

ES Series

2047/2647/3247

OPERATOR'S MANUAL

This Operator's Manual
MUST BE READ AND UNDERSTOOD
prior to operating your
MEC Aerial Work Platform



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Introduction

This Operations and Safety 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 THE OPERATOR'S MANUAL HAS BEEN READ AND UNDERSTOOD AS WELL AS HAVING OPERATED THE MEC SCISSORLIFT UNDER SUPERVISION OF AN EXPERIENCED AND QUALIFIED OPERATOR.

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 many years of safe, dependable service. Only trained, authorized 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:



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Machine Specifications - 2047ES

Working Height	26 ft	7.92 m
Platform Height	20 ft	6.10 m
Stowed Height:	85.6 in	2.17 m
Folded Down Rails	55.9 in	1.42 m
Lift Capacity (Evenly Distributed):	1,250 lbs	568 kg
Roll-out Deck Capacity	300 lbs	136 kg
Platform Dimensions:		
With Roll-Out Deck Retracted	46 x 106 in	1.17 x 2.69 m
Guard Rail Height	43.5 in	1.10 m
Toe Board Height	7.0 in	18.0 cm
Roll-out Deck Length	42.0 in	1.07 m
Overall Length	112 in	2.84 m
Overall Width	47 in	1.19 m
Wheel Base	81 in	2.06 m
Wheel Track	42 in	1.07 m
Turning Radius:		
Inside	0 in	0 m
Outside	95.5 in	2.43 m
Ground Clearance	3.6 in	91.4 mm
Machine Weight (Unloaded) (Approx.)	5000 lbs	2272 kg
Drive System (Proportional):		
Drive Speed (Platform Elevated)	0 - 0.75 mph	0 - 1.2 kph
Drive Speed (Platform Lowered)	0 - 2.50 mph	0 - 4.0 kph
Lift/Lower Speed (Approx.)	25 seconds / 25 seconds	
Gradeability	25% / 14 degrees	
Ground Pressure/Wheel (Maximum)	120 psi	8.27 bar
Wind Speed (Maximum)	0 mph	0 kph
Tire Size-Standard (Solid, non-marking rubber)	16 in dia. x 5 in	406.4 mm x 127 mm
Tire Pressure (Not Applicable For Foam Tires)	N/A	N/A
Wheel Lug Nut Torque	75-85 ft lbs	102-115 Nm
Hydraulic Pressure:		
Main System	2150 3,000 psi	207.0 bar
Lift System	1600 2,500 psi	172.4 bar
Steer	850 1,000 psi	68.9 bar
Hydraulic Fluid Capacity	6 gal	22.7 liters
Fuel Capacity	N/A	N/A
Power System – Voltage	36 Volts DC	
Battery Charger		
Input	120 Volt AC, 60 Hz, 10.8 Amp	
Output	36 Volt DC, 20 Amps Tapering, Timed Shutoff	
Batteries	Six 6 Volt deep-cycle; 218 Amp hours @ 20 hour rating	
Electric Motor	6.9 h.p. : 4000 r.p.m.	



Machine Specifications - 2647ES

Working Height	32 ft	9.75 m
Platform Height	26 ft	7.92 m
Stowed Height:	91.6 in	2.33 m
Folded Down Rails	61.9 in	1.57 m
Lift Capacity (Evenly Distributed):	1,000 lbs	454 kg
Roll-out Deck Capacity	300 lbs	136 kg
Platform Dimensions:		
With Roll-Out Deck Retracted	46 x 106 in	1.17 x 2.69 m
Guard Rail Height	43.5 in	1.10 m
Toe Board Height	7.0 in	18.0 cm
Roll-out Deck Length	42.0 in	1.07 m
Overall Length	112 in	2.84 m
Overall Width	47 in	1.19 m
Wheel Base	81 in	2.06 m
Wheel Track	42 in	1.07 m
Turning Radius:		
Inside	0 in	0 m
Outside	95.0 in	2.43 m
Ground Clearance	3.6 in	91.4 mm
Machine Weight (Unloaded) (Approx.)	5400 lbs	2455 kg
Drive System (Proportional):		
Drive Speed (Platform Elevated)	0 - 0.75 mph	0 - 1.2 kph
Drive Speed (Platform Lowered)	0 - 2.50 mph	0 - 4.0 kph
Lift/Lower Speed (Approx.)	30 seconds / 30 seconds	
Gradeability	25% / 14 degrees	
Ground Pressure/Wheel (Maximum)	125 psi	8.62 bar
Wind Speed (Maximum)	0 mph	0 kph
Tire Size-Standard (Solid, non-marking rubber)	16 in dia. x 5 in	406.4 mm x 127 mm
Tire Pressure (Not Applicable For Foam Tires)	N/A	N/A
Wheel Lug Nut Torque	75-85 ft lbs	102-115 Nm
Hydraulic Pressure:		
Main System	2,750 3,000-psi	207.0 bar
Lift System	2200 2,500-psi	172.4 bar
Steer	850 1,000-psi	68.9 bar
Hydraulic Fluid Capacity	6 gal	22.7 liters
Fuel Capacity	N/A	N/A
Power System – Voltage	36 Volts DC	
Battery Charger		
Input	120 Volt AC, 60 Hz, 10.8 Amp	
Output	36 Volt DC, 20 Amps Tapering, Timed Shutoff	
Batteries	Six 6 Volt deep-cycle; 218 Amp hours @ 20 hour rating	
Electric Motor	6.9 h.p. : 4000 r.p.m.	

Machine Specifications - 3247ES

Working Height	38 ft	11.58 m
Platform Height	32 ft	9.75 m
Stowed Height:	97.6 in	2.48 m
Folded Down Rails	67.9 in	1.72 m
Lift Capacity (Evenly Distributed):	700 lbs	318 kg
Roll-out Deck Capacity	300 lbs	136 kg
Platform Dimensions:		
With Roll-Out Deck Retracted	46 x 106 in	1.17 x 2.69 m
Guard Rail Height	43.5 in	1.10 m
Toe Board Height	7.0 in	18.0 cm
Roll-out Deck Length	42.0 in	1.07 m
Overall Length	112 in	2.84 m
Overall Width	47 in	1.19 m
Wheel Base	81 in	2.06 m
Wheel Track	42 in	1.07 m
Turning Radius:		
Inside	0 in	0 m
Outside	95.5 in	2.43 m
Ground Clearance	3.6 in	91.4 mm
Machine Weight (Unloaded) (Approx.)	6700 lbs	3045 kg
Drive System (Proportional):		
Drive Speed (Platform Elevated)	0 - 0.75 mph	0 - 1.2 kph
Drive Speed (Platform Lowered)	0 - 2.50 mph	0 - 4.0 kph
Lift/Lower Speed (Approx.)	40 seconds / 40 seconds	
Gradeability	25% / 14 degrees	
Ground Pressure/Wheel (Maximum)	136 psi	9.38 bar
Wind Speed (Maximum)	0 mph	0 kph
Tire Size-Standard (Solid, non-marking rubber)	16 in dia. x 5 in	406.4 mm x 127 mm
Tire Pressure (Not Applicable For Foam Tires)	N/A	N/A
Wheel Lug Nut Torque	75-85 ft lbs	102-115 Nm
Hydraulic Pressure:		
Main System	2750 3,000 psi	207.0 bar
Lift System	2,500 psi	172.4 bar
Steer	1,000 psi	68.9 bar
Hydraulic Fluid Capacity	6 gal	22.7 liters
Fuel Capacity	N/A	N/A
Power System – Voltage	36 Volts DC	
Battery Charger		
Input	120 Volt AC, 60 Hz, 10.8 Amp 36 Volt DC, 20 Amps Tapering, Timed Shutoff	
Output		
Batteries	Six 6 Volt deep-cycle; 218 Amp hours @ 20 hour rating	
Electric Motor	6.9 h.p. : 4000 r.p.m.	





SECTION 1: SAFETY

Safety Symbols

This section of the manual contains important information of the safe use of your MEC Scissors. 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.

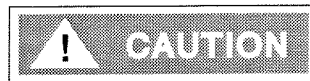
To help you recognize important safety information, we have identified warnings and instructions that have a direct impact on safety with the following signals:



“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.



“CAUTION” 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” is used for property-damage only accidents.

NOTE: The best method to protect yourself and others from injury or death is to use common sense. If you are unsure of any operation, don't start until you are satisfied that it is safe to proceed and have discussed the situation with your supervisor.

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. A copy of the ANSI Standard is considered a part of this machine and can be found in the manual compartment, located at the platform control station.



- ◆ **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 (30.5cm) 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.
- ◆ Read and understand all safety and control information found on the machine and in this manual before operating the machine.
- ◆ Only trained, competent personnel should operate the scissorlift.
- ◆ **NEVER** fasten safety belt to an adjacent structure while on the platform.
- ◆ Make sure that entry chain/gate (if so equipped to platform) is secured before operating machine from the platform.
- ◆ Exceeding the platform rated capacity in any configuration is prohibited. Review the section titled "Machine Specifications" (earlier in this manual) regarding model capacities and dimensions.

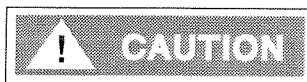
- ◆ Evenly distribute loads placed on the platform.
- ◆ SECURE all tools and other loose items to prevent injury to persons working on or below the platform.
- ◆ Use of scaffolding, ladders or similar items to extend your reach while on the platform is prohibited.
- ◆ Climbing down the beams assembly (armset), if the machine fails, while the platform is raised is prohibited.
- ◆ Precautions should be taken to prevent unauthorized personnel from operating the platform with the ground controls while the platform is in use.



- ◆ The “Moving the Machine” section (described later in this manual) requires that the brake be released. After performing this procedure, 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 run-away on sloping surfaces. Movement speed shall not exceed 5 MPH (8.0 kph).
- ◆ DO NOT attempt to open any hydraulic line or component without first relieving all system pressure.
- ◆ Altering, modifying, or disabling any safety devices or interlocks is prohibited.
- ◆ Recharging the battery near sparks or open flames is prohibited. Lead-acid batteries generate EXPLOSIVE HYDROGEN GAS. Always wear safety glasses.
- ◆ Use of the machine outdoors during electrical storms or in high wind situations is not recommended.
- ◆ Raise the platform when the machine is on a firm, level surface only.



- ◆ Unassisted loading or unloading of scissorlift from a truck or trailer is not recommended.
- ◆ Before disengaging or disconnecting hydraulic motors with brake assembly from a towing vehicle, ensure that the machine cannot roll.
- ◆ Complete the “Operational Checklist” at designated intervals.



- ◆ Use of scissorlift as a crane to lift oversized or hanging loads is prohibited.
- ◆ Raising, lowering or driving the scissorlift into stationary objects is prohibited.
- ◆ 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 per the American National Standards Institute ANSI/SIA A92.6 Standard. It is **prohibited** to use an Aerial Work Platform manufactured by Mayville Engineering Company, Inc. with any portion, or all, of the guardrails **removed**.

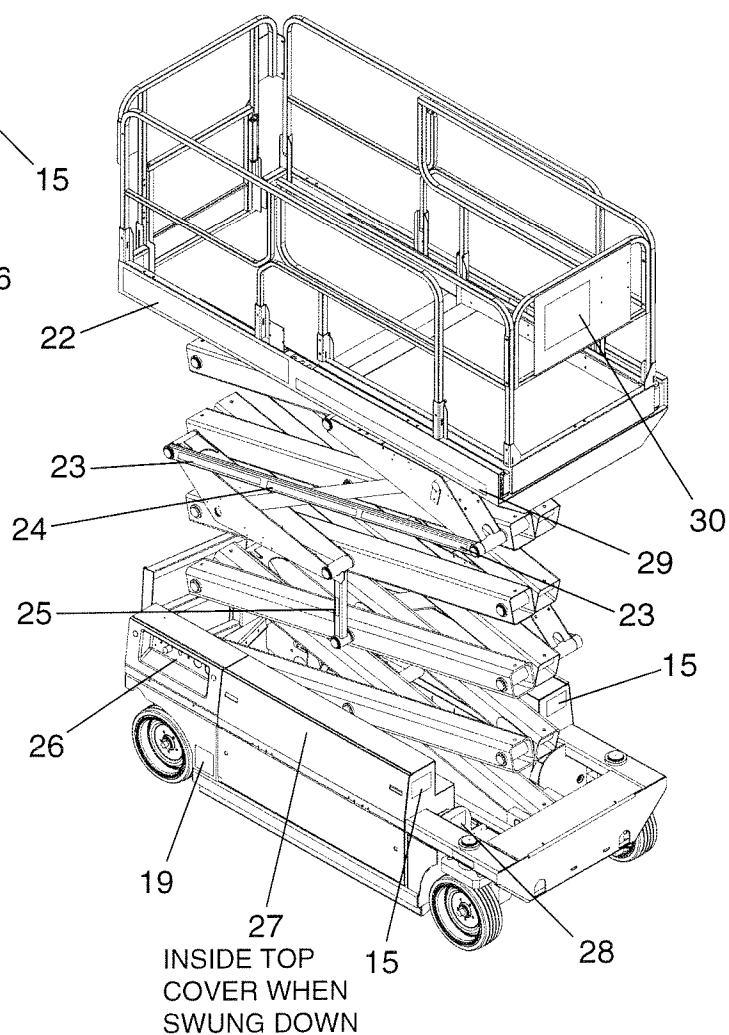
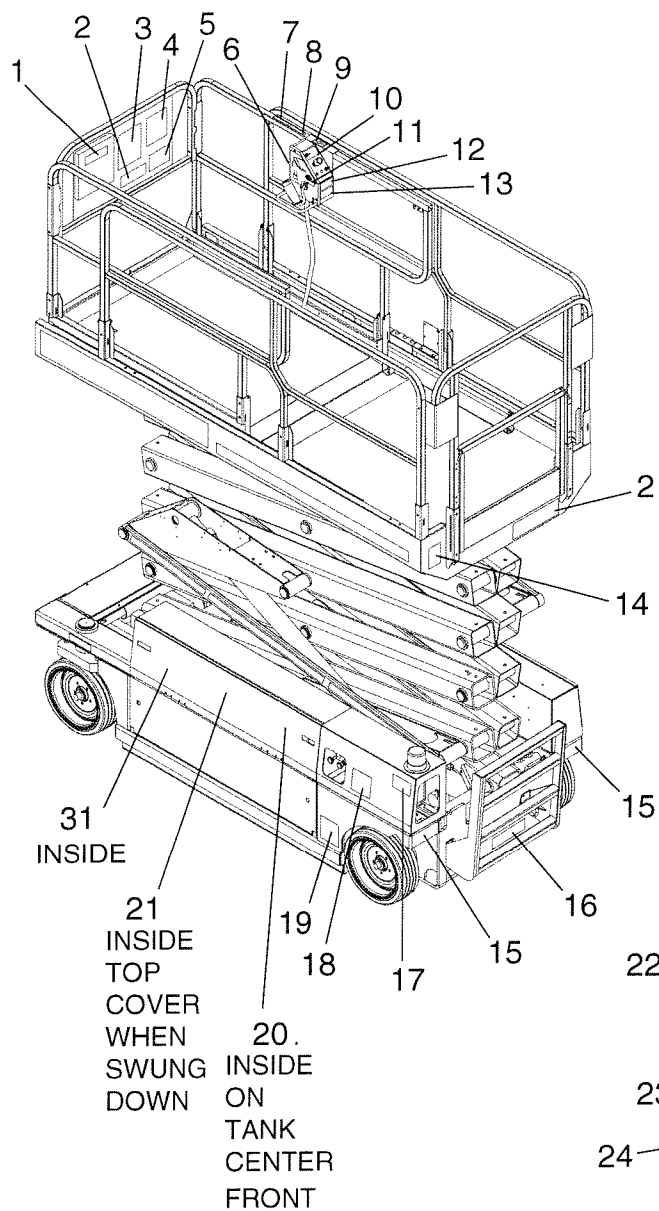
Lanyard anchorage points on this type of equipment are not required to conform to the applicable ANSI/SIA Standard.

However, if anchorage points for lanyard attachments are required by site authorities or other regulations, the anchorage points on all equipment manufactured by Mayville Engineering Company, Inc. are recommended to be used for **work positioning restraints** of personnel only. Lanyard lengths are to be determined by operator/owner to restrict the operator to the confines within the **Guardrail** System.



USE OF FALL ARREST SYSTEMS ATTACHED TO ANCHORAGE POINTS ON MOBILE EQUIPMENT MAY CAUSE MACHINE TO TIP RESULTING IN SERIOUS INJURY OR DEATH.

Safety and Control Decal Locations

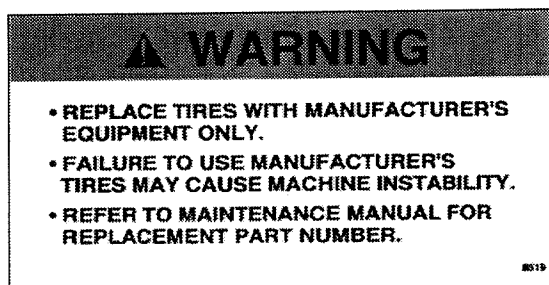


Safety and Control Decal Locations

Item #	Part #	Description	Qty
1	8911	Manual Case	1
2	9884	Platform Capacity (3247ES) - 700#, Large	2
	9885	Platform Capacity (2647ES) - 1000#, Large	2
	9886	Platform Capacity (2047ES) - 1250#, Large	2
3	7527	Operator Warning	1
4	7523	Danger - Elec/Tip Hazards	1
5	8767	Lock Warning	1
6	9633	Control Box ID	1
7	9947	Platform Capacity (3247ES) - 700#, Small	2
	9932	Platform Capacity (2647ES) - 1000#, Small	2
	9933	Platform Capacity (2047ES) - 1250#, Small	2
8	7155	Locate Control Box	1
9	7156	Front	1
10	9632	Control Box	1
11	8635	Joystick Directions	1
12	8950	Pothole Obstruction	1
13	7827	Warning Light	1
14	9458	Made In USA	1
15	8519	Tire Replacement Warning	4
16	6556	Fork Pockets	1
17	8779	Battery Charging	1
18	9543	Emergency Down	1
19	9043	Crush Hazard - Foot	2
20	6873	Hydraulic Fluid	1
21	8815	Electrical Moisture Warning	1
22	9623	2047ES	2
	9624	2647ES	2
	9625	3247ES	2
23	7982	Safety Stripe	2
24	8503	Keep Clear 3247ES	2
		2047/2647ES	1
25	6794	Maintenance Lock	1
26	9622	Control Panel - Base	1
27	8520	Battery Replacement	1
28	N/A	Serial Number Plate	1
29	8402	Rail Stripe	A/R
30	8811	MEC Oval	1
31	8979	Battery Disconnect	1

Safety Related Decals

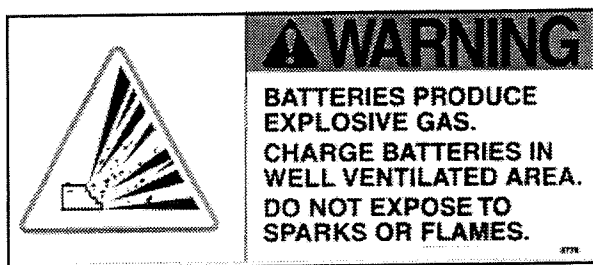
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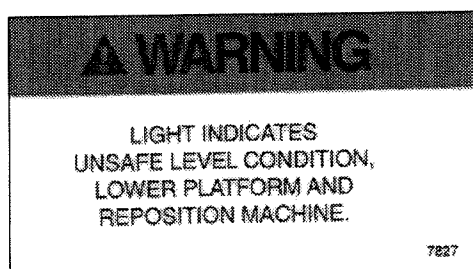
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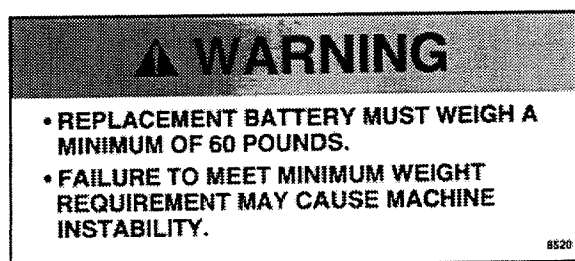
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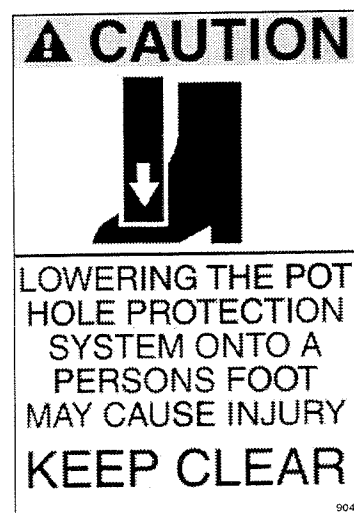
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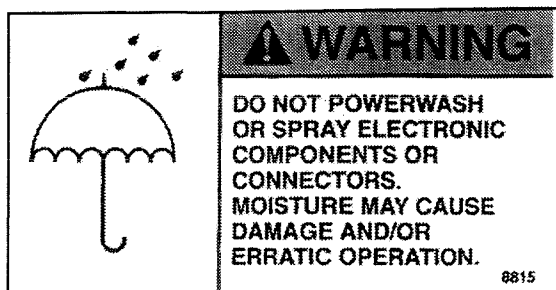
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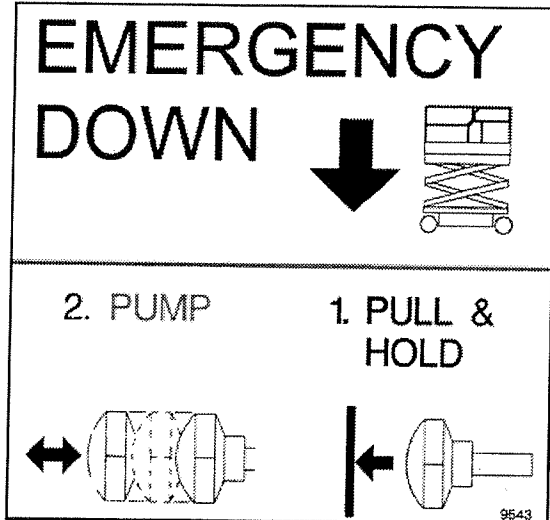


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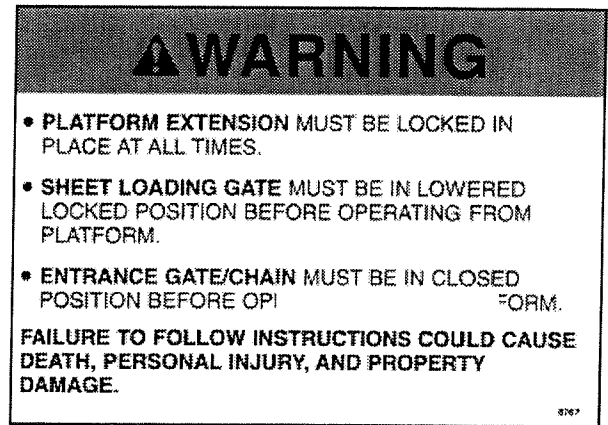


Safety Related Decals (Continued).....

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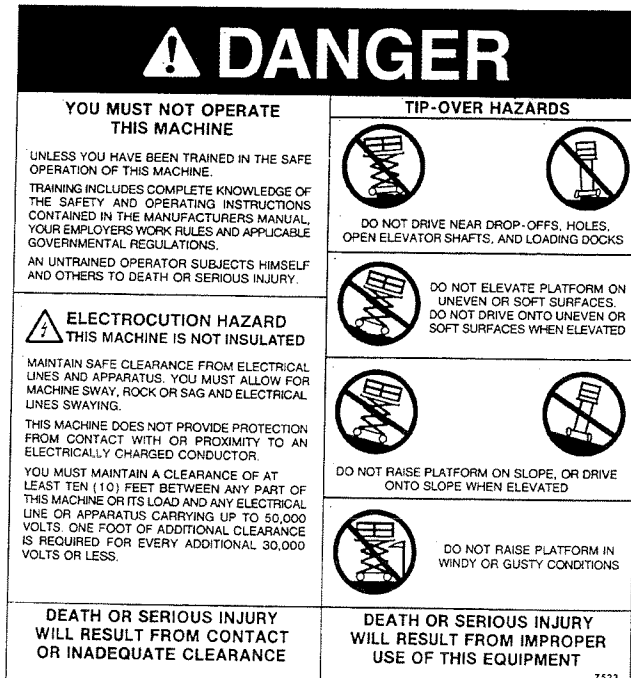
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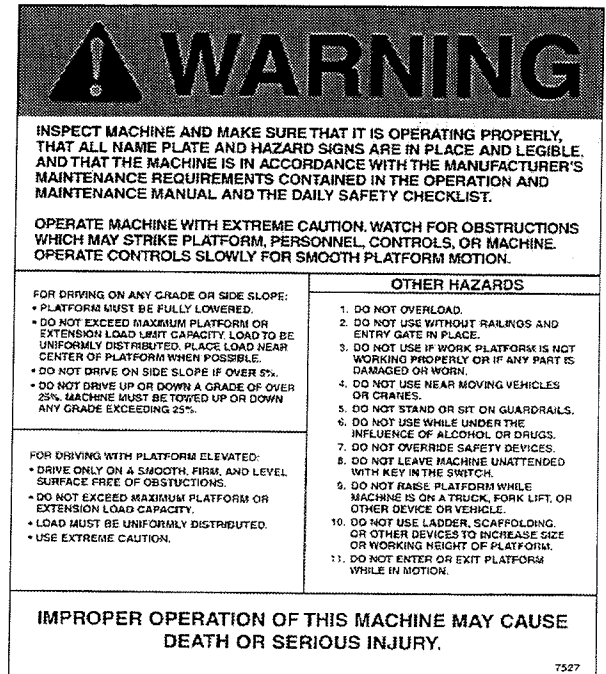
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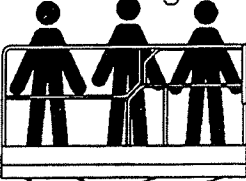
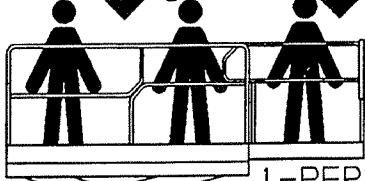


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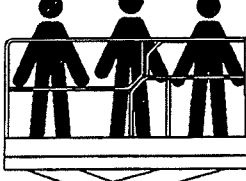
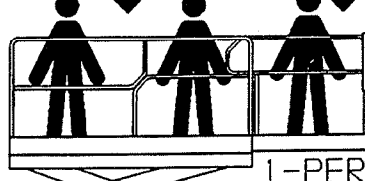


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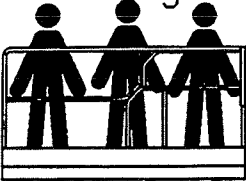
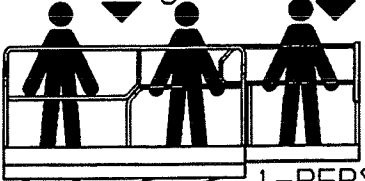
9884 3247ES

⚠ MAXIMUM PLATFORM CAPACITY - EVENLY DISTRIBUTED	
EXTENSION RETRACTED	EXTENSION EXTENDED
<p>700 LBS 317 kg</p>  <p>3-PERSONS</p>	<p>400 LBS 300 LBS 181 kg 136 kg</p>  <p>2-PERSONS 1-PERSON</p>

9885 2647ES

⚠ MAXIMUM PLATFORM CAPACITY - EVENLY DISTRIBUTED	
EXTENSION RETRACTED	EXTENSION EXTENDED
<p>1000 LBS 453 kg</p>  <p>3-PERSONS</p>	<p>700 LBS 300 LBS 317 kg 136 kg</p>  <p>2-PERSONS 1-PERSON</p>

9886 2047ES

⚠ MAXIMUM PLATFORM CAPACITY - EVENLY DISTRIBUTED	
EXTENSION RETRACTED	EXTENSION EXTENDED
<p>1250 LBS 568 kg</p>  <p>3-PERSONS</p>	<p>950 LBS 300 LBS 432 kg 136 kg</p>  <p>2-PERSONS 1-PERSON</p>



SECTION 2: OPERATION

Unloading Procedures

- ◆ Inspect the outside of the machine for damage. Inspect all hoses, beam assemblies (armset), and cables for chafing or road damage. Confirm that all wheel lug nuts are tight (refer to the "Machine Specifications").
- ◆ Unlock and open side compartments. Inspect all electrical and hydraulic connections for damage and security.
- ◆ Turn battery switch to ON position. Check electrolyte level.
- ◆ Check that fluid level is to the fill mark on the hydraulic tank and add fluid as required (see "Lubrication Chart").
- ◆ Close side compartments.



ALWAYS ATTACH THE MACHINE TO A WINCH WHEN LOADING OR UNLOADING FROM A TRUCK OR TRAILER IF DRIVEN OFF. WE DO NOT RECOMMEND UNASSISTED LOADING OR UNLOADING OF ANY SCISSORLIFT.

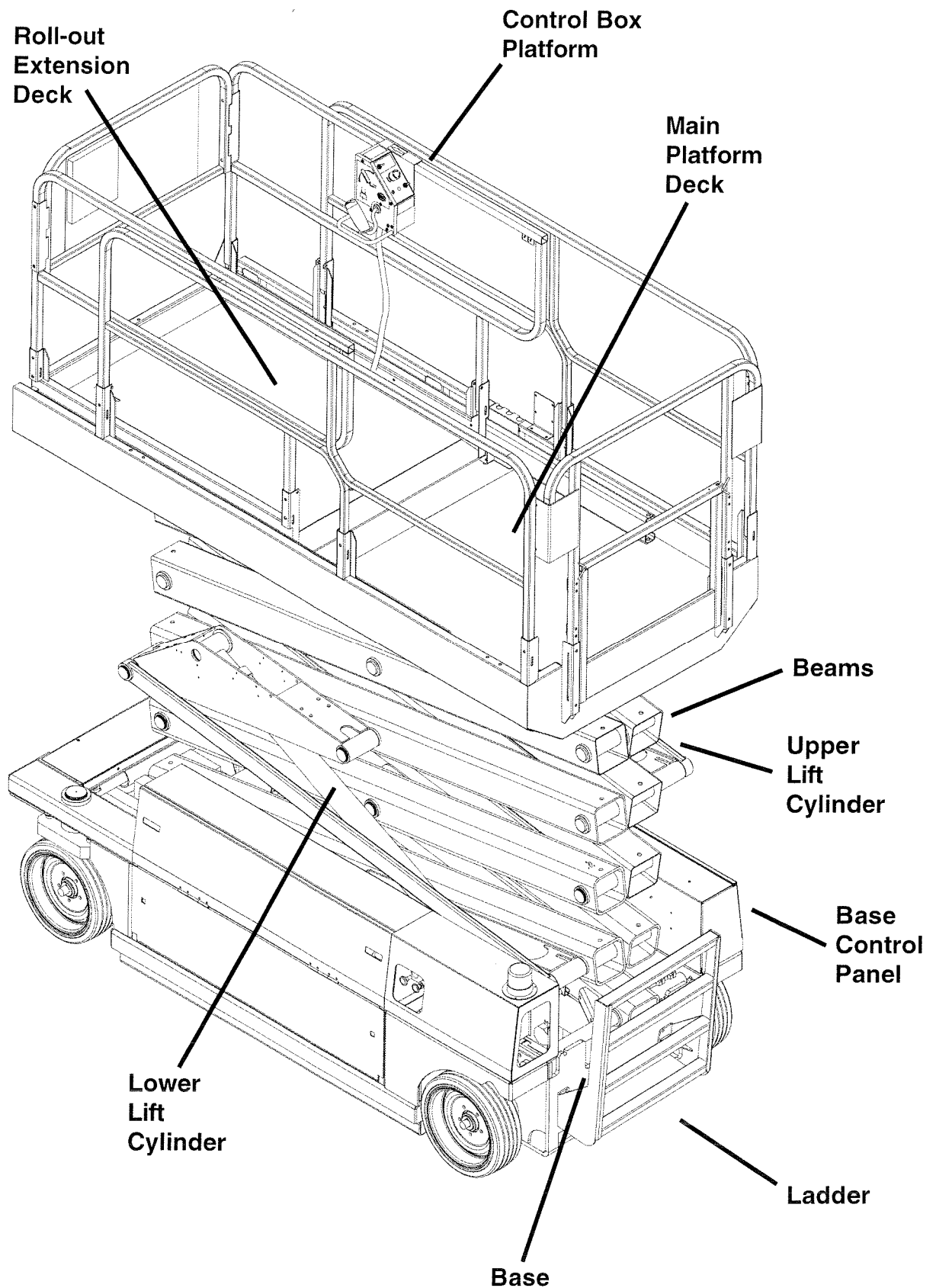
READ AND UNDERSTAND ALL SAFETY, CONTROL, AND OPERATING INFORMATION FOUND ON MACHINE AND IN THIS MANUAL BEFORE OPERATING THE MACHINE.

- ◆ Attach the machine to a winch for the unloading.
- ◆ Perform Machine Start-up procedures in this section. Refer to Operator Controls Descriptions, as necessary.
- ◆ Remove all machine tie downs. Remove wheel chocks, if used. Turn the Base/Platform selector switch to the "PLATFORM" position.
- ◆ Enter the platform, and using the platform controls, 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.

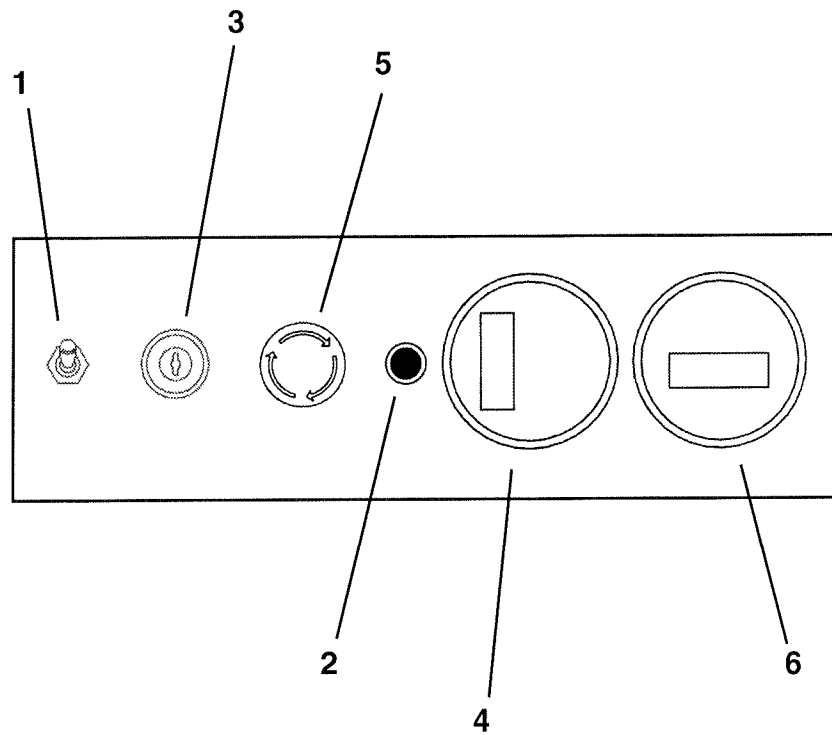
- ◆ **Before placing the machine into service, all operators must read and understand the contents of this Operator's Manual.**

Primary Machine Components



Operator Controls

Base Controls



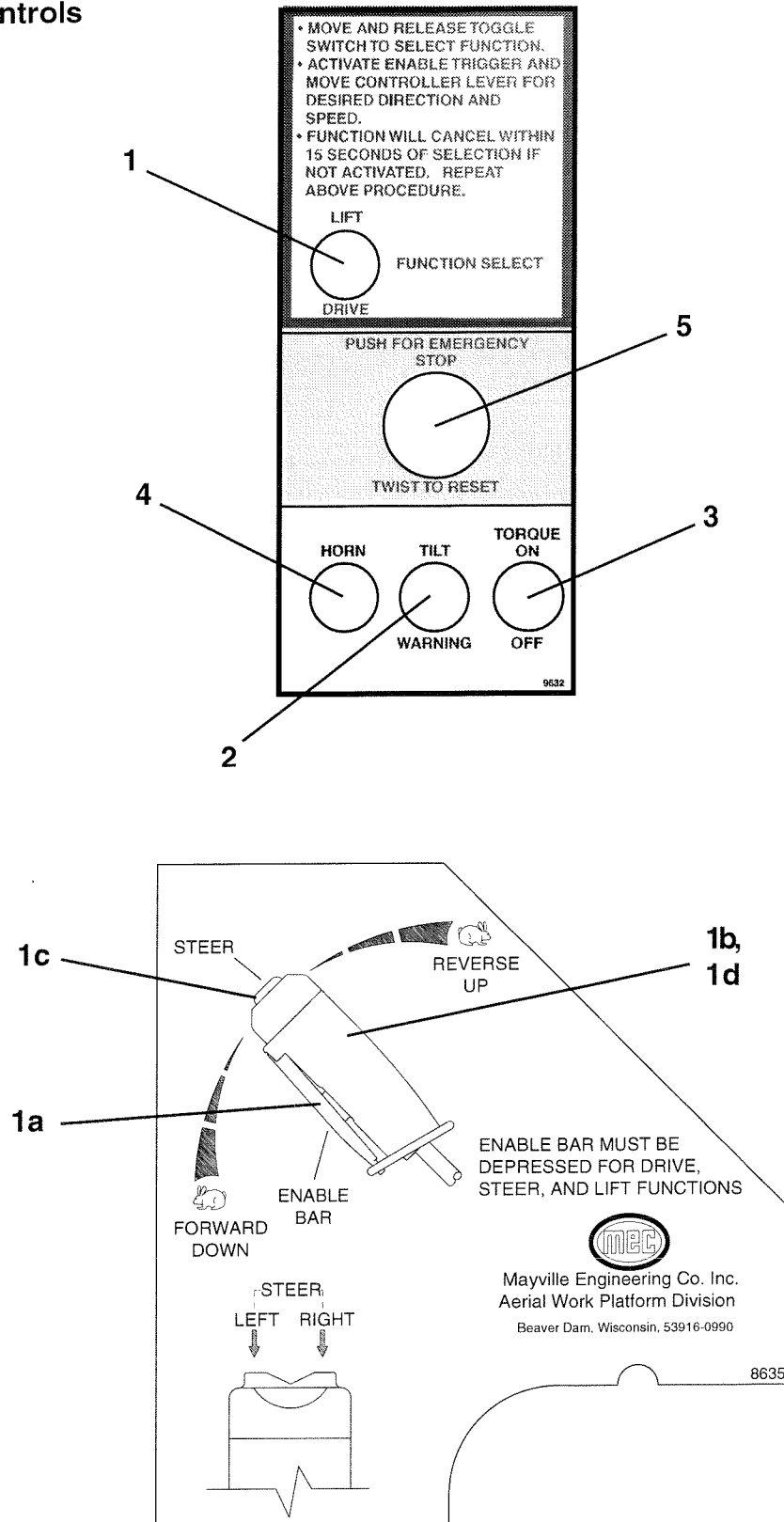
Operator Controls (Continued).....

BASE CONTROLS

	CONTROL	DESCRIPTION
1	Lift/Lower Switch	Use to control the lift and lowering of the platform from the base panel, when "BASE" position is selected as the primary control station.
2	Circuit-breaker	Pops out when there is excessive electrical load in the control circuit. Push in to reset.
3	Base/Off/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 console. NOTE: A key shall be provided for European machines and will be removable in "PLATFORM" position only.
4	Battery Gauge (Optional)	Indicates percent of charge left in batteries.
5	Emergency Stop Button	Use to stop all functions in an emergency. Push for emergency stop. To reset turn clockwise.
6	Hour Meter (Optional)	Indicates total elapsed time the machine has been operated.
	Emergency Lowering	Manually pull valve plunger on the right of the block, while holding manually pump the left plunger until platform begins to lower. Releasing the right plunger will stop descent. (Not Shown) (Located inside of compartment.)
	Emergency Brake Release	Push in bypass valve, manually pump emergency down (Not Shown) (Located inside of charger compartment)

Operator Controls (Continued).....

Platform Controls



Operator Controls (Continued).....

PLATFORM CONTROLS

CONTROL		DESCRIPTION
1	Mode Selector	Desired selection will allow either the lift or drive function using controller handle. Switch will self center and circuit will remain active for 15 seconds after controller is returned to the neutral position.
1a	Enable Switch	Must be depressed to activate drive, steer, and lift functions.
1b	"Forward/Reverse"	Controls forward and reverse machine travel at speed proportional to handle movement.
1c	"Left/Right"	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.
1d	"Lift/Lower" Controller	With enable switch depressed, moving controller handle towards the operator (up) will provide platform lift at a speed proportional to handle movement. Moving the handle away from the operator (down) will provide platform lowering at a fixed speed.
2	Tilt Warning Light	Indicates that machine is not level.
3	Torque On/Off Switch	"ON" selection will provide extra driving torque and reduce drive speed when the platform is under approximately 10 ft (3.05 m). "OFF" position is the normal mode.
4	Horn	Press button to sound warning horn.
5	Emergency Stop Button	Push to stop all functions in emergency. Reset by turning clockwise.

Prestart Inspection

Before use each day or at the beginning of each shift, the machine shall be given a visual inspection and functional test. Repairs (if any) must be made prior to operating the machine as it is critical to ensure safe operation of the machine.

- ◆ Visually inspect all machine components; for loose or missing parts, hydraulic fluid leaks, loose or damaged wires. Check for structural or weld cracks.
- ◆ Check fluid levels with the platform fully lowered.
- ◆ Check the wheel lug nuts for tightness (Refer to “Machine Specifications”).
- ◆ Check that all warning and instructional labels are legible and secure.
- ◆ Check the platform guard rail system. Look at the chain or gate and make sure they latch properly and/ or close.
- ◆ Ensure that emergency stop buttons on the base control panel and the platform controls are disengaged. Reset by turning clockwise.
- ◆ Ensure that the battery cutoff switch is in the “ON” position.

MACHINE START UP

1. Ensure the battery disconnect switch, located in the battery compartment, is open.
2. Place the base/platform select switch to the desired position.
3. The machine can now be operated from the selected position.

Note: If the machine fails to operate, inspect the motor controller inside the motor compartment. A green LED located on the controller should be illuminated. If the LED is not illuminated, refer to the troubleshooting section.

BASE CONTROL OPERATION AND CHECKS



BE SURE AREA ABOVE THE MACHINE IS CLEAR OF OBSTRUCTIONS TO ALLOW FULL ELEVATION OF PLATFORM.

DO NOT OPERATE THE MACHINE IF THE FOLLOWING CHECKS REVEAL A DEFECT.

- ◆ Turn selector switch to “BASE” position.
- ◆ Activate the Lift/ Lower switch on the base control panel to elevate the platform to the end of its movement. Releasing the switch should stop elevation.
- ◆ Test the “Emergency Stop” function. While the platform is moving, press the Emergency Stop button, platform should stop.
- ◆ Reset by rotating clockwise.
- ◆ Lower the platform about halfway by switching the Lift/ Lower switch. Releasing the switch should stop the lowering.
- ◆ Check for proper operation and hydraulic leaks.
- ◆ Lower platform to the stowed position.

PLATFORM CONTROL OPERATION AND CHECKS

- ◆ Select the "Platform" position on the selector switch at base control station.
- ◆ Enter the platform, close the chain/gate securely to the platform.
- ◆ Press the horn button briefly to check if working properly.

IMPORTANT: The Enable Switch must be activated to operate the controller for Drive, Steer, and Lift/ Lower Function.

- ◆ Check for proper operation and hydraulic fluid leaks.
- ◆ Move mode selector switch to "Lift" position, depress Enable bar and move control handle "up" (towards the operator).
- ◆ Test emergency stop function by pressing down on the red Emergency Stop switch. Reset by rotating clockwise.
- ◆ To lower platform, depress the Enable bar and move control handle "down" (away from the operator).



IF PLATFORM SHOULD FAIL TO LOWER DO NOT ATTEMPT TO CLIMB DOWN THE BEAM ASSEMBLY. SERIOUS INJURY MAY RESULT.

- ◆ Move the mode select switch to "Drive" position, depress Enable bar and move control handle "forward" and "backward" to check drive direction. Releasing the Enable bar or returning control handle to center position will stop motion of drive.
- ◆ Test the "Emergency Stop" function. While driving in both directions. Reset "Emergency Stop" by rotating the switch clockwise.
- ◆ Test Left/ Right steering by depressing Enable bar on control handle and pressing the rocker switch at the top of the handle. Press left side of switch for left steer direction and right side for right steer direction.

IMPORTANT: Always check front steer wheel direction before driving.

Operation



**THE OPERATOR MUST BE AWARE OF THE ENVIRONMENT.
DO NOT RAISE THE PLATFORM IF THE MACHINE IS NOT
ON A FIRM LEVEL SURFACE.**

**SAFE OPERATION BEGINS WITH A SAFETY CONSCIOUS
EQUIPMENT OPERATOR.**

Perform prestart inspection. Remember to place the selector switch in the "Platform" position before getting in the platform for operation.

DRIVING AND STEERING



**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.**

NOTE: To activate drive function, momentarily activate mode selector switch in "Drive" position. Release switch to return to the neutral (center) position. Depressing the Enable bar, drive and steer functions can be achieved. Steer wheels will not center themselves after a turn, and must be returned to the straight-ahead position with the steer switch.

Controller handle movement "away" from the operator will give FORWARD travel and pulling the handle "towards" the operator will give REVERSE travel.

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

BRAKING



ACTIVATION OF THE PLATFORM “EMERGENCY STOP” BUTTON 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.

NOTE: For parking, the brake is automatically applied when the forward/reverse drive controller is positioned in the center (neutral) position.

ELEVATING THE PLATFORM

Using Platform Controls

To elevate the platform, momentarily activate mode selector switch in the "Lift" position. Release switch to return to the neutral (center) position. Depressing the Enable bar and moving controller handle "towards" the operator will elevate the platform. Rate of lift is proportional and is dependent on the movement of the controller handle.

Using Base Controls

With selector switch in the "Base" position, press and hold the Lift/ Lower toggle switch on the base control panel in the "Up" position until the desired height is reached or until the platform reaches maximum height.

LOWERING THE PLATFORM

Using Platform Controls

To lower the platform, momentarily activate mode selector switch to the "Lift" position. Release switch to return to the neutral (center) position. Depressing the Enable bar and moving the controller handle "away" from the operator will lower the platform. Rate of descent is fixed - platform lowers at same rate regardless of handle position.

Using Base Controls

With selector switch in the "Base" position, press and hold the Lift/ Lower toggle switch in the "Down" position until the desired platform height is reached or until the platform reaches the stowed position.

EXTENDING THE ROLL-OUT EXTENSION DECK

- ◆ Lift handle at the rear of the extension deck to raise spring-loaded pin from the locked position.
- ◆ With both handles raised, push the deck out to the desired extended length and release the handles for the spring-loaded pin to lock into position.
- ◆ Extensions can be achieved in intervals of 7 inches (17.8 cm) throughout the entire length of the roll-out extension deck.



**IF THE ROLL-OUT DECK IS EXTENDED CHECK FOR
CLEARANCE UNDER DECK AREA BEFORE LOWERING
PLATFORM.**

LOWERING THE PLATFORM RAILINGS

- ◆ Place the platform control console on the platform floor.
- ◆ Remove safety snap pins holding the front extension railing to the corner post. Place the front rail on the platform floor.
- ◆ Remove pins from rear railing corner post. Lift rail and pivot forward and place on platform floor.
- ◆ Remove safety snap pins from extension side rails. Rotate rails down to platform floor.
- ◆ Repeat the procedure as you make your way around the platform to remove the rest of the railings.
- ◆ To return the machine to normal operation mode position/install all railings securely.
- ◆ Position platform control console.

CHARGING THE BATTERIES



**LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES.
KEEP SPARKS AND FLAME AWAY FROM BATTERIES.
NO SMOKING !**

- ◆ Plug the battery charger into 115 volt, 60 Hz AC outlet, using #12 AWG grounded extension cord to recharge the batteries.

To determine if the batteries are fully charged, plug the charger in. A drop in the charge rate (shown on the ammeter) to 1-4 amps within a few minutes indicates that the batteries are fully charged.



DO NOT OPERATE THE UNIT WHILE CHARGING.

Be sure to disconnect the charger from the outlet before moving the unit.

SHUTDOWN PROCEDURE

- ◆ When finished with the machine, place the platform in the stowed position.
- ◆ Park the machine on a level surface.
- ◆ Carefully exit the platform using a constant three (3) point dismount/grip.
- ◆ Place selector switch at base control panel in the "Off" position.

NOTE: Leaving the selector switch in the base or platform position for an extended time will drain the battery. Always put the selector 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.

Moving The Machine

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

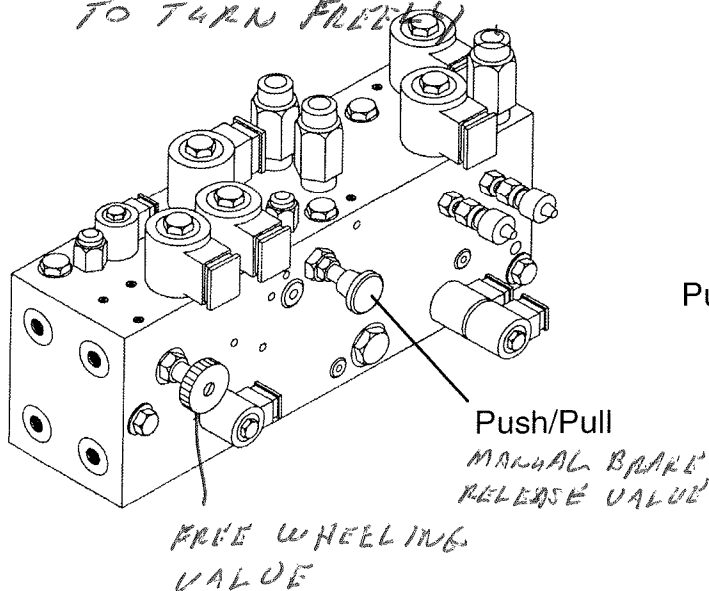
Towing/ Winching the Machine

Your machine is equipped with a brake release. *AND FREE WHEELING VALVE*

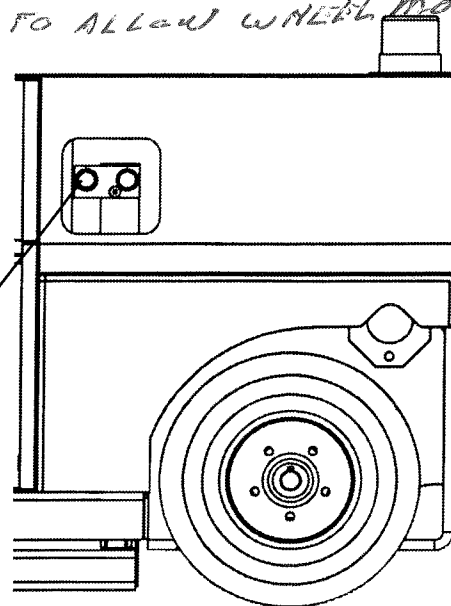
Release Brakes Before Towing:

- ◆ Push the ~~free wheeling~~ valve located on the main manifold. *MANUAL BRAKE RELEASE*
- ◆ Using the hand pump of the emergency down system (charger compartment) pump valve until pressure is built, *AND BRAKES RELEASE.*

OPEN FREE WHEELING VALVE TO ALLOW WHEEL MOTORS TO TURN FREELY



Pump



AFTER RELEASING THE BRAKES, THERE IS NOTHING TO STOP THE MACHINE'S TRAVEL. MACHINE WILL ROLL FREELY ON SLOPES. BE ON GUARD AGAINST RUNAWAY. DO NOT DRIVE MACHINE WITH BRAKES RELEASED.

To Reset ~~Brakes~~:

- ◆ Brakes will reset when drive function is activated or reset by pulling on ~~free wheeling~~ valve. *MANUAL BRAKE*

Emergency Systems And Procedures



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.



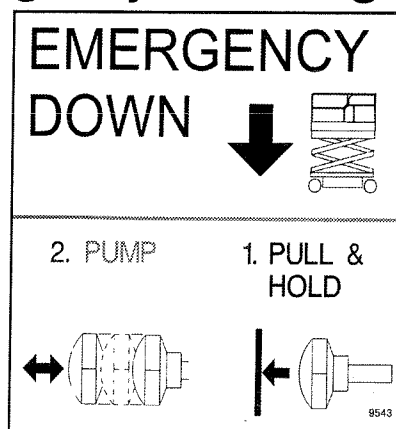
BEFORE LOWERING PLATFORM, RETRACT THE DECK EXTENSION.

Emergency Lowering

The Brake Release/Emergency Down system is used to lower the platform in case of power or valve failure. The brake release/emergency down system is located in the charger compartment and is accessible through a window in the charger cover. To lower the platform, perform the following steps:

1. Pull and hold the red valve plunger located on the brake release/emergency down manifold.
2. Pump the black plunger, also located on the brake release/emergency down manifold, until the platform begins descending. If the descent of the platform stops before reaching the stowed position, resume pumping.
3. Release the red valve plunger when the platform is in the stowed position.
4. Call your supervisor or qualified repair service.

Emergency Lowering Decal







SECTION 3: MAINTENANCE

General Maintenance Tips

Regular inspection and conscientious maintenance is the key to efficient economical operation of your scissorlift. 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 preventive 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.



NEVER PERFORM SERVICE ON THE MACHINE (WITH THE PLATFORM ELEVATED) WITHOUT FIRST BLOCKING THE BEAMS (SCISSORS) ASSEMBLY IN PLACE!

- ◆ Block scissors assembly using maintenance locks if machine is in the elevated/extended position.
- ◆ 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.

General Maintenance Tips (Continued).....



IMMEDIATELY REPORT TO YOUR SUPERVISOR ANY DEFECT OR MALFUNCTION. ANY DEFECT SHALL BE REPAIRED PRIOR TO CONTINUED USE OF THE SCISSORLIFT.

INSPECTION AND MAINTENANCE SHOULD BE PERFORMED BY QUALIFIED PERSONNEL FAMILIAR WITH THE EQUIPMENT.

HYDRAULIC FLUID UNDER PRESSURE CAN PENETRATE AND BURN SKIN, DAMAGE EYES, AND MAY CAUSE SERIOUS INJURY, BLINDNESS, AND EVEN DEATH. CORRECT LEAKS IMMEDIATELY.

FLUID LEAKS UNDER PRESSURE MAY NOT ALWAYS BE VISIBLE. CHECK FOR PIN HOLE LEAKS WITH A PIECE OF CARDBOARD, NOT YOUR HAND.



Failure to perform preventive maintenance at recommended intervals may result in the unit being operated with a defect that may result in injury or death of the operator.

SHIFT OPERATIONAL CHECKLIST

All checks must be completed before operation of the MEC Scissor Lift.

MODEL NUMBER _____ SERIAL NUMBER _____

1. Keep inspection records up-to-date.
2. Record and report all discrepancies to your supervisor.
3. A dirty machine cannot be properly inspected.

KEEP YOUR MACHINE CLEAN!!



THIS CHECKLIST MUST BE USED AT THE BEGINNING OF EACH SHIFT OR AFTER EVERY SIX TO EIGHT HOURS OF USE. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR. ALWAYS REMEMBER, A LITTLE PRE-VENTATIVE MAINTENANCE CAN SAVE MUCH MORE THAN IT COSTS.

INITIAL

DESCRIPTION

- | | |
|-------|---|
| _____ | 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 hoses and the cables for worn areas or chafing. Replace if necessary. |
| _____ | 5. Check the platform rails and safety gate for damage. |
| _____ | 6. Check the pivot pins for security. |
| _____ | 7. Check that all warning and instructional labels are legible and secure. |



SHIFT OPERATIONAL CHECKLIST (Continued).....

INITIAL **DESCRIPTION**

- | | |
|-------|---|
| _____ | 8. Inspect the platform control. Ensure the load capacity is clearly marked. |
| _____ | 9. Check the hydraulic system pressure (See Machine Specification). If the pressure is low, determine the reason and repair in accordance with accepted procedures as outlined in the service manual. |
| _____ | 10. Check the base controls for proper operation. Check all switches and push buttons for proper operation. |
| _____ | 11. 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** _____

WEEKLY OPERATIONAL CHECKLIST

All checks must be completed before operation of the MEC Scissor Lift.

MODEL NUMBER _____ SERIAL NUMBER _____

1. Keep inspection records up-to-date.
2. Record and report all discrepancies to your supervisor.
3. A dirty machine cannot be properly inspected.

KEEP YOUR MACHINE CLEAN!!



THIS CHECKLIST MUST BE USED AT WEEKLY INTERVALS OR EVERY 25 HOURS, WHICHEVER OCCURS FIRST. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR. ALWAYS REMEMBER, A LITTLE PREVENTATIVE MAINTENANCE CAN SAVE MUCH MORE THAN IT COSTS.

INITIAL

DESCRIPTION

- | | |
|-------|---|
| _____ | 1. Perform all checks listed on Shift Operational Checklist. |
| _____ | 2. Check wheel lug nuts for proper torque (see "Machine Specifications"). |
| _____ | 3. Inspect all arms and pivot points for signs of wear and/or damage. |
| _____ | 4. Lubricate all grease fittings. (see Lubrication Chart). |
| _____ | 5. Check all wire connections. |
| _____ | 6. Check battery electrolyte level and connections. |

DATE _____ INSPECTED BY _____



MONTHLY OPERATIONAL CHECKLIST

All checks must be completed before operation of the MEC Scissor Lift.

MODEL NUMBER _____ SERIAL NUMBER _____

1. Keep inspection records up-to-date.
2. Record and report all discrepancies to your supervisor.
3. A dirty machine cannot be properly inspected.

KEEP YOUR MACHINE CLEAN!!



THIS CHECKLIST MUST BE USED AT MONTHLY INTERVALS OR EVERY 100 HOURS, WHICHEVER OCCURS FIRST. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR. ALWAYS REMEMBER, A LITTLE PREVENTATIVE MAINTENANCE CAN SAVE MORE THAN IT COSTS.

INITIAL	DESCRIPTION
---------	-------------

- | | |
|-------|--|
| _____ | 1. Perform all checks listed on Shift and Weekly Operational Checklists. |
| _____ | 2. Inspect the condition of hydraulic fluid in the reservoir. Oil should have a clear amber color. |
| _____ | 3. Inspect the entire machine for signs of damage, broken welds, loose bolts, improper or makeshift repairs. |
| _____ | 4. Check the pin joints and retaining rings for security. |
| _____ | 5. Check if tires are leaning in or out. |
| _____ | 6. Check that all adjustable flow valves are locked, check setting if any are not locked. |
| _____ | 7. Check that the platform does not drift down with a full load. |
| _____ | 8. Check the electrical motor brushes. |

DATE _____ INSPECTED BY _____

QUARTERLY OPERATIONAL CHECKLIST

All checks must be completed before operation of the MEC Scissor Lift.

MODEL NUMBER _____ SERIAL NUMBER _____

1. Keep inspection records up-to-date.
2. Record and report all discrepancies to your supervisor.
3. A dirty machine cannot be properly inspected.

KEEP YOUR MACHINE CLEAN!!



THIS CHECKLIST MUST BE USED AT QUARTERLY INTERVALS OR EVERY 300 HOURS, WHICHEVER OCCURS FIRST. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR. ALWAYS REMEMBER, A LITTLE PREVENTATIVE MAINTENANCE CAN SAVE MUCH MORE THAN IT COSTS.

INITIAL DESCRIPTION

_____ 1. Perform all checks listed on Shift, Weekly and Monthly Operational Checklists.

Additional Maintenance Requirements For Severe Usage Applications.

INITIAL DESCRIPTION

_____ 2. Change hydraulic filter element.

DATE _____ **INSPECTED BY** _____



SEMI-ANNUAL OPERATIONAL CHECKLIST

All checks must be completed before operation of the MEC Scissor Lift.

MODEL NUMBER _____ SERIAL NUMBER _____

1. Keep inspection records up-to-date.
2. Record and report all discrepancies to your supervisor.
3. A dirty machine cannot be properly inspected.

KEEP YOUR MACHINE CLEAN!!



THIS CHECKLIST MUST BE USED AT SIX MONTH INTERVALS OR EVERY 500 HOURS, WHICHEVER OCCURS FIRST. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR. ALWAYS REMEMBER, A LITTLE PREVENTATIVE MAINTENANCE CAN SAVE MUCH MORE THAN IT COSTS.

INITIAL	DESCRIPTION
_____	1. Perform all checks listed on Shift, Weekly, Monthly and Quarterly Operational Checklist.
_____	2. Have a hydraulic fluid sample analyzed at a test laboratory. Comply with the test results and recommendations to ensure long, trouble free operation.

IMPORTANT: If Hydraulic Fluid Has Been Regularly Maintained It Should Only Require Changing Once Every Year Depending On Maintenance, Temperature, Application, Duty Cycle, And Atmospheric Conditions.

- | | |
|-------|--|
| _____ | 3. Check the operation speeds to ensure they are within specified limits (see Machine Specifications). |
| _____ | 4. Check the emergency lowering system. |
| _____ | 5. Clean and lubricate all push button switches with dry lubricant and ensure that the switches operate freely in all positions. |

SEMI-ANNUAL OPERATIONAL CHECKLIST (Continued).....

INITIAL	DESCRIPTION
---------	-------------

- | | |
|-------|--|
| _____ | 9. Check the tightness of the platform frame and the linkage pins. |
| _____ | 10. Check the overall platform stability. |
| _____ | 11. Check the electrical mounting and hardware connections for security. |
| _____ | 12. Replace the filter element. |
| _____ | 13. Check the king pins for excessive play. |

DATE _____ INSPECTED BY _____



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 START

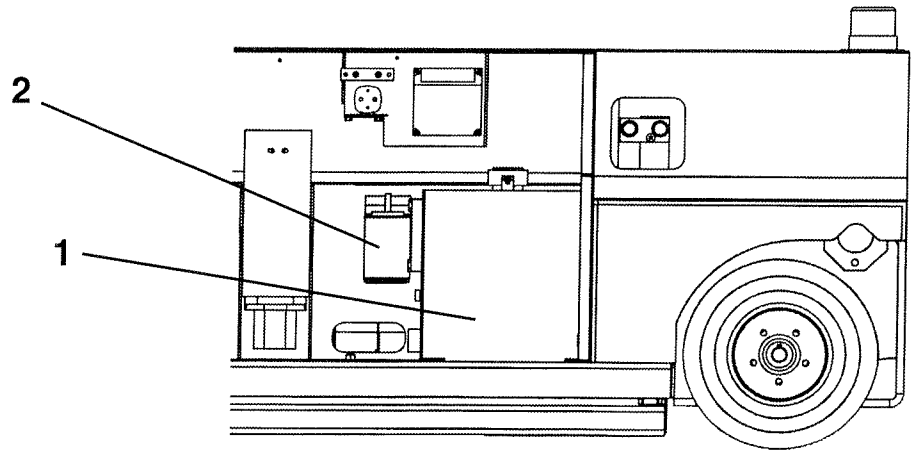
- ◆ Battery cutoff switch?
- ◆ Selector switch turned to proper position (base/ platform)?
- ◆ Emergency stop buttons at both base and platform activated? (Rotate clockwise to release).
- ◆ Batteries fully charged?
- ◆ Are any wires pulled out or loose?
- ◆ No oil pressure?

WHAT TO CHECK IF FUNCTIONS WILL NOT OPERATE:

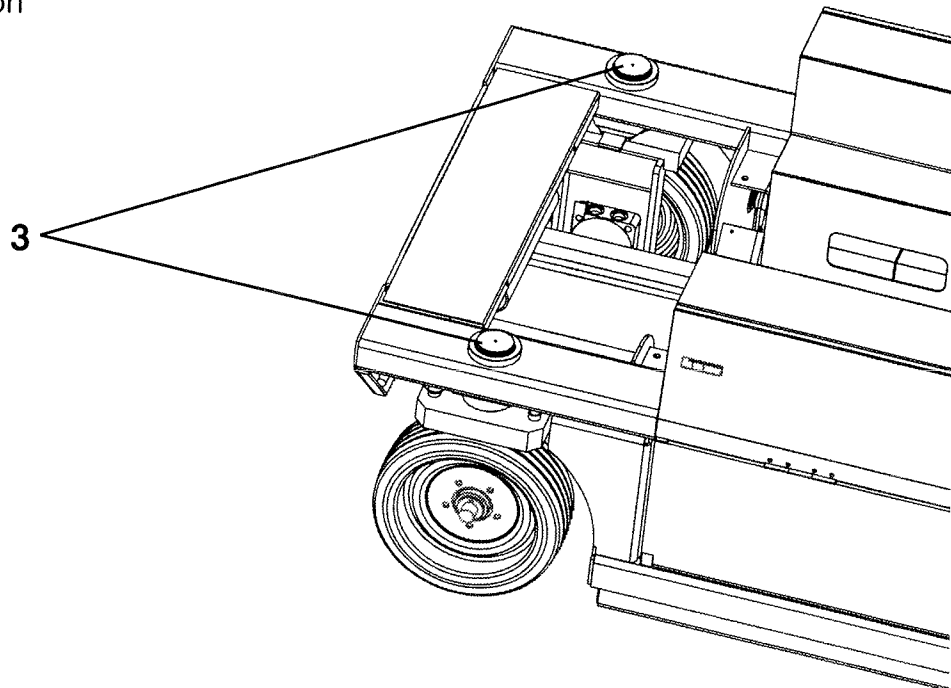
- ◆ Is a function toggle switch or the enable switch not activated?
- ◆ Is the Base/Off/Platform switch in the proper position?
- ◆ Hydraulic fluid level low?
- ◆ Obvious fluid leak or damaged component?
- ◆ Are any wires pulled out or loose?

Lubrication Diagram

Hydraulic Lubrication



Wheel Motor Mount Lubrication



Lubrication Chart

NO.	ITEM	SPECIFICATION	FREQUENCY OF LUBRICATION
1	Hydraulic Reservoir	Anti-Wear 150 SSU (ISO 32/mil spec 0-5606) Fill To The Top Of The Sight Gauge With Platform In The Stowed Position.	Check Daily. Analyze Every Six (6) Months Or 500 Hours. Change Yearly Or Every 1,000 Hours, Whichever Occurs First.
2	Hydraulic Filter	Filter Element	Change Every Six Months Or 500 Hours, Whichever Occurs First For Normal Usage. Change Every Three Months Or 300 Hours, Whichever Occurs First For Severe Usage.
3	Wheel Motor Mount	Lithium N.L.G.I. #2 EP Purge Old Grease.	Weekly Or Every 25 Hours Whichever Occurs First.



Limited Owner Warranty

Mayville Engineering Company, Inc. (MEC) 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 further warrants the structural weldments of the main frame and scissor arms as defined in MEC's current Warranty Policy & Procedures, 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 and prorated thereafter up to one (1) year.

Warranty claims within such warranty period shall be limited to repair or replacement, at MEC's option, of the defective part in question and labor to perform the necessary repair or replacement based on MEC's then current flat rate, provided the defective part in question is shipped prepaid to MEC and is found upon inspection by MEC to be defective in material and/or workmanship.

Mayville Engineering Company, Inc. 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 is authorized to alter the terms of this warranty, or in any manner assume on behalf of MEC any liability or obligation which exceeds MEC's obligations under this warranty.





Aerial Work Platforms

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An Employee Owned Company

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