

Operator Manual

TM12

Serial No. 5000 to Current

WARNING

All personnel shall carefully read, understand and follow all safety rules, operating instructions, and the Scaffold Industry Association's MANUAL OF RESPONSIBILITIES of ANSI A92.6-1999 before performing maintenance on or operating any UpRight Aerial Work Platform.

Safety Rules



NEVER operate the machine within ten feet of power lines.
THIS MACHINE IS NOT INSULATED



NEVER elevate the platform or drive the machine while elevated unless the machine is on firm level surface.



NEVER sit, stand or climb on guardrail or midrail.

NEVER operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps and debris.

NEVER operate the machine if all guardrails are not properly in place and secured with all fasteners properly torqued.

SECURE chain or bar across entrance after mounting platform.

NEVER use ladders or scaffolding on the platform.

NEVER attach overhanging loads or increase platform size.

LOOK up, down and around for overhead obstructions and electrical conductors.

DISTRIBUTE all loads evenly on the platform. See the back cover for maximum platform load.

NEVER use damaged equipment. (Contact UpRight for instructions. See toll-free phone number on back cover.)

NEVER change operating or safety systems.

INSPECT the machine thoroughly for cracked welds, loose hardware, hydraulic leaks, damaged control cable, loose wire connections and wheel bolts.

NEVER climb down elevating assembly with the platform elevated.

NEVER perform service on machine while platform is elevated without blocking elevating assembly.

NEVER recharge battery near sparks or open flame; batteries that are being charged emit highly explosive hydrogen gas.

AFTER USE secure the work platform against unauthorized use by turning key switch off and removing key.

NEVER replace any component or part with anything other than original UpRight replacement parts without the manufacturer's consent.

INTRODUCTION

This manual covers operation of the TM12 Self Propelled Elevating Work Platform. **This manual must be stored on the machine at all times.**

PRE-OPERATION SAFETY INSPECTION (FIGURES 1, 2, AND 3)

Carefully read, understand and follow all safety rules, operating instructions, labels and the Scaffold Industry Association's MANUAL OF RESPONSIBILITIES. Perform the following steps each day before use.

1. Open module covers and inspect for damage, oil leaks or missing parts.
2. Check the level of the hydraulic oil with the platform fully lowered. Open the Chassis Door and remove the reservoir cap, oil should be visible on the dipstick. Add recommended hydraulic oil if necessary.
3. Check that fluid level in the batteries is correct (See Battery Maintenance, page 8).
4. Verify that batteries are charged.
5. Check that AC extension cord has been disconnected from chassis outlet.
6. Check that all guardrails are in place with fasteners properly tightened.
7. Inspect the machine thoroughly for cracked welds, loose hardware, hydraulic leaks, damaged control cable, loose wire connections and wheel bolts.
8. Move machine, if necessary, to unobstructed area to allow for full elevation.
9. Pull Chassis Emergency Stop Switch to the ON position.
10. Pull Platform Emergency Stop Switch to the ON position.

Figure 1: Chassis Controls

11. Turn and hold the Chassis Key Switch to CHASSIS. Push the Chassis Lift/Lower Switch to the UP position and fully elevate the platform.
12. Visually inspect the mast assembly for damage or erratic operation. Check for missing or loose parts.
13. Verify that the depression mechanism supports have fully rotated into position under the machine.
14. Turn and hold the Chassis Key Switch to CHASSIS. Partially lower the platform by pushing the Chassis Lift/ Lower Switch to the DOWN position, and check operation of the audible lowering alarm.

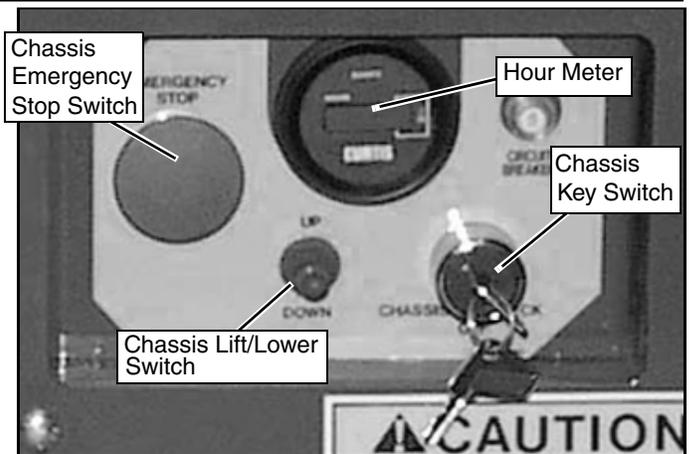


Figure 2: Chassis, Left Side

15. Open the Emergency Lowering Valve (See Figure 2) by pushing in on the knob and turning $\frac{1}{4}$ turn counter-clockwise to check for proper operation. When the platform is lowered, close the valve by pushing in and turning the knob $\frac{1}{4}$ turn clockwise until the detent engages.
16. Turn the Chassis Key Switch to DECK.
17. Close and secure module covers.
18. Check that route is clear of obstacles (persons, obstructions, holes, drop-offs, bumps and debris) is level, and is capable of supporting the wheel loads.
19. Mount the platform and properly close the entrance.

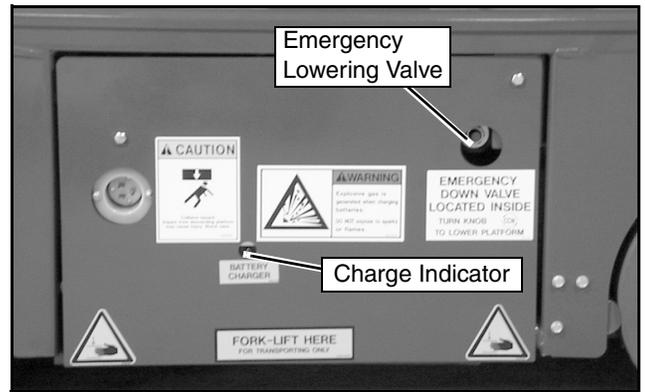
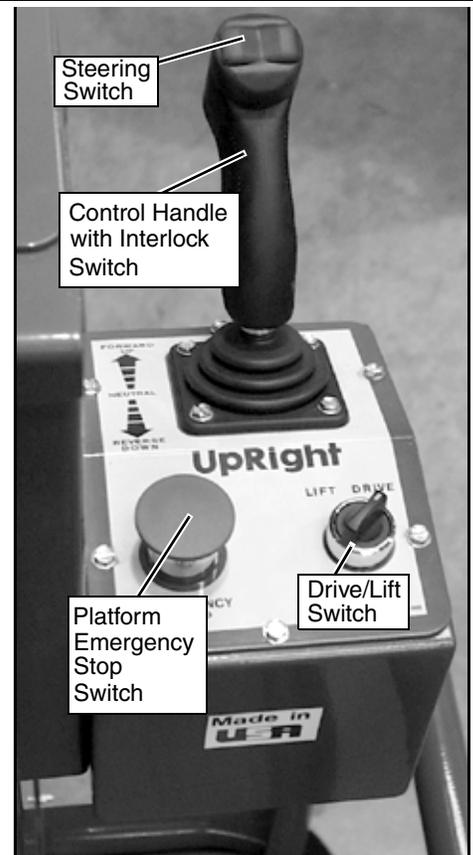


Figure 3: Platform Controls

20. **PLATFORM CONTROLS.** Turn the Drive/Lift Switch to DRIVE. While engaging the Interlock Switch, move the Control Handle to FORWARD, then REVERSE, to check for speed control.
21. Push the Steering Switch RIGHT, then LEFT, to check for steering control.
22. Turn the Drive/Lift Switch to LIFT. Grasp the Control Handle, engage the Interlock Switch and push it forward to check platform lift controls. Raise the platform to full elevation.
23. Pull back on the Control Handle. The platform should descend and the audible lowering alarm should sound.
24. Push the Platform Emergency Stop Switch button to check for proper operation. All machine functions should be disabled. Pull out the Platform Emergency Stop Switch to resume.



Before operating the work platform, ensure that the pre-operation safety inspection has been completed and that any deficiencies have been corrected. **Never operate a damaged or malfunctioning machine.** The operator must be thoroughly trained on this machine, and must read, fully understand, and follow this Operator Manual and Scaffold Industry Association's Manual of Responsibilities of ANSI A92.6-1999.

TRAVEL WITH PLATFORM LOWERED

1. Check that route is clear of obstacles (persons, obstructions, holes, drop-offs, bumps and debris), is level, and is capable of supporting the wheel loads.
2. Verify that the Chassis Key Switch is turned to DECK and that Chassis Emergency Stop Switch is on (pulled out).
3. Mount the platform and properly close the entrance.
4. Check clearances above, below and to the sides of the platform.
5. Pull the Platform Emergency Stop Button out to the ON position.
6. Turn the Drive/Lift Switch to DRIVE.
7. Engage the Interlock Switch and move the Control Handle to FORWARD or REVERSE to travel in the desired direction. The speed of the machine will vary depending on how far from center the Control Handle is moved.

STEERING

1. Turn the Drive/Lift Switch to DRIVE.
2. While engaging the Interlock Switch, push the Steering Switch to RIGHT or LEFT to turn wheels in the desired direction. Observe the tires while operating the machine to ensure proper direction.

NOTE: Steering is not self-centering. Wheels must be returned to the straight ahead position by operating the Steering Switch.

ELEVATING PLATFORM

1. Select a firm, level surface.
2. Turn the Drive/Lift Switch to Lift.
3. While engaging the Interlock Switch, push the Control Handle forward.
4. If the machine is not level the tilt alarm will sound and the machine will not lift or drive. **If the tilt alarm sounds the platform must be lowered and the machine moved to a firm level surface before attempting to re-elevate the Platform.**

NOTE: Depression supports will deploy automatically as the platform elevates and will retract after the platform has been lowered completely and has been driven.

TRAVEL WITH PLATFORM ELEVATED

NOTE: The machine will travel at reduced speed when platform is elevated.

1. Check that route is clear of obstacles (persons, obstructions, holes, drop-offs, bumps and debris), is level, and is capable of supporting the wheel loads.
2. Check clearances above, below and to the sides of platform.
3. Turn the Drive/Lift Switch to DRIVE.
4. Engage the Interlock Switch, and move the Control Handle to FORWARD or REVERSE to travel in the desired direction. The speed of the machine will vary depending on how far from center the Control Handle is moved.
5. If the machine is not level the tilt alarm will sound and the machine will not lift or drive. **If the tilt alarm sounds the platform must be lowered and the machine moved to a firm level surface before attempting to re-elevate the Platform.**

LOWERING PLATFORM

1. Turn the Drive/Lift Switch to LIFT.
2. Check around the base of the platform to ensure that no one is in contact with the machine. Engage the Interlock Switch and pull back on the Control Handle to lower the platform.

EMERGENCY LOWERING

! WARNING !

If the platform should fail to lower, NEVER climb down the elevating assembly. Stay clear of the elevating assembly while operating the Emergency Lowering Valve.

Figure 4: Emergency Lowering Valve

The Emergency Lowering Valve is located through a hole on the right side of the machine. (See Figure 4)

1. Open the Emergency Lowering Valve by pushing in on the Knob and turning $\frac{1}{4}$ turn counterclockwise.
2. To close, push in on the knob and turn $\frac{1}{4}$ turn clockwise until the detent engages.

NOTE: The platform will not elevate if the Emergency Lowering Valve is open.



PARKING BRAKE RELEASE

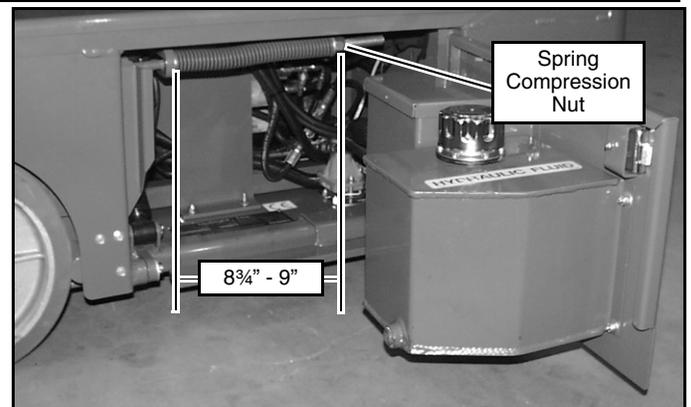
Figure 5: Parking Brake Adjustment

Perform the following only when the machine will not operate under its own power and it is necessary to move the machine or when winching onto a trailer to transport.

1. Loosen the spring compression nut so the spring is loose and the brake bars are away from the tires.
2. The machine will now roll when pushed or pulled.

After moving the machine and before normal operation:

1. Tighten the spring compression nut until the spring measures $8\frac{3}{4}$ "-9" (22,8 cm-22,8 cm) in length, verify that the brake bars have fully engaged the tires before the machine is operated.



! WARNING !

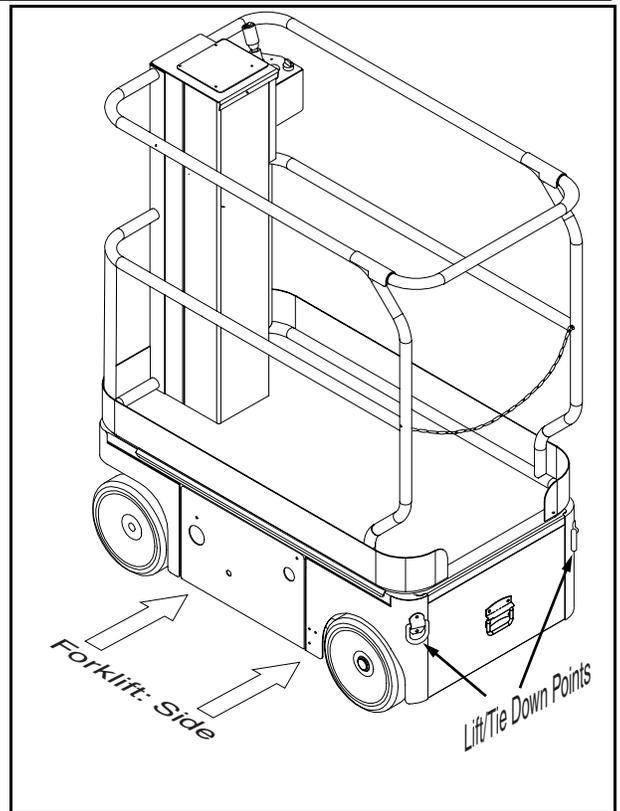
Never tow faster than 1 ft./sec. (0,3m/sec.).

Never operate work platform with the Parking Brakes released. Serious injury or damage could result.

AFTER USE EACH DAY

1. Ensure that the platform is fully lowered.
2. Park the machine on a firm, level surface, preferably under cover, secure against vandals, children and unauthorized operation.
3. Turn the Key Switch to **OFF** and remove the key to prevent unauthorized operation.

Figure 6: Transporting the Work Platform



BY FORKLIFT

! D A N G E R !

Forklifting is for transporting only.
See specifications for weight of work platform and be certain that forklift is of adequate capacity to lift the work platform.

Forklift from the side by lifting under the chassis modules.

BY CRANE

Secure straps to chassis lifting/tie down points only.

BY TRUCK

1. Maneuver the work platform into transport position and chock wheels.
2. Secure the work platform to the transport vehicle with chains or straps of adequate load capacity to the chassis lifting/tie down points.
3. Open the Emergency Lowering Valve. The platform must be in the fully lowered position for transport.

! C A U T I O N !

Overtightening of chains or straps attached to tie down lugs may result in damage to work platform.

⚠ WARNING ⚠

Never perform service while the platform is elevated without first blocking the elevating assembly.

DO NOT stand in elevating assembly area while deploying or storing brace.

DO NOT block elevating assembly with a load on the platform.

BLOCKING THE ELEVATING ASSEMBLY

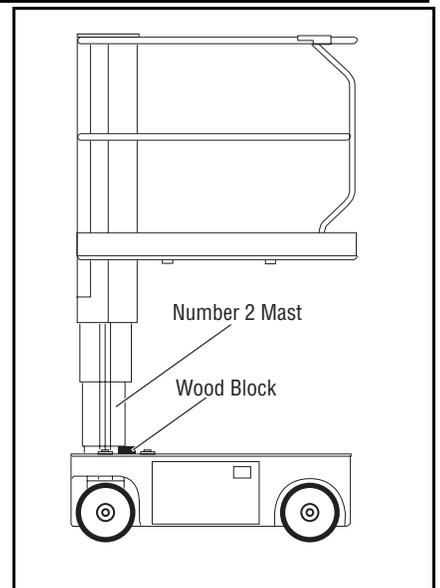
Figure 7: Blocking the Elevating Assembly

BRACE INSTALLATION

1. Park the work platform on firm, level surface.
2. Verify that the Chassis and Platform Emergency Stop Switches are ON by pulling each button out.
3. Turn and hold Chassis Key Switch to CHASSIS.
4. Push Chassis Lift Switch to UP and elevate platform approximately 4 feet (1,2 m).
5. Place a solid wood block, 2"x 4"x18" (51mm x 100mm x 45cm) between the second mast section and Chassis just behind the mast assembly. (See Figure 7)
6. Push Chassis Lift Switch to DOWN position and gradually lower the platform until the second mast section is supported by the block.

BRACE REMOVAL

1. Turn and hold the Chassis Key Switch to Chassis. Push the Lift/Lower Switch to UP and gradually raise the platform until the wood block can be removed.
2. Remove the wood block.
3. Turn and hold the Chassis Key Switch to CHASSIS. Push the Lift/Lower Switch to DOWN and completely lower platform.



BATTERY MAINTENANCE

! WARNING !

Hazard of explosive gas mixture. Keep sparks, flame and smoking material away from batteries.

Always wear safety glasses when working near batteries.

Battery fluid is highly corrosive. Thoroughly rinse away any spilled fluid with clean water.

Always replace batteries with UpRight batteries or manufacturer approved replacements weighing 62 lbs. (28 kg) each.

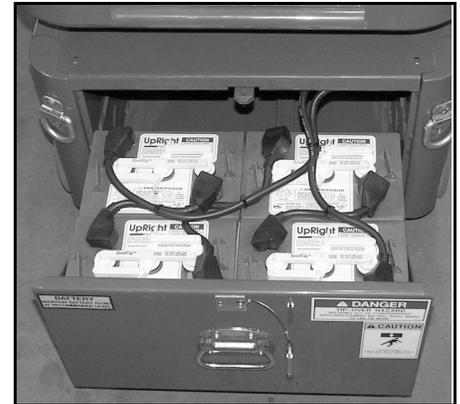
Figure 8: Access to Batteries

Check the battery fluid level daily, especially if the work platform is being used in a warm, dry climate.

If electrolyte level is lower than 3/8 in. (10 mm) above the plates, add distilled water ONLY. Do not use tap water with high mineral content, as it will shorten battery life.

The battery and cables should be inspected regularly for signs of cracks in the case, electrolyte leakage and corrosion of the terminals. Inspect cables for worn spots or breaks in the insulation and for broken cable terminals. Keep terminals and tops of batteries clean.

Refer to the Service Manual to extend battery life and for complete service instructions.



BATTERY CHARGING

Charge the batteries at end of each work shift or sooner if batteries have been discharged.

! WARNING !

Charge batteries only in a well ventilated area.

Do not charge the batteries if the work platform is near a source of sparks or flames.

Permanent damage to batteries will result if the batteries are not recharged immediately after discharging.

Never leave the charger operating for more than two days.

Never disconnect the cables from the batteries when the charger is operating.

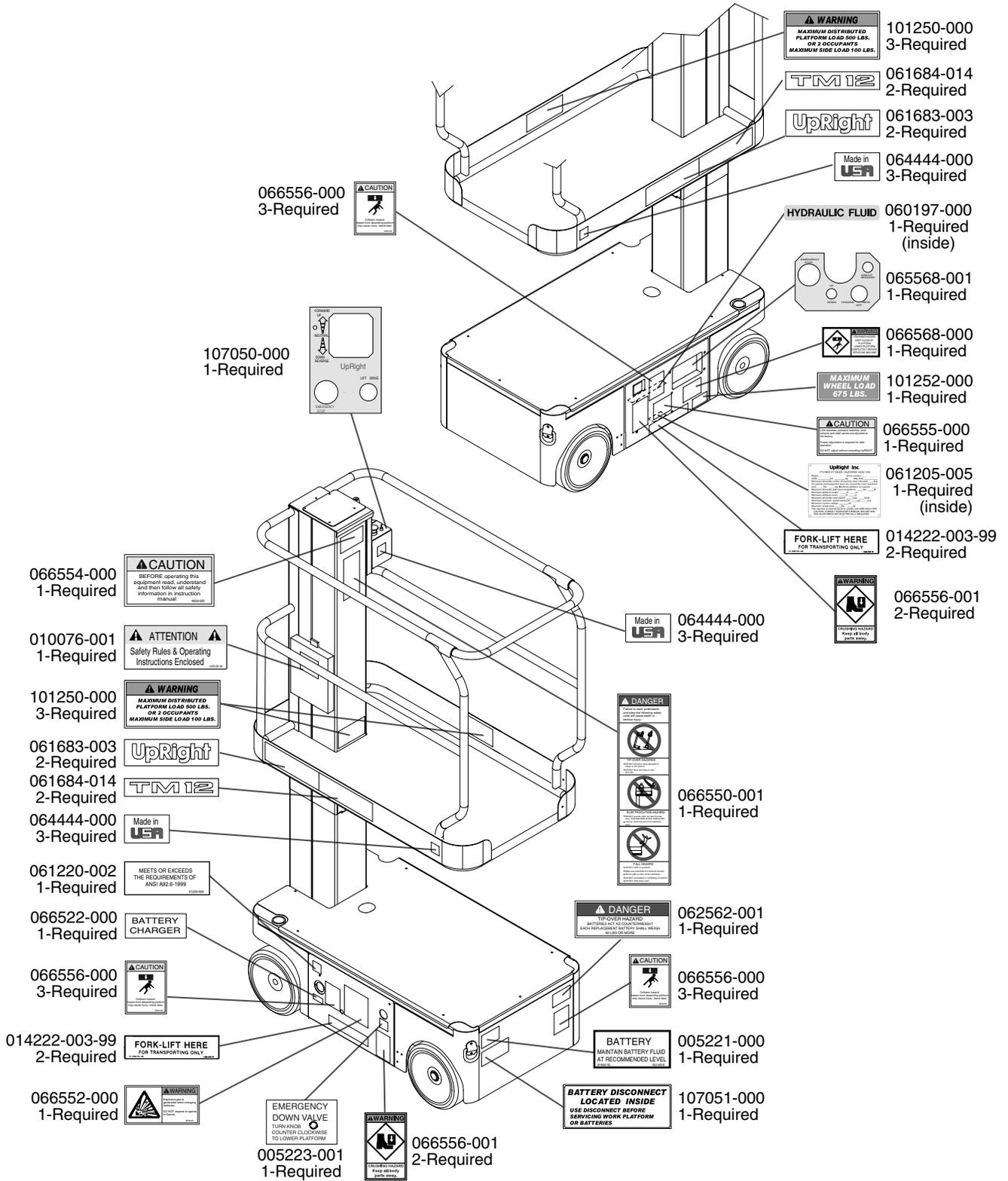
Keep the battery charger dry.

1. Check battery fluid level. If electrolyte level is lower than 3/8 in. (10 mm) above plates add distilled water only.
2. Verify charger voltage switch is set to the correct voltage.
3. Connect extension cord (12 gauge [1,5 mm²] minimum conductor diameter; 50 ft. (15 m) maximum length) to charger plug located through cutout at the left side of the chassis.
4. Connect an extension cord to properly grounded outlet of proper voltage and frequency.
5. The battery charger turns on automatically after a short delay, the LED charge indicator will illuminate.
6. The battery charger turns off automatically when batteries are fully charged, the LED charge indicator will blink indicating that the charger is in a continuing maintenance mode. DO NOT leave the charger plugged in for more than 48 hours, as permanent damage to the batteries may occur.

NOTE: The battery charger circuit must be used with a GFI (Ground Fault Circuit Interrupt) outlet.

NOTE: DO NOT operate the machine while charger is plugged in.

NOTE: Labels can be ordered by using part number located by each label. For machines equipped with options, consult the Service Manual



Proper TM12 label installation is required. These labels Shall Be Present and in Good condition before operating the work platform. Be sure to read, understand, and follow these labels BEFORE operating the work platform.

PREVENTATIVE MAINTENANCE

NOTE: No normal (routine) maintenance on the TM12 should require the platform to be raised.

The complete inspection consists of periodic visual and operational checks, together with all necessary minor adjustments to assure proper performance. Daily inspection will prevent abnormal wear and prolong the life of all systems. The inspection and maintenance schedule is to be performed at regular intervals. Inspection and maintenance shall be performed by personnel who are trained and familiar with mechanical and electrical procedures.

W A R N I N G

Before performing preventative maintenance, familiarize yourself with the operation of the machine.

Always block the elevating assembly whenever it is necessary to perform maintenance while the platform is elevated.

The preventative maintenance table has been designed to be used primarily for machine service and maintenance repair. Please photocopy and use the table as a checklist when inspecting the machine for service.

PREVENTATIVE MAINTENANCE CHECK LIST

PREVENTATIVE MAINTENANCE KEY

INTERVAL

- Daily=each shift or every day
- 50h/30d=every 50 hours or 30 days
- 250h/6m=every 250 hours or 6 months
- 1000h/2y=every 1000 hours or 2 years
- Y=Yes/Acceptable
- N=No/Not Acceptable
- R=Repaired/Acceptable

PREVENTATIVE MAINTENANCE REPORT

Date: _____
 Owner: _____
 Model No: _____
 Serial No: _____
 Serviced By: _____
 Service Interval: _____

COMPONENT	INSPECTION OR SERVICES	INTERVAL	Y	N	R
Battery System	Check electrolyte level	Daily			
	Check battery cable condition	Daily			
	Charge batteries	Daily			
	Check charger condition & operation	Daily			
	Check specific gravity	6m			
	Clean exterior	6m			
	Clean terminals	6m			
Hydraulic Oil*	Check oil level	Daily			
	Change Filter	6m			
	Drain and replace oil	2y			
Hydraulic System	Check for leaks	Daily			
	Check hose connections	30d			
	Check hoses for exterior wear	30d			
Drive Motors	Check for operation and leaks	Daily			
Emergency Down	Check procedure for Emergency Down	Daily			
Hydraulic Pump	Check for fitting leaks	Daily			
	Wipe clean	30d			
	Check for leaks at mating surfaces	30d			
	Check mounting bolts for proper torque	6m			
Controller	Check condition & operation	Daily			

COMPONENT	INSPECTION OR SERVICES	INTERVAL	Y	N	R
Platform Deck & Rails	Check fasteners for proper torque	Daily			
	Check welds for cracks	Daily			
	Check condition of deck	Daily			
	Check entry way closure	Daily			
Elevating Assembly	Inspect for external damage, dents, loose rivets or cracks	Daily			
	Check chains and sheaves for wear	6m			
Chassis	Check cables for pinch or rubbing points	Daily			
	Check welds for cracks	Daily			
	Check component mounting for proper torque	6m			
Lift Cylinder	Check for leaks	Daily			
	Check for proper torque	6m			
Entire Unit	Perform pre-operation inspection	Daily			
	Check for and repair collision damage	Daily			
	Lubricate	30d			
	Check fasteners for proper torque	6m			
Labels	Check for corrosion; remove and repaint	6m			
	Check for peeling, missing, or unreadable labels & replace	Daily			
Wheels	Check for loose components	Daily			
Steering System	Oil pivot pins	30d			
	Oil king pins	30d			
	Check steering cylinder for leaks	30d			
	Check hardware & fittings for proper torque	6m			

* NOTE: Use ISO #46 during summer and ISO #32 during winter.

SPECIFICATIONS*

ITEM	SPECIFICATION
Platform Size	29 in. x 41 in. (73,7 cm x 1,04 m) Inside Toeboards
Maximum Platform Capacity	500 lbs. (227 kg)
Maximum Number of Occupants	Two people
Height	
Working Height	18 ft. (5,5 m)
Maximum Platform Height	12 ft. (3,66 m)
Minimum Platform Height	19 in. (48,3 cm)
Dimensions	
Weight	1710 lbs. (776 kg)
Overall Width	30 in. (76 cm)
Overall Height	65 in. (165 cm)
Overall Length	53.5 in. (1,36 m)
Driveable Height	12 ft. (3,66 m)
Drive Speed	
Platform Lowered	2.27 mph (3,65 km/h)
Platform Raised	.62 mph (0,99 km/h)
Energy Source	24V battery pack Four 220 ampere hour, 6 Volt batteries, min. wt. 62 lbs. (28,12 kg) each 4 HP DC electric motor
System Voltage	24 VDC
Battery Charger	20 AMP, 110/220 VAC
Hydraulic Tank Capacity	1.9 gal (7,2 L)
Maximum Hydraulic System Pressure	3000 psi (207 bar)
Hydraulic Fluid	
Above 32° F [0° C]	ISO #46
Below 32° F [0° C]	ISO #32
Below 0° F [-17° C]	ISO #15
Lift System	One Single Stage Lift Cylinder
Drive Control	Proportional
Control System	Proportional Control Handle with Interlock, Selector Switch, Red Mushroom Emergency Stop Switches
Drive System	Dual Front Wheel Hydraulic Motors
Tires	12 in. (30,5 cm) diameter solid rubber, Non-marking
Parking Brakes	Dual, Spring Applied, Hydraulic Release
Turning Radius	14.5 in. (37 cm) Inside
Maximum Gradeability	25% (14°)
Wheel Base	38.5 in. (97,8 cm)
Guardrails	45 in. (1,14 m)
Toeboard	6 in. (152 mm)

*Specifications are subject to change without notice. Hot weather or heavy use may affect performance. Refer to the Service Manual for complete parts and service information.
The TM12 meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999

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06-02