



Operation & Safety Manual

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

***Model
EC600SJ, H600SJ,
EC600SJP, H6000SJP***

PVC 2201

31219938

January 10, 2022 - Rev A

**ANSI CE UK CA 
AS/NZS MOL70**

JLG®
An Oshkosh Corporation Company

WARNING

Operating, servicing and maintaining this vehicle or equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle or equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing. For more information go to www.P65Warnings.ca.gov.

FOREWORD

The Mobile Elevating Work Platform (MEWP) models covered in this manual are designed and tested to meet or exceed various compliance standards. Please refer to the manufacturer's nameplate affixed to the subject MEWP for specific standard compliance information.

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.

Refer to www.JLG.com for Warranty, Product Registration, and other machine-related documentation.

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

Indicates an imminently hazardous situation. If not avoided, will result in serious injury or death. This decal will have a red background.

⚠ WARNING

Indicates a potentially hazardous situation. If not avoided, could result in serious injury or death. This decal will have an orange background.

⚠ CAUTION

Indicates a potentially hazardous situation. If not avoided, may result in minor or moderate injury. It may also alert against unsafe practices. This decal will have a yellow background.

NOTICE

Indicates information or a company policy that relates directly or indirectly to the safety of personnel or protection of property.

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.

NOTICE

JLG Industries, Inc. must be notified immediately in all instances where JLG products have been involved in an accident involving bodily injury or death or when substantial damage has occurred to personal property or the JLG product.

Foreword

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.

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Hagerstown, MD 21742

USA

or Visit www.jlg.com to find your local JLG office.

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REVISION LOG

Date	Revision	Description
January 10, 2022	A	Original Issue

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SECTION 1

Safety Precautions

1.1 GENERAL

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

The owner/user/operator/lessor/lessee of the machine must not accept operating responsibility until this manual has been read, training is accomplished, and operation of the machine has been completed under the supervision of an experienced and qualified operator.

This section contains the responsibilities of the owner, user, operator, lessor, and lessee concerning safety, training, inspection, maintenance, application, and operation. If there are any questions with regard to safety, training, inspection, maintenance, application, and operation, please contact JLG Industries, Inc. ("JLG").

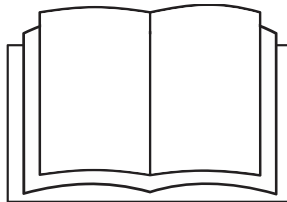
⚠ WARNING

Failure to comply with the safety precautions listed in this manual could result in machine damage, property damage, personal injury or death.

1.2 PRE-OPERATION

1.2.1 Operator Training and Knowledge

- Read, understand, and study the Operation and Safety Manual in its entirety before operating the machine. For clarification, questions, or additional information regarding any portions of this manual, contact JLG Industries, Inc.



- Only personnel who have received proper training regarding the inspection, application and operation of MEWPs (including recognizing and avoiding hazards associated with their operation) shall be authorized to operate a MEWP.

Safety Precautions

- Only properly trained personnel who have received unit-specific familiarization shall operate a MEWP. The user shall determine if personnel are qualified to operate the MEWP prior to operation.
- Read, understand, and obey all DANGERS, WARNINGS, CAUTIONS, and operating instructions on the machine and in this manual.
- Ensure that the machine is to be used in a manner which is within the scope of its intended application as determined by JLG.
- All operating personnel must have a thorough understanding of the intended purpose and function of the MEWP controls, including platform, ground and emergency descent controls.
- Read, understand, and obey all applicable employer, local, and governmental regulations as they pertain to your utilization and application of the machine.

1.2.2 Workplace Inspection

- Precautions to avoid all hazards in the work area must be taken by the user before and during operation of the machine.
- Do not operate or raise the platform from a position on trucks, trailers, railway cars, floating vessels, scaffolds or other equipment unless the application is approved in writing by JLG.
- Before operation, check work area for overhead hazards such as electric lines, bridge cranes, and other potential overhead obstructions.
- Check operating surfaces for holes, bumps, drop-offs, obstructions, debris, concealed holes, and other potential hazards.
- Check the work area for hazardous locations. Do not operate the machine in hazardous environments unless approved for that purpose by JLG.
- Ensure that the ground conditions are adequate to support the maximum tire load indicated on the tire load decals located on the chassis adjacent to each wheel. Do not travel on unsupported surfaces.

1.2.3 Machine Inspection

- Do not operate this machine until the inspections and functional checks as specified in the User Responsibilities, Machine Preparation, and Inspection Section of this manual have been performed.
- Do not operate this machine until it has been serviced and maintained according to the maintenance and inspection requirements as specified in the machine's Service Manual.
- Ensure all safety devices are operating properly. Modification of these devices is a safety violation.

WARNING

Modification or alteration of a MEWP shall be made only with prior written permission from the manufacturer.

- Do not operate any machine on which the safety or instruction placards or decals are missing or illegible.
- Check the machine for modifications to original components. Ensure that any modifications have been approved by JLG.
- Avoid accumulation of debris on platform floor. Keep mud, oil, grease, and other slippery substances from footwear and platform floor.

1.3 OPERATION

1.3.1 General

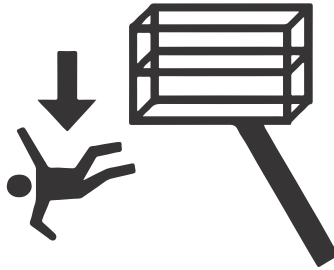
- Machine operation requires your full attention. Bring the machine to a full stop before using any device, i.e. cell phones, two-way radios, etc. that will distract your attention from safely operating the machine.
- Do not use the machine for any purpose other than positioning personnel, their tools, and equipment.
- Before operation, the user must be familiar with the machine capabilities and operating characteristics of all functions.
- Never operate a malfunctioning machine. If a malfunction occurs, shut down the machine. Remove the unit from service and notify the proper authorities.
- Do not remove, modify, or disable any safety devices.
- 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 machine from the ground with personnel in the platform, except in an emergency.
- Do not carry materials directly on platform railing unless approved by JLG.
- When two or more persons are in the platform, the operator shall be responsible for all machine operations.
- Always ensure that power tools are properly stowed and never left hanging by their cord from the platform work area.
- 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.

Safety Precautions

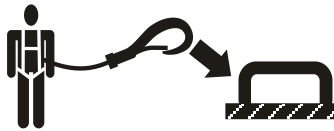
- Do not assist a stuck or disabled machine by pushing or pulling except by pulling at the chassis tie-down lugs.
- Fully lower platform and shut off all power before leaving machine.
- Remove all rings, watches, and jewelry when operating machine. Do not wear loose fitting clothing or long hair unrestrained which may become caught or entangled in equipment.
- 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.
- Hydraulic cylinders are subject to thermal expansion and contraction. This may result in changes to the platform position while the machine is stationary. Factors affecting thermal movement can include the length of time the machine will remain stationary, hydraulic oil temperature, ambient air temperature, and platform position.

1.3.2 Trip and Fall Hazards

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



- During operation, occupants in the platform must wear a full body harness with a lanyard attached to an authorized lanyard anchorage point. Attach only one (1) lanyard per lanyard anchorage point.

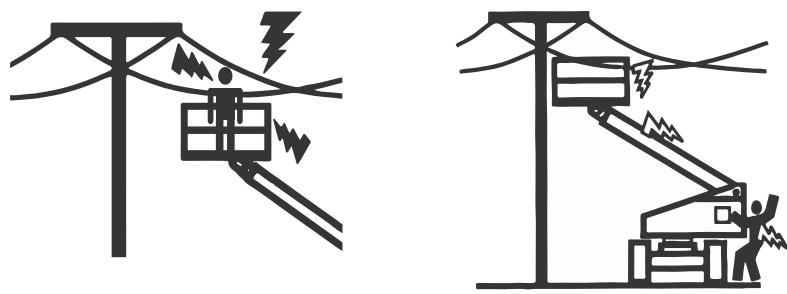


- Enter and exit only through gate area. Use extreme caution when entering or leaving platform. Ensure that the platform assembly is fully lowered. Face the platform when entering or leaving the platform. Always maintain “three point contact” with the machine, using two hands and one foot or two feet and one hand at all times during entry and exit.

- Keep both feet firmly positioned on the platform floor at all times. Never position ladders, boxes, steps, planks, or similar items on unit to provide additional reach for any purpose.
- Keep oil, mud, and slippery substances cleaned from footwear and the platform floor.

1.3.3 **Electrocution Hazards**

- This machine is not insulated and does not provide protection from contact with or proximity to electrical current.
- It is not recommended to use the machine during lightning. To prevent injury or machine damage if lightning occurs during operation, lower the boom and shut down the machine in a safe and secure location.



- Maintain distance from electrical lines, apparatus, or any energized (exposed or insulated) parts according to the Minimum Approach Distance (MAD) as shown in [Table — Minimum Approach Distances \(MAD\), page 17](#).
- Allow for machine movement and electrical line swaying.

Table 1. Minimum Approach Distances (MAD)

Voltage Range (Phase to Phase)	Minimum Approach Distance in Feet (Meters)
0 to 50 KV	10 (3)
Over 50K V 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.	

Safety Precautions

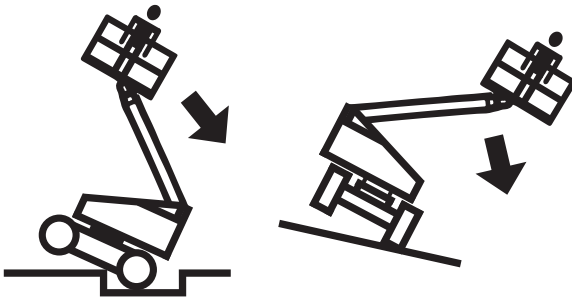
- Maintain a clearance of at least 10 ft (3m) between any part of the machine and its occupants, their tools, and their equipment from any electrical line or apparatus carrying up to 50,000 volts. One foot additional clearance is required for every additional 30,000 volts or less.
- The MAD may be reduced 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 MAD shall be reduced to a distance within the designed working dimensions of the insulating barrier. This determination shall be made by a qualified person with respect to electrical transmission and distribution 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.

1.3.4 Tipping Hazards

- Ensure that the ground conditions are adequate to support the maximum tire load indicated on the tire load decals located on the chassis adjacent to each wheel. Do not travel on unsupported surfaces.
- The user must be familiar with the operating surface before driving. Do not exceed the allowable side slope and grade while driving.



- Do not elevate platform or drive with platform elevated while on or near a sloping, uneven, or soft surface.
- Ensure machine is positioned on a smooth, firm surface within the limits of the maximum operating slope before elevating platform or driving with the platform in the elevated position.
- Before driving on floors, bridges, trucks, and other surfaces, check allowable capacity of the surfaces.
- Never exceed the maximum platform capacity as specified on the platform. Keep all loads within the confines of the platform, unless authorized by JLG.

- Keep the chassis of the machine a minimum of 2 ft (0.6m) from holes, bumps, drop-offs, obstructions, debris, concealed holes, and other potential hazards at the ground level.
- Do not push or pull any object with the boom.
- Never attempt to use the machine as a crane. Do not tie-off machine to any adjacent structure. Never attach wire, cable, or any similar items to platform.
- 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.
- Do not operate the machine when wind conditions, including gusts, exceed 28 mph (12.5 m/s). Refer to [Table — Beaufort Scale \(For Reference Only\), page 20](#). Factors affecting wind speed are; platform elevation, surrounding structures, local weather events, and approaching storms.
- Wind speed can be significantly greater at height than at ground level.
- Wind speed can change rapidly. Always consider approaching weather events, the time required to lower the platform, and methods to monitor current and potential wind conditions.
- Do not cover or increase surface area of the platform or the load. Do not carry large surface area items in the platform when operating outdoors. The addition of such items increases the exposed wind area of the machine. Increased areas exposed to wind will decrease stability.
- Do not increase the platform size with unauthorized modifications or attachments.

WARNING

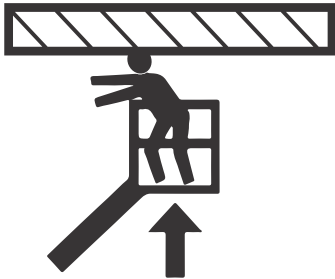
Do not operate the machine when wind conditions exceed specifications shown in the General Specifications section of this manual or as shown on the capacity placard on the platform billboard.

Table 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.
5	19-24	8.0-10.7	Fresh breeze	Smaller trees sway.
6	25-31	10.8-13.8	Strong breeze	Large branches in motion. Flags waving near horizontal. Umbrella use becomes difficult.
7	32-38	13.9-17.1	Near Gale/Moderate Gale	Whole trees in motion. Effort needed to walk against the wind.
8	39-46	17.2-20.7	Fresh Gale	Twigs broken from trees. Cars veer on road.
9	47-54	20.8-24.4	Strong Gale	Light structure damage.

1.3.5 Crushing and Collision Hazards

- Approved head gear must be worn by all operating and ground personnel.
- Watch for obstructions around machine and overhead when driving. Check clearances above, on sides, and bottom of platform during all operations.



- During operation, keep all body parts inside platform railing.
- 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 (1.8 m) away from machine during all operations.

- Under all travel conditions, the operator must limit travel speed according to conditions of ground surface, congestion, visibility, slope, location of personnel, and other factors.
- Be aware of stopping distances in all drive speeds. When driving in high speed, reduce drive speed before stopping. Travel grades in low speed only.
- Do not use high speed drive in restricted or close quarters or when driving in reverse.
- Exercise extreme caution at all times to prevent obstacles from striking or interfering with operating controls and persons in the platform.
- Ensure that operators of other overhead and floor level machines are aware of the MEWP's presence. Disconnect power to overhead cranes. Barricade floor area if necessary.
- Do not operate over ground personnel. Warn personnel not to work, stand, or walk under a raised boom or platform. Position barricades on floor if necessary.

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, if equipped, 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 capacity.
- Refer to the Machine Operation section of this manual for lifting information.

1.5 MAINTENANCE

This sub-section contains general safety precautions which must be observed during maintenance of this machine. Additional precautions to be observed during machine maintenance are inserted at the appropriate points in this manual and in the Service and Maintenance Manual. It is of utmost importance that maintenance personnel pay strict attention to these precautions to avoid possible injury to personnel or damage to the machine or property. A maintenance program must be established by a qualified person and must be followed to ensure that the machine is safe.

1.5.1 Maintenance Hazards

- Shut off power to all controls and ensure that all moving parts are secured from inadvertent motion prior to performing any adjustments or repairs.

Safety Precautions

- Never work under an elevated platform until it has been fully lowered to the full down position, if possible, or otherwise supported and restrained from movement with appropriate safety props, blocking, or overhead supports.
- DO NOT attempt to repair or tighten any hydraulic hoses or fittings while the machine is powered on or when the hydraulic system is under pressure.
- Always relieve hydraulic pressure from all hydraulic circuits before loosening or removing hydraulic components.
- DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks. Wear gloves to help protect hands from spraying fluid.



- Use only replacement parts or components that are approved by JLG. To be considered approved, replacement parts or components must be identical or equivalent to original parts or components.
- Never attempt to move heavy parts without the aid of a mechanical device. Do not allow heavy objects to rest in an unstable position. Ensure adequate support is provided when raising components of the machine.
- 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 combustion engine-powered machines with the engine running.
- Use only approved non-flammable cleaning solvents.
- Do not replace items critical to stability, such as batteries or solid tires, with items of different weight or specification. Do not modify the MEWP in any way to affect stability.
- Refer to the Service & Maintenance Manual for the weights of critical stability items.

WARNING

Modification or alteration of a MEWP shall be made only with prior written permission from the manufacturer.

1.5.2 Battery Hazards

- Always disconnect batteries when servicing electrical components or when performing welding on the machine.
- Do not allow smoking, open flame, or sparks near battery during charging or servicing.
- Do not contact tools or other metal objects across the battery terminals.
- Always wear hand, eye, and face protection when servicing batteries. Ensure that battery acid does not come in contact with skin or clothing.

CAUTION

Battery fluid is highly corrosive. Avoid contact with skin and clothing at all times. Immediately rinse any contacted area with clean water and seek medical attention.

- Charge batteries only in a well ventilated area.
- Avoid overfilling the battery fluid level. Add distilled water to batteries only after the batteries are fully charged.

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SECTION 2

User Responsibilities, Machine Preparation, and Inspection

2.1 PERSONNEL TRAINING

The Mobile Elevating Work Platform (MEWP) is a personnel handling device, so it is necessary that it be operated and maintained only by trained personnel.

2.1.1 Operator Training

Operator training must cover:

1. Reading and understanding the Operation and Safety Manual.
2. Thorough understanding of the intended purpose and function of the MEWP controls, including platform, ground, and emergency descent controls.
3. Control labels, instructions, and warnings on the machine.
4. Applicable regulations, standards, and safety rules.
5. Use of approved fall protection equipment.
6. Enough knowledge of the mechanical operation of the machine to recognize a malfunction or potential malfunction.
7. The safest means to operate the machine where overhead obstructions, other moving equipment, and obstacles, depressions, holes, and drop-offs exist.
8. Means to avoid the hazards of unprotected electrical conductors.
9. Selection of the appropriate MEWP and available options for the work to be performed considering specific job requirements, with involvement from the MEWP owner, user, and/ or supervisor.
10. The responsibility of the operator to ensure all platform occupants have a basic level of knowledge to work safely on the MEWP, and to inform them of applicable regulations, standards, and safety rules.
11. The requirement for familiarization in addition to training.

2.1.2 Training Supervision

Training must be delivered by a qualified person in an open area free of hazards until the trainee has demonstrated the ability to safely control and operate the machine.

2.1.3 Operator Responsibility

The operator must be instructed that they have the responsibility and authority to shut down the machine in case of a malfunction or other unsafe condition of either the machine or the job site.

2.1.4 Machine Familiarization

Note: Responsibilities for familiarization may vary by region.

Only properly trained personnel who have received unit-specific familiarization shall operate a MEWP. The user shall determine if personnel are qualified to operate the MEWP prior to operation. The user shall ensure that after familiarization, the operator operates the MEWP for a sufficient period of time to achieve proficiency. When authorized by the user, self-familiarization can be achieved, if authorized, by a properly trained operator reading, understanding and following the manufacturer's operator's manual.

Prior to user's authorization of an operator to use a specific model of MEWP, the user shall ensure the operator is familiarized on the following:

- 1. Location of the manual storage compartment and the requirement to ensure the required manual(s) are present on the MEWP;
- 2. Purpose and function of the machine controls and indicators at the platform and ground control stations;
- 3. Purpose, location, and function of the emergency controls;
- 4. Operating characteristics and limitations;
- 5. Features and devices;
- 6. Accessories and optional equipment.

2.2 PREPARATION, INSPECTION, AND MAINTENANCE

The following table covers machine inspections and maintenance required by JLG Industries, Inc. Consult local regulations for further requirements for MEWPs. 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.

Table 3. Inspection and Maintenance Table

Type	Frequency	Primary Responsibility	Service Qualification	Reference
Pre-Start Inspection	Before using each day; or whenever there is an Operator change	User or Operator	User or Operator	Operation & Safety Manual
Pre-Delivery Inspection (See Note)	Before each sale, lease, or rental delivery	Owner, Dealer, or User	Qualified JLG Mechanic	Service & 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 Purchased used	Owner, Dealer, or User	Qualified JLG Mechanic	Service & Maintenance Manual and applicable JLG inspection form
Annual Machine Inspection (See Note)	Annually, no later than 13 months from the date of prior inspection	Owner, Dealer, or User	Factory Trained Service Technician (Recommended)	Service & Maintenance Manual and applicable JLG inspection form
Preventive Maintenance	At intervals as specified in the Service & Maintenance Manual	Owner, Dealer, or User	Qualified JLG Mechanic	Service & Maintenance Manual

Note: Inspection forms are available from JLG. Use the Service & Maintenance Manual to perform inspections.

NOTICE

JLG Industries, Inc. recognizes a factory trained service technician as a person who has successfully completed the JLG Service Training School for the specified JLG product model.

2.3 MACHINE COMPONENTS

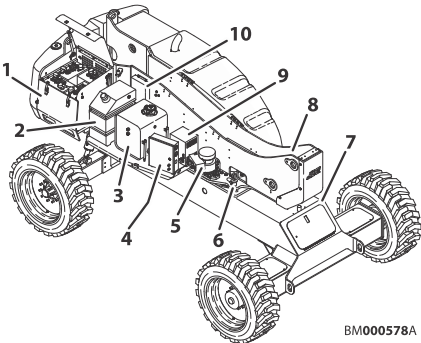


Figure 1. Basic Nomenclature - Sheet 1 of 3

- 1. Battery Pack
- 2. Fuel Tank
- 3. Hydraulic Tank
- 4. Main Terminal Box
- 5. Swing Drive
- 6. Turntable Lock
- 7. Frame
- 8. Turntable
- 9. Battery Charger
- 10. Generator Control Module (H Models)

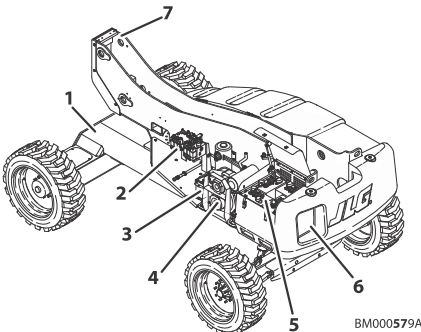
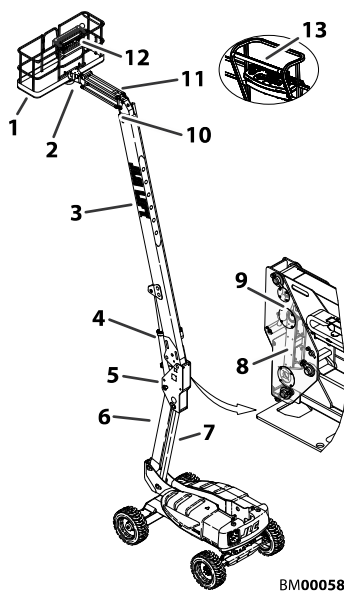


Figure 2. Basic Nomenclature - Sheet 2 of 3

- 1. Frame
- 2. Main Valve
- 3. Generator Start Battery (H Models)
- 4. Generator (H Models)
- 5. Battery Pack
- 6. Ground Control
- 7. Turntable



1. Platform
2. Jib Rotate (If Equipped)
3. Boom
4. Lift Cylinder
5. Upright
6. Tower Boom
7. Tower Lift
8. Boom Link
9. Master Cylinder
10. Slave Cylinder
11. Jib
12. Platform Control Box
13. SkyGuard

Figure 3. Basic Nomenclature - Sheet 3 of 3

2.4 PRE-START INSPECTION

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

1. **Cleanliness** — Check all surfaces for leakage (oil 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.

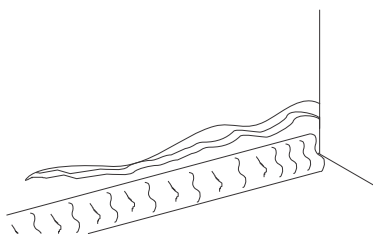


Figure 4. Parent Metal Crack

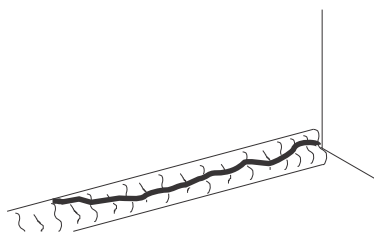


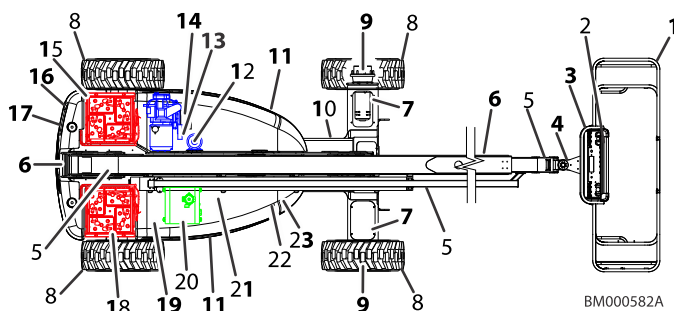
Figure 5. Weld Crack

3. **Decals and Placards** — Check all for cleanliness and legibility. Make sure none of the decals and placards are missing. Make sure all illegible decals and placards are cleaned or replaced.
4. **Operation and Safety Manuals** — Make sure a copy of the Operation and Safety Manual, AEM Safety Manual (ANSI markets only), and ANSI Manual of Responsibilities (ANSI markets only) is enclosed in the weather resistant storage container.
5. **Walk-Around Inspection** — Perform as instructed.
6. **Battery** — Charge as required.
7. **Hydraulic Oil** — Check the hydraulic oil level. Ensure hydraulic oil is added as required.
8. **Accessories/Attachments** — Refer to the Accessories section in this manual or accessory installed upon the machine for specific inspection, operation, and maintenance instructions.
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. Refer to Section 4, Machine Operation for more specific instructions.
10. **Platform Gate** — Keep gate and surrounding area clean and unobstructed. Verify the gate closes properly and is not bent or damaged. Keep gate closed at all times except when entering/exiting the platform and loading/unloading materials.
11. **Lanyard Attach Points** — During operation, occupants in the platform must wear a full body harness with a lanyard attached to an authorized lanyard anchorage point. Attach only one (1) lanyard per lanyard anchorage point.

WARNING

If the machine does not operate properly, turn off the machine immediately! Report the problem to the proper maintenance personnel. Do not operate the machine until it is declared safe for operation.

2.5 WALK-AROUND INSPECTION



Begin the Walk-Around Inspection at item 1, as noted on the diagram. Continue to the right (counterclockwise viewed from the 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.

NOTICE

Do not overlook visual inspection of chassis underside. Checking this area may result in discovery of conditions which could cause extensive machine damage.

INSPECTION NOTE: On all components, make sure there are no loose or missing parts, that they are securely fastened, and no visible damage, leaks or excessive wear exists in addition to any other criteria mentioned.

1. **Platform Assembly and Gate** - Footswitch works properly, not modified, disabled or blocked. Gate latches and hinges in working condition.
2. **SkyGuard** - Refer to Inspection Note.
3. **Platform Control Console** - Switches and levers return to neutral when activated and released, decals/placards secure and legible, control markings legible.
4. **Platform Rotator** - Refer to Inspection Note.
5. **All Hydraulic Cylinders** - No visible damage; pivot pins and hydraulic hoses undamaged, not leaking.
6. **Boom Sections/Uprights/Turntable** - Refer to Inspection Note.
7. **Drive Axle and Motor** - Refer to Inspection Note.
8. **Wheel/Tire Assemblies** - Properly secured, no missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies. Inspect wheels for damage and corrosion.

- 9. **Drive Brake and Hub** - No evidence of leakage.
- 10. **Frame** - Refer to Inspection Note.
- 11. **Hood Assemblies** - Refer to Inspection Note.
- 12. **Hydraulic Pump and Reservoir** - Refer to Inspection Note.
- 13. **Manual Descent Valve** - Refer to Inspection Note.
- 14. **Generator Start Battery** - Refer to Inspection Note.
- 15. **Battery Compartment** - Batteries have proper electrolyte level; cables tight; no visible damage or corrosion.
- 16. **Counterweight** - No evidence of damage.
- 17. **Ground Control Console** - Switches and levers return to neutral when activated and released, decals/placards secure and legible, control markings legible.
- 18. **Battery Compartment** - Batteries have proper electrolyte level; cables tight; no visible damage or corrosion.
- 19. **Fuel Tank** - Refer to Inspection Note.
- 20. **Hydraulic Filter** - Refer to Inspection Note.
- 21. **Battery Charger** - See Refer to Inspection Note.
- 22. **Turntable Bearing** - Evidence of proper lubrication. No evidence of loose bolts or looseness between bearing and machine.
- 23. **Swing Motor and Worm Gear** - No evidence of damage.

2.6 FUNCTION CHECK

 WARNING

To avoid serious injury, do not operate machine if any control levers or toggle switches controlling platform movements do not return to the off position when released.

 WARNING

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 to stop machine.

Perform the Function Check as follows:

1. From the ground control console with no load in the platform:
 - a. Ensure that **all** machine functions are disabled when the Emergency Stop Button is pushed in.
 - b. Ensure **all** functions stop when the function switch is released.
 - c. Operate **all** functions and ensure proper operation;
 - d. Ensure proper operation of the manual descent controls, as described in [Section — Manual Descent System](#) of this manual.
2. From the platform control console:
 - a. Ensure that the control console is firmly secured in the proper location
 - b. Check that **all** guards protecting the switches or locks are in place.
 - c. Ensure that **all** machine functions are disabled when the Emergency Stop Button is pushed in.
 - d. Ensure that **all** machine functions stop when the footswitch is released.
 - e. Operate **all** functions and ensure proper operation.
3. With the platform in the stowed position:
 - a. Drive the machine on a grade, not to exceed the rated gradeability, and stop to ensure the brakes hold;
 - b. Check that the tilt indicator is **illuminated** to ensure proper operation.
4. Swing the boom over either of the rear tires and ensure that the Drive Orientation indicator **illuminates** and that the Drive Orientation Override switch must be used for the drive function to operate.
5. With the machine positioned on a smooth, firm surface within the limits of the maximum operating slope, elevate the boom above 11 degrees of horizontal. Select high speed drive mode. Carefully attempt to drive and ensure the drive speed is reduced.

2.7 SKYGUARD® FUNCTION TEST

Note: Refer to [Section — SkyGuard Operation](#) for additional information on SkyGuard operation.

From the Platform Console in an area free from obstructions:

1. Operate the telescope out function.
2. Activate the SkyGuard sensor:
 - a. **SkyGuard** — Apply approximately 50 lb (222 Nm) of force to yellow bar.
 - b. **SkyGuard SkyLine®** — Press rod to break connection between the rod and the right bracket.
 - c. **SkyGuard SkyEye®** — Put arm or hand in path of sensor beam.
3. Once the sensor has been activated, verify the following conditions:
 - a. Telescope out function stops and telescope in function operates for a short duration.
 - b. The horn sounds.
 - c. If equipped with SkyGuard beacon, the beacon illuminates.

Note: If SkyGuard is enabled with the Soft Touch system, functions will cut out instead of reversing.

4. Disengage the SkyGuard sensor, release controls, then recycle the foot switch. Ensure normal operation is available.

Note: On machines equipped with SkyLine, reattach the rod to the right bracket.

If SkyGuard remains activated after function reversal or cutout, press and hold the SkyGuard Override Switch to allow normal use of machine functions until the sensor is disengaged.

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

Note: The indicator panels use 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.

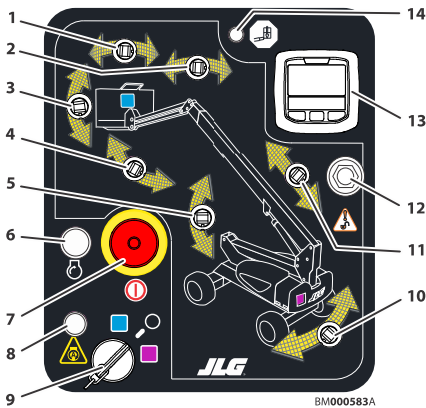


Indicates an abnormal operating condition, which if not corrected, may result in machine interruption or damage. This indicator will be yellow.



Indicates important information regarding the operating condition, i.e. procedures essential for safe operation. This indicator will be green with the exception of the capacity indicator which will be yellow.

3.3 GROUND CONTROL STATION



1. Platform Rotate
2. Jib Rotate (If Equipped)
3. Platform Leveling Override
4. Jib Lift
5. Main Boom Lift
6. Generator/Engine Start (If Equipped)
7. Power/Emergency Stop
8. Generator Enabled Indicator (If Equipped)
9. Platform/Ground Select
10. Swing
11. Telescope
12. Machine Safety System Override (MSSO) (If Equipped)
13. Display Gauge
14. Platform Overload

3.3.1 Ground Control Station Functions

Note: The optional generator engine will automatically shut down under the following conditions:

- Batteries Fully Charged
- High Oil Temperature
- Low Oil Pressure
- Engine Overspeed
- Overvoltage

Note: The optional generator engine will not start if the batteries are fully charged or if the Generator Enable switch on the platform console is not in the On position.

⚠ WARNING

To avoid serious injury, do not operate machine if any control levers or toggle switches controlling platform movement do not return to the off or neutral position when released.

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

Display Gauge

Registers engine hours, fuel level (if applicable), and Diagnostic Trouble Codes (DTCs) from the JLG Control System and the engine control system.



Jib Lift

The Jib control switch provides raising and lowering of the jib.



Jib Rotate (If Equipped)

The Jib Swing control switch provides swinging of the jib when positioned left or right.



Generator Enabled Indicator (If Equipped)

The generator enabled indicator lights to signify the generator is enabled and may start at any time as the batteries require. If the indicator flashes, it signifies an abnormal condition for the generator engine (high oil temperature or low oil pressure) or, on all electric machines, an electrical system fault.



Generator/Engine Start (If Equipped)

The generator/engine start push-button switch allows the generator to be started manually to top-off the battery charge. The generator will start automatically when the batteries reach a low-charge level.



Machine Safety System Override (MSSO) (If Equipped)

Provides emergency override of function controls that are locked out in the event of Load Sense System activation.



Main Boom Lift

Provides for raising and lowering of the Boom.



Platform / Ground Select Switch

A three position, key operated switch supplies power to the platform control console when positioned to Platform. With the switch key in the Ground position, power is shut off to platform and only ground controls are operable.



Note: When Platform/Ground Select switch is in the center position, power is shut off to the controls at both operating stations.



Platform Leveling Override

A three position switch allows the operator to adjust the automatic self leveling system. This switch is used to adjust platform level in situations such as ascending/descending a grade.



WARNING

Only use the platform leveling override function for slight leveling of the platform. Incorrect use could cause the load/occupant to shift or fall. Failure to do so could result in death or serious injury.

Platform Overload

Indicates the platform has been overloaded.



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.



Platform Rotate

Provides rotation of the platform.



Swing

Provides 400 degrees non-continuous turntable rotation.

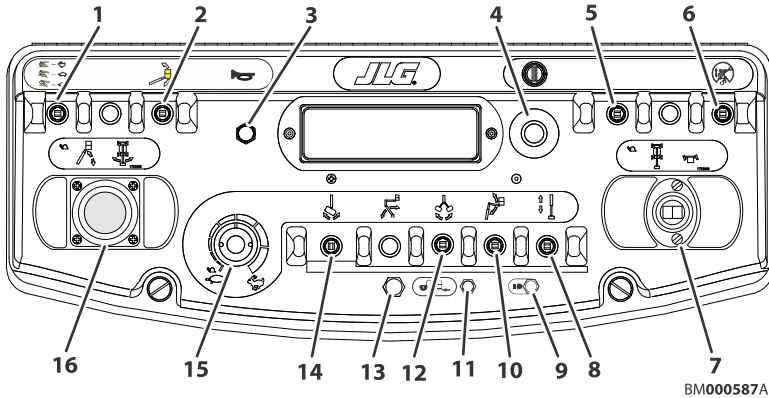


Telescope

Provides for extension and retraction of the Boom.



3.4 PLATFORM CONTROL STATION



3.4.1 Platform Control Station Functions

⚠ WARNING

To avoid serious injury, do not operate machine if any control levers or toggle switches controlling platform movement do not return to the off or neutral position when released.

Note: Main Lift/ Swing and Drive control levers are spring-loaded and will automatically return to neutral (off) position when released.

Drive Orientation Override

When the boom is swung over the rear tires or further in either direction, the Drive Orientation indicator will illuminate when the drive function is selected. Push and release the switch, and within 3 seconds move the Drive/Steer control to activate drive or steer. Before driving, locate the black/white orientation arrows on both the chassis and the platform controls. Move the drive controls in a direction matching the directional arrows for the intended direction of travel.



Drive Speed / Torque Select

Activating the Speed Mode switch allows the operator to High or Low Speed travel operation.

2WD - On 2WD machines, a two-position switch is used. The forward position selects High Speed travel and the lower position selects Low Speed travel.



4WD - On 4WD machines, a three-position switch is used. The forward position selects High speed mode. The middle position selects Low Speed mode and Automatic 4WD. The lower position is momentary and selects Manual 4WD. It must be held down as long as Manual 4WD is required.



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: To operate the Drive joystick, pull up on the locking ring below the handle.



Function Speed Control

This control knob affects the speed of the Telescope, Jib Lift, Jib Rotate (if equipped), and Platform Rotate functions.

Note: During platform rotation, a speed difference may not be noticeable to the operator.



Turning the knob all the way counterclockwise until it clicks puts the machine into Creep Mode. Creep Mode puts the functions listed above as well as the Drive/Steer and Main Lift/ Swing functions into the slowest speed setting.

Generator Enable (If Equipped)

This switch allows the operator to prevent the generator engine from starting to charge the batteries when using the machine indoors.



Horn

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



Jib Lift

Provides for raising or lowering of the jib.



Jib Rotate (If Equipped)

Provides rotation of the jib and platform.



Lights (If Equipped)

This switch operates the accessory lights package if the machine is so equipped.



Main Boom Telescope

Provides extension and retraction of the main boom.



Main Lift / Swing Controller

Provides main lift and swing. Push forward to lift up, pull backward to boom down. Move right to swing right, move left to swing left. Moving the joystick activates switches to provide the functions selected.



Note: Main boom lift and swing functions may be selected in combination. Maximum speed is reduced when multiple functions are selected.

Note: To operate the Main Boom Lift/Swing joystick, pull up on the locking ring below the handle.

**Platform Level Override**

A three position switch allows the operator to adjust the automatic self leveling system. This switch is used to adjust platform level in situations such as ascending/descending a grade.



⚠ 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.

Platform Rotate

Provides rotation of the platform.

**Power / Emergency Stop Switch**

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.

**Soft Touch and SkyGuard Indicator/ SkySense Mute**

Indicates the Soft Touch bumper is against an object or the SkyGuard sensor has been activated. All controls are cut out until the override button is pushed. For Soft Touch, controls are then active in the Creep Mode or for SkyGuard, controls will work normally.

If the machine is equipped with SkySense, the switch will mute the SkySense speakers.

Soft Touch / SkyGuard / SkySense Override

For machines equipped with SkyGuard:

The SkyGuard override switch enables functions cut out by the SkyGuard system to be operated again, allowing the operator to resume use of machine functions.



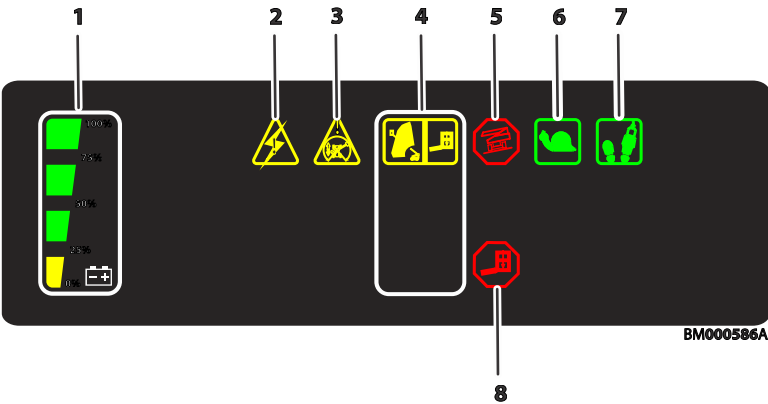
For machines equipped with both SkyGuard and Soft Touch:
The switch operates like the SkyGuard override switch as described above. The switch also enables the functions cut out by the Soft Touch system to operate again at creep speed, allowing the operator to move the platform away from the obstacle that caused the shutdown situation.



For machines equipped with both SkyGuard and SkySense:
The switch operates like the SkyGuard override switch as described above. The switch also enables the functions cut out by the SkySense system to operate again at creep speed, allowing the operator to move the platform closer to the obstacle that caused the shutdown situation if desired.



3.5 PLATFORM CONTROL INDICATOR PANEL



1. Battery Charge

2. System Distress

3. Drive Orientation
4. Capacity Zone Indicator

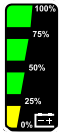
5. Tilt Alarm Warning

6. Creep Speed
7. Footswitch

8. Platform Overload

3.5.1 Platform Control Indicator Panel Functions

Battery Charge Level
Indicates the state-of-charge of the battery pack.



Capacity Zone Indicator
Indicates the platform capacity zone for the current position of the platform. Restricted capacities are permitted at restricted platform positions (shorter boom lengths and higher boom angles).



Creep Speed
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.



Drive Orientation

When the boom is swung beyond the rear drive tires or further in either direction, the Drive Orientation indicator will illuminate when the drive function is selected. This is a signal for the operator to verify that the drive control is being operated in the proper direction (i.e. controls reversed situations).

**Footswitch Enable**

To operate any function, the footswitch must be pressed down 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 pressed again to enable the controls.



Releasing the footswitch removes power from all controls and applies the drive brakes.

! WARNING

To avoid serious injury, do not remove, modify or disable the footswitch by blocking or any other means.

Platform Overload

Indicates the platform has been overloaded.

**System Distress**

The light indicates that the JLG Control System has detected an abnormal condition and a Diagnostic Trouble Code has been set in the system memory. Refer to the Service Manual for instructions concerning the trouble codes and trouble code retrieval.

The system distress indicator light will illuminate for 2-3 seconds when the key is positioned to the On position to act as a self test.

**Tilt Warning Light and Alarm**

This red illuminator indicates that the chassis is on a slope. If the boom is above horizontal and the machine is on a slope, the tilt alarm warning light will illuminate, an alarm will sound, available functions are placed in Creep speed, and drive is cut out in direction of travel. Drive in the opposite direction may be allowed under certain conditions.



Note: When the tilt sensor alarm is activated, the Drive function will be disabled if the boom is elevated above horizontal.

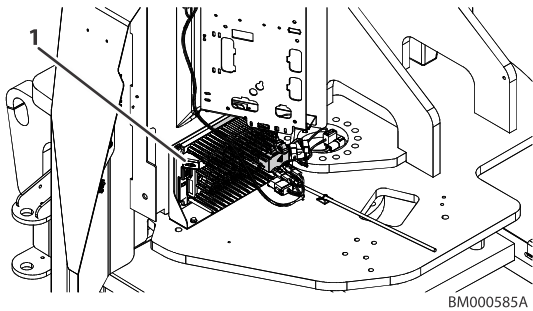
⚠ WARNING

If tilt warning light is illuminated when boom is raised or extended, retract and lower to below horizontal then reposition machine so that it is within the limits of the maximum operating slope before extending boom or raising boom above horizontal.

Tilt Angle	Market
3°	EC600SJP/H600SJP - All Markets
4°	EC600SJ/H600SJ - All Markets

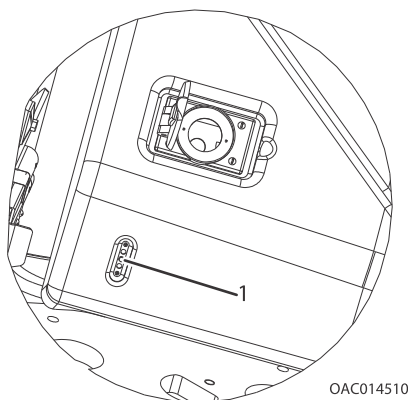
3.6 BATTERY CHARGER

1. LED Indicator on Charger



- **AC Power On:** Blue LED on
- **Low State of Charge:** Bottom Panel — Green LED flashing; Top Panel — Green LED off
- **High State of Charge:** Bottom Panel — Green LED on; Top Panel — Green LED flashing
- **Charge Complete:** Bottom Panel — Green LED on; Top Panel — Green LED on
- **Fault Indicator:** Red LED on
- **External Error Condition Caution:** Amber LED flashing

2. LED Indicator on Hood



- **Full Charge (100%):** LED is green
- **Charge Cycle in Process:** LED is amber
- **Abnormal Battery Condition/Charger Fault:** LED is red

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SECTION 4

Machine Operation

4.1 GENERAL

This machine is a mobile elevating work platform used to position personnel, along with their necessary tools and materials at work locations.

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 upper or lower boom or swing the boom to the left or right. Standard boom swing is 400° non-continuous left and right of the stowed position. The machine has a Ground Control Station which will override the Platform Control Station. Ground Controls operate all functions except drive and steer. Except for performing inspections and the Function Check, the ground controls are used in an emergency to lower the platform to the ground should the operator in the platform be unable to do so.

4.2 OPERATING CHARACTERISTICS AND LIMITATIONS

4.2.1 Operating Conditions

The boom can be raised above horizontal with or without any load in platform, if:

1. Machine is positioned on a smooth, firm surface within the limits of the maximum operating slope.
2. Load is within manufacturer's rated capacity.
3. All machine systems are functioning properly.
4. Machine is as originally equipped from JLG.

4.2.2 Platform Load Sensing System (LSS)

The Platform Load Sensing System (LSS) measures platform load from a sensor in the platform support.

If the LSS senses an overload condition, the overload alarm will sound, the overload indicator will light up at both the platform control and the ground control stations, and all boom functions will be disabled. To regain boom control, reduce the load in the platform to not exceed the rated workload indicated on the capacity decal. If unable to resolve the overload condition, auxiliary power may be used to return the platform to a safe working condition. See Emergency Operation section.

4.3 STABILITY

4.3.1 Platform Load Sensing System (LSS)

The Platform Load Sensing System provides the platform capacity to the control system.

If the LSS system senses an overload condition, boom functions will be disabled, the overload indicator is illuminated at both control stations, and the overload alarm will sound. Reduce the weight in the platform to not exceed the rated workload indicated on the capacity decal, then the controls will work again.

4.3.2 Stability

Machine stability is based on two (2) conditions which are called FORWARD and BACKWARD stability. The machine's position of least FORWARD stability is shown in (See [Figure — Position of Least Forward Stability, page 49](#)) and its position of least BACKWARD stability is shown in (See [Figure — Position of Least Backward Stability, page 49](#).)

! WARNING

To avoid forward or backward tipping, do not overload machine or operate the machine beyond the limit of the maximum operating slope.

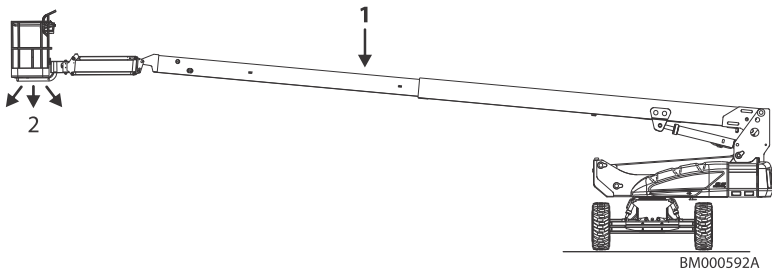


Figure 6. Position of Least Forward Stability

1. Boom fully extended.
2. Machine will tip over in this direction if overloaded or operated beyond the limits of the maximum operating slope.

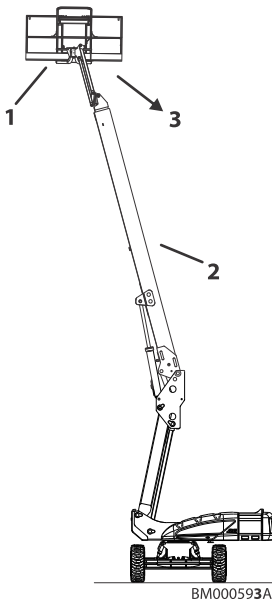


Figure 7. Position of Least Backward Stability

1. Platform rotated 90°.
2. Main Boom fully retracted and elevated.
3. Machine will tip over in this direction if overloaded or operated beyond the limits of the maximum operating slope.

4.4 BATTERY CHARGING

Note: Park the machine in a well-ventilated area before charging.

1. Connect the charger AC input plug to a grounded outlet using a 3 wire heavy duty extension cord.
2. The charge cycle is complete when the single LED light on the ground control panel turns green. Additionally, the green LEDs on the top and bottom panels of the battery charger illuminates.

⚠ CAUTION

Only plug the charger into a properly installed and grounded outlet. Do not use ground adapters or modify plug in any way. Do not touch non-insulated portion of output connector or non-insulated battery terminal.

Do not operate charger if the AC supply cord is damaged, or if the charger has received a sharp blow, been dropped, or otherwise damaged in any way.

Always disconnect the charger AC supply before making or breaking the positive/negative connections to the battery.

Do not open or disassemble charger.

4.5 MOTOR OPERATION

4.5.1 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.



4.5.2 Platform/Ground Select Switch

The Platform/Ground Select switch functions to direct battery power to the desired control station when the Power/Emergency Stop switch is pulled out (On). With the switch in the Ground position, battery power is supplied to the ground control station. When the switch is in the Platform position, battery power is supplied to the platform control station.



4.6 TRAVELING (GRADE/SIDE SLOPE)

Note: Refer to the Operating Specifications table for gradeability and side slope ratings.

All ratings for gradeability and side slope are based upon the machine's boom being in the stowed position, fully lowered, and retracted.

Traveling is limited by two factors:

1. Gradeability, which is the percent of grade of the incline the machine can climb.
2. Side slope, which is the angle of the slope the machine can be driven across.

4.6.1 Traveling on a Grade

When traveling a grade, maximum braking and traction are obtained with the boom stowed, in position over the rear (drive) axle, and in line with the direction of travel. Drive the machine forward when climbing a grade, and in reverse when descending a grade. Do not exceed the machine's maximum rated gradeability.

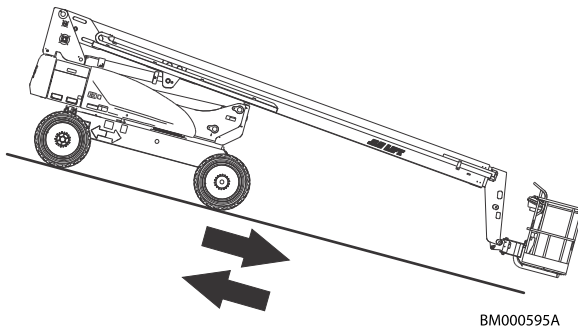


Figure 8. Traveling on a Grade

NOTICE

If the boom is over the front (steer) axle, direction of steer and drive movement will be opposite from the movement of the controls.

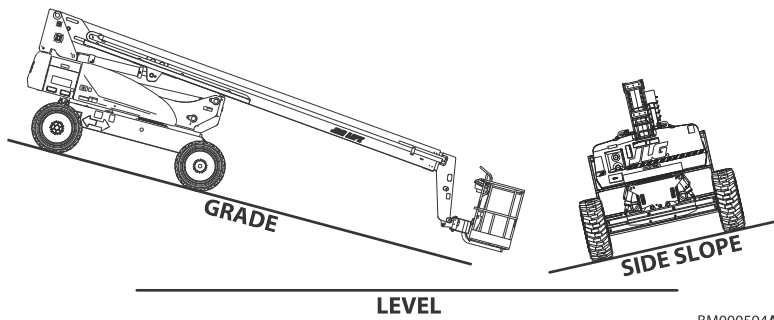


Figure 9. Grade/Side Slope

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4.7 TRAVELING (DRIVING)

Note: When the upper boom is raised approximately 11° above horizontal, the high drive function will automatically be in low drive.

⚠ WARNING

Do not drive with boom above horizontal except on a smooth, firm surface within the limits of the maximum operating slope.

⚠ WARNING

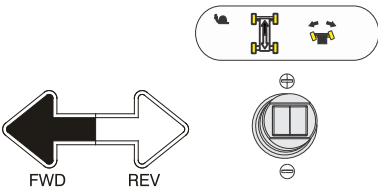
Do not drive on side slopes which exceed 4°.

To avoid loss of travel control or tip over, do not drive machine on grades exceeding those specified in the operating specifications section of this manual.

⚠ WARNING

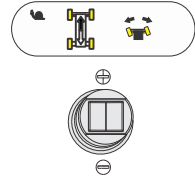
Use extreme caution when driving in reverse and at all times when the platform is elevated.

Before driving, locate the black/white orientation arrows on both the chassis and the platform controls. Move the drive controls in a direction matching the directional arrows for the intended direction of travel.



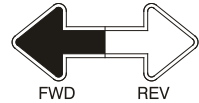
4.7.1 Traveling Forward and Reverse

1. At Platform Controls, pull out Emergency Stop switch and activate footswitch.
2. Position Drive controller to FORWARD or REVERSE as desired.



This machine is equipped with a Drive Orientation Indicator. The yellow light on the platform control console indicates that the boom is swung beyond the rear drive tires and the machine may Drive/Steer in the opposite direction from the movement of the controls. If the indicator is illuminated, operate the Drive function in the following manner:

1. Match the black and white direction arrows on both platform control panel and the chassis to determine the direction the machine will travel.
2. Push and release the Drive Orientation Override switch. Within 3 seconds, slowly move the Drive control toward the arrow matching the intended direction of machine travel. The indicator light will flash during the 3 second interval until the drive function is selected.



4.8 STEERING

Press footswitch. Position thumb switch on Drive/Steer controller to Right for steering right, or to Left for steering left.



4.9 PLATFORM

4.9.1 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.

To Level Up or Down - Position the Platform/Level control switch Up or Down and hold until the platform is level.



4.9.2 Platform Rotation

To rotate the platform to the left or right, use the Platform Rotate control switch to select the direction.



4.10 BOOM

⚠ WARNING

A red tilt warning light is located on the control console which lights when the chassis is on an excessive slope. Do not swing or raise boom above horizontal when indicator is lit.

Do not depend on the tilt warning light as a level indicator for the chassis. The tilt warning light indicates chassis is on an excessive slope. Chassis must be level before swinging or raising boom above horizontal or driving with the boom elevated.

To avoid tip over if red tilt warning light lights when the boom is raised above horizontal, lower platform to ground level. Then reposition machine so that chassis is level before raising boom.

If the 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.

! WARNING

To avoid serious injury, do not operate machine if any control lever or toggle switch controlling platform movement does not return to the Off or neutral position when released.

! CAUTION

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.

4.10.1 Swinging the Boom

To swing boom, use Swing control switch to select Right or Left direction.



NOTICE

When swinging the boom make sure there is ample room for the boom to clear surrounding walls, partitions and equipment.

4.10.2 Raising and Lowering the Upper Boom

To raise or lower the Upper Boom, use the Upper Boom Lift switch to select Up or Down movement.



4.11 GENERATOR (IF EQUIPPED)

4.11.1 Automatic Operating Mode

The generator will operate in automatic mode when:

1. Ground Control Emergency Stop Switch is pulled out (on), and;
2. The Generator Enable switch on the platform control station is in the On or Enable position.

When the above conditions apply, the generator's controller will monitor status of the batteries, turn on automatically when the battery voltage drops as a result of discharge, and turn off when batteries are fully charged.

4.11.2 Battery Only Operating Mode

The machine will operate in the battery only mode when:

1. Ground Control Emergency Stop Switch is pulled out (on), and;
2. The switch on the platform control station is in the Off or Disable position.

The batteries can be used until they are fully discharged.

4.11.3 Manual (Charge) Operating Mode

The generator will operate in manual mode when:

1. Ground Control Emergency Stop Switch is pulled out (on), and;
2. The switch on the platform control station is in the On or Enable position and;
3. The Manual Charge push button is activated.

Activation of the Manual Charge button will start the engine and initiate the charging cycle even if the batteries are charged above the level of automatic start.

4.12 FUNCTION SPEED CONTROL

This control affects the speed of the Telescope, Jib Lift, Jib Rotate , and Platform Rotate functions.

Note: During platform rotation, a speed difference may not be noticeable to the operator.



Turning the knob all the way counterclockwise until it clicks puts the machine into Creep Mode. Creep Mode puts the functions listed above, as well as the Drive/Steer and Main Lift/Swing functions into the slowest speed setting.

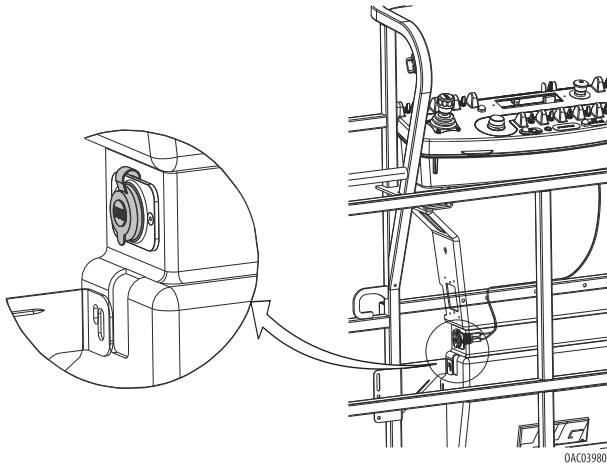
4.13 MACHINE SAFETY SYSTEM OVERRIDE (MSSO) (IF EQUIPPED)

The Machine Safety System Override (MSSO) is used to override function controls for Emergency Platform Retrieval only. Refer to Emergency Procedures Section for Machine Safety System Override operating procedures (if equipped).



4.14 USB CHARGING PORT

The machine is equipped with a USB charging port for the operator.



4.15 SKYGUARD OPERATION

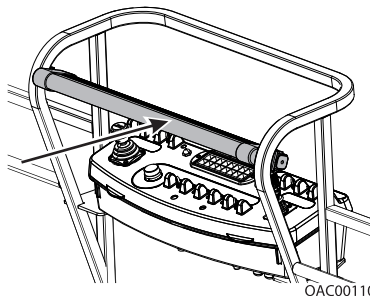
SkyGuard provides enhanced control panel protection. When the SkyGuard sensor is activated, functions in use at the time of actuation will reverse or cutout. The SkyGuard Function Table provides more details on these functions.

During activation, the horn will sound and the SkyGuard beacon (if equipped) will illuminate until sensor and footswitch are disengaged.

If the SkyGuard sensor remains activated after function reversal or cutout, press and hold the SkyGuard Override Switch to allow normal functions until the sensor is disengaged.

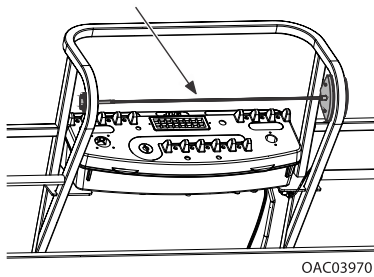
Consult the following illustrations to determine which type of SkyGuard the machine has and how it is activated. Regardless of type, SkyGuard function according to the SkyGuard Function Table does not change.

4.15.1 SkyGuard



Approximately 50 lb (222 Nm) of force is applied to yellow bar.

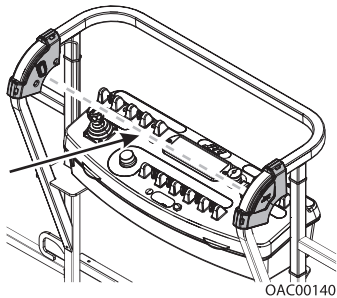
4.15.2 SkyGuard - SkyLine



OAC03970

Rod is pressed, breaking the connection between the rod and right bracket.

4.15.3 SkyGuard - SkyEye



OAC00140

Operator passes through path of sensor beam.

4.15.4 SkyGuard Function Table

Drive Forward	Drive Reverse	Steer	Swing	Boom Lift Up	Boom Lift Down	Boom Tele Out	Boom Tele In	Jib Lift	Basket Level	Basket Rotate
R * / C **	R	C	R	R	R	R	C	C	C	C
R = Indicates Reversal is Activated										
C = Indicates Cutout is Activated										
* DOS (Drive Orientation System) Enabled										
** DOS Not Enabled, machine is driving straight without steering, and any other hydraulic function is active										
Note: If SkyGuard is enabled with the Soft Touch system, functions will cut out instead of reversing.										

4.16 SHUT DOWN AND PARK

Note: When parking battery powered units overnight, batteries should be charged properly 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.

The preferred procedures to shut down and park the machine are as follows:

1. Drive machine to a reasonably well protected area.
2. Ensure boom is fully retracted and lowered over rear axle.
3. Shut down Emergency Stop at Platform Controls.
4. Shut down Emergency Stop at Ground Controls. Position Platform/Ground Select switch to center Off.
5. If necessary, cover Platform Controls to protect instruction placards, warning decals and operating controls from hostile environment.

NOTICE

If parking a MEWP with the boom elevated in an effort to conserve space, booms may be elevated, but shall not be extended. It is the operator's responsibility to ensure all safety precautions in section 1 of this manual are followed for each unique situation.

4.17 LIFTING AND TIE DOWN

4.17.1 Lifting

1. Refer to the Machine Serial Number Plate, 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.

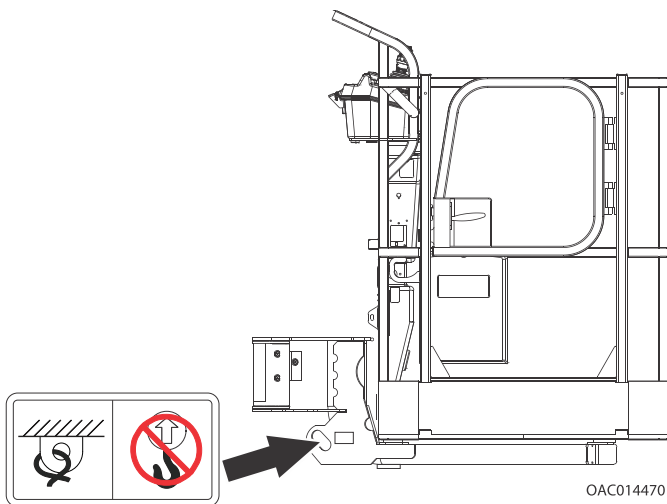
4.17.2 Tie Down

NOTICE

When transporting the machine, the boom must be fully lowered into the boom rest.

1. Place the boom in the stowed position.
2. Remove all loose items from the machine.
3. Secure the chassis using straps or chains of adequate strength.
4. Ensure the platform is lowered so the wear pad on the bottom rests on the surface of the transportation vehicle.

Note: Secure through the tie downs on the boom using straps or chains of adequate strength.



NOTICE

Secure turntable with turntable lock (if equipped) before traveling long distances or hauling machine on truck/trailer.

4.18 SAFETY DECAL LOCATIONS

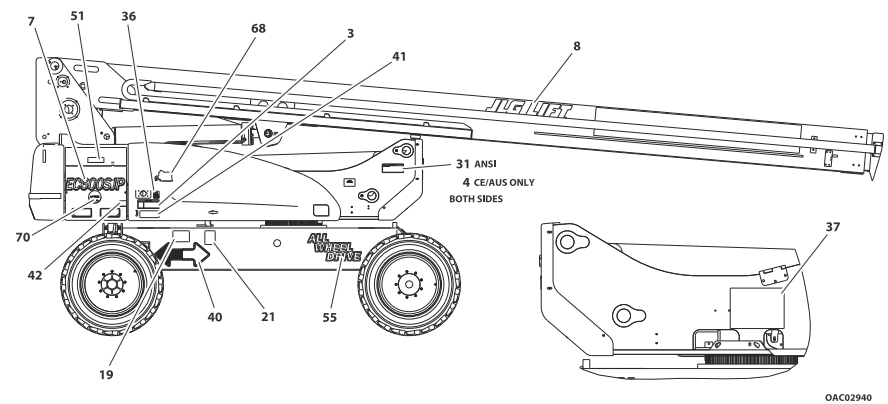


Figure 10. Decal Locations — View 1

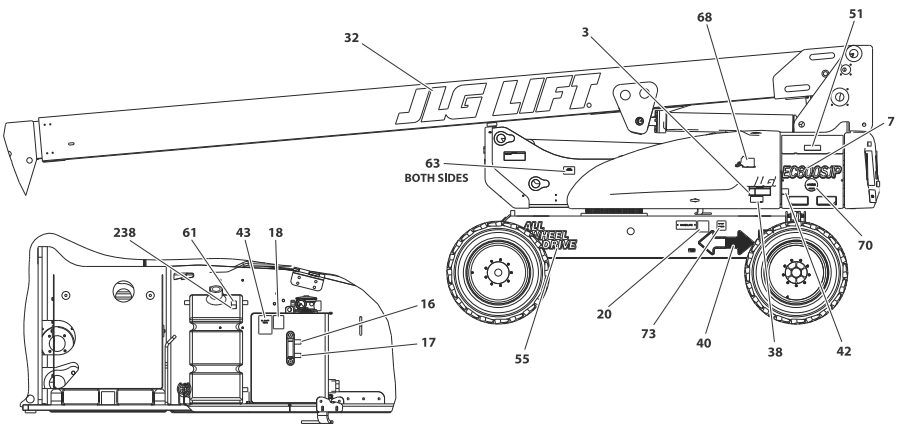
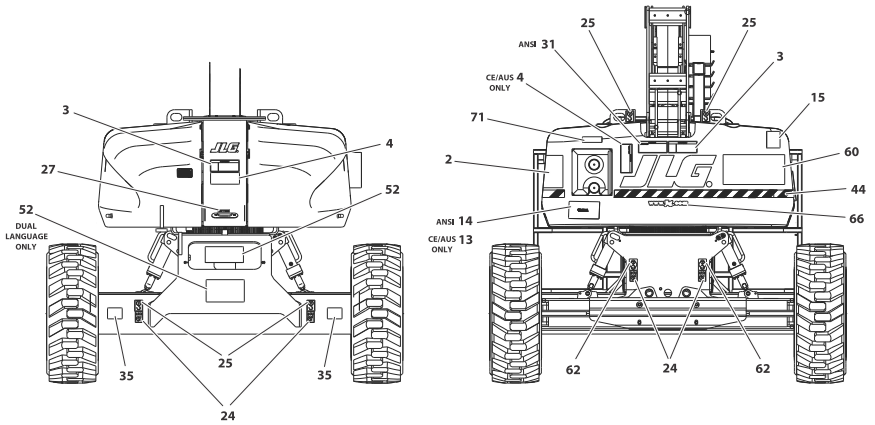
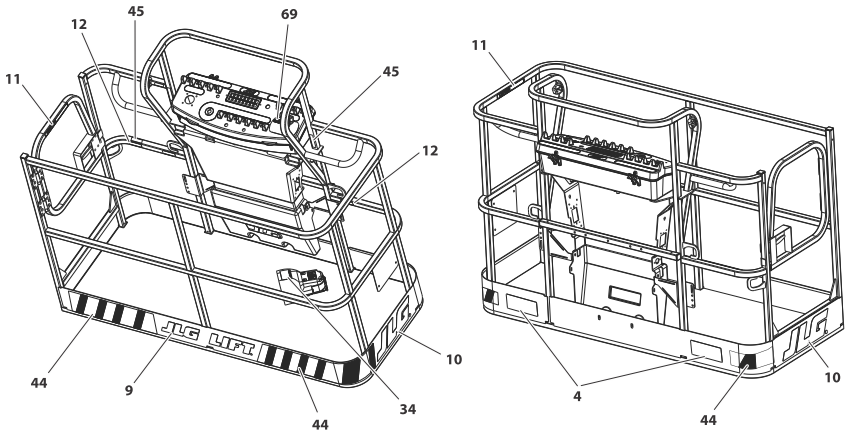


Figure 11. Decal Locations — View 2



OAC02960

Figure 12. Decal Locations — View 3



OAC2970

Figure 13. Decal Locations — View 4

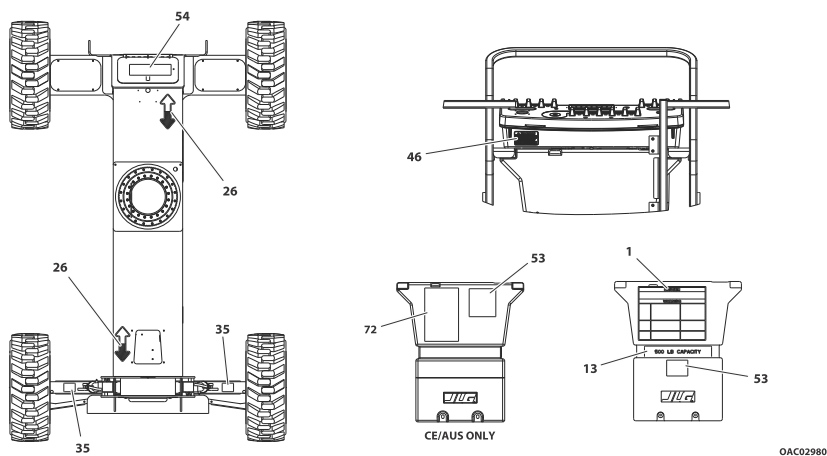


Figure 14. Decal Locations — View 5

4.19 SAFETY DECALS LEGEND

Item #	ANSI 1001248325-D	CE/Aus 1001248326-C	Japan 1001248327-D	Korean/Eng 1001248328-D	Eng/Spanish 1001248329-D	Eng/French 1001248330-D	Chinese/Eng 1001248331-D	Port./Spa 1001248332-D
1	1703797	1705921	1703926	1703927	1703923	1703924	1703925	1703928
2	1704575	1705822	1704667	1704668	--	--	--	--
3	1703805	--	1703938	1703939	1703935	1703936	1703937	1703940
4	1703804	1701518	1703950	1703951	1703947	1703948	1703949	1703952
7 - EC600SJ	1001256649	1001256649	1001256649	1001256649	1001256649	1001256649	1001256649	1001256649
7 - H600SJ	1001256650	1001256650	1001256650	1001256650	1001256650	1001256650	1001256650	1001256650
7 - EC600SJP	1001256652	1001256652	1001256652	1001256652	1001256652	1001256652	1001256652	1001256652
7 - H600SJP	1001256651	1001256651	1001256651	1001256651	1001256651	1001256651	1001256651	1001256651
8	1702860	1702860	1702860	1702860	1702860	1702860	1702860	1702860
9	1702774	1702774	1702774	1702774	1702774	1702774	1702774	1702774
10	1702773	1702773	1702773	1702773	1702773	1702773	1702773	1702773
11	1702868	--	--	--	1704001	1704000	100116846	1704002
12	1704277	1704277	1704277	1704277	1704277	1704277	1704277	1704277
13	1001253920	1705978	1001253932	1001253924	1001253930	1001253922	1001253926	1001253928
14	1001253921	--	1001253933	1001253925	1001253931	1001253923	1001253927	1001253929
15	3251813	1705084	--	--	--	3251813	--	--
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

Item #	ANSI 1001248325-D	CE/Aus 1001248326-C	Japan 1001248327-D	Korean/Eng 1001248328-D	Eng/Spanish 1001248329-D	Eng/French 1001248330-D	Chinese/Eng 1001248331-D	Port./Spa 1001248332-D
20	1702631	1702631	1702631	1702631	1702631	1702631	1702631	1702631
21	1001131269	--	--	--	--	1001131269	--	--
22	1001253997	1001253993/ 1001253994	1001253997	1001253997	1001253997	1001253997	1001253997	1001253997
23	1701509	1701509	1701509	1701509	1701509	1701509	1701509	1701509
24	1702300	1702300	1702300	1702300	1702300	1702300	1702300	1702300
25	1701500	1701500	1701500	1701500	1701500	1701500	1701500	1701500
26	1701529	1701529	1701529	1701529	1701529	1701529	1701529	1701529
27	3251243	--	--	--	3251243	3251243	--	3251243
28	0860520	0860520	0860520	0860520	0860520	0860520	0860520	0860520
31	1703953	--	1703944	1703945	1703941	1703942	1703943	1703946
32	1702861	1702861	1702861	1702861	1702861	1702861	1702861	1702861
34	3252347	1705828	1703980	1703981	1703983	1703984	1703982	1703985
35	1704708	1704708	1704708	1704708	1704708	1704708	1704708	1704708
36	1701644	1701644	1701644	1701644	1701644	1701644	1701644	1701644
37	1001261130	1001261130	1001261130	1001261130	1001261130	1001261130	1001261130	1001261130
38	1702901	1706392	1704119	1704120	1704117	1704116	1704121	1704118
40	1701501	1701501	1701501	1701501	1701501	1701501	1701501	1701501
41	1704248	1706378	1704331	1704332	1704328	1704329	1704333	1704330
42	1702155	1702155	1702155	1702155	1702155	1702155	1702155	1702155

Item #	ANSI 1001248325-D	CE/Aus 1001248326-C	Japan 1001248327-D	Korean/Eng 1001248328-D	Eng/Spanish 1001248329-D	Eng/French 1001248330-D	Chinese/Eng 1001248331-D	Port./Spa 1001248332-D
43	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412
44	4420051	4420051	4420051	4420051	4420051	4420051	4420051	4420051
46	1001231801	--	--	--	--	--	--	--
51	1703813	1705670	1704342	1704343	1704339	1704340	1704344	1704341
52	1706377	1706377	1706377	1706377	1706377	1706377	1706377	1706377
53	1704286	1001093687	1704369	1704370	1704371	1704368	1704372	1704373
54	1001209679	100209679	1001209679	1001209679	1001209679	1001209679	1001209679	1001209679
55	1704724	1704724	1704724	1704724	1704724	1704724	1704724	1704724
62	1701499	1701499	1701499	1701499	1701499	1701499	1701499	1701499
63	1702391	1701517	1701517	1701517	1701517	1701517	1701517	1701517
64	1704725	1704728	1704671	1704670	1704732	1704733	1704731	1704618
66	1704885	1704885	1704885	1704885	1704885	1704885	1704885	1704885
68	1705358	--	--	1705358	1705358	1705358	1705358	1705358
69	1705351	--	1705426	1705427	1705910	1705429	1705430	100113680
70	1001121510	1001121510	1001121510	1001121510	1001121510	1001121510	1001121510	1001121510
71	--	1001189882	--	--	--	--	--	--
73	1001223055	--	1001224053	1001224048	1001224049	1001223971	1001224050	1001224052
74	1001228370	--	--	--	--	1001228370	--	--

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SECTION 5

Emergency Procedures

5.1 GENERAL

This section explains the steps to be taken in case of an emergency situation during operation.

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.

- USA: 877-JLG-SAFE (554-7233)
- EUROPE: (32) 0 89 84 82 20
- AUSTRALIA: (61) 2 65 811111
- E-mail: ProductSafety@JLG.com

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 incident, thoroughly inspect the machine and test all functions first from the ground controls, then from the platform controls. Do not lift above 3 m (10 ft.) until you are sure that all damage has been repaired, if required, and that all controls are operating correctly.

5.3 EMERGENCY OPERATION

5.3.1 Operator Unable to Control Machine

If the platform operator is pinned, trapped or unable to operate or control machine, do the following:

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.

WARNING

Do not continue operation if controls do not function properly.

3. Cranes, forklift trucks or other equipment can be used to remove platform occupants and stabilize motion of the machine.

5.3.2 Platform or Boom Caught Overhead

If the platform or boom becomes jammed or snagged in overhead structures or equipment, do the following:

1. Shut off the machine.
2. Rescue all people in the platform before freeing the machine. Personnel must be out of the platform before operating any controls on the machine.
3. Use cranes, forklifts, or other equipment to stabilize motion of the machine to prevent a tip over as required.
4. From the ground controls, use the Auxiliary Power System (if equipped) to carefully free the platform or boom from the object.
5. Once clear, restart the machine and return the platform to a safe position.
6. Inspect the machine for damage. If the machine is damaged or does not operate properly, turn off the machine immediately. Report the problem to the proper maintenance personnel. Do not operate the machine until it is declared safe for operation.

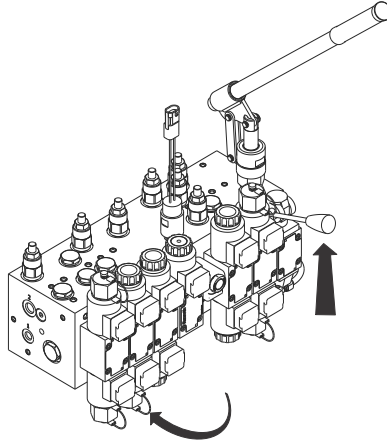
5.4 EMERGENCY TOWING PROCEDURES

Towing this machine is prohibited, unless properly equipped. However, provisions for moving the machine have been incorporated. For specific procedures, refer to the Machine Operation section.

5.5 MANUAL DESCENT SYSTEM

The manual descent system is used, in the event of total power failure, to lower the boom using gravity. To operate the manual descent system, proceed as follows:

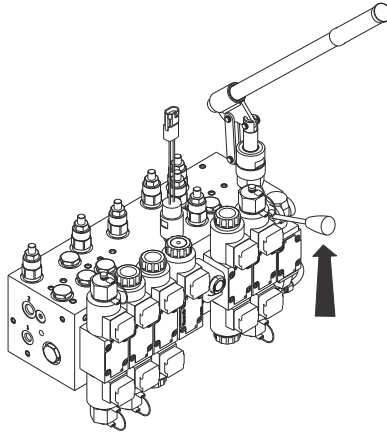
Telescoping In and Lowering the Boom



0AC03190

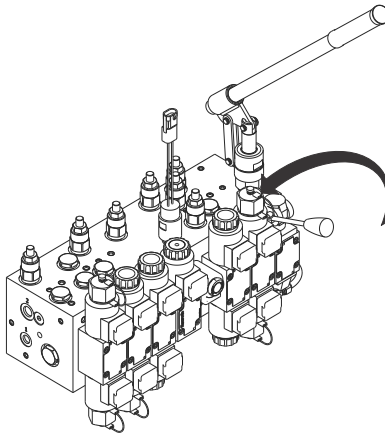
1. Install the spool plug in the location shown and push the control lever on the valve up.
2. Install the handle into the hand pump and pump the handle until the desired platform position is reached.
3. Push the control lever down when complete. Remove the handle from the hand pump and the spool plug from the valve.

Lowering the Boom



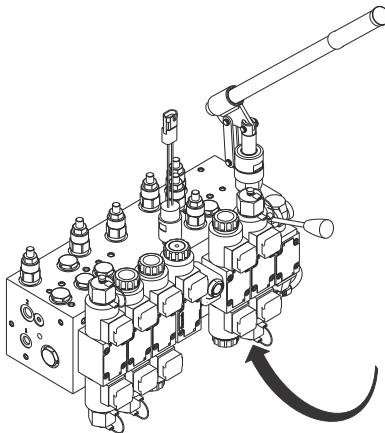
OAC03191

1. Push the control lever on the valve up.
2. Install the handle into the hand pump and pump the handle until the desired platform position is reached.
3. Push the control lever down when complete. Remove the handle from the hand pump.

Swing Right

OAC03192

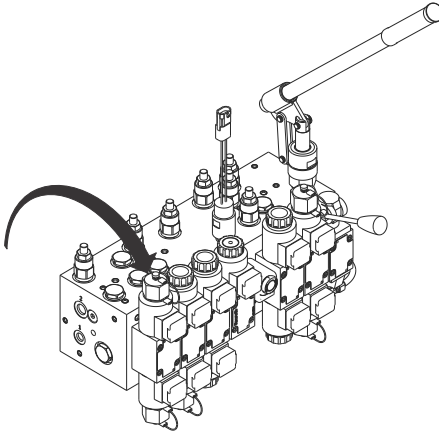
1. Install the spool plug in the location shown.
2. Install the handle into the hand pump and pump the handle until the desired platform position is reached.
3. Remove the handle from the hand pump.

Swing Left

OAC03193

1. Install the spool plug in the location shown.
2. Install the handle into the hand pump and pump the handle until the desired platform position reached.
3. Remove the handle from the hand pump.

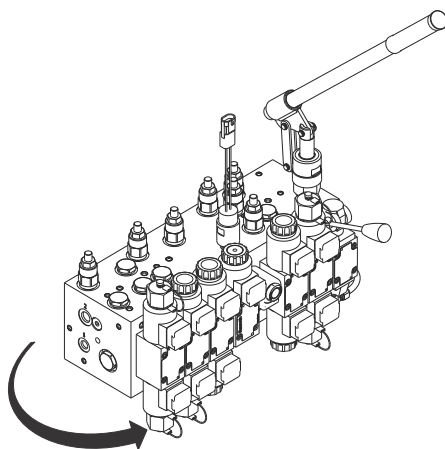
Jib Up



OAC03194

1. Install the spool plug in the location shown.
2. Install the handle into the hand pump and pump the handle until the desired platform position is reached.
3. Remove the handle from the hand pump.

Jib Down

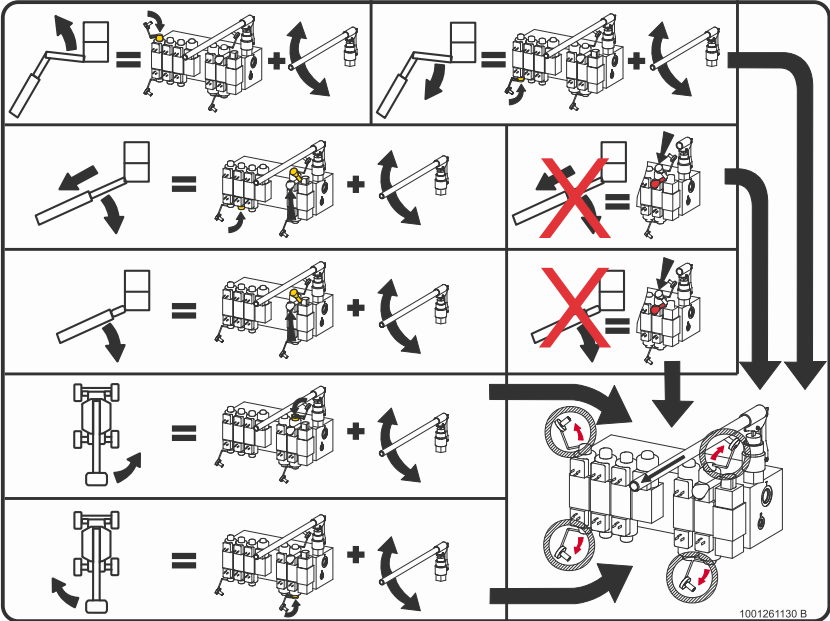


0AC03195

1. Install the spool plug in the location shown.
2. Install the handle into the hand pump and pump the handle until the desired platform position is reached.
3. Remove the handle from the hand pump.

⚠ CAUTION

Remove all spool plugs before returning unit to service.



OAC03251

Figure 15. Manual Descent Decal

5.6 MACHINE SAFETY SYSTEM OVERRIDE (MSSO) (IF EQUIPPED)

The Machine Safety System Override (MSSO) is only to be used to retrieve an operator that is pinned, trapped, or unable to operate the machine. The MSSO will override function controls that are locked out from the platform and ground consoles. An example of this would be in the case of Load Sense System activation.



Note: If the MSSO functionality is used, a fault indicator is set with a fault code in the JLG Control System which must be reset by a qualified JLG Service Technician.

Note: No functional checks of the MSSO system are necessary. The JLG Control System will set a Diagnostic Trouble Code if the control switch is faulty.

Note: If the engine is not running, MSSO will function through the Auxiliary Power system.

To operate the MSSO, perform the following:

1. From the Ground Control Console, place the Platform/Ground Select switch into the Ground position.
2. Pull out the Power/Emergency Stop control switch.
3. Start the engine.
4. Press and hold the MSSO switch and the control switch for the desired function.

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SECTION 6

Accessories

6.1 AVAILABLE ACCESSORIES AND RELATIONSHIP TABLE

Table 4. Available Accessories Table

Accessory	Market							
	ANSI (USA Only)	ANSI	AUS	CE/ UKCA	CSA	GB (China)	MOL70 (Japan)	UL
Bolt-On External Fall Arrest (30" x 48") (30" x 72") (36" x 72")	√	√	√		√	√	√	√
Bolt-On External Fall Arrest (36" x 96")	√	√	√		√	√		√
Fabric Mesh to Mid Rail (30" x 48") (30" x 72")	√	√	√			√		
Fabric Mesh to Top Rail (30" x 48") (30" x 72")	√				√			√
Fall Arrest Platform (30" x 60")		√				√		
Fall Arrest Platform (36" x 72")	√	√			√	√	√	
Pipe Racks	√	√	√	√	√	√	√	√
Platform Mesh to Mid Rail (30" x 48") (30" x 72")	√	√	√			√		
Platform Mesh to Top Rail (30" x 48") (30" x 72")	√				√			√
Platform Top Rail Extension (30" x 48")	√	√	√	√	√	√	√	√

Table 4. Available Accessories Table (continued)

Accessory	Market							
	ANSI (USA Only)	ANSI	AUS	CE/ UKCA	CSA	GB (China)	MOL70 (Japan)	UL
Platform Top Rail Extension (30" x 72")	√	√		√	√	√	√	√
Platform Work Lights	√	√	√	√	√	√	√	√
SkyGlazier®	√	√			√	√		
SkySense®	√	√	√	√	√	√	√	√
Soft Touch	√	√		√	√	√	√	√

Table 5. Accessories/Options Relationship Table

Accessory	Required Item	Compatible With (Note 1)	Incompatible With	Interchangeable With (Note 2)
Bolt-On External Fall Arrest	Fall Arrest Platform		Fabric MMR*/MTR**, Platform MMR*/MTR**, Pipe Racks, Platform Rail Extension, SkyGlazier, SkySense, Soft Touch	
Pipe Racks			Platform MMR*, Platform MTR*, Platform Rail Extension, Platform Rail Padding, SkySense, Soft Touch	
SkyGlazier		Fabric MMR*/MTR**, Platform MMR*	Bolt-On External Fall Arrest, Platform MTR*, Platform Rail Extension, Platform Rail Padding, SkySense, Soft Touch	
SkySense		Fabric MMR*/MTR**, Platform MMR*, Platform MTR**	Bolt-On External Fall Arrest, Pipe Racks, Platform Rail Padding	
Soft Touch			Platform MMR*, Platform MTR**, Platform Rail Padding, Platform Rail Extension, SkyGlazier, Bolt-On External Fall Arrest	
Note: 1. Any non - "Sky" accessory not listed under "Incompatible With" is assumed to be compatible.				
Note: 2. Can be used on the same unit but not simultaneously.				
* MMR = Mesh to Mid Rail; ** MTR = Mesh to Top Rail				

6.2 BOLT-ON EXTERNAL FALL ARREST

The bolt-on external fall arrest system is designed to provide a lanyard attach point while allowing the operator to access areas outside the platform. Exit/Enter the platform through the gate area only. The system is designed for use by one person.

Personnel must use fall protection at all times. A full body harness is required with lanyard not to exceed 6 ft (1.8 m) in length, that limits the maximum arrest force to 900 lb (408 kg).

External Fall Arrest System capacity is 310 lb (140 kg) - one (1) person maximum.

Do not move platform during use of the external fall arrest system.

WARNING

Do not operate any machine functions while outside of platform. Be careful when entering/exiting the platform at elevation.

WARNING

If the external fall arrest system is used to arrest a fall or is otherwise damaged, the entire system must be replaced and the platform fully inspected before returning to service. Refer to the service manual for removal and installation procedures.

NOTICE

The external fall arrest system requires an annual inspection and certification. The annual inspection and certification must be performed by a qualified person other than the user.

6.2.1 Inspection Before Use

The external fall arrest system must be inspected before each use of the machine. Replace components if there are any signs of wear or damage.

Before each use, perform a visual inspection of the following components:

- **Cable:** Inspect cable for proper tension, broken strands, kinks, or any signs of corrosion.

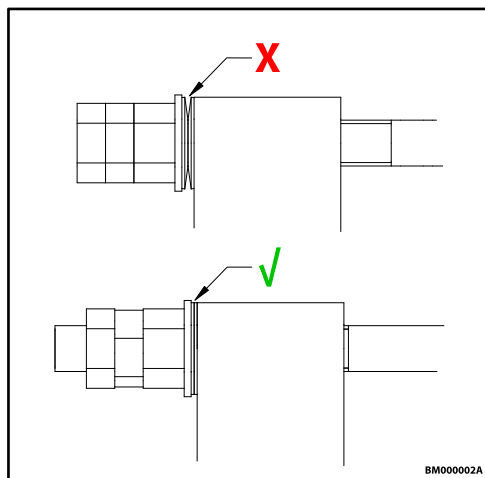


Figure 16. Bolt-On External Fall Arrest Cable

Note: There should be no visible gap between the two Belleville washers when setting proper cable tension. If any gap is shown between the two Belleville washers, the cable tension is incorrect.

- **Fittings & Brackets:** Ensure all fittings are tight and there are no signs of fractures. Inspect brackets for any damage.
- **Attachment Ring:** No cracks or signs of wear are acceptable. Any signs of corrosion requires replacement.
- **Attaching Hardware:** Inspect all attaching hardware to ensure there are no missing components and hardware is properly tightened.
- **Platform Rails:** No visible damage is acceptable.

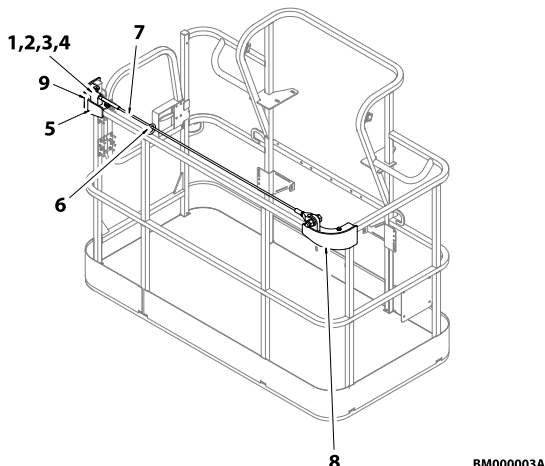


Figure 17. Bolt-On External Fall Arrest System

- | | |
|----------------------|--------------------|
| 1. Belleville Washer | 6. Attachment Ring |
| 2. Washer | 7. Cable |
| 3. Hex Nut | 8. RH Bracket |
| 4. Jam Nut | 9. Decal |
| 5. LH Bracket | |

6.3 FABRIC MESH TO MID OR TOP RAIL

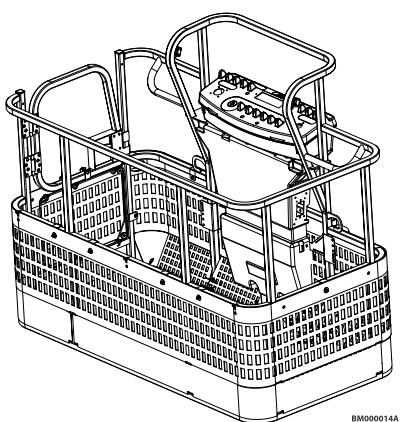


Figure 18. Fabric Mesh to Mid Rail

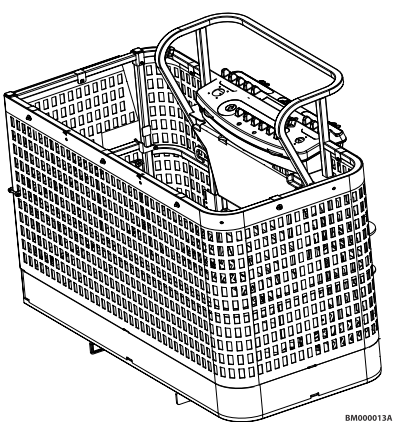


Figure 19. Fabric Mesh to Top Rail

The Fabric Mesh accessory consists of a flame retardant, lightweight mesh which is attached to the mid platform rail **or** the top platform rail.

6.4 FALL ARREST PLATFORM

Note: See the JLG External Fall Arrest System manual (PN 3128935) for more detailed information.

The external fall arrest system is designed to provide a lanyard attach point while allowing the operator to access areas outside the platform. Exit/enter the platform through the gate area only. The system is designed for use by one person.

Personnel must use fall protection at all times. A full body harness is required with lanyard not to exceed 6 ft (1.8 m) in length, that limits the maximum arrest force to 900 lb (408 kg) for the transfastener type and 1350 lb (612 kg) for the shuttle type fall arrest system.

6.4.1 Safety Precautions

! WARNING

Do not operate any machine functions while outside the platform. Use caution when entering/exiting the platform at elevation.

6.5 PIPE RACKS

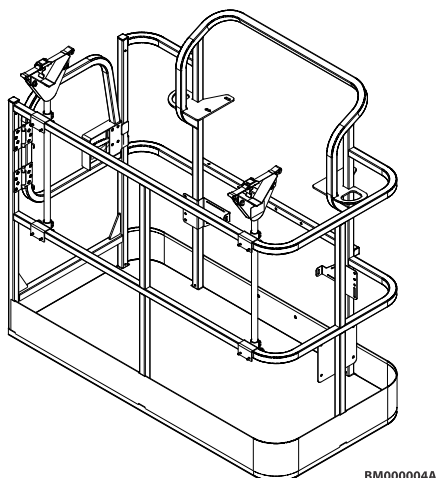


Figure 20. Pipe Racks

Pipe Racks provide a way to store pipe or conduit inside the platform in order to prevent rail damage and optimize platform utility. This accessory consists of two racks with adjustable straps to secure the load in place.

6.5.1 Capacity Specifications (Australia Only)

Max. Capacity in Racks	Max. Platform Capacity (With Max. Weight in Racks)
80 kg	184 kg
Max. Length of Material in Racks: 6.0 m Min. Length of Material in Racks: 2.4 m	

6.5.2 Safety Precautions

 WARNING

Reduce platform capacity by 100 lb (45.5 kg) when installed.

 WARNING

Weight in racks plus weight in platform must not exceed rated capacity.

NOTICE

The maximum load in the racks is 180 lb (80 kg) evenly distributed between the two racks.

NOTICE

The maximum length of material in racks is 20 ft (6.1 m).

- Ensure no personnel are beneath the platform.
- Do not exit platform over rails or stand on rails.
- Do not drive machine without material secured.
- Return racks to the stowed position when not in use.
- Use this option only on approved models.

6.5.3 Preparation and Inspection

- Ensure racks are secured to the platform rails.
- Replace torn or frayed tie-down straps.

6.5.4 Operation

1. To prepare racks for loading, remove locking pins, rotate each rack 90 degrees from stowed to working position, then secure with locking pins.
2. Loosen and remove tie-down straps. Place material on racks with weight evenly distributed between both racks.
3. Route the tie-down straps at each end across loaded material and tighten.
4. To remove material, loosen and remove tie-down straps, then carefully remove material from racks.

Note: Reinstall tie-down straps across any remaining material before continuing machine operations.

6.6 PLATFORM MESH TO MID OR TOP RAIL

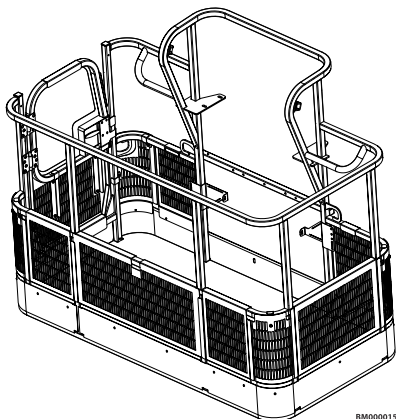


Figure 21. Platform Mesh to Mid Rail

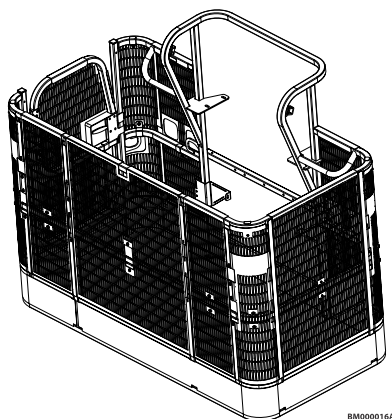


Figure 22. Platform Mesh to Top Rail

The Platform Mesh to Mid Rail accessory consists of stainless steel mesh attached to the platform mid rail.

The Platform Mesh to Top Rail accessory consists of lightweight, aluminum mesh attached to the platform top rail.

6.7 PLATFORM TOP RAIL EXTENSION

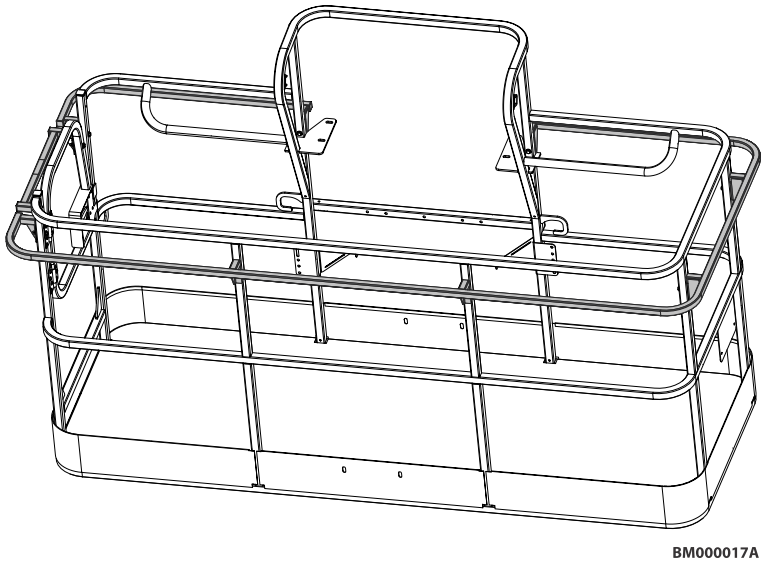


Figure 23. Platform Top Rail Extension

The Platform Top Rail Extension accessory consists of an additional bar extending from all sides of the platform.

6.8 PLATFORM WORK LIGHTS

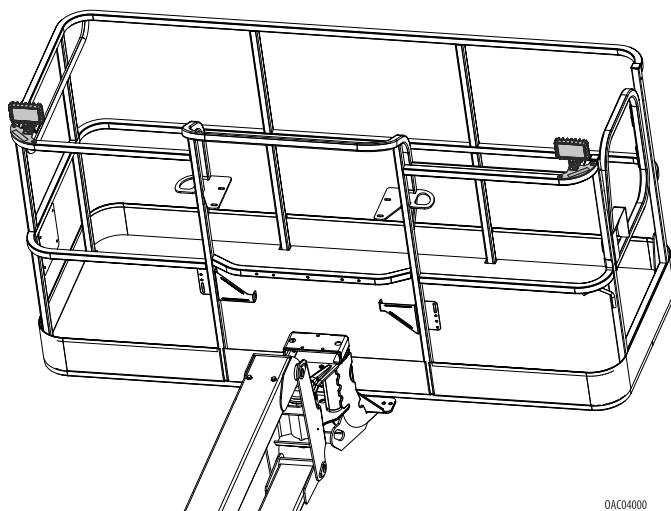


Figure 24. Platform Work Lights

The Platform Work Lights accessory consists of two 12V lights mounted to the platform railing.

6.9 SKYSENSE®

! WARNING

SkySense is not intended to replace or reduce the need for the operator to be aware of the environment around the machine. Hazards that will cause serious injury or death may not be prevented or reduced by SkySense. The operator must always look in the direction of travel, avoid power lines, avoid obstacles that could strike the machine or persons in the platform, and follow all instructions, decals, and other warnings provided with this machine.

The operator must not rely on SkySense as a substitute for following the instructions and warnings contained in the manuals and placards provided with this machine.

SkySense is intended to assist the operator. SkySense may not detect certain objects depending on shape, type of material, or orientation of the object to the sensors. It is the operator's responsibility to be aware of their surroundings at all times.

WARNING

De-rate the platform by 10 lb (4.5 kg) per bar when installed on the platform (20 lb (9 kg) or 30 lb (14 kg) total).

Note: SkySense is not active when operating the machine from the ground controls.

6.9.1 Preparation and Inspection

Pre-Operation Inspection:

1. Inspect each of the SkySense tubes for dents, cracks, or other damage.
2. Inspect each SkySense sensor for any damage to the housing or sensor.

To test the SkySense system:

1. In an area free of obstructions, ensure the machine is on a smooth, firm surface within the limits of the maximum operating slope.
2. From the platform control console, elevate the boom until the bottom of the platform is at least 6 feet off the ground.
3. Continue to elevate the platform.
4. While elevating, hold your hand 6 inches to 12 inches above one of the upward facing sensors. The machine should stop, and the LED corresponding to that sensor (left LED for left sensor bar; right LED for right sensor bar; both LEDs for center sensor bar or overhead sensor) should be red.
5. Recycle the footswitch and press the override button on the platform control console.
6. Ensure the area below the platform is clear of obstructions and lower the platform. The machine should slow down, (SkySense Status LED will blink yellow with increasing frequency) and stop, (SkySense Status LED will be illuminated solid red) when the bottom of the platform is approximately 12 inches from the ground. The alarm should sound if it is not muted (refer to SkySense Alarm).
7. Recycle the footswitch and press the override button on the platform control console.
8. Continue to lower the platform. The machine should move in the elevated drive speed mode (SkySense Status LED will remain red).

Note: The SkySense system will not stop machine operation while in Creep.

6.9.2 Operation

SkySense slows a machine's function to creep speed when it is a certain distance away from an object, known as the "warning zone." If the machine continues to approach the object and moves into the "stop zone," SkySense stops all machine functions.

For proportional functions activated by the joystick, the size of the warning zone varies based on the amount of joystick activation. The stop zone always activates at the same distance from the object regardless of the joystick's position.

If the function has reached the warning zone, normal drive speed will resume when a function is activated in the opposite direction. If the machine has reached the SkySense stop zone, release the function and recycle the footswitch to activate a function in the opposite direction.

SkySense is active during the following functions:

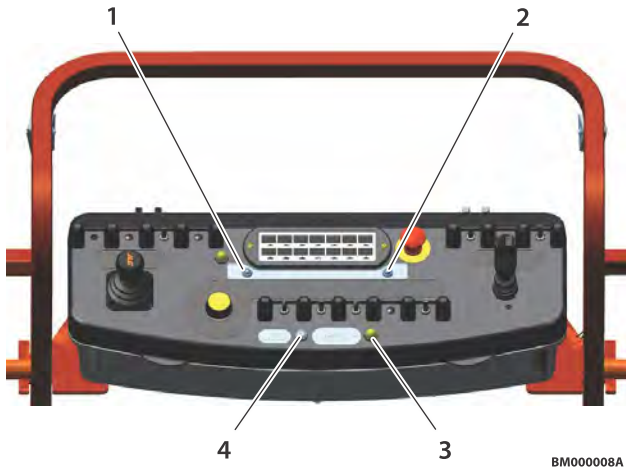
- Lift Up/Down (including jib functions)
- Platform Rotate (including jib rotate)
- Telescope Out
- Swing
- Reverse Drive

Note: During active DOS (Drive Orientation System), SkySense is active when driving in both forward and reverse directions.

There are two LED indicators on the platform control box that signal SkySense activity.

- **No LED:** Normal operation.
- **LED Flashing Yellow:** Machine is in SkySense warning zone and will reduce function speed to creep. Flash frequency correlates to proximity of object.
- **LED Red:** Machine is in SkySense stop zone and all machine functions will cease.
- **LED Flashing Red:** SkySense sensor is obstructed or damaged. Obstructions must be removed and proper function verified. Damaged sensors must be replaced.

6.9.3 SkySense Platform Panel Indicators



- 1. LED Indicator Light
- 2. LED Indicator Light
- 3. Override Button
- 4. Mute Speaker Button

6.9.4 SkySense Alarm

Activation of SkySense is signaled by an audible alarm and the LEDs on the platform console that indicate SkySense activity when reaching the warning or stop zones.

In the warning zone, the audible alarm will pulse and increase in frequency as the machine moves closer to the object. In the stop zone, the alarm will sound a continuous tone.

Additionally, when the machine is in the stop zone, the platform control panel audible alarm will sound. The system may be reset by recycling the footswitch.

The audible SkySense alarms can be muted by a button on the platform control console, although LEDs will continue to light. The platform control panel alarm will sound when the machine enters the SkySense stop zone even when muted.

6.9.5 SkySense Override Button

The yellow override button allows operators to bypass normal SkySense operation in order to move closer to an object in the stop zone.

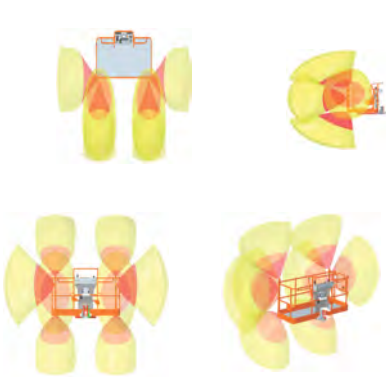
When the operator overrides the SkySense via the override button to get closer to a work surface, the machine will maintain creep speed and flash the appropriate indicator color based on location in either the warning or stop zones.

Note: Override is only required to be engaged if the operator desires to move the platform closer to an object that is in or entering the stop zone.

NOTICE

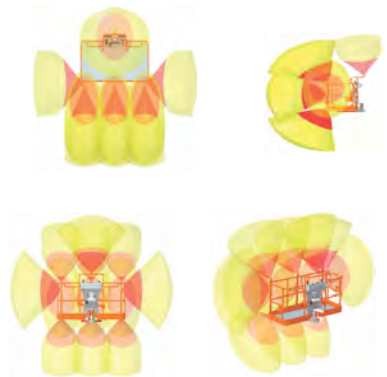
SkyGuard operation is affected when SkySense is installed on a machine. If SkySense activation occurs prior to SkyGuard activation, SkyGuard will only cut out functions if activated. If SkyGuard activation occurs prior to SkySense activation, SkyGuard will function normally.

6.9.6 SkySense Coverage Areas



BM000009A

Figure 25. SkySense Coverage Level 1 Areas (2- Bar)



BM000010A

Figure 26. SkySense Coverage Level 2 Areas (3 — Bar)

Note: Sensor Cones shown are approximations for reference only.

6.10 SKYGLAZIER®

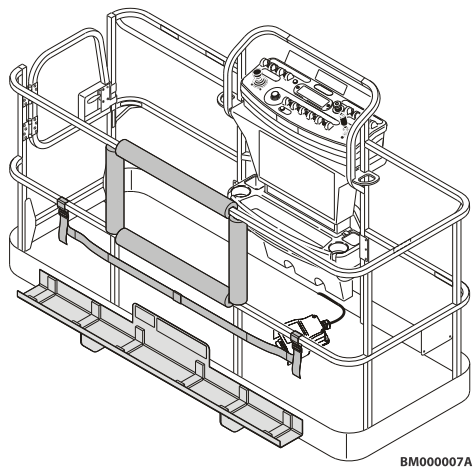


Figure 27. SkyGlazier System

SkyGlazier allows glaziers to position panels efficiently. The glazier package consists of a tray that attaches to the bottom of the platform. The panel rests on the tray and against top-rail of the platform, which is padded to prevent damage. SkyGlazier includes a strap to secure the panel to the platform rail.

6.10.1 Capacity Specifications

Capacity Zone *	Max. Tray Capacity	Max. Platform Capacity With Max. Weight in Tray
500 lb (227 kg)	150 lb (68 kg)	250 lb (113 kg)
550 lb (250 kg)	150 lb (68 kg)	250 lb (113 kg)
600 lb (272 kg)	150 lb (68 kg)	250 lb (113 kg)
660 lb (300 kg)	150 lb (68 kg)	350 lb (160 kg)
750 lb (340 kg)	150 lb (68 kg)	440 lb (200 kg)
1000 lb (454 kg)	250 lb (113 kg)	500 lb (227 kg)
* Refer to the capacity decals installed on the machine for capacity zone information.		
Required Platform Type: Side-Entry		
Maximum Dimensions of Panel: 32 sq ft (3 sq m)		
Maximum Wind Speed: 20 mph (32 kph)		

6.10.2 Safety Precautions

WARNING

Ensure panel is secured with strap.

WARNING

Do not overload tray or platform. Total machine capacity is reduced when tray is installed.

WARNING

With SkyGlazier installed, the original platform capacity ratings are reduced as specified in the specifications table above. Do not exceed the new platform capacity rating. Refer to capacity decal located on tray.

WARNING

An increase of the area exposed to the wind will decrease stability. Limit panel area to 32 sq ft (3 sq m). Maximum allowable wind speed is 20 mph (32 kph).

- Ensure no personnel are beneath platform.
- Do not exit platform over rails or stand on rails.
- Remove tray when not in use.
- Use this option only on approved models.

6.10.3 Preparation and Inspection

- Check for cracked welds and damage to tray.
- Ensure tray is properly secured to platform.
- Ensure strap is not torn or frayed.

6.10.4 Operation

1. Load SkyGlazier tray with panel.
2. Position panel to its desired location on the tray.
3. Route the adjustable strap around the panel and tighten until secure.

6.11 SOFT TOUCH

A padding kit is mounted to the platform rails and to a frame suspended below the platform. Limit switches deactivate platform functions when the padded framework contacts an adjacent structure. A button on the platform console allows override of the system.

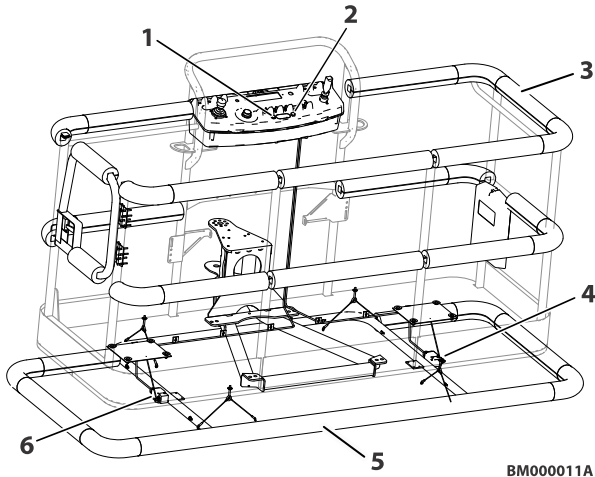


Figure 28. Soft Touch System

1. Override Indicator Light
2. Override Button
3. Rail Bumper
4. Limit Switch
5. Suspended Frame and Rail Bumper
6. Limit Switch

SECTION 7

General Specifications and Operator Maintenance

7.1 GENERAL

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 & Maintenance Manual.

7.2 OTHER PUBLICATIONS AVAILABLE

Service & Maintenance Manual	31219939
Illustrated Parts Manual	31219940

7.3 OPERATING SPECIFICATIONS AND PERFORMANCE DATA

Table 6. Operating Specifications

Maximum Work Load (Capacity) ANSI, ANSI Export, CSA, MOL70, GB Markets Unrestricted:	500 lb (227 kg)
Maximum Work Load (Capacity) CE/UKCA, AZ/NZS Markets Unrestricted:	230 kg
Maximum Operating Slope EC600SJP/H600SJP EC600SJ/H600SJ	3° 4°
Maximum Travel Grade (Gradeability)	30%
Maximum Travel Grade (Side Slope) EC600SJP/H600SJP EC600SJ/H600SJ	3° 4°

Table 6. Operating Specifications (continued)

Maximum Vertical Platform Height:	60 ft (18.29 m)
Maximum Horizontal Platform Reach	
EC600SJP/H600SJP	43 ft (13.11 m)
EC600SJ/H600SJ	42 ft 9 in (13.11 m)
Machine Width	
2WD	7 ft 11 7/16 in (2.42 m)
4WD	7 ft 11 3/8 in (2.42 m)
Machine Length	
EC600SJ/H600SJ	30 ft 8 15/16 in (9.37 m)
EC600SJP/H600SJP	33 ft 3 3/4 in (10.15 m)
Turning Radius (outside)	15 ft 3 in (4.65 m)
Turning Radius (inside)	4 ft (1.23 m)
Maximum Tire Load:	7700 lb (3493 kg)
Maximum Ground Bearing Pressure	
EC600SJ/H600SJ	52 psi (3.7 kg/cm²)
EC600SJP/H600SJP	51 psi (3.6 kg/cm²)
Maximum Drive Speed:	3.0 mph (1.3 m/s)
Electrical System Voltage	48 volts
Maximum Hydraulic System Pressure	3200 psi (221 Bar)
Maximum Wind Speed	28 mph (12.5 m/s)
Maximum Manual Force	400N
Gross Machine Weight (Platform Empty)	
EC600SJ/H600SJ	16,710 lb (7,580 kg)
EC600SJP/H600SJP	17,210 lb (7,806 kg)
Ambient (Operating) Temperature	See Figure — Hydraulic Oil Specification .

7.3.1 Capacities

Table 7. Capacities

Generator Fuel Tank (H Models Only)	13 gal (49.2 L)
Hydraulic Tank	15.9 gal (60.2 L) 12.4 gal (46.9 L) to full mark
Drive Hub	0.4 gal (1.5 L)

7.3.2 Tires

Table 8. Tires

Size	Type	Pressure
36/14 LL-22.5	Foam Filled	N/A

7.3.3 Hydraulic Oil

Table 9. Hydraulic Oil SAE Viscosity Grade Operating Temperature Ranges

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, 10W-30
+50° to + 210° F (+10° to +99° C)	20W-20

Note: Hydraulic oils require anti-wear qualities at least to API Service Classification GL-3 and sufficient chemical stability for mobile hydraulic system service. JLG Industries recommends standard UTTO.

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 standard UTTO is desired, contact JLG Industries for proper recommendations.

Note: Machine operation using non-JLG approved hydraulic fluids or operation outside of the temperature boundaries outlined in the hydraulic fluid operation charts may result in premature wear or damage to components of the hydraulic system.

Note: Machines may be equipped with standard UTTO biodegradable and non-toxic hydraulic oil. This is a fully synthetic hydraulic oil that possesses the same anti-wear and rust protection characteristics as mineral oils, but will not adversely affect the ground water or the environment when spilled or leaked in small amounts.

Note: When temperatures remain consistently below 20° F (-7° C), JLG Industries recommends the use of a premium "cold weather" hydraulic fluid (Viscosity Grade 32).

Table 10. Hydraulic Oil Properties and Classifications

Fluid	Properties		Base				Classifications		
	Viscosity at 40° C (cSt, Typical)	Viscosity Index	Mineral Oils	Vegetable Oils	Synthetic	Synthetic Polyol Esters	Readily Bio-degradable*	Virtually Non-toxic**	Fire Resistant***
Shell Tellus S2 VX15 - Recommended	15	135	X					X	
Mobil DTE 10 Excel 15 - Optional	16	169	X					X	
Shell Naturelle HF-E32 - Recommended	31	192				X	X		
Mobil EAL Envirodyn H32 - Optional	34	146				X	X		
Shell Tellus S2 VX32 - Recommended	32	142	X						
Mobil DTE 10 Excel 32 - Optional	32	161	X						

* Readily biodegradable classification indicates one of the following:

CO2 Conversion > 60% per EPA 560/6-82-003

CO2 Conversion > 80% per CEC-L-33-A-93

** Virtually Non-toxic classification indicates an LC50 > 5000 ppm per OECD 203

*** Fire Resistant classification indicates Factory Mutual Research Corp. (FMRC) Approval

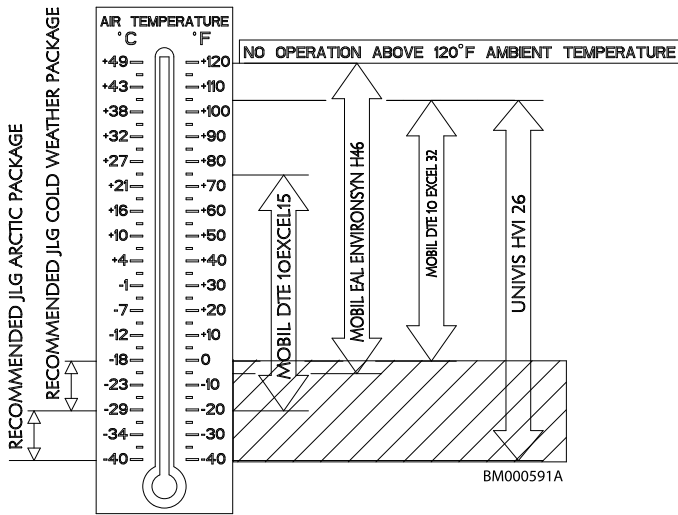


Figure 29. Hydraulic System Operating Temperature Specifications

7.3.4 Major Component Weights

Table 11. Component Weights

Component	Pounds	Kilograms
Frame (bare)	1381	626
T/T (bare)	2093	950
Boom Assembly (E/M 600)	4464	2025
Boom Assembly (E/M 600J)	4464	2025
Tire & Wheel	226	102.5
Swing Drive	70	32
Swing Bearing	100	45.4
Platform Console	25	11
Side Entry Platform - 30x72 (bare)	175	80
Side Entry Platform - 30x48 (bare)	144	66
Counterweight	2560	1161

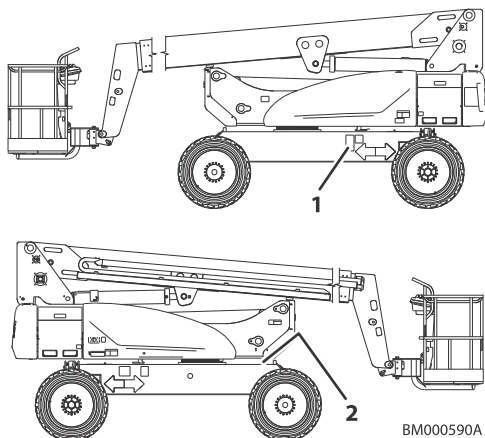
7.4 BATTERY CHARGER

Battery Charger Type	Delta-Q
Electrical System Voltage (DC)	48V (960 W)

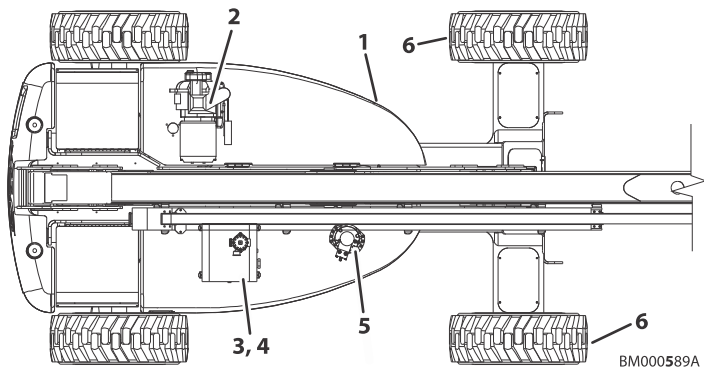
Input	
AC Input Voltage	85-270V AC
Nominal AC Input Voltage	120 – 240V AC
Input Frequency	50 - 60Hz
Max. AC Input Current	Nominal 8.4A @ 120V AC Nominal 4.3A @ 240V AC
Ingress Protection	IP66
Operating Temperature	-40°F to 149°F (-40°C to 65°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Output	
Nominal DC Output Voltage	48V
Max. DC Output Voltage	72V
Max DC Output Current	20A
Derated	> 104° (40°F)
Protection	
Output Reverse Polarity	Electronic Protection-Auto Reset
Output Short Circuit	Current Limited
AC Overload	Current Limited
DC Overload	Current Limited

7.5 SERIAL NUMBER LOCATION

A serial number plate is affixed to the right side of the frame (1). If the serial number plate is damaged or missing, the machine serial number is stamped on the left side of the frame at the top (2).



7.6 OPERATOR MAINTENANCE



7.7 OPERATOR MAINTENANCE

Note: The following numbers correspond to those in the Operator Maintenance and Lubrication Diagram.

Table 12. 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.
H0	Hydraulic Oil. API Service Classification GL-3

Table 12. Lubrication Specifications (continued)

KEY	SPECIFICATIONS
OG*	Open Gear Lube - Tribol Molub-Alloy 936 Open Gear Compound. (JLG Part No. 3020027)
BG*	Bearing Grease (JLG Part No. 3020029) Mobilith SHA 460.
LL	Synthetic Lithium Lubricant, Gredag 741 Grease. (JLG Part No. 3020022)
EO	Engine (crankcase) Oil. Gas - API SF/SG class, MIL-L-2104. Diesel - API CC/ CD class, MIL-L-2104B/MIL-L-2104C.
*MPG may be substituted for these lubricants, if necessary, but service intervals will be reduced.	

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.

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

- 1. Swing Bearing - Internal Ball Bearing
Lube Point(s) - 1 Grease Fitting
Capacity - A/R
Lube - MPG
Interval - Every 3 months or 150 hours of operation



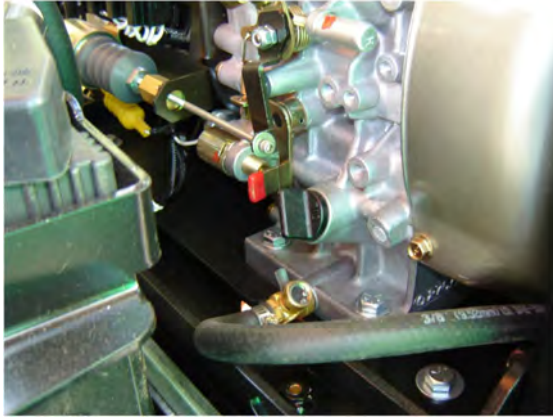
2. Generator Engine (If Equipped)

Lube Point(s) - Fill Cap

Capacity - Refer to engine manual

Lube - EO

Interval - Check daily. Change in accordance with engine manual.



3. Hydraulic Tank

Lube Point(s) - Fill Cap

Capacity - 15.9 gal system (56.7 L) 12.4 gal (46.9 L) to Full Mark

Lube - HO

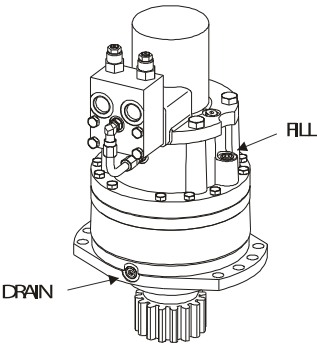
Interval - Check Level daily; Change every 2 years or 1200 hours of operation.



4. Hydraulic Filter
Interval - Change after first 50 hours and every 6 months or 300 hours thereafter or as indicated by Condition Indicator.
Comments - Under certain conditions, it may be necessary to replace the filter on a more frequent basis.



5. Swing Drive Hub
Lube Point(s) - Level/Fill Plug
Capacity - 24 oz (0.7 L)
Lube - EPGL
Interval - Check level every 3 months or 150 hours of operation; change every 2 years or 1200 hours of operation



6. Wheel Drive Hub
Lube Point(s) - Level/Fill Plug
Capacity - 0.4 gal (1.5 L)
Lube - EPGL
Interval - Check level every 3 months or 150 hours of operation; change every 2 years or 1200 hours of operation



7.8 OSCILLATING AXLE LOCKOUT TEST (IF EQUIPPED)

NOTICE

Lockout system test must be performed quarterly, any time a system component is replaced, or when improper system operation is suspected.

Note: Ensure boom is fully retracted, lowered, and centered between drive wheels prior to beginning lockout cylinder test.

1. Place a 6 in (15.2 cm) high block with ascension ramp in front of left front wheel.
2. From platform control station, start engine
3. Place the Drive control lever to the forward position and carefully drive machine up ascension ramp until left front wheel is on top of block.
4. Carefully activate Swing control lever and position boom over right side of machine.
5. With boom over right side of machine, place Drive control lever to Reverse and drive machine off of block and ramp.
6. Have an assistant check to see that left front wheel remains locked in position off of ground.
7. Carefully activate Swing control lever and return boom to stowed position (centered between drive wheels). When boom reaches center, stowed position, lockout cylinders should release and allow wheel to rest on ground, it may be necessary to activate Drive to release cylinders.
8. Place the 6 in (15.2 cm) high block with ascension ramp in front of right front wheel.
9. Place Drive control lever to Forward and carefully drive machine up ascension ramp until right front wheel is on top of block.
10. With boom over left side of machine, place Drive control lever to Reverse and drive machine off of block and ramp.
11. Have an assistant check to see that right front wheel remains locked in position off of ground.
12. Carefully activate Swing control lever and return boom to stowed position (centered between drive wheels). When boom reaches center, stowed position, lockout cylinders should release and allow wheel to rest on ground, it may be necessary to activate Drive to release cylinders.
13. If lockout cylinders do not function properly, have qualified personnel correct the malfunction prior to any further operation.

7.9 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.

7.9.1 Battery Charging (Daily)

WARNING

When battery charger is to be used, charging harness must be plugged into a grounded receptacle. If receptacle is not grounded and a malfunction should occur, the machine could cause serious electrical shock.

For increased battery life:

- Batteries should be kept at highest state of charge permitted by availability at job site and machine use. Charge batteries before they reach 20% state of charge. Avoid completely discharging the batteries.
- Fully charge the batteries each day the machine is used.
- Charge the batteries at available times between use. Flooded lead acid/AGM batteries do not develop a charging memory.
- If applicable, be sure the battery fluid covers the battery plates before charging. To avoid overflow, do not top off the fluid level until after charging.

CAUTION

When adding distilled water to the batteries, non-metallic containers and/or funnels must be used. Add water until electrolyte covers plates. Do not charge batteries unless electrolyte covers the plates.

Note: 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.

7.9.2 Battery Maintenance (Quarterly)

CAUTION

When adding distilled water to the batteries, non-metallic containers and/or funnels must be used. Add water until electrolyte covers plates. Do not charge batteries unless electrolyte covers the plates.

Note: 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. Open battery compartment cover to allow access to battery terminals and vent caps.
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 reconnect cable to post. Coat non-contact surfaces with mineral grease or petroleum jelly.
5. When all cables and terminal posts have been cleaned, ensure all cables are properly positioned and do not get pinched. Close battery compartment cover.
6. Power up machine and verify it functions properly.

7.10 TIRES AND WHEELS

7.10.1 Tire Damage

For polyurethane foam filled tires, JLG Industries, Inc. recommends that when any of the following are discovered, measures must be taken to remove the JLG product from service immediately and arrangements must be made for replacement of the tire or tire assembly.

- a smooth, even cut through the cord plies which exceeds 3 inches (7.5 cm) in total length
- any tears or rips (ragged edges) in the cord plies which exceed 1 inch (2.5 cm) in any direction
- any punctures which exceed 1 inch in diameter
- any damage to the bead area cords of the tire

If a tire is damaged but is within the above noted criteria, the tire must be inspected on a daily basis to insure the damage has not propagated beyond the allowable criteria.

7.10.2 Tire Replacement

JLG recommends a replacement tire be the same size, ply and brand as originally installed on the machine. Please refer to the JLG Parts Manual for the part number of the approved tires for a particular machine model. If not using a JLG approved replacement tire, we recommend that replacement tires have the following characteristics:

- Equal or greater ply/load rating and size of original

- Tire tread contact width equal or greater than original
- Wheel diameter, width, and offset dimensions equal to the original
- Approved for the application by the tire manufacturer (including inflation pressure and maximum tire load)

Unless specifically approved by JLG Industries Inc. do not replace a foam filled or ballast filled tire assembly with a pneumatic tire. When selecting and installing a replacement tire, ensure that all tires are inflated to the pressure recommended by JLG. Due to size variations between tire brands, both tires on the same axle should be the same.

7.10.3 Wheel Replacement

The rims installed on each product model have been designed for stability requirements which consist of track width and load capacity. Size changes such as rim width, center piece location, larger or smaller diameter, etc., without written factory recommendations, may result in an unsafe condition regarding stability.

7.10.4 Wheel Installation

It is extremely important to apply and maintain proper wheel mounting torque.

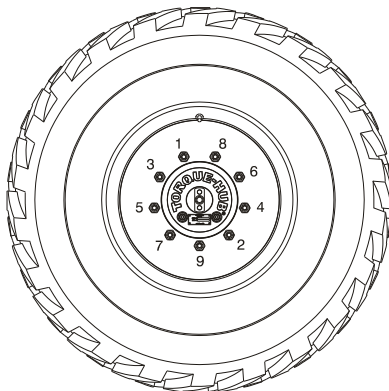
WARNING

Wheel nuts must be installed and maintained at the proper torque to prevent loose wheels, broken studs, and possible dangerous separation of wheel from the axle. Be sure to use only the nuts matched to the cone angle of the wheel.

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 chart.
4. Wheel nuts should be torqued after first 50 hours of operation and after each wheel removal. Check torque every 3 months or 150 hours of operation.

Table 13. 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)

7.11 SUPPLEMENTAL INFORMATION ONLY APPLICABLE TO CE/UKCA MACHINES

The following information is provided in accordance with the requirements of the European Machinery Directive 2006/42/EC or Supply of Machinery (Safety) Regulations 2008 No. 1597.

The A-Weighted emission sound pressure level at the work platform is less than 70 dB (A).

The guaranteed Sound Power Level (LWA) per European Directive 2000/14/EC (Noise Emission in the Environment by Equipment for Use Outdoors) or Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001 No. 1701 based on test methods in accordance with Annex III, Part B, Method 1 and 0 of the directive, is 99 dB (A) (H600SJ, H600SJP only).

The vibration total value to which the hand-arm system is subjected does not exceed 2,5 m/s². The highest root mean square value of weighted acceleration to which the whole body is subjected does not exceed 0,5 m/s².

7.12 EC DECLARATION OF CONFORMITY

Manufacturer

JLG Industries, Inc.

Address

1 JLG Drive
McConnellsburg, PA 17233 USA

Technical File

JLG EMEA B.V.
Polaris avenue 63,
2132 JH Hoofddorp
The Netherlands

Contact/Position

Senior Manager — Product Safety & Reliability

Date/Place

Hoofddorp, Netherlands

Machine Type

Mobile Elevating Work Platform

Model Type

EC600SJ, H600SJ, EC600SJP, H600SJP

EC-Number

2842

Certificate Number

KCEC44404

Notified Body

Kuiper Certificering b.v.

Address

Van Slingelandtstraat 75, 7331 NM
Apeldoorn, The Netherlands

Reference Standards

- EN 55011:2009/A1:2010
- EN 61000-6-2:2005
- EN 60204-1:2018
- EN 280:2013+ A1:2015
- EN ISO 12100:2010

JLG Industries, Inc. hereby declares that the above mentioned machine conforms with the requirements of:

- 2006/42/EC — Machinery Directive
- 2014/30/EU — EMC Directive
- 2014/53/EU — RED Directive (If fitted with optional equipment)
- 2000/14/EC — Outdoor Noise Directive

Note: This declaration conforms with the requirements of annex II-A of the council directive 2006/42/EC. Any modification of the above described machine violates the validity of this declaration.

7.13 UKCA DECLARATION OF CONFORMITY

Manufacturer

JLG Industries, Inc.

Address

1 JLG Drive
McConnellsburg, PA 17233 USA

Technical File

JLG Industries UK Ltd
Braunstone Frith Industrial Estate
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Leicester, LE3 1UX
United Kingdom

Contact/Position

Director of Engineering — Europe

Date/Place

Leicester, United Kingdom

Machine Type

Mobile Elevating Work Platform

Model Type

EC600SJ, H600SJ, EC600SJP, H600SJP

AB-Number

0463

Certificate Number

AVUK4404

Approved Body

Amtri Veritas

Address

Pierce Street, Macclesfield, SK11 6ER, England

Reference Standards

- EN 55011:2009/A1:2010
- EN 61000-6-2:2005
- EN 60204-1:2018
- EN 280:2013+ A1:2015
- EN ISO 12100:2010

JLG Industries, Inc. hereby declares that the above mentioned machine conforms with the requirements of:

- 2008 No. 1597 - Supply of Machinery (Safety) Regulations 2008
- 2016 No. 1091 - Electromagnetic Compatibility Regulations 2016
- 2017 No. 1206 - Radio Equipment Regulations 2017 (if fitted with optional equipment)
- 2001 No. 1701 - Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001

Note: This declaration conforms with the requirements of annex II-A of the Regulations 2008 No. 1597. Any modification of the above described machine violates the validity of this declaration.

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Inspection, Maintenance and Repair Log



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