Operate lift through a few cycles. Check and add oil if necessary. See oil specification elsewhere in this manual.

Clean up any debris or spilled oil.

HYDRAULIC CIRCUIT

When the operator wants to raise the unit, he/she presses the "**RAISE**" button. This opens the air motor supply valve which turns the hydraulic pump. Oil from the reservoir is drawn in through the suction filter and into the pump. The pump delivers the pressurized oil through the check valve before entering the cylinders.

The function of the check valve is to allow the oil to flow in one direction, i.e. towards the cylinders. It also prevents the flow of oil back into the pump circuit when the pump stops running. This holds the oil in the cylinders and maintains the desired elevation.

If the load is excessive, and the "**RAISE**" button is still depressed, pressure will build up in the circuit between the pump and the cylinders. This forces the "ball" or "poppet" in the relief valve to unseat allowing the pump output returns into the reservoir through the return pipe.

When the operator wants to lower the unit, he presses the "**LOWER**" button. This opens a hydraulic "**DUMP**" valve. The poppet in the solenoid valve is unseated and oil now returns from the cylinders through the flow control valve, return filter, the solenoid valve, oil return pipe, and in the reservoir.

The flow control valve controls the down speed of the table. It is preset and cannot be changed.

Releasing the "**LOWER**" control will de-energize the solenoid, closing the valve poppet. This prevents the oil from returning to the reservoir and the cylinders will stop retracting. The unit will maintain that particular elevation.

Cartridge Valves

The lowering valve, as discussed above, is of cartridge construction and is virtually maintenance free. If there is a faulty operation, check trouble shooting section. To clean the cartridge valve, follow this procedure:

- 1.) Use a sharp object and push poppet in from the bottom to open the valve.
- 2.) Repeat several times while valve is immersed in kerosene or mineral spirits. Blow dry.
- 3.) Inspect "O" rings and the teflon extrusion washer.
- 4.) Reinstall. The valve should be tightened to approximately 30 ft. lbs.

Velocity Fuse

There is a brass velocity fuse with a stainless steel spring in the base of each cylinder. In the event of a hydraulic pump failure, the platform starts to lower at a fast rate. As soon as the descent speed exceeds the preset speed, the velocity fuse will shut off the oil flow and the platform will remain stationary until pressure is reapplied. This safety feature reduces the possibility of accidental personal injury or damage to the table or contents. To reset the velocity fuse just briefly activate pump by depressing the "**RAISE**" button.

LOADING INSTRUCTIONS

The load capacity rating as inscribed on the nameplate of your unit designates the net capacity, assuming the load is centered. This capacity must never be exceeded, as permanent damage or injury may result.

OPERATING INSTRUCTIONS

This unit is furnished with constant pressure ("deadman" type) push button controls. Depressing the "RAISE" control opens the motor air supply valve. The cylinder begins to extend and the deck starts to raise. Stand to the side when operating. Stay clear of moving parts. The platform will rise as long as the "RAISE" control is pressed.

On releasing the control, the unit will cease to rise and will remain at that particular elevation. This is because the pushbutton valve will close which in turn closes the pilot-operated motor air supply valve.

On pressing the "LOWER" control, the lowering solenoid valve is energized. The cylinders retract as the oil returns to the reservoir and, upon releasing the control, the unit will cease to lower, remaining at that particular elevation. Be certain no person or object is in the way when the unit is descending.

In the event the unit is overloaded, it will not raise the relief valve will open due to excessive pressure buildup, an oil will bypass into the reservoir.

Always remember that the motor runs only when the "RAISE" button is depressed and the lowering solenoid valve is energized only when the "LOWER" button is pressed.

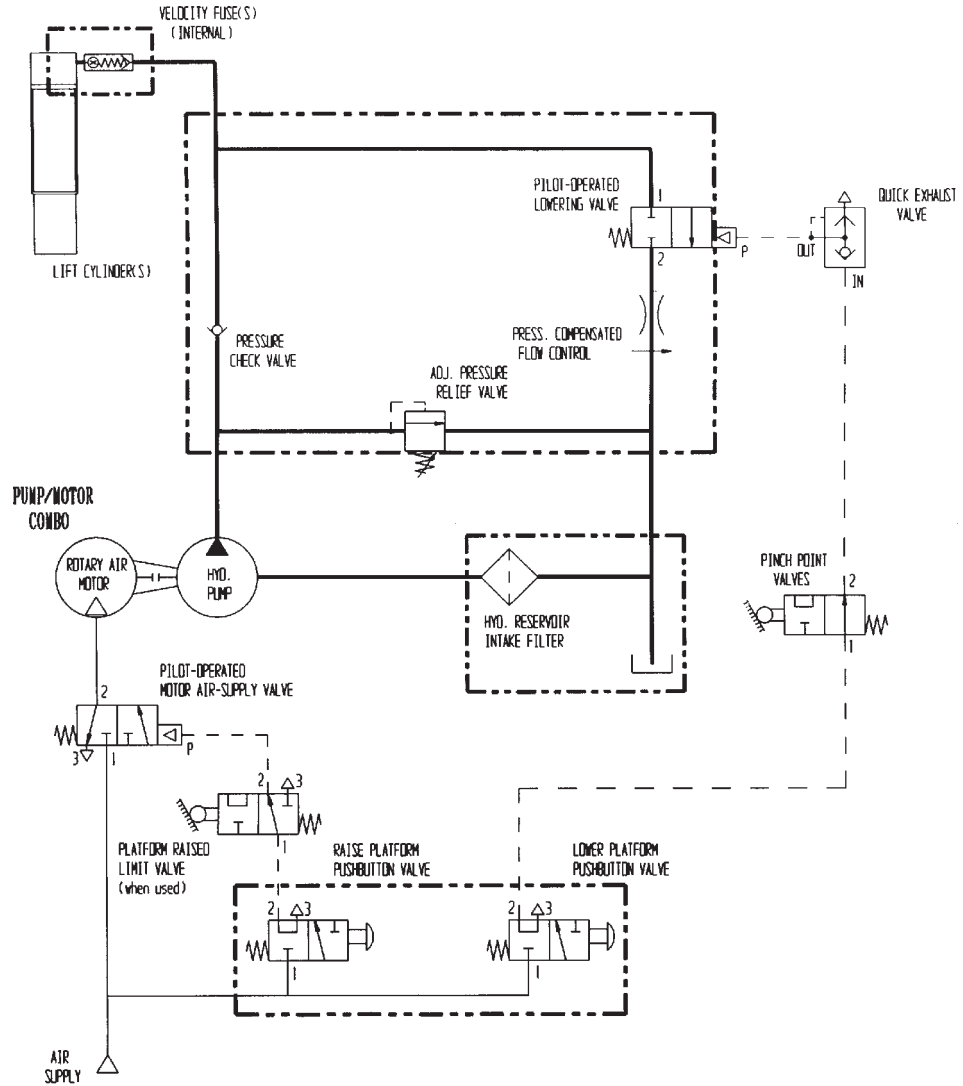
SAFETY INSTRUCTIONS TO THE OPERATOR

- 1.) Always load the unit properly.
- 2.) Never use the Lift if it is in need of repairs or in the case of malfunction.
- 3.) Notify your maintenance personnel in case you notice anything out of the ordinary, such as binding, odd pump noises, etc.
- 4.) Do not continue to depress the "UP" control if the unit is not raising. You can permanently damage the motor or pump by doing so.

ORDERING REPLACEMENT OR EXTRA PARTS

Our company takes pride in using the finest available parts for our equipment. We are not responsible for equipment failure resulting from the use of unapproved replacement parts. To order replacement or extra parts for your equipment contact Customer Service at the factory. In any correspondence with the factory please include the **serial number** which is inscribed on the nameplate of the piece of equipment. Use only the part numbers provided in this Owner's Manual.

PNEUMATIC/HYDRAULIC DIAGRAM



MINIMUM AIR SUPPLY: 70 SCFM @ 80 PSI -- RECOMMENDED AIR LINE SIZE 3/4"φ

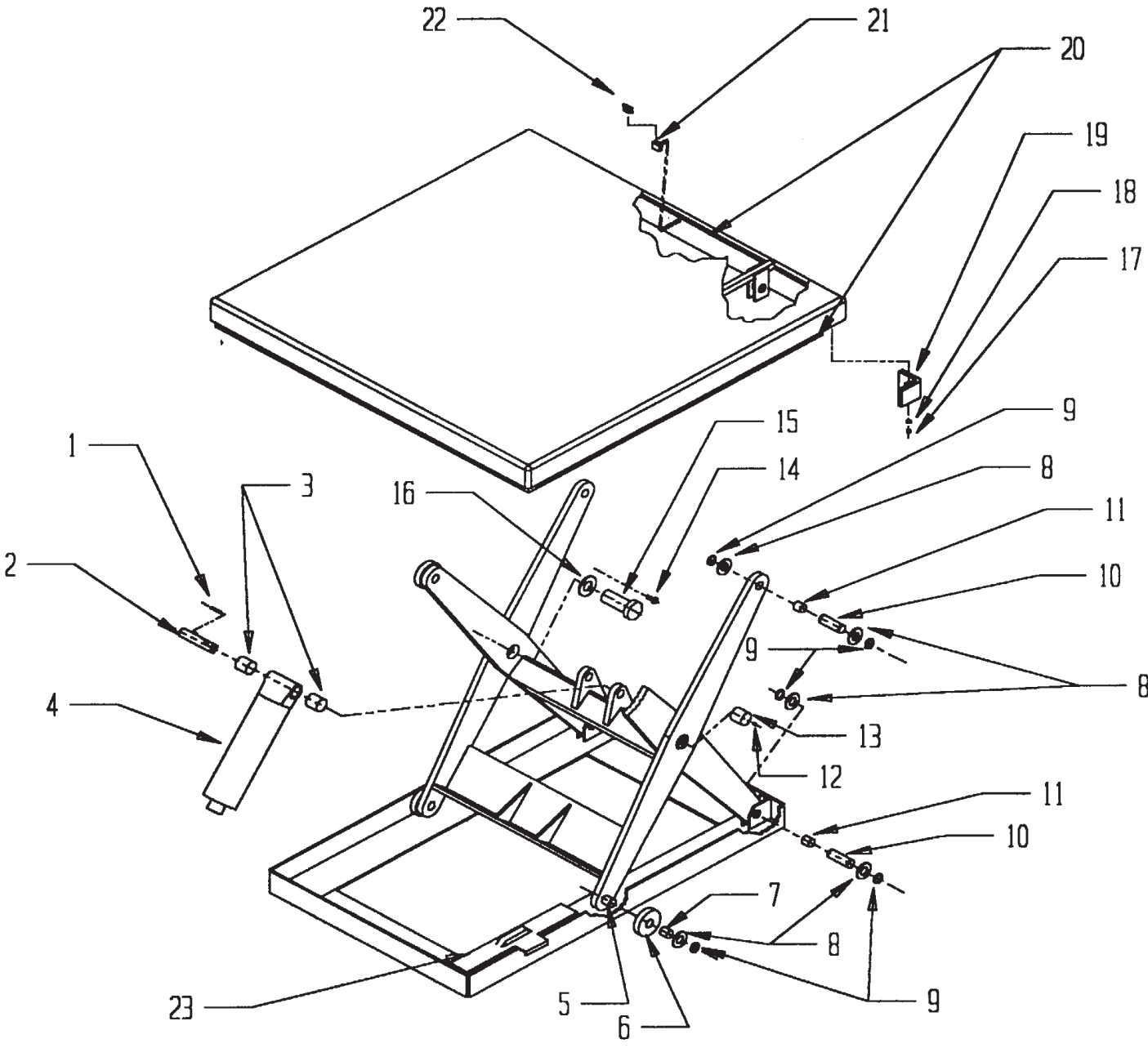
HYDRAULIC LINE —————

AIR SUPPLY LINE —————

AIR PILOT LINE - - - - -

NOTE: Operation of this machine without a filter/lubricator will void the warranty!

AIR HYDRAULIC SCISSOR TABLE
MODEL AHLT



AIR HYDRAULIC SCISSOR TABLE MODEL AHLT

ITEM NUMBER	DESCRIPTION	PART NUMBER	QTY
1	CYLINDER MOUNT SPRING PIN	ST-SPRGPIN	1
2	CYLINDER MOUNT PIVOT PIN	ST-CYLPIN	1
3	CYLINDER MOUNT BEARING	ST-CYLBORG	2
4	HYDRAULIC CYLINDER	ST-CYL	1
4A	CYLINDER SEAL KIT (NOT PICTURED)	ST-CYLSLKT	1
5	ROLLER PIN	ST-RLPIN	4
6	ROLLER	ST-RLR	4
7	ROLLER BEARING	ST-RLRBRG	4
8	ROLLER WASHER	ST-RLRWSHR	4
9	ROLLER SNAP RING	ST-RLRNRG	4
10	HINGE PIN	ST-HNGPIN	4
11	HINGE PIN BEARING	ST-HNGBRG	4
12	PIVOT PIN GREASE ZERK	ST-GRSZRK	2
13	PIVOT PIN BEARING	ST-PVTBRG	2
14	PIVOT PIN ROLL PIN	ST-PPRP	2
15	PIVOT PIN	ST-PVTPIN	2
16	PIVOT PIN WASHER	ST-PVTPIN	2
17	TOE GUARD HANGER NUT	ST-HNGRNUT	4
18	TOE GUARD HANGER WASHER	ST-HNGRWSH	4
19	TOE GUARD CORNER PIECE	ST-TGRDCNR	4
20	TOE GUARD ALUMINUM RAIL	ST-TGRDRAIL	4
21	TOE GUARD SWITCH	ST-TGRDSW	2
22	TOE GUARD SWITCH RETAINING SCREW	ST-TGRDSCR	4
23	SAFETY STOP BLOCK	ST-STBLK	1

****PLEASE SUPPLY SERIAL NUMBER AT TIME OF ORDER****

HYDRAULIC EQUIPMENT

Trouble Shooting Quick Reference Guide
(For further information contact the factory)

****BEFORE PREFORMING ANY MAINTENANCE WORK ALWAYS INSTALL MAINTENANCE SAFETY BLOCKS****

Observation	Possible Cause	Remedy
1.) Table does not raise but pump is running	<ul style="list-style-type: none"> a. Hose or hydraulic line is leaking. b. Fluid level in reservoir is low. c. Load exceeds capacity requirements. Relief Valve is bypassing the fluid back into the reservoir. d. Suction filter is clogged, starving pump. e. Suction line may be leaking air, due to loose fittings. f. Filler/Breather cap on tank may be clogged. g. Lowering Valve may be energized by faulty wiring or stuck open. h. Hydraulic pump may be inoperative. 	<ul style="list-style-type: none"> c. Correct as necessary. d. Add fluid. Refer to Owner's Manual for proper fluid levels. e. DO NOT CHANGE RELIEF VALVE SETTING. Instead, reduce the load to rated capacity. f. Remove and clean. g. Inspect all fittings for proper fit. h. Remove and clean. i. Remove solenoid valve. Check and clean. (Refer to Hydraulic Section of Owner's Manual). j. Disconnect hydraulic line at power unit. Put pressure line in a large container and cycle pump. If no output, check the pump motor coupline, which may be defective, and correct as necessary. If pump is worn, consult factory for replacement parts service.
2.) Table raises too slowly.	<ul style="list-style-type: none"> a. Foreign material stuck in lowering solenoid, causing some fluid to bypass back into tank. b. Foreign material clogging suction filter, breather cap, or a pinched hose. d. Table overloaded. e. Pump is inoperative. 	<ul style="list-style-type: none"> a. Lower the platform. Remove the solenoid valve and clean. (Refer to Hydraulic Section of Owner's Manual). b. Correct as necessary. (See also, 1(f), (h)). d. See 1(e). e. See 1(j).
3.) Motor labors, or is excessively hot.	<ul style="list-style-type: none"> a. Oil starvation causes pump to bind. High internal heat is developed. If this occurs, pump may be permanently damaged. b. Binding cylinders. 	<ul style="list-style-type: none"> a. See 1(d), (f), (g), (h), (j). b. Align cylinders correctly.
4.) "Spongy" or "Jerky" table operation. Do not confuse spongy operation with small surges caused by foreign material on table wheel roller plate.	<ul style="list-style-type: none"> a. Fluid starvation. b. Air in system. 	<ul style="list-style-type: none"> a. See 1(d), (f), (g), (j). b. See air bleed procedure p.9.
5.) Table lowers too slowly when loaded.	<ul style="list-style-type: none"> a. Down Valve filter clogged. b. Pinched tube or hose. c. Foreign material in flow control valve. d. Binding cylinders e. Foreign material in velocity fuse. 	<ul style="list-style-type: none"> a. Remove solenoid valve and clean filter. b. Correct as necessary. (In case of pipe, check for obstruction in line.) c. Remove and clean Flow Control Valve. (Refer to Hydraulic Section of Owner's Manual). d. Align cylinders correctly. e. Remove and clean velocity fuse. (Refer to Hydraulic Section of Owner's Manual.)

Observation	Possible Cause	Remedy
6.) Table lowers too quickly.	<p>a. Leaking hoses and/or cracked fittings.</p> <p>b. Check valve is stuck open. (The combination of a stuck Check Valve and open Solenoid Valve will cause excessive speeds.)</p> <p>c. Foreign material stuck in Flow Control Valve. (In this case, table lowers initially at a normal rate then speeds up as the platform descends.)</p>	<p>a. Correct as necessary.</p> <p>b. Remove and clean Check Valve. (Refer to Hydraulic Section of Owner's Manual).</p> <p>c. Remove Flow Control Valve from the Valve Block and clean. (Refer to Hydraulic Section of Owner's Manual).</p>
7.) Table raises then lowers slowly.	<p>a. Down Solenoid Valve may be incorrectly wired or is stuck open due to dirt.</p> <p>b. Check Valve may be stuck open.</p> <p>c. Check for leaking hoses, fittings, pipes.</p> <p>d. Cylinder packings may be worn or damaged.</p>	<p>a. See 2(a).</p> <p>b. Remove and clean Check Valve. (Refer to Hydraulic Section of Owner's Manual).</p> <p>c. Correct as necessary.</p> <p>d. Replace packings. (Consult Factory for replacement parts.)</p>
8.) Table has raised, but does not lower.	<p>a. Down Solenoid Valve is stuck.</p> <p>b. Faulty Down Solenoid Coil.</p> <p>c. Maintenance safety bar, or some other object blocking down travel.</p> <p>d. Binding cylinders.</p> <p>e. In case of excessive down speeds, the Velocity Fuse will become operative and shut off the oil flow from the cylinders, thus the platform will remain stationary.</p> <p>f. Check if the Limit Switch is inoperative and the platform has raised all the way so that the mechanical stops are engaged. If mechanical stops are engaged, the Velocity Fuse has been locked up.</p>	<p>a. Lightly tap down the Solenoid Coil body to seat it properly. (DO NOT hit coil hard as it will permanently damage the internal stem). DO NOT remove the Solenoid Valve from the Block as the unit will come down at a dangerous speed.</p> <p>b. Remove and replace. (Refer to Electrical Section of Owner's Manual.)</p> <p>c. Raise table and remove the safety bar, or whatever object is blocking the down travel, then press the down button.</p> <p>d. See 2(e).</p> <p>e. To unlock, re-pressurize the hydraulic system.</p> <p>f. Refer to Velocity Fuse Section of the Owner's Manual</p>

Notes:

Routine Maintenance & Safety

Raise the table and install the maintenance safety prop before beginning any inspection or work on the unit.

(A) Before Each Use Check For The Following:

- 1.) Frayed wires
- 2.) Oil leaks
- 3.) Pinched or chafed hoses
- 4.) Structural deformation of arms, frame, and platform
- 5.) Unusual noise or binding

Do not use if there are any of the above!

(B) Monthly Inspections

- 1.) Check oil level. Oil should be 1" to 1-1/2" below the top of the tank with the lift in the fully lowered position. Add as necessary.
- 2.) Check for oil leaks. See trouble shooting section and correct as necessary.
- 3.) Check roller bushings, axle pin, clevis and pivot points for wear.
- 4.) Check for worn or damaged hydraulic hoses. Repair as necessary.
- 5.) Check rollers for looseness and wear. See trouble shooting.
- 6.) Check retaining rings at all axles, pivot points and clevis.
- 7.) Check for unusual noise. See trouble shooting.
- 8.) Make sure all warning labels are in place and in good condition.
- 9.) Clean off dirt and debris.

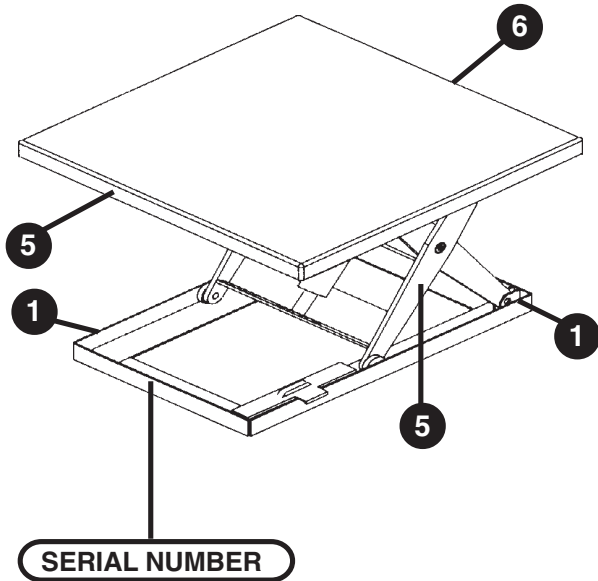
(C) Yearly

Oil reservoir should be changed at least once a year, or sooner if the oil darkens or becomes gritty. Presence of water is indicated if the oil turns milky. Recommended oil: AW-32 Hydraulic fluid or equal.

All maintenance work must be preformed by qualified personnel with training in the repair of electrical and hydraulic components.

WARNING LABEL IDENTIFICATION

MAKE SURE ALL WARNING LABELS ARE IN PLACE!



*Product safety signs or labels should be periodically inspected and cleaned by the product users as necessary to maintain good legibility for safe viewing distance . . . ANSI 535.4 (10.21)
Contact manufacturer for replacement labels if needed.

1	⚠ WARNING SECURE FRAME TO FLOOR	⚠ AVISO ASEGURE EL BASTIDOR AL PISO	⚠ AVERTISSEMENT FIXER SOLIDEMENT LE CADRE AU PLANCHER
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2 ON HYDRAULIC TANK (NOT SHOWN)

ISO AW-32

HYDRAULIC OIL OR EQUIVALENT
ACEITE HIDRÁULICO O EQUIVALENTE
HYDRAULIQUE OU ÉQUIVALENT

3 FOUND ON HANDLE

PLATFORM MUST BE LOWERED BEFORE MOVING LIFT

LA PLATAFORMA DEBE DE SER BAJADA ANTES DE MOVER EL MONTACARGAS

LA PLATE-FORME DOIT ÊTRE ABAISSÉE AVANT D'ACTIVER LE MONTE CHARGE

4

FOR USER INSTRUCTIONS OR QUESTIONS CONTACT
PARA INSTRUCCIONES DE USO Ó CONSULTAS CONTACTAR
POUR INSTRUCTIONS OU QUESTIONS SUPPLÉMENTAIRES CONTACTER

T & S EQUIPMENT CO. • P.O. BOX 496 ANGOLA, IN 46703 • 1-800-348-0860 OR 219-665-9521

5 BOTH SIDES & FRONT END

⚠ WARNING KEEP CLEAR OF PINCH POINT	⚠ AVISO MANTENGASE ALEJADO DE PUNTO DE CORTE	⚠ AVERTISSEMENT SE TENIR À DISTANCE DU POINT DE PINCEMENT
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6

<p>⚠ DANGER</p> <p>⚠ PELIGRO</p> <p>⚠ ATTENTION</p>	<p>TO AVOID PERSONAL INJURY READ OWNER'S MANUAL BEFORE OPERATING OR REPAIRING SCISSOR LIFT</p> <p>PARA EVITAR DAÑOS PERSONALES LEA EL MANUAL DEL PROPIETARIO ANTES DE OPERAR O REPARAR EL ELEVADOR DE TIJERAS</p> <p>POUR ÉVITER TOUTE BLESSURE PERSONNELLE LIRE LE MANUEL DU PROPRIÉTAIRE AVANT DE METTRE EN MARCHÉ OU AVANT DE RÉPARER L'ÉLEVATEUR CISEAU</p>	<p>DO NOT PUT HANDS, FEET OR OBJECTS UNDER TOP. LOWER PLATFORM SLOWLY.</p> <p>NO PONGA MANOS, PIES U OBJETOS DEBAJO DEL BORDE. DESCENDA LA PLATAFORMA LENTAMENTE.</p> <p>NE PAS METTRE LES MAINS, LES PIEDS OU TOUT OBJET SOUS LE PLATEAU SUPÉRIEUR. DESCENDRE LA PLATFORME LENTEMENT</p>	<p>DO NOT WORK UNDER LIFT WITHOUT SAFETY BLOCK OR WHILE LOADED. KEEP CLEAR OF MOVING SCISSOR LEG MECHANISM.</p> <p>NO TRABAJE DEBAJO DEL ELEVADOR SIN LOS FRENOS DE SEGURIDAD O CUANDO ESTÉ CARGADO. MANTENGASE ALEJADO DEL MECANISMO DE TIJERA EN MOVIMIENTO.</p> <p>NE PAS TRAVAILLER SOUS L'ÉLEVATEUR SANS BLOCS DE SÉCURITÉ OU LORSQU'IL EST CHARGÉ. RESTER À L'ÉCART DU MÉCANISME CISEAU LORSQUE L'ÉLEVATEUR EST EN FONCTIONNEMENT.</p>	<p>DO NOT STAND, SIT OR RIDE ON LIFT</p> <p>NO SE SIENTE, SE PARE, O VIAJE EN EL ELEVADOR</p> <p>NE PAS SE TENIR DEBOUT, S'ASSEOIR OU MONTER SUR L'ÉLEVATEUR</p>
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LIMITED WARRANTY

ONE YEAR LIMITED WARRANTY. The manufacturer warrants for the original purchaser against defects in materials and workmanship under normal use one year after date of purchase. (Not to exceed 15 months after date of manufacture.) Airbag is warranted for 1 year or half a million cycles, whichever comes first. Any part which is determined by the manufacturer to be defective in material or workmanship and returned to the factory, shipping costs prepaid, will be, as the exclusive remedy, repaired or replaced at our option. Labor costs for warranty repairs and/or modifications are not covered unless done at manufacturer's facilities. Any modifications performed without written approval of the manufacturer may void warranty. This limited warranty gives purchaser specific legal rights which vary from state to state.

LIMITATION OF LIABILITY. To the extent allowable under applicable law, the manufacturer's liability for consequential and incidental damages is expressly disclaimed. The manufacturer's liability in any event is limited to, and shall not exceed, the purchase price paid. Misuse or modification may void warranty.

WARRANTY DISCLAIMER. Our company has made a diligent effort to illustrate and describe the products shown accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the products are merchantable, or fit for a particular purpose, or that the products will necessarily conform to the illustrations or descriptions.

The provisions of the warranty shall be construed and enforced in accordance with the UNIFORM COMMERCIAL CODE and laws as enacted in the State of Indiana.

DISPOSITION. Our company will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within the Limited Warranty. Warranty claims must be made in writing within said year.

SERVICE RECORD

DATE OF SERVICE: ____/____/____
WORK DONE BY: _____
SERVICE PER- FORMED: _____

DATE OF SERVICE: ____/____/____
WORK DONE BY: _____
SERVICE PER- FORMED: _____

DATE OF SERVICE: ____/____/____
WORK DONE BY: _____
SERVICE PER- FORMED: _____

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