

Maxx-Mini Lift MMLE-80D Service Manual



LIFT PRODUCTS INC
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Model: MMLE-80D

S/N _____

Customer _____

LIFT PRODUCTS, INC.

LIFT PRODUCTS, INC.

REGISTRATION INFORMATION

(To validate your warranty and receive updated service bulletins, please complete this form)

Date _____ Model No. _____

How did you first hear of Lift Products?

- Magazine Ad (Specify which magazine) _____
- Recommended by a dealer (Name of Dealer) _____
- Received information in the mail
- Internet
- Other (Please specify) _____

What factors caused you to choose Lift Products? _____

Describe how and where products are being used? _____

Name of person completing this form _____

Title _____

Company _____

Street Address _____

City, State, Zip _____

Phone _____ Fax No. _____

Purchased From:

Name of Dealer _____

Street Address _____

City, State, Zip _____

Phone No. _____ Fax No. _____

Please fax this form to 262-521-5725.

OPERATION AND SERVICE MANUAL

BEFORE OPERATING THE LIFT TABLE, READ THIS MANUAL CAREFULLY AND UNDERSTAND COMPLETELY. KEEP THIS MANUAL ON FILE FOR FUTURE REFERENCE. IF THIS IS LOST, PLEASE CONTACT YOUR LOCAL SUPPLIER FOR A NEW COPY. ALSO, IF THE WARNING/CAUTION DECAL ON THE UNIT IS LOST, PLEASE CONTACT YOUR LOCAL SUPPLIER FOR A NEW COPY.

NOTE: On this manual, WARNING means the danger which can lead to death or serious injury. CAUTION mean the danger can lead to slight or property damage.

1. WARNING

1. DO NOT allow another person to stand in front of or behind lifter when it starts to move.
2. ALWAYS travel with fork in lowered position.
3. NEVER sit, stand or ride on forks or platform. SEVERE PERSONAL INJURY could result.
4. NEVER go under forks or platform. SEVERE PERSONAL INJURY or DEATH could result.
5. DO NOT use in area of multi level floor surfaces that could create loss control and result in SEVERE INJURY and PROPERTY DAMAGE.
6. DO NOT use lifter on slope, un-level or soft surface. Lifter may become uncontrollable. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result.
7. KEEP FEET CLEAR of rolling wheel that could result in SEVERE PERSONAL INJURY.
8. DO NOT load on fork more than the other and DO NOT load tips on forks. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result.
9. DO NOT overload lifter. ALWAYS stay within designated capacity and load center rating. SEVER PERSONAL INJURY and PROPERTY DAMAGE could result.
10. SHEARING HAZARD. NEVER place hands or feet under lowering forks. SEVERE PERSONAL INJURY could result.
11. NO FIRE during charging. Read battery operation manual.
12. HIGH VOLTAGE. Disconnect battery socket before opening control panel box.
13. DO NOT remove battery terminal cover. Short-circuit or electric shock could occur.

2. CAUTION

1. Hazard or unsafe practice which, if not avoided, may result in MINOR or MODERATE PERSONAL INJURY and PROPERTY DAMAGE.
2. READ THE OPERATION MANUAL COMPLETELY BEFORE USING AND THOROUGHLY UNDERSTAND AND FOLLOW ALL SAFETY INSTRUCTIONS.
3. This liter is designated to use with stable uniform load on a solid lever floor. DO NOT use the lifter for and other purpose than its intended use.
4. Lifter shall be operated by TRAINED personnel. OPERATION shall read "Operation Manual" completely and thoroughly understand the controls and operation of this equipment BEFORE operation of the lifter.
5. ALWAYS observe lifter and ALWAYS stay at the controls while the lifter is in motion. RELEASE controls and STOP lifter immediately if load on lifter appears to become unstable. NEVER leave the load lifter unattended unless the forks are in the fully lowered position.

6. DO NOT slide the load on or off the forks. The lift may move allowing the load to fall. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result.
7. DO NOT use lifter with unstable, unbalanced or loosely stacked load. Unbalanced loads may become unstable and fall. SEVERE PERSONAL INJURY and PROPERTY DAMAGE could result.
8. ALL lifter service must be performed by qualified personnel only.
9. ALWAYS keep feet, hands and fingers away from casters, load wheels and all moving components. SEVERE INJURY could result.
10. ALWAYS perform maintenance and inspections with lifter unloaded.
11. Prolonged continuous working might cause damage of power pack.
12. Stop operation if temperature of hydraulic oil is too high. The lifter is NOT waterproof and is intended to be used in a dry environment.

3. DAILY INSPECTION

Daily inspection is effective to find the malfunction or faulty on the lifter. Check the lifter on the following points before operation.

CAUTION: DO NOT use lifter if any malfunction or faulty is found.

1. Check scratch, bending or crack on the lifter.
2. Check smooth movement of the wheels.
3. Check if there is oil leakage from the cylinder.
4. Check the vertical creep of forks.
5. Check the function of brake.
6. Check if all the bolts and nuts are tightened firmly.

4. NAME OF PARTS



- 1.Handle
- 2.Switch
- 3.Brake Pedal

- 4.Platform
- 5. Link
- 6.Guide rail

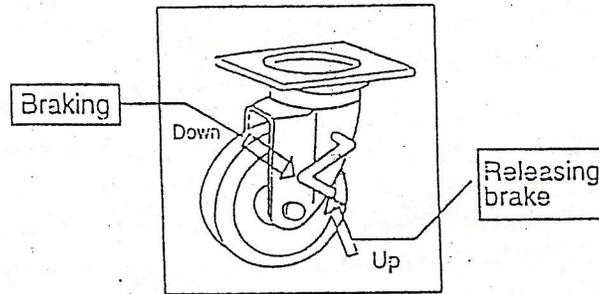
5. OPERATING LIFT TABLE

How to use the brake.

CAUTION: Brake lift table when not moving it in order to prevent sudden movement.

The brake is equipped with the swivel caster on the right side.

1. Braking the wheel, press the brake pedal.
2. Releasing the brake, lift up the brake pedal.

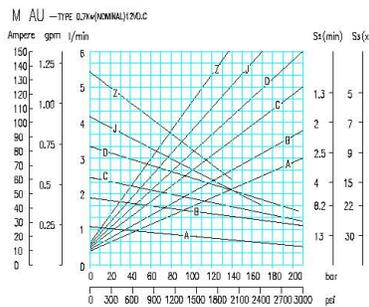
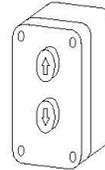
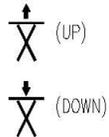


6. LIFTING UP FORKS

CAUTION:

1. DO NOT overload the lifter. Stay within its rated capacity.
2. Prolonged continuous working might cause damage of hydraulic power pack.
3. Step operation if temperature of hydraulic oil is too high.

Push the button "UP" and the table lifts up.



TYPE OF PUMP

A	GR.0.5 - 0.25	D	GR.0.5 - 0.75
B	GR.0.5 - 0.45	J	GR.0.5 - 0.92
C	GR.0.5 - 0.56	Z	GR.0.5 - 1.26

— Curve S2 defines the maximum running time of the D.C. Motor expressed in a minutes.

— Curve S3 expresses the on-off ratio in % which has value S3 in a total work cycle (100%).

7. LOWERING FORKS

CAUTION: DO NOT lower forks with load too fast and stop suddenly. Impact could be created and lifter could be damaged.

Push the button DOWN and the table lowers

8. MOVING THE LIFTER

WARNING: DO NOT move lifter on slope or inclined surfaces. The lifter can become uncontrollable and create danger.

1. Make the load stable to prevent it to fall.
2. Lower the table down.
3. Release the brake and move the lifter.

CAUTION: KEEP watching the condition of the load. Stop operating lifter if the load becomes unstable.

9. CHARGING THE BATTERY

1. Check the quantity of battery fluid. If it is insufficient, add the battery solution according to battery operation manual.
2. Disconnect the battery socket.
3. Connect the charging port of battery socket to the battery charger.

10. REGULAR INSPECTION

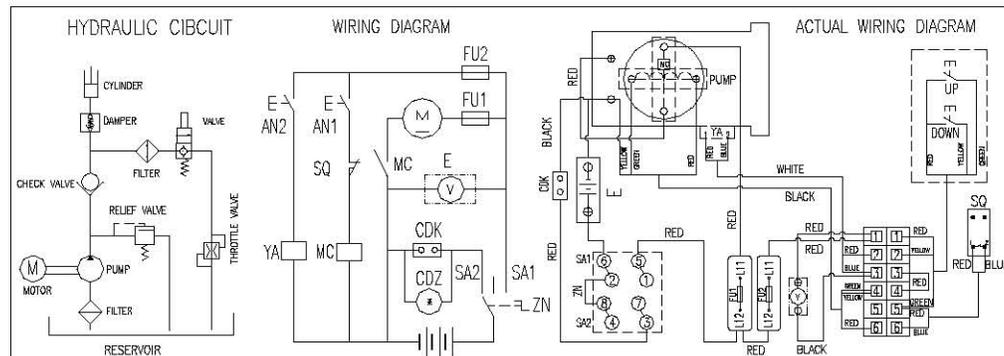
Perform the regular inspection for the safety operation

1. Check the items expressed in daily inspection (daily)
2. Lubricate with grease the guides where roller moves. Also, lubricate the grease nipples and chains. (Every Month).
3. Lubricate all the pivoting points and axles. (Every 6 months).
4. Replace the hydraulic oil for the first time: Accumulated working ten hours.
5. Replace the hydraulic oil. (Every 12 months).

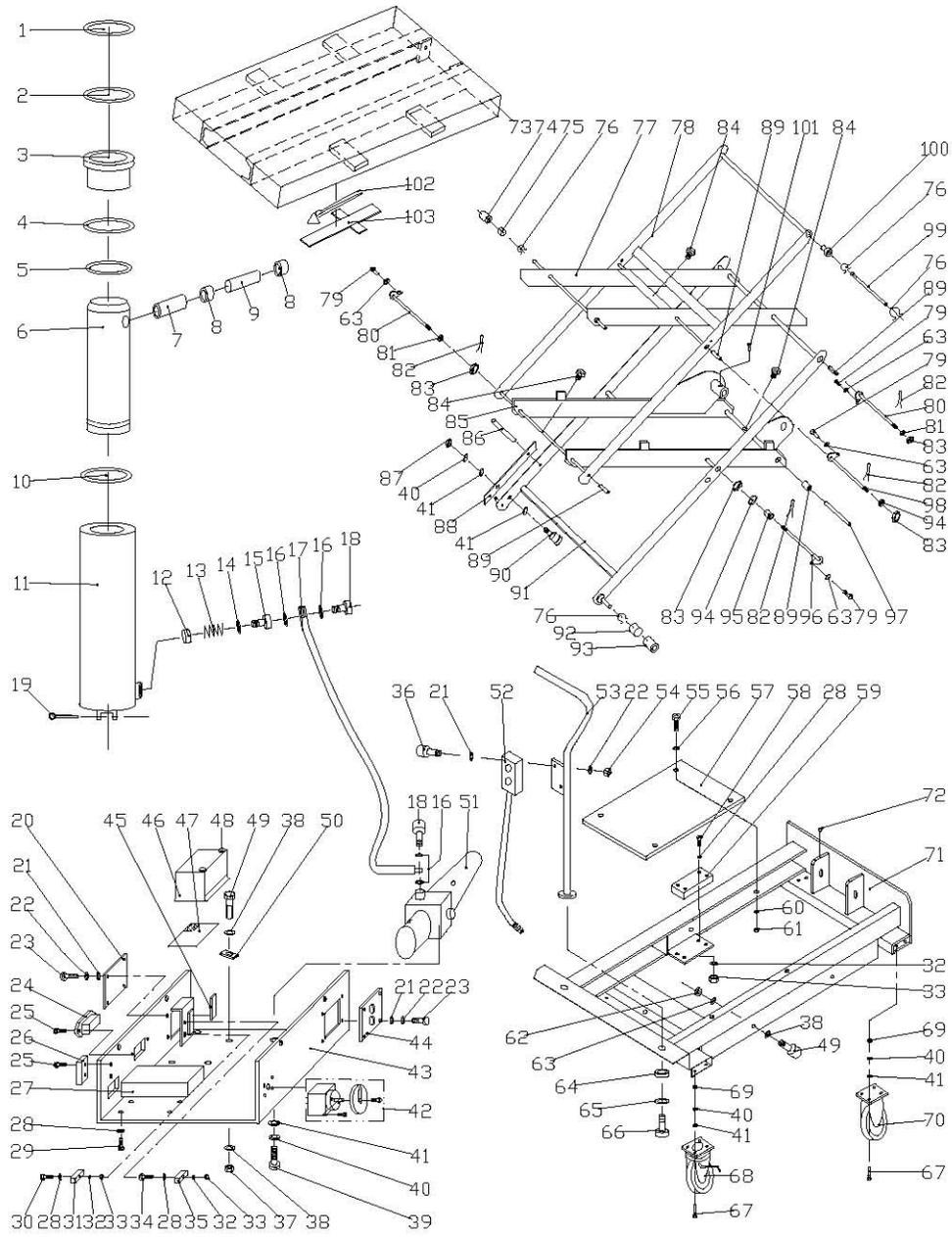
TROUBLE SHOOTING

TROUBLE	CAUSE	REPAIR
Platform does not rise while motor does not run.	1. Faulty wiring.	1. Check the wiring referring to the actual diagram.
	2. Battery socket is disconnected.	2. Connect the battery socket.
	3. Battery charge is insufficient.	3. Charge the battery.
Platform does not rise while motor runs.	1. Faulty adjustment of relief valve.	1. Adjust relief valve again.
	2. Faulty hydraulic pump.	2. Replace power pack.
	3. Shortage of hydraulic oil.	3. Add oil.
Vertical creep of forks.	1. Oil leakage in power pack.	1. Replace lowering valve.
	2. Oil leakage from hydraulic circuit.	2. Check hydraulic circuit and repair.
Oil leakage form cylinder	Faulty sealing.	Replace sealing.
Oil leakage from piping or joint.	Insufficient tightening or seal invalid	Tighten joint again or replace seal.
Oil leakage from air breather.	Excessive quantity of oil.	Reduce oil quantity.

HYDRAULIC CIRCUIT/WIRING DIAGRAM/ACTUAL WIRING DIAGRAM



MMLE-80D



LIFT TABLE SPARE PARTS LIST FOR MMLE-80D

NO	DESCRIPTION	QTY	NO	DESCRIPTION	QTY
1	Seal Cover 60x68x6.5	1	25	Screw M3x10	4
2	Y-Ring 60x70x6	1	26	Connector Block	1
3	Cylinder Cover	1	27	Charger	1
4	Retainer Ring	1	28	Washer 5	10
5	O-Ring 65x2.65	1	29	Screw M5x10	4
6	Piston Rod	1	30	Screw M5x20	1
7	Bushing	1	31	Fuse	1
8	Bushing	2	32	Spring Washer 5	6
9	Pin Axle	1	33	Nut M5	6
10	Snap Ring 60	1	34	Screw M5x16	1
11	Cylinder	1	35	Fuse	1
12	Prevent Burst Valve	1	36	Screw M4x16	2
13	Spring	1	37	Nut M8	4
14	Seal Ring 18	1	38	Washer 8	16
15	Prevent Burst Joint	1	39	Screw M10x16	2
16	Seal Ring 14	4	40	Spring Washer 10	20
17	High Pressure Hose	1	41	Washer 10	22
18	Joint	2	42	Switch	1
19	Split Pin	1	43	Battery Case Weldment	1
20	Covering Plate	1	44	Covering Plate	1
21	Washer 4	10	45	Pad	1
22	Spring Washer 4	10	46	Battery	1
23	Screw M14x10	8	47	Insulator Pad	1
24	Battery Indicator	1	48	Insulation Case	2

NO	DESCRIPTION	QTY	NO	DESCRIPTION	QTY
49	Screw M8x20	8	77	Internal Scissors for Table	1
50	Battery Securing Tag	4	78	External Scissors for Table	1
51	Hydraulic Power Pack	1	79	Screw M8x16	6
52	Terminals	1	80	Pin Axle for Scissors	2
53	Handle	1	81	Washer	2
54	Nut M4	2	82	Split Pin 3.2x26	6
55	Hex Screw M6x20	4	83	Nut M16x1.5	6
56	Washer 6	4	84	Oil Cup	3
57	Covering Plate	1	85	Internal Scissors for Chassis	1
58	Screw M5x20	4	86	Spring Pin 8x30	2
59	Lifting Limit Switch	1	87	Nut M10	2
60	Spring Washer 6	4	88	Safety Rod	2
61	Nut M6	4	89	Bushing	8
62	Nut M8	4	90	Screw M10x40	2
63	Spring Washer 8	9	91	External Scissors for Chassis	1
64	Washer	2	92	Bushing	2
65	Spring Washer 12	2	93	Roller for Chassis	2
66	Hex Screw M12x30	2	94	Washing	4
67	Screw M10x25	16	95	Bushing	2
68	Front Wheel	2	96	Pin Axle	2
69	Nut M10	16	97	Pin Axle for Chassis	1
70	Front Wheel	2	98	Pin Axle for Chassis	2
71	Chassis	1	99	Pin Axle for Table	1
72	Screw M6x8	1	100	Bushing	2
73	Table	1	101	Screw M6x16	2
74	Roller for Table	2	102	Cable	1
75	Bushing	2	103	Cable Velcro Strap	1
76	Retaining Ring for Axle 20	6			

OPERATION INSTRUCTION ENERGY SERVICE-FREE ACID-LEAD STORAGE BATTERY

1. Storage and Transportation

- Uncharged ENERGY storage battery needs no maintenance. Please store it in dry and frost less place.
- If the density of electrolyte in filled battery is less than 1.23KG/l , it shall be recharged as soon as possible. If the density of electrolyte filled in is 1.23kg/l, the storage battery shall be recharged when it is below 1.18kg/l.
- During transportation or storage, the filled storage battery shall be kept upright vertically to prevent acid liquid from overflowing.
- Cover opening, short circuit, sliding and other damage shall be avoided in the course of transportation.

2. PUT INTO USE

- Pre charged but unfilled ENERGY storage battery can be put into use at once without charging after electrolyte is filled in it.
- When it is being filled, the temperature of battery and electrolyte should be 10°C at least.
- Each unit of battery shall be filled with special acid whose density is 1.28kg/l (1.23kg/l in the area of tropics), and be filled up to the line indicating the maximum level or to the height of 15mm over the top of pole plate.
- Keep the battery at a standstill about 15 minutes. Then sway the battery gently several times. Refill proper electrolyte if necessary.
- Screw or press the sealing hole tightly.
- Clean the acid liquid left on its surface.
- The storage battery can be in good condition without any service within 5 years at the temperature of 20°C.

NOTE: If the output of the battery is not enough due to temperature or storage, please recharge the storage battery.

3. CHARGING

- Before recharging, please take the battery down.
- The storage battery is allowed to be charged with DC power. Connect the plus pole and minus pole of storage battery correspondingly to the poles of the charger.
- Ensure to connect the poles rightly, switch on the charger.
- When the battery be charged sufficiently, cut off the charger.
- Recommended charging current is 1/10 of battery capacity (E.g. 1/10x44=4.4A for the storage battery with capacity if 44Ah.)
- In the course of charging, the temperature of electrolyte is not allowed to be above 55°C.
- If the temperature of electrolyte is above 55°C, stop charging.

- If the density of electrolyte and the voltage of the battery stop increasing for 2 hours, the storage battery could be thought to be charged sufficiently.
- When the charging is ended, please check the level of electrolyte. Add pure water to the maximum level indicating line if necessary.

4. MAINTENANCE

To ensure the service life of storage battery, the following points must be followed:

- Keep battery surface clean and dry. When cleaning , only wet cloth can be used. Make sure that the liquid level is in specified position and add pure water if necessary.
- The so-called “battery reinforcer” must be forbidden to use Charge status can be checked by electrolyte density test.
- The density of electrolyte is below 1.23kg/l (1.8kg/l in the area of tropic), the storage battery must be recharged.
- At such density, freezing point of electrolyte is -15°C (at the density of 1.28kg/l freezing point is -70°C)

WARNING AND SAFETY SIGN

- Follow instruction described in plate of battery, operating instruction and instruction of vehicles and ships.
- Wear guard-glasses.
- Keep children from touching electrolyte and battery.
- Explosive Hazard Easy-explosive mixture come to escape during charge. So fire electric spark uncovered bulb and fireworks are strictly inhibited. When connecting wire-circuit, electric spark and short-circuit must be avoided.
- Hazard of strong corrosion Electrolyte is strongly corrosive. So please wear protective clothes and guard glasses. Do not tilt the storage battery otherwise acid liquid will overflow.
- Emergency Cure when the acid liquid spatters in the eyes, wash it with a large quantity of clean water at once, then see a doctor. Acid liquid on skin and clothes shall be washed with a large quantity of clean water as well. If acid liquid is swallowed, please see a doctor at once.
- Warning:
 - Do not out the unprotected storage battery in the sun
 - Because discharge storage battery may be frozen, please store it in frost less conditions.
- Handling:
 - Store discarded battery in stipulated site.
 - Follow rules of transportation (GGVS) during transporting.
 - Do not mix discarded battery with daily rubbish.