

Operator Manual

MX15/19**Serial No. 14000 to Current**

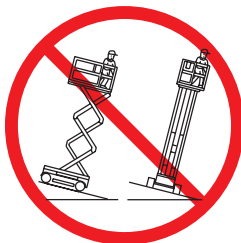
WARNING

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.

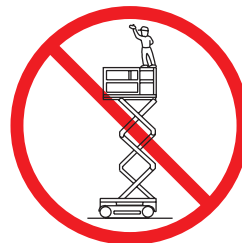
Safety Rules



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 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 all models of the MX 15 and MX19 Self-Propelled Elevating Work Platforms. **This manual must be stored on the machine at all times.**

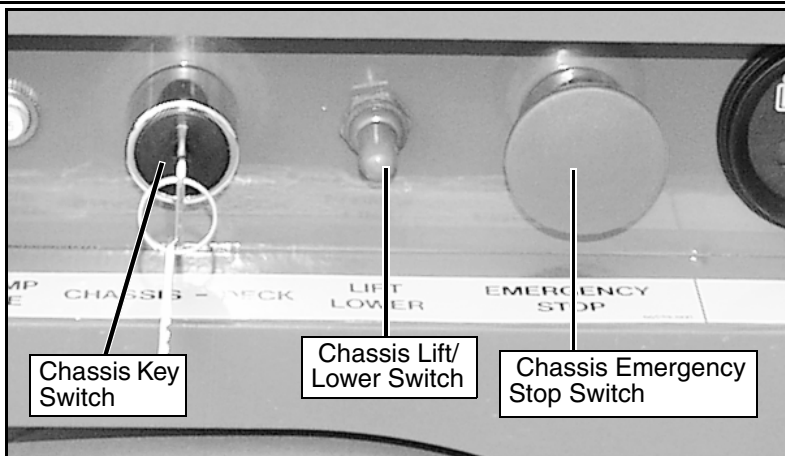
PRE-OPERATION SAFETY INSPECTION (FIGURES 1, 2, AND 3)

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 modules and inspect for damage, oil leaks, or missing parts.
2. Check the level of the hydraulic oil with the platform fully lowered. The hydraulic reservoir is located at the rear of the machine. The oil level should be visible through the side of the tank, and must be between the MIN and MAX lines (see Figure 2). Add hydraulic fluid 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 A.C. extension cord has been disconnected from the plug in the left Chassis Module, and that the module doors are closed and locked.
6. Check that all guardrails are in place and all fasteners are properly tightened.
7. Inspect the machine thoroughly for cracked welds and structural damage, loose or missing hardware, hydraulic leaks, damaged control cable, loose wire connections and wheel bolts.
8. Move machine, if necessary, to an 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 raise the platform approximately 7 feet (2.1m). Block the Elevating Assembly as described on page 7.
12. Visually inspect the elevating assembly, lift cylinder, cables, and hoses for cracked welds and structural damage, loose hardware, hydraulic leaks, loose wire connections, and erratic operation. Check for missing or loose parts.



13. Verify that the Depression Mechanism Supports have rotated into position under the machine. Remove the Scissor Brace as described on page 7.
14. Turn and hold the Chassis Key Switch to CHASSIS. Push the Chassis Lift/Lower Switch to the UP position and fully elevate the platform. Partially lower the platform by pushing Chassis Lift/Lower Switch to LOWER, and check for proper operation of the audible lowering alarm.

Figure 2: Emergency Lowering Valve Knob

15. Open the Emergency Lowering Valve (Figure 2) by pulling the knob out to check for proper operation. When the platform is lowered, release the knob.
16. Turn the Chassis Key Switch to DECK.
17. Check that route is clear of obstacles (persons, obstructions, holes, and drop-offs, bumps and debris), is level, and is capable of supporting the wheel loads.
18. Mount the platform and properly close the entrance.

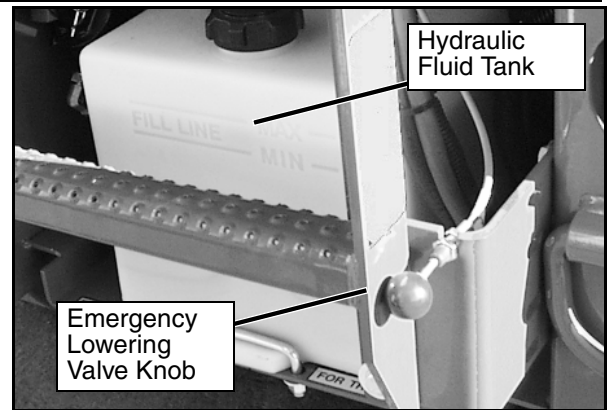
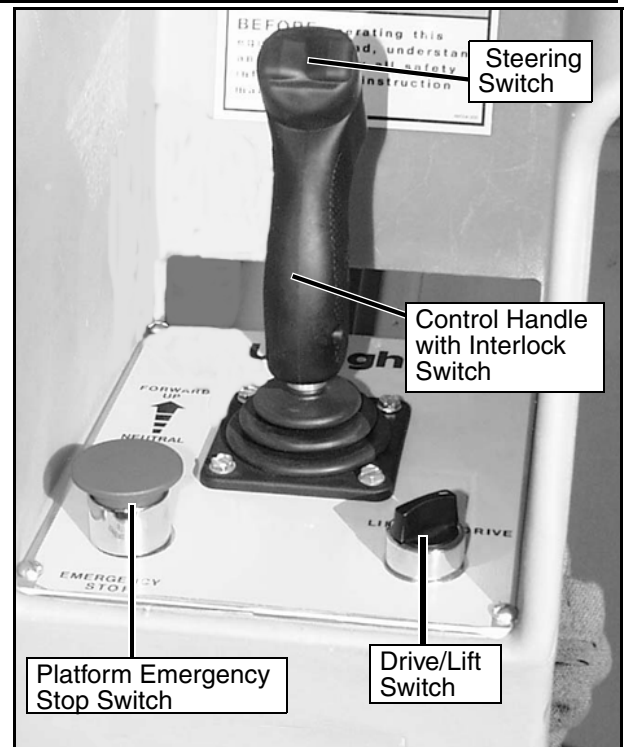


Figure 3: Platform Controls

19. 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.
20. Push the Steering Switch RIGHT, then LEFT, to check for steering control.
21. Turn the Drive/Lift Switch to LIFT. Grasp the Control Handle, engaging the Interlock Switch, and push it forward to check platform lift controls. Raise the platform to full elevation.
22. Pull back on the Control Handle. The platform should descend and the audible lowering alarm should sound.
23. Push the Platform Emergency Stop Switch 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.

PLATFORM EXTENSION

Figure 4: Platform Extension

1. Mount the platform and properly close the entrance.
2. Engage the foot lever located at the rear of the platform extension. Push the platform extension forward until the pin engages the front stop.
3. To retract the platform extension, depress the foot lever and pull the platform extension toward the rear of the machine until the pin engages the rear stop

TRAVEL WITH PLATFORM LOWERED

1. Check that the 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 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 platform.
5. Pull the Platform Emergency Stop Switch 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 the wheels in the desired direction. Observe the tires while maneuvering the work platform 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 Mechanism 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 the platform is elevated.

1. Check that the 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

W A R N I N G

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

The Emergency Lowering Valve Knob is located beside the ladder at the rear of the machine (see Figure 2).

1. Open the Emergency Lowering Valve by pulling and holding the knob.
2. To close, release the knob. The platform will not elevate if the Emergency Lowering Valve is open.

AFTER USE EACH DAY

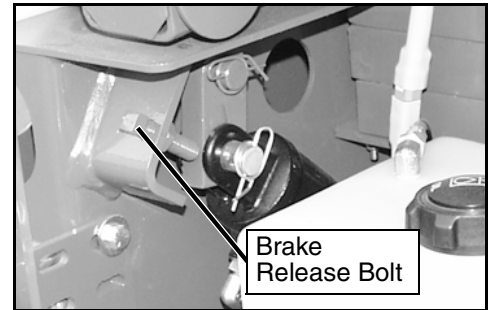
1. Ensure that the platform is fully lowered.
2. Park the machine on a firm level surface, preferably under cover, secure against vandals, children and unauthorized operation.
3. Turn the Chassis Key Switch to OFF and remove the key to prevent unauthorized operation.

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.

Figure 5: Parking Brake Release

1. To release the brakes, loosen the jam nut and bolt until the brakes disengage the tires (Figure 5). The machine will now roll when pushed or pulled.
2. To re-engage the brakes, tighten the bolt until the brakes have fully engaged the tires. Secure the bolt with the locknut. Verify that the brakes have fully engaged the rear tires before operating the machine by testing their ability to hold the machine on a 25% (14°) grade.



! WARNING !

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

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

TRANSPORTING THE WORK PLATFORM

BY CRANE

Secure the straps to Tie Down/Lifting D-Rings only.

BY FORKLIFT

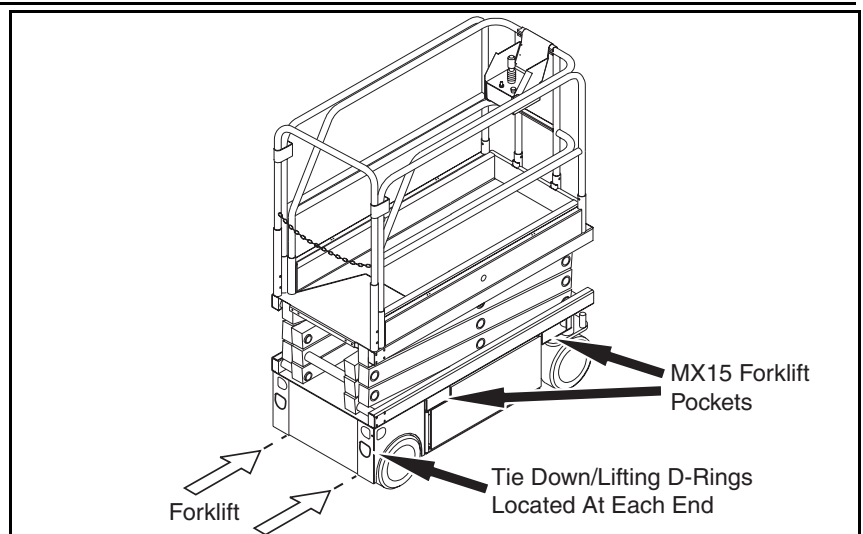
! DANGER !

Forklifting is for transport only.

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

Both the MX15 and MX19 may be forklifted from the rear end of the machine between the wheels. The MX15 may also be forklifted from the side using the forklift pockets shown in the diagram.

Figure 6: Transporting the Work Platform



BY TRUCK

Maneuver the work platform into transport position and chock the wheels. Secure the work platform to the transport vehicle by attaching chains or straps of adequate load capacity to the Tie Down/Lifting D-Rings.

! CAUTION !

Overtightening of the chains or straps attached to the Tie Down/Lifting D-Rings may result in damage to work platform.

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.

Figure 7: Scissor Brace

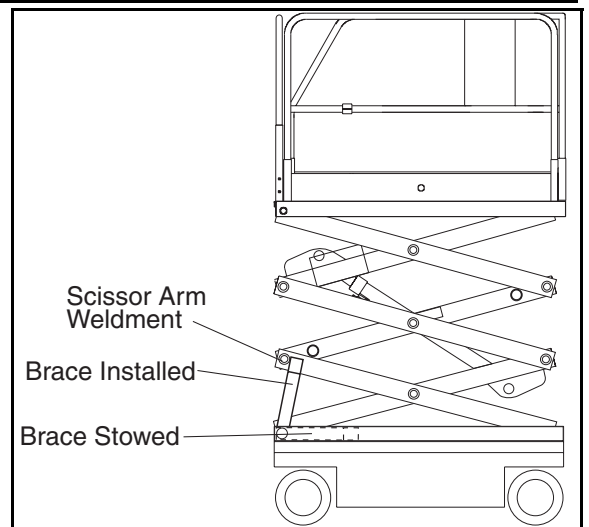
BLOCKING THE ELEVATING ASSEMBLY

SCISSOR BRACE INSTALLATION

1. Park the work platform on a firm, level surface. Completely unload the platform before installing the Scissor Brace.
2. Verify that the Chassis and Platform Emergency Stop Switches are ON by pulling each button out.
3. Turn and hold the Chassis Key Switch to CHASSIS. Push the Chassis Lift/Lower Switch to UP and elevate the platform approximately 7 Ft. (2.1 m).
4. Rotate the Scissor Brace to a vertical position.
5. Carefully lower the platform until the end of the Scissor Arm Weldment rests on the Brace.

SCISSOR BRACE STOWAGE

1. While holding the Brace, slowly raise the platform using the Chassis Controls until the end of the Scissor Arm Weldment clears the Scissor Brace.
2. Rotate the Scissor Brace forward to rest on the Chassis.
3. Push the Chassis Lift/Lower Switch to LOWER and completely lower the 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.

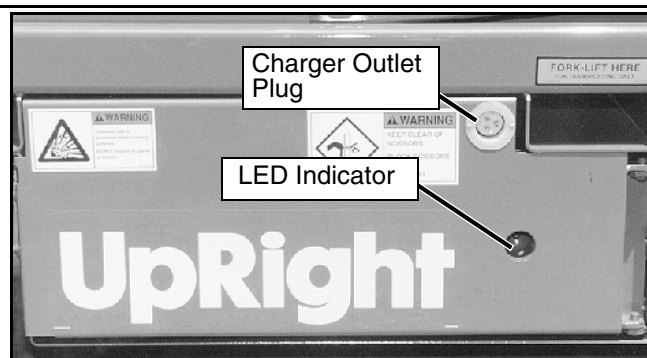
Always replace batteries with UpRight batteries or manufacturer approved replacements weighing 62 lbs. (28 kg) each.

- 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.
- 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

Figure 8: Battery Charger

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 work platform 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.

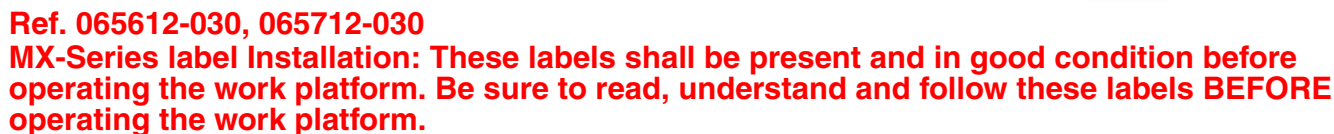
Never disconnect the cables from the batteries when the charger is operating.

Keep the charger dry.

1. Check the battery fluid level. If the battery fluid level is lower than 3/8 in. (10 mm) above the plates add distilled water only.
2. Connect an extension cord to charger outlet plug in Left Module Door. Plug the extension cord (12 gauge (1.5 mm²) minimum conductor diameter and 50 ft. (15 m) maximum length) into a properly grounded outlet of proper voltage and frequency.
3. The charger turns on automatically after a short delay. The LED charge indicator will illuminate. After completion of the charge cycle the LED 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 Interrupt) outlet. DO NOT operate the machine while the charger is plugged in.

**NOTE: Labels can be ordered by using Part Number located by each label.
For machines equipped with options consult service manual**



PREVENTATIVE MAINTENANCE

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. The inspection and maintenance schedule should be performed at the specified 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 checklist has been designed for machine service and maintenance. Please photocopy the following page and use the checklist when inspecting the machine.

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
Battery	Check electrolyte level	Daily			
	Check specific gravity	6m			
	Clean exterior	6m			
	Check battery cable condition	Daily			
	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			
Emergency Hydraulic System	Operate the emergency lowering valve and check for serviceability	Daily			
Controller	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	6m			
	Check welds for cracks	Daily			
	Check condition of deck	Daily			
Tires	Check for damage	Daily			
	Check lug nuts (torque to 108 Nm [80 ft. lbs])	6m			
Hydraulic Pump	Wipe clean	30d			
	Check for leaks at mating surfaces	30d			
	Check for hose fitting leaks	Daily			
	Check mounting bolts for proper torque	6m			
Drive Motors	Check for operation and leaks	Daily			

COMPONENT	INSPECTION OR SERVICES	INTERVAL	Y	N	R
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	6m			
	Check mounting pin pivot bolts for proper torque	6m			
	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	6m			
	Check seals for leaks	30d			
	Inspect pivot points for wear	6m			
	Check fittings for proper torque	6m			
Entire Unit	Check for and repair collision damage	Daily			
	Check fasteners for proper torque	6m			
	Check for corrosion-remove and repaint	6m			
	Lubricate	30d			
Labels	Check for peeling, missing, or unreadable labels & replace	Daily			

SPECIFICATIONS

ITEM	MX15	MX19
Platform Size (Inside minimum)		
Standard w/Deck	22.5 in. x 98.5 in. (.57 m x 2.5 m)	22.5 in. x 98.5 in. (.57 m x 2.5 m)
Maximum Platform Capacity		
Standard w/Deck Extension	550 lbs. (250 kg)	500 lbs. (250 kg)
Maximum Number of Occupants		
Standard w/Deck Extension	2 People	2 People
on Extension	1 Person	1 Person
Height		
Working Height	20 ft. 9 in. (6.3 m)	25 Ft. (7.6 m)
Maximum Platform Height	14 ft. 9 in. (4.5 m)	19 Ft. (5.8 m)
Maximum Drivable Height	14 ft. 9 in. (4.5 m)	19 Ft. (5.8 m)
Dimensions		
Weight	2300 lbs. (890 kg)	3154 lbs. (980 kg)
Overall Width	30 in. (760 mm)	30 in. (760 mm)
Overall Height (Lowered)	76 in. (1.93 m)	79.5 in. (2.02)
Overall Length (Deck in)	63 in. (1.60 m)	63 in. (1.60 m)
Drivable Height	14 ft. 9 in. (4.5 m)	19 ft. (5.8 m)
Drive Speed		
Platform Lowered	2.75 mph (4.43 km/h)	2.75 mph (4.43 km/h)
Platform Raised	.75 mph (1.2 km/h)	.75 mph (1.2 km/h)
Energy Source	24V battery pack (4-220 ampere hour, 6 Volt batteries, min. wt. 62 lbs. (28 kg) each), 4 HP DC electric motor	24V battery pack (4-220 ampere hour, 6 Volt batteries, min. wt. 62 lbs. (28 kg) each), 4 HP DC electric motor
System Voltage	24 VDC	24 VDC
Battery Charger	20 AMP, 120 VAC 60 Hz, Automatic	20 AMP, 120 VAC 60 Hz, Automatic
Hydraulic Tank Capacity	3.4 gal (12.9 L)	3.4 gal (12.9 L)
Maximum Hydraulic System Pressure	3000 psi (207 Bar)	3000 psi (207 Bar)
Lift System	One Single Stage Lift Cylinder	One Single Stage Lift Cylinder
Drive Control	Motor Control	Motor Control
Control System	Control Handle with Interlock Switch, Rotary Drive/Lift Switch, and Red Mushroom Emergency Stop Switch	Control Handle with Interlock Switch, Rotary Drive/Lift Switch, and Red Mushroom Emergency Stop Switch
Drive System	Dual Front Wheel Hydraulic Motors	Dual Front Wheel Hydraulic Motors
Tires	12 in. (30.5 cm) diameter solid rubber, Non-marking	12 in. (30.5 cm) diameter solid rubber, Non-marking
Parking Brake	Dual, Spring Applied, Hydraulic Release	Dual, Spring Applied, Hydraulic Release
Turning Radius (inside)	1 in. (25 mm) Inside	1 in. (25 mm) Inside
Maximum Gradeability	25% (14°)	25% (14°)
Wheel Base	48.5 in. (1.23 m)	48.5 in. (1.23 m)
Guardrails	39 in. (1.02 m)	39 in. (1.02 m)
Toeboard	6 in. (152 mm)	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 MX Series meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999