JLG®

An Oshkosh Corporation Company

Operation and Safety Manual

Original Instructions - Keep this manual with the machine at all times.

Boom Lift Models
E300A

FOREWORD

This manual is a very important tool! Keep it with the machine at all times.

The purpose of this manual is to provide owners, users, operators, lessors, and lessees with the precautions and operating procedures essential for the safe and proper machine operation for its intended purpose.

Due to continuous product improvements, JLG Industries, Inc. reserves the right to make specification changes without prior notification. Contact JLG Industries, Inc. for updated information.

SAFETY ALERT SYMBOLS AND SAFETY SIGNAL WORDS

This is the Safety Alert Symbol. It is used to alert you to the potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death

DANGER

CAUTION

⚠ WARNING

THIS PRODUCT MUST COMPLY WITH ALL SAFETY RELATED BULLETINS. CONTACT JLG INDUSTRIES, INC. OR THE LOCAL AUTHORIZED JLG REPRESENTATIVE FOR INFORMATION REGARDING SAFETY-RELATED BULLETINS WHICH MAY HAVE BEEN ISSUED FOR THIS PRODUCT.

NOTICE

JLG INDUSTRIES, INC. SENDS SAFETY RELATED BULLETINS TO THE OWNER OF RECORD OF THIS MACHINE. CONTACT JLG INDUSTRIES, INC. TO ENSURE THAT THE CURRENT OWNER RECORDS ARE UPDATED AND ACCURATE.

For:

- Accident Reporting
- Product Safety Publications
- Current Owner Updates
- Questions Regarding Product Safety
- Standards and Regulations Compliance Information
- Questions Regarding Special Product Applications
- Questions Regarding Product Modifications

Contact:

Product Safety and Reliability Department
JLG Industries, Inc.
13224 Fountainhead Plaza

REVISION LOG

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SECTION 1. SAFETY PRECAUTIONS

1.1 GENERAL

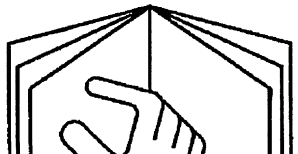
This section outlines the necessary precautions for proper and safe machine operation and maintenance. For proper machine use, it is mandatory that a daily routine is established based on the content of this manual. A maintenance program, using the information provided in this manual and the Service and Maintenance Manual, must also be established by a qualified person and followed to ensure the machine is safe to operate.

The owner/user/operator/lessor/lessee of the machine should not operate the machine until this manual has been

1.2 PRE-OPERATION

Operator Training and Knowledge

- Read and understand this manual before operating the machine.



- Read, understand, and obey all DANGERS, WARNINGS, CAUTIONS, and operating instructions on the machine and in this manual.
- Use the machine in a manner which is within the scope of its intended application set by JLG.
- All operating personnel must be familiar with the emergency controls and emergency operation of the machine as specified in this manual.
- Read, understand, and obey all applicable employer, local, and governmental regulations as they pertain to operation of the machine.

Workplace Inspection

- This machine can be operated in temperatures of 0^{o} F to 104^{o} F (-20^{o} C to 40^{o} C). Consult JLG for operation outside this range.

Machine Inspection

- Before machine operation, perform inspections and functional checks. Refer to Section 2 of this manual for detailed instructions.
- Do not operate this machine until it has been serviced and maintained according to requirements specified in the Service and Maintenance Manual.
- Be sure the footswitch and all other safety devices are operating properly. Modification of these devices is a

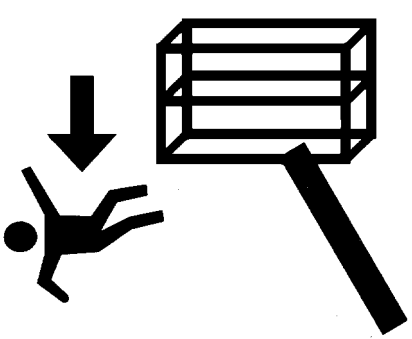
1.3 OPERATION

General

- Do not use the machine for any purpose other than positioning personnel, their tools, and equipment.
- Never operate a machine that is not working properly. If a malfunctions occurs, shut down the machine.
- Never slam a control switch or lever through neutral to an opposite direction. Always return switch to neutral and stop before moving the switch to the next function. Operate controls with slow and even pressure.
- Do not allow personnel to tamper with or operate the
- Supplies or tools which extend outside the platform are prohibited unless approved by JLG.
- When driving, always position boom over rear axle in line with the direction of travel. Remember, if boom is over the front axle, steer and drive functions will be reversed.
- Do not assist a stuck or disabled machine by pushing, pulling, or by using boom functions. Only pull the unit from the tie-down lugs on the chassis.
- Do not place boom or platform against any structure to steady the platform or to support the structure.
- Stow boom and shut off all power before leaving machine.

Trip and Fall Hazards

- Before operating the machine, make sure all gates are closed and fastened in their proper position.



- Use extreme caution when entering or leaving platform. Be sure that the boom is fully lowered. It may be necessary to telescope out to position the platform closer to the ground for entry/exit. Face the machine, maintain “three point contact” with the machine, using two hands and one foot or two feet and one hand during entry and exit.

Electrocution Hazards

- This machine is not insulated and does not provide protection from contact or proximity to electrical current.

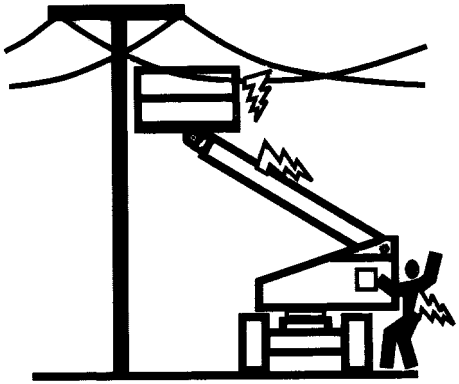


Table 1-1. Minimum Approach Distances (M.A.D.)

Voltage Range (Phase to Phase)	MINIMUM APPROACH DISTANCE in Feet (Meters)
0 to 50 KV	10 (3)
Over 50KV to 200 KV	15 (5)
Over 200 KV to 350 KV	20 (6)
Over 350 KV to 500 KV	25 (8)
Over 500 KV to 750 KV	35 (11)
Over 750 KV to 1000 KV	45 (14)

NOTE: ***This requirement shall apply except where employer, local or governmental regulations are more stringent.***

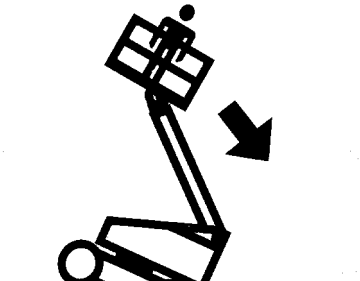
- The minimum approach distance may be reduced if insulating barriers are installed to prevent contact, and the barriers are rated for the voltage of the line being guarded. These barriers shall not be part of (or attached to) the machine. The minimum approach distance shall be reduced to a distance within the designed working dimensions of the insulating barrier. This determination shall be made by a qualified person in accordance with the employer, local, or governmental requirements for work practices near energized equipment

⚠ DANGER

DO NOT MANEUVER MACHINE OR PERSONNEL INSIDE PROHIBITED ZONE (MAD). ASSUME ALL ELECTRICAL PARTS AND WIRING ARE ENERGIZED UNLESS KNOWN OTHERWISE.

Tipping Hazards

- The user must be familiar with the surface before driving. Do not exceed the allowable sideslope and grade while driving.



- Do not elevate platform or drive with platform elevated while on a sloping, uneven, or soft surface.
- Before driving on floors, bridges, trucks, and other surfaces, check allowable capacity of the surfaces.
- Never exceed the maximum platform capacity. Distribute loads evenly on platform floor.
- Do not raise the platform or drive from an elevated position unless the machine is on firm, level and smooth surfaces.
- Keep the chassis of the machine at least 2 ft. (0.6m) from holes, bumps, drop-offs, obstructions, debris, concealed holes, and other potential hazards on the floor/surface.
- Do not push or pull any object with the boom.
- If boom assembly or platform is in a position that one or more wheels are off the ground, all persons must be removed before attempting to stabilize the machine. Use cranes, forklift trucks, or other appropriate equipment to stabilize machine.

Crushing and Collision Hazards

- Approved head gear must be worn by all operating and ground personnel.
- Check work area for clearances overhead, on sides, and bottom of platform when lifting or lowering platform, and driving.

- Use the boom functions, not the drive function, to position the platform close to obstacles.
- Always post a lookout when driving in areas where vision is obstructed.
- Keep non-operating personnel at least 6 ft. (1.8m) away from machine during all driving and swing operations.
- Limit travel speed according to conditions of ground surface, congestion, visibility, slope, location of personnel, and other factors which may cause collision or injury to personnel.
- Be aware of stopping distances in all drive speeds. When driving in high speed, switch to low speed before stopping. Travel grades in low speed only.

1.4 TOWING, LIFTING, AND HAULING

- Never allow personnel in platform while towing, lifting, or hauling.
- This machine should not be towed, except in the event of emergency, malfunction, power failure, or loading/unloading. Refer to the Emergency Procedures section of this manual for emergency towing procedures.
- Ensure boom is in the stowed position and the turntable locked prior to towing, lifting or hauling. The platform must be completely empty of tools.
- When lifting machine, lift only at designated areas of the machine. Lift the unit with equipment of adequate capac-

1.5 ADDITIONAL HAZARDS / SAFETY

- Do not use machine as a ground for welding.
- When performing welding or metal cutting operations, precautions must be taken to protect the chassis from direct exposure to weld and metal cutting spatter.
- Do not refuel the machine with the engine running.
- Battery fluid is highly corrosive. Avoid contact with skin and clothing at all times.
- Charge batteries only in a well ventilated area.

NOTICE

DO NOT OPERATE THE MACHINE WHEN WIND CONDITIONS EXCEED 28 MPH (12.5 M/S).

Table 1-2. Beaufort Scale (For Reference Only)

Beaufort Number	Wind Speed		Description	Land Conditions
	mph	m/s		
0	0	0-0.2	Calm	Calm. Smoke rises vertically
1	1-3	0.3-1.5	Light air	Wind motion visible in smoke
2	4-7	1.6-3.3	Light breeze	Wind felt on exposed skin. Leaves rustle
3	8-12	3.4-5.4	Gentle breeze	Leaves and smaller twigs in constant motion
4	13-18	5.5-7.9	Moderate breeze	Dust and loose paper raised. Small branches begin to move

SECTION 2. USER RESPONSIBILITIES, MACHINE PREPARATION, AND INSPECTION

2.1 PERSONNEL TRAINING

The aerial platform is a personnel handling device; so it is necessary that it be operated and maintained only by trained personnel.

Persons under the influence of drugs or alcohol or who are subject to seizures, dizziness or loss of physical control must not operate this machine.

Operator Training

Operator training must cover:

6. The safest means to operate the machine where overhead obstructions, other moving equipment, and obstacles, depressions, holes, dropoffs.
7. Means to avoid the hazards of unprotected electrical conductors.
8. Specific job requirements or machine application.

Training Supervision

Training must be done under the supervision of a qualified person in an open area free of obstructions until the trainee has developed the ability to safely control and operate the

2.2 PREPARATION, INSPECTION, AND MAINTENANCE

The following table covers the periodic machine inspections and maintenance recommended by JLG Industries, Inc. Consult local regulations for further requirements for aerial work platforms. The frequency of inspections and maintenance must be increased as necessary when the machine is used in a harsh or hostile environment, if the machine is used with increased frequency, or if the machine is used in a severe manner.

NOTICE

JLG INDUSTRIES, INC. RECOGNIZES A FACTORY-TRAINED SERVICE TECHNICIAN AS A PERSON WHO HAS SUCCESSFULLY COMPLETED THE JLG SERVICE TRAINING SCHOOL FOR THE SPECIFIC JLG PRODUCT MODEL.

Table 2-1. Inspection and Maintenance Table

Type	Frequency	Primary Responsibility	Service Qualification	Reference
Pre-Start Inspection	Before using each day; or whenever there's an Operator change.	User or Operator	User or Operator	Operator and Safety Manual
Pre-Delivery Inspection (See Note)	Before each sale, lease, or rental delivery.	Owner, Dealer, or User	Qualified JLG Mechanic	Service and Maintenance Manual and applicable JLG inspection form
Frequent Inspection (See Note)	In service for 3 months or 150 hours, whichever comes first; or Out of service for a period of more than 3 months; or	Owner, Dealer, or User	Qualified JLG Mechanic	Service and Maintenance Manual and applicable JLG inspection form

Pre-Start Inspection

The Pre-Start Inspection should include each of the following:

1. **Cleanliness –** Check all surfaces for leakage (oil, fuel, or battery fluid) or foreign objects. Report any leakage to the proper maintenance personnel.
2. **Structure** - Inspect the machine structure for dents, damage, weld or parent metal cracks or other discrepancies.

(Domestic only) is enclosed in the weather resistant storage container.

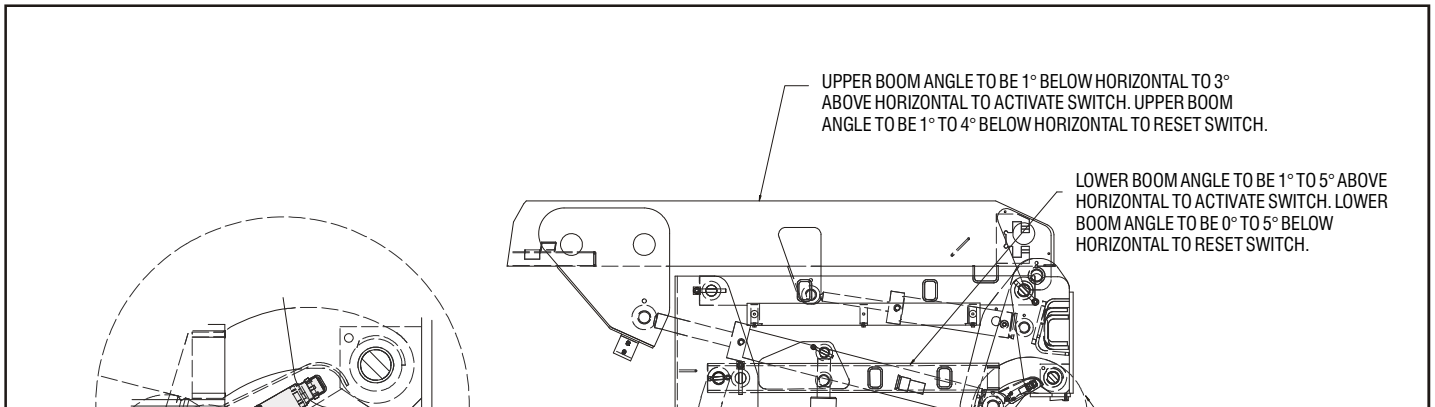
5. **"Walk-Around" Inspection** – Refer to Figure 2-4. thru Figure 2-6.
6. **Battery –** Charge as required.
7. **Fuel** (Combustion Engine Powered Machines) – Add the proper fuel as necessary.
8. **Hydraulic Oil** – Check the hydraulic oil level. Ensure hydraulic oil is added as required.
9. **Function Check** – Once the "Walk-Around" Inspection is complete, perform a functional check of all systems in an area free of overhead and ground level obstructions.

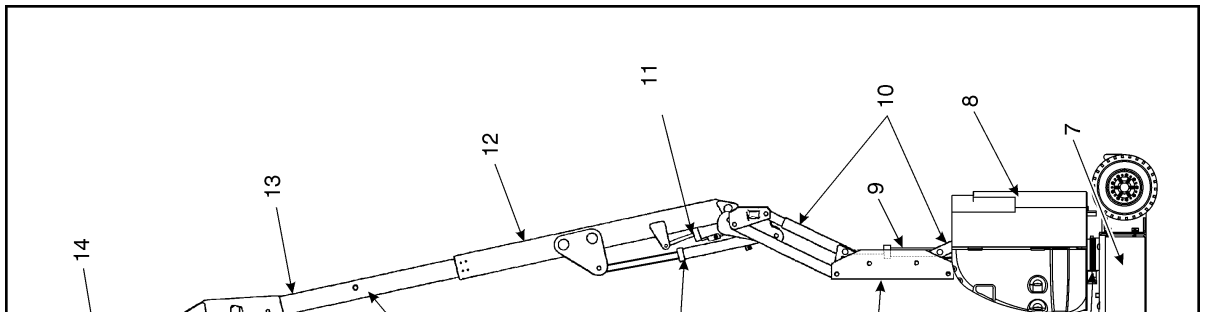
Function Check

Perform the Function Check as follows:

1. From the ground control panel with no load in the platform:
   - **a.** Check that all guards protecting the switches or locks are in place;
   - **b.** Operate all functions and check boom limit switches; drive speed should switch to creep mode if lower boom is elevated or main boom is above horizontal.
   - **c.** Check auxiliary power (or manual descent);
   - **d.** Ensure that all machine functions are disabled

Cutout	Description	Market
Tilt & High Drive	5 degree-reduces the maximum speed of all boom functions to creep when tilted and above elevation. Reduces drive speed to creep when tilted. (See Figure 2-1.)	ANSI & Japan
	3 degree-reduces the maximum speed of all boom functions to creep when tilted and above elevation. Reduces drive speed to creep when tilted.(See Figure 2-1.)	CE & Australia
Drive	Battery Charger Cutout-cuts out drive when the battery charger is plugged in.	All
	Battery Charger Cutout and Simultaneous Drive and Boom Functions disabled above elevation. (See Fig-	CE & Australia



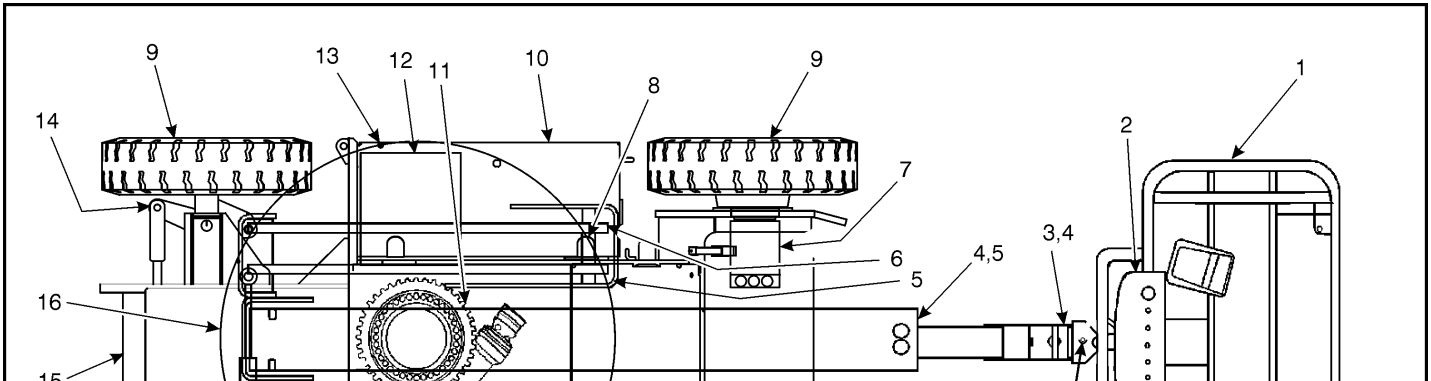


11. Master Cylinder
12. Base Boom
13. Fly Boom
14. Platform Control Box

ng Bearing
ery Box
table
er Lift Cylinder
er Arms

omenclature - E300A

Figure 2-1. Machine Nomenclature - E300AJ & E300AJP



GENERAL

Begin the "Walk-Around Inspection" at Item 1, as noted on the diagram. Continue to the right (counterclockwise viewed from top) checking each item in sequence for the conditions listed in the following checklist.

⚠ WARNING

TO AVOID POSSIBLE INJURY, BE SURE MACHINE POWER IS OFF.

DO NOT OPERATE MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED.

3. **Fly Boom Nose and Platform Support** - Ensure fly boom nose and platform support are free of debris, obstructions, etc.
4. **All Hydraulic Cylinders** - No visible damage; pivot pins and hydraulic hoses undamaged, not leaking.
5. **Slave Cylinder** - No visible damage; pivot pins secure; hydraulic hoses undamaged, not leaking.
6. **Boom Sections/Uprights/Turntable** - See Inspection Note.
7. **Limit Switches -** Switches operable; See Inspection Note.

12. **Hydraulic Pump and Reservoir** - See Inspection Note. Recommended hydraulic fluid level on sight gage (system shut down, boom in stowed position). Breather cap secure and working.
13. **Cowling and Latches** - All cowling, doors and latches in working condition; See Inspection Note.
14. **Tie Rod Ends and Steering Spindles** - See Inspection Note. Tie rod end stubs locked.
15. **Frame** - See Inspection Note. No evidence of cables dragging under the machine.
16. **Counterweight** - See Inspection Note.
17. **Swing Motor and Worm Gear** - See Inspection Note; evidence of proper lubrication.
18. **Battery Charger** - See Inspection Note.
19. **Control Valve** - See Inspection Note.
20. **Manual Descent Valve** - See Inspection Note.
21. **Jib** (E300 AJ only) - See Inspection Note.

Figure 2-6. Daily Walk-Around Inspection - Sheet 3 of 3

NOTES:

SECTION 3. MACHINE CONTROLS AND INDICATORS

3.1 GENERAL

NOTICE

THE MANUFACTURER HAS NO DIRECT CONTROL OVER MACHINE APPLICATION AND OPERATION. THE USER AND OPERATOR ARE RESPONSIBLE FOR CONFORMING WITH GOOD SAFETY PRACTICES.

This section provides the necessary information needed to understand control functions.

3.2 CONTROLS AND INDICATORS

Ground Control Station

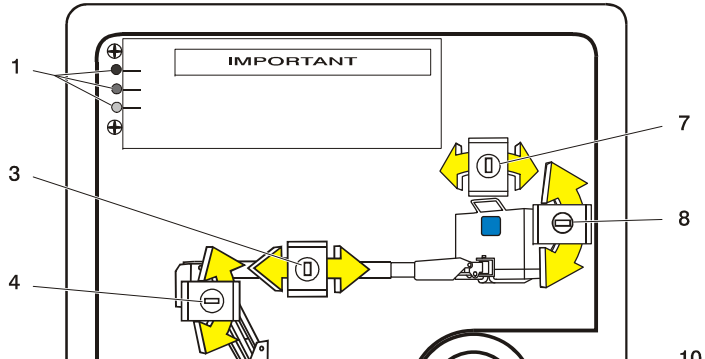
See Figure 3-1., Figure 3-2., and Figure 3-3.

NOTE: *When machine is shut down the Platform/Ground Select switch and Emergency Stop must be positioned to OFF.*

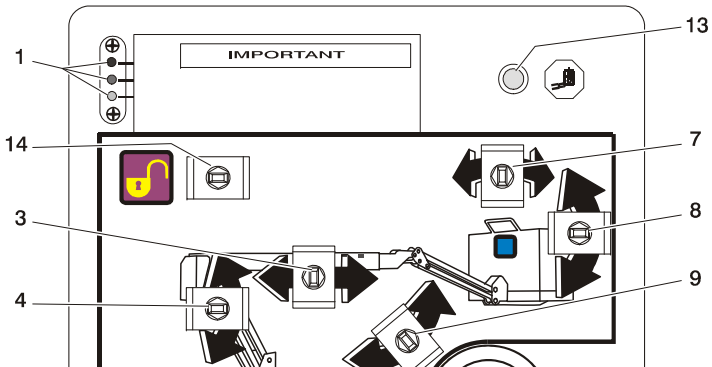
NOTE: *When Power/Emergency Stop Switch is in the on position and motor is not running, an alarm will sound, indicating power is on.*

NOTE: *If equipped, the Function Enable switch must be held down in order to operate Boom Telescope, Lower Lift,*

SECTION 3 - MACHINE CONTROLS AND INDICATORS

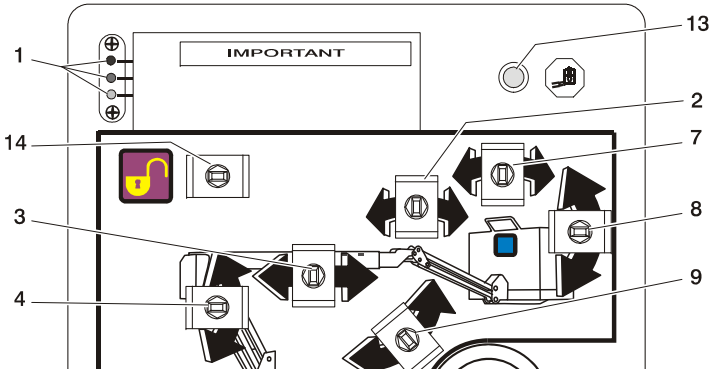


1. Battery Status
2. Not Used
3. Telescope
4. Main Lift
5. Lower Lift
6. Swing
7. Platform Rotate



1. Battery Status
2. Not Used
3. Telescope
4. Main Lift
5. Lower Lift
6. Swing
7. Platform Rotate

SECTION 3 - MACHINE CONTROLS AND INDICATORS



1. Battery Status
2. Jib Swing
3. Telescope
4. Main Lift
5. Lower Lift
6. Swing
7. Platform Rotate
8. Platform Level

3. Telescope

Provides extension and retraction of the main boom.

NOTE: *Main Lift, Swing, Platform Level, Main Telescope, Lower Lift and Platform Rotator control switches are spring-loaded and will automatically return to neutral (off) when released.*

4. Main Lift

Provides raising/lowering of the main boom when positioning up or down.

5. Lower Lift

7. Platform Rotate

Permits rotation of the platform when positioned to the right or left.

⚠ WARNING

ONLY USE THE PLATFORM LEVELING OVERRIDE FUNCTION FOR SLIGHT LEVELING OF THE PLATFORM. INCORRECT USE COULD CAUSE THE LOAD/OCCUPANTS TO SHIFT OR FALL. FAILURE TO DO SO COULD RESULT IN DEATH OR SERIOUS INJURY.

8. Platform leveling Override

Allows the operator to compensate for any difference in

SECTION 3 - MACHINE CONTROLS AND INDICATORS

⚠ CAUTION

WHEN THE MACHINE IS SHUT DOWN THE MASTER/EMERGENCY STOP SWITCH MUST BE POSITIONED TO THE OFF POSITION TO PREVENT DRAINING THE BATTERIES.

10. Power/Emergency Stop Switch.

A two-position red mushroom shaped switch furnishes power to PLATFORM/GROUND SELECT switch when pulled out (on). When pushed in (off), power is shut off to the PLATFORM/GROUND SELECT switch.

11. Battery Indicator and Hourmeter

12. Control Station Selector

Supplies power to the platform control console when positioned to the PLATFORM. With the switch in GROUND position, power is shut off to the platform control console, and only the controls on the ground control panel are operable.

NOTE: *When the Platform/Ground Select Switch is in the center position, power is shut off to the controls at both operating stations. Remove the key to prevent the controls from being actuated. The key is removable in the platform position on CE machines. The key must be available to ground personnel in the event of an emergency.*

Platform Control Station

See Figure 3-4.

1. Posi-Track

   When one wheel is slipping and the machine is not descending a grade, automatic traction control will provide added torque to both wheels. While this function is automatic, it may also be manually engaged by moving the toggle switch to the forward position. Positrac will be engaged for approximately 20 seconds.

   ⚠ WARNING

3. Horn

   A push-type HORN switch supplies electrical power to an audible warning device when pressed.

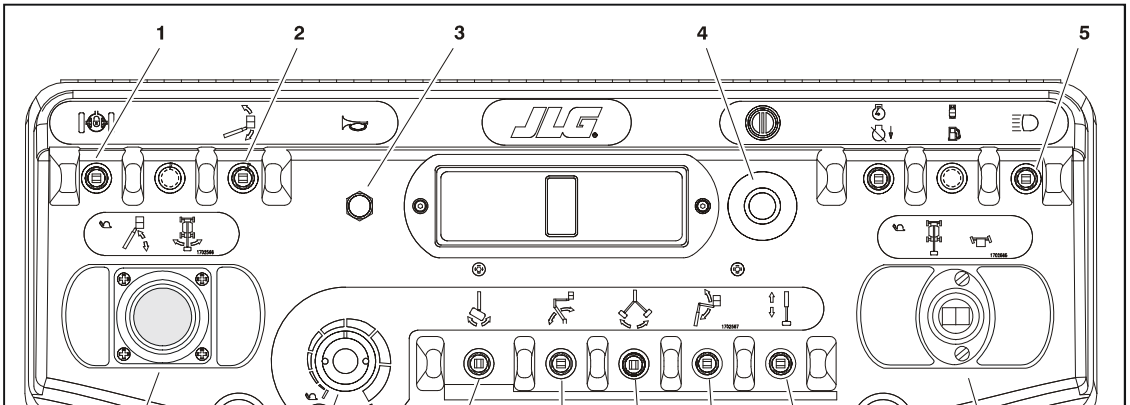
4. Power/Emergency Stop

   A two-position red mushroom shaped switch furnishes power to PLATFORM Controls when pulled out (on). When pushed in (off), power is shut off to the platform functions.

5. Lights (If Equipped)

   This switch operates control console panel lights and head lights if the machine is so equipped.

SECTION 3 - MACHINE CONTROLS AND INDICATORS



NOTE: *Main Lift, Swing, and Drive control levers are spring loaded and will automatically return to neutral (off) position when released.*

6. Drive/Steer

Push forward to drive forward, pull back to drive in reverse. Steering is accomplished via a thumb-activated rocker switch on the end of the steer handle.

NOTE: *When boom is positioned above horizontal and Posi-Track or Function speed are positioned to high, high function speeds are automatically cut out and the machine continues to operate at a lower speed.*

10. Lower Lift

Provides for raising and lowering of Upright when positioned to UP or DOWN.

11. Platform Rotate

Permits rotation of the platform when positioned to the right or left.

12. Function Speed Control

Adjusts speed of Boom and Swing Functions. Rotate CCW for slower speed and CW for faster speed. To adjust Drive, Swing, and Main Lift to creep, turn knob fully CCW until it clicks.

Table 3-1.Simultaneous Functions

If This Function is Selected:	These Functions Will Also Work at the Same Time:				
Drive and Steer		Swing*	Lower Lift**	Main Lift**	Telescope
Swing	Drive and Steer		Lower Lift**	Main Lift**	Telescope
Lower Lift	Drive and Steer	Swing*		No	Telescope
Main Lift	Drive and Steer	Swing*	No		Telescope
Telescope	Drive and Steer	Swing*	Lower Lift**	Main Lift**	
Jib Articulate	Drive and Steer	Swing*	Lower Lift**	Main Lift**	Telescope

Platform Control Indicator Panel

NOTE: *The platform control indicator panel uses different shaped symbols to alert the operator to different types of operational situations that could arise. The meaning of those symbols are explained below.*

Indicates a potentially hazardous situation, which if not corrected, could result in serious injury or death. This indicator will be red.

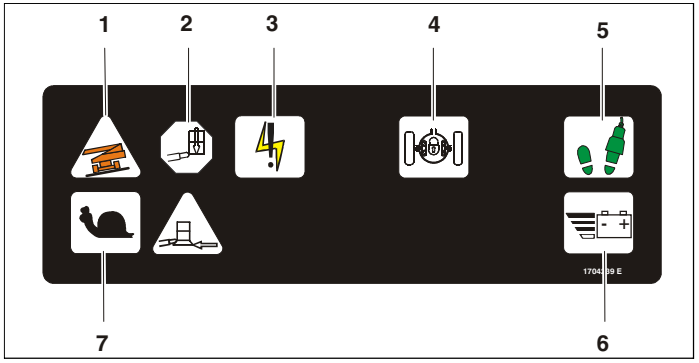
Indicates an abnormal operating condition, which if not corrected, may result in machine interruption or damage. This indicator will be yellow.

1. Tilt Alarm Warning Light and Alarm

Tilt Angle	Market
3°	CE & Australia
5°	ANSI & Japan

This orange illuminator indicates that the chassis is on a slope. An alarm will also sound when the chassis is on a slope and the boom is above horizontal. If lit when boom is raised or extended, retract and lower to below horizontal then reposition machine so that it is level before continuing operation. If the boom is above horizontal and the machine is on a slope, the tilt alarm warning light will illuminate and an alarm will sound and CREEP

SECTION 3 - MACHINE CONTROLS AND INDICATORS



1. Tilt
5. Enable

The four likely causes of a system fault are:

a. The seven second enable time has been allowed to lapse or a function was selected before depressing the footswitch. The system reads this condition as a fault, just as it would if the footswitch were jammed in the depressed position or a function switch were stuck in the on position. Re-depress the footswitch to power the controls and extinguish the light.

b. The maximum power limit has been reached and the machine is not moving. This could happen when the machine is stuck or when attempting to travel over rough terrain or on steep grades which exceed the rated gradeability of the machine. This

4. Posi-Track Indicator

   This indicator lights to show that posi-traction is operating.

5. Enable Indicator/Footswitch

   To operate any function, the footswitch must be depressed and the function selected within seven seconds. The enable indicator shows that the controls are enabled. If a function is not selected within seven seconds, or if a seven second lapse between ending one function and beginning the next function, the enable light will go out and the footswitch must be released and depressed again to enable the controls.

⚠ WARNING

FOOTSWITCH MUST BE ADJUSTED IF FUNCTIONS ACTIVATE WHEN SWITCH ONLY OPERATES WITHIN LAST 1/4" OF TRAVEL, TOP OR BOTTOM.

6. Low Battery Indicator

   Indicates the batteries are low and need to be charged.

7. Creep Speed Indicator

   When the Function Speed Control is turned to the creep position, the indicator acts as a reminder that all functions are set to the slowest speed.

SECTION 3 - MACHINE CONTROLS AND INDICATORS

NOTES:

SECTION 4. MACHINE OPERATION

4.1 DESCRIPTION

This machine is a self-propelled hydraulic lift equipped with a work platform on the end of an elevating, articulating and rotating boom.

The primary operator control station is in the platform. From this control station, the operator can drive and steer the machine in both forward and reverse directions. The operator can raise or lower the boom or swing the boom to the left or right. Standard boom swing is 360 degree non-continuous left and right of the stowed position. The machine has a Ground Control Station which will override the Platform Con-

4.2 OPERATING CHARACTERISTICS AND LIMITATIONS

Capacities

Raising boom above horizontal with or without any load in platform, is based on the following criteria:

1. Machine is positioned on a smooth, firm and level surface.
2. Load is within manufacturers rated design capacity.

Stability

Machine stability is based on two (2) conditions which are called FORWARD stability and BACKWARD stability. The machine's position of least FORWARD stability is shown in Figure 4-1. and its position of least BACKWARD stability is shown in Figure 4-2.

⚠ WARNING

TO AVOID FORWARD OR BACKWARD UPSET, DO NOT OVERLOAD MACHINE, OR OPERATE ON OUT-OF-LEVEL SURFACE.

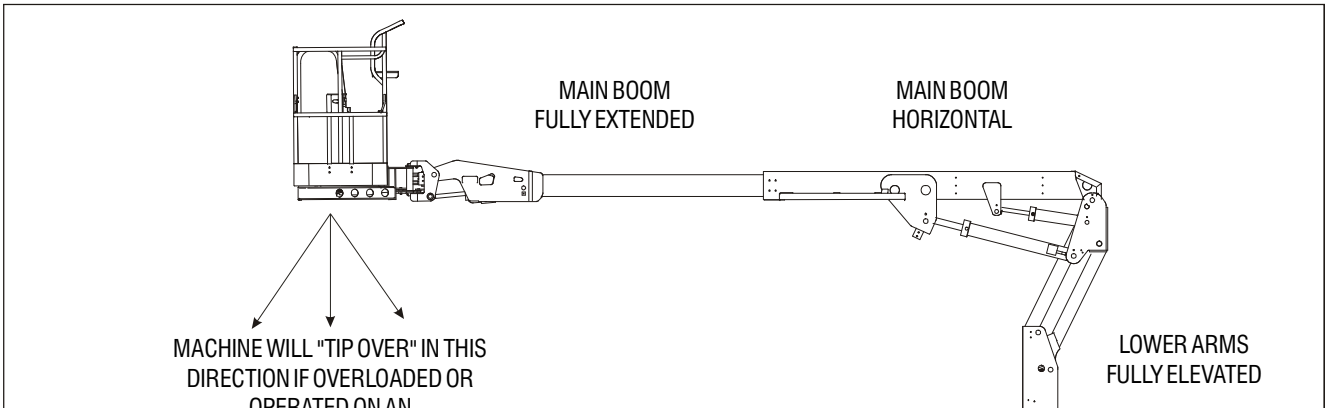
4.3 MOTOR OPERATION

Power/Emergency Stop

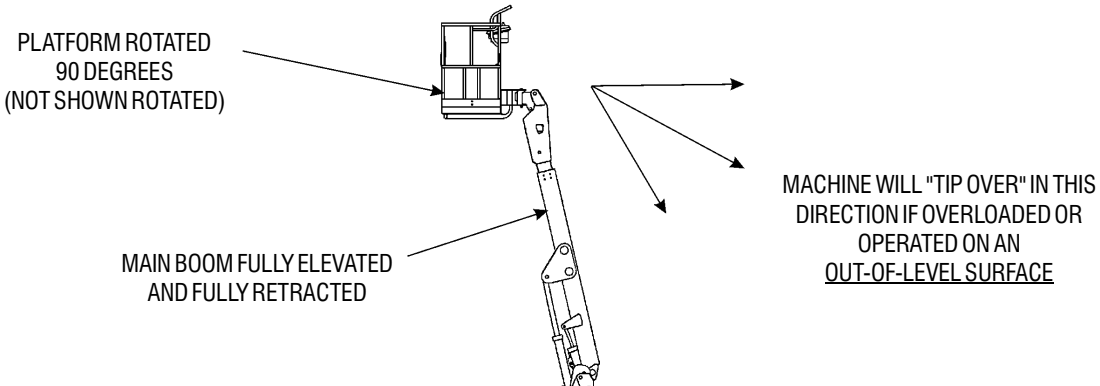
This red, mushroom-shaped switch provides battery power to the Platform/Ground Select switch, when pulled out (on), for all machine functions. The switch should be pushed in (off) when recharging the batteries or parking the machine overnight.

Platform/Ground Select Switch

The Platform/Ground Select switch functions to direct battery power to the desired control station when the POWER/



SECTION 4 - MACHINE OPERATION



Motor Activation

NOTICE

FOOTSWITCH MUST BE DEPRESSED PRIOR TO ACTIVATING ANY FUNCTION, OTHERWISE FUNCTION WILL NOT OPERATE.

The motor becomes activated and operates the desired function when the Emergency Stop switch is pulled out (on), the Platform/Ground select switch is in the appropriate position and the Footswitch is depressed.

⚠ CAUTION

IF A MOTOR MALFUNCTION NECESSITATES UNSCHEDULED SHUT-

4.4 TRAVELING (DRIVING)

NOTICE

IF THE MACHINE IS OPERATED AT A VERY SLOW SPEED OR STALLED WHEN CLIMBING A GRADE OF 20% OR GREATER, DRIVE FUNCTION WILL STOP. REMOVE FOOT FROM FOOT-SWITCH, AND DEPRESS FOOT-SWITCH TO RESET.

⚠ WARNING

DO NOT DRIVE WITH BOOM ABOVE HORIZONTAL EXCEPT ON A SMOOTH, FIRM AND LEVEL SURFACE.

DO NOT DRIVE ON SIDE SLOPES EXCEEDING 5 DEGREES

⚠ CAUTION

BEFORE DRIVING, MAKE SURE BOOM IS POSITIONED OVER REAR DRIVE AXLE. IF BOOM IS OVER STEER WHEELS, STEER AND DRIVE CONTROLS WILL MOVE IN OPPOSITE DIRECTIONS TO MACHINE MOTION.

Traveling Forward and Reverse

NOTICE

FOOTSWITCH MUST BE DEPRESSED PRIOR TO ACTIVATING ANY FUNCTION, OTHERWISE FUNCTION WILL NOT OPERATE.

1. If machine is shut down, pull out Emergency Stop at

4.5 STEERING

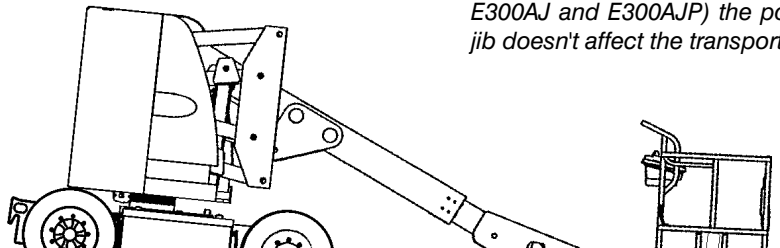
Depress footswitch to steer machine, position thumb switch on Drive/Steer controller to RIGHT for steering right, or to LEFT for steering left.

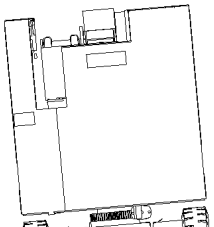
4.6 PLATFORM

Loading From Ground Level

1. Position chassis on a smooth, firm and level surface.
2. If total load (personnel, tools and supplies) is 500 LB. (227 kg) or less, distribute load uniformly on platform floor and proceed to work position.

NOTE: *Machine shown in transport position. For machines provided with jib (models E300AJ and E300AJP) the position of the jib doesn't affect the transport position*





SIDE SLOPE

Platform Level Adjustment

⚠ WARNING

ONLY USE THE PLATFORM LEVELING OVERRIDE FUNCTION FOR SLIGHT LEVELING OF THE PLATFORM. INCORRECT USE COULD CAUSE THE LOAD/OCCUPANTS TO SHIFT OR FALL. FAILURE TO DO SO COULD RESULT IN DEATH OR SERIOUS INJURY.

1. Leveling UP. Depress footswitch to raise platform, position PLATFORM/LEVEL control switch UP and hold until platform is level.
2. Leveling DOWN. Depress footswitch to lower platform, position PLATFORM/LEVEL control switch to DOWN

4.7 BOOM

⚠ WARNING

A RED TILT WARNING LIGHT IS LOCATED ON THE CONTROL CONSOLE WHICH LIGHTS WHEN THE CHASSIS IS ON A 5 DEGREE OR GREATER SLOPE. DO NOT SWING OR RAISE BOOM ABOVE HORIZONTAL WHEN LIGHT IS LIT.

DO NOT DEPEND ON TILT ALARM AS A LEVEL INDICATOR FOR THE CHASSIS. TILT ALARM INDICATES CHASSIS IS ON A SEVERE SLOPE (5 DEGREE OR GREATER). CHASSIS MUST BE LEVEL BEFORE SWINGING, OR RAISING BOOM ABOVE HORIZONTAL.

TO AVOID UPSET IF RED TILT WARNING LIGHT LIGHTS WHEN BOOM IS

⚠ CAUTION

TO AVOID SERIOUS INJURY, DO NOT OPERATE MACHINERY IF ANY CONTROL LEVER OR TOGGLE SWITCH CONTROLLING PLATFORM MOVEMENT DOES NOT RETURN TO THE 'OFF' OR NEUTRAL POSITION WHEN RELEASED.

TO AVOID A COLLISION AND INJURY IF PLATFORM DOES NOT STOP WHEN A CONTROL SWITCH OR LEVER IS RELEASED, REMOVE FOOT FROM FOOTSWITCH OR USE EMERGENCY STOP SWITCH TO STOP THE MACHINE.

Swinging the Boom

Raising and Lowering the Upper Boom

Depress footswitch to raise or lower the Upper Boom, with footswitch activated, position Upper Boom Lift switch to UP or DOWN until desired height is reached.

4.8 BOOM FUNCTION SPEEDS

The Function Speed Control affects the speed of boom functions LIFT, TELESCOPE, and SWING. Turn the control CW to increase function speed or CCW to decrease function speed.

4.9 SHUT DOWN AND PARK

NOTE: *When parking battery powered units overnight, batteries should be charged in accordance with instructions in Section 6 to ensure readiness for following workday.*

NOTE: *Electric machines are equipped with a static strap due to static electricity build-ups. Strap is located under rear of machine chassis.*

To shut down and park the machine, the procedures are as follows:

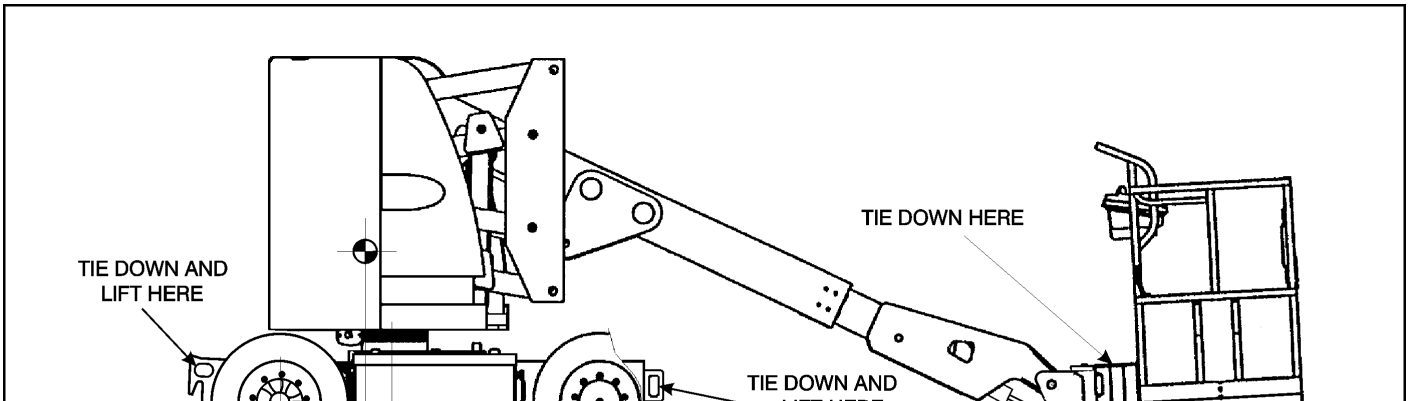
1. Drive machine to a reasonably well protected area.
2. Ensure boom is lowered over rear drive axle.

4.10 LIFTING AND TIE DOWN

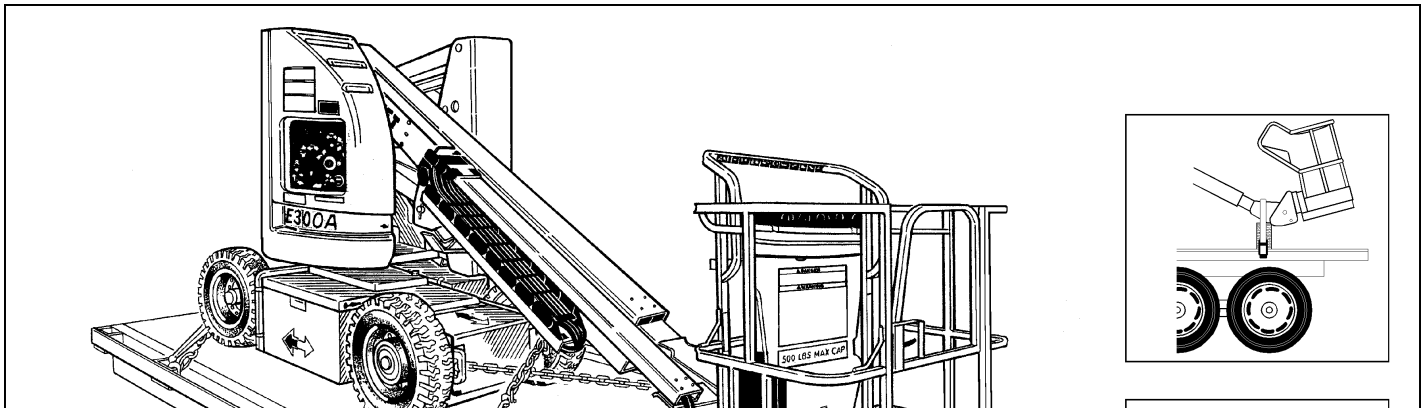
Lifting

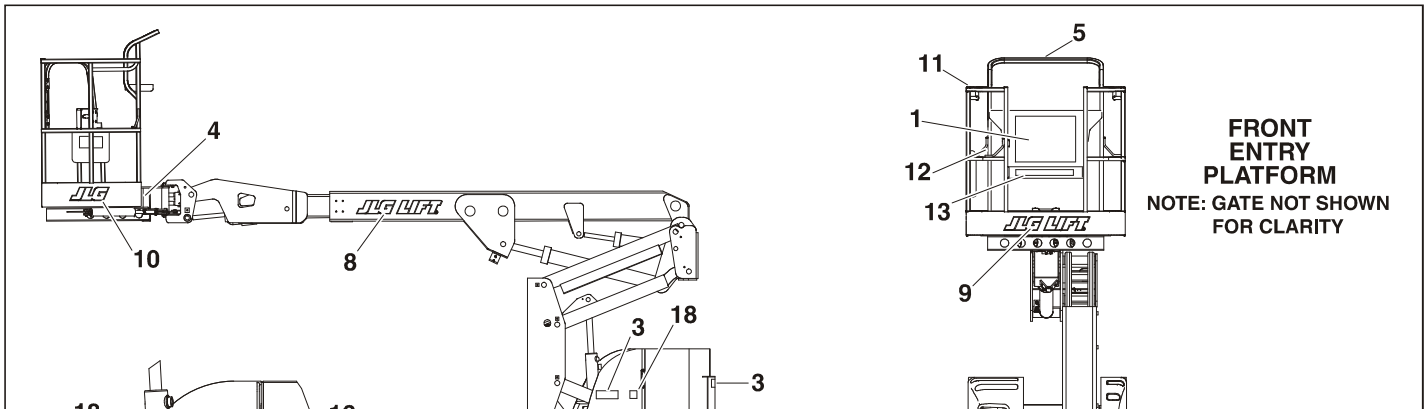
1. Refer to the Serial Number Tag, call JLG Industries, or weigh the individual unit to find out the Gross Vehicle Weight.
2. Place the boom in the stowed position.
3. Remove all loose items from the machine.
4. Properly adjust the rigging to prevent damage to the machine and so the machine remains level.

Tie Down

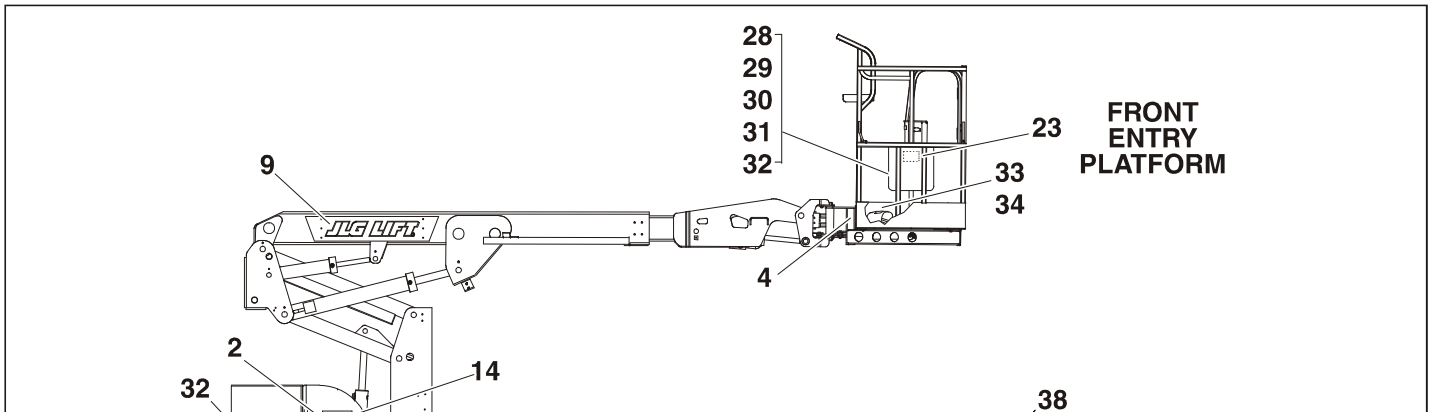


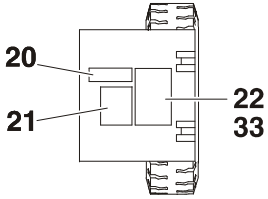
SECTION 4 - MACHINE OPERATION





SECTION 4 - MACHINE OPERATION





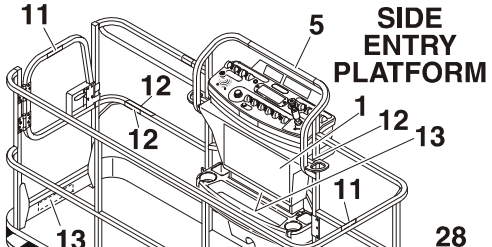


Table 4-1. E300A Decal Legend - Part 1 of 2

Item #	ANSI 0259007-9	Australian 0259009-4	CE English 0259314-5	German 0259013-5	Dutch 0259015-5	Italian 0259017-5	French 0259019-5	Spanish 0259021-5
1	1703797	1703992	1703806	1703799	1703913	1703915	1703917	1703919
2	1703798	1703807	1703807	1703800	1703914	1703916	1703918	1703920
3	1703805	--	--	--	--	--	--	--
4	1703804	1701518	1701518	1701518	1701518	1701518	1701518	1701518
5	1704253	--	--	--	--	--	--	--

Table 4-1. E300A Decal Legend - Part 1 of 2

Item #	ANSI 0259007-9	Australian 0259009-4	CE English 0259314-5	German 0259013-5	Dutch 0259015-5	Italian 0259017-5	French 0259019-5	Spanish 0259021-5
14	1702688	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--	--
16	1701502	1701502	1701502	1701502	1701502	1701502	1701502	1701502
17	1701503	1701503	1701503	1701503	1701503	1701503	1701503	1701503
18	1701504	1701504	1701504	1701504	1701504	1701504	1701504	1701504
19	1702153	--	--	--	--	--	--	--

Table 4-1. E300A Decal Legend - Part 1 of 2

Item #	ANSI 0259007-9	Australian 0259009-4	CE English 0259314-5	German 0259013-5	Dutch 0259015-5	Italian 0259017-5	French 0259019-5	Spanish 0259021-5
28	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--
32	--	--	--	--	--	--	--	--
33	--	--	--	--	--	--	--	--

Table 4-1. E300A Decal Legend - Part 1 of 2

Item #	ANSI 0259007-9	Australian 0259009-4	CE English 0259314-5	German 0259013-5	Dutch 0259015-5	Italian 0259017-5	French 0259019-5	Spanish 0259021-5
42	--	--	--	--	--	--	--	--
43	1702901	1702901	1702901	1702901	1702901	1702901	1702901	1702901
44	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412

Table 4-2. E300A Decal Legend - Part 2 of 2

Item #	Japanese 0259023-4	Korean 0259025-5	ANSI English/ Spanish 0259027-5	ANSI Chinese/ English 0259031-5	ANSI Portuguese/ Spanish 0259035-6	Norwegian 0273209-2
1	1703926	1703927	1703923	1703925	1703928	1705254
2	1703932	1703933	1703929	1703931	1703934	1705255
3	1703938	1703939	1703935	1703937	1703940	--
4	1703950	1703951	1703947	1703949	1703952	1701518
5			1704253			

Table 4-2. E300A Decal Legend - Part 2 of 2

Item #	Japanese 0259023-4	Korean 0259025-5	ANSI English/ Spanish 0259027-5	ANSI Chinese/ English 0259031-5	ANSI Portuguese/ Spanish 0259035-6	Norwegian 0273209-2
14	--	--	1702688	--	--	--
15	--	--	--	--	--	--
16	1701502	1701502	1701502	1701502	1701502	1701502
17	1701503	1701503	1701503	1701503	1701503	1701503
18	1701504	1701504	1701504	1701504	1701504	1701504
19			1704007		1704008	

Table 4-2. E300A Decal Legend - Part 2 of 2

Item #	Japanese 0259023-4	Korean 0259025-5	ANSI English/ Spanish 0259027-5	ANSI Chinese/ English 0259031-5	ANSI Portuguese/ Spanish 0259035-6	Norwegian 0273209-2
28	--	--	--	--	--	--
29	--	--	--	--	--	--
30	--	--	--	--	--	--
31	--	--	--	--	--	--
32	--	--	--	--	--	--
33						

Table 4-2. E300A Decal Legend - Part 2 of 2

Item #	Japanese 0259023-4	Korean 0259025-5	ANSI English/ Spanish 0259027-5	ANSI Chinese/ English 0259031-5	ANSI Portuguese/ Spanish 0259035-6	Norwegian 0273209-2
42	--	--	--	--	--	--
43	1702901	1702901	1702901	1702901	1702901	1705246
44	1704412	1704412	1704412	1704412	1704412	1704412

Table 4-3. E300AJ Decal Legend

Item #	ANSI 0259008-7	CE/Aus 0275064-3	Japanese 0259024-5	Korean 0259026-6	Spanish 0259028-6	French 0259030-6	Chinese 0259032-6	Portuguese/ Spanish 0259036-6
1	1703797	1705921	1703926	1703927	1703923	1703924	1703925	1703928
2	1703798	1705822	1703932	1703933	1703929	1703930	1703931	1703934
3	1703805	--	1703938	1703939	1703935	1703936	1703937	1703940
4	1703804	1701518	1703950	1703951	1703947	1703948	1703949	1703952
5	1704253	--	--	--	1704253	1704253	--	--

Table 4-3. E300AJ Decal Legend

Item #	ANSI 0259008-7	CE/Aus 0275064-3	Japanese 0259024-5	Korean 0259026-6	Spanish 0259028-6	French 0259030-6	Chinese 0259032-6	Portuguese/ Spanish 0259036-6
14	1707013	--	--	--	1707013	1707047	--	1707013
15	--	--	--	--	--	--	--	--
16	1701502	1701502	1701502	1701502	1701502	1701502	1701502	1701502
17	1701503	1701503	1701503	1701503	1701503	1701503	1701503	1701503
18	1701504	1701504	1701504	1701504	1701504	1701504	1701504	1701504
19	1702153	--	--	--	1704007	1704006	--	1704008

Table 4-3. E300AJ Decal Legend

Item #	ANSI 0259008-7	CE/Aus 0275064-3	Japanese 0259024-5	Korean 0259026-6	Spanish 0259028-6	French 0259030-6	Chinese 0259032-6	Portuguese/ Spanish 0259036-6
28	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--
32	--	--	--	--	--	--	--	--
33	--	--	--	--	--	--	--	--

Table 4-3. E300AJ Decal Legend

Item #	ANSI 0259008-7	CE/Aus 0275064-3	Japanese 0259024-5	Korean 0259026-6	Spanish 0259028-6	French 0259030-6	Chinese 0259032-6	Portuguese/ Spanish 0259036-6
42	--	--	--	--	--	--	--	--
43	1702901	1706932	1702901	1702901	1702901	1704116	1702901	1702901
44	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412
45	--	--						
46	--	1704885						

Table 4-4. E300AJP Decal Legend

Item #	ANSI 0259506-7	CE/Aus 0275065-3	Japanese 0259514-4	Korean 0259515-5	Spanish 0259516-5	French 0259517-6	Chinese 0259518-5	Portuguese/ Spanish 0259519-5
1	1703797	1705921	1703926	1703927	1703923	1703924	1703925	1703928
2	1703798	1705822	1703932	1703933	1703929	1703930	1703931	1703934
3	1703805	--	1703938	1703939	1703935	1703936	1703937	1703940
4	1703804	1701518	1703950	1703951	1703947	1703948	1703949	1703952
5	1704253	--	--	--	1704253	1704253	--	--

Table 4-4. E300AJP Decal Legend

Item #	ANSI 0259506-7	CE/Aus 0275065-3	Japanese 0259514-4	Korean 0259515-5	Spanish 0259516-5	French 0259517-6	Chinese 0259518-5	Portuguese/ Spanish 0259519-5
14	1707013	--	--	--	1702688	1704112	--	--
15	--	--	--	--	--	--	--	--
16	1701502	1701502	1701502	1701502	1701502	1701502	1701502	1701502
17	1701503	1701503	1701503	1701503	1701503	1701503	1701503	1701503
18	1701504	1701504	1701504	1701504	1701504	1701504	1701504	1701504
19	1702153	--	--	--	1704007	1704006	--	1704008

Table 4-4. E300AJP Decal Legend

Item #	ANSI 0259506-7	CE/Aus 0275065-3	Japanese 0259514-4	Korean 0259515-5	Spanish 0259516-5	French 0259517-6	Chinese 0259518-5	Portuguese/ Spanish 0259519-5
28	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--
32	--	--	--	--	--	--	--	--
33	--	--	--	--	--	--	--	--

Table 4-4. E300AJP Decal Legend

Item #	ANSI 0259506-7	CE/Aus 0275065-3	Japanese 0259514-4	Korean 0259515-5	Spanish 0259516-5	French 0259517-6	Chinese 0259518-5	Portuguese/ Spanish 0259519-5
42	--	--	--	--	--	--	--	--
43	1702901	1706932	1702901	1702901	1702901	1704116	1702901	1702901
44	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412
45		--						
46		1704885						

NOTES:

SECTION 5. EMERGENCY PROCEDURES

5.1 GENERAL

This section explains the steps to be taken in case of an emergency situation while operating.

5.2 INCIDENT NOTIFICATION

JLG Industries, Inc. must be notified immediately of any incident involving a JLG product. Even if no injury or property damage is evident, the factory should be contacted by telephone and provided with all necessary details.

In USA:
JLG Phone: 877-JLG-SAFE (554-7233)

Failure to notify the manufacturer of an incident involving a JLG Industries product within 48 hours of such an occurrence may void any warranty consideration on that particular machine.

NOTICE

FOLLOWING ANY ACCIDENT, THOROUGHLY INSPECT THE MACHINE AND TEST ALL FUNCTIONS FIRST FROM THE GROUND CONTROLS, THEN FROM THE PLATFORM CONTROLS. DO NOT LIFT ABOVE 10 FT. (3 M) UNTIL YOU ARE SURE THAT ALL DAMAGE HAS BEEN REPAIRED, IF REQUIRED, AND THAT ALL CONTROLS ARE OPERATING CORRECTLY.

5.3 EMERGENCY OPERATION

Operator Unable to Control Machine

IF THE PLATFORM OPERATOR IS PINNED, TRAPPED OR UNABLE TO OPERATE OR CONTROL MACHINE:

1. Other personnel should operate the machine from ground controls only as required.
2. Other qualified personnel on the platform may use the platform controls. DO NOT CONTINUE OPERATION IF CONTROLS DO NOT FUNCTION PROPERLY.

Platform or Boom Caught Overhead

5.4 EMERGENCY TOWING PROCEDURES

Towing this machine is prohibited. However, provisions for moving the machine have been incorporated. The following procedures are to be used ONLY for emergency movement to a suitable maintenance area.

1. Chock wheels securely.
2. Engage the mechanical release on both drive hubs by loosening, completely reversing, and tightening the two bolts on each hub.
3. Connect suitable equipment, remove chocks, and move machine.

5.5 MANUAL DESCENT SYSTEM

The manual descent system is used, in the event of total power failure or in case the key is not accessible to the ground personnel, to lower the upper, lower and jib booms using gravity. To operate the manual descent system, proceed as follows:

Machines built Prior to S/N 0300063313 and from S/N 0300127575 to Present.

1. Locate the manual descent knob on main valve and turn (clockwise) to open. Install handle into manual descent pump and lower the lower boom by pumping the handle until the boom is completely lowered.
2. Turn manual descent knob (counterclockwise) to close completely lowered. Return the manual descent knob to the center position and stow the handle in bracket provided.

Jib Manual Descent

⚠ WARNING

CRUSHING HAZARD

DO NOT REACH THROUGH THE JIB SECTION TO ACCESS THE KNOB. ALWAYS ACCESS FROM THE UNDER SIDE OF THE JIB.

Locate the manual descent knob located on the jib cylinder. Turn the knob counterclockwise until the jib begins to descend. Return the knob to the closed position (clockwise)

SECTION 5 - EMERGENCY PROCEDURES

NOTES:

SECTION 6. GENERAL SPECIFICATIONS & OPERATOR MAINTENANCE

6.1 INTRODUCTION

This section of the manual provides additional necessary information to the operator for proper operation and maintenance of this machine.

The maintenance portion of this section is intended as information to assist the machine operator to perform daily maintenance tasks only, and does not replace the more thorough Preventive Maintenance and Inspection Schedule included in the Service and Maintenance Manual.

Other Publications Available:

6.2 OPERATING SPECIFICATIONS

Table 6-1. Operating specifications - E300A

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability) see Figure 4-3.	25%
Maximum Travel Grade, stowed Position (Side Slope) see Figure 4-3.	5%
Vertical Platform Height	30 ft. (9.14 m)

Table 6-1. Operating specifications - E300A

Ground Bearing Pressure	110 psi (7.7 kg/cm^2)
Maximum System Voltage	48 VDC
Maximum Main Relief Hyd. Pressure	2500 psi. (172.3 bars)

Table 6-2. Operating specifications - E300AJ

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability) see Figure 4-3.	25%

Table 6-2. Operating specifications - E300AJ

Drive Speed (High Drive) (Above Horz.)	45-50 sec/ 200ft. (61 m) 55-68 sec/ 50 ft. (15.2 m)
Gross Machine Weight	15,400 lbs. (6985 kg)
Ground Bearing Pressure	121 psi (8.7 kg/cm^2)
Maximum System Voltage	48 VDC
Maximum Main Relief Hyd. Pressure	2500 psi. (172.3 bars)

Table 6-3. Operating specifications - E300AJP

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability) see Figure 4-3.	25%
Maximum Travel Grade, stowed Position (Side Slope) see Figure 4-3.	5%
Vertical Platform Height	30 ft. (9.14 m
Horizontal Platform Reach (Up & Over)	20 ft. (6.1 m)
Machine Width	4 ft. (1.22 m)

Table 6-3. Operating specifications - E300AJP

Maximum Main Relief Hyd. Pressure	3200 psi. (220.6 bars)

Capacities

Table 6-4. Capacities

Hydraulic Oil Tank	3.0 gallons (11.35 liters)
Hydraulic System (Including Tank)	4.0 gallons (15.14 liters)
Torque Hub, Drive*	17 ounces (0.50 L)
*Torque hubs should be one half full of lubricant.	

Dimensional Data

Table 6-5. Dimensional Data

Turning Radius (Inside)	5 ft. (1.52 m.)
Turning Radius (Outside)	10 ft. - 0 in. (3.05 m)
Machine Height (stowed)	6 ft., 7.0 in. (2.0 m.)
Machine Length (stowed) E300A E300AJ/AJP	 17 ft.,2 in. (5.23 m.) 18 ft., (5.48 m)
Up and Over Platform Height	13 ft.,1.0 in. (3.99 m.).

Hydraulic Oil

Table 6-6. Hydraulic Oil

Hydraulic System Operating Temperature Range	S.A.E. Viscosity Grade
+0° to + 180° F (-18° to +83° C)	10W
+0° to + 210° F (-18° to +99° C)	10W-20, 10W30
+50° to + 210° F (+10° to +99° C	20W-20

NOTE: *Hydraulic oils require anti-wear qualities at least API Ser*

NOTE: *Aside from JLG recommendations, it is not advisable to mix oils of different brands or types, as they may not contain the same required additives or be of comparable viscosities. If use of hydraulic oil other than Mobil DTE 11M is desired, contact JLG Industries for proper recommendations.*

Table 6-7. Mobil DTE 11M Specs

ISO Viscosity Grade	#15
Gravity API	31.9
Pour Point, Max	-40 F (-40 C)
Flash Point, Min.	330 F (166 C)

NOTE: *Machines Manufactured before S/N 03000046376 were filled with Mobilfluid 424 hydraulic oil. If desired to change to Mobil DTE 11M hydraulic oil, the telescope seals are recommended to be changed. These are included in (JLG) kit P/N 8457399. Also included in the kit, is a decal to be located on the hydraulic tank to identify Mobil DTE 11M oil in use.*

Table 6-8. Mobilfluid 424 Specs

SAE Grade	10W30
Gravity, API	29.0
Density, Lb/Gal. 60°F	7.35
Pour Point, Max	-46°F (-43°C)

Table 6-9. Mobil EAL 224H Specs

Type	Synthetic Biodegradable
ISO Viscosity Grade	32/46
Specific Gravity	.922
Pour Point, Max	-25°F (-32°C)
Flash Point, Min.	428°F (220°C)
Operating Temp.	0 to 180°F (-17 to 162°C)
Weight	**7.64 lb. per gal. (0.9 kg per liter)**
Viscosity	
at 40°C	37 cSt

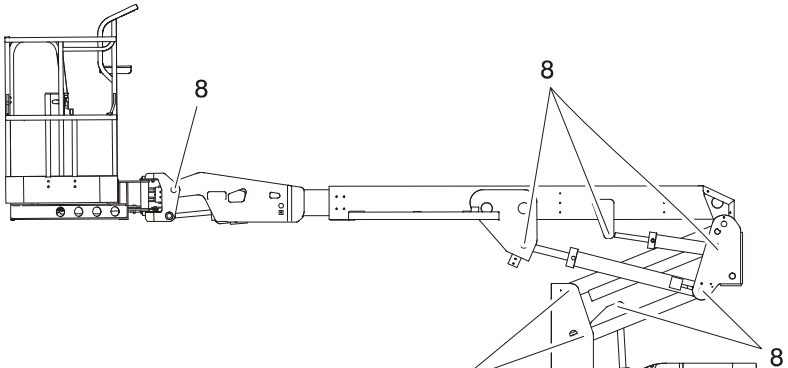
Critical Stability Weights

⚠ WARNING

DO NOT REPLACE ITEMS CRITICAL TO STABILITY WITH ITEMS OF DIFFERENT WEIGHT OR SPECIFICATION (FOR EXAMPLE: BATTERIES, FILLED TIRES, PLATFORM) DO NOT MODIFY UNIT IN ANY WAY TO AFFECT STABILITY.

Table 6-10. Critical Stability Weights

Components	LBS.	KG.
Counterweight	5300	2404.1
Tire and Wheel	120	54.4



6.3 OPERATOR MAINTENANCE

NOTE: *The following numbers correspond to those in Figure 6-1., Operator Maintenance & Lubrication Diagram.*

Table 6-11. Lubrication Specifications.

KEY	SPECIFICATIONS
MPG	Multipurpose Grease having a minimum dripping point of 350 degrees F. Excellent water resistance and adhesive qualities; and being of extreme pressure type (Timken OK 40 pounds minimum).
EPGL	Extreme Pressure Gear Lube (oil) meeting API Service Classification GL-5 or Mil-Spec Mil-L-2105.

NOTE: *It is recommended as a good practice to replace all filters at the same time.*

NOTICE

LUBRICATION INTERVALS ARE BASED ON MACHINE OPERATION UNDER NORMAL CONDITIONS. FOR MACHINES USED IN MULTI-SHIFT OPERATIONS AND/OR EXPOSED TO HOSTILE ENVIRONMENTS OR CONDITIONS, LUBRICATION FREQUENCIES MUST BE INCREASED ACCORDINGLY.

1. Swing Bearing

Lube Point(s) - 2 Grease Fittings
Capacity - A/R

2. Swing Bearing/Worm Gear Teeth

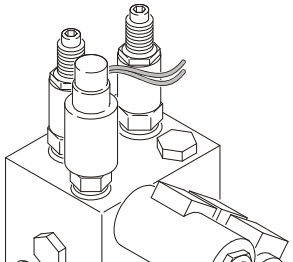
Lube Point(s) - 2 Grease Fittings
Capacity - Spray On
Lube - Mobiltac375NC
Interval - A/R
Comments - If necessary install grease fittings into worm gear housing and grease bearings.

⚠ CAUTION

DO NOT OVERGREASE BEARINGS. OVERGREASING BEARINGS WILL RESULT IN DAMAGE TO OUTER SEAL IN HOUSING.

Comments - On new machines, those recently overhauled, or after changing hydraulic oil, operate all systems a minimum of two complete cycles and recheck oil level in reservoir.

4. Hydraulic Return Filter



5. Wheel Drive Hub

Lube Point(s) - Level/Fill Plug
Capacity - 17 oz. (1/2 Full)
Lube - EPGL
Interval - Check level every 3 months or 150 hrs of operation; change every 2 years or 1200 hours of operation

6. Wheel Bearings

7. Spindles/Bushing

Capacity - A/R
Lube - Lithium Lubricant
Interval - Every 2 years or 1200 hours of operation
Comments - At Spindle/Bushing Replacement; Coat I.D. of bushings prior to installing king pins.

8. Boom Pivot Pins/Bushing

Capacity - A/R
Lube - Lithium Lubricant
Interval - Every 2 years or 1200 hours of operation
Comments - At boom pivot pins/bushing replacement; Coat I.D. of bushings prior to installing pivot pins.

6.4 BATTERY MAINTENANCE AND CHARGING

⚠ WARNING

TO AVOID INJURY FROM AN EXPLOSION, DO NOT SMOKE OR ALLOW SPARKS OR A FLAME NEAR BATTERY DURING SERVICING. ALWAYS WEAR EYE AND HAND PROTECTION WHEN SERVICING BATTERIES.

Battery Maintenance, Quarterly

1. Open battery compartment cover to allow access to battery terminals and vent caps.

⚠ CAUTION

2. Remove all vent caps and inspect electrolyte level of each cell. Electrolyte level should be to the ring approximately one inch from top of battery. Fill batteries with distilled water only. Replace and secure all vent caps.
3. Remove battery cables from each battery post one at a time, negative first. Clean cables with acid neutralizing solution (e.g. baking soda and water or ammonia) and wire brush. Replace cables and/or cable clamp bolts as required.
4. Clean battery post with wire brush then re-connect cable to post. Coat non-contact surfaces with mineral grease or petroleum jelly.
5. When all cables and terminal posts have been cleaned,

Battery Charging, Daily

NOTE: *To avoid excessive battery charging time, do not allow batteries to become completely discharged.*

To avoid electrolyte overflow, add distilled water to batteries after charging.

When adding water to the battery, fill only to level indicated or 3/8" above separators.

1. Charge batteries at the end of each work day, or when machine performance is significantly reduced due to batteries becoming discharged.

   b. Remove charging harness cable and connect to a receptacle or the correct voltage.

   c. Allow batteries to charge until 100% LED is illuminated.

NOTE: *When batteries are completely charged, disconnect charging harness cable from receptacle. Store charging harness cable.*

   d. Ensure battery cables are positioned and are not pinched. Close and secure all compartment doors.

6.5 TIRES AND WHEELS

Tire Wear and Damage

Inspect tires periodically for wear or damage. Tires with worn edges or distorted profiles require replacement. Tires with significant damage in the tread area or side wall, require immediate evaluation before replacing the machine into service.

Wheel and Tire Replacement

Replacement wheels must have the same diameter and profile as the original. Replacement tires must be the same size and rating as the tire being replaced.

Tighten the lug nuts to the proper torque to prevent wheels from coming loose. Use a torque wrench to tighten the fasteners. If you do not have a torque wrench, tighten the fasteners with a lug wrench, then immediately have a service garage or dealer tighten the lug nuts to the proper torque. Over-tightening will result in breaking the studs or permanently deforming the mounting stud holes in the wheels. The proper procedure for attaching wheels is as follows:

1. Start all nuts by hand to prevent cross threading. DO NOT use a lubricant on threads or nuts.
2. Tighten nuts in the following sequence.

3. The tightening of the nuts should be done in stages. Following the recommended sequence, tighten nuts per wheel torque.

Table 6-12. Wheel Torque Chart

TORQUE SEQUENCE		
1st Stage	2nd Stage	3rd Stage
40 ft lbs (55 Nm)	95 ft lbs (130 Nm)	170 ft lbs (230 Nm)

4. Wheel nuts should be torqued after first 50 hours of operation and after each wheel removal. Check the torque after the first 10 miles, 25 miles, and again at 50 miles. Check periodically thereafter.

6.6 SUPPLEMENTAL INFORMATION

The following information is provided in accordance with the requirements of the European Machinery Directive 2006/42/EC and is only applicable to CE machines.

For electric powered machines, the equivalent continuous A-Weighted sound pressure level at the work platform is less than 70dB(A)

For combustion engine powered machines, guaranteed Sound Power Level (LWA) per European Directive 2000/14/EC (Noise Emission in the Environment by Equipment for Use Outdoors) based on test methods in accordance with Annex III, Part B, Method 1 and 0 of the directive, is 104 dB.

SECTION 7. INSPECTION AND REPAIR LOG

Machine Serial Number _____

Table 7-1. Inspection and Repair Log

Date	Comments

SECTION 7 - INSPECTION AND REPAIR LOG

Table 7-1. Inspection and Repair Log

Date	Comments

⚠ WARNING: ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

PROPOSITION 65 WARNING

- **Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.**
- **Batteries also contain other**

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