

Operator Manual

XRT Electric**SERIAL NO. 1000 to Current**

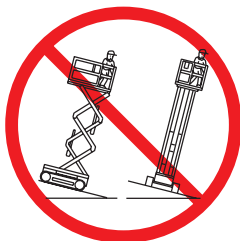
WARNING

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

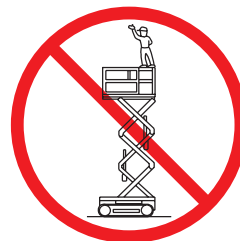
Safety Rules



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 and lock gate 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 the X27 Electric Work Platform. This machine operates on a 48 volt battery powered system. This manual must be stored on the machine at all times.

PRE-OPERATION AND SAFETY INSPECTION

Reference: • “Specifications” on page 12
• “Battery Maintenance” on page 9
• “Figure 1:Controls” on page 4

NOTE: Carefully read, understand and follow all safety rules, labels, and operating instructions, then perform the following steps each day before use.

1. Open panels and check hydraulic components and hoses for damage or leaks. Check electrical components and wiring for damage or loose connections.
2. Inspect chassis, axles, hubs, and steering linkage for damage, deformation, buckled paint, loose or missing hardware, and cracked welds.
3. With platform fully lowered, check the hydraulic oil level sight gauge on the hydraulic tank. Add ISO #46 hydraulic oil if necessary.
4. Check that fluid level in all batteries is correct.
5. Check that all guardrails are in place. Insure that gate operates freely and latches securely.
6. Check tires for damage.
7. Carefully inspect the entire work platform for damage such as cracked welds or structural members, loose or missing parts, oil leaks, damaged cables or hoses, and loose connections.

W A R N I N G

DO NOT use a machine that is damaged or malfunctioning. Tag and remove the unit from service until it is repaired.

SYSTEM FUNCTION INSPECTION

W A R N I N G

STAND CLEAR of the work platform while performing the following checks.

Before operating the work platform survey the work area for surface hazards such as holes, drop-offs, bumps and debris.

Check in ALL directions, including above the work platform, for obstructions and electrical conductors.

Protect control console cable from possible damage while performing checks.

1. Unhook controller from front guardrail. Firmly grasp controller hanger in such a manner that the interlock lever can be depressed, while performing the following checks from the ground.
2. Turn platform controller key switch clockwise to ON.
3. Position drive/lift switch to DRIVE position. Drive enable indicator light will be illuminated.
4. With the speed range switch first in LOW SPEED and then again in HIGH SPEED depress the interlock lever and slowly push the control lever to FORWARD then REVERSE positions to check for speed and directional control. The farther you push or pull the control lever the faster the machine will travel.
5. Push steering switch RIGHT then LEFT to check for steering control.
6. Hook controller on guardrail in original position.
7. On chassis controls, turn key switch to Chassis.
8. From lower controls, push chassis raise button to elevate platform while pushing the tilt sensor off of level. The platform should only partially elevate and the tilt alarm should sound. If the platform continues to elevate and/or there is no alarm STOP and remove the machine from service until it is repaired.
9. Release the tilt sensor and fully elevate platform.
10. Visually inspect the elevating assembly, lift cylinder, cables and hoses for damage or erratic operation. Check for missing or loose parts.
11. Lower the platform partially by pushing in on the chassis lower switch, and check operation of the audible lowering alarm.
12. Open the chassis emergency lowering valve to check for proper operation by pulling and holding the knob out. Once the platform is fully lowered, close the valve by releasing the knob.
13. On chassis controls, turn key switch to platform.
14. Mount the platform making sure the gate is latched.
15. Turn platform controller key switch clockwise to ON. Position drive/lift switch to LIFT.
16. Depress the interlock lever and slowly push the control lever forward to raise the platform, fully actuate the control lever to check proportional lift speed. Elevate the platform to 12 feet (3.7 m).
17. Slowly pull control lever to DOWN position to lower platform. Check that lowering alarm sounds.
18. Turn platform controller key switch to OFF, push the emergency stop button and dismount the platform.
19. Close and secure module covers.

Figure 1: Controls

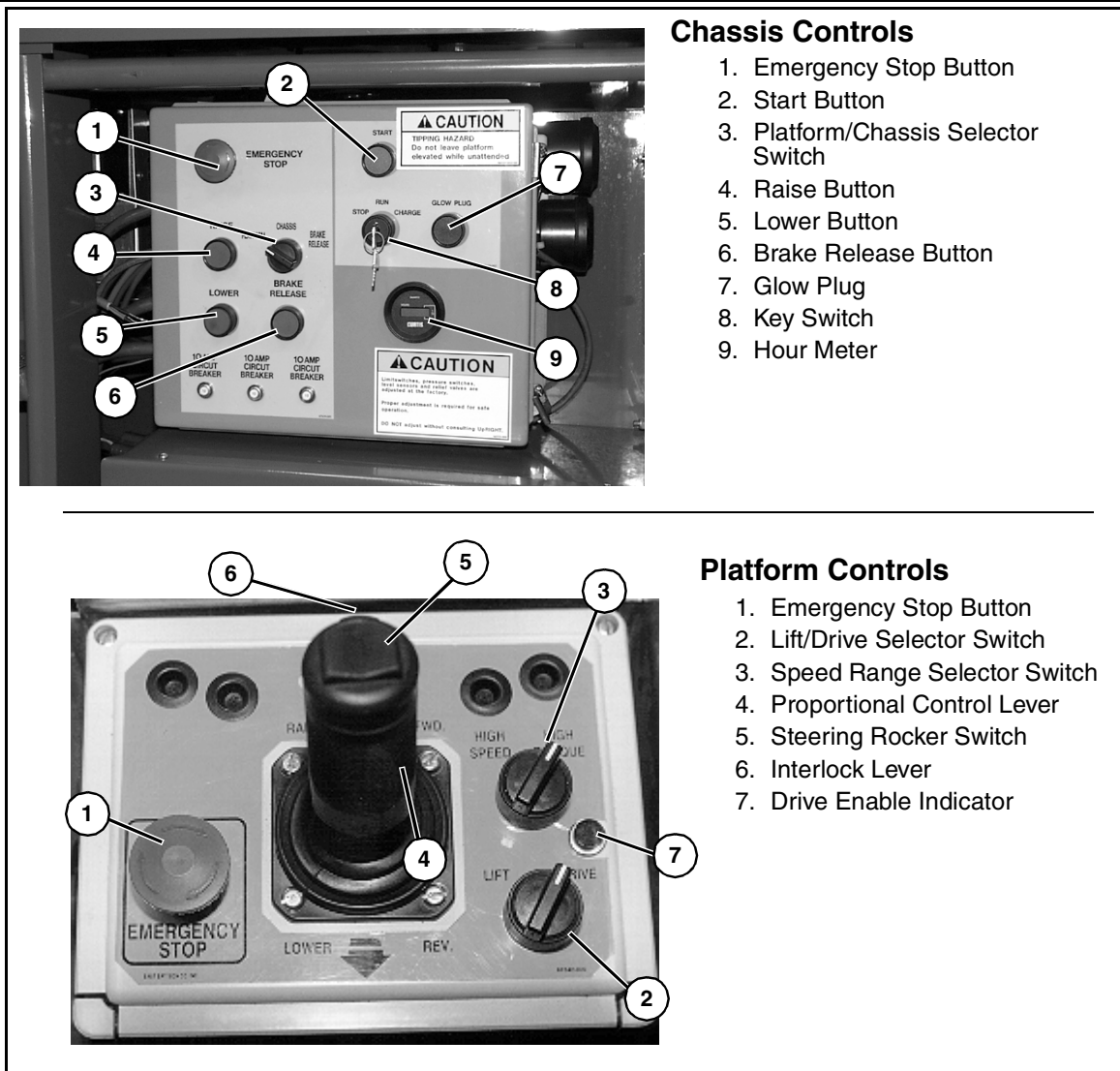


Figure 2: Level Sensor



OPERATION

Before operating work platform, ensure that the pre-operation and safety inspection has been completed, any deficiencies have been corrected and the operator has been thoroughly trained on this machine.

TRAVEL WITH PLATFORM LOWERED

1. Verify chassis emergency stop switch is in the ON position (pulled out), the drive enable indicator light is on, and that the platform/chassis switch is on platform.

NOTE: If the drive enable indicator light is off, verify that the platform is fully lowered.

2. After mounting platform, close and latch gate. Check that guardrails are in position and properly assembled with fasteners properly torqued.
3. Check that route is clear of persons, obstructions, holes and drop-offs and surface is capable of supporting the wheel loads.
4. Check clearances above, below and to the sides of the platform.
5. Pull controller emergency stop button out to ON position.
6. Set the drive/lift speed range switch to LOW SPEED.
7. Grasp the control lever so the interlock lever is depressed (releasing the interlock lever cuts power to controller). Slowly push or pull the control lever to forward or REVERSE to travel in the desired direction. The farther you push or pull the control lever from center the faster the machine will travel.
8. While moving, push the drive/lift speed range switch to HIGH SPEED for travel on level surfaces or to LOW SPEED for climbing grades or traveling in confined areas.

STEERING

1. Push the steering switch RIGHT or LEFT to turn the wheels. Observe the tires while maneuvering to insure proper direction.

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

RAISING AND LOWERING THE PLATFORM

1. Position the drive/lift switch to LIFT.
2. While holding the control lever so the interlock lever is depressed, push the control lever slowly to UP to raise the platform. Pushing the control lever farther increases the lift speed.
3. Lower the platform by pulling back on the control lever until the platform is fully lowered.

TRAVEL WITH WORK PLATFORM ELEVATED

Travel with platform elevated ONLY on firm and level surfaces.

NOTE: The work platform will travel at reduced speed when in the elevated position.

1. Check that the route is clear of persons, obstructions, holes and drop-offs, surface is level and capable of supporting the wheel loads.
2. Check clearances above, below and to the sides of platform.
3. Position the drive/lift switch to the DRIVE position.
4. Push the control lever to FORWARD or REVERSE for the desired direction of travel.

CAUTION

If the machine quits driving and the tilt alarm sounds, immediately lower the platform and move the machine to a level location before re-elevating the platform.

EMERGENCY LOWERING

Figure 3: Emergency Lowering Valve Knob

The emergency lowering control is located at the rear of the elevating assembly

1. Open the emergency lowering valve by pulling on the knob and holding it.
2. Once the platform is fully lowered, release the knob to close the valve.

AFTER USE EACH DAY

1. Ensure that the platform is fully lowered.
2. Park the machine on level ground, preferably under cover, secure against vandals, children or unauthorized operation.
3. Turn the key switch to OFF and remove the key to prevent unauthorized operation.



PARKING BRAKE RELEASE (FIGURE 5)

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.

! WARNING !

Never release brakes if machine is on a slope. Hook machine to towing vehicle before releasing brakes.

1. Turn Platform/Chassis/Brake Release switch to Brake Release position. Alarm will sound.
2. Momentarily push brake Release button.
3. The machine will now roll when pushed or pulled.
4. For normal operation, turn Platform/Chassis/Brake Release switch to Platform position.

! WARNING !

Never operate work platform with the parking brakes released. Serious injury or damage could result.

FOLD DOWN GUARDRAILS

NOTE: When performing the following procedures retain all fasteners.

This procedure is only for passing through doorways. Guardrails must be returned to proper position before using the machine.

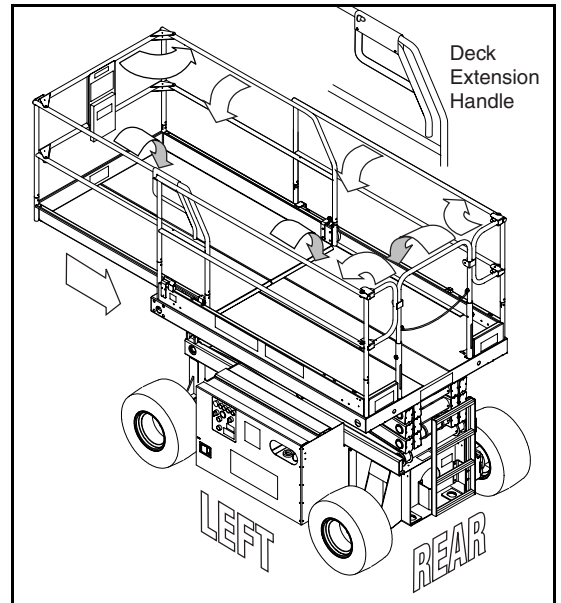
Figure 4: Fold Down Guardrails

FOLD DOWN PROCEDURE

1. Ensure that the slide out deck extension is fully retracted and deck pin is locked. Place the controller on the platform.
2. Pull the pins on the two end gate arms. Lower the rear gate to the floor. Replace the pins.
3. Pull the pins (2) on the left side of the front rail and swing the front rail back against the right handrail. Insert pins into right handrail.
4. Lift the right handrail up, then lower it to the extension deck floor.
5. Push the deck extension handle into locked position. Lift the left handrail up, then lower it on top of the right handrail.
6. Rotate the arms in against handrails.
7. Lift the right main handrail and lower to the floor.
8. Lift the left main handrail and lower it on top of right hand rail.

ERECTION PROCEDURE

1. Reverse the fold down procedure.
2. Hang the controller from front guardrail.
3. Before operating the work platform, check that all fasteners are in place.



! WARNING !

Before operating machine, guardrails must be securely fastened in their proper position.

TRANSPORTING WORK PLATFORM

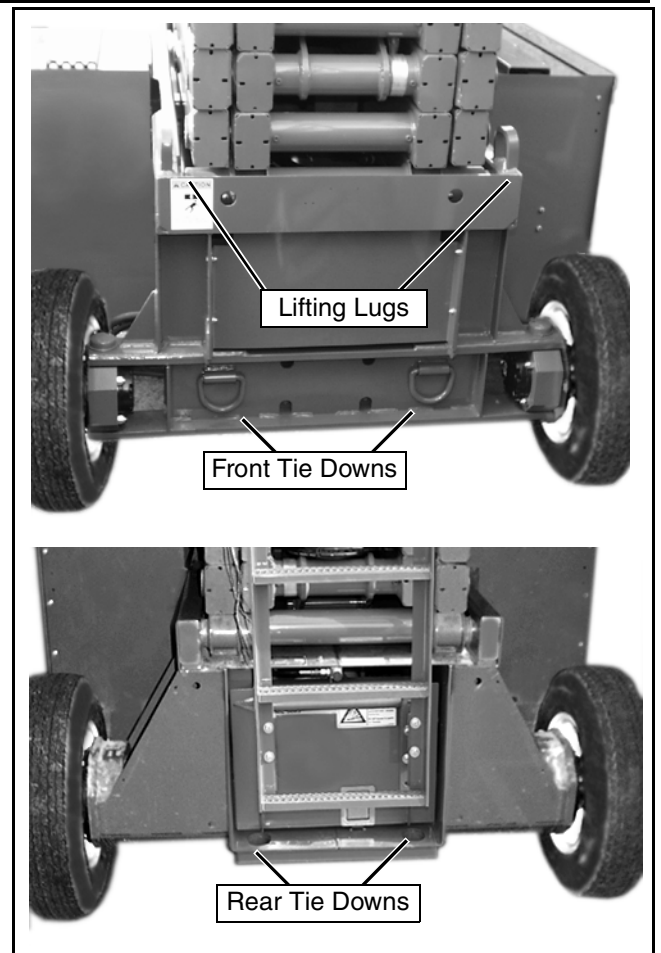
Figure 5: Transporting the Work Platform

BY CRANE

1. Secure straps to chassis tie downs and lifting lugs 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 attached to the chassis tie down/lifting lugs.



⚠ CAUTION ⚠

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

! WARNING !

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

Figure 6: Supporting the Elevating Assembly

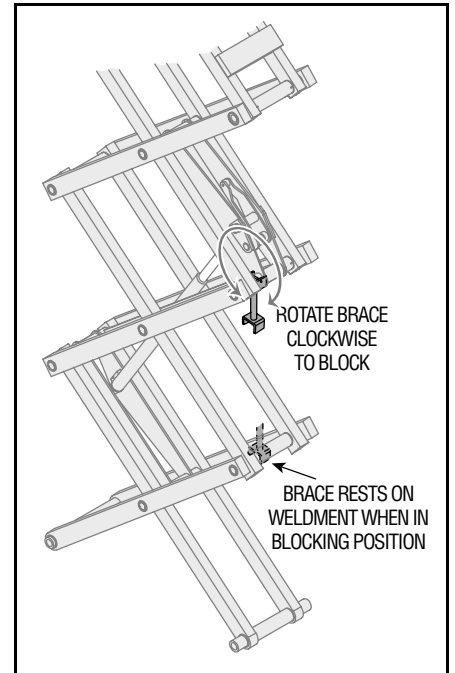
SUPPORTING ELEVATING ASSEMBLY

INSTALLATION

1. Park the work platform on firm level ground.
2. Verify platform emergency stop switch is ON.
3. Turn platform/chassis switch to CHASSIS.
4. Using the raise button, elevate platform until the scissors brace can be rotated to the vertical position.
5. From rear of machine, lift the scissor brace from its stowed position. Rotate upward and outward then down until it is hanging vertical below its attachment point.
6. Push lower button and gradually lower platform until brace is supporting the platform.

REMOVAL

1. Using chassis controls, gradually raise platform until the scissors brace clears the two scissor center pivots.
2. Rotate scissor brace outward and upward over its mounting point until it rests in the stowed position.
3. Push lower button to completely lower platform.



BATTERY MAINTENANCE

! WARNING !

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

Always wear safety glasses when working with batteries.

Battery fluid is highly corrosive. Rinse away any spilled fluid thoroughly with clean water.

Always replace batteries with UpRight batteries or manufacturer approved replacements weighing 62 lbs. each.

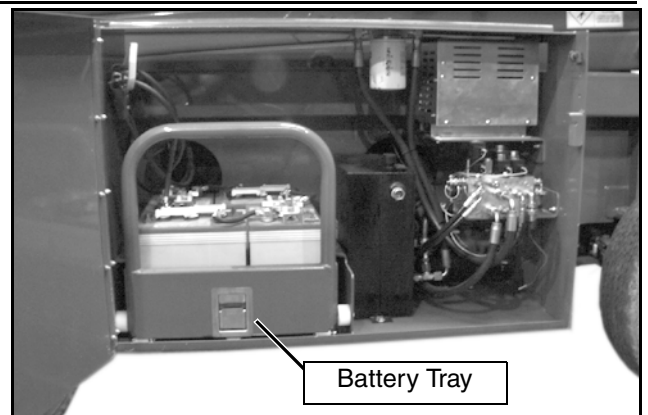
Figure 7: Access to Batteries

There are Eight batteries, four in each side module. Open either module door to gain access to a slide out battery tray.

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

If electrolyte level is lower than 3/8 in. (10 mm) above plates add distilled water only. DO NOT use tap water with high mineral content. It will shorten battery life.

Keep terminals and tops of batteries clean.



PREVENTATIVE MAINTENANCE

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 enter the scissor assembly 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 the following page and use the table as a checklist when inspecting the machine for service.

Table 1: Preventative Maintenance Checklist**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
Batteries	Check electrolyte level	6m			
	Check specific gravity	6m			
	Clean exterior	6m			
	Check battery cable condition	Daily			
	Clean terminals	6m			
Engine Oil and Filter (Bi-Energy)	Check level and condition	Daily			
	Check for leaks	Daily			
	Change oil filter	200h			
Engine Fuel System (Bi-Energy)	Check fuel level	Daily			
	Check for leaks	Daily			
	Replace fuel filter	400h/6m			
	Check air cleaner	Daily			
	Replace air cleaner element (Diesel)	Yearly			
Engine Coolant (Bi-Energy)	Check Intake Air Line (Diesel)	200h			
	Check coolant level (with engine cold)	Daily			
	Replace coolant	3m			
Hydraulic Oil	Check Hoses and Clamps	200h			
	Check oil level	Daily			
	Change filter	6m			
Hydraulic System	Drain and replace oil	2y			
	Check for leaks	Daily			
	Check hose connections	30d			
Emergency Hydraulic System	Check hoses for exterior wear	30d			
	Operate the emergency lowering valve and check for serviceability	Daily			
Control Handle	Check switch operation	Daily			
Control Cable	Check the exterior of the cable for pinching, binding or wear	Daily			
Platform Deck and Rails	Check fasteners for proper torque	Daily			
	Check welds for cracks	Daily			
	Check condition of deck	Daily			

COMPONENT	INSPECTION OR SERVICES	INTERVAL	Y	N	R
Tires	Check for damage	Daily			
	Check lug nuts (torque to 90 ft. lbs.)	30d			
Hydraulic Pump	Wipe clean	30d			
	Check for leaks at mating surfaces	30d			
	Check for hose fitting leaks	Daily			
	Check mounting bolts for proper torque	30d			
Drive Motors	Check for operation	Daily			
Steering System	Check hardware & fittings for proper torque	6m			
	Grease pivot pins	30d			
	Oil king pins	30d			
	Check steering cylinder for leaks	30d			
Elevating Assembly	Inspect for structural cracks	Daily			
	Check pivot points for wear	30d			
	Check mounting pin pivot bolts for proper torque	30d			
	Check elevating arms for bending	6m			
Chassis	Check hoses for pinch or rubbing points	Daily			
	Check component mounting for proper torque	6m			
	Check welds for cracks	Daily			
Lift Cylinder	Check the cylinder rod for wear	30d			
	Check mounting pin pivot bolts for proper torque	30d			
	Check seals for leaks	30d			
	Inspect pivot points for wear	30d			
	Check fittings for proper torque	30d			
	Check for and repair collision damage	Daily			
Entire Unit	Check fasteners for proper torque	3m			
	Check for corrosion-remove and repaint	6m			
	Lubricate	30d			
Labels	Check for peeling, missing, or unreadable labels & replace	Daily			

SPECIFICATIONS

Specifications are subject to change without notice. Hot weather or heavy use may reduce performance.
Meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999

ITEM		Specification
Platform Size (Outside)	Standard	58 in. x 90.5 in. [1,47 m x 2,34 m]
	Slide Out Deck Extended	58 in. x 103.5 in. [1,47 m x 2,62 m]
Max. Platform Capacity	Standard	1,250 lbs. [567 kg]
	w/ Extension	1,250 lbs. [567 kg]
	on Extension	250 lbs. [113 kg]
Max. No. of occupants	Standard	3 people
	on Extension	1 people
Height	Working Height	33 ft. [10,1 m]
	Max. Platform Height	27 ft. [8,2 m]
	Max. Drive Height	27 ft. [8,2 m]
Dimensions	Weight, Standard	7,000 lbs. [3175 kg]
	Overall Width	69in. [1,75 m]
	Overall Height (Rails Up)	98.5 [2,5 m]
	Overall Height (Rails Folded)	69.5 in. [1,8 m]
Overall Length, Standard		106 in. [2,72 m]
Drivable Height		27 ft. [8,2 m]
Surface Speed	Platform Lowered	0 to 3.2 m.p.h. [0 to 5.1 km/h]
	Platform Raised	0 to 0.45 m.p.h. [0 to 0,73 km/h]
System Voltage		48 Volt DC
Hydraulic Tank Capacity		7.5 US Gallons [28.4 l]
Maximum Hydraulic System Pressure		2500 psi [172.37 bar]
Hydraulic Fluid		
Normal use: Above 32° F [0° C]		ISO #46
Low Temp. use: Below 32° F [0° C]		ISO #32
Below 0° F [-17° C]		ISO #15
Lift System		One Single Stage Lift Cylinder
Lift Speed		Raise, 30 sec./Lower, 31 sec.
Power Source		8-6volt 220Ah Batteries (350Ah option available)
Drive Control		Proportional
Tires	Standard	G78-15 Poly Filled
	Optional	26-12-390 Poly Filled Lug
Parking Brakes		Spring Applied, Hydraulic Release, Multiple Disc
Turning Radius (inside)		68 in. [1,7 m]
Maximum Gradeability		30% [16,7°]
Ground Clearance		8.5 in [194 mm]
Wheel Base		78 3/8 in. [2 m]
Guardrails		44 in. [1,1 m] high, Fold Down with gate.
Toeboard		6 in. [152 mm] High

UpRight

1775 Park Street
Selma, California 93662
TEL: (800) 926-LIFT or (559) 891-5200
FAX: (559) 891-9012
Parts FAX: (559) 896-9244

Local Distributor:

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