

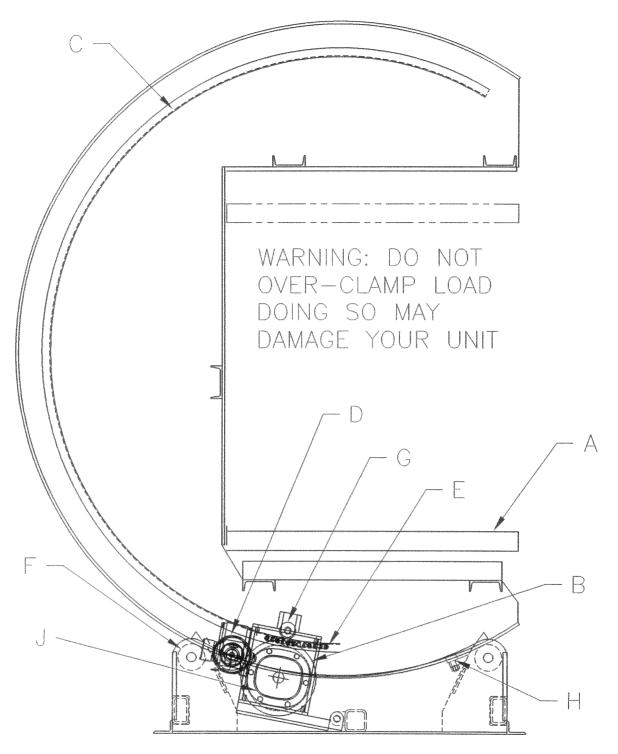
# **UPENDER INVERTER**



# PARTS AND SERVICE MANUAL

## **Air Technical Industries**

7501 Clover Avenue Mentor, Ohio 44060 Phone: 440-951-5191 Fax: 440-953-9237 www.airtechnical.com



- A) SCISSORS LIFT TABLE
- B) SPROCKET #80-2
- C) #80-2 1" PITCH CHAIN
- D) BRAKEMOTOR
- E) CHAIN TENSIONER
- F) MAIN ROLLER
- G) REDUCER SUPPORT ROLLER
- H) SIDE ROLLER
- J) IRONMAN GEAR REDUCER

#### **GENERAL INFORMATION**

You are now the proud owner/user of an Air Technical Industries, Upender/Inverter (UI) with scissor-type, hydraulic-cylinder operated platform.

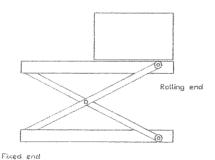
The UI with scissor-type, hydraulic-cylinder operated platform is a highly versatile machine that is designed to perform a wide range of lifting, feeding, accumulating, aligning, transporting, upending, rotating, tilting and moving operations. All units are electric motor powered. On all UIs there are three control options: (1) pedestal control mounted on the unit, (2) foot operated remote control or (3) push button remote control.

The units have the load capacity rating and serial number typed on a label plate attached to one side of the lift platform. The capacity is a net capacity rating for a lift furnished with the standard steel platform. The relief valve of the hydraulic pump has been set to raise the rated capacity, plus a small amount for overload. If there are other fixtures, conveyors, etc. mounted to the platform-deduct the weight of these from the load rating to obtain the net capacity. Units should not be overloaded beyond the established capacity, as damage may result.

NOTE: The unit is not for moving or lifting personnel unless it is specifically intended for that purpose. The equipment is not intended for lifting objects over personnel.

## UNBALANCED LOADING

Stabilization of the hydraulic scissor lift provided is basically for balanced loads. NEVER exceed 50% of the rated capacity on either end or sides of the platform. For unbalanced loading please consult the factory.



#### **OPERATING CHARACTERISTICS**

The hydraulic system, usually contained in the base of the unit, consists of a directly coupled motor-pump combination, oil reservoir, solenoid operated lowering valve and all necessary plumbing. The hydraulic pump is a positive displacement design, and operates at a usual working pressure of 1200-1500 PSI. A fine mesh screen is provided for protection of the pump. This screen is located adjacent to the output port of the reservoir. A pre-

adjusted, built-in, relief valve protects the pump discharge from the effects of overloading.

The operating principle provides that the pump is operated to raise the platform and the pump is stopped when the table attains the desired raised height. A check valve between the pump holds the hydraulic cylinder at the raised height.

#### **FOR LOWERING THE PLATFORM**

The solenoid is energized to allow fluid to return from the hydraulic cylinder to the reservoir. An adjustable flow control valve is connected in the return line to limit the lowering speed under full load conditions.

All automatic controls, added to the lift table, must include provisions for immediately shutting off the pumping unit at the top travel of the table and de-energizing the solenoid at the bottom travel of the table

# BASIC OPERATING INSTRUCTIONS ELECTRIC OPERATION:

#### TO RAISE PLATFORM:

- (1) Insure unit is connected to the correct power source
- (2) Depress "up" button or foot pedal-unit, the platform will raise and continue until the button or foot pedal is released

## CAUTION: DO NOT CONTINUE TO OPERATE BEYOND THE FULL EXTENSION OF THE CYLINDER

TO LOWER PLATFORM: Depress "down" button or pedal, the unit will lower and continue to lower until the button or foot pedal is released.

TO ROTATE UNIT CLOCKWISE: Depress "clockwise" button and the unit will continue to rotate until the button is released or limit switch is engaged.

TO ROTATE UNIT COUNTER-CLOCKWISE: Depress "counter-clockwise" button and the unit will continue to rotate until the button is released or limit switch is engaged.

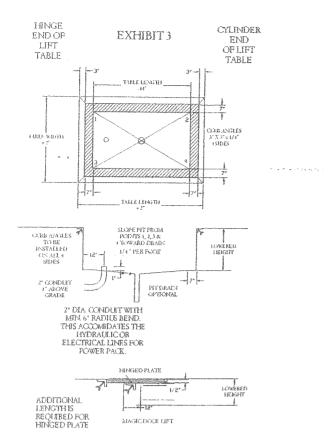
# INSTALLATION SUGGESTIONS PERMANENTLY ANCHORED OR PLACED IN A PIT

#### **SEE EXHIBIT 3**

Permanent installation may be subject to local codes, rules and regulations, permits and inspection. Check your local and national codes and regulations first.

The illustration (EXHIBIT 3) shows the most desirable position of the unit for the greatest stability.

The unit can be moved with a lift truck or slings placed around the base frame-caution should be used not to deform the frame or the platform.



When positioning the lift in a pit, position the lift and align the frame carefully so the 1" clearance is maintained around the unit. Level the unit and place solid shims under the base frame as required.

Where anchor clips have been provided, the bolt fit is close to restrict shifting of lift. This requires careful location of the anchor bolts with consideration of the frame, platform and pit.

The illustration (EXHIBIT 3) offers a choice of anchor bolt installations, which allow considerable movement of the bolts to align with the holes in the anchor clips.

After the unit has been aligned, leveled and shimmed and anchor bolts have been installed, pour grout under entire base frame. When set and cured, tighten nuts or anchor bolts.

Prior to operating the unit table, the hydraulic fittings should be tightened. The fittings can become loose from shipping to your factory.

The hydraulic reservoir should be filled to within 1" (one inch) of the top of the tank, with the table in the lowered position. Spillage can occur, through the vent plug, in the top of the tank during shipment. The fluid is coming from the vent plug. Wipe off all surfaces of any spilled hydraulic fluid.

#### **ELECTRICAL NOTES AND PROCEDURES**

110 Volt requires a 20 Amp fuse, three prong plug with ground.

All three phase motors are dual voltage and need to be wired for 208, 230, or 460.

Always check to ensure the proper rotation of the motor.

The transformer in the magnetic starter box MUST be wired to the proper voltage. H1 & H4 = 460 Volts, H2 & H4 = 230 Volts
H3 & H4 = 208 Volts.

## **BASIC ADJUSMENT INSTRUCTIONS**

PLATFORM LOWERING SPEED TOO FAST-Turn lowering valve to limit flow of oil back to reservoir PLATFORM LOWERING SPEED TO SLOW-Turn lowering valve to increase flow of oil back to reservoir.

# BASIC ADJUSTMENT INSTRUCTIONS FOR VELOCITY FUSES

NOTE: Do not operate table to fully raised position while performing the following adjustment.

Load platform to desired capacity-raise table to **two thirds** (2/3) of the raised height. Lower table-if lowering speed is too fast, the velocity fuses will lock up. If the velocity fuses do lock up, raise the table to height and adjust lowering valve to limit flow of oil back to reservoir. Repeat these steps until the table lowers to collapsed height.

NOTE: We recommend a top travel limit switch with velocity fuses.

#### PLATFORM WILL NOT LIFT LOAD:

Increase pump pressure, turn the hydraulic pressure bypass adjustment clockwise. This bypass adjustment is: located on the side of the hydraulic pump.

WARNING: Before attempting to work on the unit, always place blocks to support the platform or support unit to prevent downward/rotation movement. This provides protection for the worker.

#### **LUBRICATION AND MAINTENANCE INSTRUCTIONS**

We recommend that lubrication and preventative maintenance work should be conducted on a regular schedule that is established through experience gained during the first few months of operation. The need for lubrication and inspection is largely proportional to actual service duty, environment and application.

We recommend that the unit should be lubricated and completely inspected at least once a week during the first month of regular operation. Inspection should include a careful examination of all fastenings, fulcrum pins, rolling

surfaces and rollers, hydraulic connections, electrical systems and general functions. The unit should be cleaned and clear of accumulation of debris, water, etc. Consideration must be given to a means for the prevention of such conditions.

Maintain oil level with lift fully raised. Oil level should be approximately 1 to 2 inches from the bottom of the tank....

Recommended hydraulic oils (non-foaming) NORMAL CONDITIONS:

CHEVRON EP-9

STANDARD OIL

DURO AWS-150

ATLANTIC RICHFIELD

TELI US #32

SHELL OIL

DTF #24

MOBILE OIL

HIGH TEMPERATURE:

CHEVRON EP-15

STANDARD OIL

The use of multi-grade motor oils with SAE 510-10W-20W/20 or SAE 10W-20W-30 non-detergent is permissible where the above oils are not readily available.

NOTE: Do not use hydraulic fluids which contain additives that may swell or dissolve certain packing materials normally used in systems designed for petroleum oils. For special fluids consult the factory.

CAUTION: Over-filling the hydraulic tank will cause overflow when the table is lowered.

Periodically scheduled greasing of the unit provides the opportunity for general inspection, insuring the proper maintenance of the equipment.

#### TROUBLE SHOOTING SERVICE SUGGESTIONS

1) PLATFORM WILL NOT RAISE:

A. CHECK THE POWER SUPPLY AND ELECTRICAL CIRCUIT

Pump motor starter (if provided). On new installations of 3 phase motors, if the lift does not start raising in approximately 10 seconds, reverse line leads.

(WARNING: Do not run the pump backwards or without hydraulic oil)

B. CHECK OIL LEVEL (WARNING: Do not overfill)

With lift in full up position, oil level should be 1 to 2 inches above bottom of the tank

1. LOWERING VALVE STUCK IN OPEN POSITION

Flush lowering valve by operating up and down controls simultaneously

- LIFT MOVES SLOWER THAN SPECIFIED RATE OR WILL RAISE ONLY PARTIAL LOAD:
  - A. CHECK LINE VOLTAGE UNDER LOAD CONDITION

Low voltage affects speed and capacity

- B. SUCTION LINE MAY LEAK
  Tighten fittings
- C. RELIEF VALVE MAY LEAK

Remove foreign matter from valve and adjust to ½ turn beyond what is required to lift load

D. INSPECT LOWERING VALVE

Disassemble valve and look for foreign material under valve seat

- E. CHECK FILTER IN TANK FOR FOREIGN MATERIAI
- 3. LIFT SLOWLY WITH LOWERING VALVE CLOSED:
  - A. INSPECT CHECK VALVE

Remove cap, spring and ball and inspect for foreign matter

- B. FLUSH LOWERING VALVE
  By operating up and down controls
  simultaneously. This should be done with
- C. DISASSEMBLE LOWERING VALVE

Look for foreign material under valve seat

- 4. PLATFORM WILL NOT LOWER:
  - A. TEST VALVE COIL FOR OPERATION

Check voltage at coil

B. LOWERING VALVE CLOSED

Open valve and adjust for lowering speed

C. VELOCITY FUSES

Flow adjustment instructions for velocity fuses

- 5. PLATFORM WILL NOT RAISE FULL VERTICAL TRAVEL:
  - A. CHECK FOR LOW OIL LEVEL
  - B. IF FOAM IS VISIBLE IN TANK OIL.

Check for leaks in suction line between pump and tank

- 6. PLATFORM WILL NOT MAINTAIN HEIGHT AND LOWERS SLOWLY WHEN DOWN BUTTON IS NOT DEPRESSED.
  - A. Check the pressure relief valve, do to an overload on the table, the relief valve may have activated. Debris can be entrapped not

allowing the valve to close. Take the relief valve apart and clean it completely. Reassemble and adjust to ¼ turn beyond what is required to lift load.

- B. The check valve may need cleaning or replacement.
- Clean the strainer in the tank for foreign matter.
- D. Check and clean the lowering valve for debris.
- 7. PLATFORM DOES NOT LOWER SMOOTHLY:
  - A. RUN LIFT UP AND DOWN

Under load to purge air from hydraulic system

- 8. IF HYDRAULIC CYLINDER APPEARS TO BE LEAKING THROUGH TOP AIR VENT HOLE:
  - A. RAISE AND LOWER TABLE

Raise and lower the table (under load) to maximum, if oil is still leaking through vent hole-check cylinder packing.

# TROUBLE SHOOTING SERVICE SUGGESTIONS NORMALLY CLOSED SOLENOID LOWERING VALVE

#### SERVICE

In the event the valve malfunctions, check for a burned out coil and/or foreign material in the valve causing failure of valve to close. Check for possible low line voltage.

#### DISASSEMBLE PROCEDURE

Remove rut on top of solenoid. Slide off valve stem. The stem is threaded into the valve body. Use a wrench to remove the valve carridge from the body. The valve seat is held in the valve stem by an o-ring and can be removed by grasping firmly and pulling apart. Carefully remove the valve from the seat.

#### REASSEMBLY PROCEDURE

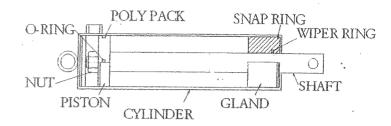
Reassemble in the same manner as disassembly. Make sure the valve spool and seat are clear of debris and foreign material. Check the o-rings for damage and replace as needed. Use care in reassembly to avoid o-ring damage.

#### REPAIR PARTS

When ordering repair parts specify the valve model number, pipe size, and coil voltage that appears on the nameplate on top of the solenoid.

## **HYDRAULIC CYLINDER**

#### EXHIBIT 6



## PHYSICAL SIGNS OF INTERNAL PROBLEMS

1. HYDRAULIC FLUID LEAKING OUT OF THE AIR BREATHER HOLE

(Single acting cylinder) The poly pack needs to be replaced

2. DOUBLE ACTING CYLINDER OPERATES TO SLOW OR DOES NOT OPERATE

The poly pack needs to be replaced

3. VISIBLE LEAKAGE AROUND TOP OF GLAND

The "O" ring needs to be replaced

- RUBBING NOISE OR SQUEAL (EXCEPT NEW CYLINDERS)
   The poly pack needs to be replaced
- 5. JERKING MOTION OF SHAFT

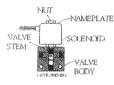
Air in hydraulic system purge air

#### PHYSICAL SIGNS OF EXTERNAL PROBLEMS

- VISIBLE LEAKAGE NEAR PORTS
   At bottom near end, and on cylinder-tube wall-replace cylinder
- BENT ROD/SHAFT Straighten or replace
- BINDING CYLINDER Check pivot points
- SCORED OR RUSTY ROD SHAFT Replace wiper ring and if necessary the shaft

Defective and worn parts should be replaced. We suggest a cylinder repair kit to replace all worn poly packs, "O" rings and wipers. Rebuild the cylinder provided there has been no physical damage to the cylinder or any vital components.







For a smoother "break-in" period on new or rebuilt cylinders, we recommend to add STP or equal to the cylinder walls and shafts.

NOTE: To prevent any accidents when performing maintenance of the hydraulic cylinders, lower the platform, remove the top or hinge top up, or place a suitable support (stop) between the rollers and the end of the frame.

#### REPAIR PARTS

Repair kits are available from the factory. When ordering parts, specify the cylinder bore and whether it is single acting or double acting.

#### DISASSEMBLY PROCEDURE

A repair kit should always be on hand before disassembly since parts can become damaged when the piston is withdrawn and passes over the snap ring groove on the cylinder wall. Discard any such damaged parts and replace with new. Disassemble as follows:

- 1. Push the gland back into the cylinder until snap ring is free.
- 2. Remove the snap ring and pull out shaft, gland and piston assembly.

To replace poly pack, "O" rings and wipers, it is only necessary to spring the parts out of the grooves and remove them longwise over the lands of the piston and glands.

#### ASSEMBLY PROCEDURE

Clean piston and cylinder and remove any scratches or burrs that might damage sealing parts or prevent proper sealing function.

Lubricate lands and grooves and install new parts.
Reassemble piston/rod assembly, gland and snap ring in the reverse order of disassembly.

#### **PUMPS**

#### **ADJUSTMENTS**

The built-in relief valve is set at 2000PSI at factory. Do not readjust to exceed this setting as full load working pressure is 1700 PSI.

#### **SERVICE**

Do not attempt to replace gears, bearings, shafts or other major parts of the pump. Order a replacement pump head, identified by the nameplate data, stamped on pump body and plate. When assembling pump on motor, be sure the intermediate coupling slot aligns with motor shaft tang.

#### CAUTION

Do not operate this pump against the relief valve by overloading or in the extreme raised position any period greater than five seconds. When "Automatic Return" controls are used provision must be made to stop the pump immediately upon reaching the raised position.

Do not run the standard pumping unit continuously or use on applications requiring more than five starts per minute in continuous service. A special pump unit, externally mounted, equipped with a continuous duty motor and normally open by-pass valve can be furnished for high frequency starts.

#### WARRANTY

Air Technical Industries products are unconditionally guaranteed against defects in workmanship and materials; unless otherwise agreed in writing, the seller makes no other warranties expressed or implied, which extends beyond the description of the goods.

- A. One year on all structural parts and components
- B. Ninety (90) days on electrical and hydraulic components

Before any repairs are made or damaged equipment returned, written permission must be obtained from Air Technical Industries. Labor to replace defective components is not considered part of the warranty.

NOTE: Does not apply to 48 x 48 units

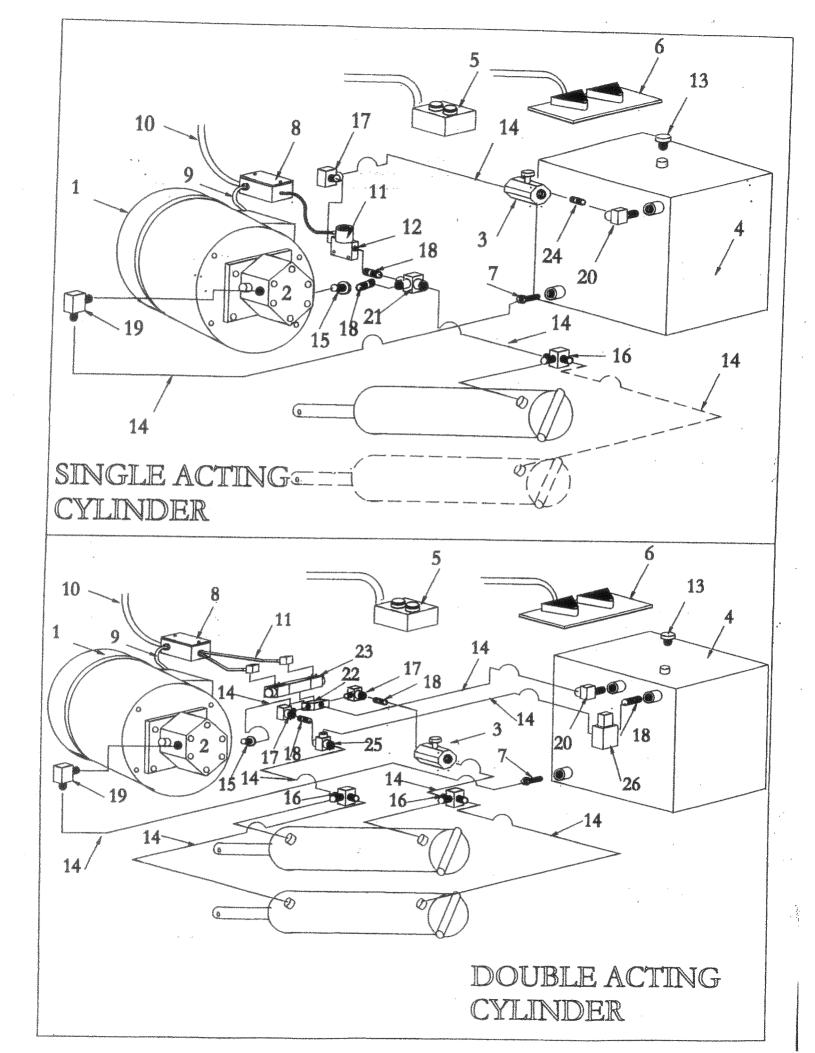
RE: Proximity sensors inside clamp frame of Upender Inverter

The limit switches included on the Upender Inverter that are installed in the frame are not intended for the purpose of limiting clamp travel. They are related to a hydraulic function and can be disregarded as they serve no active purpose related to your regular operation of the equipment.

The reason they are installed is to act as a "pressure-reducing" safety feature, and to understand their purpose requires a little background into the operation of the hydraulic scissors lift that is used as the clamping device. The force required to lift a load is dependent on the angle of the hydraulic cylinders and the scissors. The highest force and therefore, highest pressure required is with the lift in its lowest position, what we call "break load pressure". As the lift raises, this angle improves (improved mechanical advantage) and therefore less force (and pressure) is required to continue to lift the load.

If you have a small load that requires the clamp to be closed approximately 50% or more, the pressure required to raise that load may be several hundred PSI less than the break load pressure and so once the load is clamped, before the built-in, factory pre-set pressure relief valves are activated, all that additional pressure will go into the clamping force, potentially damaging the load or causing internal damage in the clamp itself. So we have installed this pressure reducing safety feature to reduce the pressure relief setting once the clamping reaches a certain level where the required pressure to lift the load is significantly reduced.

If your load is very large and almost fills the fully open clamp, you will never engage this feature. It is still important for the operators to know not to over-clamp the load, as this feature does not operate precisely, and depending on the type of load, the clamping force may still need to be engaged carefully. Further, if the unit is loaded in the inverted position where the clamp comes down from the top, then very little pressure is required to operate the clamp, and so the same concern may exist throughout the range of travel. Basically, the safest method of operation is to never operate the clamping function for more than 2 seconds after touching the load.

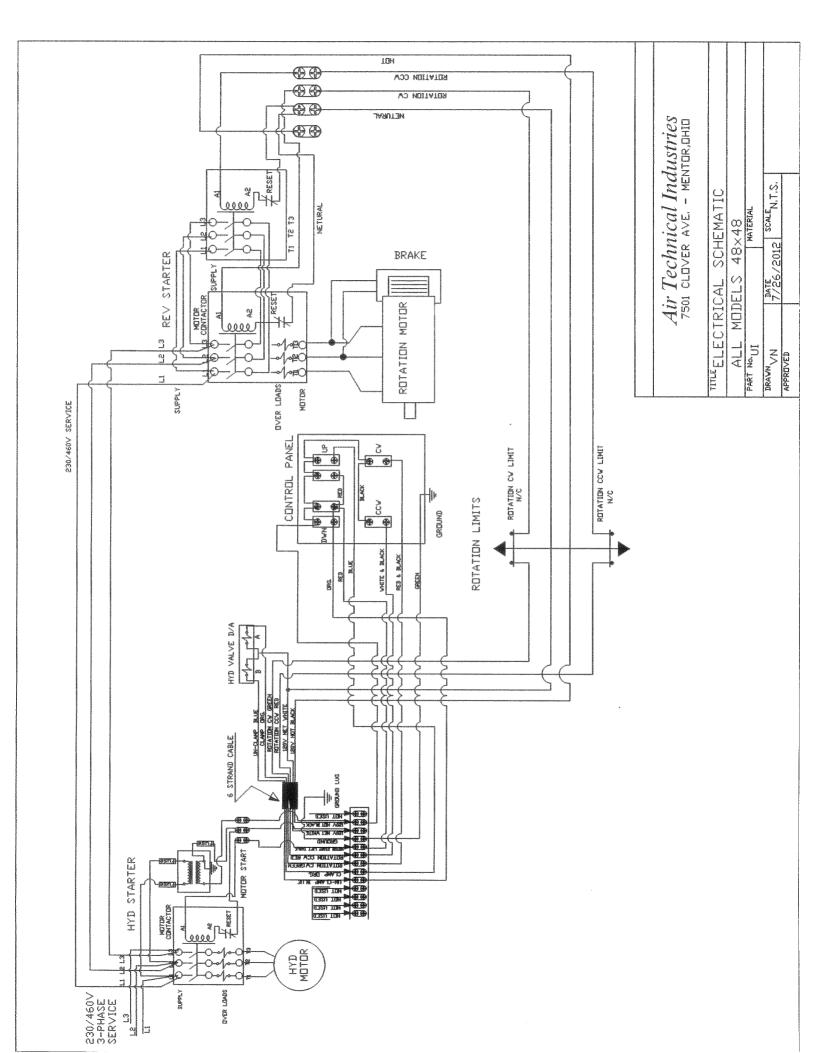


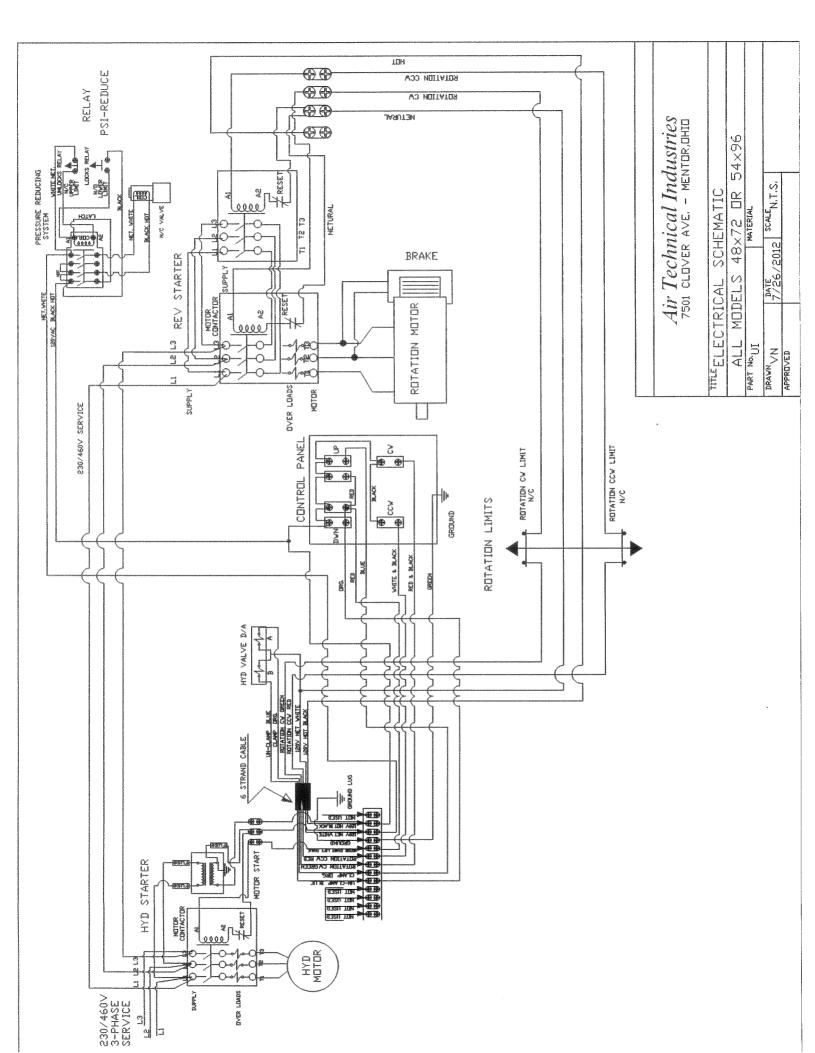
Clamping mechanism and hydraulic powerpack parts

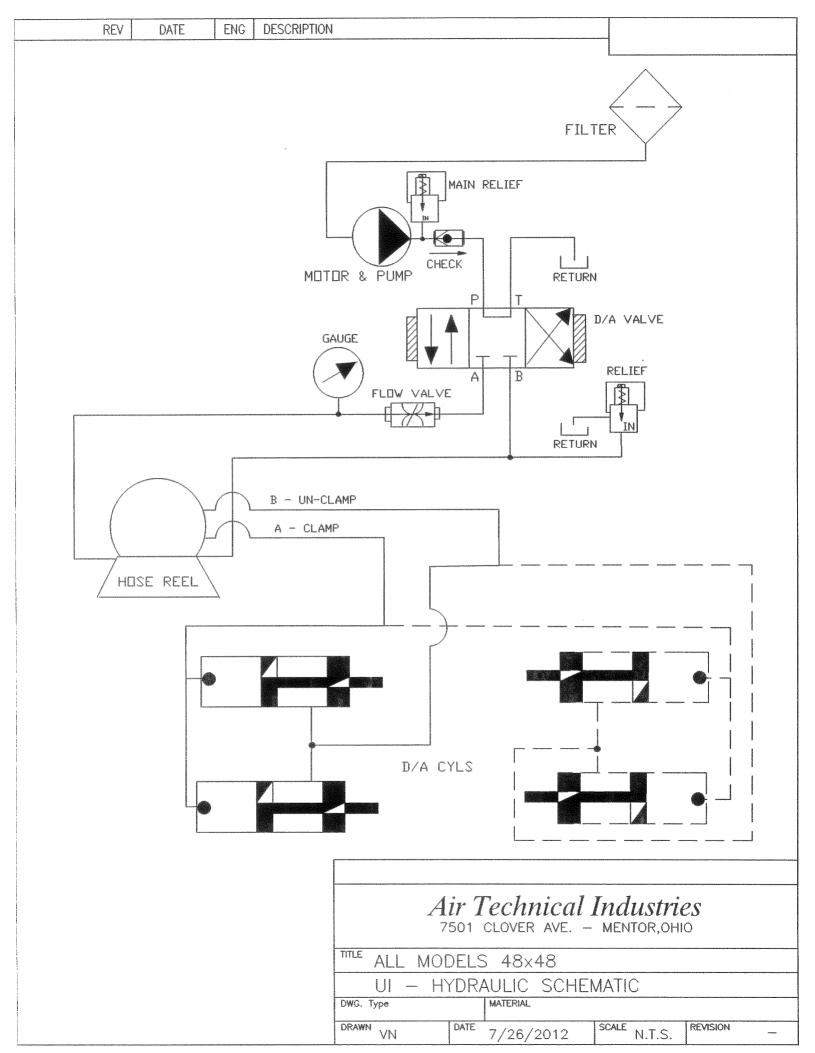
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10		3/8"	FLOW CONT	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	PH03MFCV0		LOVE		.875" BORE			PTL090140	ļ
15 15		1/2"	FLOW CONT		PH04MFCV0 ONSULT FACTOR	V	LOVEJO	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	.5" BORE .625" BORE			PTL100080 PTL100100	
TEM TEM	4 5	marian and a	TANK PUSHBUTTO	THE RESIDENCE OF THE PROPERTY	ONSULT FAUTUR		LOVEJ		.625 BORE			PTL100100 PTL100120	<u> </u>
2 1		2 BUTTON	STOREST AND STOREST CONTRACTOR OF THE PARTY		PE2STAPB0		LOVEJ		.875" BORE		DEFENSION OF THE PROPERTY OF T	PTL100120	
4	######################################	4 BUTTON		********************************	PE4STAPB0		LOVEJO		1" BORE	•		PTL100140	
6	<del>1000000000000000000000000000000000000</del>	6 BUTTON	The same of the State of State		PE6STAPB0	***************************************	LOVEJ	NAME OF TAXABLE PARTY.	1.125" BOR	Ē	***************************************	PTL100180	
8		8 BUTTON			PE8STAPB0		LOVEJ		1.25" BORE			PTL100200	
TEM	6	TOWNSHIP OF THE PROPERTY OF THE PARTY OF THE	FOOT PEDAL				LOVEJO		1.375" BOR			PTL100220	
	E ACTI			2 PEDAL	PETWINFP0		LOVEJO		1.4375" BOI			PTL100230	
	LE ACT	ING		2 PEDAL	PETWINFP2		LOVEJO		.625" BORE			PTL110100	
AND RESIDENCE OF	OTOR	nanankan ka		2 PEDAL	PNAFP34F0		LOVEJO		.75" BORE	±1100000000000000000000000000000000000		PTL110340	
TEM	7 TANK STRAI			STRAINER PH0403STR			LOVE		.875" BORE			PTL110140	<u> </u>
TEM LID	8		HANDY BUX	NDY BOX PEPC2X400			LOVEJO		1.625" BOR	AIR LINE		PTL110158 PNAFAH400	
BOX	***********	<del>                                     </del>			PE224HB00						AY FOR YOU	UR PARTS AND ALL	
TEM	9	Accordance	MOTOR COR	D	1		***			LING NEEDS		C O . I O . M VO / Mala	
	11000		1 PHASE	163	PEEW03160	AND COMMERCES OF	1			140-951-5191 VO	ICE		
1'-6"	10VOL	T.	1 PHASE	123	PEEW03120					-440-953-9237 F			
	220/440		3 PHASE	124	PEEW04120	- Acquires and account of the second				1-888-857-6272			

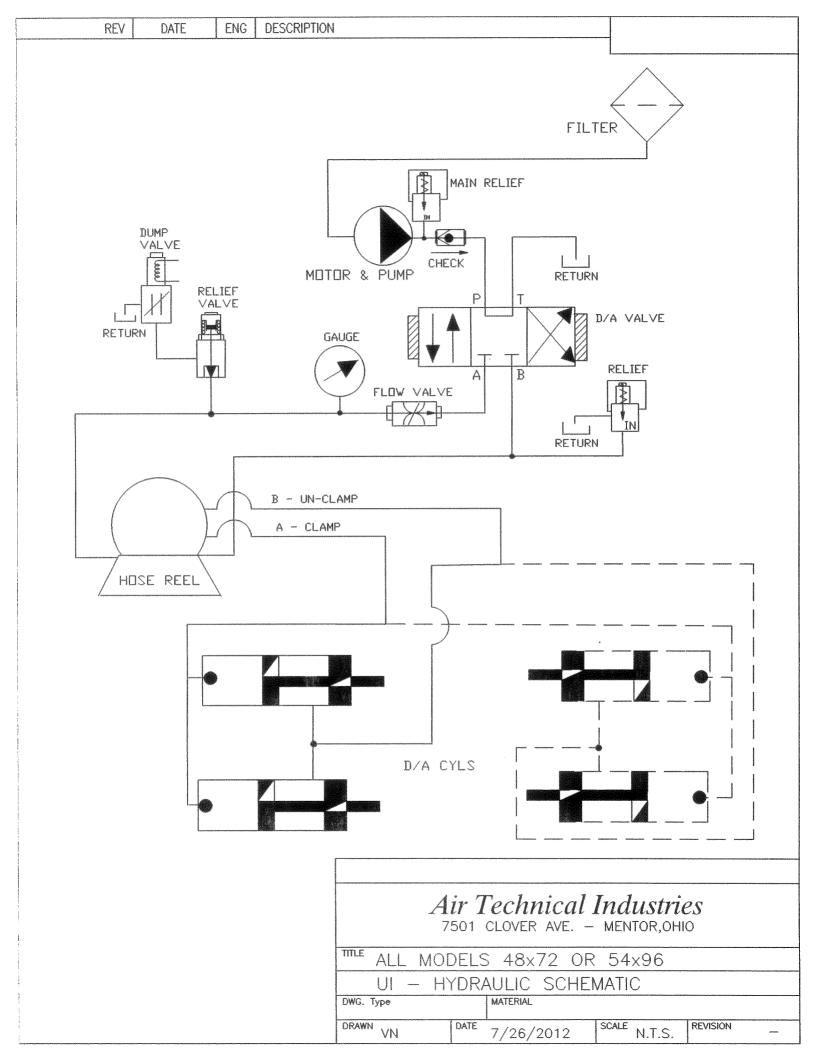
# Upender Inverter parts list

Model No.	Part Number	SAIDA		Size	aty		CYLINDER	CYLINDER REPAIR KITS	TS				
presument property and property	CYLINDER	AND THE PROPERTY OF THE PROPER	Andreas de la company de la co	CYLINDER	THE REAL PROPERTY OF THE PARTY		PART NUMBER	DER	DIA.	SA/DA			
UI 44848	M5YDD0681126	DA	3.5" X 8"	3.5" X 8" ST X 14" CC	2		<b>MSREPKITDDA0</b>	DDA0	3.5	DA			
UI 44872	M5YDD1251696	DA	3.5" × 15	3.5" X 15.125" ST X 21.125" CC	2		<b>MSREPKITEDA0</b>	EDAO	4	DA			
UI 45496	M5YDD1602046	DA	3.5" X 20	3,5" X 20" ST X 25.5626" CC	3		CYLINDER	CYLINDER MOUNTING BOLI	3 BOLT				
UI 64872	M5YDD1211657	DA	3.5" X 14	3.5" X 14.625" ST X 20.625" CC	4		1" DIA. X 5"	=	PF1608205HHC	HEC		2238	
UI 1105496	M5YDE1542067	ğ	4" X 18.7	4" X 18.75" ST X 25.75" CC	4		1" DIA. X 6"	п	PF1608245HHC	E C			
							1" DIA. X 7"	-	PF1608285HHC	2 E			
PART#		DESCI	DESCRIPTION		αTY	TEM	1" DIA. X 8"	2	PF1608325HHC	모			
PTRED652Z	MOTOR/REDUCER/BRAKE COMBO UNIT (specify gear ratio)	RAKE CON	MBO UNIT	(specify gear ratio)	1	7	CYLINDER	CYLINDER MOUNTING BOLT NU	3 BOLT NU				
PESM01720	11.5HP BRAKEMOTOR FOR REDUCER (up to 4000 pounds)	<b>FOR RED</b>	<b>JUCER</b> (up	o to 4000 pounds)	-	Ω	1" DIA. INSERT NU	SERT NUT	PFN116080				
PESM23UI0	12HP BRAKEMOTOR FOR REDUCER (6000-10,000 pounds)	OR REDU	JCER (600)	00-10,000 pounds)	7-	Ω	CYLINDER PISTON	PISTON				CYLINDER GLAND	
PEMSR4637	REV MAG STARTER				-		SIZE	SA/DA	PART NUMBER	BER		PART NUMBER	
PEADJRL SO	LIMIT SWITCH, ADJUSTABLE ROLLER LEVER	ISTABLE R	<b>30LLERLE</b>	EVER	4		3.5" D	DA	MIPISTONDDS	DDS1		M1GLANDDDD0S1	
PHTHR5400	HOSE REEL for 1/4" (up to 4000 pounds models)	up to 4000	m spunod	lodels)	-		4"D	DA	MIPISTONDES	DES1		M1GLANDED001	
PHTHR7600	HOSE REEL for 3/8" (6000-10,000 pounds models)	6000-10,00	30 pounds	models)	1		SNAP RINGS	GS			CYLINDER NUTS	NUTS	
PTCYR2000	2" CAM ROLLER				4	Τ	SIZE	PART NUMBER	IDER	PRICE	SIZE	PART NUMBER	PRICE
PTCYR3000	3" CAM ROLLER				1	9	3.5" D	PFISRD001		\$4.00	.75" X 10	PFJN12100	\$1.00
PTCYR4000	4" CAM ROLLER (up to model UI-44872)	to model UI	1-44872)		4	u	4" D	PFISRE001		\$9.00	1" X 14	PFJN16148	\$3.00
PTCYR5000	[5" CAM ROLLER (model UI-45496 and up	del UI-4549	96 and up)		4	L					Our techn	Our technical staff is ready to solve	solve
PTCH80D00	ROLLER CHAIN (#80 DOUBLE CHAIN)	DOUBLE C	CHAIN)		10 FT	ပ					your mate.	your materials handling needs	m
PTCL80CH0	CONNECTING LINK F/#80 DOUBLE CHAIN)	1000 08#/:	BLE CHAII	Z	2						Call us at	Call us at 1-888-392-3553	
PTD80B42Z	SPROCKET, DOUBLE CHAIN #80 1" PITCH	: CHAIN #8	80 1" PITC		2	m					FAX 1-440-953-9237	-953-9237	









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FIIONL	B d		MANAGEMENT MANAGEMENT AND	
				· .

### RETURN GOODS AUTHORIZATION POLICY

It is Air Technical Industries policy that any and all returns must have a return goods authorization on file before any credit will be issued. A return goods authorization form can be obtained by calling our Customer Service Department. Any parts or product must be returned and inspected to validate any warranty or defect claim before any credit will be issued. Any items returned without authorization on file will not be issued a credit as no claim has been established.

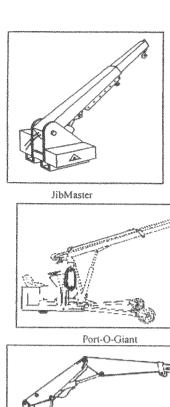
To establish a valid claim the customer must use the following procedure:

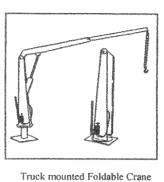
- ♦ Call Air Technical Industries customer service department for a Return Goods Authorization form
- Sign and return by fax a copy for Air Technical Industries file.
- Use this form as a packing slip for return shipment.
- Return all parts or products for inspection to validate claim.

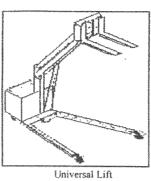
## RETURN AND CREDIT POLICY

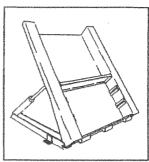
It is Air Technical Industries policy that any and all returns or warranty claims once established to our satisfaction as a valid claim will be issued a <u>CREDIT</u> on the customer's account. This credit can be used for purchase of New Product, Replacement Parts, and Service; <u>at no time will a cash refund be issued</u>. If a credit is issued under special circumstances, that credit can only be used as specified in a written agreement made between Air Technical Industries and the customer. This agreement must be made at the time the claim is established. Air Technical Industries has worked under this policy for over 37 years. Air Technical Industries will not change this policy to suit any individual customer regardless of past sales history.

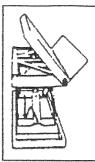
Thank you, Air Technical Industries





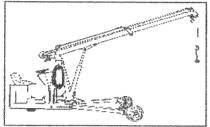


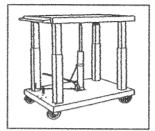


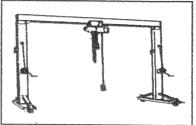


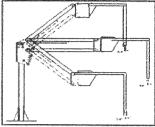
Zero-Low Crate Positioners

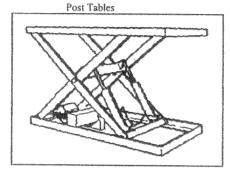
Lift & Tilt Tables

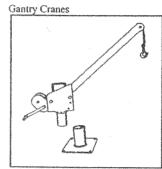


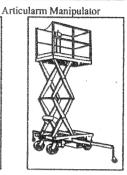


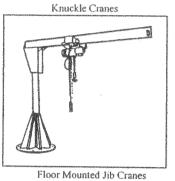




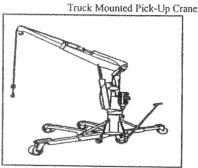


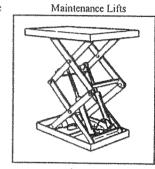


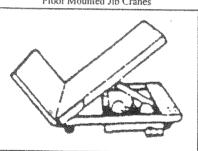




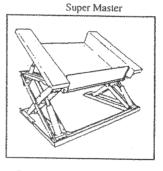








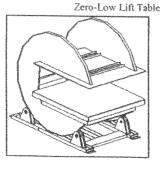


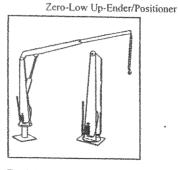


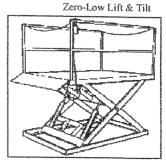


Crate Positioner

Husky Master







Upender-Inverter Truck Mounted Foldable Crane

Magic Dock Scissor Lift