

2591ES | 3391ES | 4191ES Scissor Lift

2591ES Serial #11400001 – up
3391ES Serial #11500001 – up
4191ES Serial #11600001 – up

91831
December 2008

Operator's Manual

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—Specifications—

	2591ES		3391ES		4191ES	
Working Height*	31 FT*	9.62 m*	39 FT*	12.06 m*	47 FT*	14.50 m*
Platform Height	25 FT	7.62 m	33 FT	10.06 m	41 FT	12.50 m
Platform Entry Height	57 IN	1.45 m	66 IN	1.67 m	74 IN	1.88 m
Stowed Height						
Rails Up	100.5 IN	2.55 m	109.5 IN	2.78 m	119 IN	3.02 m
Rails Folded Down	71 IN	1.80 m	79 IN	2.01 m	87.5 IN	2.22 m
Maximum Number of Occupants	5	5	4	4	4	4
Lift Capacity (Evenly Distributed)	2000 LB	907 kg	1500 LB	680 kg	1000 LB	454 kg
Roll-out Deck Capacity	500 LB	227 kg	500 LB	227 kg	500 LB	227 kg
Platform Dimensions						
With Roll-Out Deck Extended	180 IN	4.57 m	180 IN	4.57 m	180 IN	4.57 m
With Roll-Out Deck Retracted	132 IN	3.35 m	132 IN	3.35 m	132 IN	3.35 m
Deck Width (inside)	71 IN	1.80 m	71 IN	1.80 m	71 IN	1.80 m
Guardrail Height	44.5 IN	1.13 m	44.5 IN	1.13 m	44.5 IN	1,13 m
Toeboard Height	7.0 IN	18 cm	7.0 IN	18 cm	7.0 IN	18 cm
Roll-out Deck Length	48 IN	1.22 m	48 IN	1.22 m	48 IN	1.22 m
Overall Length	144 IN	3.66 m	144 IN	3.66 m	144 IN	3.66 m
With Outriggers	180 IN	4.57 m	180 IN	4.57 m	180 IN	4.57 m
Overall Width	91 IN	2.31 m	91 IN	2.31 m	91 IN	2.31 m
Wheel Base	102.5 IN	2.60 m	102.5 IN	2.60 m	102.5 IN	2.60 m
Wheel Track	78.5 IN	1.99 m	78.5 IN	1.99 m	78.5 IN	1.99 m
Turning Radius						
Inside	76 IN	1.93 m	76 IN	1.93 m	76 IN	1.93 m
Outside	195 IN	4.95 m	195 IN	4.95 m	195 IN	4.95 m
Ground Clearance	12.0 IN	30.48 cm	12.0 IN	30.48 cm	12.0 IN	30.48 cm
Machine Weight** (Unloaded) (Approx.)	8,600 LB**	3901 kg**	9,300 LB**	4218 kg**	10,300 LB**	4672 kg**
Ground Pressure/Wheel (Maximum)	118 PSI	8.29 kg/cm ²	120 PSI	8.43 kg/cm ²	125 PSI	8.79 kg/cm ²
Wheel Load	3687 LB	1672 kg	3747 LB	1699 kg	3897 LB	1768 kg
Lift/Lower Speed (Approx.)	24 sec / 28 sec		35 sec / 40 sec		45 sec / 52 sec	
Drive System (Proportional)	2 Wheel Drive Standard, 4 Wheel Drive Option					
Drive Speed (Platform Elevated)			0 – 0.5 MPH	0 – 0.8 km/h		
Drive Speed (Platform Lowered)			0 – 2.6 MPH	0 – 4.2 km/hr		
Gradeability			45% / 24.2°	45% / 24.2°		
Tire Size-Standard	12-16.5 NHS "Outrigger"					
Tire Pressure, 12 Ply Pneumatic			80 PSI	5.5 bar		
12 Ply Foam-Filled (Option)			Foam-Filled	Foam-Filled		
Wheel Lug Nut Torque			150-165 FT/LB	204-225 Nm		
Hydraulic Pressure						
Main System			3000 PSI	207 bar		
Lift System			2500 PSI	172 bar		
Steer			2000 PSI	103 bar		
Hydraulic Fluid Capacity			23 GAL	87 liters		
Power System – Voltage	48 Volts DC					
Battery Pack	Eight 6 Volt DC 350 amp hour industrial, deep cycle					
Battery Charger						
Input	120 Volt AC, 50.60 Hz, 18 Amp—240 Volt AC, 50.60 Hz, 9 Amp					
Output	48 Volt DC, 32 Amp, 1500 W, Timed Shutoff					
Electric Motor	8 h.p. (6 kW): 3600 rpm					
Brakes	Multi disc / Dual Rear Wheel					
Meets requirements of ANSI A92.6-2006 Section 4.						
*Working height adds 6 feet (2 m) to platform height.						
**Weight may increase with certain options or country standards.						

Introduction

This Operator's Manual has been designed to provide you, the customer, with the instructions and operating procedures essential to properly and safely operate your MEC Aerial Work Platform for its intended purpose of positioning personnel, along with their necessary tools and materials, to overhead work locations.



The Operator's Manual must be read and understood prior to operating your MEC Aerial Work Platform. The user/operator should not accept operating responsibility until he/she has read and understands the operator's manual as well as having operated the MEC Aerial Work Platform under supervision of an authorized, trained and qualified operator.

It is essential that the operator of the aerial work platform is not alone on the workplace during operation.

Modifications of this machine from the original design and specifications without written permission from MEC are strictly forbidden. A modification may compromise the safety of the machine, subjecting operator(s) to serious injury or death.

Your MEC Aerial Work Platform has been designed, built, and tested to provide safe, dependable service. Only authorized, trained and qualified personnel should be allowed to operate or service the machine.

MEC, as manufacturer, has no direct control over machine application and operation. Proper safety practices are the responsibility of the user and all operating personnel.

If there is a question on application and/or operation contact:



MEC Aerial Platform Sales Corp.

1775 Park Street, Suite 77

Selma, CA 93662

USA

Phone: 1-800-387-4575

559-891-2488

Fax: 559-891-2448

www.mecawp.com

Safety

DO NOT operate this machine until you have read and understood the Safety section of this manual, have performed the Jobsite Inspection, Pre-Start Inspection and Routine Maintenance, and have completed all the test operations detailed in the Operating Instructions section.

Failure to read, understand and follow all safety rules, warnings, and instructions will unnecessarily expose you and others to dangerous situations. For your safety and the safety of those around you, you must operate your machine as instructed in this manual.

MEC designs aerial work platforms to be safe and reliable. They are intended to position personnel, along with their necessary tools and materials, to overhead work locations. The owner/user/operator of the machine should not accept responsibility for the operation of the machine unless properly trained.

ANSI and other applicable standards identify requirements of all parties who may be involved with self-propelled elevating work platforms. The ANSI/SIA A92.56-2006 Manual of Responsibilities is considered a part of this machine and can be found in the manual compartment, located at the platform control station. To ensure safe use of machine, inspections specified in ANSI/SIA A92.6-2006 Section 6.7 must be performed at designated intervals as prescribed.

Never perform service on the machine with the platform elevated without first blocking the scissor assembly using the maintenance lock (see *Maintenance Lock* on page 26).

California Proposition 65 Warning

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

Safety Alert Symbols

MEC manuals and decals use symbols and colors to help you recognize important safety, operation and maintenance information.



RED – Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



ORANGE – Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



YELLOW with alert symbol – Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



YELLOW without alert symbol – Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

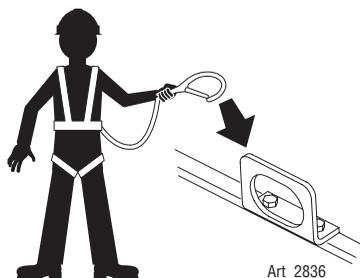
Fall Protection

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

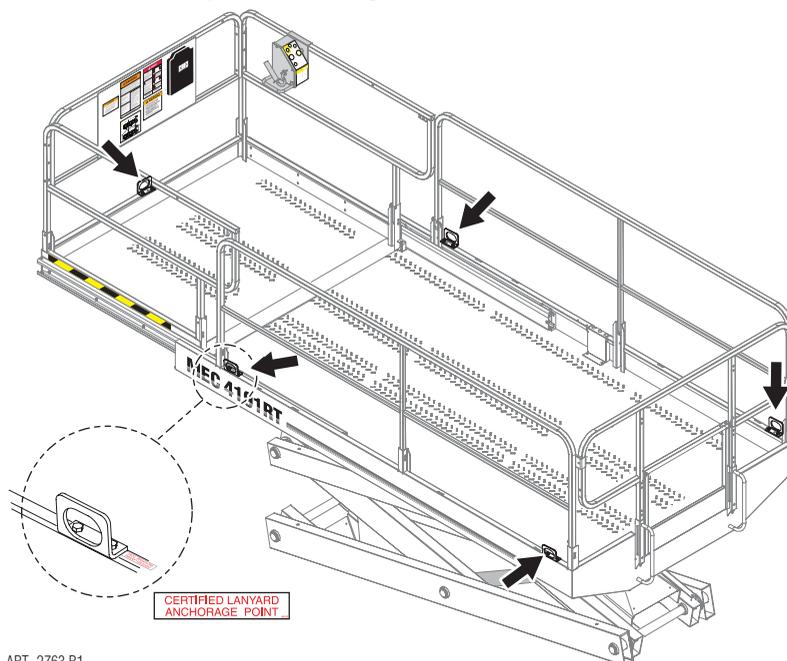
If required by your employer or job site, use personal fall protection equipment (PFPE) when operating this machine.

All PFPE must comply with applicable governmental regulations, and must be inspected and used in accordance with the PFPE manufacturer's instructions.

Fall restraint must be properly attached to a designated anchorage point when driving or operating the machine. Attach only one fall restraint to each anchorage point.



Lanyard Anchorage Points



Electrocution Hazard



ELECTROCUTION HAZARD!!! THIS MACHINE IS NOT INSULATED!

DEATH OR SERIOUS INJURY will result from contact with or inadequate clearance from any electrically charged conductor.

You must maintain a CLEARANCE OF AT LEAST 10 FEET (3.05 m) between any part of the machine, or its load, and any electrical line or apparatus carrying over 300 Volts up to 50,000 Volts. One foot (30.5 cm) additional clearance is required for every additional 30,000 Volts.

Observe Minimum Safe Approach Distance.



Art_2824



Art_2823

DO NOT work in close proximity to, or in contact with, energized power lines and electrical equipment. This machine is not insulated and WILL NOT protect the operator from injury or the machine from damage.

Refer to Table and all applicable governmental regulations for the minimum safe distances from energized power lines and electrical equipment.

Minimum Safe Approach Distance

Voltage Phase to Phase	Minimum Safe Approach Distance	
	Feet	Meters
0 to 300 Volts	Avoid Contact	
Over 300V to 50kv	10	3.05
Over 50KV to 200KV	15	4.60
Over 200KV to 350KV	20	6.10
Over 350KV to 500KV	25	7.62
Over 500KV to 750KV	35	10.67
Over 750KV to 1000KV	45	13.72

DO NOT touch the machine if it contacts energized power lines.

Personnel in the platform:

- Move away from the platform rails,
- DO NOT attempt to operate the machine, and
- DO NOT touch any part of the machine until energized power lines are shut off.

Personnel on the ground:

- DO NOT approach the machine and
- DO NOT touch or attempt to operate the machine until energized power lines are turned off.

Do not operate the machine during electrical storms or lightning.

DO NOT use the machine as a ground for welding unless properly equipped with a weld line to platform option.

Tip-over Hazards



Art_2828

DO NOT OVERLOAD

DO NOT exceed the maximum platform capacity (see Specifications). The weight of options and accessories will reduce the rated platform capacity and must be factored into the total platform load. Refer to the decals on the options.

DO NOT elevate the platform when the machine is on a surface that is soft and / or on a slope. If the alarm sounds when the platform is raised, use extreme caution to lower the platform.

Driving: DO NOT drive the machine on a slope that exceeds the maximum uphill, downhill or side slope rating. Slope rating applies to machines in the stowed position.

Slope rating is subject to ground and traction conditions.

Driving in stowed position: use extreme care and slow speeds when driving across uneven terrain, debris, unstable or slippery surfaces, and near holes or drop-offs.

Driving with the platform elevated: DO NOT drive on or near uneven terrain, unstable surfaces or other hazardous conditions.

DO NOT push off or pull toward any object outside the platform.

Maximum Allowable Side Force

ANSI and CSA	CE and AUS
150 lbs (667 N)	90 lbs (400 N)



Art_2834

DO NOT DRIVE ON IRREGULAR OR UNSTABLE SURFACE

DO NOT elevate the platform when wind speeds are in excess of 28 m.p.h. (12.5 m/s). If these wind speeds occur when the platform is elevated, carefully lower and discontinue operation.

DO NOT increase the surface area of the platform (i.e. cover the rails with tarp or plywood). Increased surface area exposed to the wind will decrease machine stability.

DO NOT attach overhanging loads or use the machine as a crane.

DO NOT transport tools and materials unless they are evenly distributed and can be safely handled by personnel in the platform. Secure all tools and loose materials to prevent injury to personnel below the platform.

DO NOT alter or disable machine components that may affect safety and stability.

DO NOT replace items critical to machine stability with items of different weight or specification.

DO NOT modify or alter the work platform without written permission from MEC, as modifications can increase weight and/or surface area resulting in instability.

DO NOT place ladders or scaffolds in the platform or against any part of the machine.

DO NOT use the machine on a moving or mobile surface or vehicle.

Ensure that all tires are in good condition, air filled tires are properly inflated and lug nuts are properly torqued.



Art_2833

DO NOT PUSH OR PULL OBJECTS OUTSIDE PLATFORM

Art_2831

DO NOT ELEVATE IN WINDY CONDITIONS

Art_2832

DO NOT USE AS CRANE

Fall Hazards



Art_2826
DO NOT CLIMB ON RAILS



Art_2825
DO NOT EXIT PLATFORM WHEN ELEVATED

DO NOT sit, stand or climb on the platform guard rails. Maintain a firm footing on the platform floor at all times.

DO NOT exit the platform when elevated

DO NOT climb down from the platform when elevated.

Keep the platform floor clear of debris.

DO NOT fasten a fall restraint lanyard to an adjacent structure.

Ensure that the entry is properly closed before operating the machine.

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

Collision Hazards



Art_2835

Be aware of blind spots while operating this machine.

Watch for overhead obstructions when elevating the platform.

Watch for crushing hazards when holding the platform rail.

Reduce travel speed when moving the machine on slopes, when near personnel and obstacles, or when surface conditions are wet, slippery or otherwise limiting.

DO NOT operate in the path of any crane unless the controls of the crane have been locked out and/or precautions have been taken to prevent any possible collision.

Stunt driving and horseplay are PROHIBITED.



Art_2829



Art_2827

Additional Safety Hazards

Explosion and Fire Hazards

DO NOT operate the machine in hazardous locations or locations where potentially flammable or explosive gasses or particles may be present.

Damaged Machine Hazards

Conduct a thorough pre-start inspection of the machine and test all functions before each work shift to check for damage, malfunction and unauthorized modification. Tag and remove a damaged, malfunctioning or modified machine from service. DO NOT use a damaged, malfunctioning or modified machine.

Routine maintenance must be performed by the operator before each work shift. Scheduled maintenance must be performed by a qualified service technician at scheduled intervals. Tag and remove from service any machine that has not had scheduled preventative maintenance performed.

Check that all safety and instructional decals are in place and undamaged.

Check that the operator's, safety and responsibilities manuals are present in the storage container located in the platform. All manuals must be complete, undamaged and readable.

Bodily Injury Hazards

DO NOT operate the machine when there is a hydraulic fluid or air leak. Hydraulic fluid or air under pressure can penetrate and/or burn skin.

All compartments must remain closed and secure during machine operation. Improper contact with components under any cover will cause serious injury. Only trained maintenance personnel should access compartments. The operator should only access a compartment when performing pre-operation inspection.

Weld Line to Platform Safety (if equipped)

Read, understand and follow all warnings and instructions provided with the welding power unit.

Do not connect weld leads or cables unless the welding power unit is turned off at the platform controls.

DO NOT operate unless the weld cables are properly connected.

Battery Safety

Burn Hazards

Batteries contain acid. Always wear protective clothing and eye wear when working with batteries.

Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

Explosion Hazard

Keep sparks, flame and lighted tobacco away from batteries. Batteries emit explosive gas.

Electrocution Hazard

Avoid contact with electrical terminals.

Jobsite Inspection

DO NOT operate this machine until you have read and understood the Safety section of this manual, have performed the Jobsite Inspection, Pre-Start Inspection and Routine Maintenance, and have completed all the test operations detailed in the Operating Instructions section.

Inspect the jobsite and determine whether the jobsite is suitable for safe machine operation. Do this before moving the machine to the jobsite.

Be aware of changing jobsite conditions, and continue to watch for hazards while operating the machine.

Workplace Inspection

Check the jobsite where the machine will be used for all possible hazards, including but not limited to:

- drop-offs or holes, including those concealed by water, ice, mud, etc.
- sloped, unstable or slippery surfaces
- bumps, surface obstructions and debris
- overhead obstructions and electrical conductors
- hazardous locations and atmospheres
- inadequate surface and support to withstand all load forces imposed by the machine
- wind and weather conditions
- the presence of unauthorized personnel
- other possible unsafe conditions

Function Tests

DO NOT operate this machine until you have read and understood the Safety section of this manual, have performed the Pre-Start Inspection, Routine Maintenance, and Functions Test, have inspected the jobsite for hazards, and have learned the operating procedures for this machine.

The operator must conduct a Functions Test of the machine before each work shift to check that all machine systems are working properly.

Test the machine on a firm level surface with no debris, drop-offs, potholes or overhead obstructions. Perform each step outlined in *Operating Instructions* on page 10.

DO NOT use a machine that is malfunctioning. If any function does not perform as described, tag the machine and remove for repair by a qualified service technician. After repairs are completed, a Pre-Start Inspection and Functions Test must be performed before using the machine.

Operating Instructions

DO NOT operate this machine until you have read and understood the Safety section of this manual, have performed the Jobsite Inspection, Pre-Start Inspection and Routine Maintenance, and have completed all the test operations detailed in the Operating Instructions section.

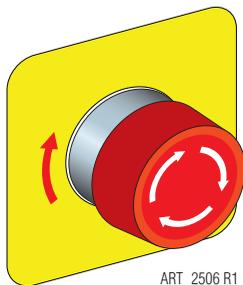
This section provides instructions for each function of machine operation. Follow all safety rules and instructions.

This machine may be operated by trained and authorized personnel only. If multiple operators use this machine, all must be qualified and authorized to use it. New operators must perform a Pre-Start Inspection and Functions Test prior to operating the machine.

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment – see *Fall Protection* on page 4.

Prestart

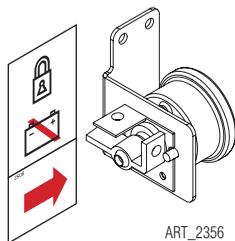
- Perform *Prestart Inspection* (see page 21).
- Check base control Emergency Stop Switch – turn clockwise to reset.



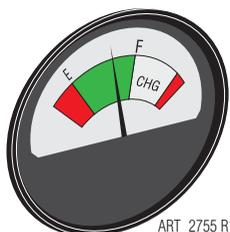
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ART_2507 R1



ART_2356



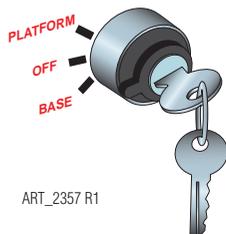
ART_2755 R1

- Check platform control Emergency Stop Switch – turn clockwise to reset.
- Check Battery Disconnect Switch in Control Module next to Base Controls. Must be in ON position.
- Check Charge Indicator on Base Control Panel. Battery pack should be fully charged.

Note: If machine fails to operate, check the Diagnostic LED on the motor control processor inside the Control Module – see *Component Locations* on page 30.

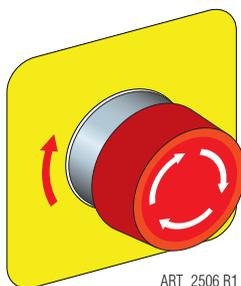
Base Controls Operation and Test

IMPORTANT—Be sure the area above the machine is clear of obstructions to allow full elevation of platform.



Select BASE Operation

- Turn the Selector Key Switch to BASE.



Emergency Stop

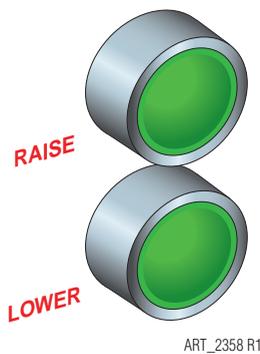
- Press the Emergency Stop Switch at any time to stop all machine functions.
- Turn switch *clockwise* to reset.



Do not elevate the platform if the machine is not on a firm level surface.

Elevate Platform

- Press and hold the RAISE button on the base control panel to elevate the platform.



Test Operation

- Elevate to maximum height.
- Releasing the button will stop elevation.
- Pressing the Emergency Stop Switch will stop elevation.

Lower Platform

- Press the LOWER button on the base control panel until the desired platform height is reached.

Test Operation

- Lower the platform to the stowed position.
- Releasing the button will stop descent.
- Pressing the Emergency Stop Switch will stop descent.

Platform Control Operation and Test

IMPORTANT—Check that the route of travel to be taken is clear of persons, obstructions, debris, holes, and drop offs, and is capable of supporting the machine.



Select PLATFORM Operation

- Turn the Selector Key Switch to PLATFORM.
- Enter the platform and secure the entry.
- Turn the Platform Key Switch to the ON position.
- Press the horn button to verify proper operation (optional).



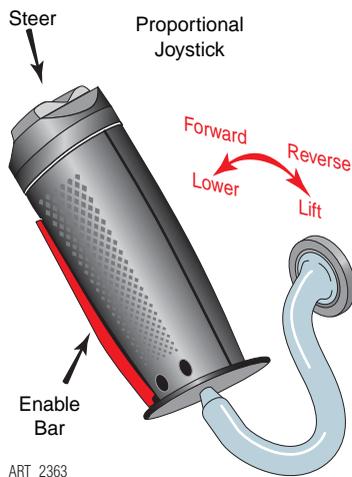
Emergency Stop

- Press the Emergency Stop Switch at any time to stop all machine functions.
- Turn switch *clockwise* to reset.

WARNING

Activation of the Emergency Stop Switch will apply brakes immediately. This may cause unexpected platform movement as the machine comes to a sudden stop. Brace yourself and secure objects on the platform during operation of machine.

Joystick Operation



WARNING

Do not elevate platform unless guardrails are installed and secure – see Fold Down Platform Railings on page 18.

If the deck is extended, check for clearance beneath the deck before lowering.

If the platform fails to lower DO NOT attempt to climb down the scissor assembly. Serious injury may result – see Emergency Systems on page 16.



ART_2386 R1

Elevate Platform

- Place the Enable Bar in the LIFT position.
- Squeeze the Enable Bar and move the Joystick toward you.

Test Operation

- Rate of lift is proportional and is dependent on the movement of the Joystick.
- Elevate to maximum height.
- Releasing the Enable Bar or the Joystick will stop elevation.
- Pressing the Emergency Stop Switch will stop elevation.

Lower Platform

- Place the Mode Select Switch in the LIFT position.
- Move the Joystick away from you.

Test Operation

- Rate of descent is fixed - platform lowers at same rate regardless of handle position.
- Pressing the Emergency Stop Switch will stop descent.

Steer



Check that the route is clear of persons, obstructions, debris, holes and drop-offs, and is capable if supporting the machine.

- Always check front steer wheel direction before driving.
- With the Mode Select Switch in the DRIVE position, press the Steering Switch with your thumb to steer left or right.

Test Operation

- Releasing the Steering Switch will stop steering function.
- The steer wheels will not center themselves after a turn.
- They must be returned to the straight-ahead position with the Steering Switch.

Drive Torque (Speed Control)

Drive speed is selectable until the platform is elevated above 10 Feet (3 m). When the platform is elevated the machine defaults to MID RANGE and the switch is locked-out (non functioning).

- HIGH SPEED: allows speeds up to 3.0 m.p.h. (4.8 km/h).
- MID RANGE: allows speeds up to 1.0 m.p.h. (1.6 km/h).
- HIGH TORQUE: use to drive up or down a slope that is too steep for normal speed.



ART_2388 R1



Drive Forward

- Place the Mode Select Switch in the DRIVE position.
- Squeeze the Enable Bar and move the Joystick away from you.

Test Operation

- Drive speed is proportional and is dependent on the movement of the Joystick.
- Releasing the Enable Bar or returning the Joystick to the center position will stop drive.
- Pressing the Emergency Stop Switch will stop drive.

Drive Reverse

- Place the Mode Select Switch in the DRIVE position.
- Squeeze the Enable Bar and move the Joystick toward you.

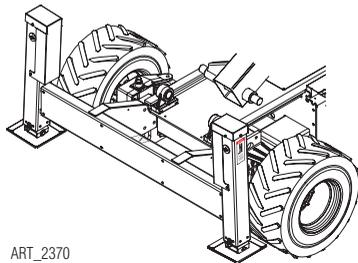
Test Operation

- Drive speed is proportional and is dependent on the movement of the Joystick.
- Releasing the Enable Bar or returning the Joystick to the center position will stop drive.
- Pressing the Emergency Stop Switch will stop drive.

Brake

- For parking, the brake is automatically applied when the Joystick is positioned in the neutral (center) position.

Outrigger Operation (optional)



ART_2370

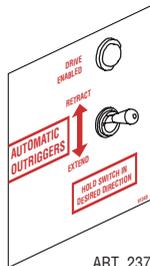
Only lower the outriggers when the machine is on a firm, level surface. The surface must be capable of supporting the maximum ground pressure per wheel/outrigger (see specifications).

The Outrigger Control Switch is located on the front face of the Upper Control Box.

Extend

Push down and hold the Outrigger Control Switch to the EXTEND position.

- The outriggers will extend and level the machine. When the machine is level and ready to operate, the outriggers will stop automatically.
- The Indicator Lamp will turn OFF, indicating that outriggers are down and machine drive function is disabled.



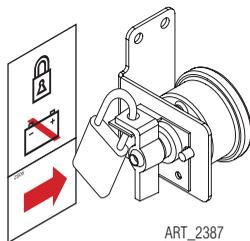
ART_2371

Retract

Push up and hold the Outrigger Control Switch to the RETRACT position.

- The outriggers will retract.
- The Indicator Lamp will turn ON, indicating that the outriggers are up and machine drive function is enabled.

Shutdown Procedure



ART_2387

- When finished with the machine, place the platform in the stowed position.
- Park the machine on a level surface.
- Turn the Selector Key Switch to the OFF position and remove the key to prevent unauthorized use.
- Carefully exit the platform using a constant three (3) point dismount/grip.
- Turn the Battery Disconnect Switch to the OFF position.

Note: Leaving the Battery Disconnect Switch in the ON position for an extended time will drain the battery.

- Always put the switch in OFF position when leaving the machine at the end of the work day.
- Put a padlock on the Battery Disconnect Switch to prevent unauthorized operation.

Emergency Systems

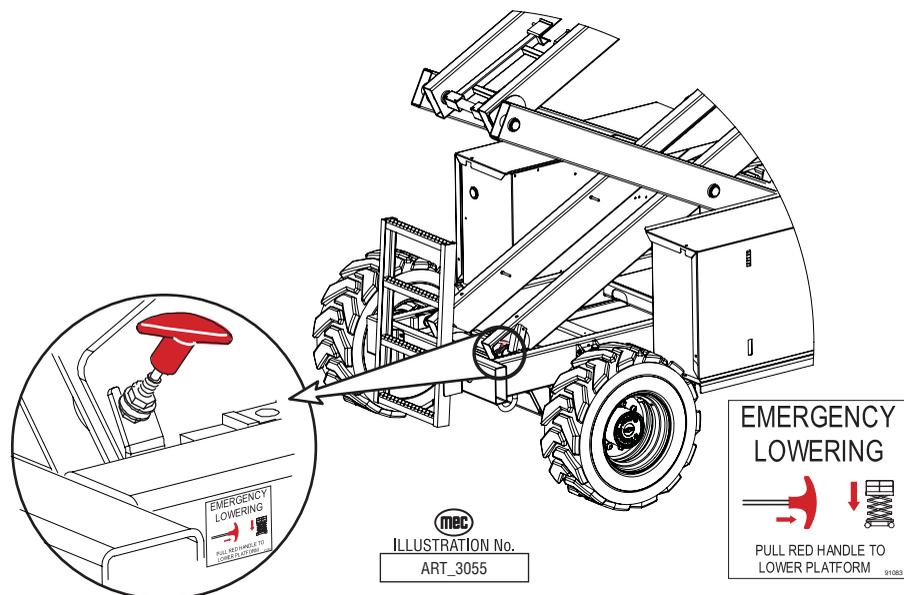
WARNING

If the control system fails while the platform is elevated, have an experienced operator use the emergency lowering procedure to safely lower the platform.

Do not attempt to climb down beams (scissors) assembly.

Emergency Lowering – 2591ES – 3391ES

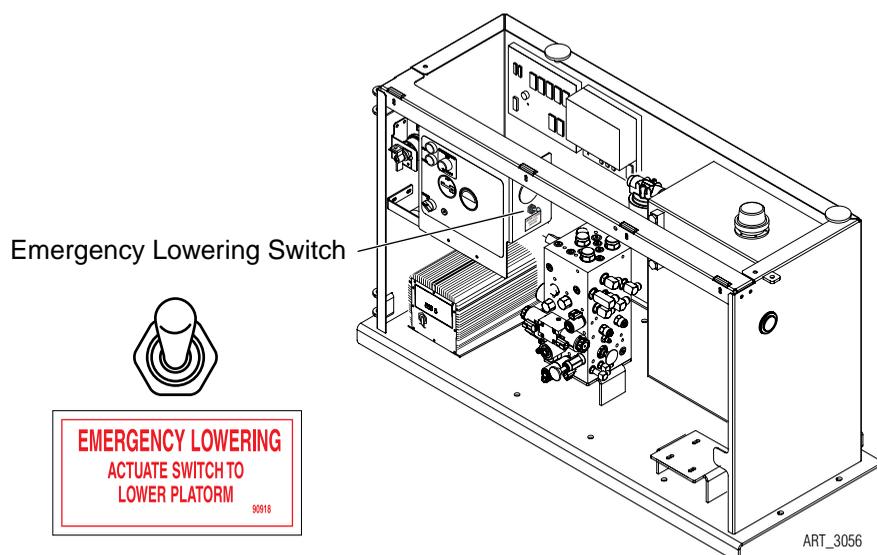
The Emergency Lowering System is used to lower the platform in case of power or valve failure. To lower the platform, pull the red “T” handle located at the rear of the machine. Lowering stops when you release the “T” handle.



Emergency Lowering – 4191ES

The Emergency Lowering System is used to lower the platform in case of power or valve failure. To lower the platform, perform the following steps:

- Push and hold the toggle switch down to lower the platform.
- Once the platform is fully lowered, release the toggle switch to close the valve.

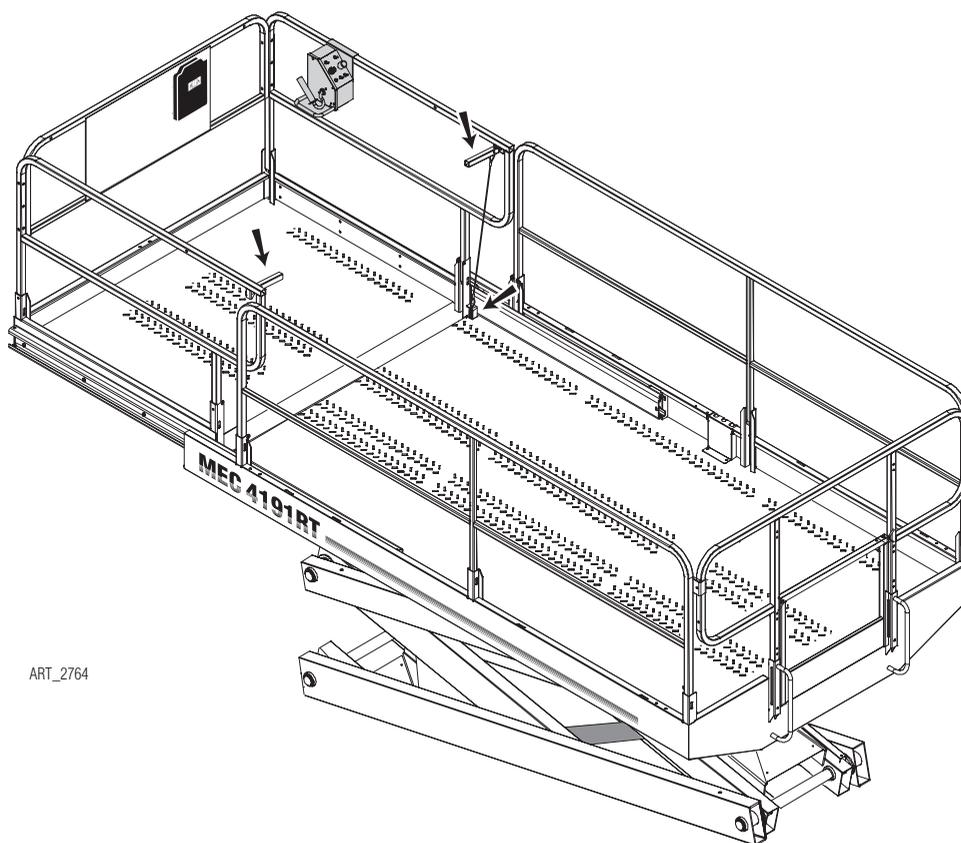


Deck Extension

The deck will extend in intervals of 8 inches (20 cm) throughout the entire length of the deck extension. There are two (2) handles that hang from the top rail at the end of the deck extension.

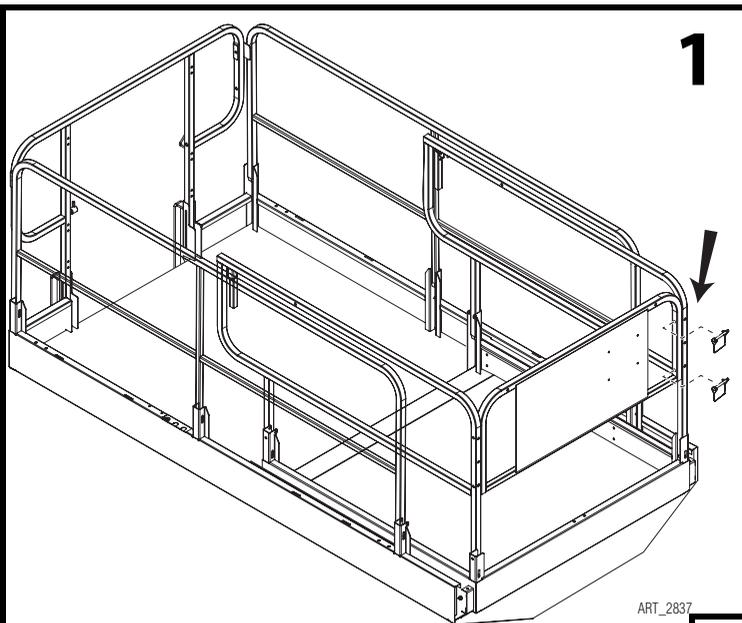
Both handles are used to push or pull the deck extension to the desired position. The right-side handle is attached by cable to a spring-loaded pin at the deck.

- Lift the right-side handle to raise the spring loaded pin from the locked position.
- With right-side handle raised, lift the left-side handle and push to extend or pull to retract the deck.
- Lower the right-side handle enough for the spring-loaded pin to engage and continue to push or pull until the pin locks into position.



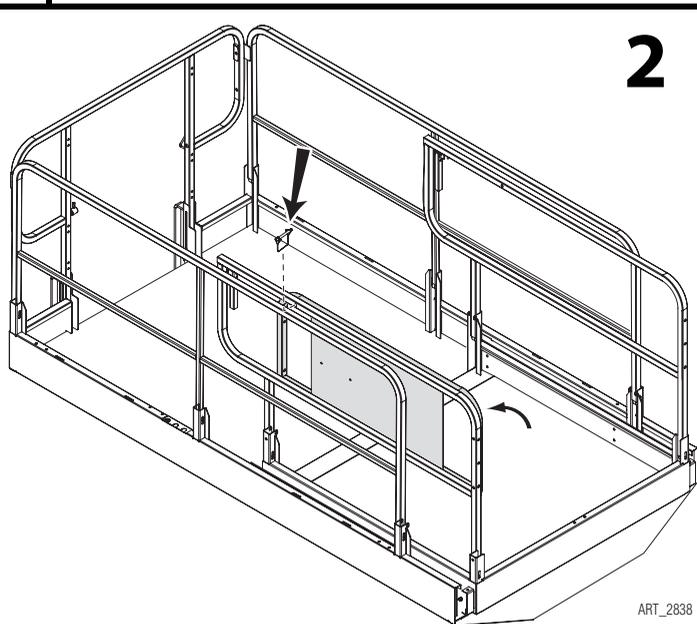
ART_2764

Fold Down Platform Railings



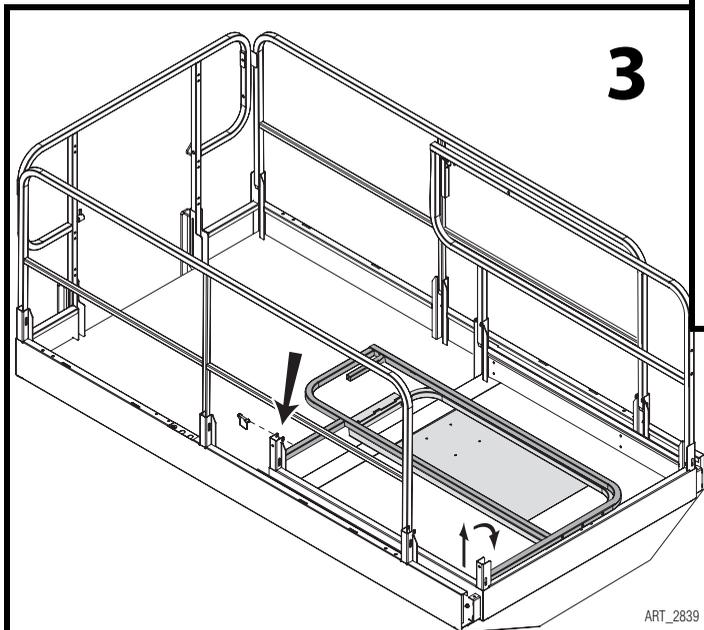
Remove the safety snap pins holding the front extension rail to the corner post.

ART_2837



Swing the front extension rail back, next to the right side extension rail and secure with a safety snap pin.

ART_2838



Remove the safety snap pin from the rear right side extension rail corner post.

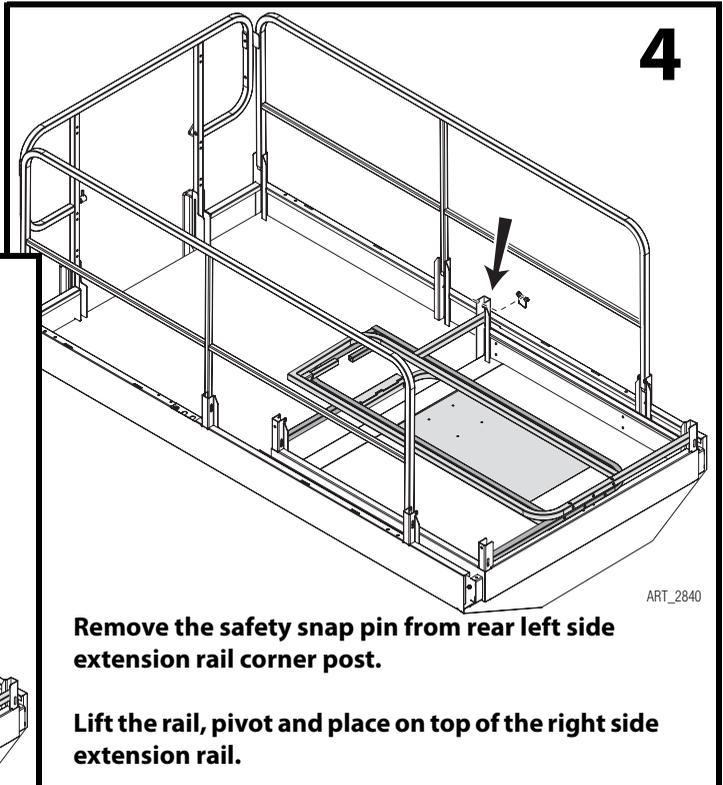
Lift the rail, pivot, and place on the platform floor.

ART_2839

continued...

Fold Down Rails (continued)

4

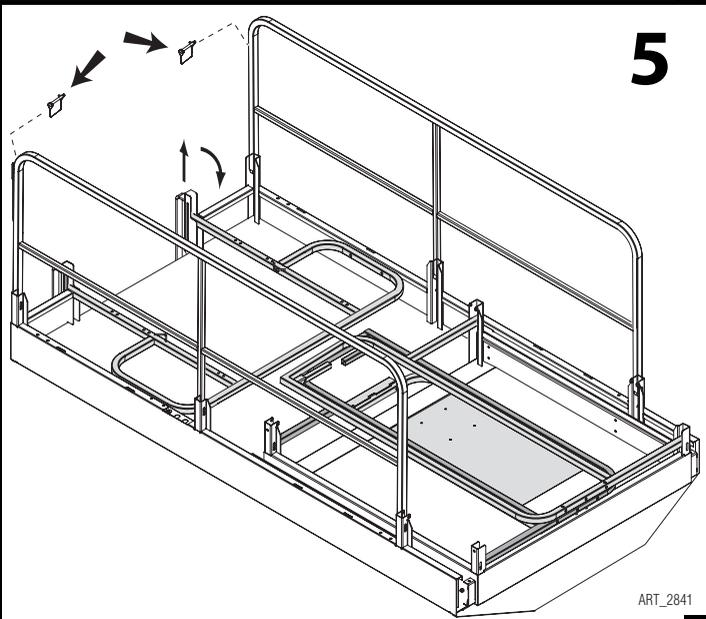


ART_2840

Remove the safety snap pin from rear left side extension rail corner post.

Lift the rail, pivot and place on top of the right side extension rail.

5

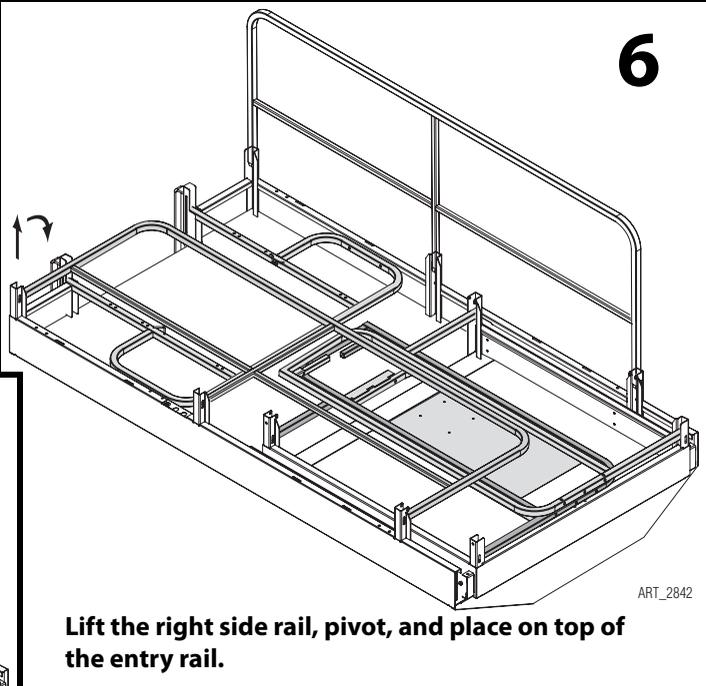


ART_2841

Remove the safety snap pins holding the entry railing to the corner posts.

Lift the entry rail, pivot, and place on the platform floor.

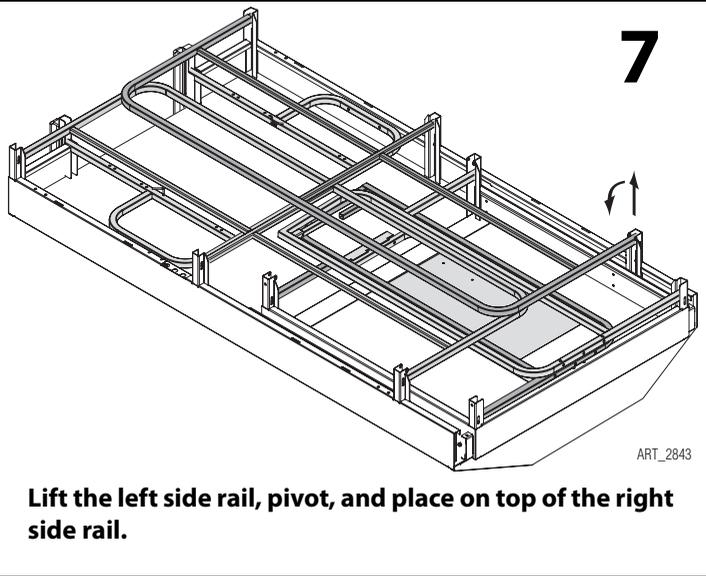
6



ART_2842

Lift the right side rail, pivot, and place on top of the entry rail.

7



ART_2843

Lift the left side rail, pivot, and place on top of the right side rail.

To return the machine to normal operation mode, lift all rails into their upright position, install all safety snap pins, and position the platform control box on the extension rail.

Machine Inspections and Maintenance

DO NOT operate this machine until you have read and understood the Safety section of this manual, have performed the Jobsite Inspection, Pre-Start Inspection and Routine Maintenance, and have completed all the test operations detailed in the Operating Instructions section.

The operator must conduct a thorough Pre-Start Inspection of the machine and test all functions before each work shift to check for damage, malfunction and unauthorized modification.

Tag and remove a damaged, malfunctioning or modified machine from service. **DO NOT** use a damaged, malfunctioning or modified machine.

Use the Pre-Start Inspection to determine what Routine Maintenance is required. The operator may perform only the routine maintenance items specified in this manual.

IMPORTANT— Scheduled maintenance inspection checklists are included in this manual for use only by qualified service technicians. Only qualified service technicians may perform repairs to the machine. After repairs are completed, the operator must perform a Pre-Start Inspection before proceeding to the Functions Test.



Always use the maintenance lock to block the scissor assembly in place before servicing the machine with the platform elevated.

Hydraulic fluid under pressure can penetrate and burn skin, damage eyes, and may cause serious injury, blindness, and death. Repair leaks immediately. Fluid leaks under pressure may not always be visible. Check for pin hole leaks with a piece of cardboard, not your hand.



Perform scheduled maintenance at recommended intervals. Failure to perform scheduled maintenance at recommended intervals may result in a defective or malfunctioning machine and may result in injury or death of the operator. Keep maintenance records current and accurate.

Immediately report any damage, defect, unauthorized modification or malfunction to your supervisor. Any defect must be repaired prior to continued use. DO NOT use a damaged, modified or malfunctioning machine.



Never leave hydraulic components or hoses open. Plug all hoses and fitting immediately after disassembly to protect the system from outside contamination (including rain).

Never open a hydraulic system when there are contaminants in the air.

Always clean the surrounding area before opening hydraulic systems.

Use only recommended lubricants. Improper lubricants or incompatible lubricants may cause as much damage as no lubrication.

Watch for makeshift "fixes" which can jeopardize safety as well as lead to more costly repair.

Inspection and maintenance should be performed by qualified personnel familiar with the equipment.

Pre-Start Inspection Checklist

The operator must conduct a thorough Pre-Start Inspection of the machine before each work shift.

General Inspection Checklist

Initial	Description
_____	Check that the operator's, safety, and responsibilities manuals are in the storage container located on the platform.
_____	Perform a visual inspection of all machine components. Look for missing parts, torn or loose hoses, hydraulic fluid leaks, torn or disconnected wires, damaged tires etc.
_____	Check all structural components of the machine for cracked welds, corrosion and collision damage.
_____	Check all hoses and the cables for worn or chafed areas.
_____	Check the platform rails and sliding mid-rail entry for damage or modification.
_____	Check that all warning and instructional decals are legible and secure.
_____	Check the tires for damage.
_____	Check the tire pressure (not required for foam filled tires).
_____	Check the lower limit switch for visual damage or loose or missing hardware.
_____	All structural components, pins and fasteners are present and properly tightened.

Fluid Level Checklist

_____	Check for fluid leaks.
_____	Hydraulic fluid level (check with platform fully lowered).

Secure for operation

_____	Secure all covers and panels.
-------	-------------------------------

Monthly Inspection Checklist



This checklist must be used at monthly intervals or every 100 hours of machine use, whichever occurs first. Failure to do so could result in death or serious injury.

Scheduled Maintenance Inspections should be conducted by qualified service technicians only. Photocopy this page for reuse. Keep inspections records up to date. Record and report all discrepancies to your supervisor.

Model Number _____ **Serial Number** _____ **Hour Meter Reading** _____

Initial	Description
_____	Perform all checks listed on Prestart Inspection.
_____	Inspect the condition of hydraulic fluid in the reservoir. Oil should have a clear amber color.
_____	Check battery electrolyte level and connections.
_____	Check wheel lug nuts for proper torque (see "Machine Specifications").
_____	Check if tires are leaning in or out.
_____	Inspect all beams and pivot points for signs of wear and/or damage.
_____	Check the pin joints and retaining rings for security.
_____	Inspect the entire machine for signs of damage, broken welds, loose bolts, improper or makeshift repairs.
_____	Check that the platform does not drift down with a full load.
_____	Lubricate the axle float cylinder pivot mounts (see Lubrication Chart).
_____	Check all wire connections.
_____	Check that all adjustable flow valves are locked, check setting if any are not locked.
_____	Check outriggers for proper operation (if equipped).

DATE _____ INSPECTED BY _____



Quarterly Inspection Checklist



This checklist must be used at quarterly intervals or every 300 hours of machine use, whichever occurs first. Failure to do so could result in death or serious injury.

Scheduled Maintenance Inspections should be conducted by qualified service technicians only. Photocopy this page for reuse. Keep inspections records up to date. Record and report all discrepancies to your supervisor.

Model Number _____ **Serial Number** _____ **Hour Meter Reading** _____

Initial	Description
_____	Perform all checks listed on Prestart/Monthly Inspection.
_____	Check the operation speeds to ensure they are within specified limits (see <i>Specifications</i>).
_____	Check the emergency lowering system.
_____	Clean and lubricate all push button switches with dry lubricant and ensure that the switches operate freely in all positions.
_____	Check the tightness of the platform frame and the linkage pins.
_____	Check the overall platform and guardrail component stability.
_____	Check the electrical mounting and hardware connections for security.
_____	Check the king pins for excessive play.

Additional maintenance requirements for severe conditions

_____ Replace hydraulic filter element (under normal conditions replace every six [6] months).

DATE _____ INSPECTED BY _____

ANNUAL INSPECTION

Annual Inspection Report



Aerial Platform Sales Corp.

1775 Park Street, Suite 77 • Selma, CA 93662 USA
800-387-4575 • 559-891-2488 • Fax: 559-891-2493

Date _____
Serial Number _____
Model Number _____
Date Of Last Inspection _____
Date Placed In Service _____

Customer _____
Street _____
City/State/Zip _____
Phone Number _____
Contact _____

Dealer _____
Street _____
City/State/Zip _____
Phone Number _____
Contact _____

- Check each item listed below.
- Use proper Operator's, Service and Parts manual for specific information and settings.
- If an item is found to be "Unacceptable" make the necessary repairs and check the "Repaired" box.
- When all items are "Acceptable", the unit is ready for service.
- Please fax a copy to MEC at (559) 891-2488 or email to EMAIL ADDRESS

Key: "Y" Yes/Acceptable
"N" No/Unacceptable
"R" Repaired
"U" Unnecessary/Not Applicable

	Y	N	R	U		Y	N	R	U		Y	N	R	U
Decals:					Base:					Operation:				
Proper Placement/Quantity					Cover Panels Secure					Wires Tight				
Legibility					Base Fasteners Tight					Switches Secure				
Correct Capacity Noted					Bolts Tight					All Functions Operational				
Rails:					Front Axle Mounting (4WD)					Emergency Down:				
All Rail Fasteners Secure					Rear Axle Mounting (4WD)					Operational				
Entry Gate/Chain Closes Properly					Front Axle/Front Wheel Assemblies:					Slow Speed Limit Switch:				
Manual/Safety Data In Box					Wheel Motors-Mounting Secure					Set Properly				
Rear Rail Pad In Place					Wheel Motors-Leaks					Pothole Bars:				
Extending Platform:					Lug Nuts Torqued Properly					Operate Smoothly				
Slides Freely					Steering Cylinder Pins Secure					Lock In Place				
Latches In Stowed Position					Pivot Points Lubed					Limit Switches Adjusted				
Latches In Extended Position					Drive Assembly Front Hubs:					Pressures & Hydraulics:				
Rail Latches Work Properly					Castle Nut Torqued Properly					Oil Filter Secure/Chg				
Cable Secure					Cotter Pinned					Oil Level Correct/Chg				
Platform:					Rear Axle/Rear Wheel Assemblies:					Steering Pressure Set				
Platform Bolts Tight					Brakes Operational					Drive Pressure Set				
Platform Structure					Wheel Motors-Mounting Secure					Lift Pressure Set				
Platform Overload System:					Wheel Motors-Leaks					Engine:				
Functional					Lug Nuts Torqued Properly					Engine Mounts Tight				
Calibrated					Axle Pivot Libed (4WD)					Fuel Lines Secure				
Wire Harnesses:					Axle Lock Operational					Fuel Lines Free Of Leaks				
Mounted Correctly					Component Area:					Fuer Tanks Secure				
Physical Appearance					Valve Manifold(s) Secure					Fuel Shut Off Valves Func.				
110/220V Outlet Safe/Working					Hoses Tight/No Leaks					All Shields/Guards In Place				
Scissors:					D/C Mtr(s) Secure/Operational					Oil Level				
Beam Structures					Contactors Secure					Oil Filter				
Welds					Pump Secure					Air Filter				
Retaining Rings					Batteries:					Options Operational:				
Upper Cylinder Pins Secure					Secure					Hour Meter				
Lower Cylinder Pins Secure					Fully Charged					Battery Indicator				
Lower Beam Mounts tight					Battery Charger:					Warning Light				
Rollers Turn Freely					Secure					Warning Horn				
Maintenance Locks:					Operational					Generator				
Secure					Emergency Stop:					Converter				
Operational					Breaks All Circuits									

Comments: _____

Signature/Mechanic: _____ Date: _____
Signature/Owner-User: _____ Date: _____

Maintenance

DO NOT operate this machine until you have read and understood the Safety section of this manual, have performed the Jobsite Inspection, Pre-Start Inspection and Routine Maintenance, and have completed all the test operations detailed in the Operating Instructions section.

Tag and remove a damaged, malfunctioning or modified machine from service. **DO NOT** use a damaged, malfunctioning or modified machine.

Use the Pre-Start Inspection to determine what Routine Maintenance is required. The operator may perform only the routine maintenance items specified in this manual.

IMPORTANT—Scheduled maintenance inspection checklists are included in this manual for use only by qualified service technicians. Only qualified service technicians may perform repairs to the machine. After repairs are completed, the operator must perform a Pre-Start Inspection before proceeding to the Functions Test.

**DANGER**

Always use the maintenance lock to block the scissor assembly in place before servicing the machine with the platform elevated.

Hydraulic fluid under pressure can penetrate and burn skin, damage eyes, and may cause serious injury, blindness, and death. Repair leaks immediately. Fluid leaks under pressure may not always be visible. Check for pin hole leaks with a piece of cardboard, not your hand.

**WARNING**

Perform scheduled maintenance at recommended intervals. Failure to perform scheduled maintenance at recommended intervals may result in a defective or malfunctioning machine and may result in injury or death of the operator. Keep maintenance records current and accurate.

Immediately report any damage, defect, unauthorized modification or malfunction to your supervisor. Any defect must be repaired prior to continued use. DO NOT use a damaged, modified or malfunctioning machine.

**CAUTION**

Never leave hydraulic components or hoses open. Plug all hoses and fitting immediately after disassembly to protect the system from outside contamination (including rain).

Never open a hydraulic system when there are contaminants in the air.

Always clean the surrounding area before opening hydraulic systems.

Use only recommended lubricants. Improper lubricants or incompatible lubricants may cause as much damage as no lubrication.

Watch for makeshift “fixes” which can jeopardize safety as well as lead to more costly repair.

Inspection and maintenance should be performed by qualified personnel familiar with the equipment.

Routine Maintenance

IMPORTANT— The operator may perform routine maintenance only. Scheduled maintenance must be performed by qualified service technicians.

Charge Batteries See *Battery Charger* on page 28

Pre-Start Inspection Perform routine maintenance as identified in the *Pre-Start Inspection Checklist* on page 21.

Scheduled Maintenance

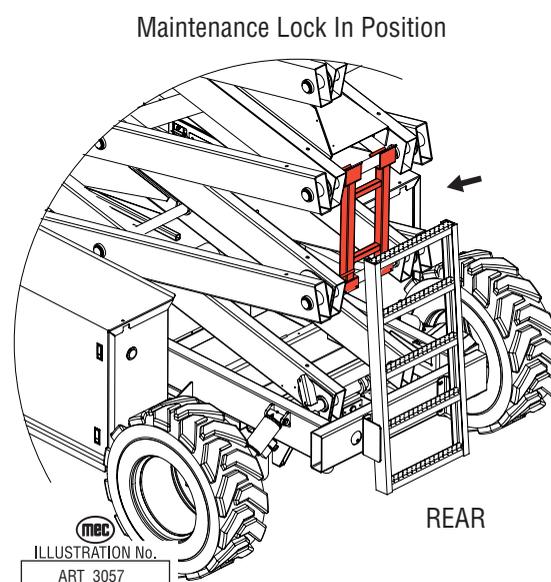
Maintenance performed monthly, quarterly, annually and bi-annually must be performed by a qualified service technicians trained and authorized to perform maintenance on this machine, and must be done in accordance with the procedures outlined in the service manual. Scheduled maintenance inspection checklists are included in this manual for use by qualified service technicians.

Machines that have been out of service for more than three months must receive the quarterly inspection before returning to service.

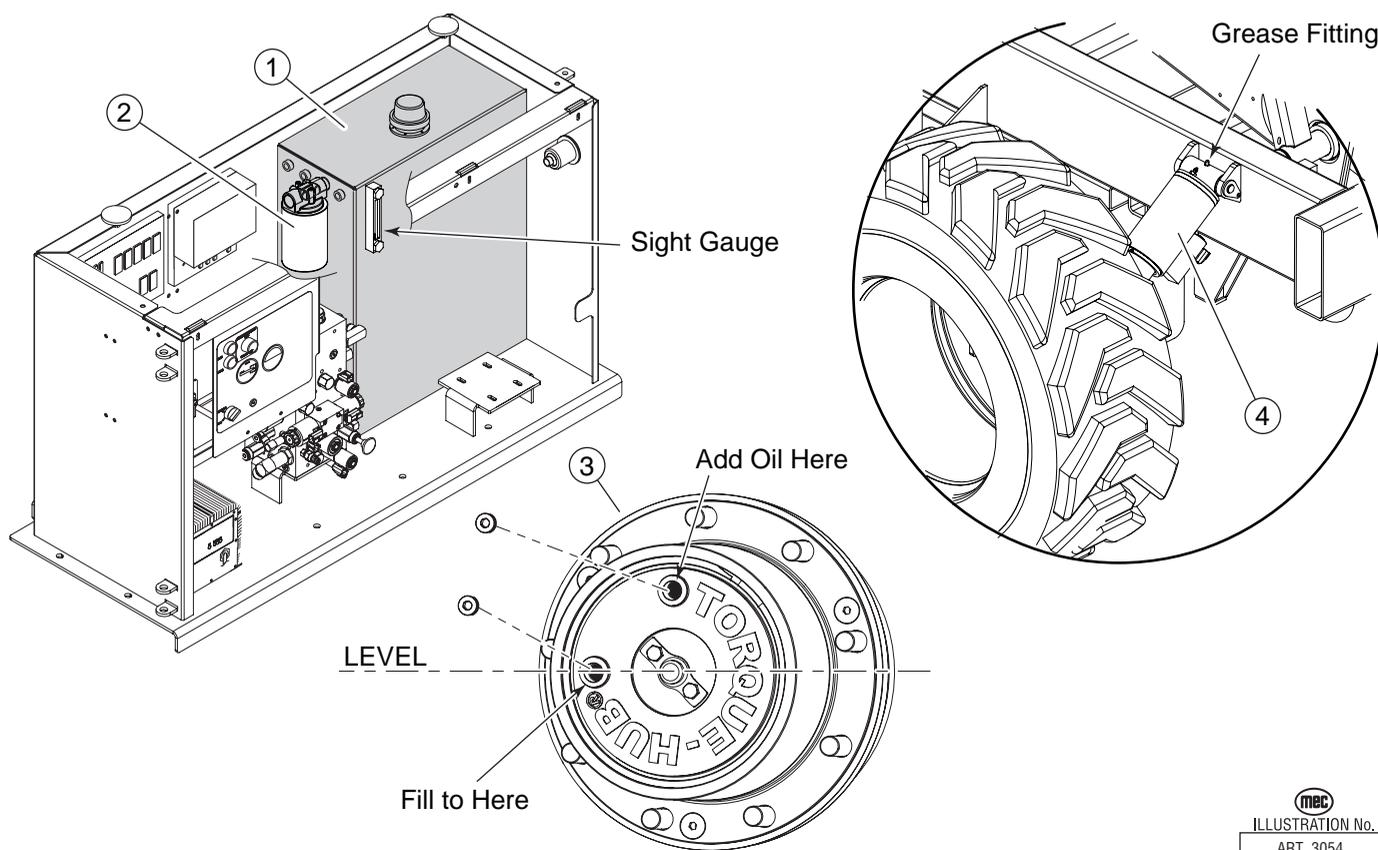
Maintenance Lock



Never perform service on the machine with the platform elevated without first blocking the scissor assembly using the maintenance lock.



Lubrication



Lubrication

No.	ITEM	SPECIFICATION	FREQUENCY
1	Hydraulic Reservoir	Mobile Fluid 424 Do not substitute with lower grade fluids as pump damage may result. Fill to the middle of the sight gauge with platform in the stowed position.	Routine Maintenance Check Daily Scheduled Maintenance Change yearly or every 1000 hours, whichever occurs first
2	Hydraulic Filter	Filter Element	Scheduled Maintenance Normal Conditions Change every six months or 500 hours, whichever occurs first Severe Conditions Change every three months or 300 hours, whichever occurs first
3	Hubs	SAE 90 Multipurpose Hypoid Gear Oil API Service Classification GL5	Scheduled Maintenance Check every three months or 250 hours, whichever occurs first Change yearly or every 1000 hours, whichever occurs first
4	Axle Float Cylinder	Lithium N.L.G. #2 EP Purge old grease.	Scheduled Maintenance Change monthly or every 25 hours, whichever comes first.

Battery Charger

The charger is an advanced, microprocessor controlled, high frequency switching type charger.

The charger will work even with batteries in a severe discharge state with battery terminal voltages as low as 4V. This reduces the need to “boost charge” weak batteries before charging.

The charger has a 22 hour timer in case charging can not be completed due to battery problems. The charger senses and flashes error codes for problems – refer to *SERVICE MANUAL*.

Battery charger LEDs can be viewed through a window in the door of the Control Module.

IMPORTANT— Unit will not operate when charger is plugged in. Be sure to disconnect the charger from the outlet before attempting to operate the unit.

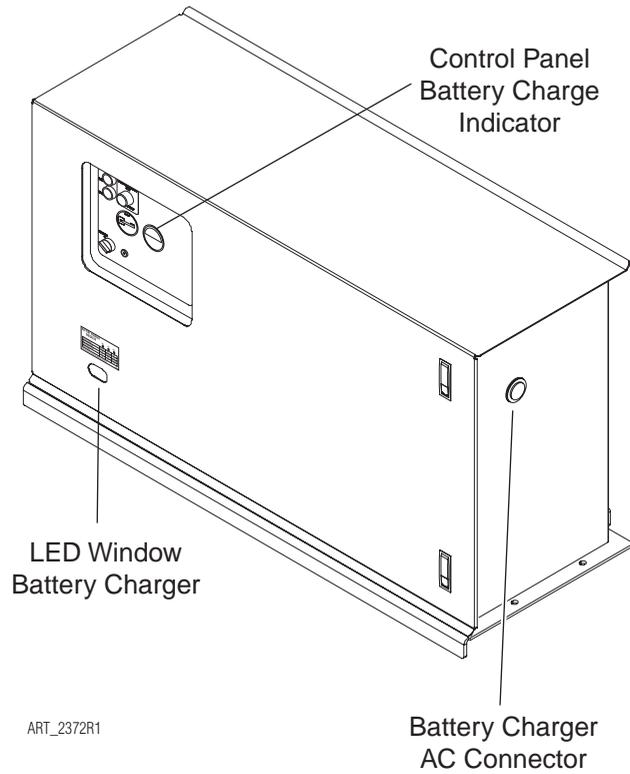


Lead-acid batteries generate explosive gases. Keep sparks and flame away from batteries.

No Smoking!

The charger surface can get hot while operating. Contact with the skin or surrounding materials should be avoided.

To reduce the risk of an electric shock, connect only to a properly grounded single-phase (3 wire) outlet.



HB1500-48

BATTERY CHARGER INDICATOR

	YELLOW	80%	100%	FAULT
No AC power to charger	OFF	OFF	OFF	OFF
Normal operation, charger is charging	ON	OFF	OFF	OFF
Normal, battery is over 80% charged	ON	ON	OFF	OFF
Normal, battery is 100% charged	OFF	OFF	ON	OFF

Please see service manual for additional information.

ILLUSTRATION No. ART_2374

Charge Batteries

- 1 Plug the charger into a single phase AC socket with a nominal voltage rating of 100V, 110V, 115V, 120V, 220V, 230V, or 240V and a frequency rating of 50 or 60Hz.
 - The charger automatically senses and adjusts to the AC voltage and frequency.
 - **At 110/120V the wall socket circuit breaker should be a 20A breaker with no other loads on the circuit.**
- 2 The charger will start automatically within a few seconds and begin charging the batteries.
- 3 The LED's indicate the charging progress.
 - The yellow LED will turn *ON* and remain *ON* throughout the charging cycle.
 - When the battery is 80% charged the green 80% LED will turn *ON*.
 - When the battery is fully charged the green 100% LED will turn *ON* and the green 80% LED will turn *OFF*.
 - When the battery is fully charged the yellow LED will turn *OFF* indicating that the charger is no longer charging.
 - Charging time is dependent on depth of battery discharge, battery condition, and temperature.
 - If the charger is left plugged in after charging is complete (100% LED *ON*) the charger goes into maintenance mode to keep batteries charged while in storage.
 - The charger continuously measures battery voltage and restarts the charging cycle if the battery voltage drops below about 50V. This keeps batteries charged while in storage but does not boil-out the electrolyte over time.
- 4 Red FAULT LED
 - **ON:** Battery pack probably bad, weak, or a bad cell.
 - **1 FLASH:** Open or short circuit. Remove from service until problem is identified and corrected.
 - **2 FLASH:** Charger timed out. Battery pack probably bad, weak, or a bad cell. Unplug for 30 seconds, then plug in to start a new charge cycle.

Note: New batteries sometimes need 20 to 30 charge/discharge cycles before they charge normally. The charger LEDs may only show yellow or 80% LED *ON* after overnight charging. Within a few weeks the 100% LED will turn *ON* at the end of the charge cycle.
- 5 Turn *OFF* charger by unplugging (disconnect from AC voltage).

Note: There may be up to a one (1) minute delay for the charger to turn off after AC power supply is disconnected.

Component Locations

Full Machine

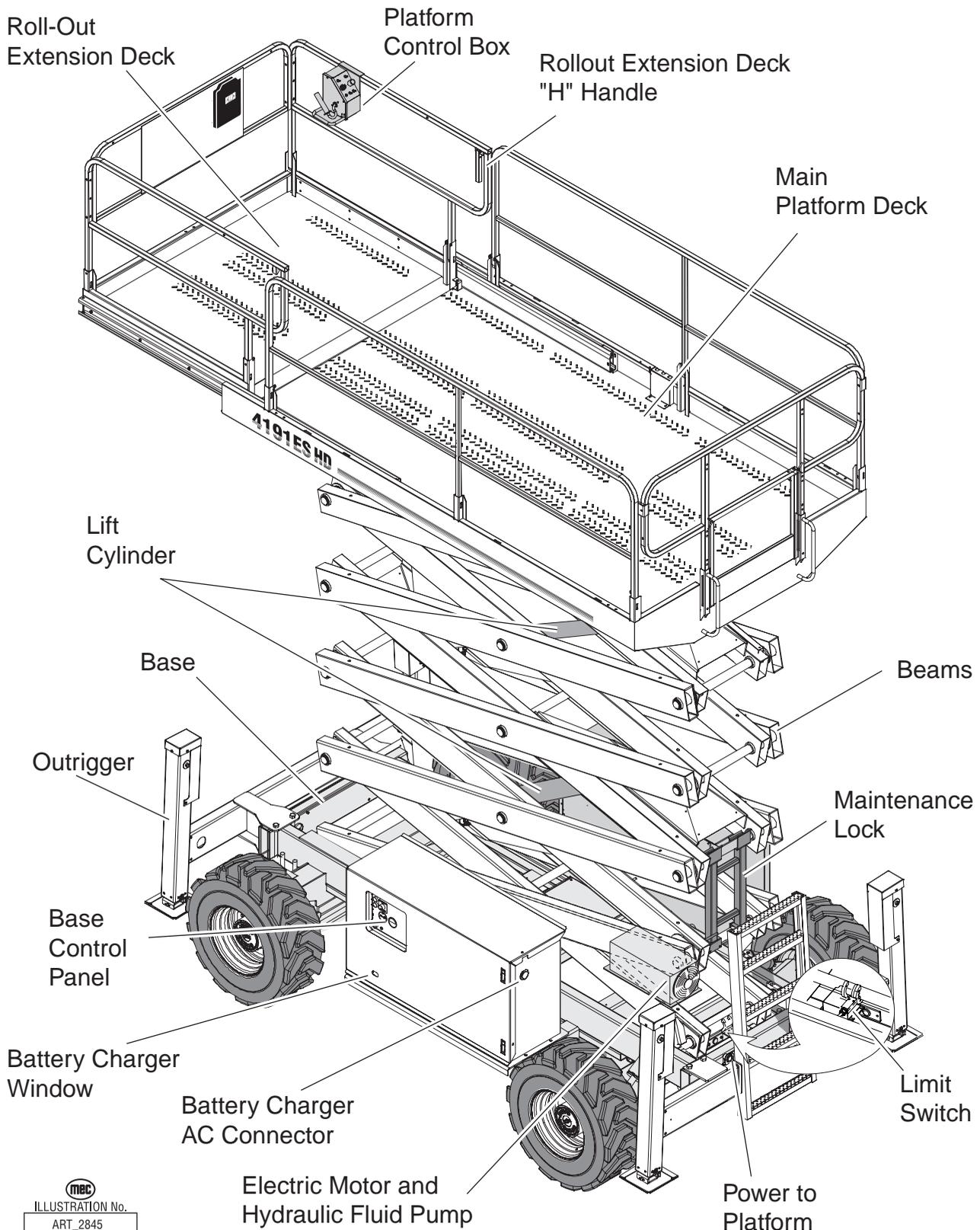
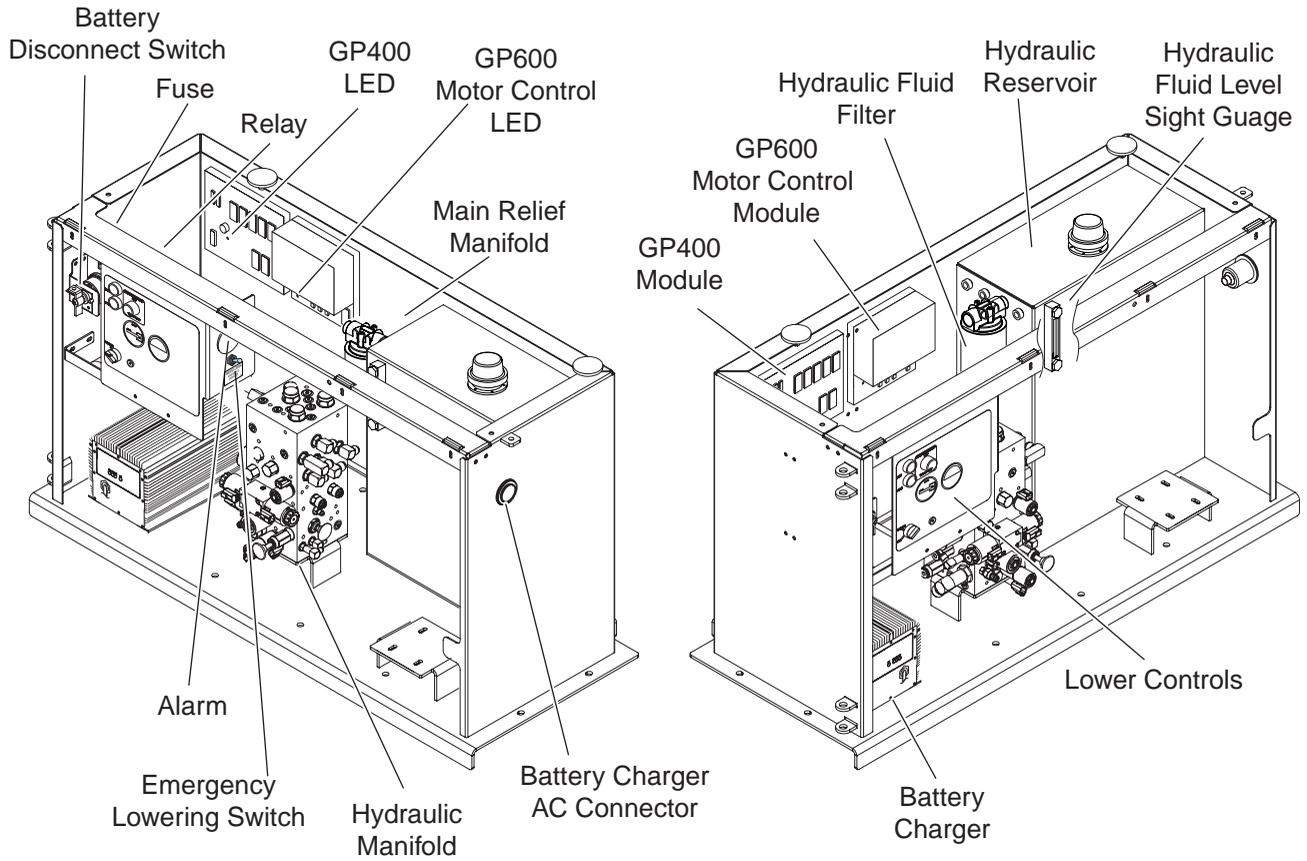



ILLUSTRATION No.
ART_2845

Modules

CONTROL MODULE



POWER MODULE

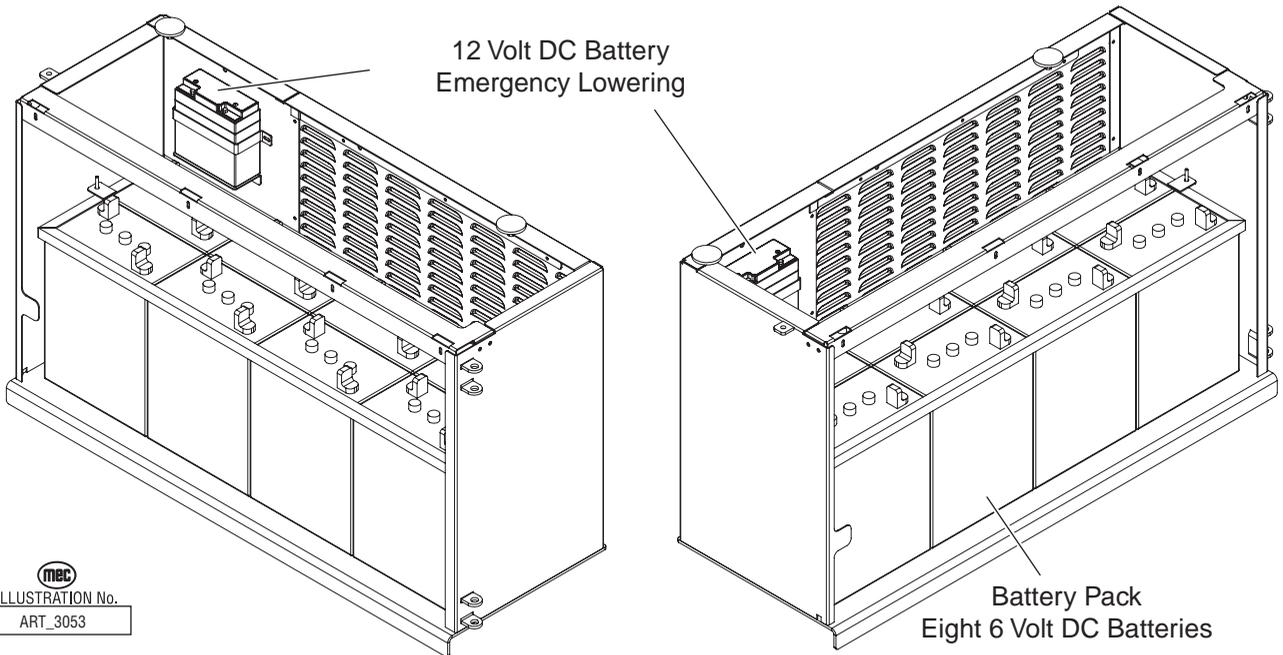
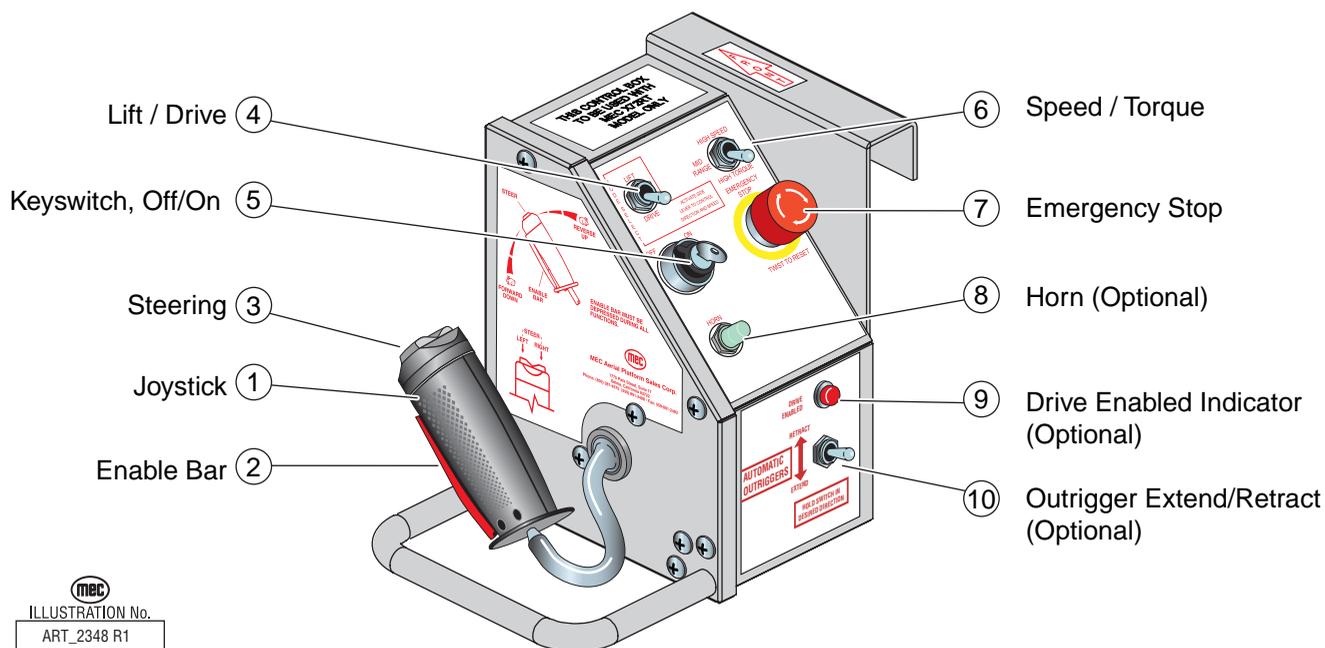



ILLUSTRATION No.
ART_3053

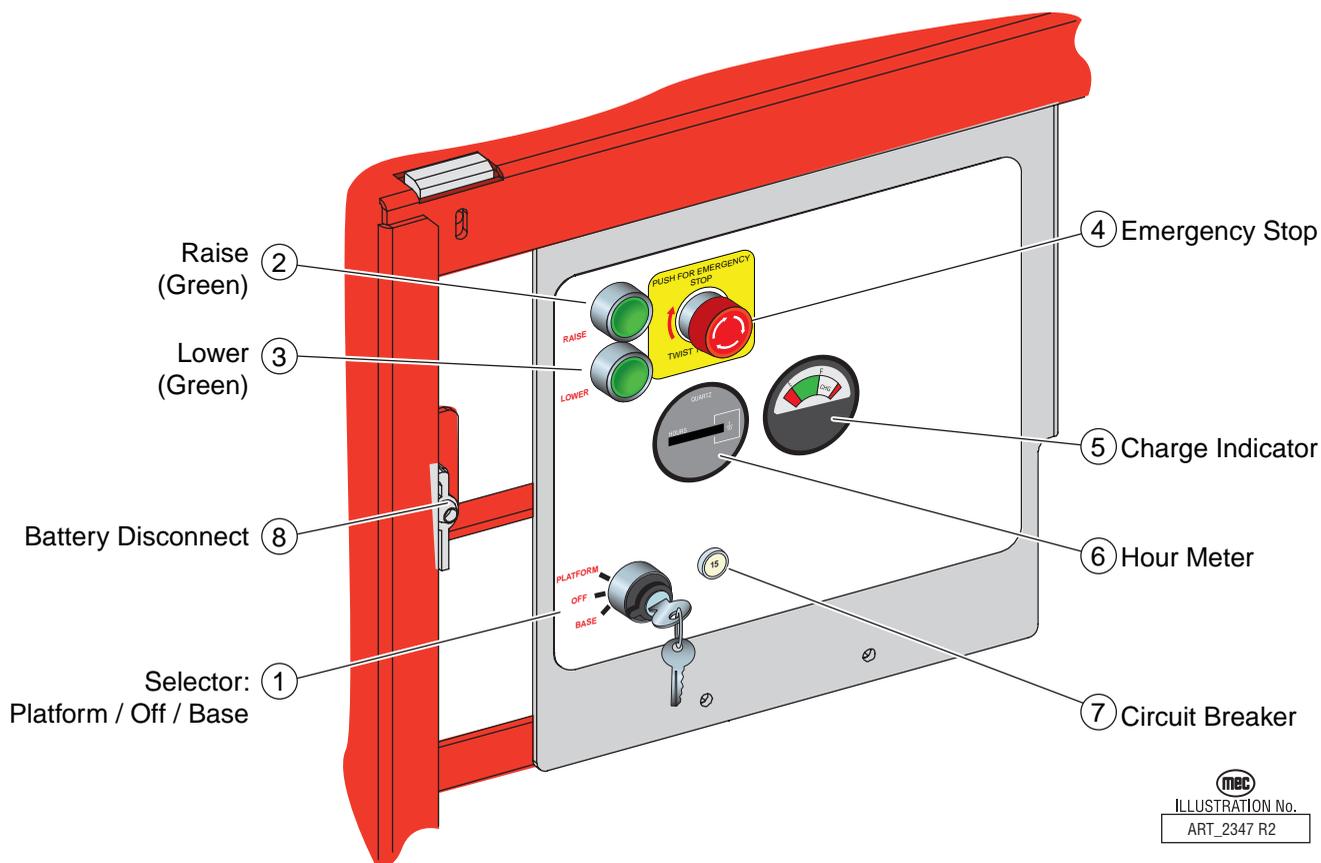
Upper Controls



MBC
ILLUSTRATION No.
ART_2348 R1

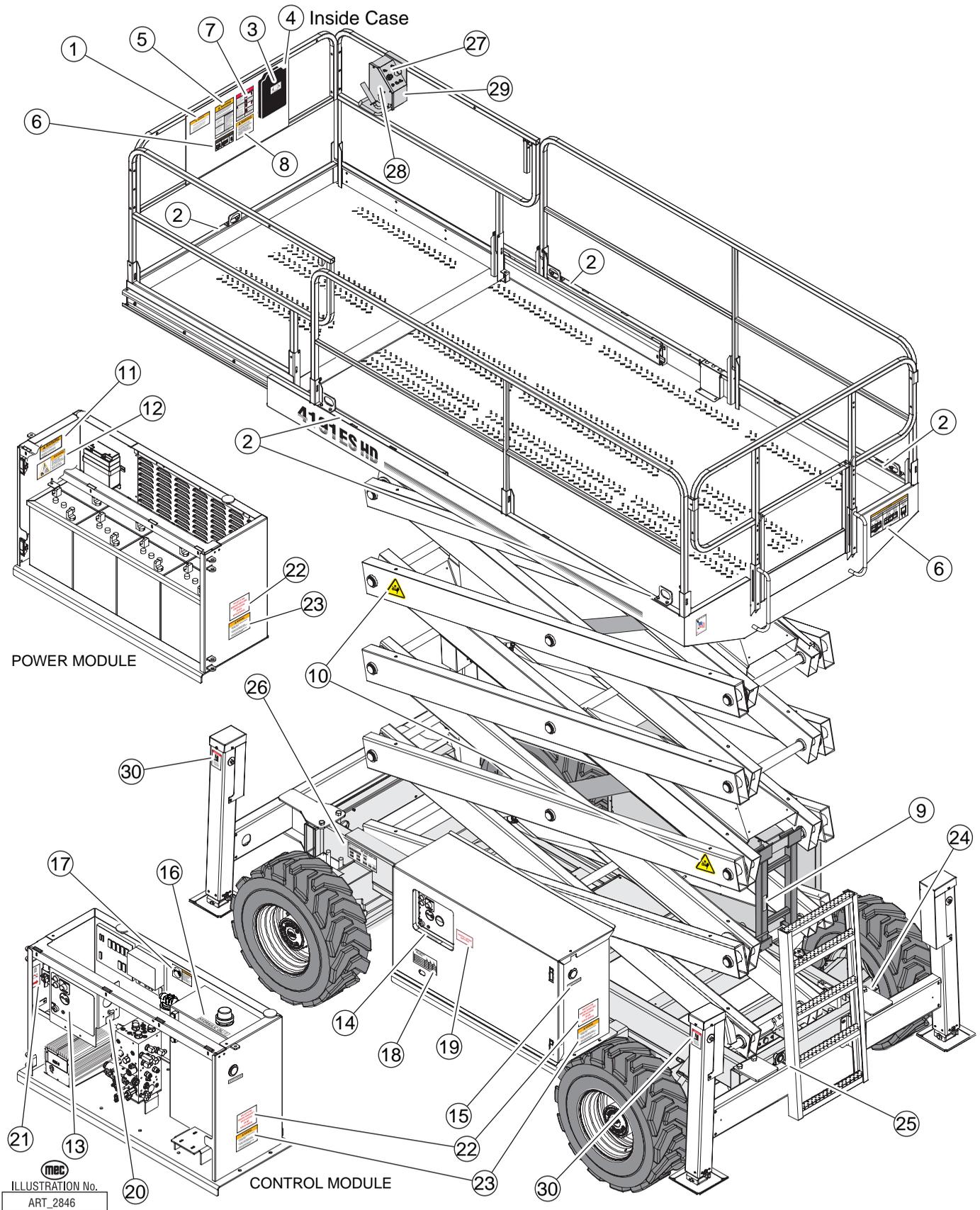
CONTROL		DESCRIPTION	
1	Joystick	DRIVE	Controls Forward and Reverse travel at stepped speeds.
		LIFT	Move toward operator to elevate platform. Lift speed increases proportional to the Joystick movement
			Move away from operator to lower platform. Speed is fixed.
2	Enable Bar	Squeeze to enable DRIVE, STEER, and LIFT from Joystick.	
3	Steering Switch	Using thumb, press and hold the rocker switch to steer Left or Right.	
4	Mode Selector	Select LIFT or DRIVE function for Joystick.	
5	Key Switch	Turn power ON or OFF at the platform. Does not affect lower controls.	
6	Speed / Torque Switch	HIGH TORQUE	Slow speed. Provides maximum torque for rough terrain.
		MID RANGE	Mid speed. Provides medium torque for smooth to moderate terrain.
		HIGH SPEED	Provides high speed when platform height is below 10 feet (3 m).
7	Emergency Stop Switch	PUSH to stop all machine functions. TURN CLOCKWISE to reset.	
8	Horn (option)	Press to sound warning horn.	
9	Indicator Lamp (outrigger option)	Lamp ON	Outriggers are UP and machine will drive.
		Lamp OFF	Outriggers are DOWN and machine will not drive.
10	Retract / Extend (outrigger option)	RETRACT	Push toggle switch UP to retract (raise) outriggers.
		EXTEND	Push toggle switch DOWN to extend (lower) outriggers.

Lower Controls



CONTROL		DESCRIPTION	
1	Selector Switch	PLATFORM	Select to operate from the platform control panel.
		BASE	Select to operate from the base control panel.
		OFF	Select to stop operation from either control panel.
2	RAISE Button	Press and hold to elevate the platform. Release to stop elevation.	
3	LOWER Button	Press and hold to lower the platform. Release to stop lowering.	
4	Emergency Stop Switch	Press to stop all machine functions. Turn <i>clockwise</i> to reset.	
5	Charge Indicator	Indicates state of battery charge.	
6	Hour Meter	Indicates total elapsed time of machine operation.	
7	Circuit Breaker	Trips when there is excessive electrical load. Push to reset.	
8	Battery Disconnect Switch	Battery power supply. Turn OFF and padlock to secure machine from unauthorized use.	

Warning and Instructional Decals

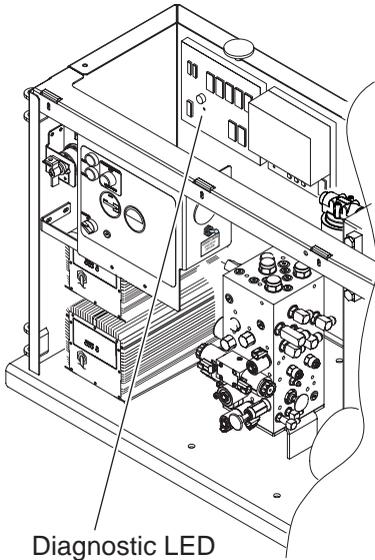


Troubleshooting



Should you experience erratic operation or notice any malfunction while operating this machine, discontinue use immediately. Call for assistance and report the incident to your supervisor, and do not use the machine until it has been checked by a trained, qualified mechanic.

Machine functions will not operate



ART_2391

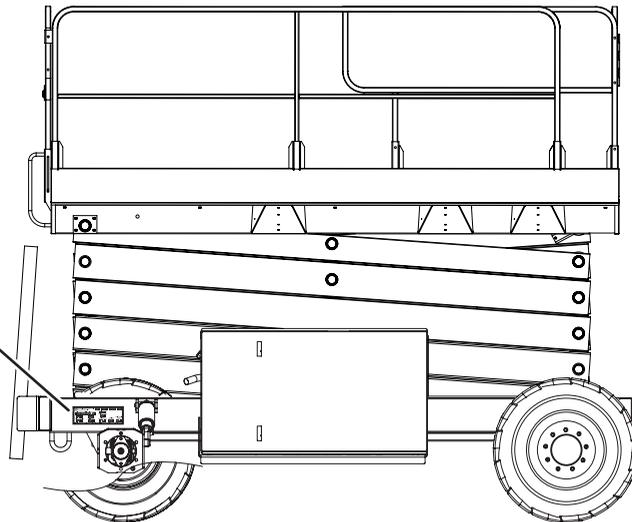
- Battery Disconnect Switch ON?
- Batteries fully charged?
- Function toggle switch or the Enable Switch not activated?
- Selector Key Switch in proper position?
- Both Emergency Stop Switches reset?
- Hydraulic fluid level low?
- Obvious fluid leak or damaged component?
- Wires disconnected, broken, or loose?
- Motor control processor Diagnostic LED OFF?
LED should be ON. If not N or FLASHING, refer to Service Manual or contact MEC Technical Support.

Serial Plate Location

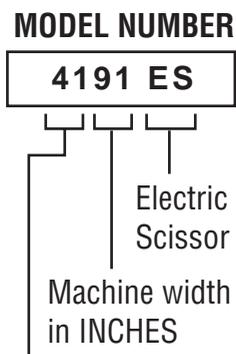
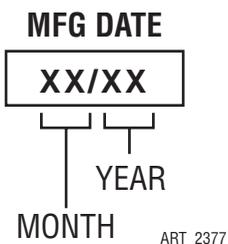
The serial plate is attached to the machine at the time of manufacture. Important information about the machine is recorded on the serial plate.

MEC AERIAL PLATFORM SALES CORP. SELMA, CA 95662, USA 1775 PARK STREET, SUITE 77		MFG. DATE XXXX	MODEL NUMBER XXXXXX	SERIAL NUMBER XXXXXXXXXX	MODEL YEAR 20XX
MAX. PLATFORM CAPACITY INCLUDING PERSONS XXX kg + X PERSONS + XXX kg EQUIPMENT		ELECTRICAL VOLTAGE XX VOLTS		MAX. MANUAL FORCE XXX LBS XXX N	
MAX. DRIVE HEIGHT XX FT XX m	MACHINE WEIGHT XXXX LBS XXXX kg	MAX. GROUND PRESSURE PER WHEEL XX PSI XX kg/cm ²	MAX. LOAD PER WHEEL XXX LBS XXX kg	MAX. HYDRAULIC SYSTEM PRESSURE XXXX PSI XXXX bar	
MAX. PLATFORM HEIGHT X X FT X X m	MAX. WIND SPEED X MPH X m/s	<small>THIS MACHINE HAS BEEN CONSTRUCTED IN ACCORDANCE WITH SECTION 4 OF ANSI A92.6-2006. GOVERNED BY US PAT. #5,479,000 & CANADIAN PAT. #2,117,587 ©2008</small>			

ART_3051



Serial Plate Description



Max. platform height
in FEET

ART_3052

MFG DATE. Month / Year of manufacture

MODEL NUMBER. Identifies the machine.

SERIAL NUMBER. Identifies a machine with reference to its original owner. Refer to the number when requesting information or ordering parts.

MAX. WIND SPEED. The maximum safe wind speed at which the machine can be elevated.

MAX. PLATFORM CAPACITY INCLUDING PERSONS. The maximum safe load (persons + equipment) which can be evenly distributed on the platform at any elevation

MAX. ALLOWABLE MANUAL FORCE. The maximum safe force that the occupant can exert laterally on an object outside the platform.

MAX. PLATFORM HEIGHT. The maximum attainable height measured from level ground surface to platform floor.

MAX. DRIVE HEIGHT. The maximum safe platform height at which the machine can be driven.

MAX. LOAD PER WHEEL. The maximum safe weight applied to each wheel. Calculated with all available options installed.

$$Fw = 30\% (Wm + Wc + Wopt)$$

MAX. GROUND PRESSURE PER WHEEL. The amount of pressure exerted on the surface at each wheel. Calculated with all available options installed.

$$Pmax = 30\% (Wm + Wc + Wopt) / \text{Contact Area}$$

STANDARD MACHINE WEIGHT. The weight of the machine with no options.

OPTIONAL EQUIPMENT ADDS TO STANDARD MACHINE WEIGHT. The weight of installed optional equipment.

Transport and Lifting Instructions.

Safety Information



This section is provided for reference and does not supersede any government or company policy regarding the loading, transport or lifting of MEC machinery.

Drivers are responsible for loading and securing machines, and should be properly trained and authorized to operate MEC machinery. Drivers are also responsible for selecting the correct and appropriate trailer according to government regulations and company policy. Drivers must ensure that the vehicle and chains are strong enough to hold the weight of the machine (see the serial number plate for machine weight).

Loading

Free-wheel configuration for Winching or Towing.



Prior to manually releasing brakes, be sure the wheels are chocked to prevent machine from moving.



RUNAWAY HAZARD!

After releasing the brakes there is nothing to stop machine travel. Machine will roll freely on slopes.

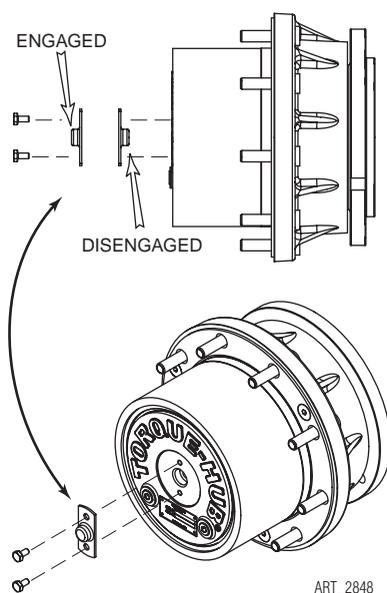
The machine can be winched or towed short distances at speeds not to exceed 5 MPH (8.05 kph). Before towing or winching the machine, it is necessary to release the brakes. Reset the brakes after towing or winching.

Disengage Brakes before Towing or Winching

- Chock the wheels.
- Remove the Torque Engage Cap and reinstall with the bump facing inward on all four (4) hubs.

Engage Brakes before Driving

- Remove the Torque Engage Cap and reinstall with the bump facing outward on all four (4) hubs.



Driving or Winching onto or off of a Transport Vehicle

WARNING

MEC does not recommend unassisted loading or unloading.
Always attach the machine to a winch when loading or unloading from a truck or trailer by driving.
Read and understand all safety, control, and operating information found on the machine and in this manual before operating the machine.

- Attach the machine to a winch.
- Remove all machine tie downs. Remove wheel chocks.

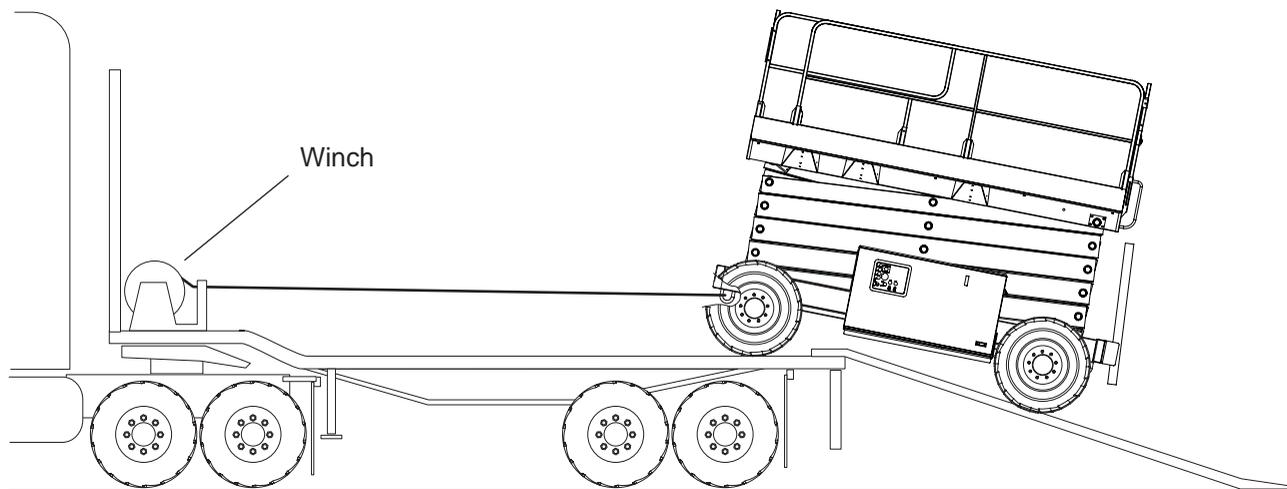
Driving

- Turn the Base Key Switch to PLATFORM. Check that the Emergency Stop Switch is reset by turning it clockwise.
- Enter the platform and reset the Platform Emergency Stop Switch.
- Test platform control functions.
- Carefully drive the machine off the transport vehicle with the winch attached.

Note: The brakes are automatically released for driving and will automatically apply when the machine stops.

Winching

- Disengage brakes (see *Disengage Brakes before Towing or Winching* on page 38).
- Carefully operate the winch to lower the machine down the ramp.
- Chock the wheels and engage the brakes.



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Lifting and Tie Down Instructions



WARNING

Only qualified riggers should rig and lift the machine.

Ensure that the crane capacity, loading surfaces and straps are sufficient to withstand the machine weight. See the serial plate for the machine weight.

- Fully lower the platform. Be sure the deck extension is retracted and the module doors are closed and secure. Remove all loose items from the machine.
- Determine the center of gravity of the machine.
- Attach rigging to the designated lift points *only*.
- Adjust the rigging to prevent damage to the machine and to keep the machine level.

Securing to Truck or Trailer for Transport

- Lock the deck extension in the retracted position.
- Turn the key Selector Key Switch to OFF and remove the key before transport.
- Turn the Battery Disconnect Switch to OFF before transport.
- Inspect the entire machine for loose or unsecured items.
- Use chains or straps of ample load capacity.
- Use a minimum of two (2) chains or straps.
- Adjust the rigging to prevent damage to the chains and the machine.

Center of Gravity and Lifting Points

Center of Gravity	X Axis	Y Axis
2591RT	50 in. / 127 cm	36 in. / 91 cm
3391RT	50 in. / 127 cm	38 in. / 97 cm
4191RT	50 in. / 127 cm	40 in. / 102 cm

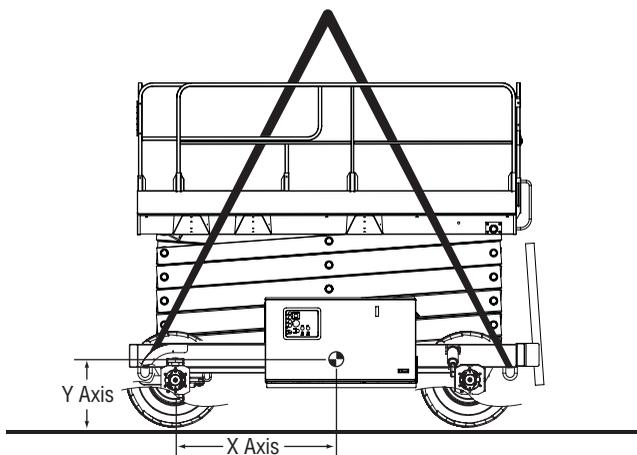
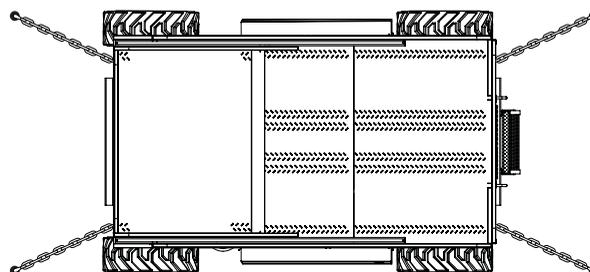
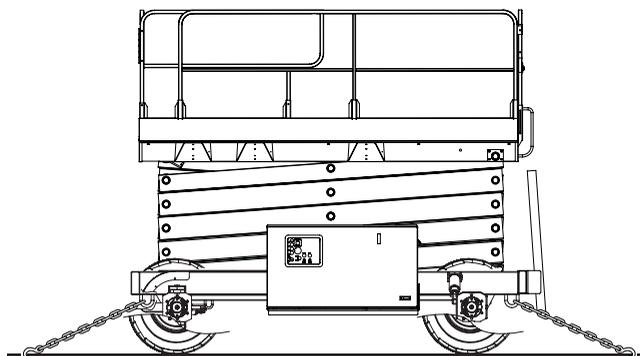


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Limited Owner Warranty

MEC Aerial Platform Sales Corp. warrants its equipment to the original purchaser against defects in material and/or workmanship under normal use and service for one (1) year from date of registered sale or date the unit left the factory if not registered. MEC Aerial Platform Sales Corp. further warrants the structural weldments of the main frame and scissor arms to be free from defects in material or workmanship for five (5) years from date of registered sale or date unit left the factory if not registered. Excluded from such warranty is the battery(s) which carries a ninety (90) day warranty from described purchase date. Warranty claims within such warranty period shall be limited to repair or replacement, MEC Aerial Platform Sales Corp's option, of the defective part in question and labor to perform the necessary repair or replacement based on MEC Aerial Platform Sales Corp's then current flat rate, provided the defective part in question is shipped prepaid to MEC Aerial Platform Sales Corp. and is found upon inspection by MEC Aerial Platform Sales Corp. to be defective in material and/or workmanship. MEC Aerial Platform Sales Corp. shall not be liable for any consequential, incidental or contingent damages whatsoever. Use of other than factory authorized parts; misuse, improper maintenance, or modification of the equipment voids this warranty. The foregoing warranty is exclusive and in lieu of all other warranties, express or implied. All such other warranties, including implied warranties of merchantability and of fitness for a particular purpose, are hereby excluded. No Dealer, Sales Representative, or other person purporting to act on behalf of MEC Aerial Platform Sales Corp. is authorized to alter the terms of this warranty, or in any manner assume on behalf of MEC Aerial Platform Sales Corp. any liability or obligation which exceeds MEC Aerial Platform Sales Corp's obligations under this warranty.



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