



INSTALLATION / OPERATOR MANUAL

3077 SERIES TWIN POST HighLift – FORKLIFT



PROUDLY MADE IN DUBLIN, VIRGINIA USA



APPALACHIAN MACHINE INC | 5304 Laboratory Street | Dublin, VA 24084

Phone: (540) 674-1914 | info@appalachianmachine.com | www.appalachianmachine.com



FOREWORD

This manual has been prepared so that the owner, maintenance personnel and operator may readily have available information and instruction pertaining to the installation, maintenance, repair and safe operation of the System.

The extra care in design, quality and manufacture of the System warrants the attention of all concerned. The additional personal attention and cost to provide regular inspection and maintenance will be reimbursed many times over in long-term trouble-free operation.

Maintenance personnel are urged to study this manual, so that a complete understanding of the system's operating principles, trouble-shooting techniques and maintenance methods may be accomplished.

Since units vary, the installation instructions presented in this manual have been generalized. Some deviations from the instructions might be required to complete the unit installation.



CUSTOMER SERVICE POLICY

LIFTERS

INSTALLATION: Appalachian Machine Inc. can install the lift unit at your location. Please call for quote.

QUESTIONS: If you are installing the lift unit and have question, please call Customer Service.

PARTS: Appalachian Machine Inc. stocks parts at our plant in Dublin, VA. Parts are shipped one to two business days after order. Emergency part service ships by UPS Next Day if ordered before 2PM EST, Monday – Friday.

PRICES: Call Customer Service.

TERMS: Net 30 days.

ORDER REQUIREMENTS: Minimum \$35 per order.

WARRANTY: All warranties (parts & labor) and returns must have a Return Material Authorization number (RMA#). Call Customer Service for approval and RMA#.

Customer Service Center

Monday – Friday 7AM-3PM EST

(540) 674-1914

info@appalachianmachine.com



GENERAL SPECIFICATIONS

3077 SERIES TWIN POST - PARTS LIST

<u>PART NUMBERS</u>	3077-08-3000 8' Column 3077-10-3000 10' Column 3077-12-3000 12' Column Custom lift height variations available on request
<u>DESCRIPTION</u>	Unit can dump all Toter Mobile Trucks, Tilt Trucks, Utility Trucks and Two-Wheel or Caster carts with an optional adapter up to 112" from the floor with standard chute.
<u>LOAD RATING</u>	2,500 LBS Twin Motor Model 1,500 LBS Single Motor Model
<u>POWER UNIT</u>	5HP 208/230/460 Volt 3 Phase Full Load Amps @ 1,800 RPM 230 Volt – 14.4 / 460 Volt – 7.21
<u>OIL RESERVOIR</u>	15 Gallon
<u>HYDRAULIC PUMP</u>	Danfoss
<u>HANDVALVES</u>	Gresen
<u>FRAME</u>	Post 5"x5" Tubing, Lift Assembly Support 6"x2" Tubing, Base Plate ¾" Steel
<u>LIFTING MOTORS</u>	Parker
<u>LIFTING MOTOR BRAKE</u>	Ausco

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<u>LIFT CHAIN</u>	#60 ¾ Pitch
<u>DUMP CYLINDER</u>	3 or 4" Bore x 18" Stroke x 2" Rod
<u>LIFTING FORKS</u>	42" Class II
<u>SHIP WEIGHT</u>	2,500 LBS
<u>SIZE</u>	
<u>COLORS</u>	Standard - Safety Yellow Custom Colors and Powder Coating By Special Order
<u>OPTIONS</u>	Power unit with electric controls Special length or width chutes 36" Class II forks Two-Wheel and Caster Cart Dump attachment



SAFETY INSTRUCTIONS

3077 SERIES TWIN POST HighLift – FORKLIFT

1. No one should operate the lifter without first reading the manual and receiving hands-on training on the unit.
2. The power unit is controlled by a key lock for added safety. Access keys should be controlled by the plant or building safety manager and limited to trained operators. **NEVER** leave the key in the lock when not operating.
3. No one should climb, sit or **RIDE** on the lifter.
4. All personnel must stand clear (10 feet away) during the complete lift cycle. The operator must have a clear view of the lifter throughout the lift cycle, up and down.
5. **NEVER** stand under the lift unit when it is operating or in the up position.
6. **NEVER** clean under the lift unit when it is in the up position.
7. **NEVER** leave the unit up in the dumped position.
8. The power unit is designed with safety in mind and is operated by key lock and hydraulic hand valve. No modifications should be made to these controls.
9. Dump only authorized Toter Carts that are in good repair. **DO NOT** dump other carts. **DO NOT** dump Toter Carts that are cracked, broken, have bent stop bars or missing parts.
10. **DO NOT** modify this lifter to handle other carts.
11. **DO NOT** dump a cart that is over-filled (above the lip of the cart) or overloaded (above the maximum weight printed on the cart or lid). MAXIMUM LOAD for this lifter is 2,500 LBS for double motor; 1,500 LBS for single motor.
12. **DO NOT** dump carts containing hazardous waste (per EPA listings), flammable liquids or explosive materials.
13. Wear eye protection when operating.
14. Keep hands clear of operating lift unit. Follow US OSHA lockout and tagout procedures prior to maintaining or repairing the unit.
15. Ensure that the lids of any carts that are latched, locked, or chained shut are fully opened before dumping.

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WARNING

BEFORE ANY INSTALLATION OF THE UNIT:

Voltage from the electrical disconnect to the motor starter has to be verified as the same stated on the voltage label on the motor starter control box.

FAILURE TO SUPPLY ANY VOLTAGE TO THE MOTOR STARTER THAT IS NOT THE SAME AS THE VOLTAGE STATED ON THE MOTOR STARTER WILL VOID ALL WARRANTIES.

GREASING IS REQUIRED FOR PROPER MAINTENANCE OF CERTAIN PARTS.

For weekly (or as needed) greasing, please refer to Drawing #3077-057-2 and #3077-059-2



INSTALLATION INSTRUCTIONS

3077 SERIES TWIN POST HighLift – FORKLIFT

1. Unit should be mounted on a level, 6" concrete pad beside compactor, hopper or conveyor.
2. Align mounting base of lifter as close to compactor, hopper or conveyor as possible.
3. Center faceplate chute on compactor or hopper opening.
4. Check front side and overhead clearances per dimensional drawing of 3077 Lift Units in this manual.
5. Drill holes for $\frac{3}{4}$ " concrete anchor bolts (not supplied) in each mounting hole of lifter base (16 places).
6. Attach front leg braces to the top of each column and anchor bottom of the brace pads to floor with $\frac{3}{4}$ " concrete anchor bolts (4 places).
7. Place power unit outside of leg brace on brake side of lifter as close as possible to the hydraulic motor.
8. Connect hydraulic hoses supplied from power unit to lifter.
 - a. Facing power unit's motor starter, connect left hand valve's (dump valve) '**A**' port to the upper hose fitting on the hose chain bracket. Connect '**B**' port to the lower hose fitting on the hose chain bracket.
 - b. Connect right hand valve's (elevator valve) '**A**' port to the tee fitting that connects directly to the motor. Connect '**B**' port to the tee fitting that connects to the over center valve on the motor.

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9. Bolt power unit to floor with 3/8" anchor bolts.
10. Connect 3 phase power from electrical disconnect to motor starter.
11. Fill hydraulic power unit with AW-46 or equivalent hydraulic oil to top mark on the sight gauge of the power unit.
12. Turn power unit on and check the rotation of the motor. The motor's fan should be turning in the direction of the arrow on the motor. Power unit will not pump oil if rotation of motor is not correct. To change the rotation of the motor, reverse one of the hot leads to the motor.
13. Raise lift unit up the elevator to the approximate dump height by lifting up on elevator hand valve.
14. Lift up dump valve until dump unit is fully dumped. If dumper's chute is too high above hopper, lower unit with elevator valve until desired height is established. If lift unit strikes hopper before fully dumped, raise elevator to establish dump height.
15. After desired dump height is established, weld or bolt stops on the outside of each column above the slide tubes of the elevator (1/2" x 2" x 8" flat bar).
NOTE: If stops are bolted in place, it is the customer's responsibility to supply bolts and drill holes.
16. Slide lifting forks on fork slides and adjust the height of the forks to line up with the center of the forklift sleeves on the cart being used. The height is adjusted with the 3 set screws on the channel under the elevator. A Toter cart will be required to make this adjustment. Before using lifter, be sure the cart slides easily on the forks with the elevator stopped on the adjustment screws.
17. Test unit with each style of cart that will be used with the lift unit before turning over operation of the lift unit to the operators.
18. After testing, check all hoses and fittings for oil leaks and check lifting chain's tension. If chain has a lot of movement when unit is coming down, tighten chain adjustment screw.
19. Train each operator that is to use the unit and have them carefully read the safety instructions supplied in this manual.



ATTENTION

IT IS VERY IMPORTANT THAT THE TENSION OF THE CHAINS ARE ADJUSTED BEFORE USING THE LIFT UNIT. IF THERE IS TOO MUCH SLACK OF THE CHAINS WHEN COMING DOWN THE UNIT WILL GET OUT OF TIME. THE CHAINS ARE ADJUSTED BEFORE LEAVING FACTORY, BUT THEY CAN GET LOOSE DURING SHIPPING AND DURING INSTALLATION. THE CHAINS SHOULD BE CHECKED DAILY FOR THE FIRST WEEK OF OPERATION FOR PROPER TENSION.



INSTALLATION INSTRUCTIONS

3077 SERIES TWIN POST HighLift – FORKLIFT

3077-08-3000

3077-10-3000

3077-12-3000

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	5590-00-0300	Socket Head Screw Cap
2	5440-00-0300	Lock Washer
3	3077-00-0302	Idler Shaft
4	5035-00-2020	Needle Bearing
5	3077-00-0252	Idler Sprocket
6	3077-00-0322	Holding Tab
7	5590-00-0301	Socket Head Cap Screw
8	3077-ST-3008	Twin Post Stand
	3077-ST-3010	
	3077-ST-3012	
9	5590-00-0524	Socket Head Cap Screw
10	5440-00-0500	Lock Washer
11	3077-00-3402	Hydraulic Motor Single Shaft
	3077-00-3401	Through Shaft Motor (Brake Motor)
12	3077-00-0232	Lift Sprocket
13	5035-00-1104	Bearing
14	3077-00-0602	Drive Shaft (Standard)
16	5260-00-0700	Hex Nut
17	5440-00-0700	Lock Washer
18	3077-00-0052	Roller Bearing
19	3077-00-0022	Guide Roller
20	3077-00-0032	Roller Tube

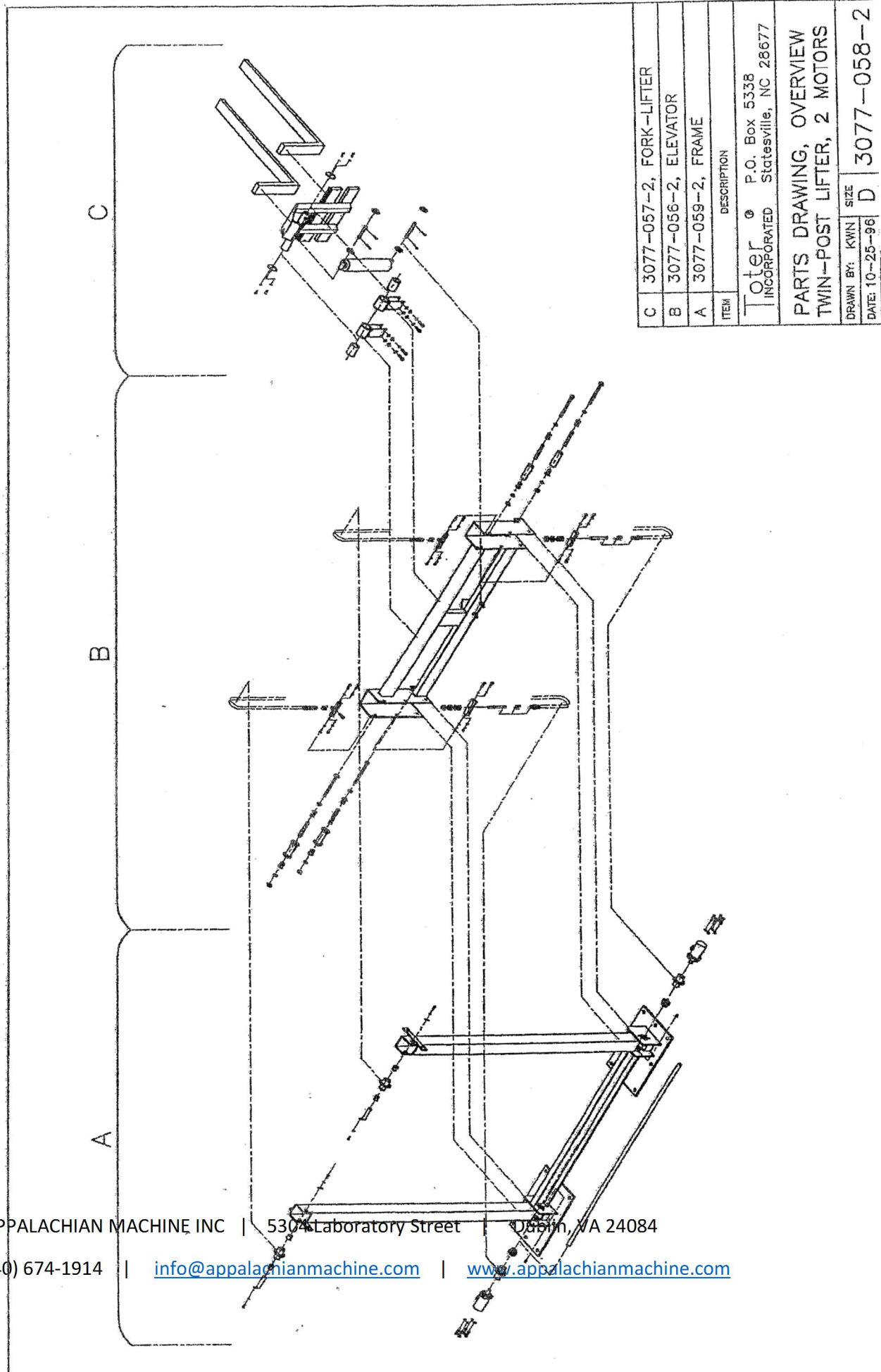
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21	3077-00-0042	Roller Screw
22	5590-00-0416	Socket Head Cap Screw
23	5440-00-0400	Lock Washer
24	3077-00-0092	Chain Take Up Bracket
25	3077-00-0122	Chain Screw
26	30077-00-3103	Connecting Link #60
27	3077-00-3104	Roller Chain #60
28	3077-00-3105	Bellville Washer
29	5260-00-0500	Hex Nut
30	3077-00-0120	Elevator
31	3077-00-0082	Chain Mount Bracket
32	5590-00-0420	Socket Head Cap Screw
33	3077-00-0522	Idler Roller
34	3078-00-3042	42" Forks
	3078-00-4032	32" Forks
35	3077-00-0492	Shaft Washer
36	3077-00-0493	Swing Unit
37	3077-00-0494	Short Pin (Cylinder)
38	5032-00-3005	Bronze Bushing
39	5590-00-0579	Socket Head Cap Screw
40	3077-00-0452	Bearing Block
41	3077-00-3100	Cylinder
42	5500-00-0910	Washer
43	5110-00-0030	Cotter Pin
44	3077-00-0432	Long Pin (Cylinder)
1	3077-00-2156	Hydraulic Motor Brake
2	3077-00-2157	Shuttle Valve (Motor Brake)
3	5320-00-1002	Hose Chain
4	5320-00-1003	Hose Chain Bracket
5		Right Post Brace
6		Left Post Brace
7	5354-00-0650	Counter Balance Valve

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ITEM	DESCRIPTION
C	3077-057-2, FORK-LIFTER
B	3077-056-2, ELEVATOR
A	3077-059-2, FRAME

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PARTS DRAWING, OVERVIEW
TWIN-POST LIFTER, 2 MOTORS

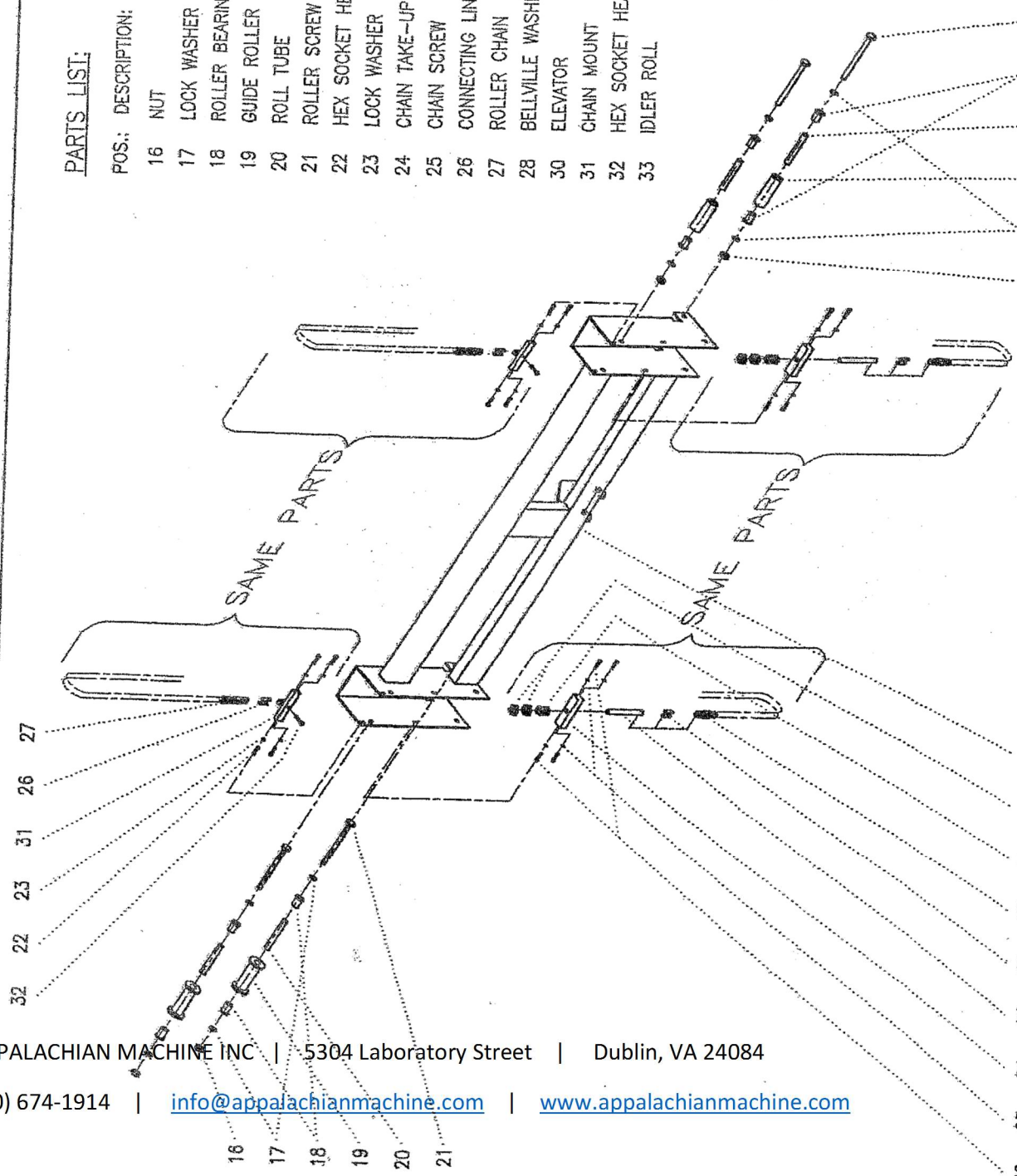
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DATE: 10-25-96	D

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PARTS LIST:

POS.:	DESCRIPTION:	SPECIFICATIONS:	QUANT.:
16	NUT	3/4"UNC	8
17	LOCK WASHER	3/4"	8
18	ROLLER BEARING	3077-005-2	8
19	GUIDE ROLLER	3077-002-2	2
20	ROLL TUBE	3077-003-2	4
21	ROLLER SCREW	3077-004-2	4
22	HEX SOCKET HEAD CAP SCREW	3/8"UNC-1"LG.	16
23	LOCK WASHER	3/8"	16
24	CHAIN TAKE-UP	3077-009-2	2
25	CHAIN SCREW	3077-012-2	2
26	CONNECTING LINK	#60	2
27	ROLLER CHAIN	#60, 125"LG.	2
28	BELLEVILLE WASHER, ASS.SPRINGS	B1500-045	24
30	ELEVATOR	3077-010-2	1
31	CHAIN MOUNT	3077-008-2	2
32	HEX SOCKET HEAD CAP SCREW	3/8"UNC-1.25"LG.	2
33	IDLER ROLL	3077-052-2	2



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**PARTS DRAWING, ELEVATOR
TWIN-POST LIFTER**

DRAWN BY: KWIN SIZE: D 3077-056-2
DATE: 10-25-96

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TWIN POST HYDRAULIC PARTS

1	3077-00-3400	Motor Brake Kit
	3077-00-3403	Motor Brake
	3077-00-3402	Motor Through Shaft
	3077-00-3404	Shuttle Valve
2	5354-00-0650	Counterbalance Valve
3	3077-00-2155	Lifting Motor
4	3075-00-6000	Power Unit
	3075-00-6101	Pump
	3075-00-6102	5HP Motor
	5354-MS-3006	Motor Starter
	5354-00-0430	Gresen TC Valve
	5354-00-0420	Gresen OC Valve
5	Hand Valve Parts	
	5354-00-0408	Handle
	5354-00-0405	Center Spring
	5354-00-0407	Seals

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PARTS LIST

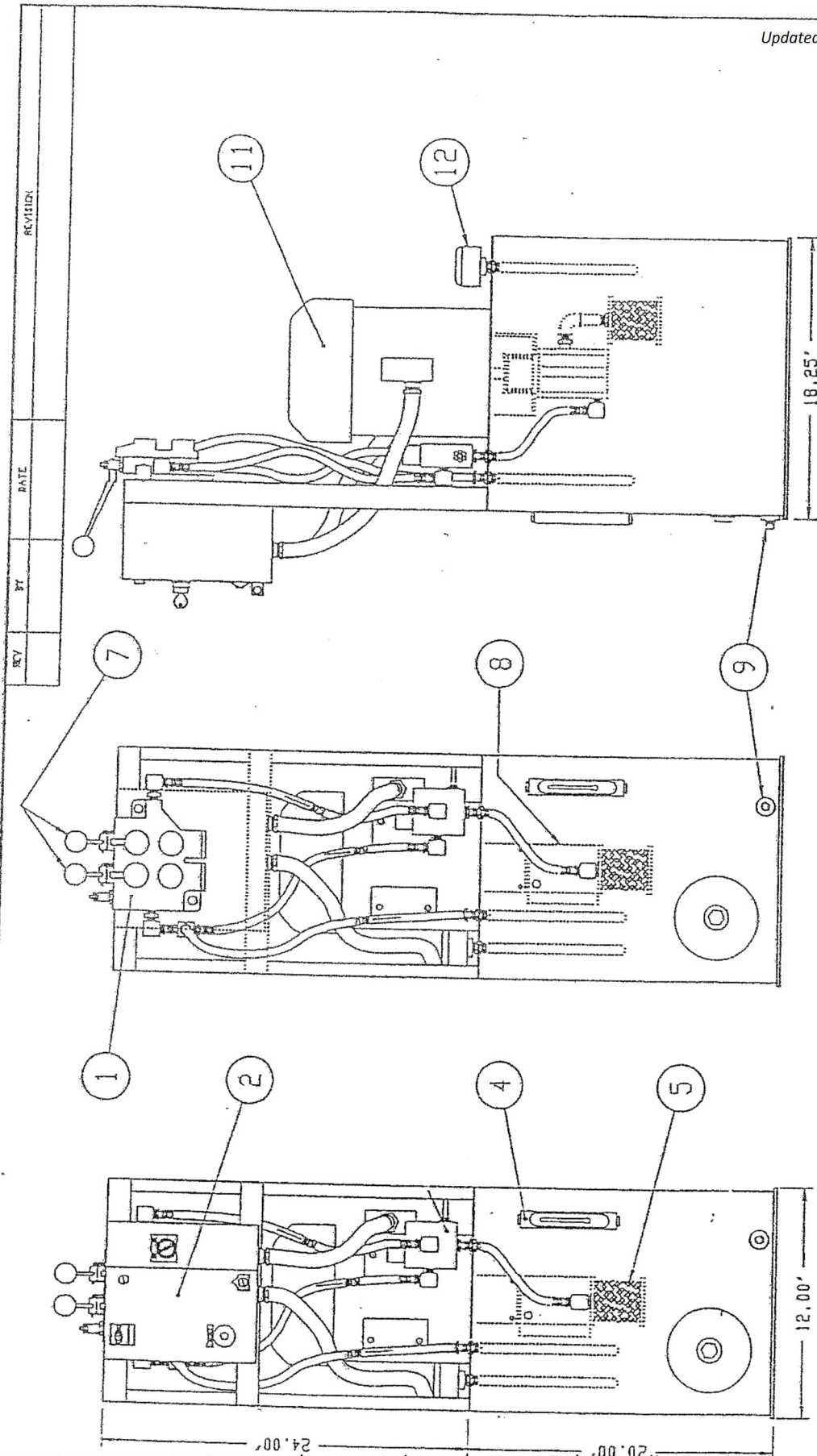
3075 -00-6000 Power Unit for 3077 & 3078 Twin Post Lift Units

<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	5354-00-0420 5354-00-0430	Open Center Hand Valve Tandem Center Hand Valve
2	5354- MS-3008	Motor Starter
4	3075-00-6107	Sight Gauge
5	3075-00-6106	Suction Strainer
7	5354-00-0409	Replacement Hand Valve Handle
8	5354-00-6101	Pump
9	3075-00-6112	Tank Plug
11	3075-00-6102	Motor 5HP 208/230/460 Volt 3PH
12	3075-00-6109	Filter Breather
NOTE:	The hand valve that operates the elevator up and down is the 5354-00-0420 open center valve. It is very important that an open center valve is used if the supplied valve has to be replaced. Failure to use the proper valve will not allow brake to operate properly.	

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Updated: Fall 2015



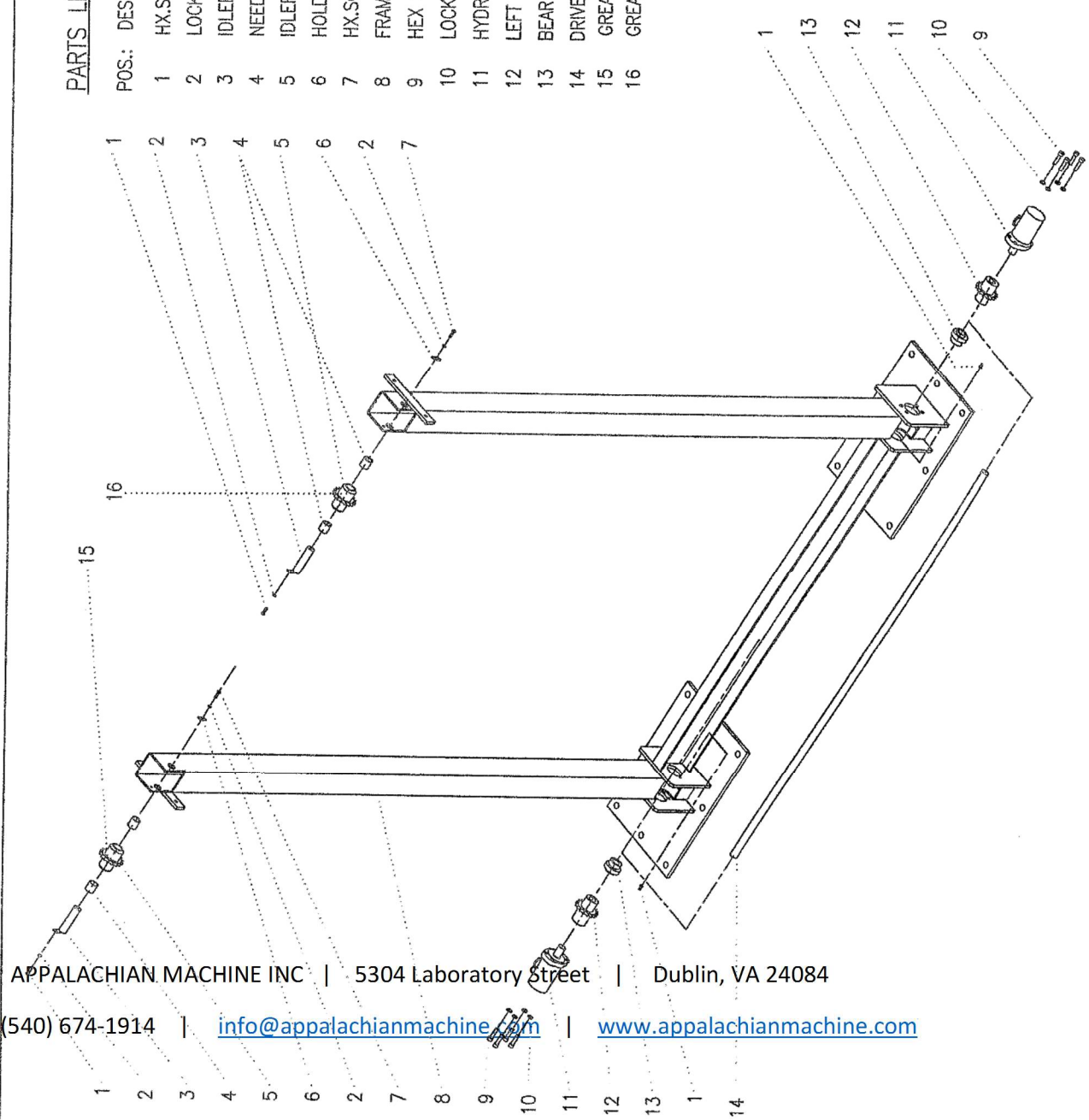
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REV	BT	DATE	REVISED
DO NOT SCALE			
THIS DRAWING IS UNLESS OTHERWISE SPECIFIED TO BE IN INCHES.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.			
All drawings are to be used as a guide only. Accuracy, availability, or availability of parts is not guaranteed without written permission.			
DATE	BY	TITLE	SCALE
06/06/95		LLOYD COLE	
DATE	BY	TITLE	SCALE
06/06/95		5 HORSE-POWER POWER UNIT	
DATE	BY	TITLE	SCALE
		DD1140	
DATE	BY	TITLE	SCALE
		3075-00-6000	

PARTS LIST:

POS.:	DESCRIPTION:	SPECIFICATIONS:	QUANT.:
1	HX.SOCK.BUTTON HD.CAP SCREW	5/16UNC-1/2"LG.	4
2	LOCK WASHER	5/16"	4
3	IDLER SHAFT	3077-030-2	2
4	NEEDLE BEARING, TORRINGTON	B-2020	4
5	IDLER SPROCKET	3077-025-2	2
6	HOLDING TAB	3077-032-2	2
7	HX.SOCK.BUTTON HD.CAP SCREW	5/16UNC-3/4"LG.	2
8	FRAME	3077-020-2	1
9	HEX SOCKET HEAD CAP SCREW	1/2UNC-1.5"LG.	8
10	LOCK WASHER	1/2"	8
11	HYDR. MOTORT, DANFOSS	#OMRA 250	2
12	LEFT SPROCKET	3077-023-2	2
13	BEARING, TORRINGTON	#1104KRR	2
14	DRIVE SHAFT	3077-060-2	1
15	GREASE FITTING	WEEKLY	1
16	GREASE FITTING	WEEKLY	1



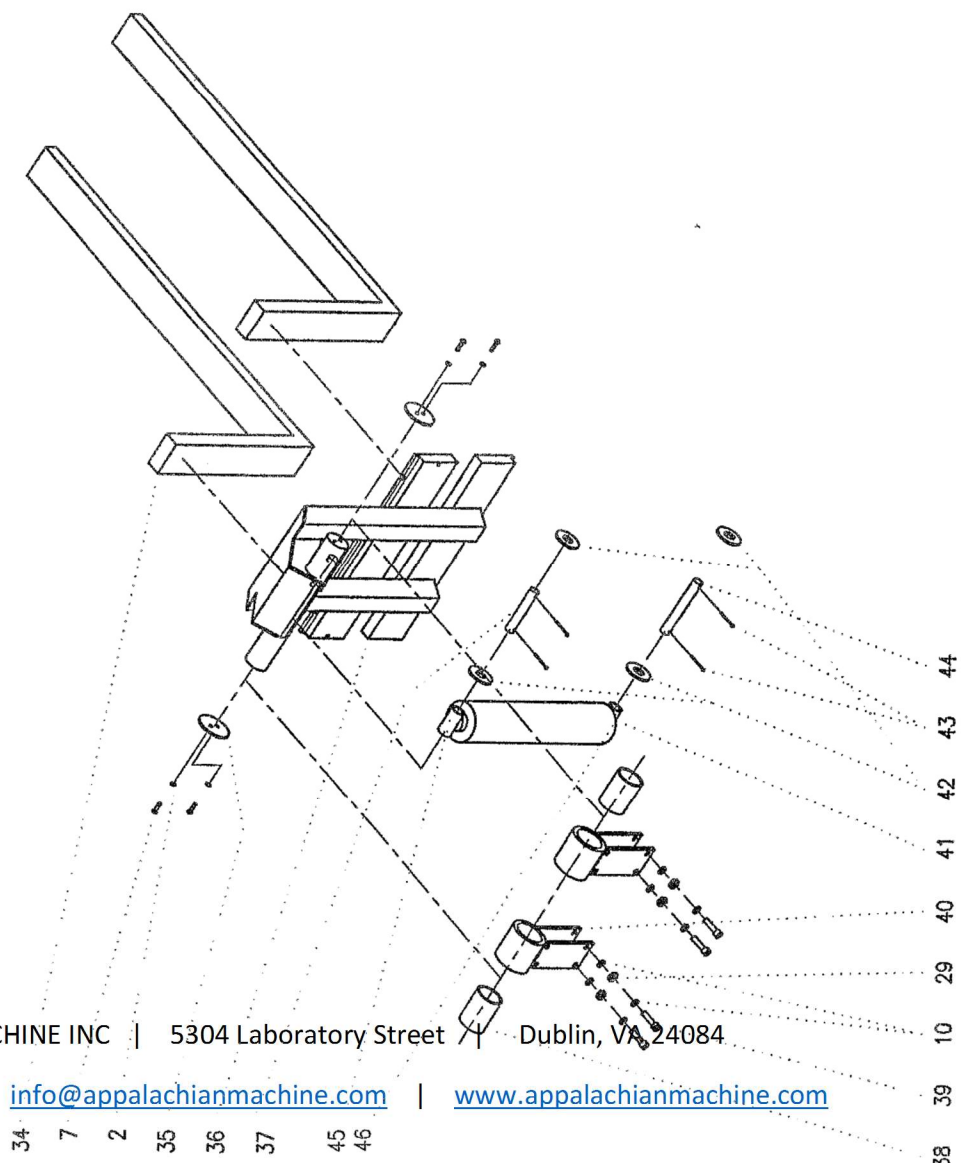
Toter INCORPORATED		P.O. Box 5338 Statesville, NC 28677	
PARTS DRAWING, FRAME TWIN-POST LIFTER, 2 MOTORS			
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DATE:	10-25-96	D	3077-059-2
SHEET	1	OF	1
			CURRENT REV.:

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PARTS LIST:

POS.:	DESCRIPTION:	SPECIFICATIONS:	QUANT.:
2	LOCK WASHER	5/16"	4
7	HEX SOCK. BUTTON HD. SCREW	5/16"UNC-3/4"LG.	4
10	LOCK WASHER	1/2"	8
29	NUT	1/2"UNC	4
34	FORK	CLASS 2	2
35	SHAFT WASHER	3077-049-2	2
36	SWING UNIT	3077-049-2	1
37	SHORT PIN	3077-049-2	1
38	OILITE BUSHING	AA-3005	2
39	HEX SOCKET HEAD CAP SCREW	1/2"UNC-3.25"LG.	4
40	BEARING		2
41	HYDR. CYLINDER	3077-042-2	1
42	WASHER (WIDE)	1"	4
43	COTTER PIN	3/16" x 1.50"LG.	4
44	LONG PIN	3077-043-2	1
45	GREASE FITTING	WEEKLY	1
46	GREASE FITTING	WEEKLY	1



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Toter INCORPORATED		P.O. Box 5338 Statesville, NC 28677	
PARTS DRAWING, FORK LIFTER		TWIN-POST LIFTER	
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