

3072ES | 3772ES Electric Scissorlift

Serial # 11201001 - Up

Part # 91670 R1 June 2008

OPERATOR'S MANUAL

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SPECIFICATIONS

	<u> </u>	2ES	377	2ES	<u>3772</u>	ES HD
Working Height*	36.0 ft*	11.14 m*	43 ft*	13.28 m*	43 ft*	13.28 m*
Platform Height	30.0 ft	9.14 m	37 ft	11.28 m	37 ft	11.28 m
Platform Entry Height	54 in	1.4 m	61 in	1.5 m	61 in	1.5 m
Stowed Height Rails Up	108.5 in	2.75 m	105.25 in	2.67 m	105.25 in	2.67 m
Rails Folded Down	78.5 in	1.99 m	74 in	1.85 m	74 in	1.85 m
Maximum Number of Occupants	3	3	3	3	3	3
Lift Capacity (Evenly Distributed)	1,000 lb	454 kg	750 lb	340 kg	1,000 lb	454 kg
Roll-out Deck Capacity	400 lb	181 kg	400 lb	181 kg	400 lb	181 kg
Platform Dimensions						
With Deck Extended (inside rails)	153.5 in	3.90 m	158 in	4.01 m	158 in	4.01 m
With Deck Retracted (inside rails)	107 in	2.72 m	110 in	2.79 m	110 in	2.79 m
Platform Width (inside rails)	56 in	1.44 m	60 in	1.52 m	60 in	1.52 m
Guardrail Height	44.7 in	1.14 m	43.5 in	1.10 m	43.5 in	1.10 m
Toeboard Height	6.0 in	15.0 cm	6.0 in	15.0 cm	6.0 in	15.0 cm
Extension Deck Length	46.5 in	1.18 m	48 in	1.22 m	48 in	1.22 m
Overall Length	117.25 in	2.98 m	117.25 in	2.98 m	140 in	3.56 m
Overall Width	72 in	1.83 m	72 in	1.83 m	73.25 in	1.86 m
Wheel Base	86.0 in	2.18 m	86.0 in	2.18 m	86.0 in	2.18 m
Wheel Track	60.5 in	1.54 m	60.5 in	1.54 m	60.5 in	1.54 m
Turning Radius Inside	73.25 in	1.86 m	73.25 in	1.86 m	73.25 in	1.86 m
Outside	170.5 in	4.33 m	170.5 in	4.33 m	170.5 in	4.33 m
Ground Clearance	9.5 in	24 cm	9.5 in	24 cm	9.5 in	24 cm
Machine Weight** (Unloaded) (Approx.)	7062 lb**	3203 kg**	7995 lb**	3626 kg**	8585 lb**	3894 kg**
Drive System (Proportional)	2 Wheel Drive Standard, 4 Wheel Drive Option					
Drive Speed (Platform Elevated)	0 – 0.4 mph	0 –0.6 km/h	0 – 0.4 mph	0 –0.6 km/h	0 – 0.4 mph	0 –0.6 km/h
Drive Speed (Platform Lowered)	0 – 3.0 mph	0 – 4.8 km/hr	0 – 3.0 mph	0 – 4.8 km/hr	0 – 3.0 mph	0 – 4.8 km/hr
Lift/Lower Speed (Approx.)	36 sec / 28 sec	36 sec / 28 sec	40 sec / 28 sec	40 sec / 28 sec	40 sec / 28 sec	40 sec / 28 sec
Gradeability	45% / 24.2°	45% / 24.2°	40% / 21.5°	40% / 21.5°	40% / 21.5°	40% / 21.5°
Ground Pressure/Wheel (Maximum)	-	-	100 psi	7.0 kg/cm ²	-	-
Wheel Load	_	_	2,987 lb	1355 kg	-	-
Tire Size-Standard			26.0-12D	/ 380 NHS		
Tire Pressure, 12 Ply Pneumatic			60 psi	4.14 bar		
Non-marking 12 Ply (Option)			Foam-Filled	Foam-Filled		
Wheel Lug Nut Torque			75-85 ft/lb	102-115 Nm		
Hydraulic Pressure Main System			3000 psi	207 bar		
Lift System			2500 psi	172 bar		
Steer			2000 psi	138 bar		
Hydraulic Fluid Capacity			23 GAL	87 liters		
Power System – Voltage			48 Vo	Its DC		
Batteries		Eight 6	Volt DC 350 amp	hour industrial, dee	ep cycle	
Single Battery Charger Input		120 Volt AC,	50.60 Hz, 18 Amp	-240 Volt AC, 50.	60 Hz, 9 Amp	
Output				1500 W, Timed Shu	-	
Dual Battery Chargers Input		120 Volt AC,	50.60 Hz, 18 Amp	-240 Volt AC, 50.	60 Hz, 9 Amp	
Output			-	700 W, Timed Shut	-	
Electric Motor				/): 3600 rpm		
	Multi-disc / Dual Rear Wheel					

**Weight may increase with certain options or country standards.



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 Self-Propelled Scissors 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 self-propelled scissors. 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 scissor lift 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 Scissor Lift 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.

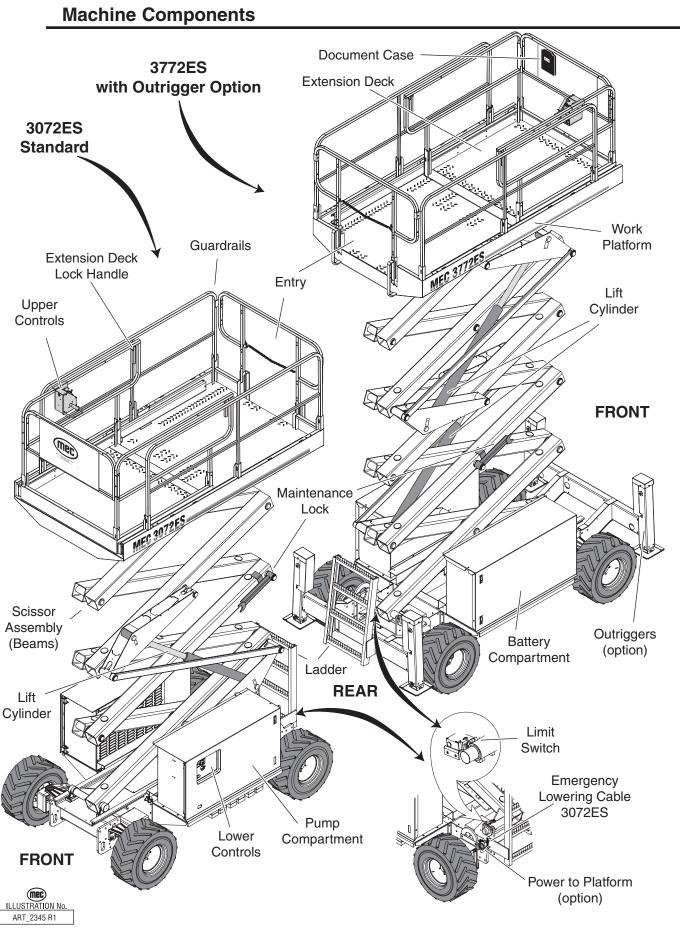
If there is a question on application and/or operation contact:



MEC Aerial Platform Sales Corp.

1775 Park Street, Suite 77 • Selma, CA 93662 USA Ph: 1-800-387-4575 • 559-891-2488 • Fax: 559-891-2448 www.mecawp.com

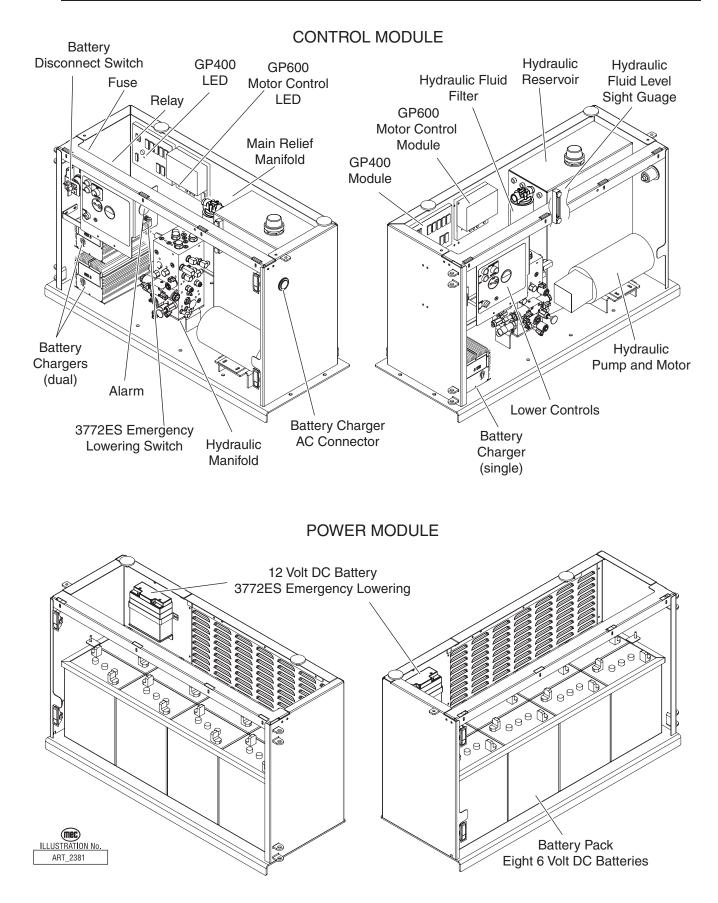




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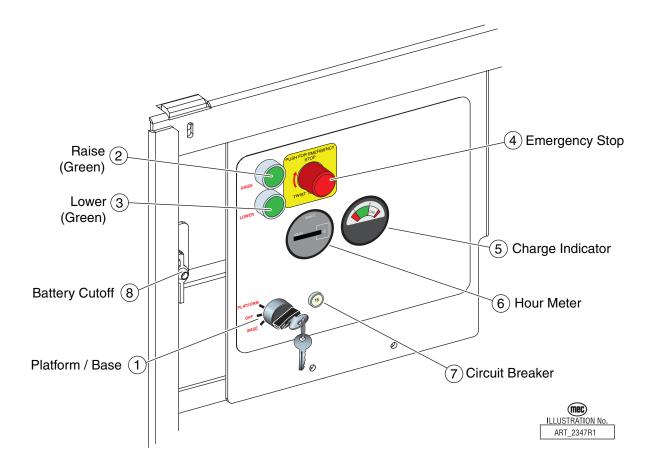


Machine Components





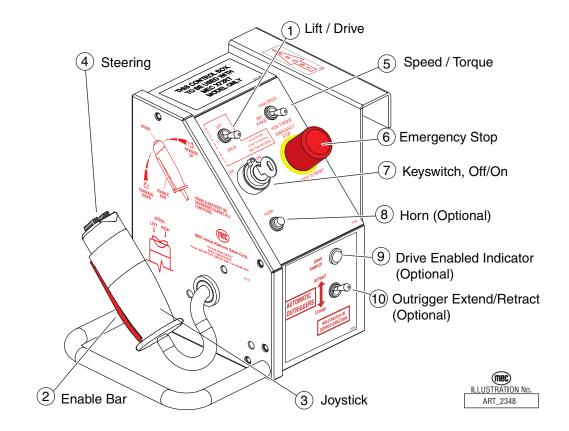
Machine Controls



CONTROL	DESCRIPTION
1 Base/Platform Selector Switch	Select BASE position to control operation of machine using the base controls. Select PLATFORM position to control operation of machine using the platform control box.
2 Raise Switch	Use to control the lift of the platform from the base panel, when BASE position is selected.
3 Lower Switch	Use to control lowering of the platform from the base controls when BASE position is selected.
4 Emergency Stop Button	Use to stop all functions in an emergency. Push for emergency stop. To reset turn clockwise.
5 Charge Indicator	Indicates state of battery charge.
6 Hour Meter	Indicates total elapsed time the engine has been operated.
7 Circuit-Breaker	Pops out when there is excessive electrical load in the 12 Volt control circuit. Push in to reset (see Service and Parts Manual).
8 Battery Disconnect	Disconnects battery power supply. Turn <i>OFF</i> and padlock to secure machine from unauthorized use.



Machine Controls



С	ONTROL	DESCRIPTION
1	Mode Selector	Desired selection will allow either the lift or drive function using controller handle.
2	Enable Bar	Must be depressed to activate drive, steer, and lift functions.
3	Joystick	DRIVE: Controls forward and reverse machine travel at stepped speeds. LIFT: With enable switch depressed, moving controller handle towards the operator will provide proportional platform lift. Moving the handle away from the operator will provide platform lowering at a fixed speed.
4	Steering	Push Steer Rocker Switch (thumb) to the left and hold to turn steer wheels to the left, right to turn steer wheels to the right.
5	Speed/Torque Switch	HIGH TORQUE selection will provide extra driving torque and reduce speed. MID RANGE selection will provide medium driving torque and speed. HIGH SPEED selection will provide high machine speed when platform is under approximately 10 Ft. (3 m).
6	Horn (Option)	Press button to sound warning horn.
7	Keyswitch	Turn power ON or OFF at the platform. Does not affect lower controls.
8	Emergency Stop	Push to stop all functions in emergency. Reset by turning Button clockwise.
9	Indicator Lamp (option)	Lamp <i>ON</i> indicates outriggers are UP and machine will drive. Lamp <i>OFF</i> indicates outriggers are DOWN and machine will not drive.
10	RETRACT/EXTEND Switch (option)	Push toggle switch UP to RETRACT (raise) the outriggers. Push toggle switch DOWN to EXTEND (lower) the outriggers.



SAFETY

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.

You, the operator, are the single most important factor for safety when using any piece of equipment. Learn to operate your machine in a safe manner.

To help you recognize important safety information, we have identified warnings and instructions that directly impact on safety with the following signals:

DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.
! WARNING !!!	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
CAUTION	Indicates a situation which, if not avoided, may result in damage to the equipment.

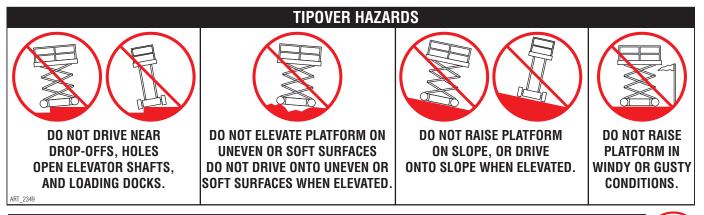
Safety Rules And Precautions

MEC designs self-propelled scissor lifts 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 A92.6 and other applicable standards identify requirements of all parties who may be involved with self-propelled elevating work platforms. The A92.6 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 insure safe use of machine, inspections specified in Section 6.7 of ANSI A92.6-2006 must be performed at designated intervals as prescribed by ANSI A92.6-2006.







- Only authorized, trained and qualified personnel should operate the machine.
- NEVER fasten a fall protection lanyard to an adjacent structure while on the platform.
- Make sure that the platform entry is properly closed and secure before operating the machine from the platform.
- NEVER exceed platform rated capacity. Review the Specifications table (see page 2) regarding model capacities and dimensions.
- Before operating the machine, read and understand all safety and control information found on the machine and in this manual.
- When operating the machine follow all safety and control information found on the machine and in this manual.
- Evenly distribute loads placed on the platform.
- NEVER use scaffolding, ladders or similar items to extend your reach while on the platform.
- NEVER climb down the beam assembly while the platform is elevated.
- Towing or winching the machine requires that the brake be released. When the brake is released, there is no means to stop the machine's travel. MEC recommends using this procedure only in cases of emergency, and only for a short distance. Be on guard against machine runaway on sloping surfaces. Movement speed shall not exceed 5 MPH (8.0 kph).
- NEVER attempt to open any hydraulic line or component without first relieving all system pressure.
- NEVER alter, modify, or disable any safety devices or interlocks.
- NEVER recharge the battery near sparks or open flames. Lead-acid batteries generate EXPLOSIVE HYDROGEN GAS. Always wear safety glasses.
- NEVER use the machine outdoors during electrical storms or in high wind situations.
- Only elevate the platform when the machine is on a firm, level surface.
- SECURE all tools and other loose items to prevent injury to persons working on or below the platform.
- Precautions should be taken to prevent unauthorized personnel from operating the platform with the ground controls while the platform is in use.

! WARNING !!!

- Unassisted loading or unloading of scissorlift from a truck or trailer is not recommended.
- Before disengaging brakes or disconnecting from a tow vehicle, ensure that the machine cannot roll.
- Complete the inspections at designated intervals.

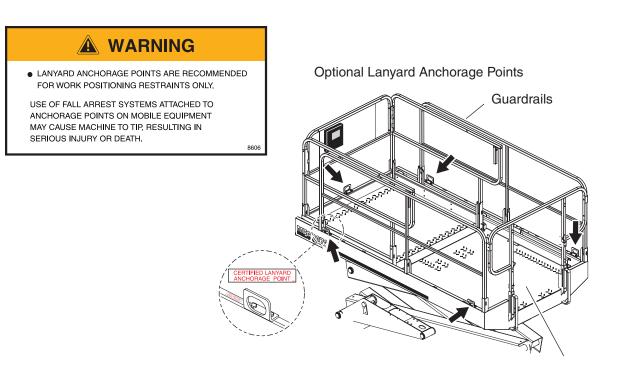
- Use of the machine as a crane to lift oversized or hanging loads is prohibited.
- Always ensure that the route and areas are clear before driving, lifting or lowering.
- It is recommended to avoid sudden braking or steering. Go slowly and leave more maneuvering room during cold weather operation.



Fall Protection Notice

The Guardrail System around the perimeter of the platform is the fall protection system for self-propelled elevating work platforms. It is prohibited to use an Aerial Work Platform manufactured by MEC with any portion, or all, of the guardrails removed.

Lanyard anchorage points on this type of equipment are optional and not required to conform to the applicable ANSI/SIA Standard.

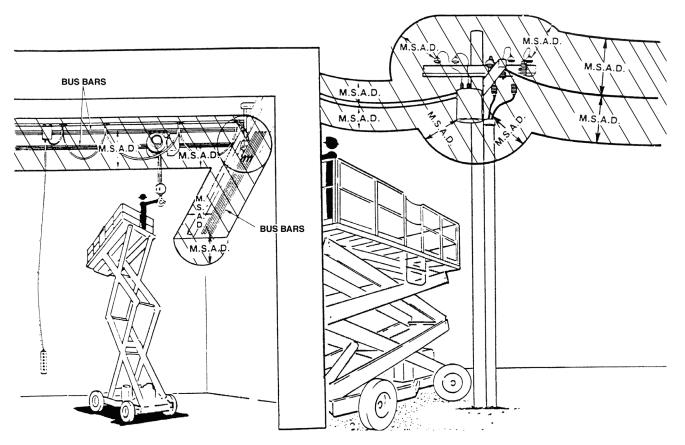


ART_2350

Entry to be secured by Safety Chain or Optional Gate

- ♦ ELECTROCUTION HAZARD!!! THIS MACHINE IS NOT INSULATED!!
- Maintain safe clearance from electrically charged conductors (power lines) and apparatus. You must allow for machine sway (side to side movement) when elevated and electrical line movement. This machine does not provide protection from contact with, or proximity to, an 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.
- DEATH OR SERIOUS INJURY will result from contact with or inadequate clearance from any electrically charged conductor.
- Observe Minimum Safe Approach Distance as illustrated on next page.





M.S.A.D. = MINIMUM SAFE APPROACH DISTANCE

DENOTES <u>PROHIBITED ZONE</u>

- **DANGER:** DO NOT ALLOW MACHINE, PERSONNEL OR CONDUCTIVE MATERIALS INSIDE PROHIBITED ZONE.
 - MAINTAIN M.S.A.D. FROM ALL ENERGIZED LINES AND PARTS AS WELL AS THOSE SHOWN.
 - ASSUME ALL ELECTRICAL PARTS AND WIRES ARE ENERGIZED UNLESS KNOWN OTHERWISE.
- **CAUTION:** DIAGRAMS SHOWN ARE ONLY FOR PURPOSES OF ILLUSTRATING M.S.A.D. WORK POSITIONS, NOT ALL WORK POSITIONS.

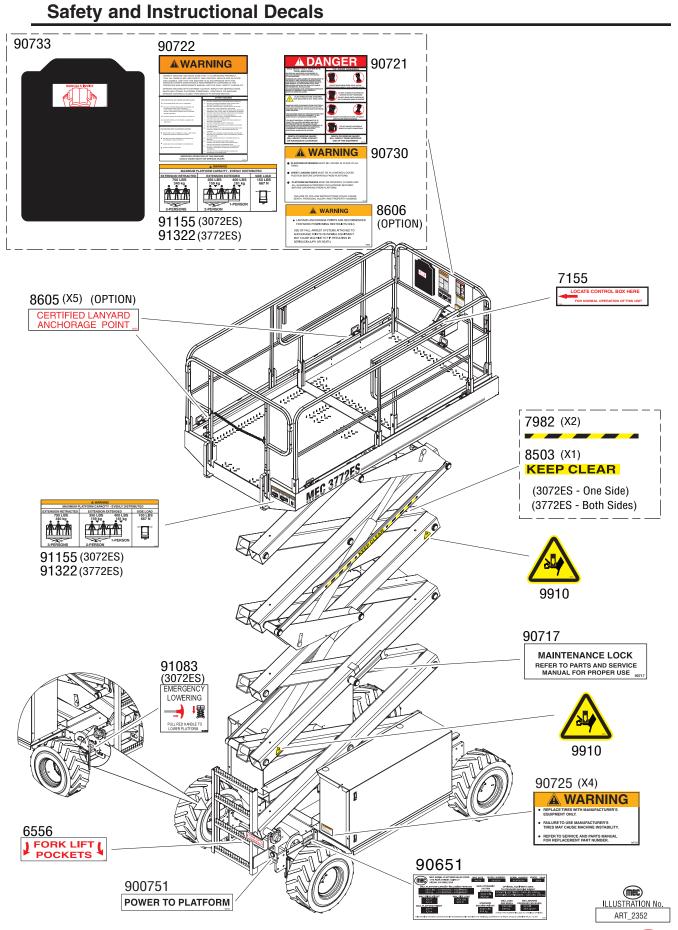
MINIMUM SAFE APPROACH DISTANCE (M.S.A.D.)

to energized (exposed or insulated) power lines and parts.

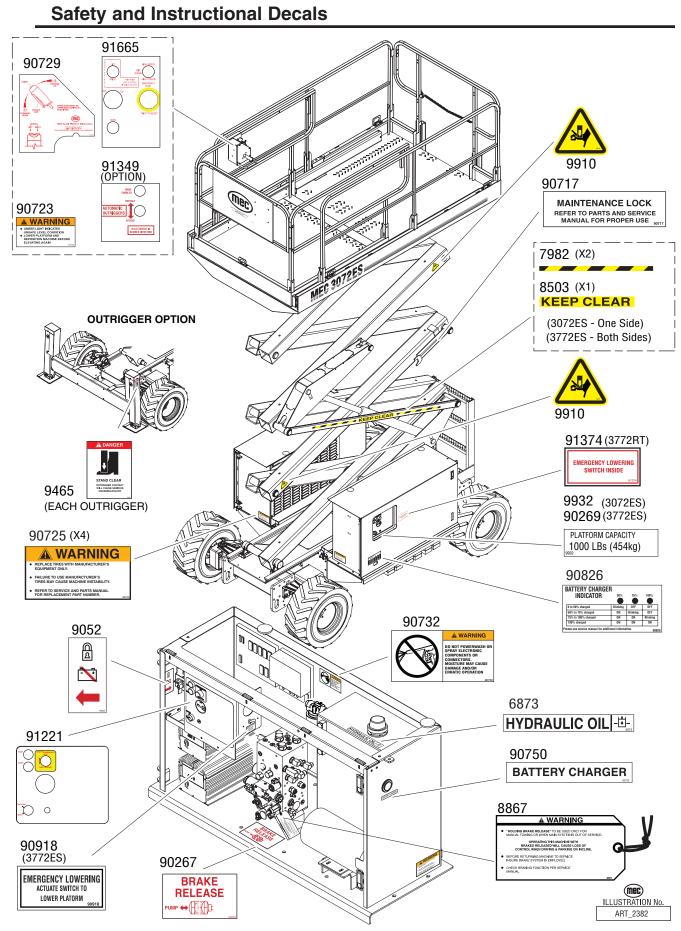
VOLTAGE RANGE (Phase to Phase)	MINIMUM SAFE APPROACH DISTANCE (Feet) (Meters)
0 to 300V	AVOID CONTACT
Over 300V to 50KV	10 3.05
Over 50KV to 200KV	15 4.60
Over 200KV to 350KV	20 6.10
Over 350KV to 500KV	25 7.62
Over 500KV to 750KV	35 10.67
Over 750KV to 1000KV	45 13.72













OPERATION



Do not operate the machine if tests reveal a defect.

Before use each day or at the beginning of each shift, a visual inspection and functional test shall be performed. Repairs must be made prior to operating the machine to ensure safe operation.

Prestart

- Perform *Prestart Inspection* (see page 30).
- Ensure that EMERGENCY STOP switch on the base control panel is reset. Reset the switch by turning it clockwise.



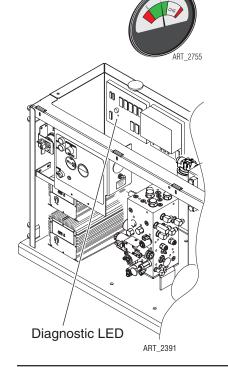
Lower Controls



ART 2356



- Ensure that EMERGENCY STOP switch on the platform controls is reset. Reset the switch by turning it clockwise.
- Ensure that the battery disconnect switch is in the ON position. Located in control module, to the left of control panel.
- Ensure that the batteries are fully charged. Check the charge indicator located on the lower control panel.



NOTE: If the machine fails to operate, inspect the processor and motor controller inside the pump compartment. The LED located on the processor should be ON or FLASHING. If not, refer to the Service Manual or contact MEC Technical Support.



Base Control Operation And Checks

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

• Turn the selector switch to BASE.



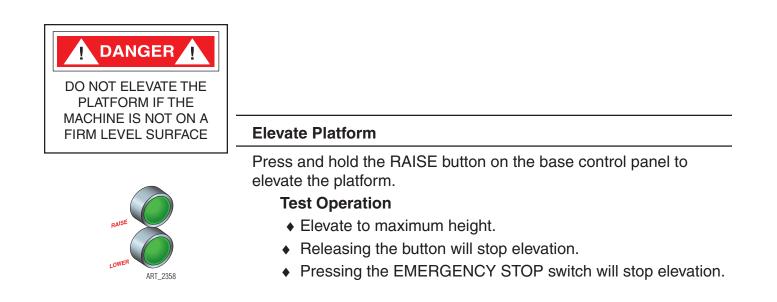


ART 2354

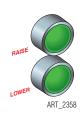
Emergency Stop

Press the EMERGENCY STOP switch at any time to stop all functions.

• Reset the switch by turning it clockwise.



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 Checks

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.

- 1. Select PLATFORM on the selector switch at base control station.
- 2. Enter platform and close and secure the entry.
- 3. Turn the keyswitch to the *ON* position.
- 4. Press the horn button to verify proper operation (optional).

Emergency Stop

Press the EMERGENCY STOP switch at any time to stop all functions.

• Reset the switch by turning it clockwise.







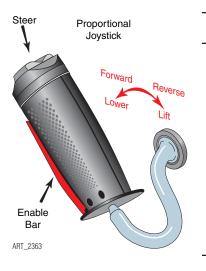
Upper Controls

ART_2355

! WARNING !!! Activation of the platform 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.





ART_2386



Do Not elevate platform unless guardrails are installed and secure.

Joystick Operation

Function speed is proportional and is controlled by the movement of the joystick. The further it is moved the faster the speed will be. The joystick returns to the neutral (center) position when released.

Elevate Platform

- 1. Place the MODE SELECT switch in the LIFT position.
- 2. 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.





If the roll-out deck is extended check for clearance under deck area before lowering platform.



If platform should fail to lower do not attempt to climb down the scissor assembly. Serious injury may result.



Lower Platform

- 1. Place the MODE SELECT switch in the LIFT position.
- 2. 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.









! WARNING !!!

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

IMPORTANT: 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 Speed

Steer

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).

- 1. HIGH SPEED: allows speeds up to 3 m.p.h. (4.8 km/h).
- 2. MID RANGE: allows speeds up to 0.4 m.p.h. (0.6 km/h).
- 3. HIGH TORQUE: use to drive up or down a slope that is too steep for normal speed.

Drive Forward

- 1. Place the MODE SELECT switch in the DRIVE position.
- 2. 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

- 1. Place the MODE SELECT switch in the DRIVE position.
- 2. 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

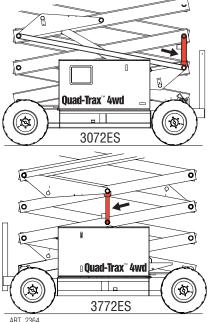
For parking, the brake is automatically applied when the joystick is positioned in the neutral (center) position.





Set Maintenance Lock

Maintenance Lock In Position



Set the maintenance lock before inspecting any items inside or around scissor beams, or beneath the platform.

- Elevate the platform about halfway.
- Rotate the maintenance lock into position.
- Lower platform until the scissor assembly is supported by the maintenance lock.

Inspect Machine

Walk around the machine and inspect for;

- frayed cables or wires.
- hydraulic oil leaks.
- missing or loose bolts.
- proper tire pressure.
- missing or loose wheel lug nuts.
- weld or structural cracks.
- defects or missing parts.

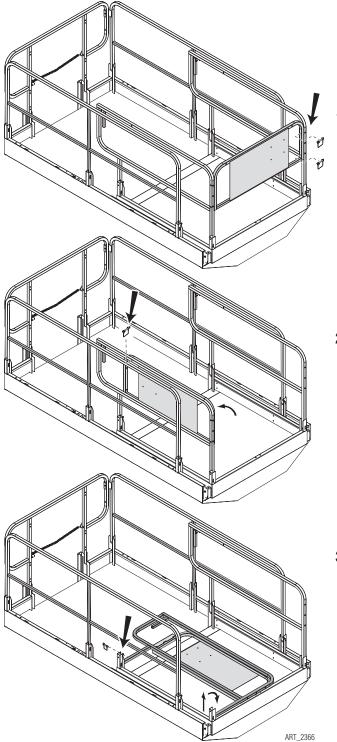
Extending the Roll-out Extension Deck

The deck will extend in intervals of 8 inches (20 cm) throughout the entire length of the roll-out extension deck. There are two (2) handles that hang from the top rail at the end of the extension deck. Both handles are used to push or pull the extension deck 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.



Lowering The Platform Railings

Place the platform control box on the platform floor and proceed as follows.

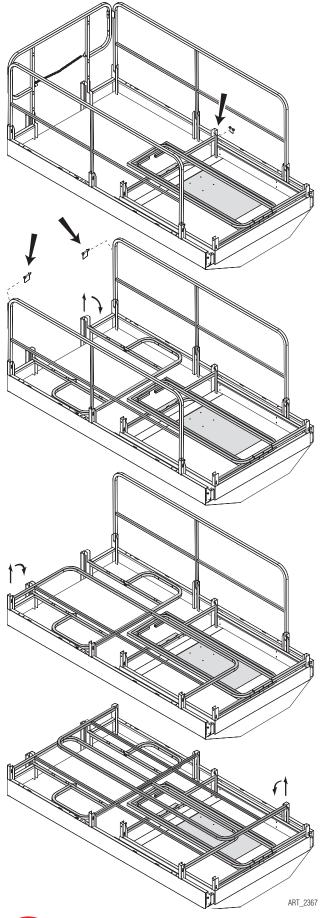


1. Remove the safety snap pins holding the front extension rail to the corner post.

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

3. Remove the safety snap pin from the rear right side extension rail corner post. Lift the rail, pivot, and place on the platform floor.





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

7. 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.



Emergency Systems And Procedures

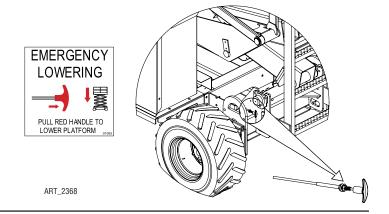
Emergency Lowering - 3072ES



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 Down 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.



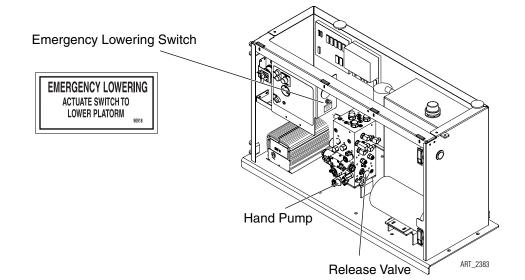


Before lowering platform, retract the deck extension.

Emergency Lowering - 3772ES

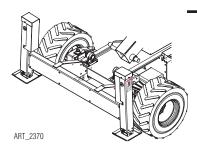
The Emergency Down System is used to lower the platform in case of power or valve failure. To lower the platform, perform the following steps:

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











Optional Outriggers

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).

Extend

Push down and hold the EXTEND/RETRACT toggle switch.

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

Retract

Push up and hold the EXTEND/RETRACT toggle switch.

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

Shutdown Procedure

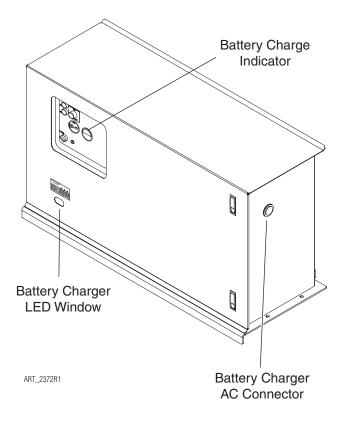
- When finished with the machine, place the platform in the stowed position.
- Park the machine on a level surface.
- Turn the keyswitch to the *OFF* position and remove the key to prevent unauthorized use.
- Carefully exit the platform using a constant three (3) point dismount/grip.
- Turn the battery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





Single Battery Charger

Use pages 24 and 25 if your machine is equipped with a single 1500 W - 48 V charger. If equipped with dual 750 W - 24 V battery chargers go to pages 26 and 27.

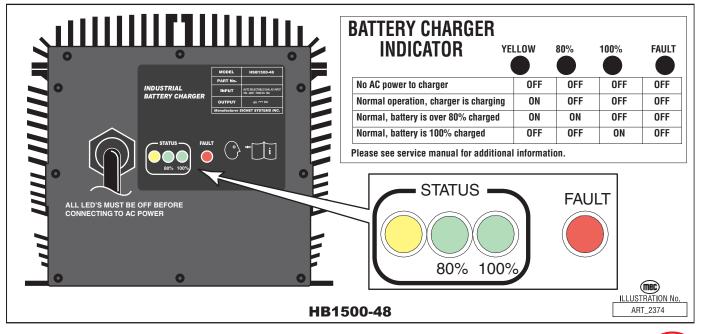


The charger is an advanced, microprocessor controlled, high frequency switching type charger.

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*.

LEDs can be viewed through a window in the door of the Pump Compartment.





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.

! WARNING !!!

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

No Smoking !

WARNING !!!

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

I WARNING !!!

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

To reduce the risk of fire, only use AC circuits and extension cords in accordance with all National and Local Electrical Codes for the location of use.

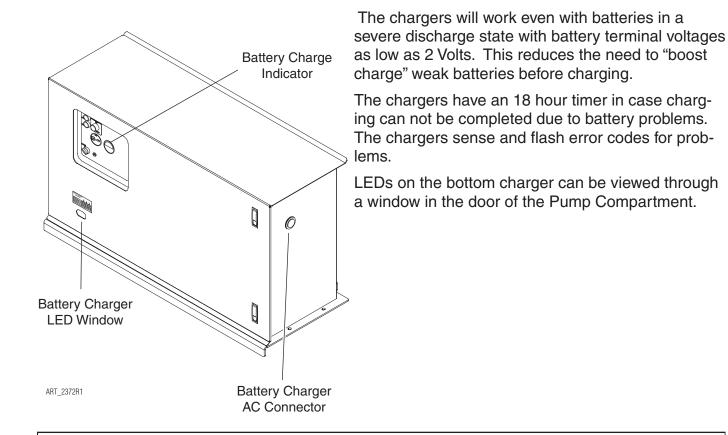
- 1. Plug the charger into a single phase AC socket with a nominal voltage rating of 100V, 110V, 115V, 120V, 220V, 230V, or 240V and a frequency rating of 50 or 60Hz.
 - The charger automatically senses and adjusts to the AC voltage and frequency.
 - At 110/120V the wall socket circuit breaker should 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).

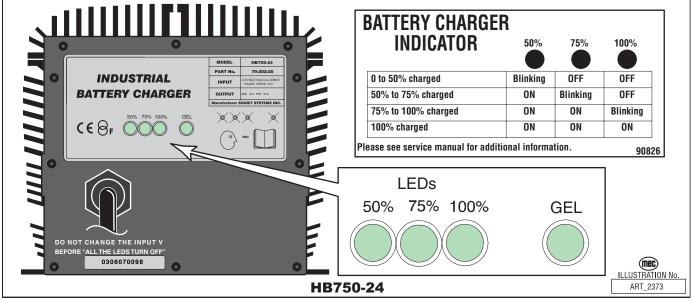


Dual Battery Chargers

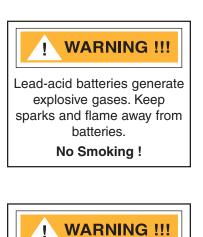
Use pages 26 and 27 if your machine is equipped with dual 750 W - 24 V battery chargers. If your machine is equipped with a single 1500 W - 48 V charger skip to pages 24 and 25.

The chargers are advanced, microprocessor controlled, high frequency switching type chargers.









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

WARNING !!!

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



To reduce the risk of fire, only use AC circuits and extension cords in accordance with all National and Local Electrical Codes for the location of use.

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.

- 1. Plug the chargers 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 chargers automatically sense and adjust 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 chargers will start automatically within a few seconds and begin charging the batteries.
- 3. The three green LED's indicate the charging progress.
 - When the battery is 0 to 50% charged the 50% LED flashes.
 - When the battery is between 50 to 75% charged the 50% LED is ON while the 75% LED flashes.
 - When the battery is between 75 to 100% charged the 75% LED is ON and the 100% LED flashes.
 - When the battery is fully charged the 50%, 75% and 100% LEDs are ON.
 - Charging time is dependent on depth of battery discharge, battery condition, and temperature.
 - If the chargers are left plugged in after charging is complete (all LEDs *ON*) they go into maintenance mode to keep batteries charged while in storage.
 - The chargers continuously measure battery voltage and restart 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. GEL LED: **Do not use if GEL LED is** *ON***.** GEL LED indicates that the charger is configured to charge solid, sealed batteries. If the GEL LED is *ON*, check the back of the charger to determine if the yellow wire loop has been cut or broken.
 - Disconnect AC power and repair cut or broken yellow wire loop. GEL LED should be OFF when AC power is restored.
 - If GEL LED is *ON* and yellow wire loop is intact, then the charger is defective. Take the machine out of service until the charger has been replaced.
 - Note: New batteries sometimes need 20 to 30 charge/ discharge cycles before they charge normally. The charger LEDs may only show 75% charge after overnight charging. Within a few weeks the LEDs will show 100% charge at the end of the charge cycle.
- 5. Turn OFF chargers by unplugging (disconnect from AC voltage).



MAINTENANCE

Regular inspection and conscientious maintenance is the key to efficient economical operation of your scissor lift. It will help to assure that your equipment will perform satisfactorily with a minimum of service and repair.

The actual operating environment of the machine governs the inspection schedule. Correct lubrication is an essential part of the preventative maintenance to minimize wear on working parts and ensure against premature failure. By maintaining correct lubrication, the possibility of mechanical failure and resulting downtime is reduced to a minimum.

I DANGER

- Never perform service on the machine with the platform elevated without first blocking the scissor assembly in place using the maintenance lock!
- Never leave hydraulic components or hoses open. They must be protected from contamination (including rain) at all times.
- 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 be as harmful as no lubrication.
- Watch for makeshift "fixes" which can jeopardize safety as well as lead to more costly repair.

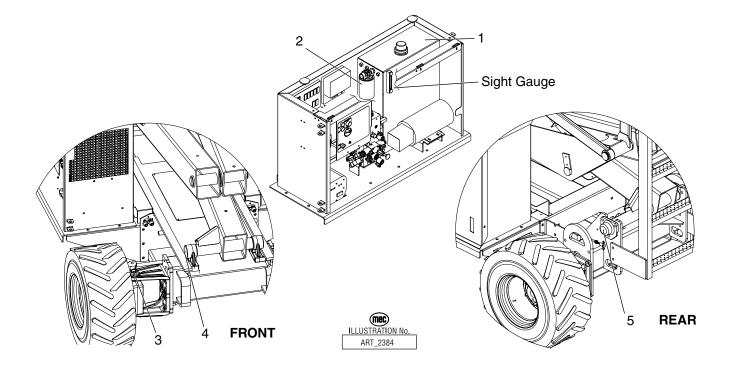
WARNING !!!

• Hydraulic fluid under pressure can penetrate and burn skin, damage eyes, and may cause serious injury, blindness, and even death. Correct leaks immediately.

- Failure to perform preventive maintenance at recommended intervals may result in the unit being operated with a defect that could result in injury or death of the operator.
- Immediately report to your supervisor any Defect or malfunction. Any defect shall be repaired prior to continued use of the scissor lift.
- Inspection and maintenance should be performed by qualified personnel familiar with the equipment.
- Fluid leaks under pressure may not always be visible. Check for pin hole leaks with a piece of cardboard, not your hand.



Lubrication Diagram



NO.	ITEM	SPECIFICATION	FREQUENCY OF LUBRICATION
1	Hydraulic Reservoir	Fill to the middle of the sight gauge with platform in the stowed position Mobile Fluid 424 <i>Do not substitute with lower grade</i> <i>fluids as pump damage may result</i>	Check daily Change yearly or every 1,000 hours, whichever occurs first
2	Hydraulic Filter	Filter Element	Normal Usage Change every six months or 500 hours, whichever occurs first Severe Usage Change every three months or 300 hours, whichever occurs first
3	Front Hubs	Lithium N.L.G. #2 EP Purge old grease	Monthly or every 25 hours, whichever occurs first
4	Slide Block	Lithium N.L.G. #2 EP Purge old grease	Monthly or every 25 hours, whichever occurs first
5	Fixed Beam	Lithium N.L.G. #2 EP Purge old grease	Monthly or every 25 hours, whichever occurs first

PRESTART INSPECTION

! WARNING !!!

This inspection must be completed before machine use each day or at the beginning of each shift. Failure to do so could result in death or serious injury.

- User/Operator is responsible for the Pre-Start Inspection.
- Keep inspection records up-to-date.
- Record and report all discrepancies to your supervisor.

MODEL NUMBER		SER SERIAL NUMBER
INITIAL	D	ESCRIPTION
	1.	Perform a visual inspection of all machine components, i.e. missing parts, torn or loose hoses, hydraulic fluid leaks, torn or disconnected wires, damaged tires etc. Replace components as necessary.
	2.	Check the hydraulic fluid level with the platform fully lowered.
	3.	Check the tires for damage. Check wheel lug nuts for tightness.
	4.	Check the tire pressure (not required for foam filled tires). (See Machine Specification).
	5.	Check the hoses and the cables for worn areas or chafing. Replace if necessary.
	6.	Inspect the lower limit switch. Ensure that switch is in the proper position and that fasteners are secure.
	7.	Check the platform rails and entry safety chain or gate for damage.
	8.	Check the pivot pins for security.
	9.	Check that all warning and instructional labels are legible and secure.
	10.	Inspect the platform control. Ensure the load capacity is clearly marked.
	11.	Check the hydraulic system pressure (See <i>Specifications</i>). If the pressure is low, determine the reason and repair in accordance with accepted procedures as outlined in the service manual.
	12.	Check the base controls for proper operation. Check all switches and push buttons for proper operation.

13. Check the platform controls for proper operation. Check all switches and push buttons, as well as ensuring that the drive controller returns to neutral.

DATE

INSPECTED BY_



MONTHLY INSPECTION

! WARNING !!!

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

- User/Operator is responsible for the Weekly Inspection.
- Keep inspection records up-to-date.
- Record and report all discrepancies to your supervisor.

MODEL N	UMBER SERIAL NUMBER
INITIAL	DESCRIPTION
	1. Perform all checks listed on Prestart Inspection.
	Inspect the condition of hydraulic fluid in the reservoir. Oil should have a clear amber color.
	3. Check battery electrolyte level and connections.
	4. Check wheel lug nuts for proper torque (see "Machine Specifications").
	5. Check if tires are leaning in or out.
	6. Inspect all beams and pivot points for signs of wear and/or damage.
	7. 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.

- 9. Check that the platform does not drift down with a full load.
- 10. Lubricate the king pins, steering cylinder pivot points, and tie rod ends (see Lubrication Chart).
- _____ 11. Check all wire connections.
- 12. Check that all adjustable flow valves are locked, check setting if any are not locked.
- 13. Check outriggers for proper operation (if equipped).

DATE



QUARTERLY INSPECTION

! WARNING !!!

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

- User/Operator is responsible for the Weekly Inspection.
- Keep inspection records up-to-date.
- Record and report all discrepancies to your supervisor.

MODEL N	UMBER SERIAL NUMBER
INITIAL	DESCRIPTION
	1. Perform all checks listed on Prestart/Monthly Inspection.
	2. Check the operation speeds to ensure they are within specified limits (see Specifications).
	3. 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.
	5. Check the tightness of the platform frame and the linkage pins.
	6. Check the overall platform and guardrail component stability.
	7. Check the electrical mounting and hardware connections for security.
	8. Check outriggers for proper operation (if equipped).
	9. Check the king pins for excessive play.

Additional Maintenance Requirements For Severe Usage Applications.

11. Replace hydraulic filter element (under normal usage, replace every six [6] months).



				Annual	Insn	ectio	n					_
					-			Date				-
Mec				Ke	por	t		Serial Number				-
	Dlat	for	-	las Cam	-			Model Number				
1775 Park Streat	Plat	$t_0 7'$	III Da	ales Corp. elma, CA 93662 USA				Date Of Last Inspection				
				• Fax: 559-891-2493				Date Placed In Service				-
800-387-4373))))-(391-	2400	• Fax. 559-691-2495	ı —							-
Customer												
Street					Str	eet						_
City/State/Zip					Cit	y/State/Z	ip					
Phone Number												
Contact												
Check each item listed belo Use proper Operator's, Serv If an item is found to be "U	ow. vice a	and l	Parts	manual for specific inf	ormatio	n and sett	tings.	Key: ''Y'' Yes/Accepta ''N'' No/Unaccept	ble			-
"Repaired" box.	nace	epta	oic	make the necessary rep	ans and	encer un	C	-	lable			
When all items are "Accept	table	", th	e uni	t is ready for service.				"R" Repaired				
Please fax a copy to MEC a	ıt (55	59) 8	91-2	488 or email to EMAII	LADDR	RESS		"U" Unnecessary	/Not A	ppli	cab	
	Y	N	RU	I		Y N I	RU		Y	Ν	R	
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 (4W				Emergency Down:				
All Rail Fasteners Secure				Rear Axle Mounting (4W	-			Operational				
Entry Gate/Chain Closes Properly				Front Axle/Front Wheel As				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 Proper				Operate Smoothly				
Slides Freely		\square		Steering Cylinder Pins Se	cure			Lock In Place				
Latches In Stowed Position		\square		Pivot Points Lubed				Limit Switches Adjusted				
Latches In Extended Position		\square		Drive Assembly Front Hub				Pressures & Hydraulics:				
Rail Latches Work Properly		$ \vdash $		Castle Nut Torqued Prope	rly			Oil Filter Secure/Chg				
Cable Secure		$ \vdash $		Cotter Pinned				Oil Level Correct/Chg				_
Platform:	+	⊢−−		Rear Axle/Rear Wheel Ass	emblies:			Steering Pressure Set				-
Platform Bolts Tight	+	\vdash		Brakes Operational	0			Drive Pressurre Set				-
Platform Structure	+	\vdash		Wheel Motors-Mounting	Secure	+ $+$ $+$		Lift Pressure Set				-
Platform Overload System: Functional	+	┝──┼	_	Wheel Motors-Leaks Lug Nuts Torqued Proper	I			Engine: Engine Mounts Tight				-
Calibrated	+	┝──┼	_	Axle Pivot Libed (4WD)	ly			Fuel Lines Secure				-
Vire Harnesses:	+	┝─┤	-+	Axle Pivot Libed (4WD) Axle Lock Operational		+		Fuel Lines Free Of Leaks		-	-	-
	+	┝─┤	+	Component Area:		+ $+$ $+$	_	Fuer Tanks Secure		+	-	-
Mounted Correctly	+	$\left - \right $	-+	Valve Manifold(s) Secure		+ $+$ $+$		Fuel Shut Off Valves Func.			-	-
Mounted Correctly Physical Appearance	\perp	\vdash		Hoses Tight/No Leaks		+ $+$ $+$		All Shields/Guards In Place		-	\vdash	-
Physical Appearance		┢──╁	+	D/C Mtr(s) Secure/Operat	tional	+		Oil Level		-		-
Physical Appearance 110/220V Outlet Safe/Working	+			Contactors Secure		+ $+$ $+$	_	Oil Filter		-	\vdash	-
Physical Appearance 110/220V Outlet Safe/Working Scissors:		\vdash						Air Filter				-
Physical Appearance 110/220V Outlet Safe/Working											-	-
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds				Pump Secure Batteries:				Options Operational:				
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds Retaining Rings				Pump Secure Batteries:				Options Operational: Hour Meter				-
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds				Pump Secure								-
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds Retaining Rings Upper Cylinder Pins Secure				Pump Secure Batteries: Secure				Hour Meter				-
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds Retaining Rings Upper Cylinder Pins Secure Lower Cylinder Pins Secure				Pump Secure Batteries: Secure Fully Charged				Hour Meter Battery Indicator				-
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds Retaining Rings Upper Cylinder Pins Secure Lower Cylinder Pins Secure Lower Beam Mounts tight Rollers Turn Freely				Pump Secure Batteries: Secure Fully Charged Battery Charger:				Hour Meter Battery Indicator Warning Light				-
Physical Appearance 110/220V Outlet Safe/Working Scissors: Beam Structures Welds Retaining Rings Upper Cylinder Pins Secure Lower Cylinder Pins Secure Lower Beam Mounts tight				Pump Secure Batteries: Secure Fully Charged Battery Charger: Secure				Hour Meter Battery Indicator Warning Light Warning Horn				-

Comments: _

 Signature/Mechanic:	Date:
Signature/Owner-User:	Date:
	P/N 90728 Rev. 2

TROUBLESHOOTING



Should you experience erratic operation or notice any malfunction while operating this machine, discontinue use immediately.

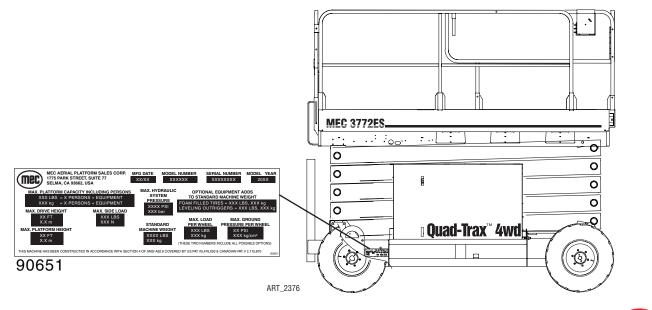
Call for assistance and report the incident to your supervisor, and do not use the machine until it has been checked by a trained, qualified mechanic.

What to check if machine will not operate

- Battery disconnect switch?
- Batteries fully charged?
- Is a function toggle switch or the enable switch not activated?
- Is the Base/Platform switch in the proper position?
- Check EMERGENCY STOP switches at both base and platform?
- Hydraulic fluid level low?
- Obvious fluid leak or damaged component?
- Are any wires pulled out or loose?

Serial Plate

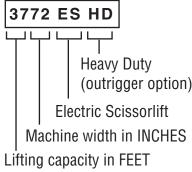
The serial plate is attached to the machine at the time of manufacture. Important information about the machine is recorded on the serial plate.











ART_2378

Serial Plate Item Information Defined

MFG DATE

Month / Year of manufacture (see side-bar).

MODEL NUMBER

Identifies the machine (see side-bar).

SERIAL NUMBER

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

MODEL YEAR

Reflects period from JULY 1 through JUNE 1. (Example: 08/05 = Model Year 2006)

MAX. PLATFORM CAPACITY INCLUDING PERSONS

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

MAX. HYDRAULIC SYSTEM PRESSURE

The maximum safe operating hydraulic pressure. Exceeding this pressure will damage the machine and may create a safety hazard.

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

MAX. DRIVE HEIGHT

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

MAX. SIDE LOAD

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.

STANDARD MACHINE WEIGHT

The weight of the machine with no options.

MAX. LOAD PER WHEEL (Fw)

The maximum safe weight applied to each wheel. Calculated with all available options installed.

Fw = 30% (Wm + Wc + Wopt)

MAX. GROUND PRESSURE PER WHEEL (Pmax)

The amount of pressure exerted on the surface at each wheel. Calculated with all available options installed.

Pmax = 30% (Wm + Wc + Wopt) / Contact Area



Lifting Instructions

! WARNING !!!

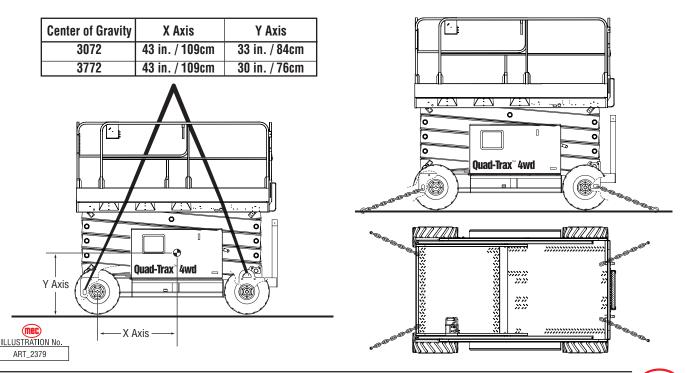
Only qualified riggers should rig and lift the machine.

Be sure the crane capacity, loading surfaces and straps or lines are sufficient to withstand the machine weight. See the serial plate for the machine weight.

- Fully lower the platform. Be sure the extension deck, controls and cabinet doors are secure. Remove all loose items on the machine.
- Determine the center of gravity of the machine using the table and picture on this page.
- Attach the rigging only to the designated lifting points on the machine. There are two holes on the front of the machine and two holes on the ladder for lifting.
- Adjust the rigging to prevent damage to the machine and to keep the machine level.

Securing to Truck or Trailer for Transport

- Always lock the extension deck in the retracted position when the machine is transported.
- Turn the key switch to the *OFF* position and remove the key before transport.
- Turn the battery disconnect switch to the OFF position before transport
- Inspect the entire machine for loose or unsecured items.
- Use chains or straps of ample load capacity.
- Use a minimum of two chains or straps.
- Adjust the rigging to prevent damage to the chains and the machine.



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UNLOADING PROCEDURES

I WARNING !!!

We do not recommend unassisted loading or unloading.

Always attach the machine to a winch when loading or unloading from a truck or trailer if driven off.

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 for the unloading.
- Remove all machine tie downs. Remove wheel chocks, if used. Turn the Base/Platform selector switch to the PLATFORM position.
- Enter the platform, activate EMERGENCY STOP switch (rotate clockwise and release). Test all platform functions.
- Carefully drive the machine off the truck or trailer with the winch still attached.
- NOTE: The brakes are automatically released for driving and will automatically apply when the machine stops.

Moving the Machine

The machine can be winched or moved short distances in case of power failure at speeds not to exceed 5 MPH (8.05 kph).

Brake Release for Winching or Towing

CAUTION

Prior to manually releasing brakes, insure wheels are chocked to prevent machine from moving.



RUNAWAY HAZARD

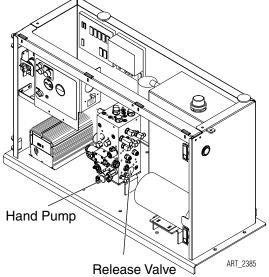
AFTER RELEASING THE BRAKES, THERE IS NOTHING TO STOP MACHINE TRAVEL. MACHINE WILL ROLL FREELY ON SLOPES. The machine is equipped with a brake release.

Release Brakes Before Towing:

- Push in the manual brake release valve located on the main manifold.
- Using the hand pump on the manifold, pump valve until pressure is built.
- The machine is now ready for towing.

To Reset Brakes:

- Automatic: Brakes will reset when drive function is activated.
- Manually: Reset manually by pulling out the manual brake release valve.











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.





MEC Aerial Platform Sales Corp.

1775 Park Street, Suite 77 Selma, CA 93662 USA Ph: 1-800-387-4575 • 559-891-2488 Fax: 559-891-2448 www.mecawp.com