

Operator Manual

TM12

SERIAL NO. 7352 to Current

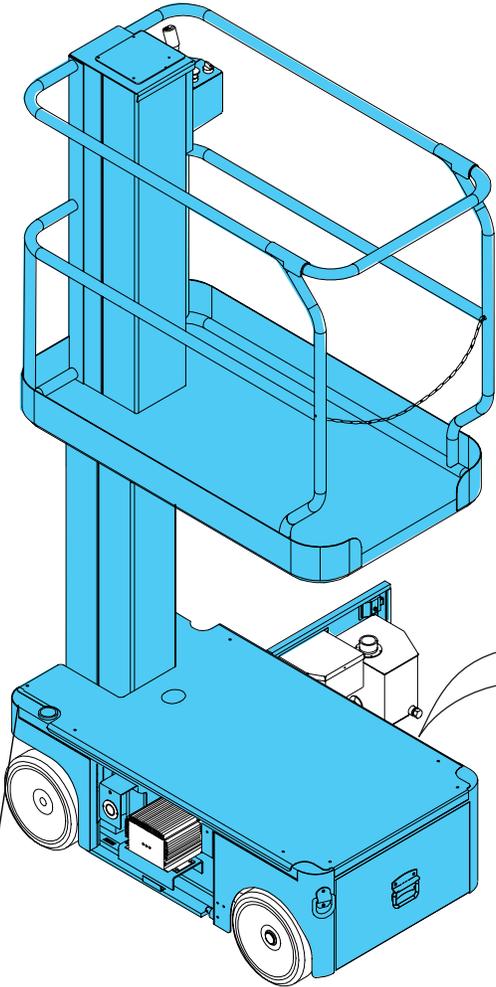
WARNING

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.

TM12

Serial Number 7352 – Current

When contacting UpRight for service or parts information, be sure to include the MODEL and SERIAL NUMBERS from the equipment nameplate. Should the nameplate be missing, the SERIAL NUMBER is also stamped on top of the chassis above the front axle pivot.



UpRight Inc.	
1775 PARK ST. SELMA CALIFORNIA 93662 USA	
Model: _____	Serial number: _____
GVW: _____ lbs.	Mfg. date: _____
Occupants and equipment must not exceed the rated workload _____ lbs. Rated number of occupants: _____	
Maximum platform height: _____ ft.	
Nominal system voltage: _____ vdc	
Maximum wheel and/or outrigger load: _____ lbs.	
This machine is manufactured to comply with ANSI A92.6-1999.	
CAUTION: CONSULT OPERATOR'S MANUAL BEFORE USE. THIS PLATFORM IS NOT ELECTRICALLY INSULATED	
061205-005	

Stamped Serial Number

UpRight, Inc.

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Madera, California 93637

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OPERATOR MANUAL

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

Electrocution Hazard	Tip Over Hazard	Collision Hazard	Fall Hazard
			
<p>NEVER operate the machine within ten (10) feet of power lines. THIS MACHINE IS NOT INSULATED.</p>	<p>NEVER operate or drive with the platform elevated unless on firm, level surface.</p>	<p>NEVER position the machine without first checking for overhead obstructions or other hazards.</p>	<p>NEVER climb, stand or sit on the platform guardrails or midrail.</p>

- **NEVER** operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps, curbs, or debris.
- **NEVER** operate the machine if all guardrails are not properly in place and secured with all fasteners properly torqued.
- **ALWAYS** close and secure the entrance after entering the platform.
- **NEVER** use ladders or scaffolding on the platform.
- **NEVER** exceed the maximum platform load. See "Specifications" on page 16.
- **NEVER** attach overhanging loads or increase platform size.
- **LOOK** up, down and around for overhead obstructions and electrical conductors.
- **DISTRIBUTE** all platform loads evenly on the platform.
- **NEVER** use damaged equipment. (Contact UpRight for instructions. See toll free phone number on inside back cover.)
- **NEVER** change operating or safety systems.
- **INSPECT** the machine thoroughly for cracked welds, loose or missing hardware, hydraulic leaks, damaged cables or hoses, loose wire connections, and wheel bolts.
- **NEVER** climb down elevating assembly when the platform is elevated.
- **IF ALARM SOUNDS** while the platform is elevated, STOP, carefully lower the platform. Move the machine to a firm, level surface.
- **IN CASE OF EMERGENCY** push the Emergency Stop Switch to cut power to all machine functions.
- **NEVER** perform service on the machine while the platform is elevated without blocking the elevating assembly.
- **NEVER** recharge batteries near sparks or open flame; batteries that are being charged emit explosive hydrogen gas.
- **NEVER** replace any component or part with anything other than original UpRight replacement parts without the manufacturer's written consent.
- **VERIFY** that all labels are in place and legible before using.
- **NEVER** tow the machine. Transport by truck or trailer only.
- **AFTER USE**, secure the machine against unauthorized use by turning the Chassis Key Switch off and removing the key.

California Proposition 65 Warning

Battery Posts, terminals and related accessories contain lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

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INTRODUCTION

This manual covers the TM12 Aerial Work Platform. This manual must be stored on the machine at all times.

Read, understand and follow all safety rules and operating instructions before attempting to operate the machine.

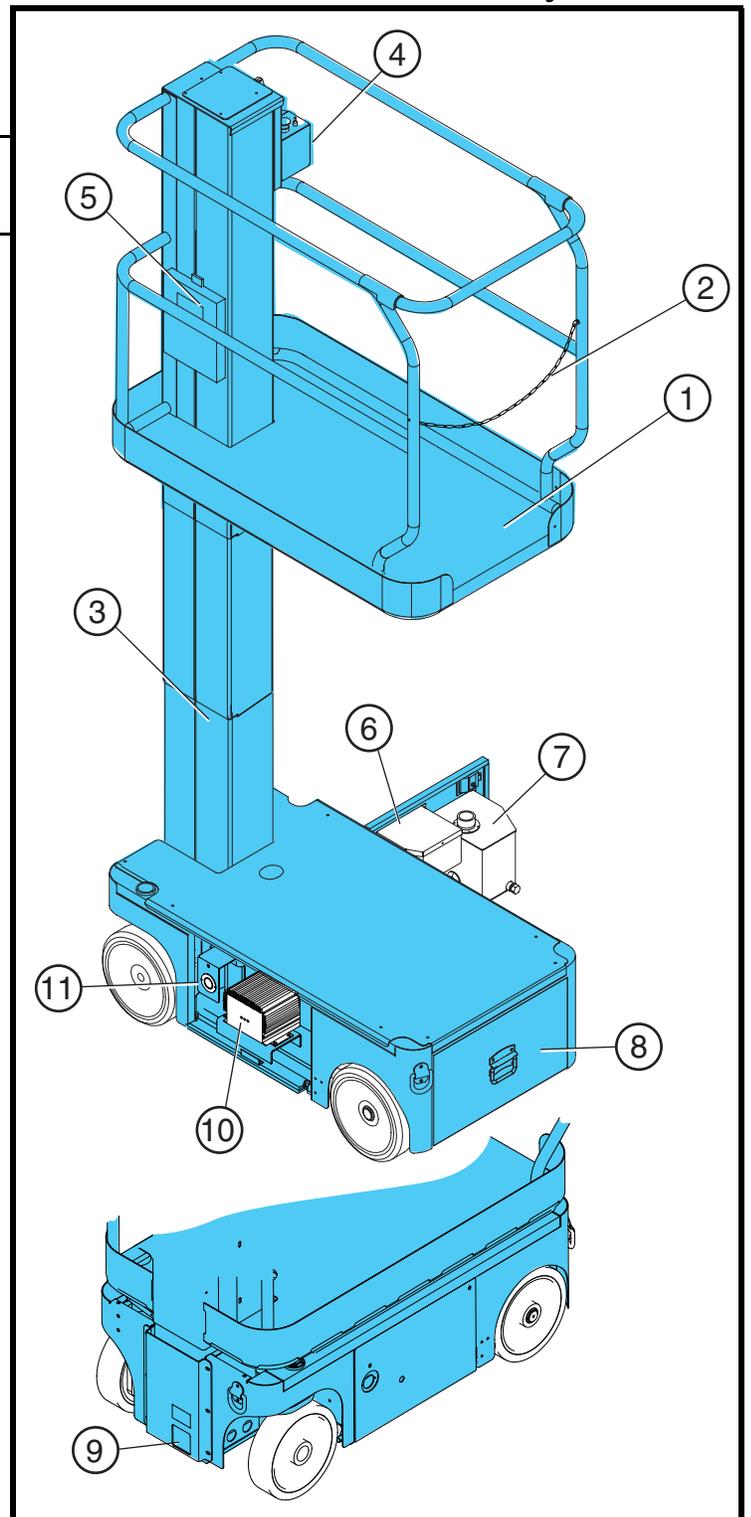
GENERAL DESCRIPTION

Figure 1: TM12 Series

⚠ WARNING ⚠

DO NOT use the machine if all guardrails are not properly in place and secured with all fasteners properly torqued.

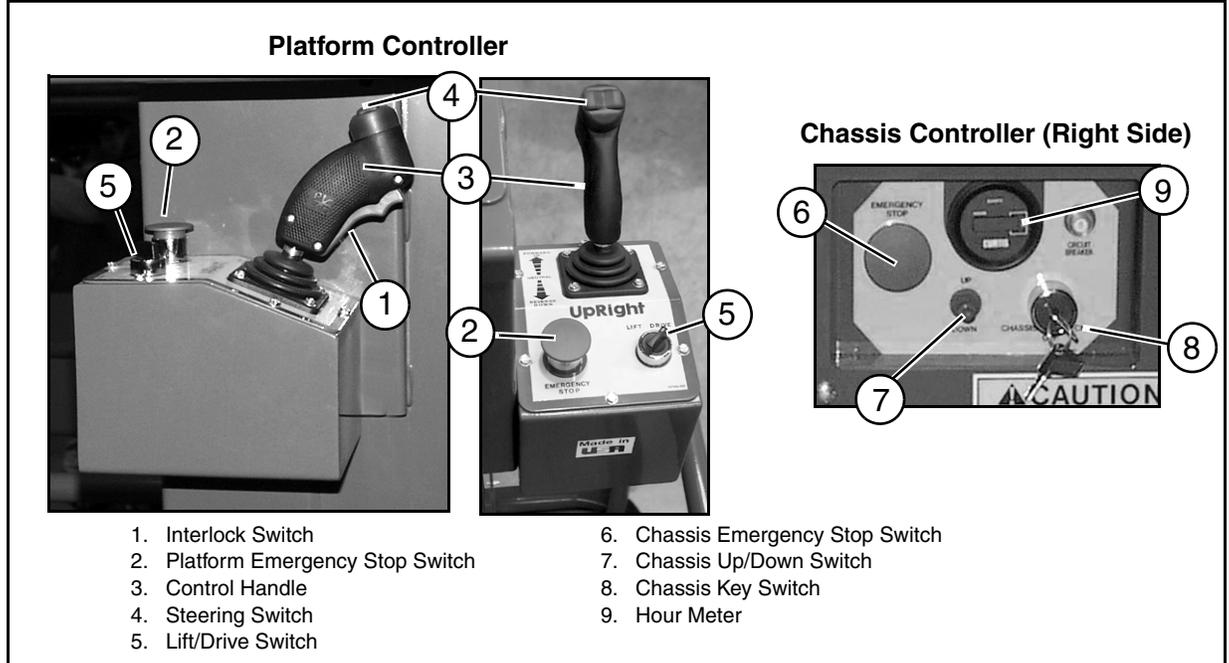
1. Platform
2. Entry Chain
3. Elevating Mast
4. Platform Controls
5. Manual Case
6. Electrical Box
7. Hydraulic Reservoir
8. Battery Tray
9. Emergency Down Valve Knob
10. Battery Charger
11. Charger Outlet Plug



CONTROLS AND INDICATORS

The operator shall know the location of each control and indicator and have a thorough knowledge of the function and operation of each before attempting to operate the unit.

Figure 2: Controls and Indicators



PRE-OPERATION SAFETY INSPECTION

NOTE: Carefully read, understand and follow all safety rules, operating instructions, labels, and the Scaffold Industry Association's **MANUAL OF RESPONSIBILITIES** of ANSI A92.6-1999. Perform the following steps each day before use.

1. Open the chassis door and inspect for damage, fluid leaks or missing parts.
2. Check the level of the hydraulic fluid with the platform fully lowered. Open the chassis door and remove the reservoir cap, fluid should be visible on the dipstick. Add recommended hydraulic fluid if necessary. See "Specifications" on page 16.
3. Check that the fluid level in the batteries is correct. See "Battery Maintenance" on page 10.
4. Verify that the batteries are charged.
5. Check that the A.C. extension cord has been disconnected from the chassis outlet.
6. Check that all guardrails are properly in place and secured with all fasteners properly torqued.
7. Inspect the machine thoroughly for cracked welds, loose or missing hardware, hydraulic leaks, damaged cables or hoses, loose wire connections, and wheel bolts.

SYSTEM FUNCTION INSPECTION

Refer to Figure 1 and Figure 2 for the locations of various controls and indicators.

⚠ WARNING ⚠

STAND CLEAR of the machine while performing the following checks.

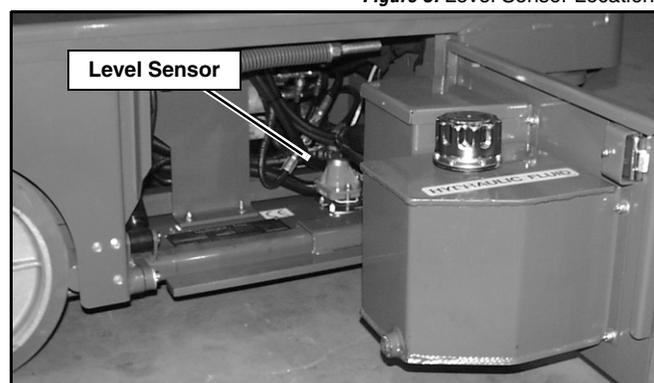
Before operating the machine, survey the work area for surface hazards such as holes, drop-offs, bumps, curbs, or debris.

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

Protect the control cable from possible damage while performing checks.

1. Move the machine, if necessary, to an unobstructed area to allow for full elevation.
2. Turn the Chassis and Platform Emergency Stop Switches ON by pulling the buttons out.
3. Check Level Sensor operation:
 - a. Open the door.
 - b. Push and hold the sensor off of level.
 - c. Turn and hold the Chassis Key Switch to CHASSIS and push the Chassis Up/Down Switch to the UP position.
 - The alarm should sound, and the platform should not lift.
 - d. Close and latch the door.
4. Turn and hold the Chassis Key Switch to CHASSIS and push the Chassis Up/Down Switch to the UP position and fully elevate the platform.
5. Visually inspect the mast assembly for damage or erratic operation. Check for missing or loose parts.
6. Verify that the depression mechanism supports have rotated into position under the machine.
7. Partially lower the platform by pushing the Chassis Up/Down Switch to DOWN, and check the operation of the audible lowering alarm.
8. Check the Emergency Down Valve for proper operation (see Figure 4):
 - a. Open the valve by pulling the knob out.
 - b. Once the platform is fully lowered, close the valve by releasing the knob.
9. Push the Chassis Emergency Stop Switch in to the OFF position. All machine functions should be disabled. Pull the Chassis Emergency Stop Switch out to resume.
10. Turn the Chassis Key Switch to DECK.
11. Check that the route is clear of persons, obstructions, holes and drop-offs, is level and capable of supporting the wheel loads.
12. After mounting the platform, properly close and secure the entrance.
13. Position the Lift/Drive Switch to DRIVE.
14. Check for speed and directional control.
 - While engaging the Interlock Switch, slowly position the Control Handle to FORWARD then REVERSE. The farther you push or pull the Control Handle from center the faster the machine will travel.
15. Push the Steering Switch RIGHT then LEFT to check for steering control.
16. Turn the Lift/Drive switch to LIFT to check platform lift controls.
 - While engaging the Interlock Switch, move the Control Handle to UP to raise the platform.
 - While engaging the Interlock Switch, move the Control Handle to DOWN to lower the platform. The platform should descend and the audible lowering alarm should sound.
17. Push the Platform Emergency Stop Switch in to the OFF position. All machine functions should be disabled. Pull the Platform Emergency Stop Switch out to resume.

Figure 3: Level Sensor Location



OPERATION

Before operating the machine, ensure that the Pre-Operation Safety Inspection and System Function 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.

TRAVEL WITH PLATFORM LOWERED

1. Check that the route is clear of surface hazards such as holes, drop-offs, bumps, curbs, or debris.
2. Check that the route is level, and is capable of supporting the wheel loads.
3. Verify that the Chassis Key Switch is turned to DECK and the Chassis Emergency Stop Switch is ON, (pull button out).
4. After mounting the platform, properly close entrance.
5. Check clearances above, below and to the sides of the machine.
6. Pull the Platform Controls Emergency Stop switch up to the ON position.
7. Position the Lift/Drive Switch to DRIVE.
8. While depressing the Interlock Switch, slowly push or pull the Control Handle to FORWARD or REVERSE position to travel in the desired direction. The farther you push or pull the Control Handle from center the faster the machine will travel.

STEERING

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

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

ELEVATING THE PLATFORM

1. Position the Lift/Drive Switch to LIFT.
2. While depressing the Interlock Switch, push Control Handle forward to UP, the farther you push the Control Handle the faster the Platform will elevate.
3. 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 elevate the platform.

TRAVEL WITH THE PLATFORM ELEVATED

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

1. Check that the route is clear of surface hazards such as holes, drop-offs, bumps, curbs, or debris.
2. Check that the route is level, and is capable of supporting the wheel loads.
3. Check clearances above, below and to the sides of the platform.
4. Position the Lift/Drive Switch to the DRIVE position.
5. While depressing the Interlock Switch, push Control Handle to FORWARD or REVERSE for desired direction of travel.
6. 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 level location before attempting to elevate the platform.

LOWERING THE PLATFORM

1. Position the Lift/Drive Switch to LIFT.
2. While depressing the Interlock Switch, pull back on the Control Handle.

EMERGENCY LOWERING

⚠ WARNING ⚠

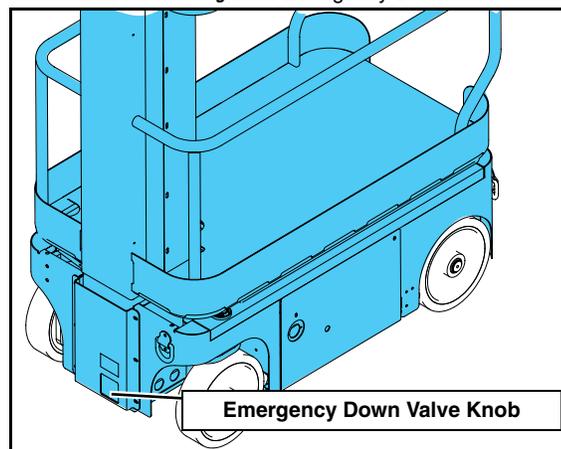
If the platform should fail to lower, **NEVER** climb down the elevating assembly.
Stand clear of the elevating assembly while operating the Emergency Down Valve Knob.

Ask a person on the ground to open the Emergency Down Valve to lower the platform. The Emergency Down Valve Knob is located at the front of the chassis.

1. Open the Emergency Down Valve by pulling the knob out.
2. To close, release the knob.

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

Figure 4: Emergency Down Valve Knob



PARKING BRAKE RELEASE

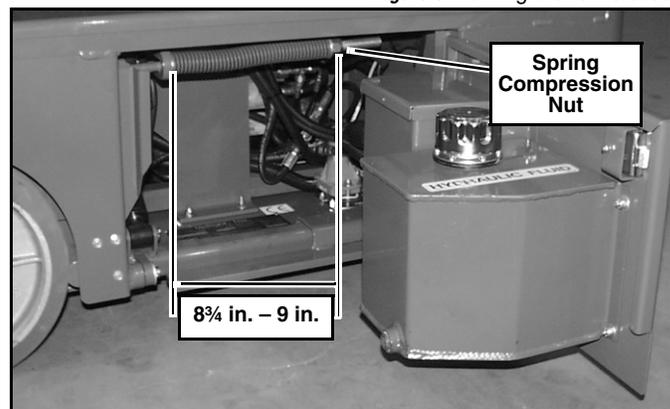
Perform the following procedure only when the machine will not operate under its own power and it is necessary to move the machine, or when winching onto a trailer to transport.

1. Remove 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. Replace the spring compression nut and tighten until the spring measures 22,2 cm – 22,9 cm (**8¾ in. – 9 in.**) in length, verify that the brake bars have fully engaged the tires before the machine is operated.

Figure 5: Parking Brake Release



⚠ WARNING ⚠

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

Never operate the machine 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 Chassis Key Switch to OFF and remove the key to prevent unauthorized operation.

TRANSPORTING THE MACHINE

BY CRANE

⚠ DANGER ⚠

See specifications for weight of machine and be certain that crane is of adequate capacity to lift the machine.

Secure the straps to chassis lifting/tie down points only.

BY FORKLIFT

⚠ DANGER ⚠

Forklifting is for transport only.

See specifications for weight of machine and be certain that forklift is of adequate capacity to lift the machine.

Forklift from the side by lifting under the chassis.

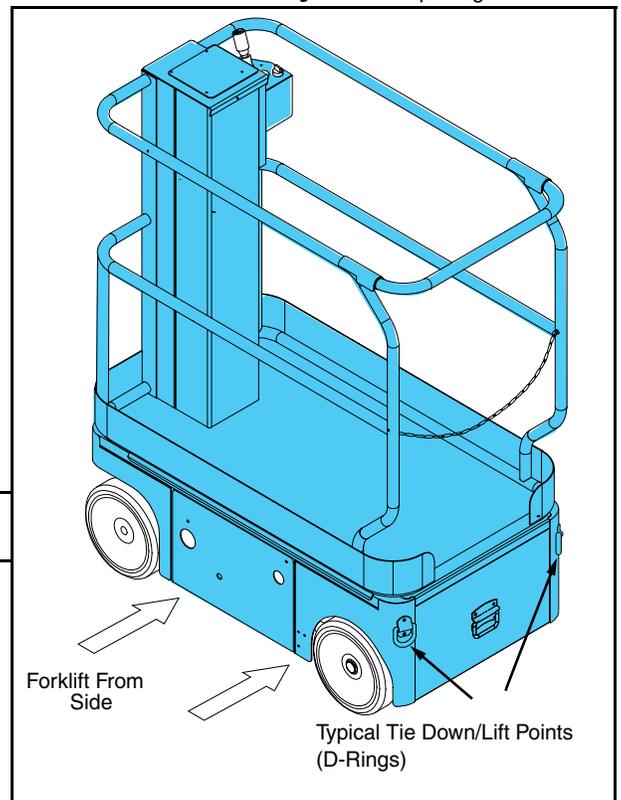
BY TRUCK

1. Maneuver the machine into transport position and chock wheels.
2. Secure the machine to the transport vehicle with chains or straps of adequate load capacity attached to the chassis lifting/tie down points.

CAUTION

Overtightening chains or straps attached to the Tie Down lugs may result in damage to the machine

Figure 6: Transporting the Machine



MAINTENANCE

⚠ WARNING ⚠

Never perform service while the platform is elevated without first blocking the elevating assembly.
DO NOT stand in the elevating assembly area while deploying or storing the brace.

BLOCKING THE ELEVATING ASSEMBLY

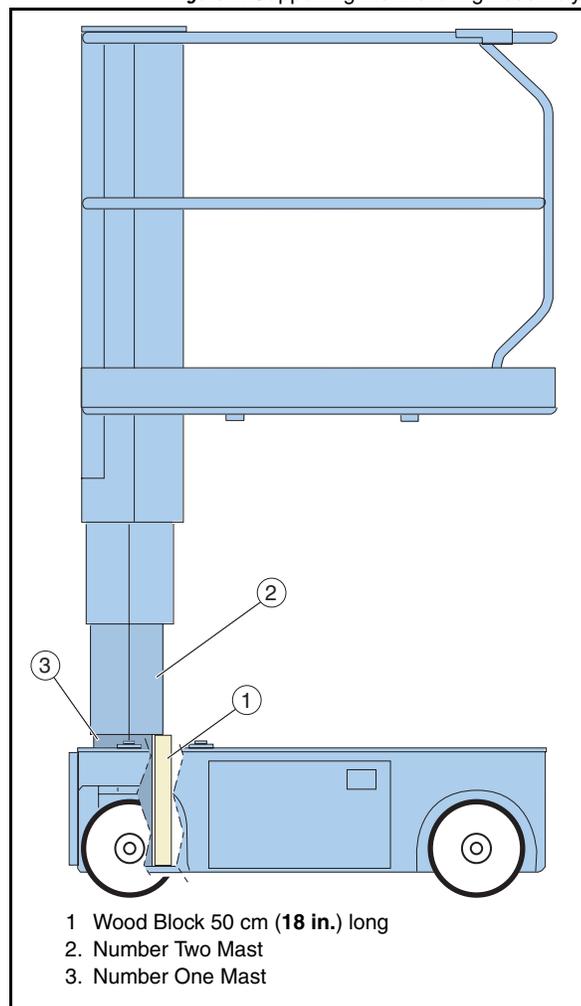
INSTALLATION

1. Park the machine on firm level ground.
2. Verify that both Emergency Stop Switches are ON.
3. Turn and hold the Chassis Key Switch to CHASSIS.
4. Position the Chassis Up/Down Switch to UP and elevate the platform approximately 1,2 m (4 ft.).
5. Place a solid 2 x 4 wood block, approximately 50 cm (18 in.) long, between the number two mast and chassis just behind the mast assembly and against the number one mast.
6. Move the Chassis Lift Switch to the DOWN position and gradually lower the work platform until the number two mast is supported by the block.

REMOVAL

1. Push the Chassis Up/Down Switch to the UP position and gradually raise platform until the wood block can be removed.
2. Remove the block.
3. Push the Chassis Up/Down Switch to the DOWN position and completely lower the platform.

Figure 7: Supporting the Elevating Assembly



HYDRAULIC FLUID

The hydraulic fluid reservoir is located in the chassis door.

NOTE: Never add fluid if the platform is elevated.

CHECK HYDRAULIC FLUID

1. Make sure that the platform is fully lowered.
2. Open the chassis door.
3. Remove the filler cap from the hydraulic fluid reservoir.
4. Check the fluid level on the dipstick on the filler cap.
5. Add the appropriate fluid to bring the level to the FULL mark. See "Specifications" on page 16.

Figure 8: Hydraulic Fluid Reservoir and Dipstick



BATTERY MAINTENANCE

Figure 9: Access to Batteries

! 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 26,3 kg (58 lbs.) each.



- Check the battery fluid level daily, especially if the machine is being used in a warm, dry climate.
- If electrolyte level is lower than 10 mm ($\frac{3}{8}$ in.) above the plates add distilled water only. DO NOT use tap water with high mineral content, as it will shorten battery life.
- Inspect the battery regularly for signs of cracks in the case, electrolyte leakage and corrosion of the terminals.
- Inspect cables regularly for worn spots or breaks in the insulation and for broken cable terminals.
- Keep the terminals and tops of the batteries clean.
- Refer to the Service Manual to extend battery life and for complete service instructions.

BATTERY CHARGING

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

WARNING

Charge the batteries in a well ventilated area.

Do not charge the batteries when the machine is near a source of sparks or flames.

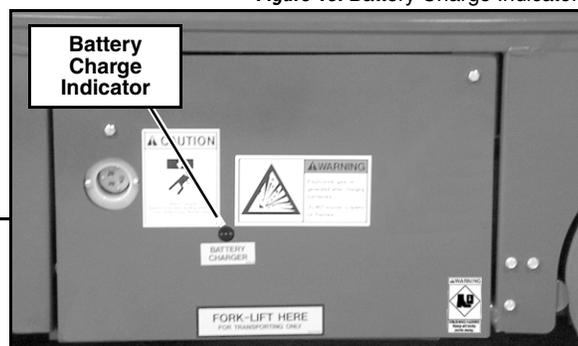
Permanent damage to the batteries will result if the batteries are not immediately recharged after discharging.

Never leave the battery charger operating for more than two days.

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

Keep the charger dry.

Figure 10: Battery Charge Indicator



1. Check the battery fluid level. If the battery fluid level is lower than 10 mm ($\frac{3}{8}$ in.) above the plates add distilled water only.
2. Connect an extension cord (1,5 mm² [**12 gauge**] minimum conductor diameter; 15 m [50 ft.] maximum length) to the charger plug located through a cutout at the left side of the chassis.
3. The charger turns on automatically after a short delay. There are three LED's to indicate the state of charge cycle.
 - The first LED will blink until the batteries reach 50% state of charge, and then it will stop blinking and stay ON.
 - The second LED will blink until the batteries reach 75% state of charge, and then it will stop blinking and stay ON.
 - The third LED will blink until the batteries reach 100% state of charge, and then it will stop blinking and stay ON.
 - When the batteries are fully charged, all three LED's will stay ON. The battery charger will automatically turn off a short time after the batteries reach full charge.

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

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

DAILY INSPECTION AND MAINTENANCE SCHEDULE

The Complete Inspection consists of periodic visual and operational checks, along with periodic minor adjustments that assure proper performance. Daily inspection will prevent abnormal wear and prolong the life of all systems. Perform the inspection and maintenance items daily. Inspection and maintenance shall be performed by personnel who are trained and familiar with mechanical and electrical procedures.

⚠ WARNING ⚠

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 daily preventative maintenance checklist has been designed for machine service and maintenance. Please photocopy the Daily Preventative Maintenance Checklist and use the checklist when inspecting the machine.

DAILY PREVENTATIVE MAINTENANCE CHECKLIST

MAINTENANCE TABLE KEY

Y = Yes/Acceptable

N = No/Not Acceptable

R = Repaired/Acceptable

PREVENTATIVE MAINTENANCE REPORT

Date: _____

Owner: _____

Model No: _____

Serial No: _____

Serviced By: _____

COMPONENT	INSPECTION OR SERVICES	Y	N	R
Battery	Check electrolyte level.			
	Check battery cable condition.			
	Charge batteries			
	Check charger condition and operation			
Chassis	Check hoses for pinch or rubbing points.			
	Check welds for cracks.			
Control Cable	Check the exterior of the cable for pinching, binding or wear.			
Controller	Check switch operation.			
Drive Motors	Check for operation and leaks.			
Elevating Assembly	Inspect for external damage, dents, loose rivets or cracks.			
Emergency Hydraulic System	Operate the emergency down valve and check for serviceability.			

COMPONENT	INSPECTION OR SERVICES	Y	N	R
Entire Unit	Perform pre-operation inspection.			
	Check for and repair collision damage.			
Hydraulic Fluid	Check fluid level.			
Hydraulic Pump	Check for hose fitting leaks.			
Hydraulic System	Check for leaks.			
Labels	Check for peeling, missing, or unreadable labels & replace.			
Lift Cylinder	Check for leaks			
Platform Deck and Rails	Check welds for cracks.			
	Check condition of deck.			
	Check entry way closure.			
Tires	Check for damage.			
Wheels	Check for loose components			

LABELS

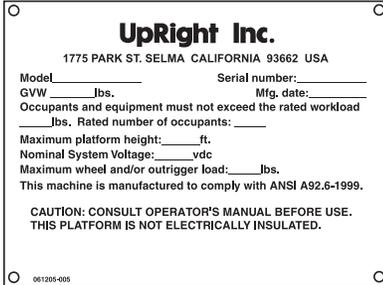
These labels shall be present and in good condition before operating the machine. Be sure to read, understand and follow these labels when operating the machine.

HYDRAULIC FLUID

1 060197-000



2 066552-000



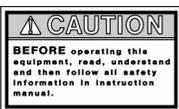
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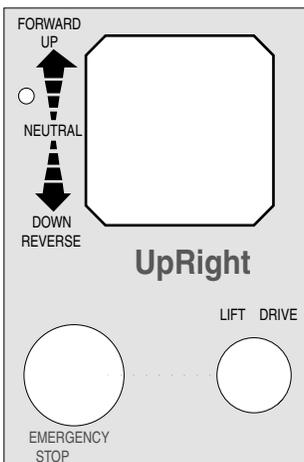
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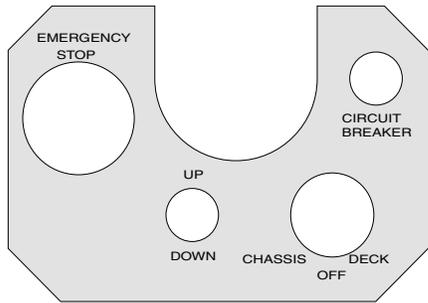
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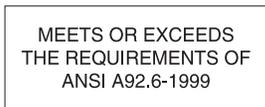
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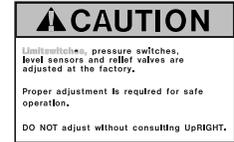
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23 066555-000



24 066568-000



25 066556-000



26 066522-000



27 101252-000



28 066556-001



29 107051-000

SPECIFICATIONS

Specifications subject to change without notice. Refer to the Service Manual for service and repair information. Refer to the Parts Manual for illustrated parts breakdown. Hot weather or heavy use may reduce performance. Meets or exceeds all applicable national safety requirements

ITEM	TM12
Platform Size	73,7 cm x 1,04 m (29 in. x 41 in.)
Maximum Platform Capacity	227 kg (500 lbs.)
Maximum Number of Occupants	2 People
Height	
Working Height	5,83 m (19 ft.)
Maximum Platform Height	3,66 m (12 ft.)
Minimum Platform Height	48,3 cm (19 in.)
Dimensions	
Weight	776 kg (1710 lbs.)
Overall Width	76 cm (30 in.)
Overall Height (Lowered)	165 cm (65 in.)
Overall Length	1,36 m (53.5 in.)
Drive Speed	
Platform Lowered	3,65 km/h (2.27 mph)
Platform Raised	0,87 km/h (0.54 mph)
Energy Source	24V battery pack Four 220 ampere hour, 6 Volt batteries, min. wt. 26,3 kg (58 lbs.) each 4 HP DC electric motor
System Voltage	24 VDC
Battery Charger	20 AMP, 220 VAC 50Hz
Battery Duty Cycle	25% for 8 Hours
Hydraulic Reservoir Capacity	7,2 L (1.9 gal)
Maximum Hydraulic System Pressure	165 bar (2400 psi)
Hydraulic Fluid	
Normal above 0° C [32° F]	ISO #46
Low Temp. below 0° C [32° F]	ISO #32
below -17° C [0° F]	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
Horizontal Drive	Dual Front Wheel
Tires	30,5 cm (12 in.) diameter solid rubber, Non-marking
Parking Brakes	Dual, Spring Applied, Hydraulic Release
Turning Radius (Inside)	37 cm (14.5 in.)
Maximum Gradeability	14° (25%)
Wheel Base	97,8 cm (38.5 in.)
Guardrails	1,10 m (43 in.)
Toeboard	152 mm (6 in.)

*Specifications are subject to change without notice. Hot weather or heavy use may affect performance.

Refer to the Parts Manual and the Service Manual for complete parts and service information.

The TM12 meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999.

UpRight

Call Toll Free in U.S.A.
1-800-926-LIFT



USA

TEL: (1) 800-926-5438 or (1) 559-662-3900

FAX: (1) 559-673-6184

Parts FAX: (1) 800-669-9884

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EUROPE

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LOCAL DISTRIBUTOR:

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07-02