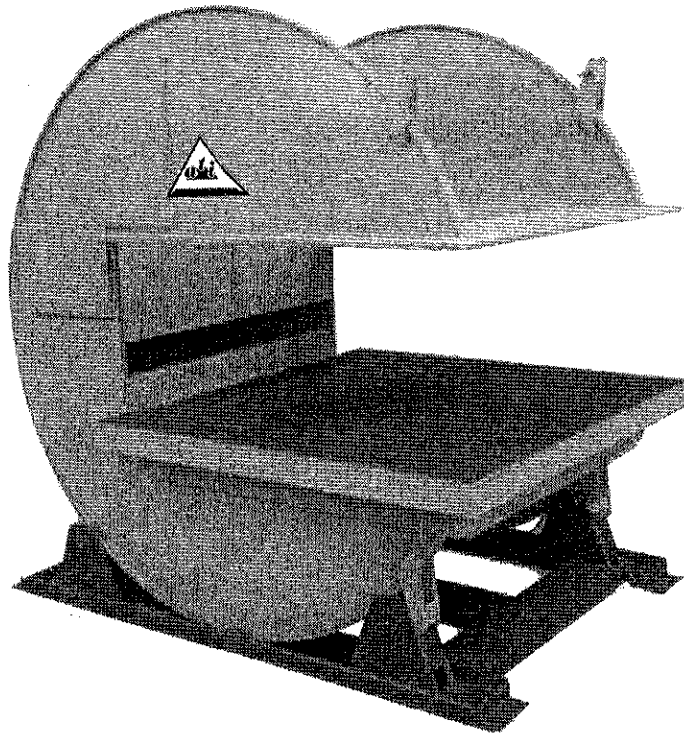


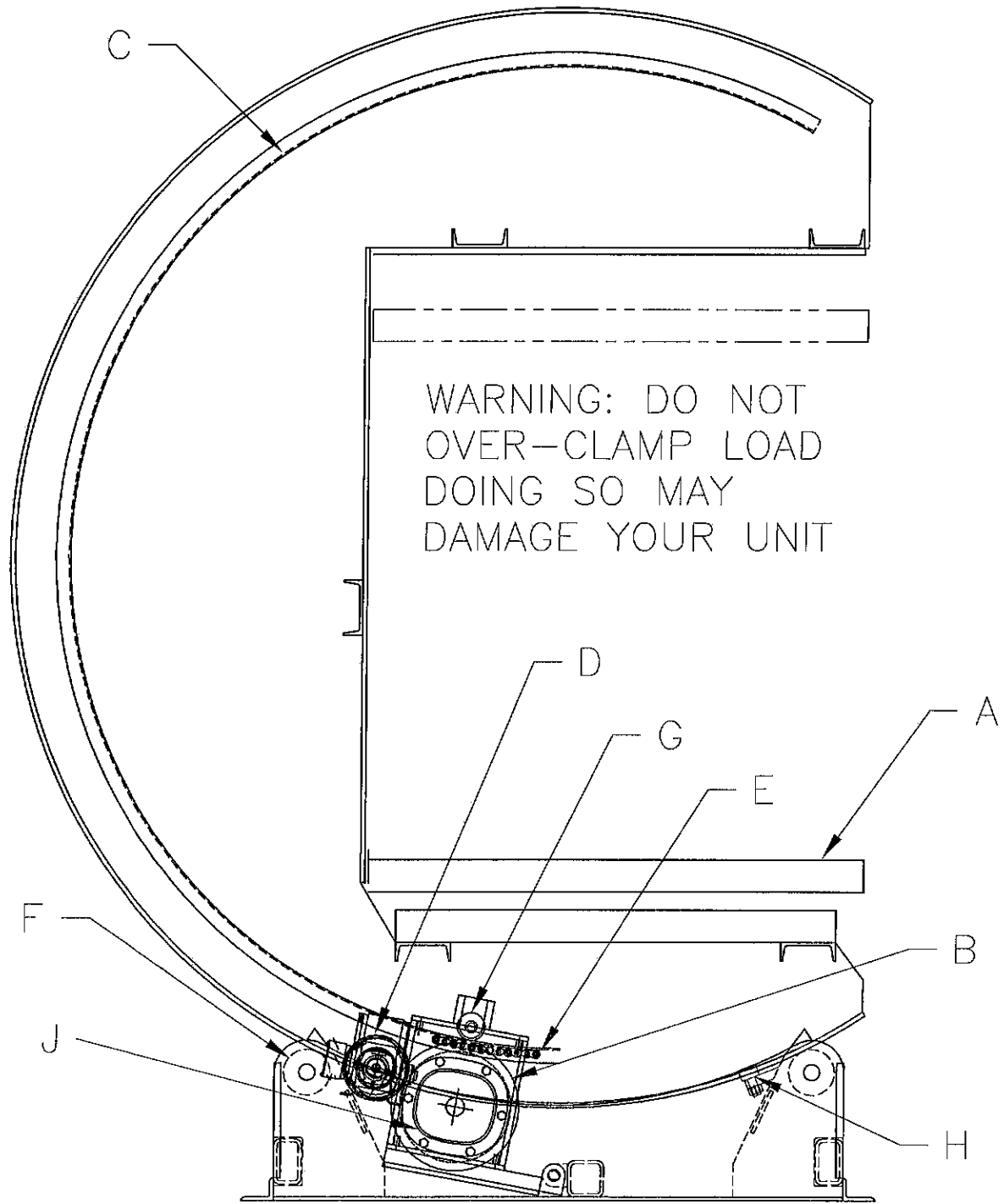


UPENDER INVERTER



PARTS AND SERVICE MANUAL

Air Technical Industries
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Mentor, Ohio 44060
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- 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.

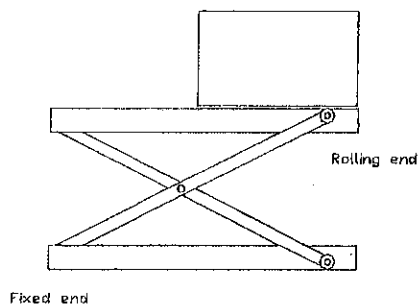
The UI with scissor-type, hydraulic-cylinder operated platform is a highly versatile machine that is designed to perform a wide range of lifting, feeding, accumulating, aligning, transporting, upending, rotating, tilting and moving operations. All units are electric motor powered. On all UIs there are 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.

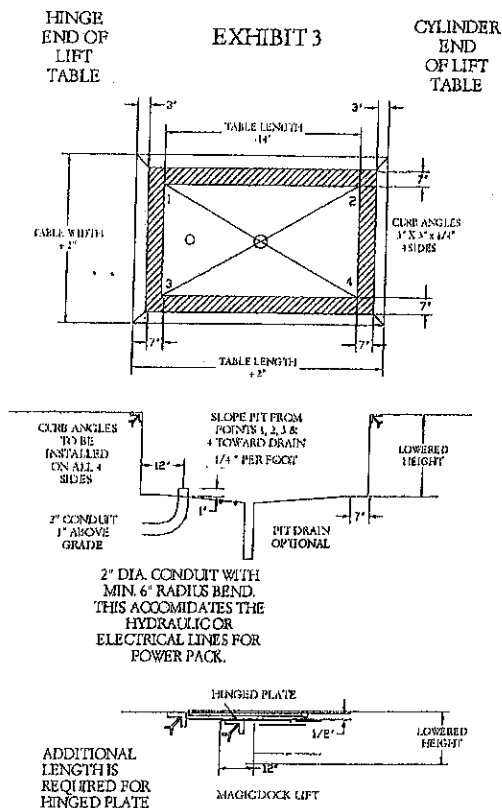
INSTALLATION SUGGESTIONS PERMANENTLY ANCHORED OR PLACED IN A PIT

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.



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 ADJUSTMENT 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

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.

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
DTE #24	MOBILE OIL

HIGH TEMPERATURE:

CHEVRON EP-15	STANDARD OIL
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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

2. 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 ¼ 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 MATERIAL

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 no load

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.
- C. 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 nut on top of solenoid. Slide off valve stem. The stem is threaded into the valve body. Use a wrench to remove the valve cartridge 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.

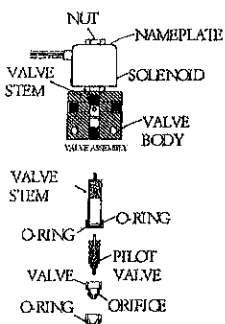
REASSEMBLY PROCEDURE

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

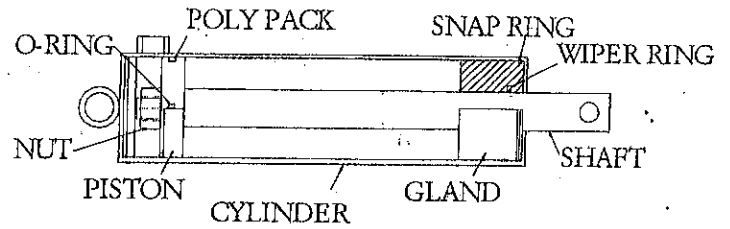
When ordering repair parts specify the valve model number, pipe size, and coil voltage that appears on the nameplate on top of the solenoid.

EXHIBIT 5
NORMALLY CLOSED
SOLENOID LOWERING
VALVE



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

4. 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

1. VISIBLE LEAKAGE NEAR PORTS

At bottom near end, and on cylinder-tube wall-replace cylinder

2. BENT ROD/SHAFT
Straighten or replace

3. BINDING CYLINDER
Check pivot points

4. 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

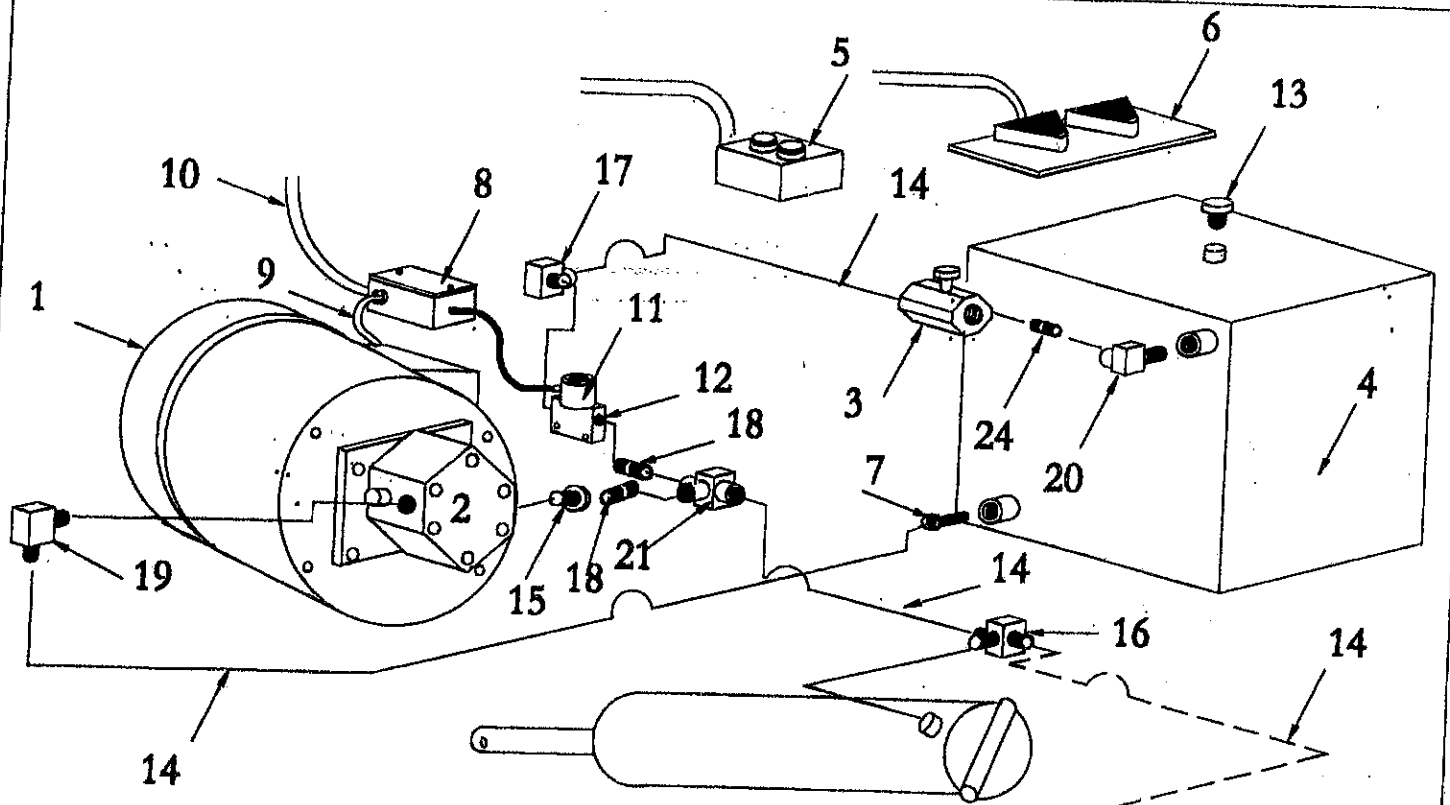
RE: Proximity sensors inside clamp frame of Upender Inverter

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.

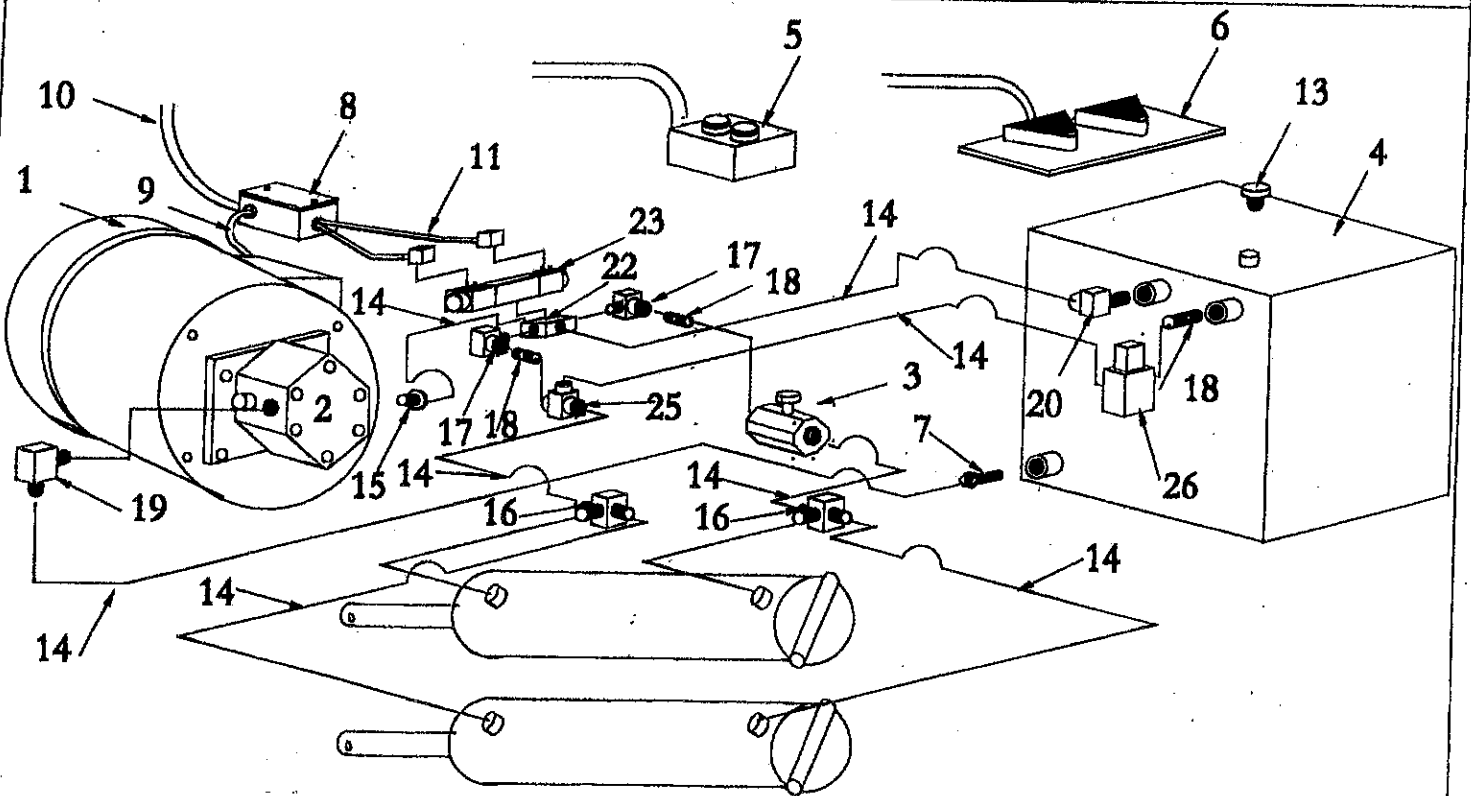
The reason they are installed is to act as a "pressure-reducing" safety feature, and to understand their purpose requires a little background into the operation of the hydraulic scissors lift that is used as the clamping device. The force required to lift a load is dependent on the angle of the hydraulic 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.



SINGLE ACTING
CYLINDER



DOUBLE ACTING
CYLINDER

Clamping mechanism and hydraulic powerpack parts

ITEM 1						ITEM 10							
HP	QTY	VOLTS	Motor PHASE	TYPE	Part Number	8'-0"	110VOLT	1 PHASE	16-3	PE316AC80			
1	1	110	1	TANG	PETM11110	8'-0"	110VOLT	1 PHASE	12-3	PEEW03120			
1	1	220	3	TANG	PETM13220	8'-0"	220/440	3 PHASE	12-4	PEEW04120			
1	1	110	1	SHAFT	PESM11110	ITEM 11						DIN CONNECTOR W/CORD W/ LOWERING VALVE	
1	1	220/440	3	SHAFT	PESM13110	ITEM 12						LOWERING VALVE WITH DIN CONNECTOR	
1	1	575	3	SHAFT	PESM13575	12 VOLT		1/4" NPT		M2HLV0122DIN			
2	1	110	1	TANG	PETM21110	110 VOLT		1/4" NPT		M2HLV110VDIN			
2	1	220	3	TANG	PETM23220	110 VOLT		3/8" NPT		M2HLV1103DIN			
2	1	110	1	SHAFT	PESM21110	ITEM 13						VENT PLUG	
2	1	220/440	3	SHAFT	PESM23220	ITEM 14						HYDRAULIC HOSE	
2	1	380	3	SHAFT	PESM23380	1/4"	10"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020100			
2	1	575	3	SHAFT	PESM23575		12"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020120			
3	1	110	1	TANG	PETM31110		16"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020160			
3	1	220	3	TANG	PETM33220		18"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020180			
3	1	110	1	SHAFT	PESM31110		24"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020240			
3	1	220	3	SHAFT	PESM31220		36"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020360			
3	1	220/440	3	SHAFT	PESM33220		48"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020480			
3	1	380	3	SHAFT	PESM33380		60"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020600			
3	1	575	3	SHAFT	PESM33575		72"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020720			
5	1	220	3	TANG	PETM53220		84"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020840			
5	1	220/440	3	SHAFT	PESM53220		96"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE020960			
7.5	1	220/440	3	SHAFT	PESM75322	3/8"	12"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030120			
7.5	1	380	3	SHAFT	PESM75338		16"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030160			
7.5	1	575	3	SHAFT	PESM75357		18"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030180			
10	1	220	3	SHAFT	PESM10322		24"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030240			
10	1	575	3	SHAFT	PESM10357		36"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030360			
4AM	1	AIR MOTOR		SHAFT	PN4AM0000		48"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030480			
6AM	1	AIR MOTOR		SHAFT	PN6AMFRV0		60"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030600			
8AM	1	AIR MOTOR		SHAFT	PN8AMFRV0		72"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030720			
							84"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030840			
							96"	HYDRAULIC HOSE WITH MF ENDS		M2HOSE030960			
ITEM 2						ITEM 15							
PUMP						3/8" x 1/4" O-RING ADAPTER							
HP	QTY	SIZE	TYPE		Part Number	PHB405060400							
1	1	0.48	Tang		PHP0048T0	ITEM 16							
1	1	0.48	Shaft		PHP0048S0	2 3/8" FL X 1/4" NPT M RN-T							
2	1	0.96	Tang		PHP0096T0	ITEM 17							
2	1	0.96	Shaft		PHP0096S0	1/4" NPT M X 1/4" F 90 ELL							
2	1	1.44	Tang		PHP0144T0	ITEM 18							
2	1	1.44	Shaft		PHP0144S0	1/4" CLOSE NIPPLE							
3	1	1.93	Tang		PHP0193T0	ITEM 19							
3	1	1.93	Shaft		PHP0193S0	3/8" FLARE X 3/8" O-RING ELL							
3	1	2.41	Tang		PHP0241T0	ITEM 20							
3	1	2.41	Shaft		PHP0241S0	3/8" NPT M X 1/4" NPT F 90 ELL							
5	1	2.89	Tang		PHP0289T0	ITEM 21							
5	1	2.89	Shaft		PHP0289S0	3/8" NPT F ALL THREE SIDES							
5	1	3.86	Tang		PHP0386T0	ITEM 22							
5	1	3.86	Shaft		PHP0386S0	VALVE BASE							
7.5	1	5.30	Shaft		PHP0561C0	HXV/VK							
7.5	1	6.55	Shaft		PHP0672C0	1/4"							
10	1	7.87	Shaft		PHP0787C0	BOSCH							
10	1	8.96	Shaft		PHP0883C0	3/8"							
15	1	12.31	Shaft		PHP12000P	SPERRY							
20	1	13.44	Shaft		PHP1344C0	3/8"							
ITEM 3						ITEM 23							
FLOW CONTROL VALVE						HYDRAULIC VALVE							
1	1	1/4"	FLOW CONTROL		PH02MFCV0	BOSCH							
2	1	1/4"	FLOW CONTROL		PH02MFCV0	12 VOLT							
3	1	1/4"	FLOW CONTROL		PH02MFCV0	BOSCH							
5	1	3/8"	FLOW CONTROL		PH03MFCV0	24 VOLT							
7.5	1	3/8"	FLOW CONTROL		PH03MFCV0	BOSCH							
10	1	3/8"	FLOW CONTROL		PH03MFCV0	110 VOLT							
15	1	1/2"	FLOW CONTROL		PH04MFCV0	ITEM 24							
ITEM 4						1/4" X 1 1/2" NIPPLE							
TANK						PH5404N04150							
ITEM 5						ITEM 25							
PUSHBUTTON						3/8" NPT F THREE SIDES							
2	2	BUTTON			PE2STAPB0	ITEM 26							
4	4	BUTTON			PE4STAPB0	PRESSURE RELIEF VALVE							
6	6	BUTTON			PE6STAPB0	PHMPPRV10							
8	8	BUTTON			PE8STAPB0	ITEM 27							
ITEM 6						PNEUMATIC VALVE							
FOOT PEDAL						PNUMATIC0							
SINGLE ACTING						2 PEDAL							
DOUBLE ACTING						2 PEDAL							
AIR MOTOR						2 PEDAL							
ITEM 7						ITEM 28							
TANK STRAINER						PNEUMATIC SOLENOID VALVE							
ITEM 8						COMPACT							
HANDY BOX						PHAVSA000							
LID					PEPC2X400	COMPACT							
BOX					PE224HB00	PHAVDA000							
ITEM 9						ITEM 29							
MOTOR CORD						MOTOR/PUMP COUPLINGS							
1'-6"	110VOLT		1 PHASE	16-3	PEEW03160	LOVEJOY	43/75" BORE			PTL090070			
1'-6"	110VOLT		1 PHASE	12-3	PEEW03120	LOVEJOY	5" BORE			PTL090080			
1'-6"	220/440		3 PHASE	12-4	PEEW04120	LOVEJOY	625" BORE			PTL090100			
						LOVEJOY	875" BORE			PTL090140			
						LOVEJOY	5" BORE			PTL100080			
						LOVEJOY	625" BORE			PTL100100			
						LOVEJOY	75" BORE			PTL100120			
						LOVEJOY	875" BORE			PTL100140			
						LOVEJOY	1" BORE			PTL100180			
						LOVEJOY	1.125" BORE			PTL100180			
						LOVEJOY	1.25" BORE			PTL100200			
						LOVEJOY	1.375" BORE			PTL100220			
						LOVEJOY	1.4375" BORE			PTL100230			
						LOVEJOY	625" BORE			PTL110100			
						LOVEJOY	75" BORE			PTL110340			
						LOVEJOY	875" BORE			PTL110140			
						LOVEJOY	1.625" BORE			PTL110158			
ITEM 30						ITEM 30							
AIR LINE						AIR LINE							
PNAF4H400						PNAF4H400							
CALL AIR TECHNICAL INDUSTRIES TODAY FOR YOUR PARTS AND ALL YOUR MATERIALS HANDLING NEEDS						1-440-951-5191 VOICE							
						1-440-953-9237 FAX							
						1-888-857-6272							

Upender Inverter parts list

PART #	DESCRIPTION	QTY	ITEM
PTRED652Z	MOTOR/REDUCER/BRAKE COMBO UNIT (specify gear ratio)	1	J
PESM01720	1.5HP BRAKEMOTOR FOR REDUCER (up to 4000 pounds)	1	D
PESM23UI0	2HP BRAKEMOTOR FOR REDUCER (6000-10,000 pounds)	1	D
PEMSR4637	REV MAG STARTER	1	
PEADJRLS0	LIMIT SWITCH, ADJUSTABLE ROLLER LEVER	4	
PHTHR5400	HOSE REEL for 1/4" (up to 4000 pounds models)	1	
PHTHR7600	HOSE REEL for 3/8" (6000-10,000 pounds models)	1	
PTCF2000	2" CAM ROLLER W/ SHAFT	4	H
PTCF3000	3" CAM ROLLER W/ SHAFT	1	G
PTCYR4000	4" CAM ROLLER (up to model UI-44872)	4	F
PTCYR5000	5" CAM ROLLER (model UI-45496 and up)	4	F
PTCH80D00	ROLLER CHAIN (#80 DOUBLE CHAIN)	10 FT	C
PTCL80CH0	CONNECTING LINK F/#80 DOUBLE CHAIN)	2	
PTD80B42Z	SPROCKET, DOUBLE CHAIN #80 1" PITCH	2	B

Model No.	Part Number	SA/DA	Size	Qty
UI	44848	M5YDD0681126	DA 3.5" X 8" ST X 14" CC	2
UI	44872	M5YDD1251696	DA 3.5" X 15.125" ST X 21.125" CC	2
UI	45496	M5YDD1602046	DA 3.5" X 20" ST X 25.5626" CC	3
UI	64872	M5YDD1211657	DA 3.5" X 14.625" ST X 20.625" CC	4
UI	105496	M5YDE1542067	DA 4" X 18.75" ST X 25.75" CC	4

CYLINDER REPAIR KITS	
M5REPHITDDA0	3.5 DA
M5REPHITEDA0	4 DA

CYL. PISTON	
3.5" D	M1PISTONDDS1
4" D	M1PISTONDES1

CYLINDER MOUNTING BOLT	
1" DIA. X 5"	PF1608205HHC
1" DIA. X 6"	PF1608245HHC
1" DIA. X 7"	PF1608285HHC
1" DIA. X 8"	PF1608325HHC

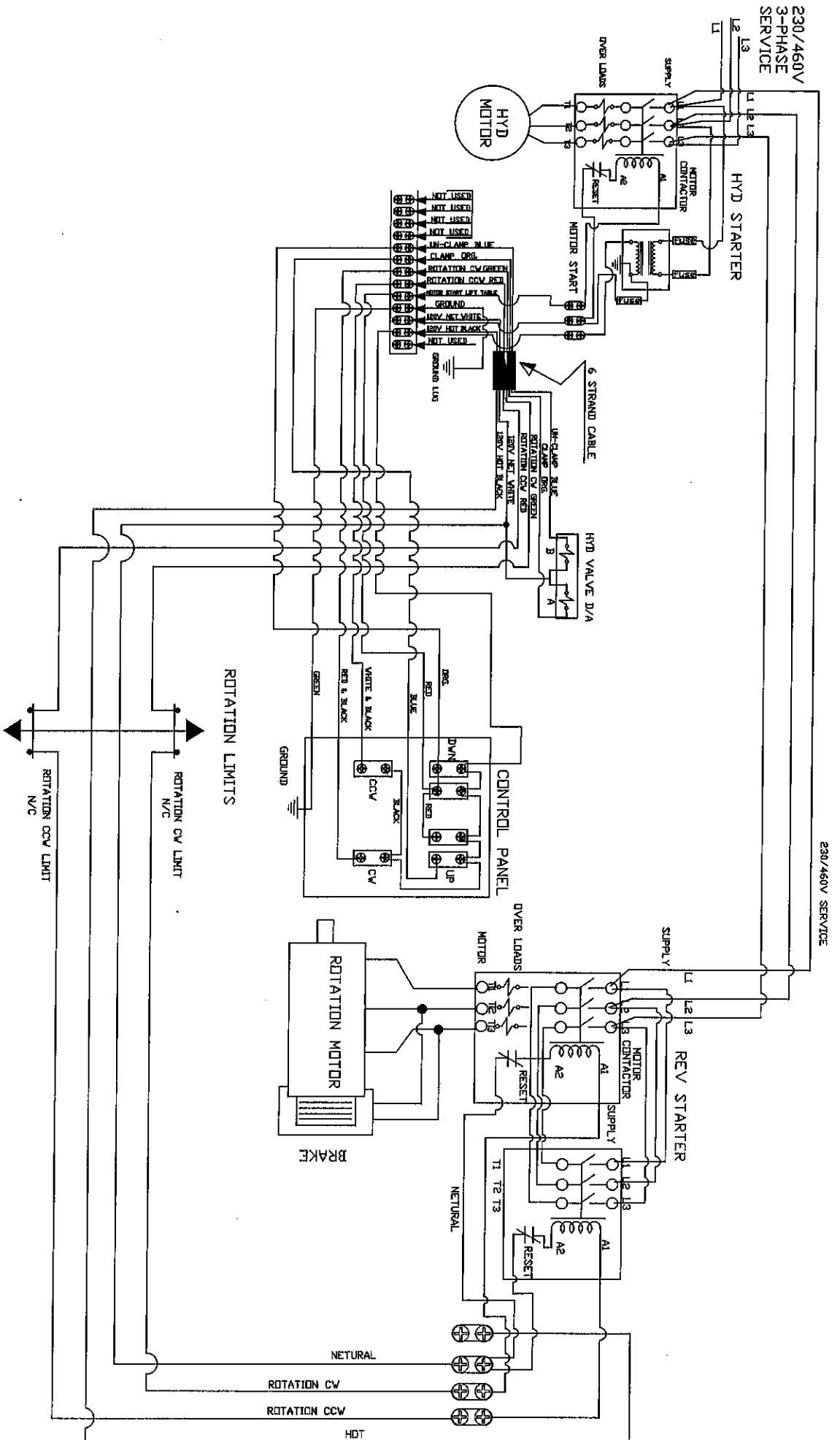
CYLINDER NUTS	
.75" X 10	PFJN12100
1" X 14	PFJN16148

CYLINDER GLAND	
M1GLANDDD0S1	
M1GLANDED001	

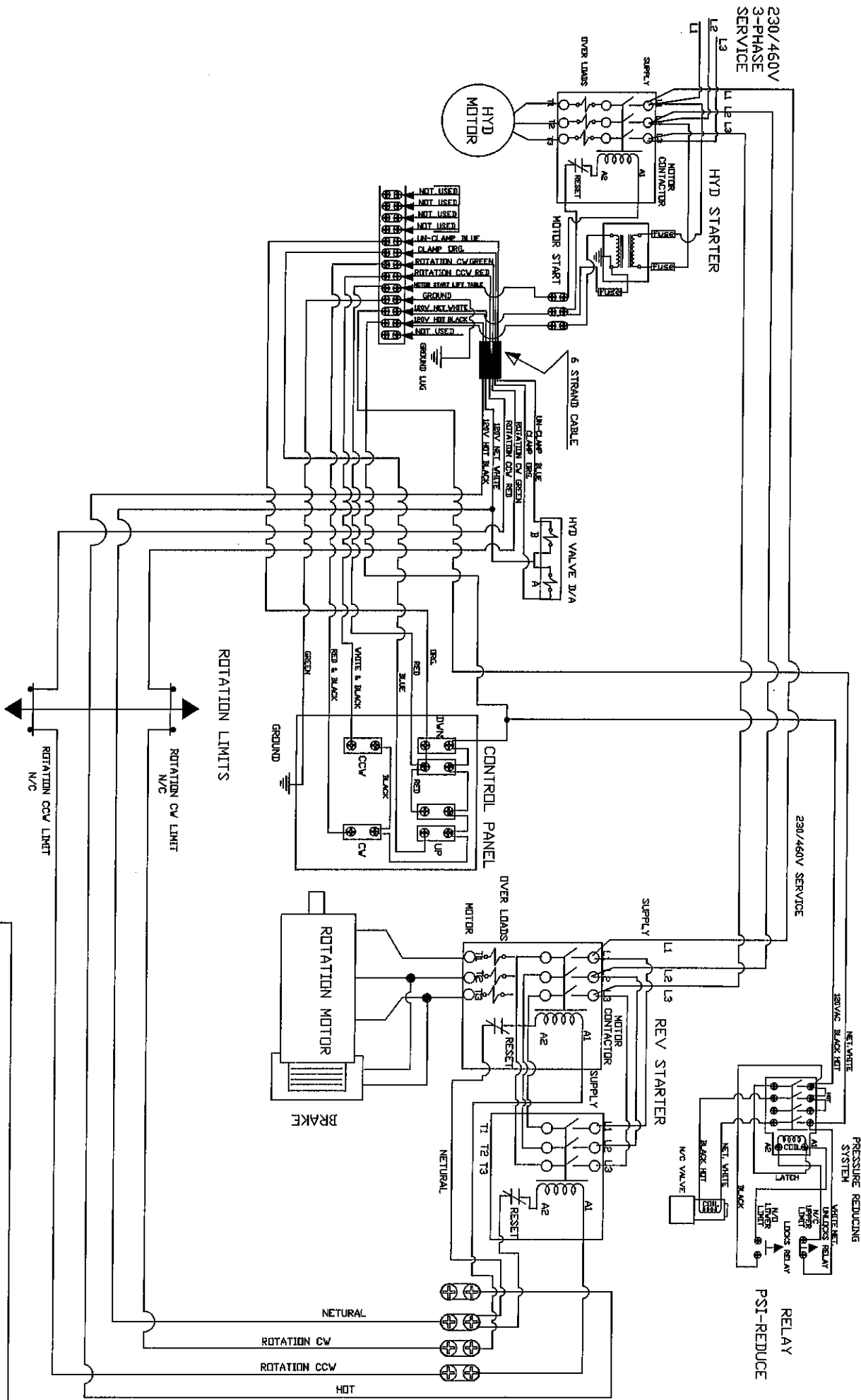
CYLINDER MOUNTING BOLT NUT	
1" DIA. INSERT NUT	PFNI16080

SNAP RINGS	
3.5"	PFISRD001
4"	PFISRE001

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FAX 1-440-953-9237



Air Technical Industries			
7501 CLOVER AVE. - MENTOR, OHIO			
TITLE ELECTRICAL SCHEMATIC			
ALL MODELS 48x48			
PART No. UT		MATERIAL	
DRAWN VN	DATE 7/26/2012	SCALE N.T.S.	
APPROVED			



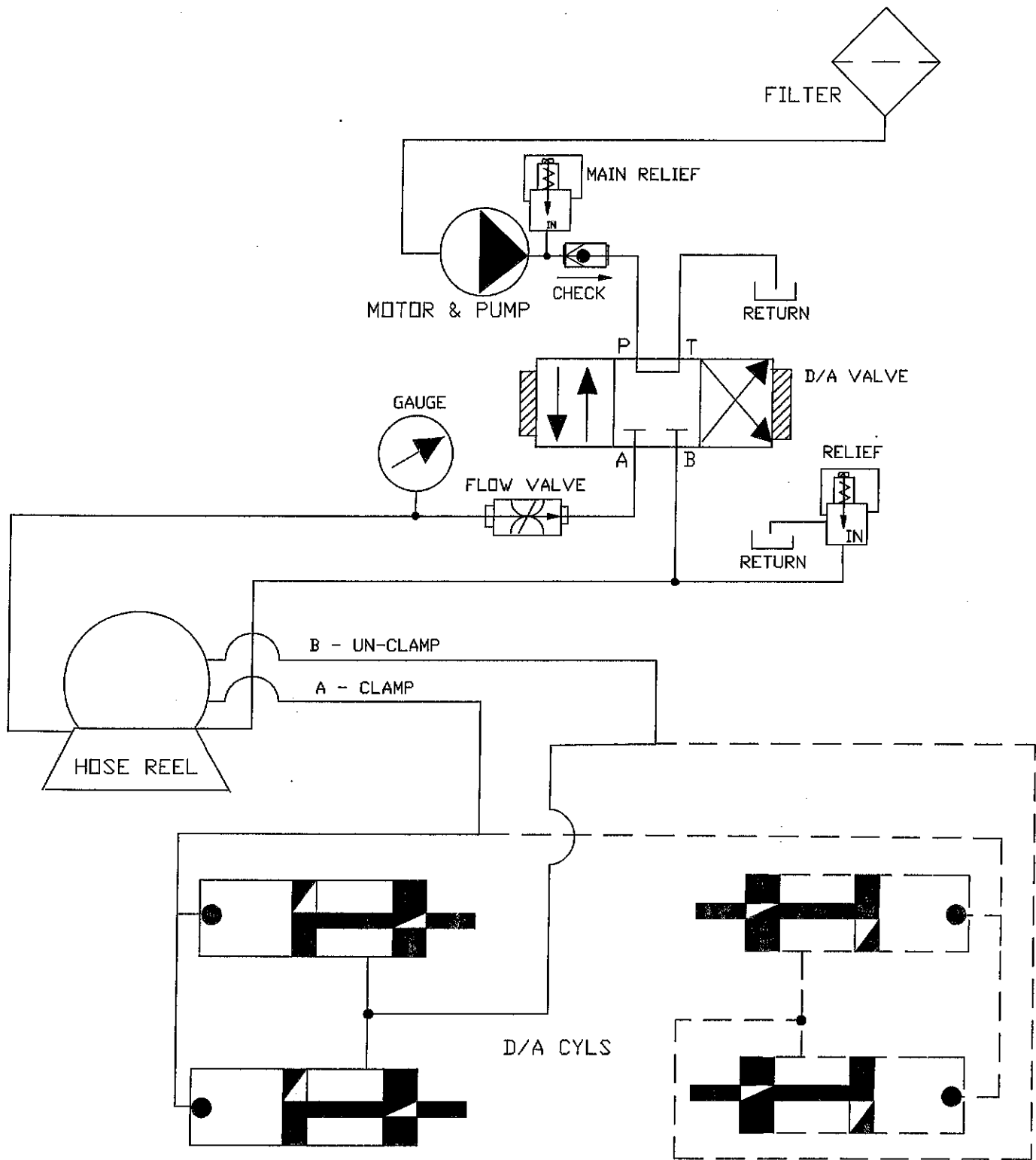
Air Technical Industries			
7501 CLOVER AVE. - MENTOR, OHIO			
TITLE ELECTRICAL SCHEMATIC			
ALL MODELS 48x72 OR 54x96			
PART No.	UI	MATERIAL	
DRAWN	VN	DATE	7/26/2012
APPROVED		SCALE	N.T.S.

REV

DATE

ENG

DESCRIPTION



Air Technical Industries

7501 CLOVER AVE. - MENTOR, OHIO

TITLE ALL MODELS 48x48

UI - HYDRAULIC SCHEMATIC

DWG. Type

MATERIAL

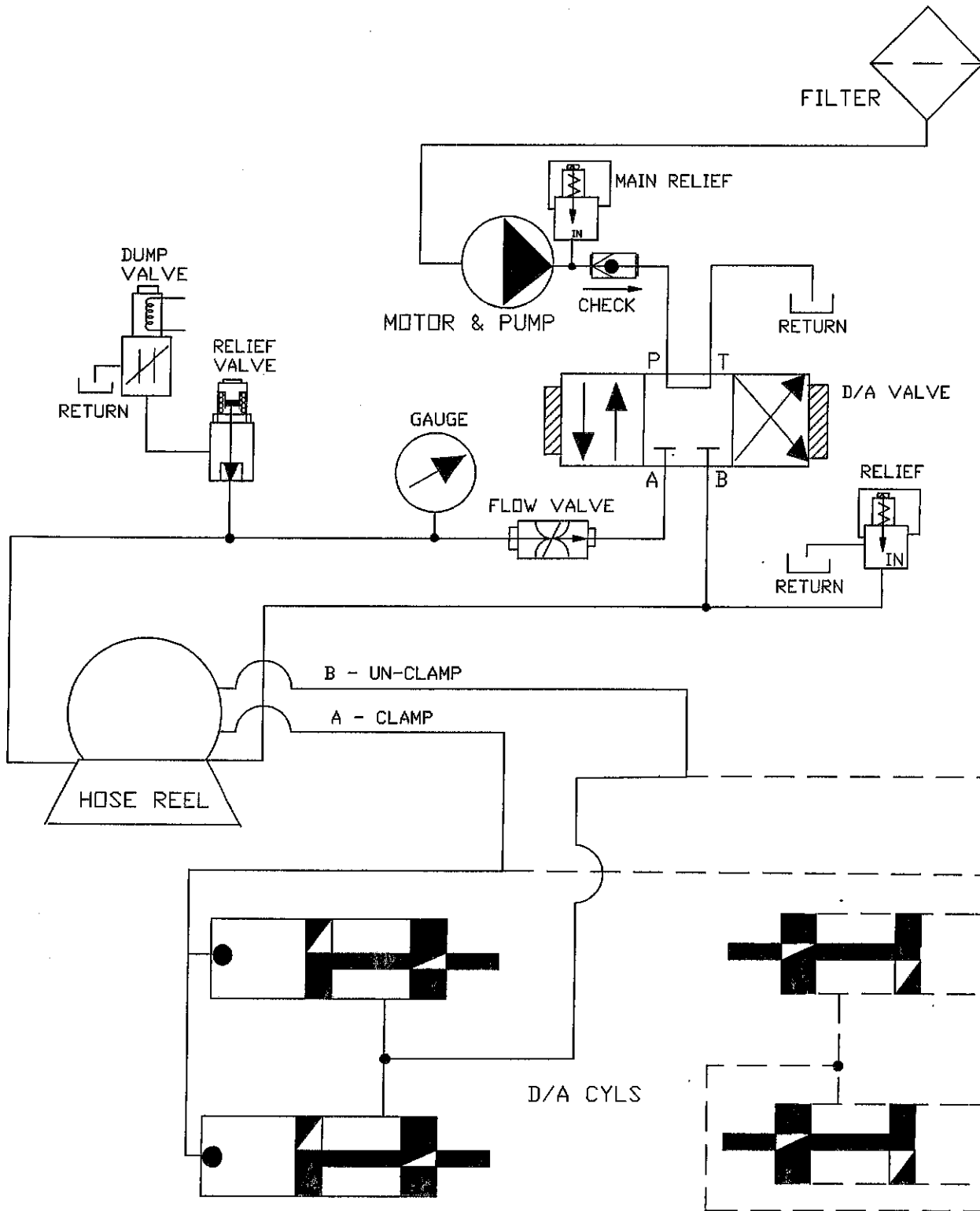
DRAWN VN

DATE 7/26/2012

SCALE N.T.S.

REVISION

-



Air Technical Industries
7501 CLOVER AVE. - MENTOR, OHIO

TITLE ALL MODELS 48x72 OR 54x96

UI - HYDRAULIC SCHEMATIC

DWG. Type MATERIAL

DRAWN VN

DATE 7/26/2012

SCALE N.T.S.

REVISION -

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 **CREDIT** on the customer's account. This credit can be used for purchase of New Product, Replacement Parts, and Service; **at no time will a cash refund be issued.** 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

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OR CALL TOLL FREE:

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7501 CLOVER AVENUE
MENTOR, OH 44060

BILL TO _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

ORDER NO. _____ PHONE _____

SHIP TO _____ NAME _____

ADDRESS _____

I am charging \$ _____
to my:



CARD NO.

Ship open account. We are rated in Dunn & Bradstreet.

EXP. DATE

Enclosed is full amount. TOTAL

QTY.	MODEL	DESCRIPTION (please print clearly)	PRICE EACH	TOTAL PRICE

All foreign payments must be in U.S. funds.

Ship via _____

All prices are F.O.B. factory unless marked otherwise.

Prices subject to change without notice.

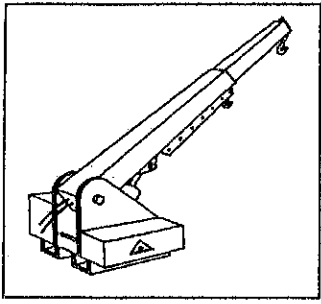
AMOUNT FOR GOODS	
SALES TAX (OHIO ONLY)	
POSTAGE OR FREIGHT	
TOTAL AMOUNT OF ORDER	
AMOUNT ENCLOSED	

FAX TO ATI: 440-953-9237

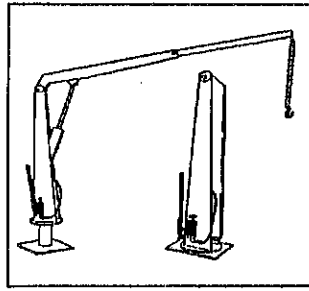
I NEED A QUOTE FOR THE FOLLOWING PARTS:

<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

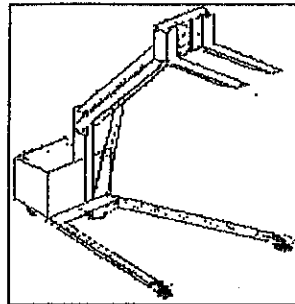
Table Model # _____	Serial Number _____
COMPANY _____	
NAME _____	TITLE _____
ADDRESS _____	
CITY _____	STATE _____ ZIP _____
PHONE _____	FAX _____



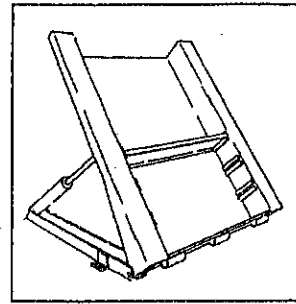
JibMaster



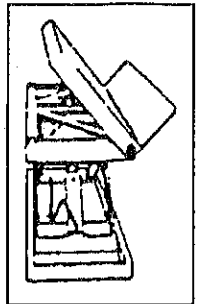
Truck mounted Foldable Crane



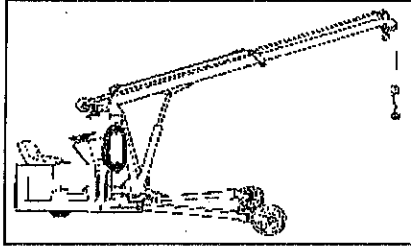
Universal Lift



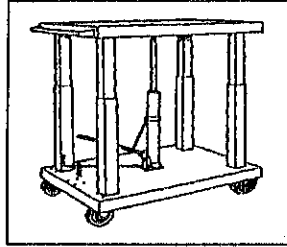
Zero-Low Crate Positioners



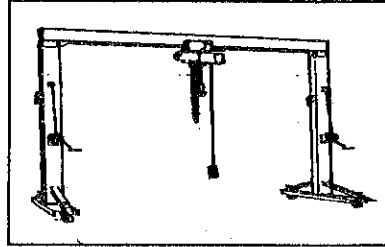
Lift & Tilt Tables



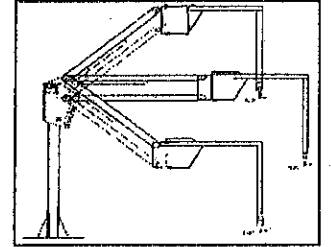
Port-O-Giant



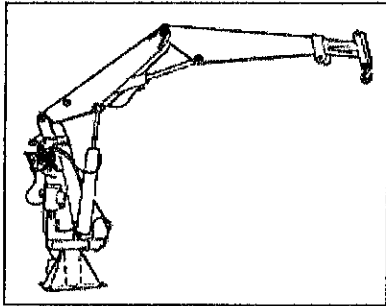
Post Tables



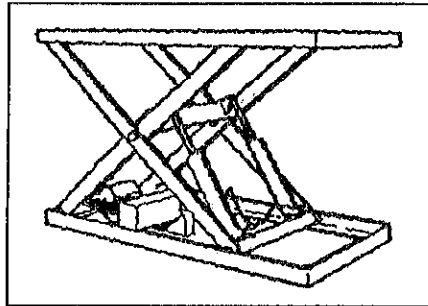
Gantry Cranes



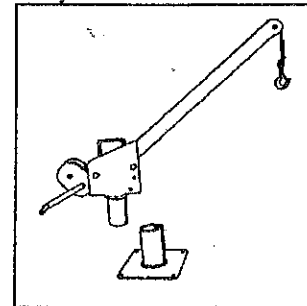
Articulating Manipulator



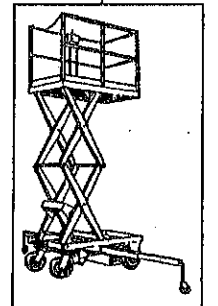
Knuckle Cranes



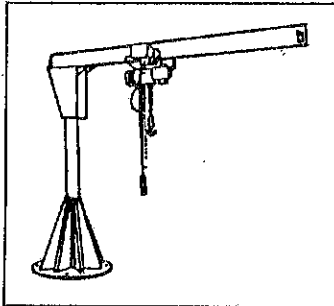
Scissor Lift Tables



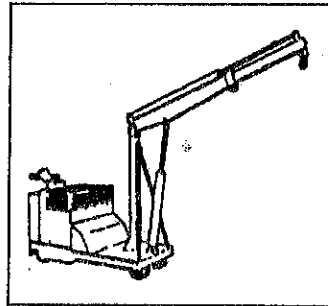
Truck Mounted Pick-Up Crane



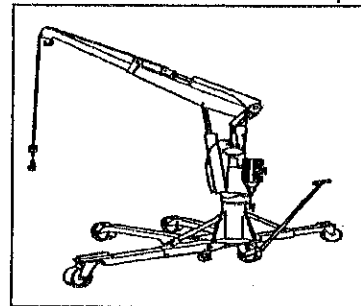
Maintenance Lifts



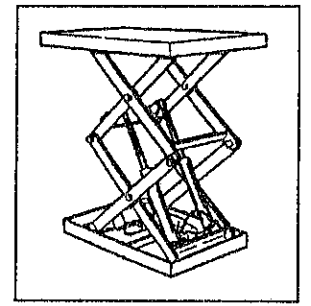
Floor Mounted Jib Cranes



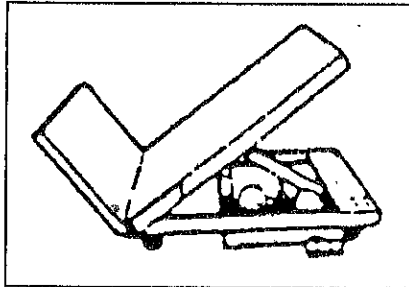
Reversible Boom Crane



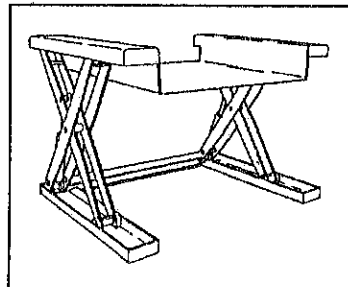
Super Master



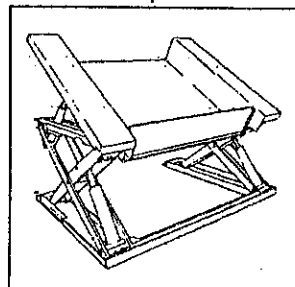
Double Scissor Lift Table



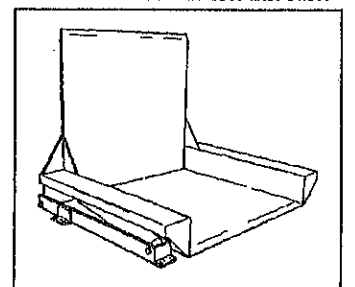
Crate Positioner



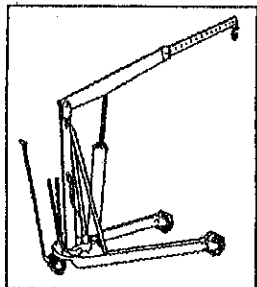
Zero-Low Lift Table



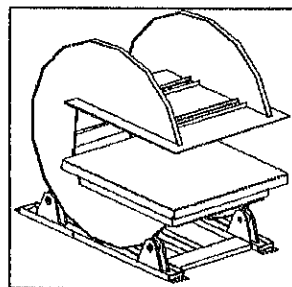
Zero-Low Up-Enders/Positioner



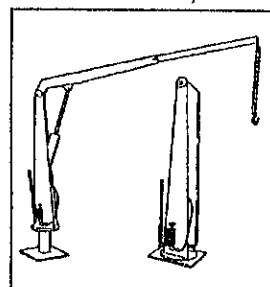
Zero-Low Lift & Tilt



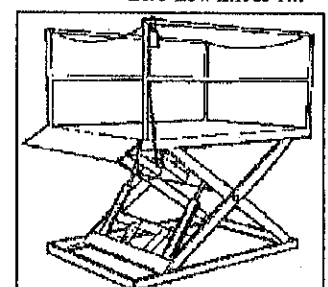
Husky Master



Uppender-Inverter



Truck Mounted Foldable Crane



Magic Dock Scissor Lift