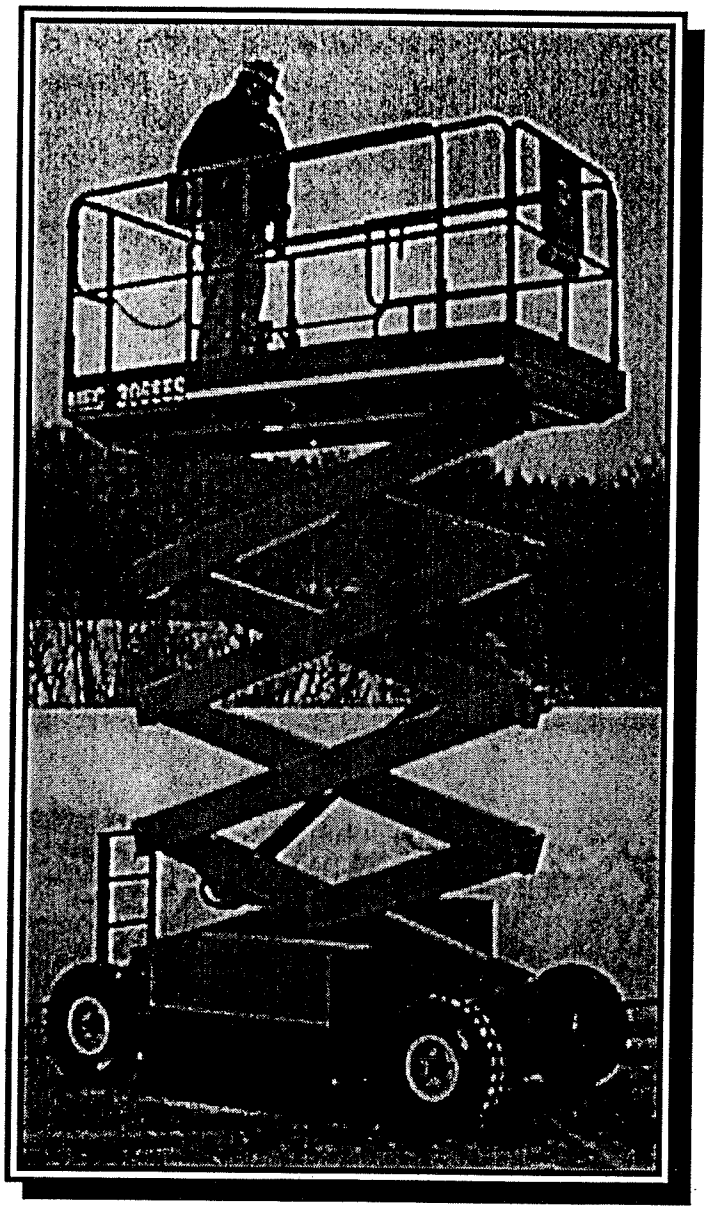

Operation and Safety Manual for

Model 3068ES Aerial Work Platform

Aerial Work Platforms

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.

FOREWORD

The purpose of this manual is to provide users with the operating procedures essential for the promotion of proper machine operation for its intended purpose. It is important to over-stress proper machine usage. All information in this manual should be **READ** and **UNDERSTOOD** before any attempt is made to operate the machine. **YOUR OPERATING MANUAL IS YOUR MOST IMPORTANT TOOL**-keep it with the machine. REMEMBER THAT ANY EQUIPMENT IS ONLY AS SAFE AS THE OPERATOR.

BECAUSE THE MANUFACTURER HAS NO DIRECT CONTROL OVER MACHINE APPLICATION AND OPERATION, PROPER SAFETY PRACTICES ARE THE RESPONSIBILITY OF THE USER AND ALL OPERATING PERSONNEL.

ALL INSTRUCTIONS IN THIS MANUAL ARE BASED ON THE USE OF THE MACHINE UNDER PROPER OPERATING CONDITIONS, WITH NO DEVIATIONS FROM THE ORIGINAL DESIGN. ANY ALTERATION AND/OR MODIFICATION OF THE MACHINE IS STRICTLY FORBIDDEN WITHOUT EXPRESS WRITTEN APPROVAL FROM MAYVILLE ENGINEERING COMPANY, INC.

All procedures herein are based on the use of the machine under proper operating conditions, with no deviations from original design intent as per ANSI regulations.

Read and Comply

The ownership, use, service and/or maintenance of this machine is subject to various federal, state and local laws and regulations. It is the responsibility of the owner/user to be knowledgeable of these laws and regulations and to comply with them. Owner/user/operator must be familiar with Sections 6, 7, 8, 9 and 10 of ANSI A92.6 Standard. These sections contain the responsibilities of the owners, users, operators, lessors and lessees concerning safety, training, inspection, maintenance, application and operation.

⚠ WARNING

ANY MODIFICATION OF THIS MACHINE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER IS PROHIBITED. DO NOT REPLACE ANY COMPONENT OR PART WITH ANYTHING OTHER THAN ORIGINAL MEC REPLACEMENT PARTS WITHOUT THE MANUFACTURER'S CONSENT.

TABLE OF CONTENTS

1. Safety 1-1
Use of Notes, Cautions and Warnings 1-1
General Operating Rules, Safety and Limitations 1-1
Operator Qualifications 1-1
Safety Features 1-2
Maintenance Locks Installation 1-3
Maintenance Locks Stowage 1-3

2. Introduction 2-1
Product Description 2-1
Equipment Literature 2-1
Dealer Inspection 2-1
Specifications 2-3

3. Operation 3-1
Controls and Indicators 3-1
Equipment Operation 3-4
Extending Extended Platform 3-7
Retracting Extended Platform 3-7
Raise Sheet Loading (Drywall) Gate 3-8
Lower Sheet Loading (Drywall) Gate 3-8
Stowing and Erecting Platform Rails 3-8
Adjustable Control Box 3-8

4. Operator Maintenance 4-1
Model 3068ES Aerial Work Platform Walk-a-round Inspection 4-1
Inspection and Lubrication 4-5
Quarterly Inspection Schedule 4-6
Hydraulic System Bleeding 4-7
Hydraulic Pump Motor Servicing 4-7
Check and Fill Hydraulic Reservoir 4-7
Battery Replacement 4-8
Spin-On Oil Filter Replacement 4-9
Service Helps 4-9
Decal Replacements 4-10
Major Alterations/Repairs Record 4-16
Examination/Test Record 4-17

⚠ WARNING

DO NOT PERFORM PRELIMINARY INSTALLATIONS, OPERATE, SERVICE, REPLACE, ADJUST OR MAINTAIN EQUIPMENT ON THIS MACHINE UNTIL YOU HAVE THOROUGHLY READ AND UNDERSTOOD THE SAFETY SECTION OF THIS MANUAL, AND HAVE READ AND UNDERSTOOD ALL SECTIONS OF THIS MANUAL THAT APPLY TO THE JOB YOU ARE DOING ON THIS MACHINE.

FAILURE TO COMPLY WITH ALL WARNINGS POSTED ON THIS MACHINE AND WRITTEN IN THIS MANUAL COULD CAUSE DEATH, SERIOUS INJURY OR PROPERTY DAMAGE.

⚠ WARNING

FAILURE TO COMPLY WITH SAFETY PRECAUTIONS LISTED IN THIS SECTION MAY RESULT IN MACHINE DAMAGE, PERSONAL INJURY OR DEATH AND IS A SAFETY VIOLATION.

- REMOVE ALL RINGS, WATCHES, AND JEWELRY WHEN PERFORMING ANY MAINTENANCE.
- DO NOT WEAR LONG HAIR UNRESTRAINED, OR LOOSE FITTING CLOTHING AND NECKTIES WHICH ARE APT TO BECOME CAUGHT ON OR ENTANGLED IN EQUIPMENT.
- OBSERVE AND OBEY ALL WARNINGS AND CAUTIONS ON MACHINE AND IN SERVICE MANUAL.
- KEEP OIL, GREASE, WATER, ETC. WIPED FROM STANDING SURFACES AND HAND HOLDS.
- NEVER WORK UNDER AN ELEVATED PLATFORM UNTIL SAFETY PROPS HAVE BEEN ENGAGED OR PLATFORM HAS BEEN SAFELY RESTRAINED FROM ANY MOVEMENT BY BLOCKING OR OVERHEAD SLING.
- BEFORE MAKING ADJUSTMENTS, LUBRICATING OR PERFORMING ANY OTHER MAINTENANCE, SHUT OFF ALL POWER CONTROLS.
- BATTERY SHOULD ALWAYS BE DISCONNECTED DURING REPLACEMENT OF ELECTRICAL COMPONENTS.
- KEEP ALL SUPPORT EQUIPMENT AND ATTACHMENTS STOWED IN THEIR PROPER PLACE.
- USE ONLY APPROVED, NONFLAMMABLE CLEANING SOLVENTS.

— 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/ SIAA92.6 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.

⚠ WARNING

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

CHAPTER 1
SAFETY

Following are definitions of labeling you might encounter on aerial platforms.

⚠ CAUTION - Hazards or unsafe practices which **COULD** result in minor personal injury or product damage.

⚠WARNING - Hazards or unsafe practices which **COULD** result in severe personal injury or death.

⚠ DANGER - Immediate hazards which **WILL** result in severe personal injury or death.

GENERAL OPERATING RULES, SAFETY AND LIMITATIONS

MEC designs the 3068ES work platforms to be safe and reliable. They are rugged and maneuverable, but must be used only for purposes and in ways intended. **That is to raise personnel, tools, and necessary equipment to overhead work areas.**

- The owner/user/operator of the machine should not accept operation responsibility until this manual has been read and operation of the machine, under the supervision of an experienced and qualified operator, has been completed. Owner/user/operator must be familiar with sections 6, 7, 8, 9 and 10 of ANSI A92.6-1990. These sections contain the responsibilities of the owner, users, operators, lessors and lessees concerning safety, training, inspection, maintenance, application and/or operation. If there is a question on application and/or operation, Mayville Engineering Co., Inc. should be consulted.
- Respect your machine; **do not** neglect or misuse it.
- Inspect your machine before using. **Do not** use machine if it is not working properly in any way.
- Check job site for unsafe working conditions. **Do not** operate on uneven or soft terrain. **Do not** raise platform if machine is on an incline.
- Use machine only for purposes for which it was designed.
- Never take chances. **Do not** use machine if your physical or mental capabilities are limited due to illness or tiredness, or if you are taking over the counter or prescription drugs which might impair or limit your mental or physical capabilities.
- **Do not** exceed the load capacity of the platform.
- **Do not** smoke while charging the batteries.
- **Do not** enter or exit platform while machine is in motion.
- An operator of any type of work platform is subject to certain hazards that cannot be protected by mechanical means. It is therefore essential that operators be competent, careful, physically and mentally fit and thoroughly trained in safe operation of this machine.
- It is imperative that MAYVILLE ENGINEERING be notified immediately of any incident involving a MEC product. Even if no injury or property damage is evident, the factory should be contacted by telephone and provided with all necessary details.
  It should be noted that failure to notify the Manufacturer of an incident involving a MEC product within 48 hours of such an occurrence may void any warranty consideration on that particular machine.

⚠ DANGER

DO NOT OPERATE MACHINE NEAR POWER LINES. THE PLATFORM AND ENCLOSURES ARE NOT INSULATED.

PERSONNEL SHALL ALWAYS STAND ON THE FLOOR OF THE PLATFORM, NOT ON LADDERS, PLANKS, RAILINGS, BOXES OR OTHER DEVICES FOR A WORK POSITION.

THIS MACHINE IS NOT INTENDED TO BE USED AS A FORKLIFT, CRANE, OR TO PUSH OR PULL ANOTHER OBJECT.

AVOID CONTACT WITH MOVING OR STATIONARY OBJECTS. THOROUGHLY CHECK CLEARANCES. DO NOT USE MACHINE AS A SUPPORT FOR AN OVERHEAD STRUCTURE.

IT IS PROHIBITED TO TAKE ON ANY ADDITION, SUCH AS SIGNBOARDS, THAT WOULD INCREASE WIND LOADING.

FAILURE TO FOLLOW THIS WARNING WILL CAUSE DEATH OR PERSONAL INJURY.

OPERATOR QUALIFICATIONS

All MEC aerial work platforms must be operated and maintained by qualified personnel only!

To qualify for operation and maintenance of this unit, an individual must read and thoroughly understand this manual and undergo training by a competent instructor. If a proposed operator or maintenance person fails to understand any segment of this manual, his or her supervisor can clarify the misunderstanding through written correspondence or a phone call to:

Mayville Engineering Co., Inc.
Aerial Work Platforms
715 South Street
Mayville, WI 53050 USA
Phone: 920-387-4500
800-387-4575
FAX: 920-387-5817

SAFETY FEATURES

Automatic Parking Brake:
The Automatic Parking Brake is a spring-actuated, normally-ON system. The brake is released during the drive cycle by hydraulic pressure built up in the drive circuit. A brake valve is used to maintain release during drive. When finished driving, an orifice is employed to control the braking function during deceleration.

To Manually Lock Out Brakes: Turn thumbscrew Clockwise until completely closed. Pump upper plunger until it has built up pressure and stops.

To Release Locked Out Brakes: Turn thumbscrew Counter Clockwise until fully open. The machine is in normal Drive/Lift mode with the thumbscrew in this position. (Figures 1-1, 1-4)

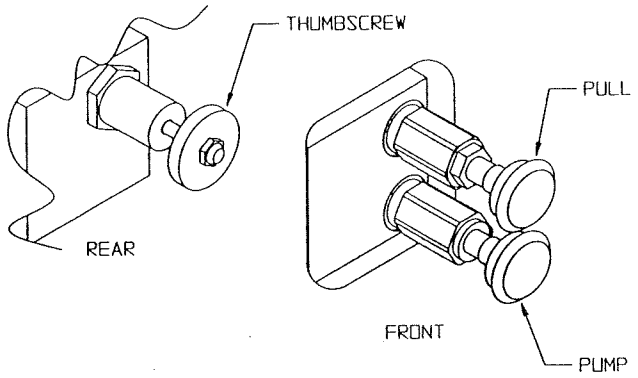

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Figure 1-1. Brake Lockout and Emergency Down Controls

Emergency Stop
The Emergency Stop is a plunger type switch and is located in two places - on the upper control box assembly (Figure 1-2) on the platform, and on the lower control panel (Figure 1-3) on the side of the machine. The Emergency Stop is actuated by depressing the red cap which de-energizes power supplied to the control electrical circuits. To reactivate the circuits, turn the red cap approximately a quarter turn clockwise until the cap "pops" back out. Another means to effect an emergency stop is to use the BATTERY DISCONNECT (Figure 3-1) which removes all power to the circuits.

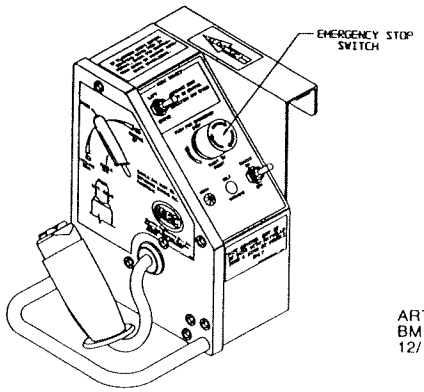

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Figure 1-2. EMERGENCY STOP-UPPER CONTROL BOX ASSEMBLY

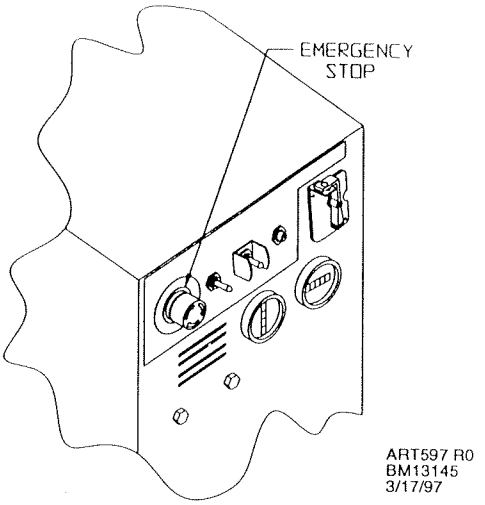

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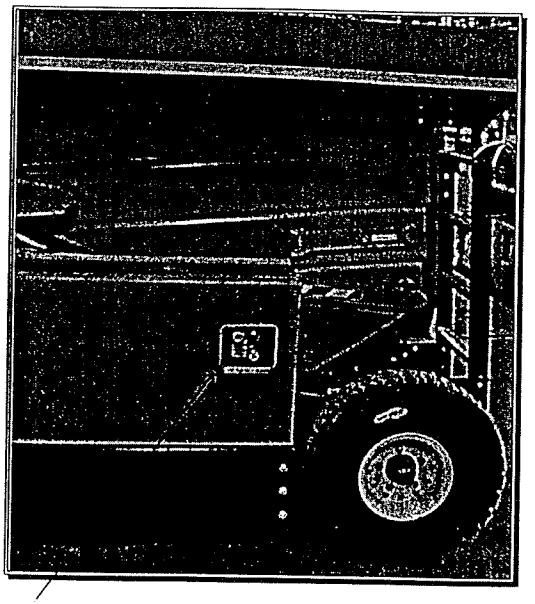
Figure 1-3. EMERGENCY STOP-LOWER CONTROL PANEL

Emergency Down (Figure 1-1, 1-4)
The Emergency Down Controls are accessible by a person on the ground and are used to manually lower the raised platform. If the platform cannot be lowered by the operator at the upper control box or base controls, the Emergency Down Controls are located in front of the left rear wheel. **To Lower Platform:** Pull lower plunger out and hold. At the same time, pump uppermost plunger. To stop platform, release lower plunger.



EMERGENCY DOWN & BRAKE LOCKOUT PANEL

Figure 1-4. EMERGENCY DOWN and BRAKE LOCKOUT

Speed Limit Switch
This switch is a standard safety feature that will limit driving speed of the machine when the platform is raised above approximately 8-10 feet. The Speed Limit Switch is located in the base, near the middle of the machine.

SAFETY FEATURES

Automatic Pothole Protection

Pothole bars are a MEC original safety feature established in 1982. The concealed Pothole Protection system with positive lock is a standard feature of this unit. MEC Pothole Protection helps prevent tip overs if a machine with the platform elevated is accidently driven into some type of depression, opening or hole in the surface on which it is used. The pothole bars are located under each side of the base. The bars descend as the platform raises. If either pothole bar encounters any obstruction that will not allow the bars to lock in place, stabilizer switches will not be actuated and the machine will not drive.

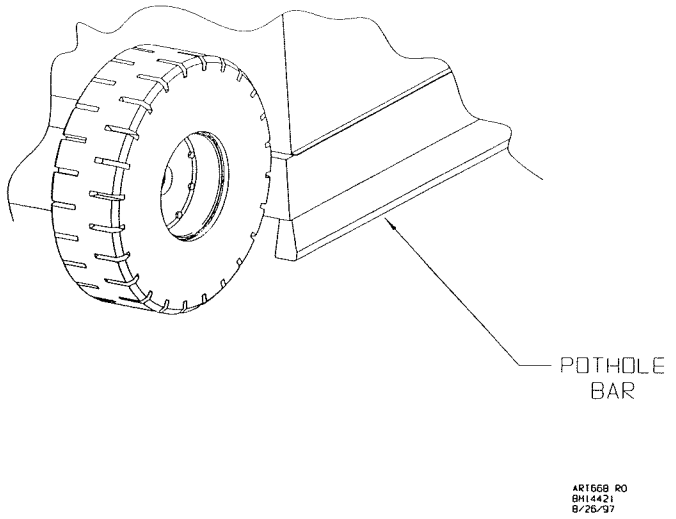


Figure 1-5. Pothole Bars

If the pothole bars cannot be fully deployed and the machine will not drive, lower the platform to the stowed position. Remove any obstruction and/or reposition the machine to a location clear of any pothole or depression. The pothole bars should deploy and enable the machine to be driven. Pothole bar operation can be tested by placing a 2x4 under the bars and raising the platform. Drive function will cease when the platform reaches approximately 8-10 feet.

MAINTENANCE LOCKS INSTALLATION

⚠ WARNING

MAINTENANCE LOCKS MUST BE INSTALLED when maintaining or servicing machine with platform fully or partially extended.

Working through beams on scissors lifting device creates a hazardous situation which could cause death or personal injury.

FOLLOW MAINTENANCE LOCKS PROCEDURE!

1. Remove load from platform.

2. Using lower control panel, raise platform until both maintenance locks (Figure 1-6) can be pivoted, 1 up, 1 down.

3. While persons A and B hold each maintenance lock upright, person C slowly lowers platform using lower control panel until each lock engages pivot pin. Persons A and B move clear.

4. Person C lowers platform until both locks fully engage pins and weight of platform and scissors rests completely on both maintenance locks.

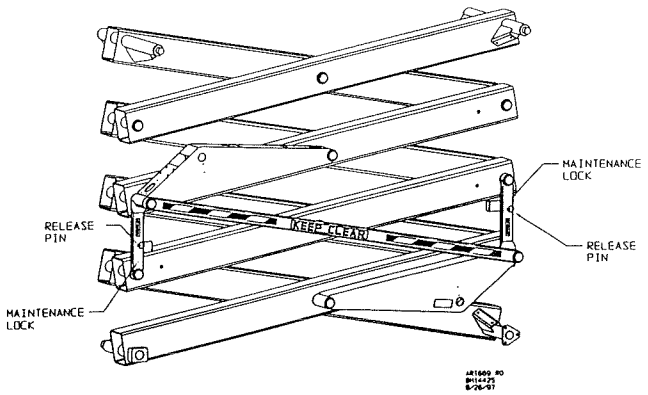


Figure 1-6. Maintenance Locks

MAINTENANCE LOCKS STOWAGE

1. Using lower control panel, raise platform approximately 2 to 3 inches - just far enough that each maintenence lock will clear pivot pin collars.

2. Pull release pin ring on each maintenance lock and swing lock parallel with scissor beam. Align release pin with receiving hole in beam and release ring so pin engages beam.

3. Lower platform to stowed position.

CHAPTER 2
INTRODUCTION

PRODUCT DESCRIPTION

The MEC 3068ES Aerial Work Platform (Figure 2-1) is a two-wheel drive, self propelled, electric-over-hydraulic-operated unit designed for use on hard, level surfaces such as concrete, asphalt or wood. **The purpose of this unit is to raise personnel, tools, and necessary equipment to overhead work areas.**

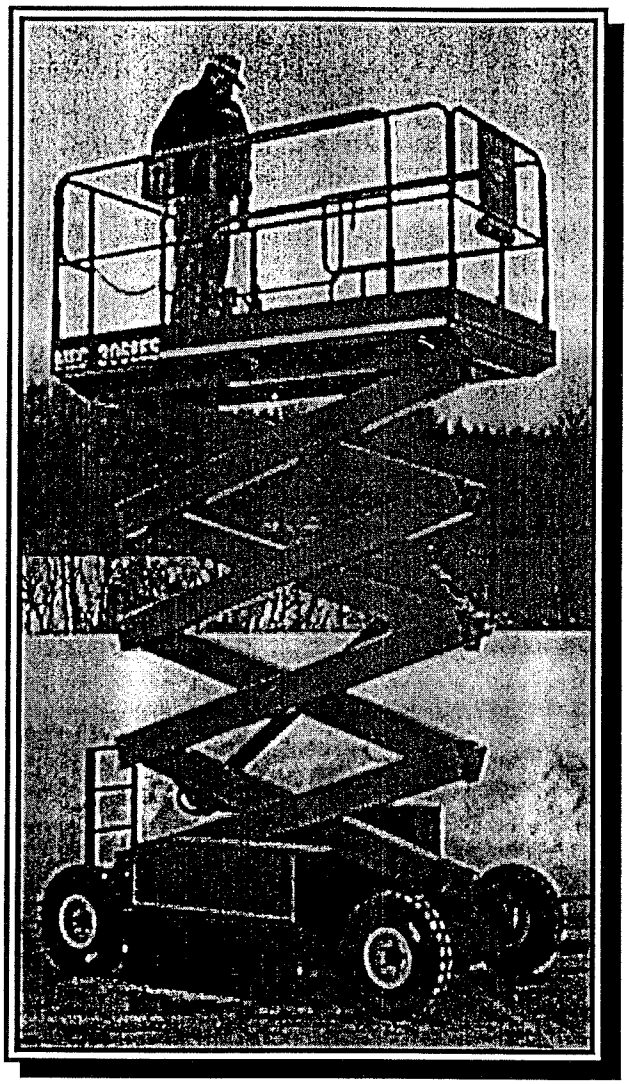


Figure 2-1. 3068ES Aerial Work Platform

The platform is raised and lowered by a hydraulic cylinder within a single beam scissors mechanism up to 30 feet. All units are steered by a hydraulic cylinder, which is controlled from the upper control box on the platform. Auxiliary lift controls are located at the lower control panel on the side of the unit.

A standard feature of the 3068ES, the torque increase feature, is used to improve drive when traveling up inclines. A standard, moveable, sheet-loading rear entrance raises to allow 4-foot-wide material to be loaded and unloaded.

EQUIPMENT LITERATURE

The unit is shipped with the following literature, which is inserted in the manual tube located on the front rail of the platform.

- Material Safety Data Sheet (P/N 6535)
- 3068ES Operating and Safety Manual (P/N 8820)
- ANSI/SIA Manual of Responsibilities (P/N 7822)
- Battery Charger Operating Inst. (P/N 5545C)
- Dealer Pre-delivery Inspection Form (P/N 7197)
- Warranty Registration Card (P/N 5524)
- EMI Safety Manual (P/N 7004)

Replacement Literature can be ordered by contacting the factory. To help us serve you, please be prepared to provide the complete publication name and part number (P/N).

PRE-DELIVERY DEALER INSPECTION

Preliminary Unpacking Instructions

1. Maintenance locks must be engaged prior to inspecting or servicing the unit and when platform is extended.

2. Remove all packing materials and inspect unit for damage during shipment. If any damage is found, please note it on the freight bill and report it to the shipper.

3. Every machine is fully assembled when shipped from the factory. All fluids are included, the levels must be checked and added as required before initial use. Perform the Walk-A-Round check as described in chapter 4, checking for any possible operation deficiencies. Have any such deficiencies corrected before using the machine. During the check, record any missing or incorrectly located Safety Decals. Order and install before use. All Safety Decals must be affixed to the unit in its proper location. See decal layout (Figure 4-7).

4. Check each item in Table 4-1 as inspection is

performed. If any item is found to be "N/O", make the necessary correction and check the "R/P" box. (see KEY in Table 4-1).

5. Turn the Battery Disconnect Switch clockwise to reenergize the system for operation.

6. Reset both EMERGENCY STOP switches (Figures 1-2, 1-3).

7. Press Circuit Breaker on lower panel to reset in case breaker has been tripped.

NOTE

File Warranty Claim according to Policies and Procedures which are listed in Publication #5638, Aerial Work Platforms Policies, Procedures and Parts Catalog.

LOADING AND UNLOADING

1. Common sense and planning must be applied to control the movement of the machine when lifting it with a crane

2. Transport vehicle must be parked on a level surface.

3. Transport vehicle must be secured to prevent rolling while machine is being loaded.

4. Vehicle capacity, loading equipment and surfaces must be capable of supporting machine weight and meet ANSI/OSHA Standards. The platform of the machine must remain fully lowered during all loading and transport procedures.

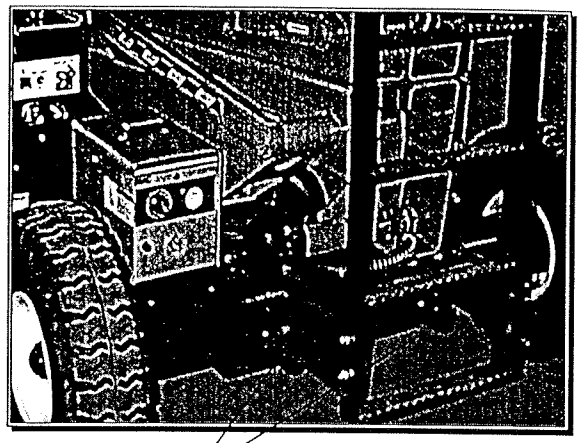
5. The machine must be secured to the transport vehicle with chains or straps of ample load capacity. (Refer to Figure 2-2)

TRANSPORTING THE UNIT (FIGURE 2-2)

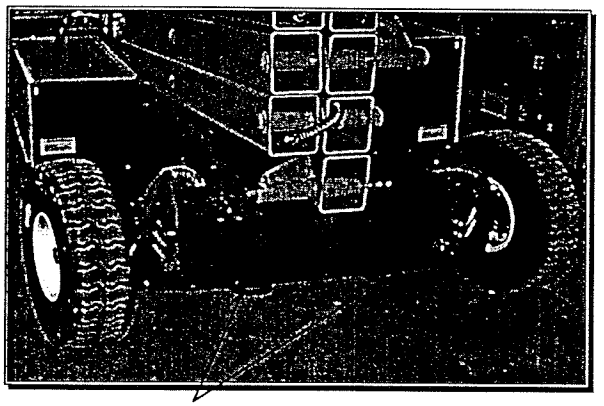
1. The MEC 3068ES Aerial Work Platform may be towed, from the tiedown point, up to 1,000 ft. at a speed no greater than 3 m.p.h.

2. To tow the unit, the Brake Lockout must be engaged. See lockout instructions in Safety section.

3. The Tiedown Loops are provided to secure the unit during transportation while on trailers or truck beds. The equipment used for these functions shall meet applicable State and Federal D.O.T. Regulations, and applicable ANSI/OSHA Standards.



REAR TIEDOWN LOOPS



FRONT TIEDOWN LOOPS

FIGURE 2-2. TRANSPORTING THE UNIT

PARKING AND STORING

Park and stow the machine as follows:

1. Drive the machine to a reasonably well protected and well ventilated area.

2. Ensure the platform is fully lowered.

3. Position the EMERGENCY STOP switch to the OFF position.

SPECIFICATIONS

Important dimensional, capacity and capability information is provided for your information. The illustration below contains letter callouts which correspond to letters in the far right side of **Table 2-1,** on the next page, to permit you to clearly identify selected, significant dimensional data that you might require. Because we constantly strive to improve our products, we may make changes to these specifications without issuing a notice to you.

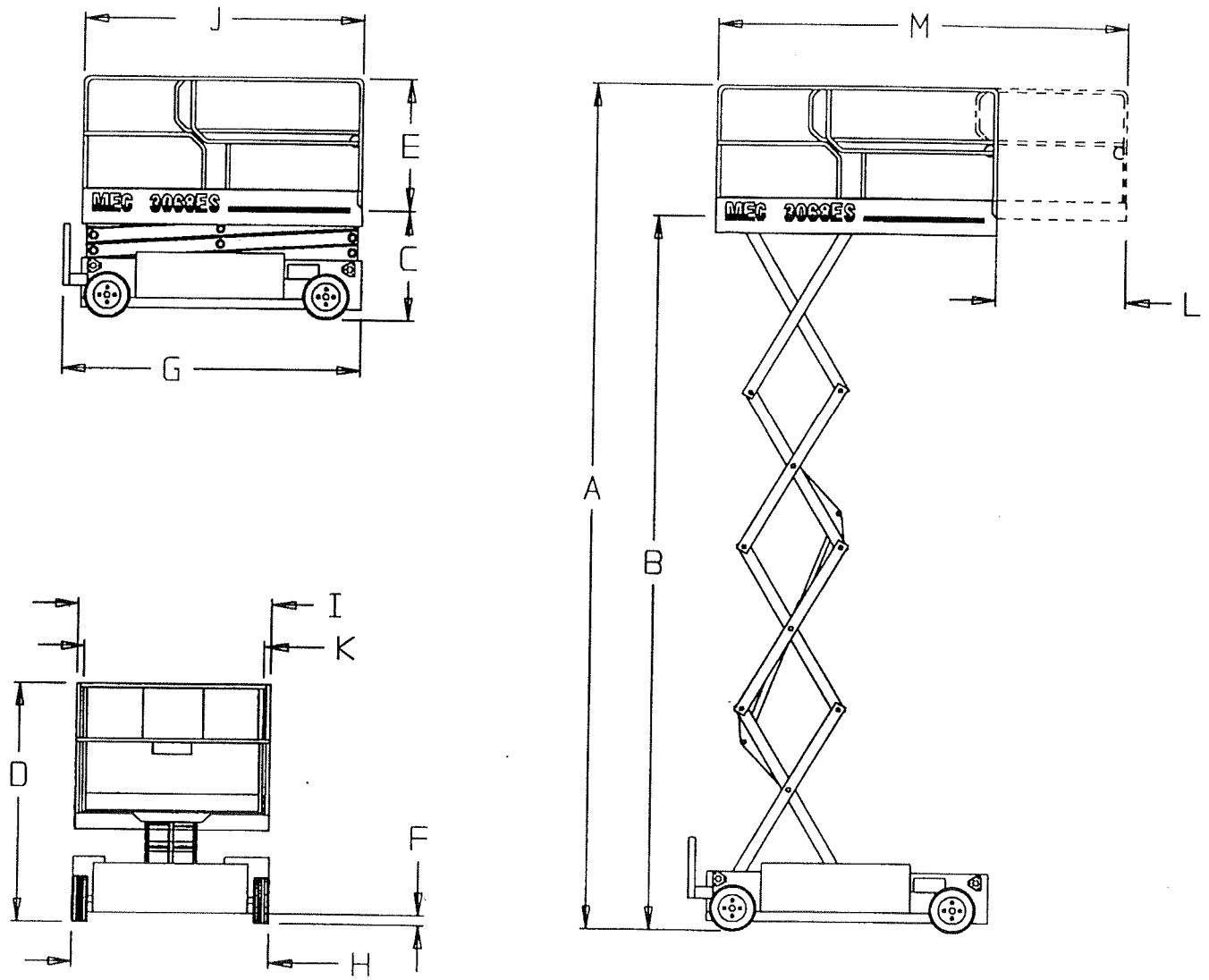


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Figure 2-3. Specifications and Locations

Specifications

Height	Clearance required at full extension	34' (10.25m)	**A**
	To Platform	29'10.5" (9.11m)	**B**
	Stowed - To Platform	60" (1.52m)	**C**
	Overall Stowed	104.5" (2.66m)	**D**
	Overall Stowed with rails folded	77" (1.96m)	
	Rails		
	Rail Height	43.5" (1.11m)	**E**
	Kick Panels	6.0" (0.15m)	
	NOTE: Add 8' when sheet loading with gate extended.		
	Ground Clearance	6.5" (16.5cm)	**F**
	Ground Clearance w/pot hole protection	1.375" (3.49cm)	
Length	Platform Stowed and Rails Up	110" (2.79m)	**G**
Width	Machine	68" (1.73m)	**H**
Working Platform Area	Platform Width	60" (1.52m)	**I**
	Platform Length	109.75" (2.79m)	**J**
	Extended Platform Width	52.38" (1.33m)	**K**
	Extended Platform Length	52.38" (1.33m)	**L**
	Overall Platform Width	158" (4.01m)	**M**
Entrance Opening	Normal Operation	29" (.74m) x 42" (1.07m)	
	Sheet Loading Operation	29" (.74m) x 49" (1.25m)	
Lift Capacity	Main Platform **TOTAL**	1,000 lbs (455 kg)	
	Extended Platform **NOT TO EXCEED**	400 lbs (181 kg)	
Weight		Approx. 6494 lbs (2946 kg)	
Turning Radius	Inside	63" (1.60m)	
	Outside	169" (4.30m)	

Table 2-1. Specifications and Locations

Table 2-2. Speed

Lift	From Base	Approx. 36 seconds
	From Platform	Approx. 36 seconds
Lower		26 seconds
Drive		3 MPH
	Platform - Fully Extended	1/2 MPH

Table 2-3. Electrical

Batteries (24 VDC)		8 @ 6V Deep Cycle Golf Cart 10.25" L x 7"W x 11.25" H BCI Group Size GC2 105 minutes @ 75 amps draw 218 amp hour @ 20 hour rating
	NOTE **Replacement battery MUST WEIGH AT LEAST 60 POUNDS to maintain the stability factor of the machine.**	
Charger	Input	120 VAC, 60 Hz, 12 amp
	Output	48 VDC, 20 amps tapering, timed shutoff
Electric Motor		48 VDC, 4 hp @ 82 amps, 3000 RPM Continuous Duty

Table 2-4. Hydraulic

Hydraulic Reservoir Capacity		7 gallons
Hydraulic Filter		10 micron cartridge (P/N 6156)
Hydraulic Pressure Settings	Main Line	2500 PSI
	Lift	2200 PSI
	Steering	1200 PSI

Table 2-5. Tires

Tire Size	25.5" x 7.9" Hard Rubber Tires

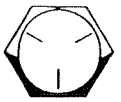
NOTE

Tires on the MEC3068ES must be replaced with manufacturer's replacement tires to maintain stability factor of the machine. LUG NUTS TO BE TORQUED TO 75-85 FT. LBS. AND CHECKED WEEKLY.

Table 2-6. Torque Specifications

Hydraulic Valve	Valve to Manifold (cartridge)	12 ft. lbs.
	Valve Nut to Valve	15 in. lbs.
Hydraulic Drive Motor		300 ft. lbs. then tighten to next slot on castle nut and install cotter pin.
Rear Axle		Tighten to take play out of bearings, and then tighten to next cotter pin slot. **Do not overtighten.**

Table 2-7. Bolt Torque

			
Bolts	**Grade 2**	**Grade 5**	**Grade 8**
1/4-20	49 in. lbs.	76 in. lbs.	9 ft. lbs.
5/16-18	8 ft. lbs	13 ft. lbs.	18 ft. lbs.
3/8-16	15 ft. lbs.	23 ft. lbs.	33 ft. lbs.
7/16-14	24 ft. lbs.	37 ft. lbs.	52 ft. lbs.
1/2-13	37 ft. lbs.	57 ft. lbs.	80 ft. lbs.

Grade markings for bolts grades 2, 5,and 8 are based on SAE J429. Markings may be raised or depressed (manufacturer's option).

NOTE

Any bolt replacement should be of the same grade or greater than original bolt.
Any questions, call factory for verification

Floor Loading Pressure

In certain field applications there is a need to specify the weight and rated work load of a machine in terms of **"Floor Loading Pressure"**. There are two basic measurements on this subject that must be considered: **Local Concentrated Pressure** and **Overall Uniform Pressure**.

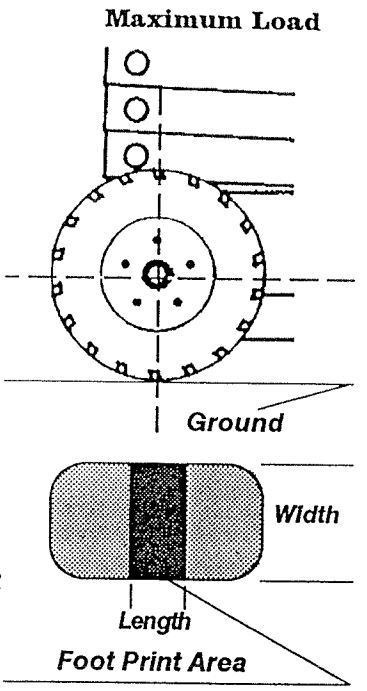
Local Concentrated Pressure

This measurement is of concern in conditions where the floor surface (i.e. tile floor) on which the machine is being used needs to be protected from indentations or breaking due to high pressure being exerted on a relatively small area. This pressure is extremely high, especially for solid or monofilled tires, since the harder the tire the smaller the footprint.

Local concentrated pressure is based on:

(1) The maximum load exerted on one tire of the machine

(2) The actual measured footprint area of the particular tire



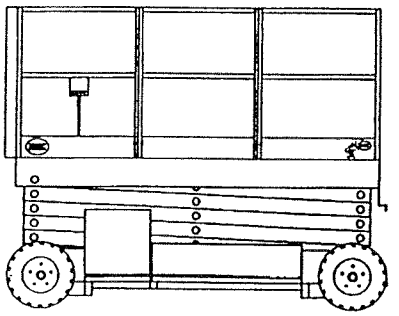
Foot Print = Length x Width

$$\textbf{PSI} = \frac{\textbf{[GVW+Rated Load]} \div \textbf{Foot Print}}{\textbf{4 (Tires)}}$$

PSF = PSI x 144

Overall Uniform Pressure

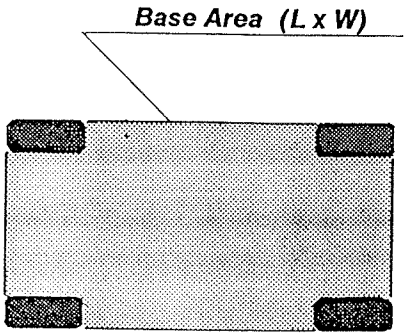
This pressure is of concern in conditions were the machine(s) is being used on a beam supported floor or surface. The machine's ***overall uniform pressure*** requires checking to ensure it does not exceed the maximum allowable pressure the floor can support. Maximum allowable pressure is determined by the architect or structural engineer, and therefore, cannot be exceeded for reasons of public safety.



Overall Uniform Pressure is calculated based on:

(1) Combined load of machines GVW plus rated load

(2) Machine's base area. The base area is defined as the area of the base or the area drawn by lines to the outside of the tires as projected onto the ground; whichever is greater.



$$\textbf{PSI} = \frac{\textbf{GVW + Rated Loaded}}{\textbf{Base Area}}$$

PSF = PSI x 144

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CHAPTER 3
OPERATION

This chapter provides identification of all controls and indicators on the MEC 3068ES aerial work platform and provides specific instructions on how to operate the unit.

CONTROLS AND INDICATORS

All controls and indicators provided on the unit are identified by a number and pointed out in an illustration in this chapter. The name and a description of each control and indicator are provided after the number.

Lower Control Panel Controls and Indicators (Figure 3-1)

The lower control panel is located at the rear right hand corner of the base in front of the right rear wheel. The panel is used for initial start-up of the unit and during performance of the daily walk-a-round checks before operating the machine.

1. EMERGENCY STOP Switch — Press red cap of switch to activate. All electrical power is turned off and all hydraulic power is shut down. To reset switch, turn red cap of switch approximately a 1/4 turn clockwise until the cap 'pops' out.

2. UP/DOWN Switch — Controls movement of platform. UP position energizes hydraulic system to raise platform. DOWN position energizes hydraulic system to lower platform. Switch will return to center or neutral position when released.

3. BASE/PLATFORM Switch — Controls electrical power to the switches and controls circuits. BASE/PLATFORM position allows flow of electrical power.

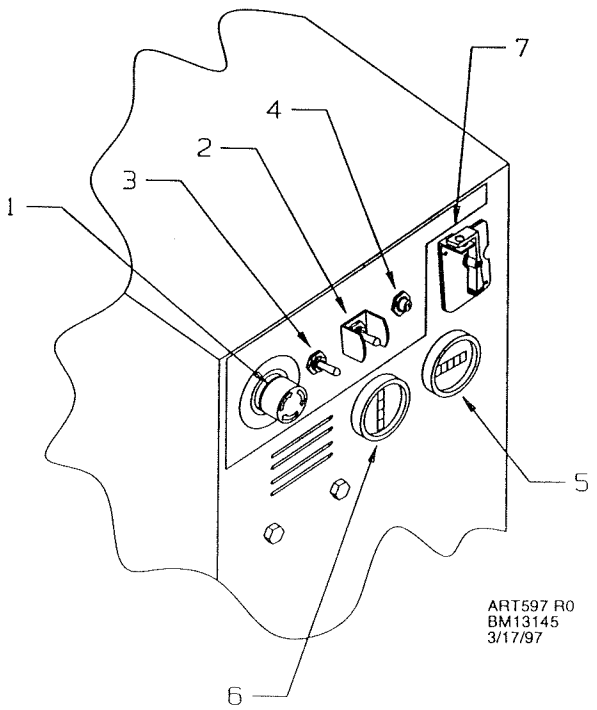


Figure 3-1. Lower Control Panel Controls and Indicators

4. CIRCUIT BREAKER	Provides circuit protection to engine electrical system. When pushed in, electrical power will flow. When "tripped" (switch sticking out), circuit is interrupted.
5. Operation Hour Meter	Optional meter records number of hours the unit has been operated.
6. Battery Charge Indicator	Optional indicator shows the approximate amount of electrical charge contained in the batteries.
7. Battery Disconnect	Turn handle counterclockwise to an upright position to remove batteries from all electrical circuits. At this position the handle can be locked in the disconnect position. Turn handle clockwise to connect electrical circuits to the batteries.

Upper Control Box Controls and Indicators (Figure 3-2)

The control box is located on the right hand platform rail and is the primary station used during normal operation of the unit. This set of controls may be used while the operator is walking along the side of the unit or while on the platform. This set is also used during performance of the daily walk-a-round checks. The control box can be removed by twisting the cannon plug on the box bottom counterclockwise. The box can be secured to prevent unauthorized use of the machine at the job site.

1. TILT WARNING Light	Optional light illuminates if unit is not level and platform is being raised.
2. Tilt Alarm	Optional alarm sounds if unit is not level and platform is being raised.
3. TORQUE ON/OFF Switch	**ON** position provides more power for driving, particularly for going up an incline (up to 20% gradeability). Ground speed is limited to 1-1/2 m.p.h. with TORQUE **ON.** Normal power in OFF position.
4. EMERGENCY STOP Switch	Press red cap of switch to activate. All electrical power is turned off and all hydraulic power is shut down. To reset switch, turn red cap of switch approximately 1/4 turn clockwise until the cap "pops' out.

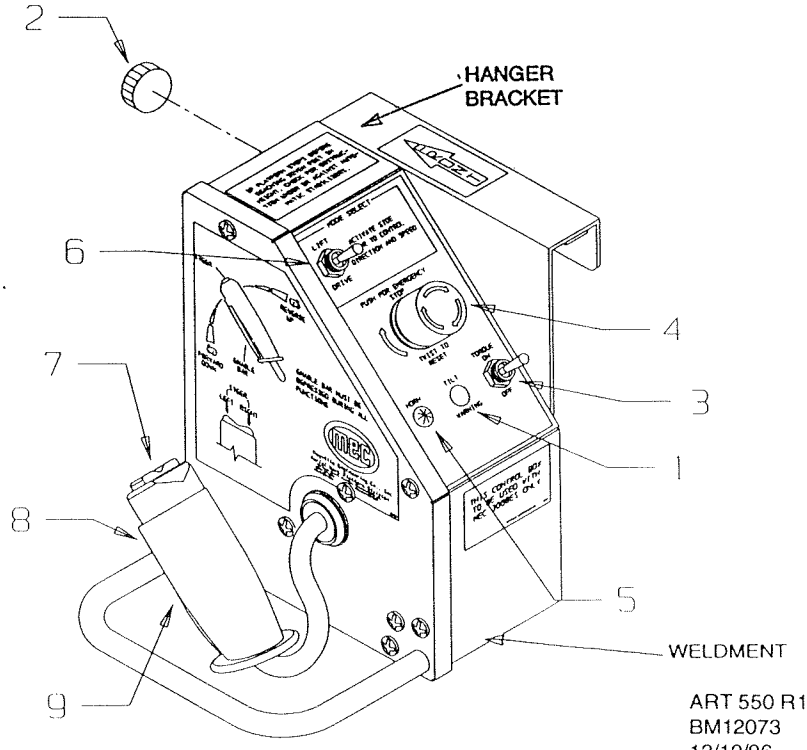


Figure 3-2. Upper Control Box Controls and Indicators

5. HORN Button	Option - Press button to sound horn. Release button to stop horn sounding.
6. MODE SELECT Switch	LIFT position allows joystick control handle to raise or lower platform. DRIVE position allows joystick control handle to control steering and propulsion of unit, such as moving the unit to another location.
7. Steering Thumb Switch	Controls steering angle of front wheels. Front wheels turn left when LEFT side of rocker switch is pressed. Front wheels turn right when RIGHT side of rocker switch is pressed. Switch will return to neutral position when released. Wheels will remain in the position attained until switch is pressed to move them to a different position.
8. Enable Bar	Must be pressed to activate control capabilities of the joystick. If bar is released, movement of the unit (drive mode) will cease or movement of the platform (lift mode) will cease.
9. Joystick Control Handle-DRIVE	Controls direction of movement with MODE SELECT switch in DRIVE position. Depressing enable bar and moving handle toward front of unit causes unit to move forward. Depressing enable bar and moving handle toward rear of unit causes the unit to move backwards. Handle returns to center or neutral position when released. Ground speed is proportional - the further the handle is moved away from center or neutral position, the faster the unit moves.
Joystick Control Handle - LIFT	Controls movement of platform with MODE SELECT switch in LIFT position. UP position energizes hydraulic system to raise platform. DOWN position energizes hydraulic system to lower platform. Switch will return to center or neutral position when released. Rate of lift is proportional - the further back the handle is moved from center or neutral position, the faster the rate of lift. The rate of descent is fixed - the platform lowers at the same rate regardless of handle position.

Battery Charger Controls and Indicators (Figure 3-3)

The battery charger controls and indicators are located in the face of the battery charger assembly at the right rear corner of the unit.

1. Timer Switch	Controls amount of time during which charging of batteries will take place. Settings range from 1 hour to 16 hours. (Not used on automatic chargers.)
2. Pilot Light	Illuminates when timer switch is turned ON and stays until timer switch moves to OFF position. For automatic chargers, light illuminates when charging has begun. Light turns off when charging is complete.
3. Charge Rate Ampere Meter	Indicates the rate of charge to the batteries in amperes.
4. Circuit Breaker	Provides charging system protection from electrical shorts.
5. Input AC Power Plug	Power cable from source of charging electricity connects at this point of input to the charger. See appropriate voltage requirements on your charger.

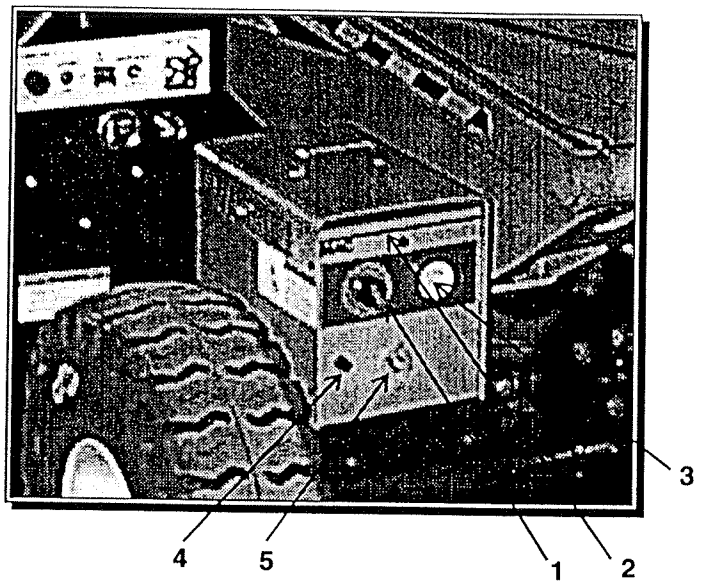


Figure 3-3. Battery Charger Controls

EQUIPMENT OPERATION

⚠ WARNING

BEFORE OPERATING THIS MACHINE, OPERATOR MUST CAREFULLY READ CHAPTER 1, SAFETY, AT THE BEGINNING OF THIS MANUAL. FAILURE TO FOLLOW SAFETY PRECAUTIONS THEREIN MAY RESULT IN DEATH OR SERIOUS INJURY.

DO NOT OPERATE MACHINE IF LIFT, DRIVE OR STEER CONTROLS DO NOT RETURN TO NEUTRAL POSITION OR MALFUNCTION IN ANY OTHER WAY.

DO NOT OPERATE MACHINE FROM LOWER CONTROL PANEL WITH PERSONNEL ON THE PLATFORM EXCEPT IN AN EMERGENCY.

START UP

1. Perform Daily Walk-A-Round Inspection. (See Chapter 4)

2. **If** you are intending to operate the unit from the Platform, follow the upper control box instructions as outlined on pages 3-2 and 3-3.

3. If you intend to operate the unit from the Base, dismount the platform and proceed to the lower control panel.

4. Switch the switch to the Base position and operate the controls as instructed on pages 3-1 and 3-2.

SHUT DOWN

1. Lower the unit to its stowed position.

2. Locate the unit in an area that is out of the way and has access to 110V outlet if charging is needed. Dismount unit.

3.Turn battery disconnect to upright position and lock in place.

4. If charging is needed, charge batteries as outlined starting on page 3-5.

BATTERIES

⚠ WARNING

NEVER SMOKE OR USE OTHER COMBUSTIBLES NEAR BATTERY OR WHILE SERVICING BATTERY OR OTHER COMPONENTS. PROVIDE PLENTY OF VENTILATION AS PRESENCE OF HYDROGEN FUMES COULD LEAD TO EXPLOSION.

The Model 3068ES units are equipped with 8 heavy duty, deep cycle batteries. Battery care and maintenance depends upon frequency of their use.

Battery wiring and water level should be checked daily. Check and fill batteries after every 15 hours of use or when recharging. Do not overfill batteries. Do not allow batteries to remain discharged. Do not run batteries dead. Put battery on charge when approximately 80% discharged. This is measured as a hydrometer reading of 1.155 at 80° F (26.6° C).

The following paragraphs contain notes and procedures for checking and filling batteries and charging batteries.

Checking and Filling Batteries

⚠ CAUTION

DO NOT OVERFILL. When battery cells are filled too full, battery fluid will expand as it warms from charging and will seep out of the battery. When water is then added, the solution is weakened and a loss of ampere hour capacity results.

NEVER add acid to battery. The solution is at its proper strength when the battery is manufactured. Use distilled water and maintain proper fluid level. When required, add water to battery AFTER charging, unless water level is below the top of the plates.

Check and fill batteries, after every 15 hours of use or when recharging, as follows:

1. Release latch (1, Figure 3-4) and pivot battery tray cover (2) open.

2. If there is any dirt or corrosion on battery, wash with a solution of 5 teaspoons baking soda per quart of warm water.

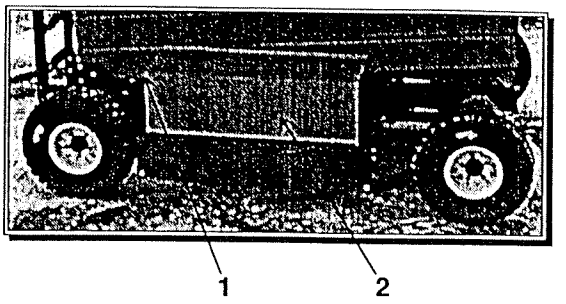


Figure 3-4. Battery Tray Cover

Remove battery caps and check fluid.

4. Fill, as needed, as follows:

a. **Before** charging, fluid must be above plates in battery.

b. **After** charging, fill to split ring. **Do not overfill.**

5. Coat terminals with petroleum jelly or equivalent coating.

Charging Batteries

⚠ WARNING

NEVER SMOKE OR USE OTHER COMBUSTIBLES NEAR BATTERY OR WHILE SERVICING BATTERY OR OTHER COMPONENTS. PROVIDE PLENTY OF VENTILATION AS PRESENCE OF HYDROGEN FUMES COULD LEAD TO EXPLOSION.

1. Release latches (1, Figure 3-4) and remove battery tray cover.

2. Remove battery caps, check fluid level and fill, if needed, to top of plates only.

3. Reinstall battery caps before charging.

4. Turn timer switch (1, Figure 3-3) to OFF position.

5. Connect extension cord plug to 115V AC receptacle.

6. Insert input AC power plug (5) of charger into receptacle of extension cord.

7. Turn timer switch (1) to ON position for a 16 hour charging period or to a lesser amount of time as desired. Pilot light (2) will illuminate and charge rate ampere meter (3) will indicate a charge rate. Charger will turn off automatically when timer runs out.

8. When charging is complete, place timer switch (I) in OFF position and disconnect power cable from input AC power plug (5).

9. Remove baftery caps, check fluid level and fill if needed, to split ring and reinstall caps.

DRIVING UNIT FORWARD AND BACKWARD AT UPPER CONTROL BOX ASSEMBLY

At Base Control Panel: Put switch in PLATFORM position.

At Control Box: Place MODE SELECT switch (6, Figure 3-2) in DRIVE position.

NOTE

Machine will move at a speed of less than 1 mph when the platform is raised above approximately 8-10 feet. Maximum ground speed with platform raised less than 8-10 feet is 3.0 mph.

1. Grasp joystick control grip (9) making sure enable bar (8) is depressed. Pivot joystick forward to move forward. Pivot joystick back to move backwards. Movement of joystick away from neutral or center position increases speed. Releasing the enable bar or joystick control grip will stop movement of unit.

2. If ascending a grade and more power is needed, place TORQUE ON/OFF switch (3) in ON position.

3. As needed, depress and hold left side of STEER switch (7) to turn left or depress and hold right side of STEER switch to turn right. Wheels must be straightened after a turn by depressing STEER switch to opposite position. Wheels will not straighten by themselves after a turn is completed. Joystick enable bar must be depressed to obtain steering action. Steering may be performed while moving joystick in a forward or reverse position.

OPERATING PLATFORM AT UPPER CONTROL BOX ASSEMBLY

⚠ CAUTION

If tilt alarm horn sounds and/or tilt alarm light illuminates when platform is raised, lower platform completely and reposition machine so it is level.

1. Place MODE SELECT switch (6, Figure 3-2) in LIFT position.

2. Grasp joystick control grip (9) making sure enable bar (8) is depressed. Pivot joystick rearward to raise platform. Pivot joystick forward to lower platform. Releasing the enable bar or joystick control grip will stop movement of unit.

OPERATING PLATFORM AT LOWER CONTROL PANEL

⚠ CAUTION

If tilt alarm horn sounds and/or tilt alarm light illuminates when platform is raised, lower platform completely and reposition machine so it is level.

1. Put Switch in BASE position. Move and hold UP/DOWN switch (2, Figure 3-1) to UP position to raise platform. To stop movement, release switch.

2. Move and hold UP/DOWN switch (2) to DOWN position to lower platform. To stop movement, release switch.

⚠ WARNING

BEFORE OPERATING UNIT FROM PLATFORM:

- EXTENDED PLATFORM MUST BE LOCKED IN PLACE.
- SHEET LOADING REAR GATE MUST BE LOWERED AND LOCKED IN PLACE.
- SWINGING REAR MIDGATE/CHAIN MUST BE CLOSED.

FAILURE TO COMPLY WITH THESE REQUIREMENTS COULD CAUSE DEATH, PERSONAL INJURY OR PROPERTY DAMAGE.

ALWAYS USE "THREE POINT CONTACT" WHEN ENTERING OR EXITING THE PLATFORM (3 OUT OF 4 ARMS AND LEGS ARE IN CONTACT WITH THE MACHINE AT ALL TIMES DURING MOUNT AND DISMOUNT).

EXTENDING EXTENDED PLATFORM

1. With your right hand, lift handle and hold (Figure 3-5) so pin disengages from locking holes in platform.

NOTE

Platform extends up to 48" and locking holes are spaced at 6" intervals to provide maximum flexibility.

2. With your left hand, grasp rail and push platform out to desired position.

3. Release handle so lock pin securely engages one of the locking holes in platform.

RETRACTING EXTENDED PLATFORM

1. With your right hand, lift handle and hold (Figure 3-5) so pin disengages from locking holes in platform.

2. With your left hand, grasp rail and pull platform in to desired position.

3. Release handle so lock pin securely engages one of the locking holes in platform.

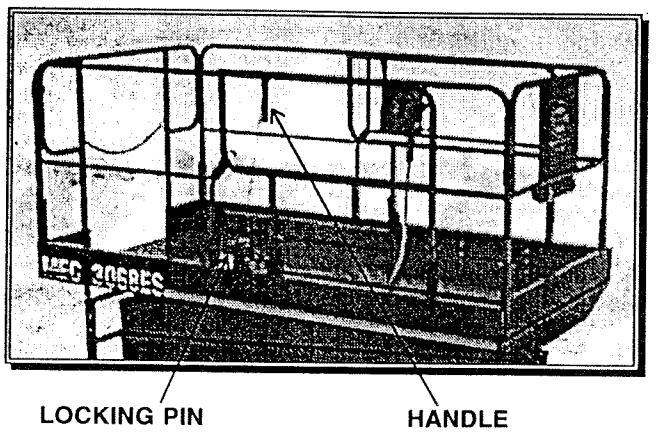


Figure 3-5. Platform Lock Pin

SHEET LOADING (DRYWALL) GATE OPERATION

To Raise Gate

1. Pull out lock pins (1, Figure 3-6) located on rear gate rail.

2. Slide upper section of gate (2) all the way up and align lock pins with rail holes.

3. Insert lock pins into rail holes.

To Lower Gate

1. Pull out lock pins (1, Figure 3-6) located on rear gate rail.

2. Slide upper section of gate (2) all the way down and align lock pins with rail holes.

3. Insert lock pins into rail holes.

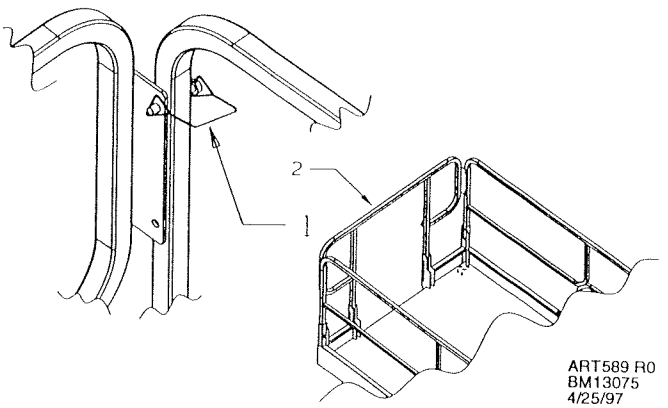


Figure 3-6. Sheet Loading Gate

STOWING AND ERECTING PLATFORM RAILINGS

1. Remove pins from front Extension Platform Railing. Place on platform floor.

2. Remove pins from Back Railing. Lift UP and OUT of hinge brackets and lay on platform floor.

3. Remove Safety Snap Pins from Extension Platform Side Rails. Rotate rails down to platform floor. Repeat with Main Platform Side Rails.

4. Erect railings by following the Reverse of this procedure.

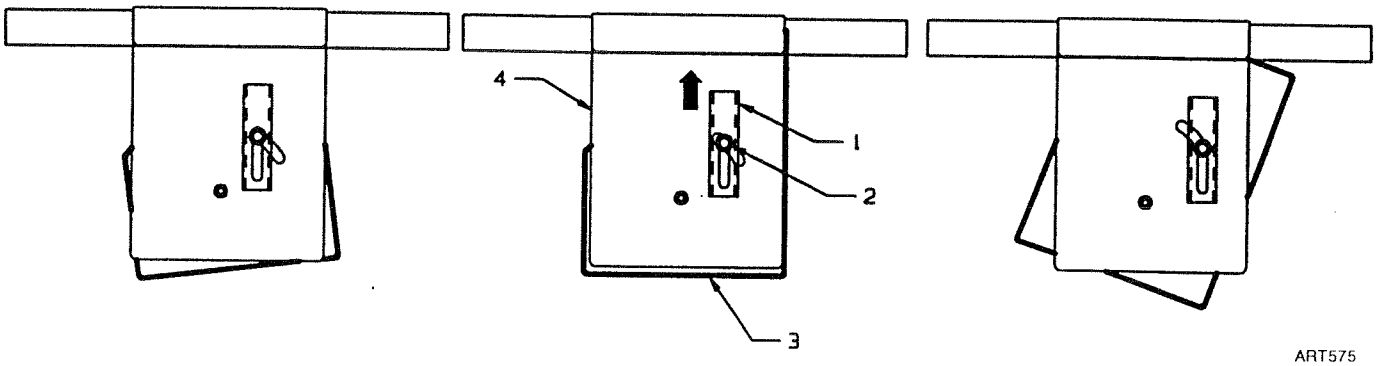


Figure 3-7. Adjustable Control Box, Left to Right: Totally back, Centered, and Totally Forward

1. LOCK BRACKET - Move bracket upward, in direction of the arrow, to LOCK Control Box onto railing.

2. THUMBSCREW (Not Shown) - Loosen thumbscrew to allow Lock Bracket to move, and to position the Control Box to the desired angle. Tighten screw to secure Control Box.

3. CONTROL BOX - In this view in its centered position.

4. CONTROL BOX HOLDER BRACKET - This allows the Control Box to be placed securely on the railing. The angled slot also allows the Control Box to be positioned to the operator's preference.

CHAPTER 4
OPERATOR MAINTENANCE

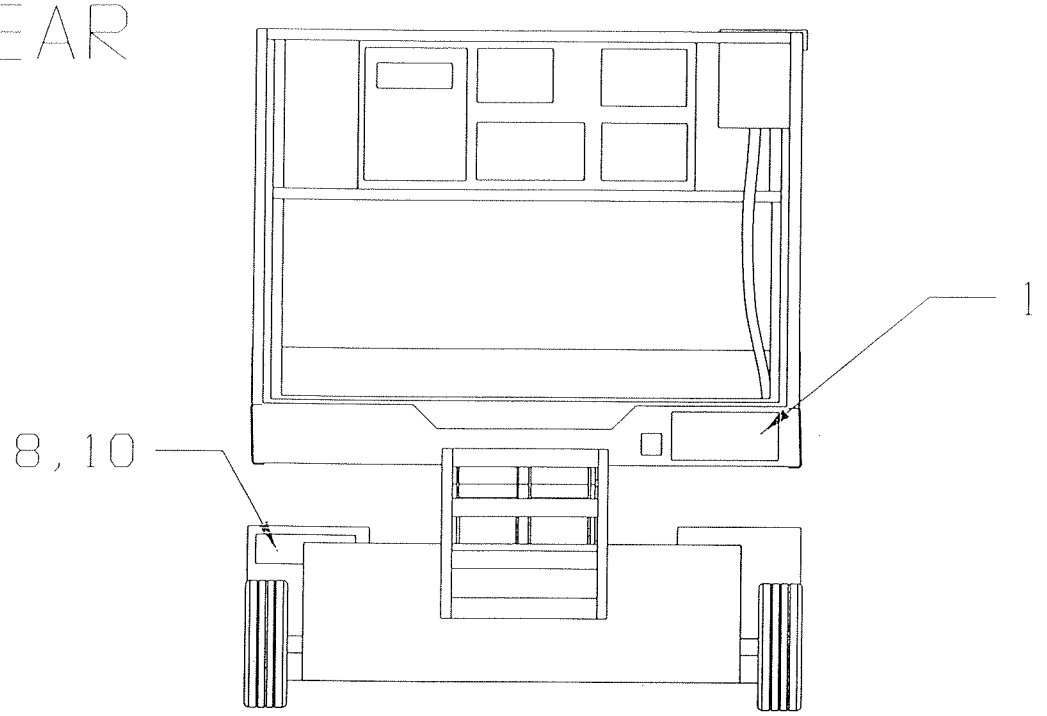
MEC 3068ES AERIAL WORK PLATFORM WALK-A-ROUND INSPECTION

The Walk-A-Round Check shall be performed by the operator prior to using the unit for the first time of the day or by a new operator even if the unit has been used during any part of the day. The Walk-A-Round Check is critical to ensuring the safe operation of the platform.

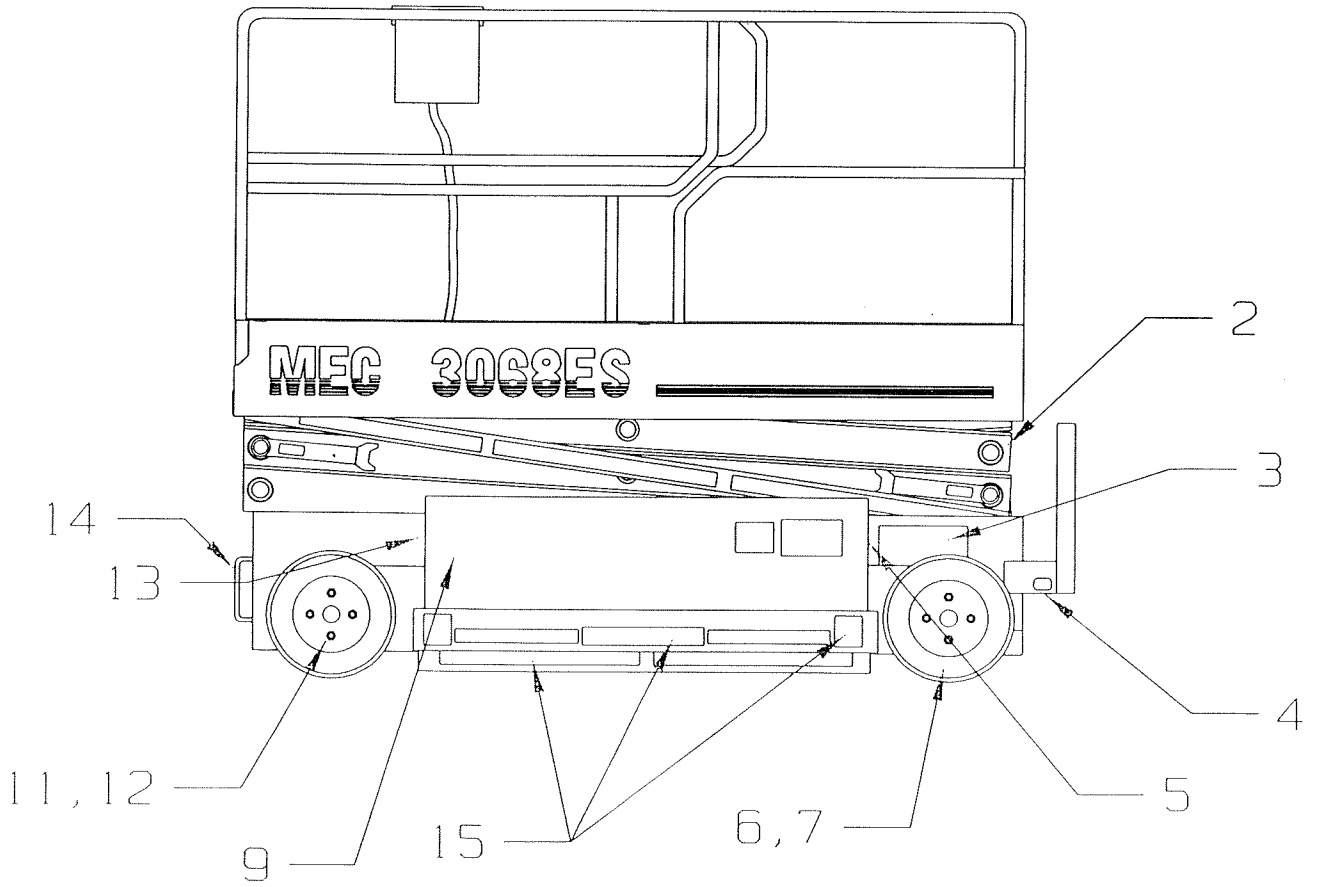
When performing the Walk-A-Round Check, visually inspect for obvious damage to the specific part of the unit including corroded, loose or missing fasteners; broken or leaking hydraulic lines; and worn, broken or frayed insulation on power cables. Also check for corroded, cracked, abraded or bent structural members (beams, frame, platform, etc.). A machine which has been overloaded will have bent structural members and fatigued pivot pins. Begin the check standing at the center of the rear of the unit. The number of the check in the listing matches a corresponding number in an illustration to help the operator understand and locate the check to be performed.

1. Capacity Decal on Rear of Platform - Check that one decal is in place on rear edge of platform floor and is intact and legible.
2. Broken Welds on Scissor Pivot Collars - Check for broken welds on scissors where each pivot pin collar is attached.
3. Battery Charger Warning Decal - Check that decal is in place on outside of battery charger case and is legible.
4. Tiedown Ring - Check for broken welds and secure attachment.
5. Tire Replacement Decal - Check that decal is in place on cabinet next to tire and is legible.
6. Tire Condition - Check for excessive wear and damage to tire.
7. Wheel Condition - Check wheel for bent rim and loose or missing lug nuts. **Weekly** - Torque nuts to 75-85 ft. lbs. (102-112 N•M).
8. Battery Disconnect - Handle Upright to disconnect, Clockwise to connect. Decal in place and legible on control panel.
9. Hydraulic Fluid Level - **Weekly** - Fluid should be visible within 1 inch of top of tank.
10. Lower Control Panel - Check for obvious damage to switches, indicators and guards. Check that decal is in place on the control box and legible.
    A. Check operation of BASE CONTROLS.
    B. Toggle BASE/PLATFORM switch to BASE position.
    C. Toggle and hold the UP/DOWN switch in UP position to raise platform a few feet. Release switch.
    D. Press Emergency Stop. Toggle the UP/DOWN switch both up and down. No platform movement
    D. Should occur.
    E. Turn red cap of Emergency Stop switch 1/4 turn clockwise until cap "pops" out.
    F. Toggle and hold the UP/DOWN switch in DOWN position to lower platform to stowed position. Release switch.
    G. Toggle switch to platform position.
11. Tire Condition - Check for excessive ware and damage to tire.
12. Wheel Condition - Check wheel for bent rim and loose or missing lug nuts. **Weekly** - Torque nuts to 75-85 ft. lbs. (102-115 N•M).
13. Tire Replacement Decal - Check that decal is in place on cabinet next to tire and is legible.
14. Tiedown Ring - Check for broken welds and secure attachment.
15. Pothole Safety Decals - Check that decals are in place and legible. See Figure 4-7 for decal placement.

REAR



LEFT

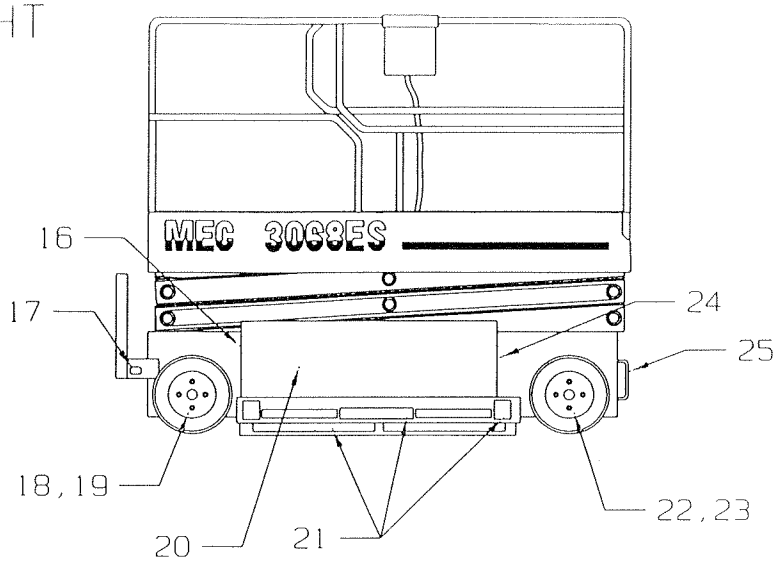


16. Tire Replacement Decal - Check that decal is in place on cabinet next to tire and is legible.
17. Tiedown Ring - Check for broken welds and secure attachment.
18. Tire Condition - Check for excessive wear and damage to tire.
19. Wheel Condition - Check wheel or bent rim and loose or missing lug nuts. **Weekly** - Torque nuts to 75-85 ft. lbs. (102-115 N•M).
20. Battery Water Level - **Weekly** - Water should be up to the split ring. Use only distilled water.
21. Pothole Safety Decals - Check that decals are in place and legible. See figure 4-7 for decal placement.
22. Wheel Condition - Check wheel for bent rim and loose or missing lug nuts. **Weekly** - Torque nuts to 75-85 ft. lbs. (102-115 N•M).
23. Tire Condition - Check for excessive wear and damage to tire.
24. Tire Replacement Decal - Check that decal is in place on frame above tire and is legible.
25. Tiedown Ring - Check for broken welds and secure attachment.
26. Emergency Down Decal - Check that emergency down decal is in place on cabinet in front of left rear tire and below EMERGENCY DOWN control and is legible.
27. Rear Gate - Check rear gate for loose or missing fasteners and obvious damage. Check that latch is secure and operates properly.

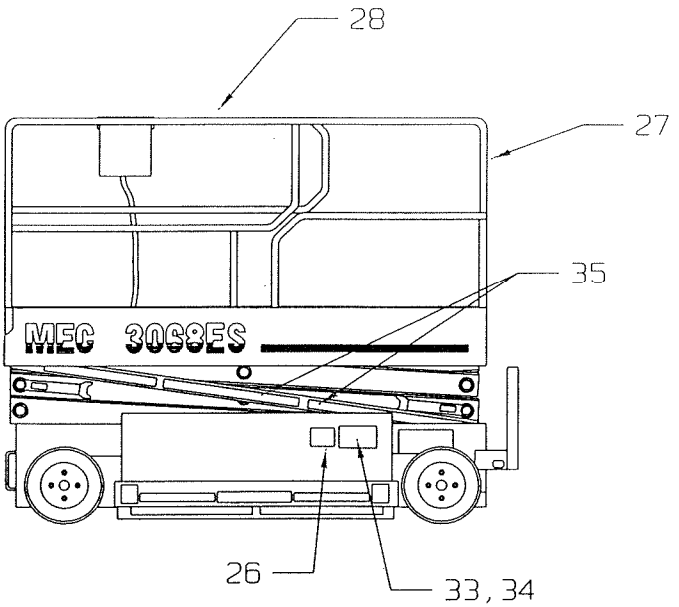
MOUNT PLATFORM.

28. Platform Railings - Check all railings for secure and proper installation and obvious damage. Check that top rail is not bent.
29. Decals on Panel on Front Rail - Check that five decals are in place on panel of front platform railing and all five are intact and legible.
30. Manual Case - Check that all documents listed in Chapter 2 and in the case on front railing.
31. Upper Control Box Assembly - Check for obvious damage to switches, indicators and guards. Check that five decals are in place on the control box and are legible.
32. Test upper control box assembly controls and indicators:
    a. Steer left and right.
    b. Drive forward/reverse at various speeds with TORQUE OFF.
    c. Operate brakes on a grade.
    d. Drive forward/reverse at various speeds with TORQUE ON.
    e. Raise platform 10-15 feet high. Drive forward to check fast drive speed cutout with platform raised.
    f. Raise platform to full extension at various speeds.
    g. Lower platform to stowed position.
    h. While slowly driving forward or backward, press EMERGENCY STOP. Unit will stop quickly and completely.
    i. Turn red cap of EMERGENCY STOP switch 1/4 turn clockwise until cap "pops" out. Lower platform. Dismount platform.
33. Inside Elec/Hydraulic Cabinet - Check that tag is attached to emergency down/brake manifold and is legible.
34. Thumbscrew on back of emergency down/brake manifold must be in fully open position to be in normal drive/lift mode.
35. Keep clear and safety stripe - Check that decals are in place and legible on beam support. See figure 4-7 for placement.

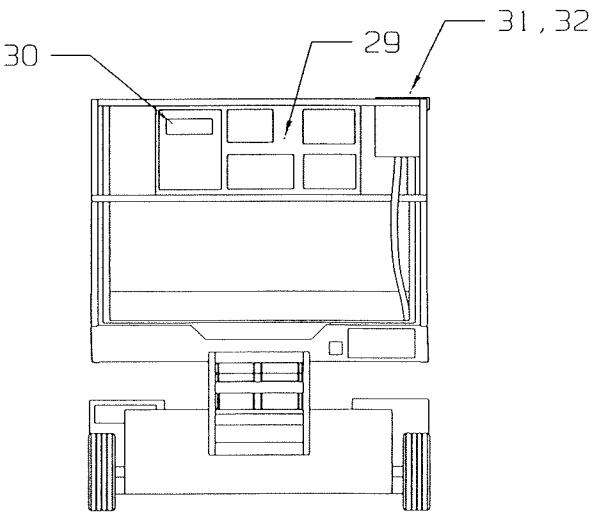
RIGHT



LEFT



REAR



⚠WARNING

ALL PIVOT AREAS OF SCISSORS AND LIFT CYLINDER MUST BE CHECKED FOR WEAR. A LOUD SCRAPING NOISE MEANS THE D.U. BEARINGS ARE DAMAGED AND NEED REPLACING. FAILURE TO DO SO WILL RESULT IN EXTENSIVE DAMAGE TO STRUCTURAL MEMBERS AND BUSHINGS WHICH WOULD CREATE A HAZARDOUS CONDITION AND COULD RESULT IN INJURY OR DEATH TO PERSONNEL.

INSPECTION AND LUBRICATION

Structural Inspection

NOTE

Refer to Table 4-1, Quarterly Inspection Schedule located in this section.

Check machine for bent structural members (beams, main frame, platform, pivot pins, etc.). Machines which have been overloaded could have bent members and fatigued pivot pins. Replace all bent members and pins to ensure a safe operating machine.

Check bushings in scissor beams for broken or cracked welds. Replace beams if bushing welds are cracked or if bushings are elongated.

⚠ WARNING

NEVER INSPECT HYDRAULIC HOSES WITH HANDS. ESCAPING FLUIDS UNDER PRESSURE CAN CAUSE SERIOUS INJURY. USE A PIECE OF CARDBOARD OR OTHER MATERIAL TO INSPECT FOR LEAKS. ESCAPING FLUID UNDER PRESSURE CAN BE INVISIBLE AND CAN PENETRATE THE SKIN, CAUSING SERIOUS INJURY.

IF ANY FLUID IS INJECTED INTO SKIN, SEEK MEDICAL ATTENTION IMMEDIATELY!

Table 4-1. Quarterly Inspection Schedule

KEY: OK - Legible, Operational And/Or Physically Correct
N/0 - Not Legible, Operational And/Or Physically Correct
R/P - Repairs Made To Unit Or Corrected

	OK	N/0	R/P
Visual Inspection - Decals: *Quantities Listed ( )			
Lock Warning [1]			
Capacity: Rear of Platform [1], Front Rail [1]			
Operations and Safety- Front Rail [2]			
Control Box [5]			
Lower Control Station [1]			
Brake Lockout Tag [1]			
Emergency Down [1]			
Tire Replacement [4]			
Battery Replacement [1]			
Battery Charging [1]			
Crush Hazard [4]			
Maintenance Locks [2]			
Keep Clear [3]			
Operational And Visual Inspection			
Any Structural Damage			
Check Hydraulic Oil Level			
Battery Water			
Inspect For Any Leaks			

	OK	N/0	R/P
Railings			
Rails In Place/ Not Damaged			
Top Rail Not Bent			
Rear Gate In Place / Closes Freely			
Rear Step In Place: Base & Platform			
Proper Safety & Operational Manual With Unit			
Functions			
Steer: Left/ Right			
Drive: Forward / Reverse			
Speeds: Slow/ Fast			
Hi Torque / Hi Speed@			
Fast Speed Cutout When Platform Is Raised			
Emergency Down Functions Properly			
Platform Raises To Full Extension			
Brakes Operational			
Emergency Stop Working Correctly			
Pothole Protection, Operational			

* See Figure 4-7 for decal location

Comments: _____

_____

Signature/Inspectors: _____ Date: _____

Reproduce form as needed. Save completed forms for future reference.

LUBRICATION

The MEC 3068ES is almost lubrication free. Pivot points within the scissors frame feature self-lubricating bearings. All other lubrication maintenance is performed annually or semiannually. Refer to Table 4-2, Lubrication Chart for schedule.

The Quarterly Inspection Schedule Checklist is also used to examine the unit after periods of storage, exposure to extremes of heat, cold, moisture, dust, etc. Use it to inspect units after a change in environmental conditions, i.e., winter, summer or geographical location.

Table 4-2. Lubrication Chart

		WEEKLY	SEMIANNUALLY	ANNUALLY
RAILS	Sheet Gate Slide Area		LIGHT GREASE	
SCISSORS	Platform Slides (4)		LIGHT GREASE	
	Base Slide		LIGHT GREASE	
REAR AXLE	Rear Hubs			BEARING GREASE
BATTERIES	Battery Water	DISTILLED WATER		
HYDRAULICS	Hydraulic Oil			STANDARD 10W NON-DETERGENT HYDRAULIC OIL
	Hydraulic Oil Filter			10 MICRON SPIN-ON (P/N 6156)

HYDRAULIC SYSTEM BLEEDING

The hydraulic system is self-bleeding. After the system has been drained, such as during the replacement of a hydraulic system component, actuate the platform completely up and down for six cycles and recheck the reservoir fluid level between each cycle. Fill as required.

HYDRAULIC PUMP MOTOR SERVICING

Brush replacement is the most common maintenance required on DC motors. Brushes should be checked and replaced, if necessary (1/4" minimum length), along with commutator inspection, approximately every six months. Time spans will vary depending on how the machine is used and the condition of the batteries. It is highly recommended to keep batteries fully charged and in top condition to eliminate service problems in general, and to extend the life of the motor and brushes. Also, refer to Batteries section in Chapter 3.

CHECK AND FILL HYDRAULIC RESERVOIR

NOTE

An accurate fluid level reading can be taken only if platform is fully down.

1. Lower platform all the way.
2. Remove filler cap by turning counterclockwise.
3. Check hydraulic fluid level by looking at fluid level in hydraulic reservoir. If fluid is not visible within 1 inch of top, add fluid.
4. Fill within 1 inch of top of reservoir.
5. Replace filler cap.

BATTERY REPLACEMENT

⚠ WARNING

ELECTRIC SERIES MACHINES SPECIAL MAINTENANCE CONCERNS

- TO MINIMIZE THE RISK OF FIRE, ELECTRIC SHOCK OR EXPLOSION, THE FOLLOWING MAINTENANCE PROCEDURES AND INSPECTIONS ARE PARTICULARLY IMPORTANT FOR ELECTRICALLY POWERED UNITS:

  1. KEEP MACHINE CLEAR OF LUBRICANTS AND OTHER COMBUSTIBLE MATERIAL.

  2. INSPECT WIRING REGULARLY FOR FRAYED OR DETERIORATED INSULATION. IMMEDIATELY REPLACE OR REPAIR A WIRE HARNESS OR INDIVIDUAL WIRE THAT HAS FRAYED OR DETERIORATED INSULATION.

  3. CHECK BRAKES AT THE RECOMMENDED INTERVALS, AND MAKE ADJUSTMENTS WHEN REQUIRED.

- NEVER SMOKE OR USE OTHER COMBUSTIBLES NEAR BATTERY OR WHILE SERVICING BATTERY OR OTHER COMPONENTS. PROVIDE PLENTY OF VENTILATION AS PRESENCE OF HYDROGEN FUMES COULD LEAD TO AN EXPLOSION.

1. Install maintenance locks per procedure contained in Chapter 1.
2. Turn BATTERY DISCONNECT (7, Figure 3-1) handle to remove batteries from all electrical circuits.
3. Remove battery access panel.
4. Note and record battery (1, Figure 4-5) positions and battery cable (2) connections by drawing a sketch and/or tagging all items to ensure proper installation of new batteries.
5. Disconnect all battery cables (2).
6. Remove old batteries (1).

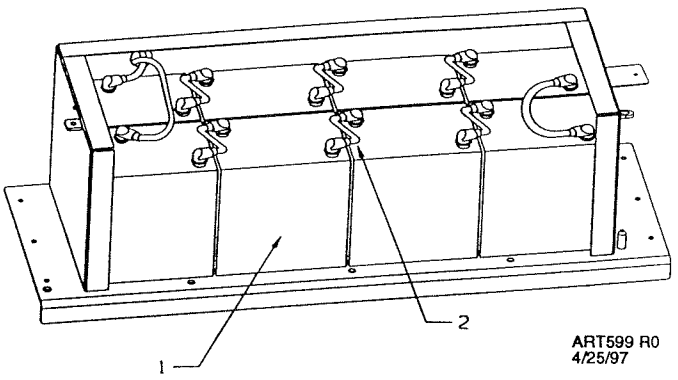


Figure 4-5. Battery Replacement

10. Install new batteries (1) in proper locations referring to sketch and/or tags installed in step 5.

11. Securely connect all battery cables (2) to proper terminals referring to sketch and/or tags installed in step 5.

12. Coat all battery terminals with petroleum jelly or equivalent coating.

13. Close battery access panel and secure with pin.

14. Turn BATTERY DISCONNECT (1) handle to connect unit electrical circuits to batteries.

CHARGING BATTERIES

Surrounding temperature has a considerable effect on the power reserve in a battery.

A battery 100% charged at 80° F (26.6° C):
--drops to 65% at 32° F (0° C)
--drops to 40% at 0° F (-32°C)

A battery 46% charged at 80° F (26.6° C):
--drops to 32% at 31° F (-1° C)
--drops to 21% at 0° F (-32° C)

Whenever the battery temperature reaches 125° F (93° C), the charging rate should be reduced or the battery taken off charge and cooled to room temperature.

Monthly equalizing charges of 25% over the regular charge are recommended. The equalizing charge must be delivered at a low rate to eliminate excessive gassing.

Bring batteries to a full charge as soon as possible after a period of continual use. A full charge is measured by a hydrometer reading of 1.265 at 80° F (26.6° C).

Lead plates in discharged batteries will harden and become sulfated, which will shorten battery life as much as overcharging. Sulfated batteries fail to deliver rated capacity or fully charge.

Several long, slow charges (at a low rate to avoid gassing) and fast discharges are then necessary to correct the sulfation and hardened plates.

Do not overcharge battery as this causes the battery to boil dry.

SPIN-ON OIL FILTER REPLACEMENT

The spin-on filter (Figure 4-6) in the hydraulic system should be changed yearly. Replace with filter part number 6156 only.

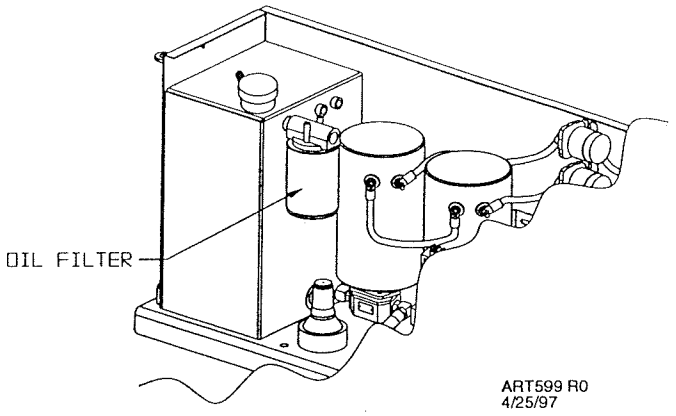


Figure 4-6. Spin-on Oil Filter

SERVICE HELPS

If unit is not functioning, check the following items BEFORE calling a service technician:

1. Battery disconnect is in upright position.

2. Base control switch is turned to base or platform.

3. Circuit breaker is reset.

4. Emergency stop switch is ON (either on lower control panel or upper control box).

5. 20 amp ground fuse is operational.

DECAL REPLACEMENT

Decals are installed in various locations on the machine. Each decal contains either a precautionary comment or helpful information for the user. If any decal listed in Table 4-1 is not legible or is missing, the machine is considered not operational and must not be used until the decal is replaced. Any needed decal can be identified by referring to Figures 4-7 and the legend below and obtained from your local MEC dealer.

Legend for Figure 4-7.

Qty.	Part No.	Description
1	8911	Manual Case
1	7523	Caution Elec/Tip Hazard
1	7527	Caution
1	8767	Lock Warning
2	8822	Capacity
2	8619	Made In USA
2	6794	Maintenance Locks
1	8779	Charge Battery
4	8519	Tire Replacement
1	8635	Directions Joystick #2
1	8832	Control Box ID - 3068ES
8	7982	Safety Stripe
4	9043	Crush Hazard

Qty.	Part No.	Description
1	8823	Base Controls
1	8866	Emergency Down
1		Serial Number Plate
2	8402	Rail Stripe
2	8817	Model 3068ES
1	8950	Platform Stops Short
1	8811	MEC Oval
1	8520	Battery Replacement
1	6873	Hydraulic Fluid
1	5351	Cable Tie
1	8867	Brake Lockout Tag
1	7156	Front
1	8391	Control Box
3	8503	Keep Clear

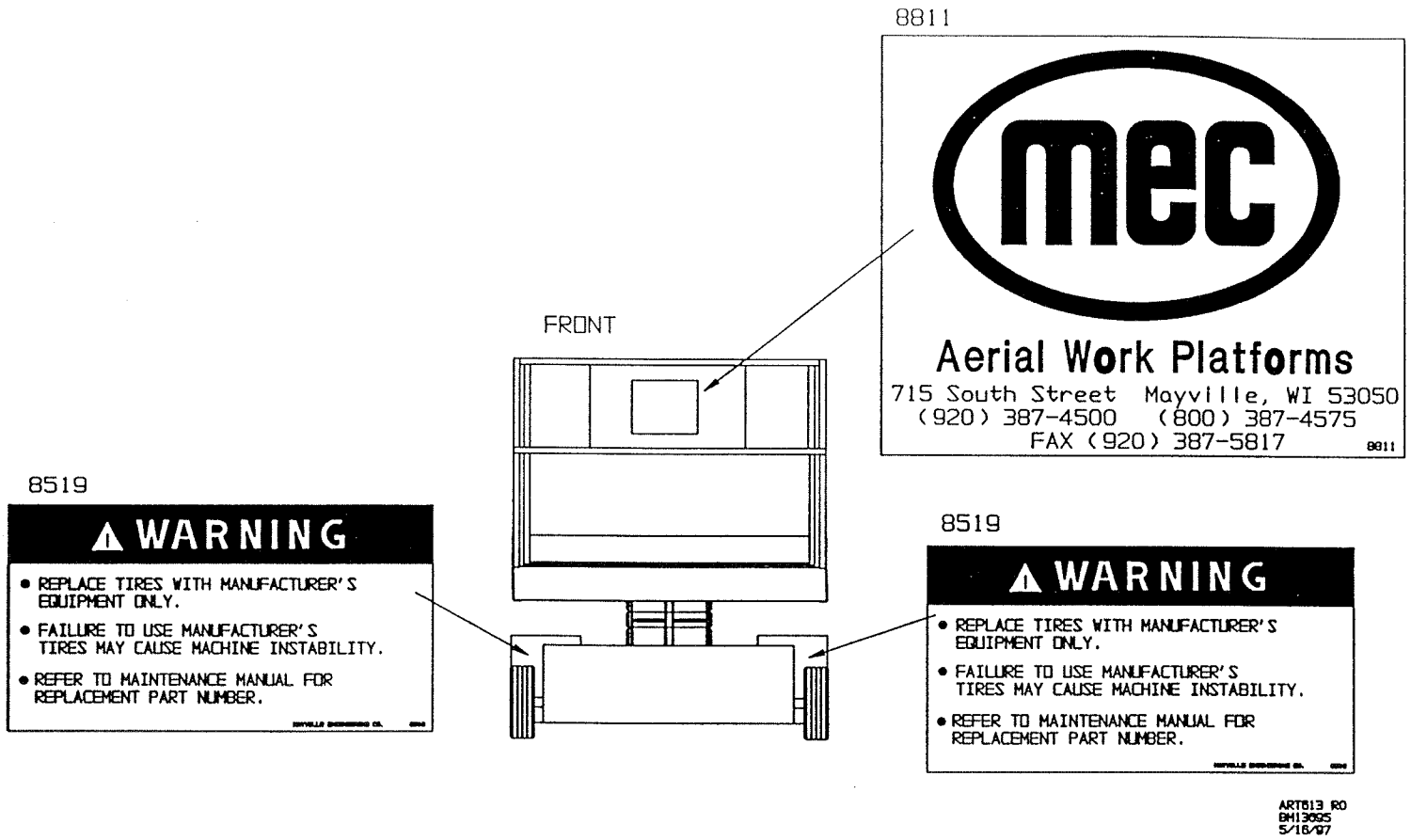


Figure 4-7. 3068ES Decal Placement

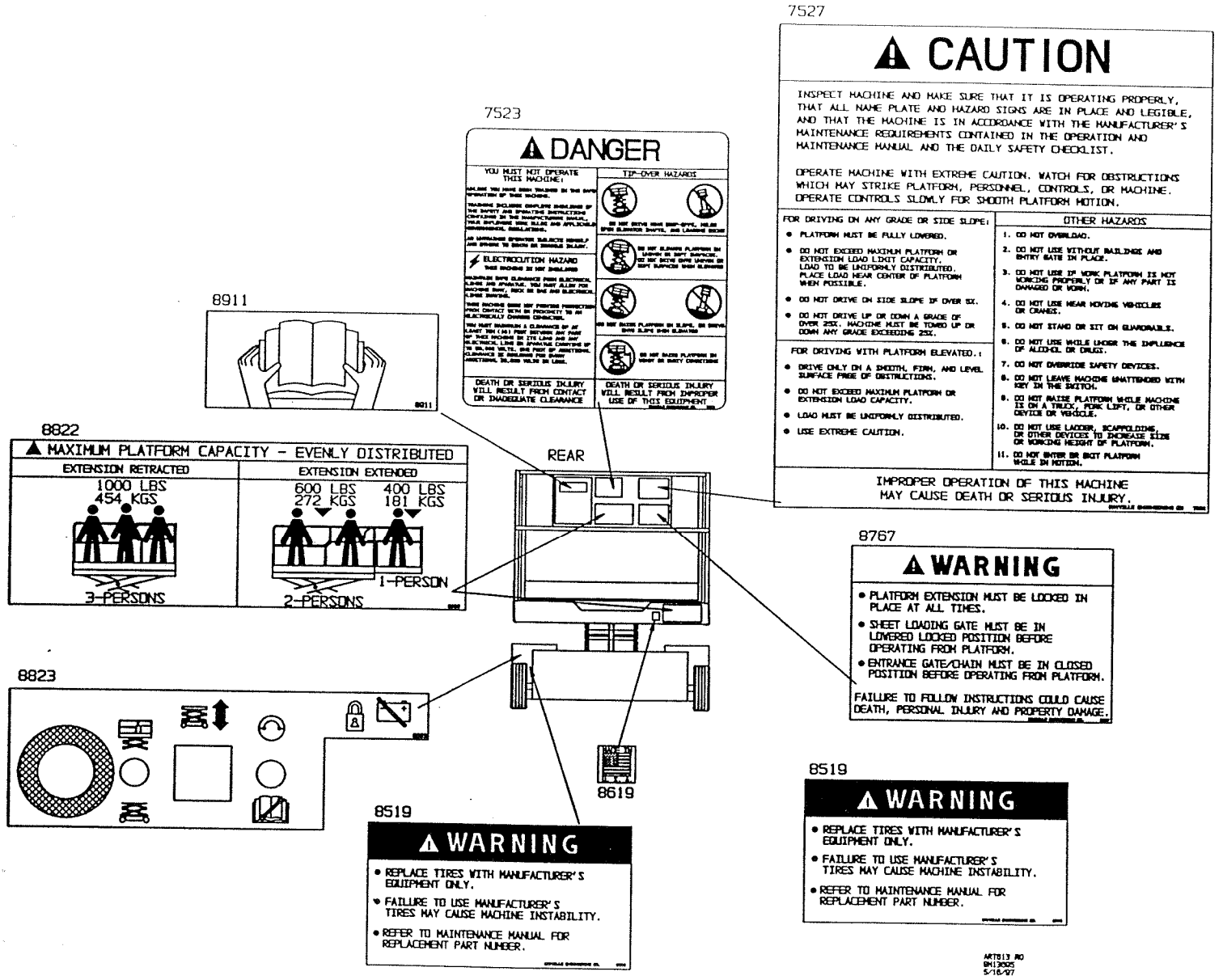


Figure 4-7 cont'd. 3068ES Decal Placement

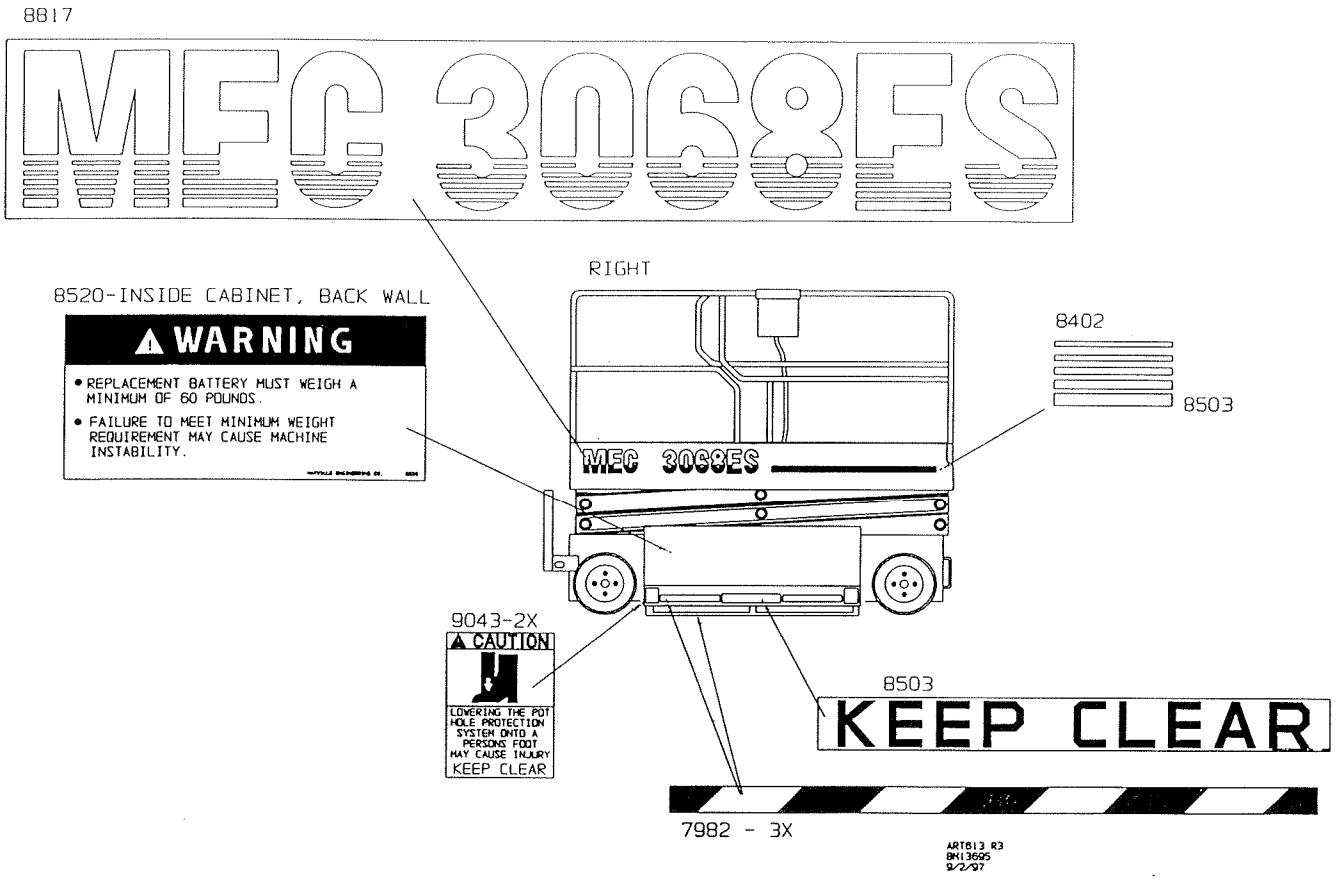


Figure 4-7 cont'd. 3068ES Decal Placement

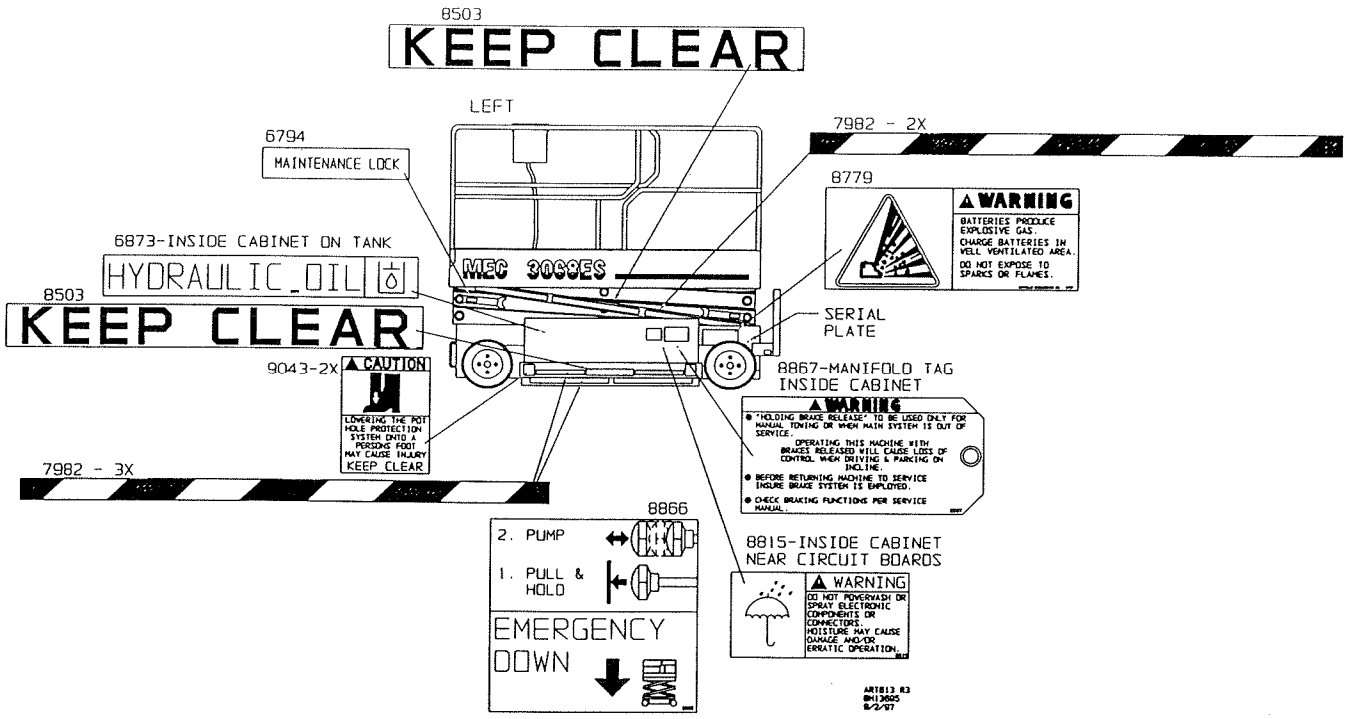


Figure 4-7 cont'd. 3068ES Decal Placement

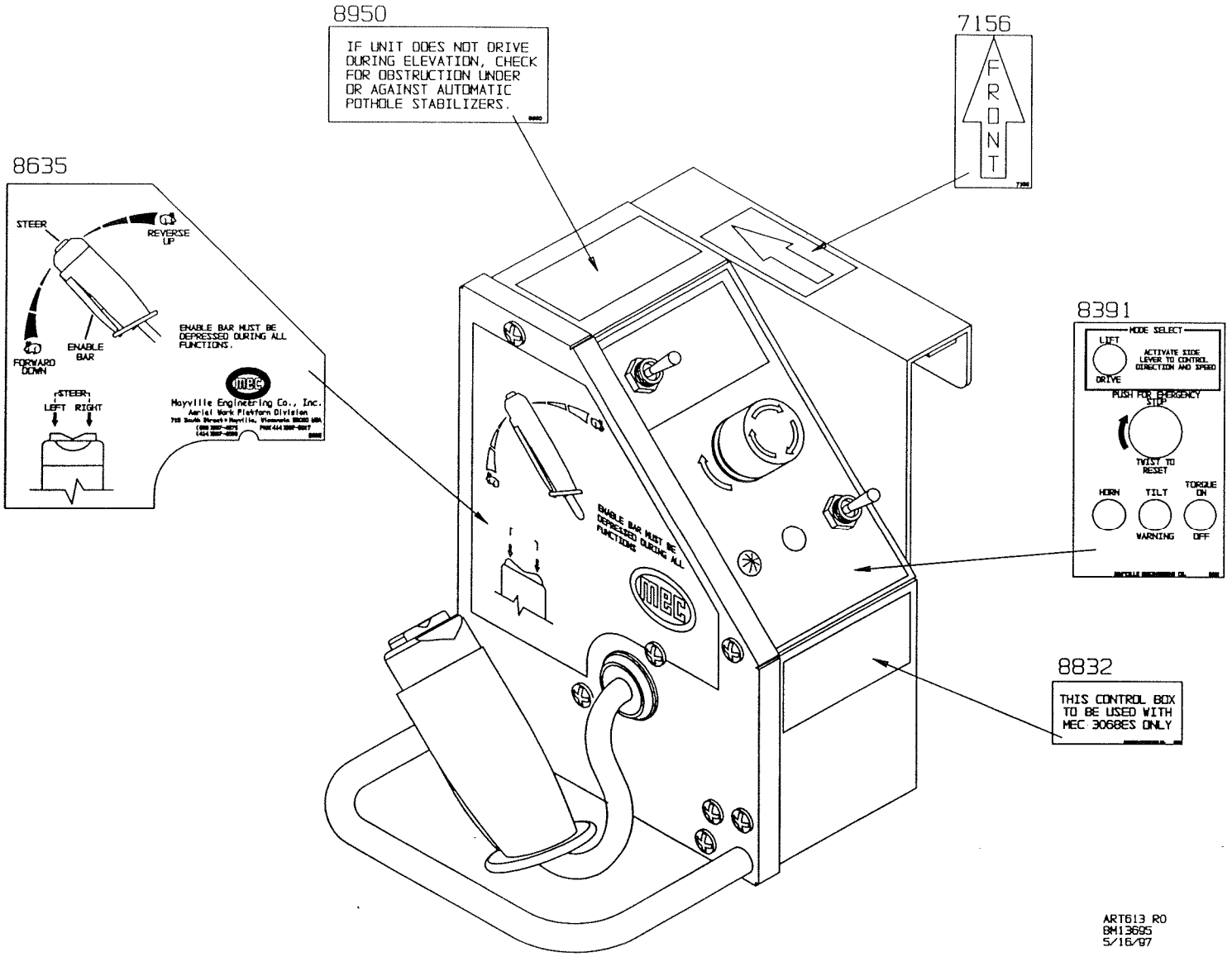


Figure 4-7 cont'd. 3068ES Decal Placement

Major Alterations Repairs Record

Signature Date

Model: _____ Performed by: _____

Repair/
Alteration
Date: _____ Approved by: _____

Part numbers included:

Description of Repair / Alteration:

Results / Conclusions:

Reproduce form as needed. Save completed forms for future reference.

Examination/Test Record

Signature Date

Model: _____ Performed by: _____

Examination/
Test
Date: _____ Approved by: _____

Description of Examination / Test:

Results / Conclusions:

Reproduce form as needed. Save completed forms for future reference.

NOTES

Aerial Work Platforms

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