An Oshkosh Corporation Company

Operation and Safety Manual

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

Models
RT2669, RT3369
ERT2669, ERT3369
PVC 2004

ANSI CE **AS/NZS**

31217162
September 28, 2021 - Rev B

⚠ 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.

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.
1 JLG Drive
McConnellsburg, PA 17233

or Your Local JLG Office
(See addresses on inside of manual cover.)

In USA:

Toll Free: 877-JLG-SAFE (877-554-7233)

Outside USA:

Phone: 240-420-2661
E-mail: ProductSafety@JLG.com

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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. In order to promote proper machine usage, it is mandatory that a daily routine is established based on the content of this manual. A maintenance program, using the information provided in this manual and the Service and Maintenance Manual, must also be established by a qualified person and must be followed to ensure that the machine is safe to operate.

The owner/user/operator/lessor/lessee of the machine should 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.

These sections contain 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").

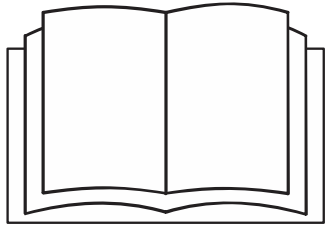
⚠ WARNING

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

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 recognition and avoiding hazards associated with their operation) shall be authorized to operate a MEWP.
- 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.

Workplace Inspection

- Precautions to avoid all hazards in the work area must be taken by the user before 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.

Machine Inspection

- Do not operate this machine until the inspections and functional checks have been performed as specified in Section 2 of this manual.
- 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 and Maintenance 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.

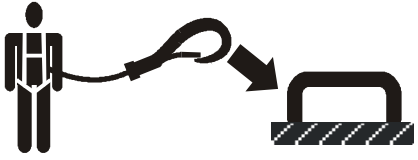
1.3 OPERATION

General

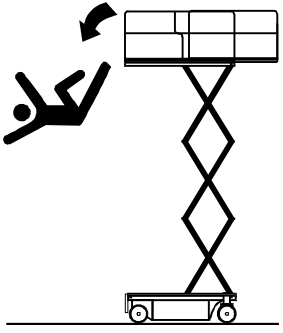
- Machine operation requires your full attention. Bring the machine to a full stop before using any device, i.e. cell phones, two-way radios, etc. that will distract your attention from safely operating the machine.
- Do not use the machine for any purpose other than positioning personnel, their tools, 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.
- 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.

Trip and Fall Hazards

- Prior to operation, ensure all gates and rails are fastened and secured in their proper position.

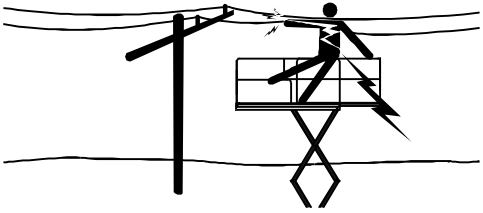


- JLG Industries, Inc. recommends that all persons in the platform wear a full body harness with a lanyard attached to an authorized lanyard anchorage point while operating this machine. For further information regarding fall protection requirements on JLG products, contact JLG Industries, Inc.
- Identify the designated lanyard anchorage point(s) at the platform and securely attach the lanyard. Attach only one (1) lanyard per lanyard anchorage point.
- Enter and exit only through gate area. Use extreme caution when entering or leaving the platform. Ensure that the platform assembly is fully lowered. Face the machine 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.

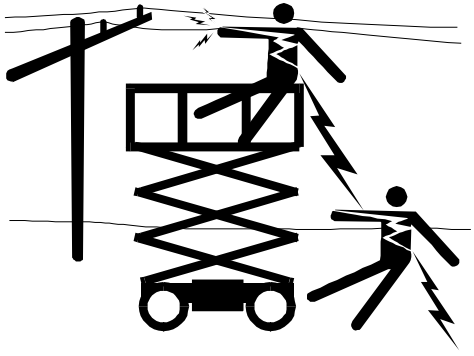


- Keep both feet firmly positioned on the platform floor at all times. Never position ladders, boxes, steps, planks, or similar items on unit to provide additional reach for any purpose.
- Never use the scissor arm assembly to gain access to or leave the platform.
- Keep oil, mud, and slippery substances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

Electrocution Hazards



- This machine is not insulated and does not provide protection from contact or proximity to electrical current.
- Maintain safe clearance from electrical lines, apparatus, or any energized (exposed or insulated) parts in accordance with the Minimum Approach Distance (MAD) as specified in Table 1-1.
- Allow for machine movement and electrical line swaying.
- Maintain a clearance of at least 10 ft (3 m) 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.
- It is not recommended to use the machine during lightning. To prevent injury or machine damage if lightning occurs during operation, lower the platform and shut down the machine in a safe and secure location.



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

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

Voltage Range (Phase to Phase)	MINIMUM APPROACH DISTANCE in Feet (Meters)
0 to 50KV	10 (3)
Over 50 KV to 200 KV	15 (5)
Over 200KV 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.*	

Tipping Hazards

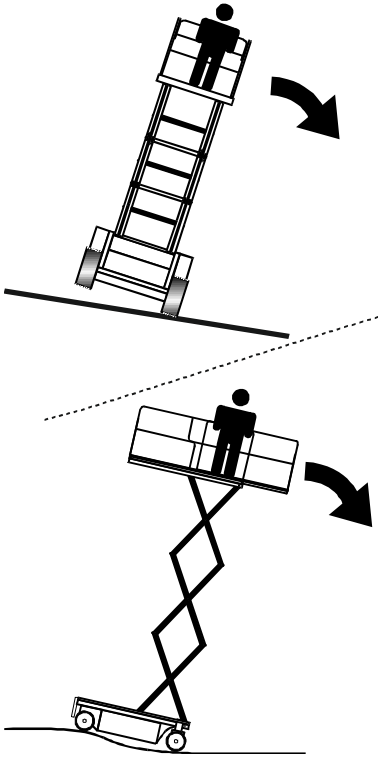
- Ensure that the ground conditions are adequate to support the maximum tire load indicated on the tire load decals located on the chassis adjacent to each wheel. Do not travel on unsupported surfaces.
- The user must be familiar with the operating surface before driving. Do not exceed the allowable sideslope 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 0.6 m (2 ft) from holes, bumps, drop-offs, obstructions, debris, concealed holes, and other potential hazards at the ground level.
- Do not operate the machine when wind conditions exceed specifications shown in Section 6.3 or as shown on the capacity placard on the platform billboard. 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, deck extensions, or attachments.

⚠ WARNING

DO NOT OPERATE THE MACHINE WHEN WIND CONDITIONS EXCEED SPECIFICATIONS SHOWN IN SECTION 6.3 OR AS SHOWN ON THE CAPACITY PLACARD ON THE PLATFORM BILLBOARD.

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

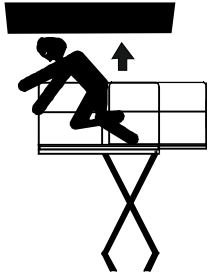
Beaufort Number	Wind Speed		Description	Land Conditions
	mph	m/s		
0	0	0-0.2	Calm	Calm. Smoke rises vertically
1	1-3	0.3-1.5	Light air	Wind motion visible in smoke
2	4-7	1.6-3.3	Light breeze	Wind felt on exposed skin. Leaves rustle
3	8-12	3.4-5.4	Gentle breeze	Leaves and smaller twigs in constant motion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



- 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 scissor arm assembly or platform is caught so that one or more wheels are off the ground, all persons must be removed before attempting to free the machine. Use cranes, forklift trucks, or other appropriate equipment to stabilize machine.

Crushing and Collision Hazards

- Approved head gear must be worn by all operating and ground personnel.
- Keep hands and limbs out of the scissor arm assembly during operation.
- Watch for obstructions around machine and overhead when driving. Check clearances above, on sides, and bottom of platform when lifting or lowering platform.



- During operation, keep all body parts inside platform railing.
- 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 driving 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 causing hazards of collision or injury to personnel.
- 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 platform. Position barricades on floor as necessary.

⚠ WARNING

IF DRIVING MACHINE WITH THE PLATFORM CONTROL STATION FROM GROUND, DO NOT HANG THE CONTROL BOX ON ANY PART OF THE MACHINE WHILE DRIVING. HOLD THE CONTROL BOX AND KEEP AT LEAST 3 FT (1 M) DISTANCE FROM MACHINE.

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 emergency towing procedures.
- Ensure platform is fully retracted and completely empty of tools prior to towing, lifting or hauling.
- When lifting machine with a forklift, position forks only at designated areas of the machine. Lift with a forklift of adequate capacity.
- Refer to Section 3.16 for lifting information.

1.5 MAINTENANCE

General

This 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.

Maintenance Hazards

- Shut off power to all controls and ensure that all operating systems are secured from inadvertent motion prior to performing any adjustments or repairs.
- 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.
- Use only approved non-flammable cleaning solvents.
- Do not replace items critical to stability, such as batteries or tires, with items of different weight or specification. Do not modify unit in any way to affect stability.
- Refer to the Service and 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.

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.

⚠ WARNING

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.

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.

Operator Training

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 MEWPs 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.

Training Supervision

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

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.

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 users' 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 the machine inspections and maintenance recommended 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.

Inspection and Maintenance Table

Type	Frequency	Primary Responsibility	Service Qualification	Reference
Pre-Start Inspection	Before using each day; or whenever there's an Operator change.	User or Operator	User or Operator	Operation and Safety Manual
Pre-Delivery Inspection (See Note)	Before each sale, lease, or rental delivery.	Owner, Dealer, or User	Qualified JLG Mechanic	Service and Maintenance Manual and applicable JLG inspection form
Frequent Inspection	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 and 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 and Maintenance Manual and applicable JLG inspection form
Preventative Maintenance	At intervals as specified in the Service and Maintenance Manual.	Owner, Dealer, or User	Qualified JLG Mechanic	Service and Maintenance Manual
NOTE: *Inspection forms are available from JLG. Use the Service and Maintenance Manual to perform inspections.*				

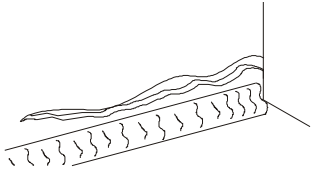
NOTICE

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

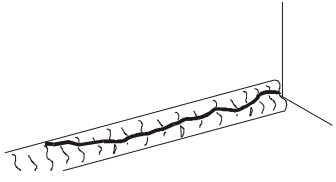
2.3 PRE-START INSPECTION

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

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



Parent Metal Crack

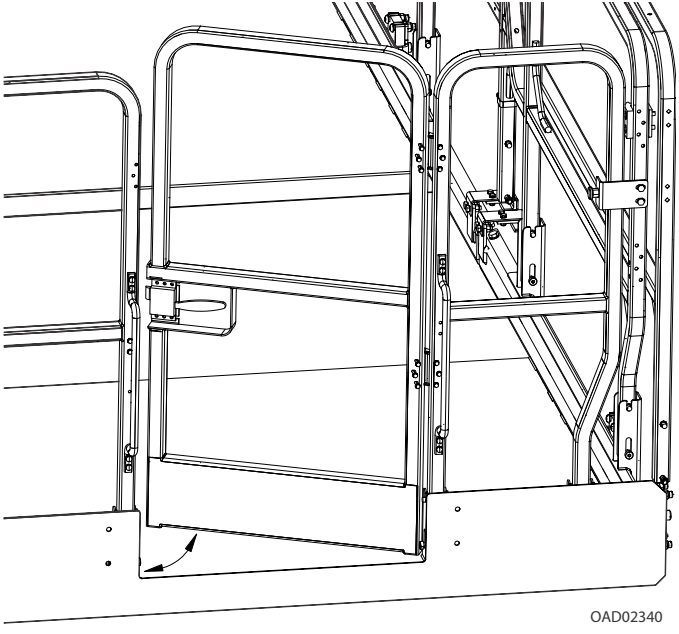


Weld Crack

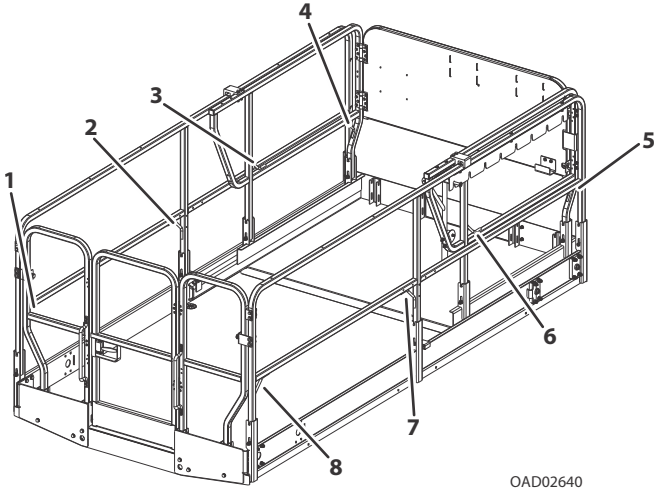
2. **Decals and Placards –** Check all for cleanliness and legibility. Make sure none of the decals and placards are missing. Make sure all illegible decals and placards are cleaned or replaced.
3. **Operation and Safety Manuals –** Ensure a copy of the Operation and Safety Manual, AEM Safety Manual (ANSI markets only), and ANSI Manual of Responsibilities (ANSI markets only) are enclosed in the weather-resistant storage box.
4. **Walk-Around Inspection –** Perform as instructed.
5. **Battery –** Charge as required.
6. **Fuel –** (Combustion Engine Powered Machines) Add the proper fuel as necessary.
7. **Engine Oil Supply –** Ensure that the engine oil level is at the full mark on the dipstick and the filler cap is secure
8. **Fluid Levels –** Be sure to check the engine oil and the hydraulic oil levels.
9. **Accessories/Attachments –** Refer to the Accessories section in this manual or the accessory installed upon the machine for specific inspection, operation, and maintenance instructions.
10. **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 3 for more specific instructions on the operation of each function.
11. **Platform Gate –** Keep gate and surrounding area clean and unobstructed. Check that 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.
12. **Lanyard Anchorage Points –** JLG Industries, Inc. recommends personnel in the platform wear a full body harness with a lanyard attached to an authorized 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.

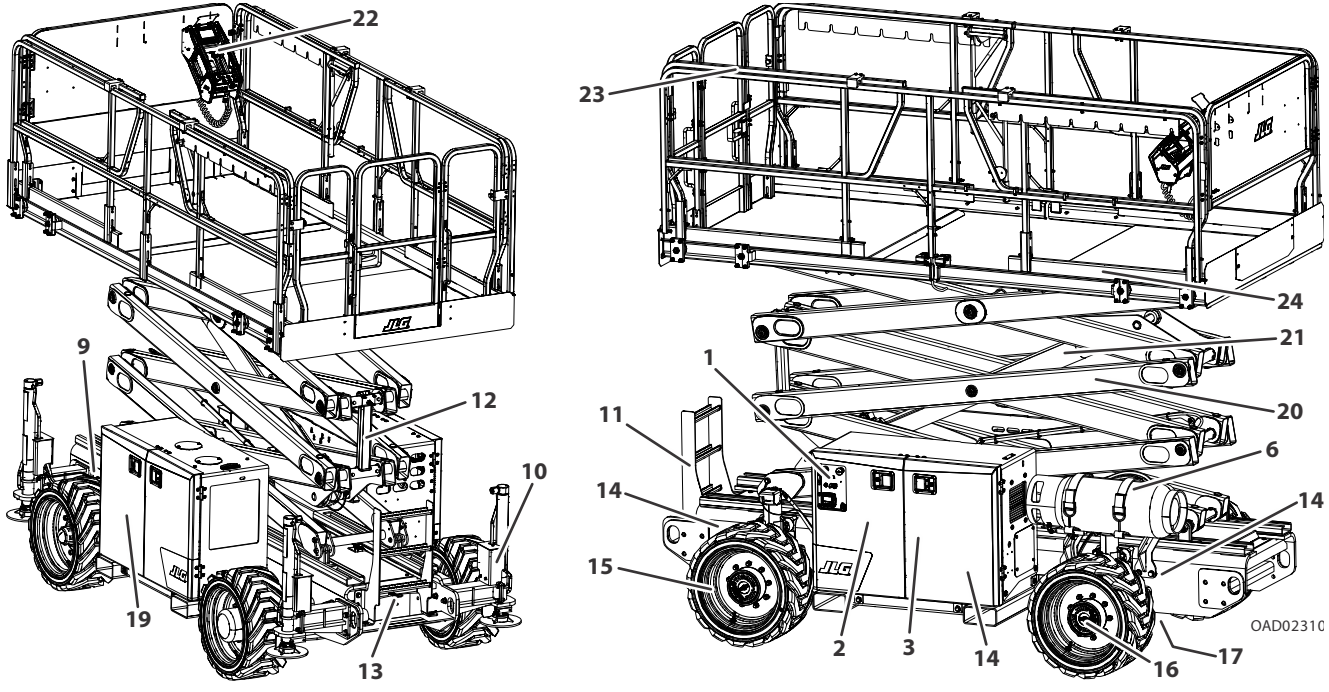


Platform Gate

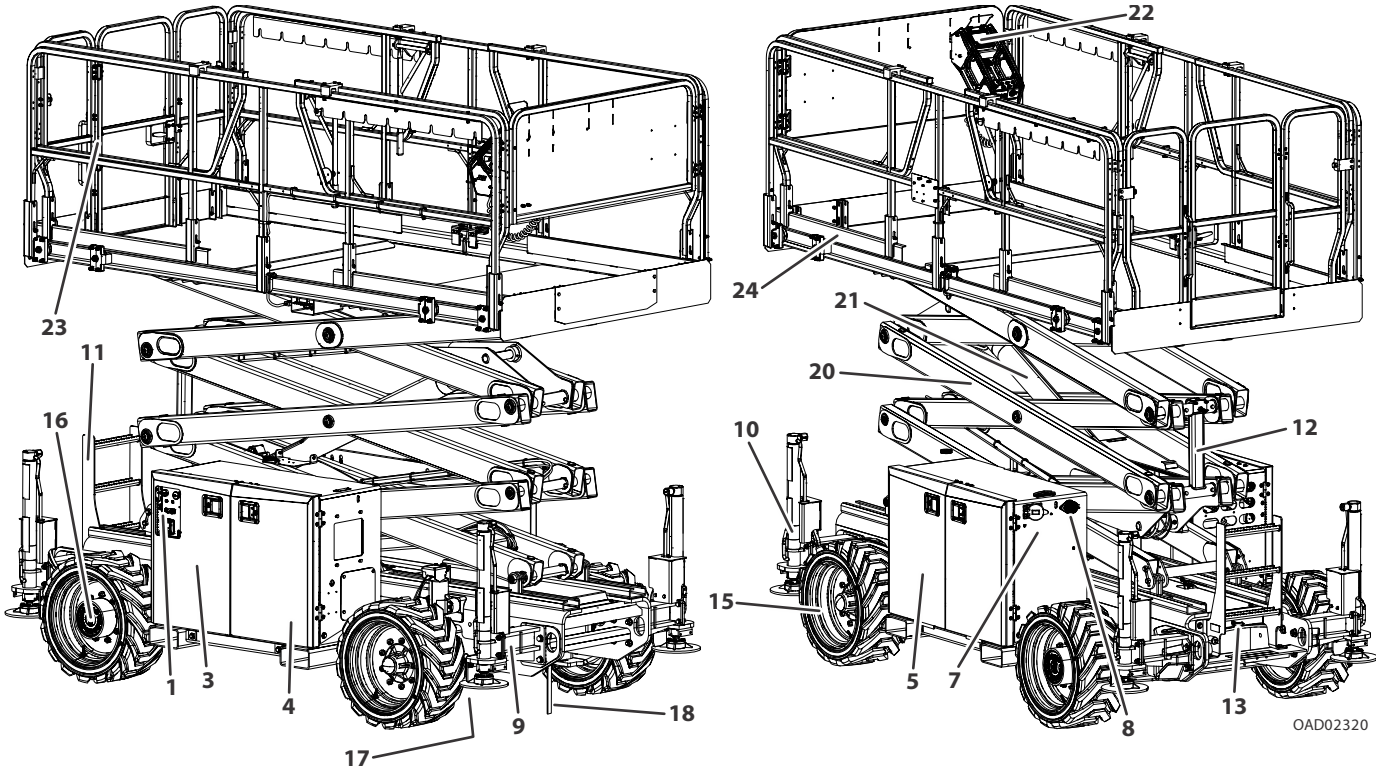


Lanyard Attach Points

2.4 WALK-AROUND INSPECTION



RT2669, RT3669



ERT2669, ERT3669

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

⚠ WARNING

TO AVOID POSSIBLE INJURY, BE SURE MACHINE POWER IS "OFF" DURING WALK-AROUND INSPECTION.

NOTICE

DO NOT OVERLOOK VISUAL INSPECTION OF CHASSIS UNDERSIDE. CHECKING THIS AREA OFTEN RESULTS IN DISCOVERY OF CONDITIONS WHICH COULD CAUSE EXTENSIVE MACHINE DAMAGE.

NOTE: *On each item, make sure there are no loose or missing parts, that they are securely fastened, and that no visible damage exists in addition to any other criteria mentioned.*

1. **Ground Controls -** Placard secure and legible, control switches return to neutral position when activated and released, emergency stop switch functions properly. Control marking legible.
2. **Fuel Tank (Diesel or Gasoline) (If Equipped) -** Filler cap secure, no damage or leaks.
3. **Hydraulic Tank -** Recommended hydraulic fluid level on level indicator on tank. Breather cap secure and working. No damage or leaks.
4. **Main Control Valve -** No unsupported wires or hoses; no damaged or broken wires.
5. **Battery Installation (If Equipped) -** Proper electrolyte level, cables secure, no damage or corrosion. Hold-downs secure.
6. **Propane Tank (If Equipped) -** Refer to Inspection Note.
7. **Battery Charger (If Equipped) -** Refer to Inspection Note.
8. **Battery Disconnect (If Equipped) -** Refer to Inspection Note.
9. **Front Oscillating Axle -** Refer to Inspection Note.
10. **Leveling Jacks Assembly (If Equipped) -** Refer to Inspection Note.
11. **Ladder -** No damage, securely attached.

12. **Safety Prop -** Refer to Inspection Note.
13. **Manual Descent -** Refer to Inspection Note.
14. **QuikLevel Advanced (Dual Oscillating Axles) (If Equipped) -** Refer to Inspection Note.
15. **Wheels and Tires -** Properly secured, no missing lug nuts. Inspect wheels for damage and corrosion. Refer to section 6, Tires and Wheels.
16. **Wheel Drive Hub -** No evidence of leakage. Refer to Inspection Note.
17. **Spindle, Tie Rod, and Steer Linkage -** No loose or missing parts, no visible damage. No steer cylinder leaks or damage.
18. **Static Strap (If Equipped) -** Refer to Inspection Note.
19. **Engine Installation (If Equipped) -** Engine oil to full mark on dipstick, oil filler cap secure. Muffler/exhaust system properly secured, no leakage. Air filter assembly secure, no loose or missing parts, element clean. Radiator cap secure, coolant to correct level.
20. **Scissor Arms and Wear Pads -** Refer to Inspection Note.
21. **Lift Cylinder -** Refer to Inspection Note.
22. **Platform Controls -** Properly secured, no loose or missing parts, no visible damage. Placards secure and legible, control switches return to neutral when activated and released, emergency stop switch functions properly. Control markings legible, manual in manual storage box.
23. **Platform/Rails Assembly -** Refer to Inspection Note.
24. **Platform Extension Stops and Rollers -** Extension stops secure and undamaged. Rollers are undamaged, free of debris, and operate properly.

2.5 FUNCTION CHECK

Perform the Function Check as follows:

1. From the Ground Control Panel with no load in the platform:
   a. Ensure all guards protecting switches are in place.
   b. Operate all functions (refer to Section 3.6 for Ground Controls and Indicators).
   c. Ensure that all machine functions are disabled when the Emergency Stop Button is activated.
   d. Check that auxiliary descent, lift down operates with engine off and power on.
   e. Check that manual descent operates properly (refer to Section 4.4 for more information).
2. From the Platform Control Console:
   a. Ensure the control console is firmly secured in the proper location.
   b. Ensure all guards protecting switches are in place.
   c. With the platform elevated on a smooth, firm, level surface with no overhead obstructions, drive the machine to check if the high drive cutout speed limit is engaged at the height indicated in Table 2-1:

Table 2-1. High Drive Speed Cutout Height

Model	Height
RT2669, ERT2669	70 in (1.78 m)
RT3369, ERT3369	80 in (2.03 m)

   d. Ensure that all machine functions are disabled when the Emergency Stop Button is activated.
   e. Ensure all machine functions stop when function control is released or when joystick trigger is released.

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 drive motor brakes hold.

b. Check the tilt indicator light to ensure proper operation. The light should be illuminated if tilted beyond allowed settings in Table 2-2.

Table 2-2. Tilt Cutout Settings

Model	Lift Up and Drive prevented when elevated and tilted Front to Back beyond the following limits:	Lift Up and Drive prevented when elevated and tilted Side to Side beyond the following limits:
RT2669, ERT2669	3°	4.0° at 0% - 55% Capacity
		3.0° at 56% - 75% Capacity
		2.5° at 76% - 100% Capacity
RT3369, ERT3369	3°	3.5° at 0% - 35% Capacity
		3.0° at 36% - 55% Capacity
		2.5° at 56% - 100% Capacity

2.6 OSCILLATING AXLE - LOCKOUT CYLINDER TEST (IF EQUIPPED)

CE Market Only

NOTICE

LOCKOUT CYLINDER SYSTEM TEST MUST BE PERFORMED QUARTERLY, ANY TIME A SYSTEM COMPONENT IS REPLACED, OR WHEN IMPROPER SYSTEM OPERATION IS SUSPECTED.

NOTE: *Ensure platform is fully lowered prior to beginning lockout cylinder test, and that the surface used to approach the ramp is flat and level.*

Left Side Wheel Test

1. Place a 4 in (10.16 cm) high block with ascension ramp in front of left wheel of the oscillating axle.
2. From platform control station, select LOW drive speed.
3. Set the DRIVE control switch into position and carefully drive the machine up ascension ramp until left oscillating axle wheel is on top of block.
4. Verify the axle oscillates to maintain contact with the ground/ramp. (All four wheels on the ground.)
5. Raise machine platform above stowed position to drive cutout height.
6. Carefully drive the machine back off the block and ramp.
7. Have an assistant check to see that the left oscillating axle wheel that was on the block is in position on the ground. The axle should oscillate so that all four wheels maintain contact with the ground.
8. In the current position (platform raised and all four tires on flat and level surface), carefully drive machine up the ramp block again.
9. Have an assistant check to verify that the axle did not oscillate and remained locked (one wheel is off of the ground).
10. Carefully drive the machine back off the block and ramp.
11. Lower the machine platform; the lockout cylinder should then release and allow the axle to oscillate. It may be necessary to activate DRIVE to release cylinders.
12. If the lockout cylinders do not function properly, have qualified personnel correct the malfunction prior to any further operation.

Right Side Wheel Test

1. Place a 4 in (10.16 cm) high block with ascension ramp in front of right wheel of the oscillating axle.
2. From platform control station, select LOW drive speed.
3. Set the DRIVE control switch into position and carefully drive the machine up ascension ramp until right oscillating axle wheel is on top of block.
4. Verify the axle oscillates to maintain contact with the ground/ramp (all four wheels on the ground).
5. Raise machine platform above stowed position to drive cutout height.
6. Carefully drive the machine back off the block and ramp.
7. Have an assistant check to see that the right oscillating axle wheel that was on the block is in position on the ground. The axle should oscillate so that all four wheels maintain contact with the ground.
8. In the current position (platform raised and all four tires on flat and level surface), carefully drive machine up the ramp block again.
9. Have an assistant check to verify that the axle did not oscillate and remained locked (one wheel is off of the ground).
10. Carefully drive the machine back off the block and ramp.
11. Lower the machine platform; the lockout cylinder should then release and allow the axle to oscillate. It may be necessary to activate DRIVE to release cylinders.
12. If the lockout cylinders do not function properly, have qualified personnel correct the malfunction prior to any further operation.

All Markets (Except CE)

NOTICE

LOCKOUT CYLINDER SYSTEM TEST MUST BE PERFORMED QUARTERLY, ANY TIME A SYSTEM COMPONENT IS REPLACED, OR WHEN IMPROPER SYSTEM OPERATION IS SUSPECTED.

NOTE: *Ensure platform is fully lowered prior to beginning lockout cylinder test, and that the surface used to approach the ramp is flat and level.*

Left Side Wheel Test

1. Place a 4 in (10.16 cm) high block with ascension ramp in front of left wheel of the oscillating axle.
2. From platform control station, select LOW drive speed.
3. Set the DRIVE control switch into position and carefully drive the machine up ascension ramp until left oscillating axle wheel is on top of block.
4. Verify the axle oscillates to maintain contact with the ground/ramp. (All four wheels on the ground.)
5. Raise machine platform above stowed position to drive cutout height.
6. Carefully drive the machine back off the block and ramp.
7. Have an assistant check to see that the left oscillating axle wheel that was on the block remains elevated in position off of the ground.
8. Return the machine to the stowed position. The lockout cylinder should release and allow wheel to rest on the ground. It may be necessary to activate DRIVE to release cylinder.
9. If the lockout cylinders do not function properly, have qualified personnel correct the malfunction prior to any further operation.

Right Side Wheel Test

1. Place a 4 in (10.16 cm) high block with ascension ramp in front of right wheel of the oscillating axle.
2. From platform control station, select LOW drive speed.
3. Set the DRIVE control switch into position and carefully drive the machine up ascension ramp until right oscillating axle wheel is on top of block.
4. Verify the axle oscillates to maintain contact with the ground/ramp (all four wheels on the ground).
5. Raise machine platform above stowed position to drive cutout height.
6. Carefully drive the machine back off the block and ramp.
7. Have an assistant check to see that the right oscillating axle wheel that was on the block remains elevated in position off of the ground.
8. Return the machine to the stowed position. The lockout cylinder should release and allow wheel to rest on the ground. It may be necessary to activate DRIVE to release cylinder.
9. If the lockout cylinders do not function properly, have qualified personnel correct the malfunction prior to any further operation.

SECTION 3. MACHINE CONTROLS, INDICATORS, AND MACHINE OPERATION

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 machine controls, indicators, and operation.

⚠ WARNING

DO NOT RAISE PLATFORM EXCEPT ON A SMOOTH, FIRM SURFACE, WITHIN THE LIMITS OF THE MAXIMUM OPERATING SLOPE, FREE OF OBSTRUCTIONS AND HOLES.

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.

IF THE PLATFORM DOES NOT STOP WHEN A CONTROL SWITCH OR LEVER IS RELEASED, USE THE EMERGENCY STOP SWITCH TO STOP THE MACHINE.

3.2 DESCRIPTION

This machine is a Mobile Elevating Work Platform (MEWP) used to position personnel along with their necessary tools and materials at work locations.

This MEWP has a primary operator control station in the platform. From this control station, the operator can drive and steer the machine in both forward and reverse directions, raise and lower the platform, set the machine leveling jacks (if equipped), or operate QuikLevel Advanced (if equipped).

The machine can be driven on a smooth, firm surface within the limits of the maximum operating slope from an elevated platform position.

The machine also has a ground control station that can override the platform control station. Ground controls operate lift up and down. Except for performing inspections and the function check, ground controls are to be used only in an emergency to lower the platform to the ground should the operator in the platform be unable to do so.

3.3 OPERATING CHARACTERISTICS AND LIMITATIONS

Placards

Important points to remember during operation are provided at the control stations by DANGER, WARNING, CAUTION, IMPORTANT and INSTRUCTION placards. This information is placed at various locations for the express purpose of alerting personnel of potential hazards constituted by the operating characteristics and load limitations of the machine. See Foreword for definitions of the above placards.

Capacities

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

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.

Stability

This machine, as originally manufactured by JLG and operated within its rated capacity on a smooth, firm surface, within the limits of the maximum operating slope, provides a stable aerial platform for all platform positions.

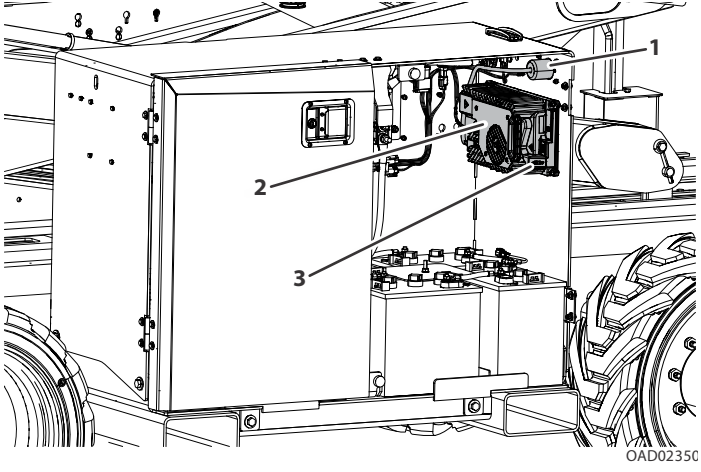
3.4 PLATFORM LOADING

The platform maximum rated load capacity is shown on a placard located on the platform billboard and is based upon the machine positioned on a smooth, firm surface, within the limits of the maximum operating slope. Refer to Section 6.3 for the maximum platform capacity.

The platform is entered through an entry gate at the rear of the platform. Keep gate closed at all times except when entering/exiting the platform and loading/unloading materials.

NOTE: *It is important to remember that the load should be evenly distributed on the platform. The load should be placed near the center of the platform when possible.*

3.5 BATTERY CHARGING (ERT MACHINES)



1. AC Input Plug
2. Charger Assembly
3. LED Indicator Panel

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 green LED light on the hood between the AC plug and battery disconnect becomes solid green. Additionally, the green LEDs on the top and bottom panels of the battery charger illuminate.

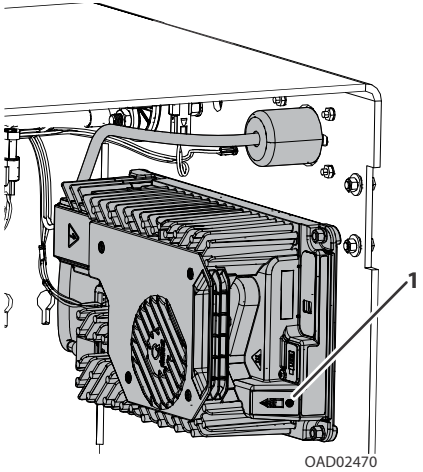
⚠ CAUTION

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.

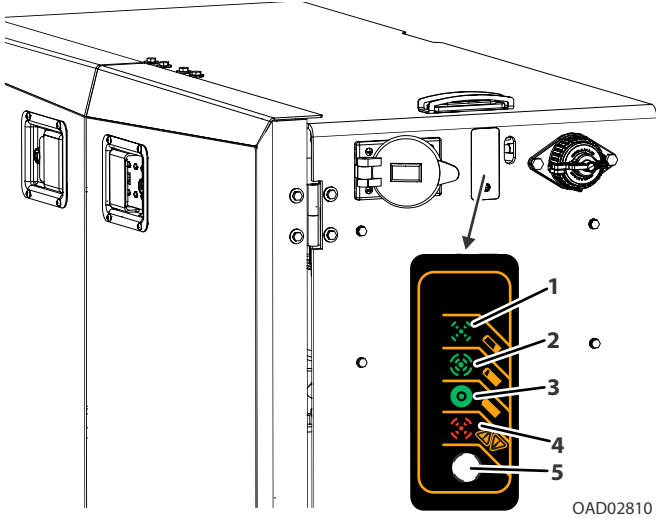
ALWAYS DISCONNECT THE CHARGER AC SUPPLY BEFORE MAKING OR BREAKING THE POSITIVE/NEGATIVE CONNECTIONS TO THE BATTERY.

DO NOT OPEN OR DISASSEMBLE CHARGER.



3. LED Indicator Panel

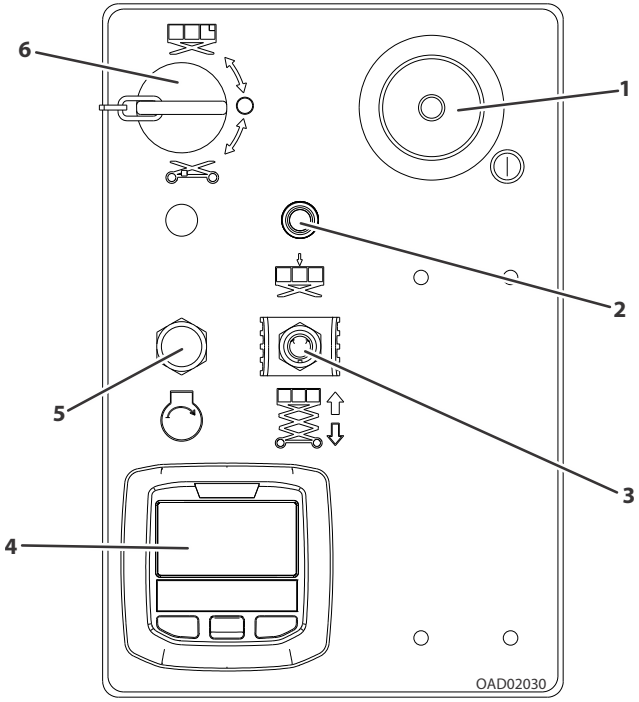
- **AC Power On:** Blue LED on
- **Low State of Charge:** Bottom Panel - Green LED flashing; Top Panel - Green LED off
- **High State of Charge:** Bottom Panel - Green LED on; Top Panel - Green LED flashing
- **Charge Complete:** Bottom Panel - Green LED on; Top Panel - Green LED on
- **Fault Indicator:**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



- **(1) Charging (Low State of Charge):** Green LED slow flash
- **(2) Charging (High State of Charge):** Green LED fast flash
- **(3) Full Charge (100%):** Solid green LED
- **(4) Charger Fault:** Amber LED rapid flash
- **(5) LED Light**
- **No AC Current:** LED is off

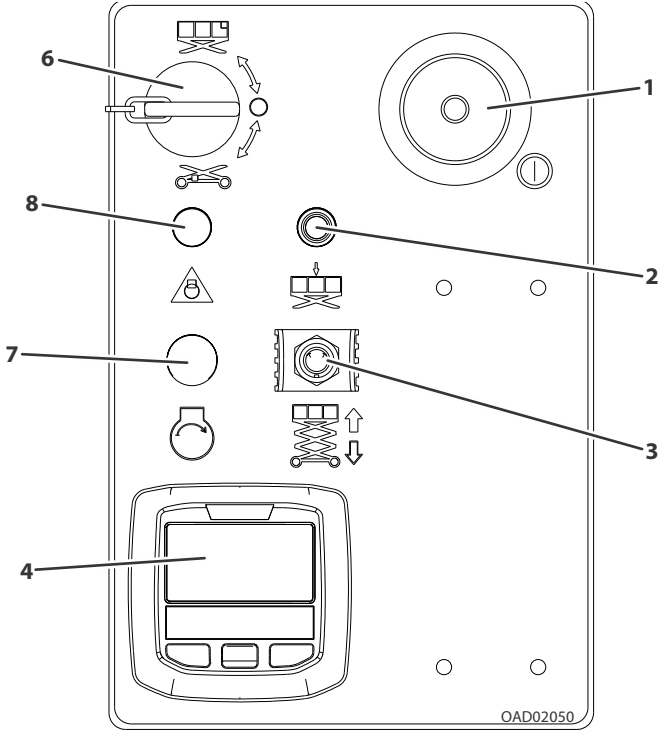
3.6 GROUND CONTROL STATION

RT Machines



1. Emergency Stop Switch
2. Overload Indicator (LSS)
3. Lift/Lower Switch
4. Display Gauge
5. Engine Start Switch
6. Ground/Platform/OFF Key Selector Switch

ERT Machines



1. Emergency Stop Switch
2. Overload Indicator (LSS)
3. Lift/Lower Switch
4. Display Gauge
5. Not Used
6. Ground/Platform/OFF Key Selector Switch
7. Genset Start Switch (If Equipped)
8. Genset Indicator (If Equipped)

Ground Controls

⚠ WARNING

DO NOT OPERATE FROM GROUND CONTROL STATION WITH PERSONNEL IN THE PLATFORM EXCEPT IN AN EMERGENCY.

NOTE: *When the machine is shut down for overnight parking or battery charging, the emergency stop and power selector switches must be positioned to OFF to prevent draining the batteries.*

1. **Emergency Stop Switch -** A two-position, red, mushroom-shaped ignition/emergency stop switch, when positioned to ON with the power selector switch positioned to ground, furnishes operating power to the ground control station. In addition, the switch can be used to turn off power to the function controls in the event of an emergency. Power is turned on by pulling the switch out (on), and is turned off by pushing the switch in (off).

NOTICE

ALWAYS POSITION EMERGENCY STOP SWITCH TO "OFF" POSITION (PUSHED IN) WHEN MACHINE IS NOT IN USE.

2. **Overload Indicator (LSS) -** The Overload Indicator indicates when the platform has been overloaded. An audible alarm will also signal when the platform is overloaded.

NOTE: *If the Overload Indicator is illuminated, further elevation will be prevented. Reduce the weight in the platform so as to not exceed the rated workload indicated on the capacity decal, then the controls will work again.*

3. **Lift/Lower Switch -** A two position momentary contact Lift/Lower control switch raises and lowers the platform when positioned to up or down.

4. **Display Gauge -**

   - **RT Machines:** Displays the number of hours the machine has been operated, fuel status, glow plug status, and any active DTCs.
   - **ERT Machines:** Displays the number of hours the machine has been operated, current battery charge, battery temperature, battery charge status (if plugged in), and any active DTCs.

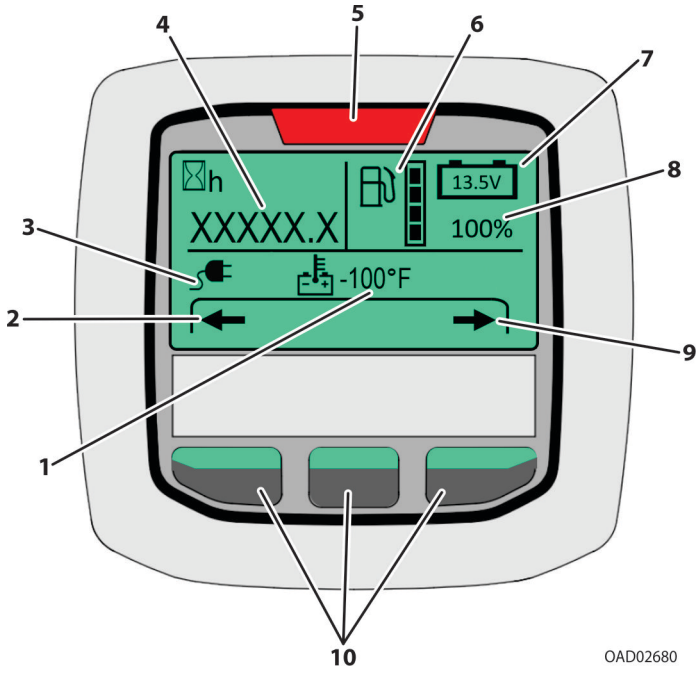
NOTE: *Refer to Display Gauge on page 3-9 for more information.*

5. **Engine Start Switch (RT Machines Only) -** A momentary contact push button type switch that supplies electrical power to the starter solenoid when the emergency stop switch is in the ON position and the start button is pressed.
6. **Ground/Platform/OFF Key Selector Switch -** A three position, key-operated power selector switch supplies operating power to the platform or ground controls, as selected. When positioned to platform, the switch provides power to the emergency stop switch at the platform controls. When positioned to ground, the switch provides power to the emergency stop switch at the ground controls. With the power selector switch in the center off position, power is shut off to both platform and ground controls and the key can be removed to disable the machine.

NOTE: *With the power selector switch in the off position, the key can be removed to disable the machine.*

7. **Genset Start Switch (If Equipped) -** This button activates the genset system to charge the batteries.
8. **Genset Indicator (If Equipped) -** This will illuminate when a genset system fault is present.

Display Gauge



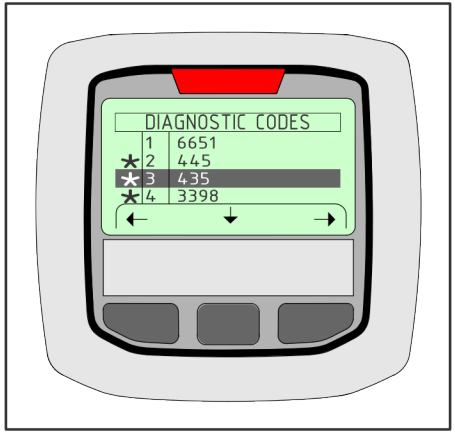
1. Battery Temperature Indicator
2. Navigate Back Arrow
3. Charger Connected Indicator (ERT Machines Only)
4. Machine Hours
5. Indicator Lamp (Fault)
6. Fuel Level Indicator (RT Machines Only)
7. Control System Voltage (12V System)
8. State-of-Charge Indicator (48V System) (ERT Machines Only)
9. Navigate Forward Arrow
10. Navigation Buttons

The Display Gauge shows machine hours and DTCs. During machine start up, with no active DTCs in the control system, the splash screen will show for 3 seconds and then switch to main screen. If there is an active DTC while powering up the machine, the splash screen will show for 3 seconds, and then launch the Diagnostics Screen. The indicator lamp will light when there is an active DTC in the Fault Log.



Splash Screen

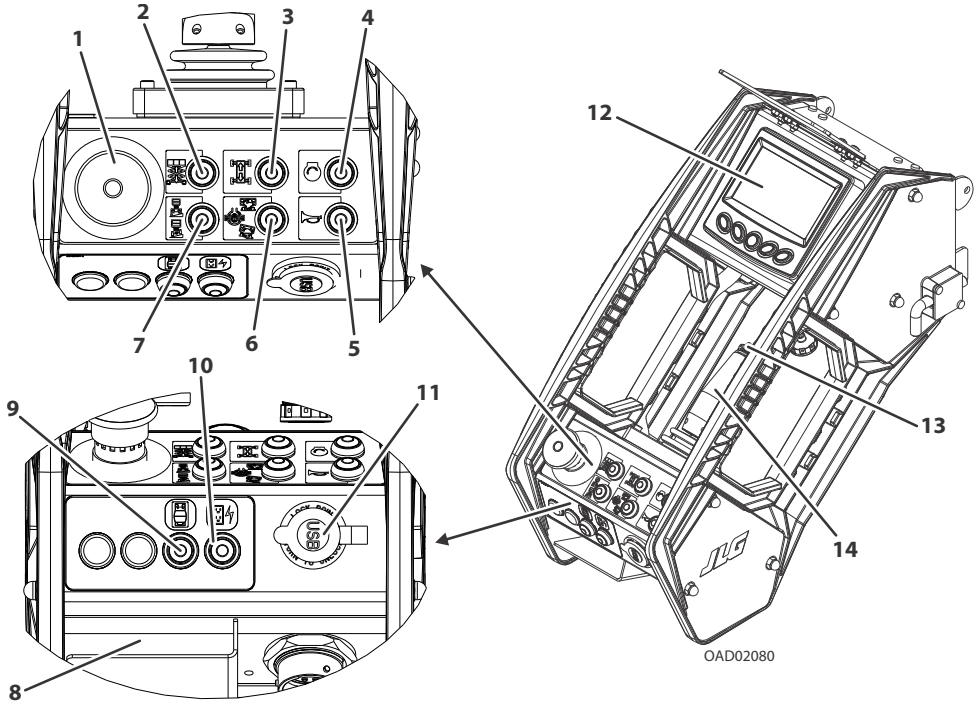
The Diagnostic Screen will show active and inactive faults from the JLG Control System on the screen. An asterisk (*) will be displayed to show active faults.



Diagnostic Screen

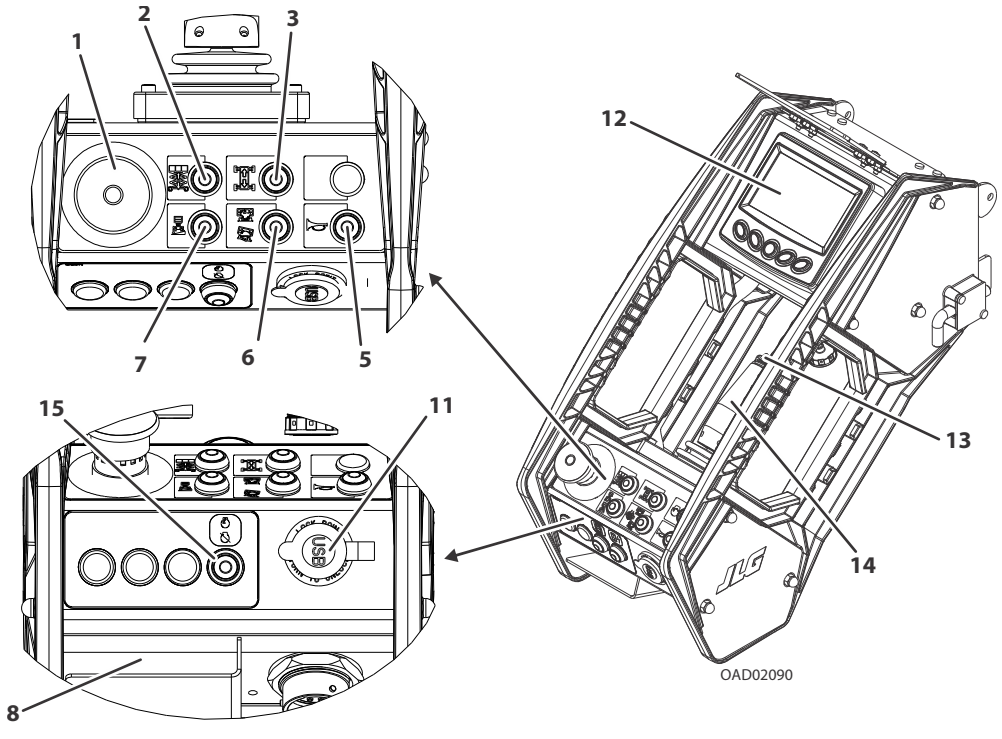
3.7 PLATFORM CONTROL STATION

RT Machines



1. Emergency Stop Switch
2. Lift Select Switch
3. Drive Select Switch
4. Engine Start Switch
5. Horn
6. Speed Select Switch
7. Leveling Jacks OR QuikLevel Advanced Switch
8. Mobile Phone Slot
9. Dual Fuel Selection (If Equipped)
10. Generator Start Switch (If Equipped)
11. USB Charge Port
12. Indicator Display
13. Steer Control Switch
14. Joystick Controller with Trigger (Enable) Switch
15. Not Used

ERT Machines



1. Emergency Stop Switch
2. Lift Select Switch
3. Drive Select Switch
4. Not Used
5. Horn
6. Speed Select Switch
7. Leveling Jacks Switch (If Equipped)
8. Mobile Phone Slot
9. Not Used
10. Not Used
11. USB Charge Port
12. Indicator Display
13. Steer Control Switch
14. Joystick Controller with Trigger (Enable) Switch
15. Genset Enable Switch (If Equipped)

Platform Controls

1. **Emergency Stop Switch -** A two-position, red, mushroom-shaped emergency stop switch functions to provide power to the platform control station and also to turn off power to the platform function controls in the event of an emergency. With the power selector switch positioned to platform, power is turned on by pulling the switch out (on), and is turned off by pushing the switch in (off).

NOTICE

ALWAYS POSITION EMERGENCY STOP SWITCH TO "OFF" POSITION (PUSHED IN) WHEN MACHINE IS NOT IN USE.

2. **Lift Select Switch -** The lift switch provides for raising and lowering the platform. Lift is activated by pressing the switch and positioning the joystick forward or backward.
3. **Drive Select Switch -** The drive switch provides for driving the machine. Drive is activated by pressing the switch and positioning the joystick forward or backward.
4. **Engine Start Switch (If Equipped) -** A momentary contact, push button type switch that supplies electrical power to the starter solenoid when the emergency stop switch is in the on position and the start button is depressed.

NOTE: *When diesel engine-powered machines are turned on, the glow plug indicator will illuminate on the platform control indicator display, regardless of engine or ambient temperature. Do not start the engine until the glow plug indicator light disappears.*



5. **Horn -** This push button switch, when activated, permits the operator to warn jobsite personnel when the machine is operating in the area.
6. **Speed Select Switch -** This switch alternates between high drive speed (rabbit) and low drive speed (turtle). If equipped with differential lock (RT machines, 2WD only) the function may be engaged with this switch.

NOTE: *High/low drive speeds are disabled when the platform is raised above the high drive cutout height (70 - 80 in [1.78 - 2.0 m]). At this height, drive speed is restricted to 0.5 mph (0.8 kmh). When platform is lowered below the high drive cutout height, high/low drive speeds are enabled.*

⚠ CAUTION

DO NOT OPERATE MACHINE IF HIGH DRIVE SPEED OPERATES WHEN PLATFORM IS RAISED ABOVE THE HIGH DRIVE CUTOUT HEIGHT.

⚠ CAUTION

DO NOT USE HIGH DRIVE SPEED WHEN DRIVING IN CLOSE QUARTERS OR WHEN DRIVING IN REVERSE.

7. **Leveling Jacks or QuikLevel Advanced Switch -** This switch engages the leveling jacks or the QuikLevel Advanced system.
8. **Mobile Phone Slot -** Provides an enclosed area to the operator in which to place a mobile phone device.
9. **Dual Fuel Selection (If Equipped) -** Switches between LP and gas usage when pressed.
10. **Generator Switch (If Equipped) -** Enables the generator that supplies AC power to the platform.
11. **USB Charge Port -** Provides a USB charge port to the operator.
12. **Indicator Display -** Shows a variety of machine operation information. Refer to Section 3.9, Platform Control Indicator Display, for more information.
13. **Steer Control Switch -** The thumb-operated steer switch on top of the joystick controller activates the steer wheels in the direction it is moved (right or left).
14. **Joystick Controller with Trigger (Enable) Switch -** The joystick controls four functions: drive; lift; drive/lift speed; or leveling jacks (if equipped), or dual oscillating axles (if equipped). All function buttons must be selected prior to engaging the joystick. The speed is controlled by the travel distance of the joystick.

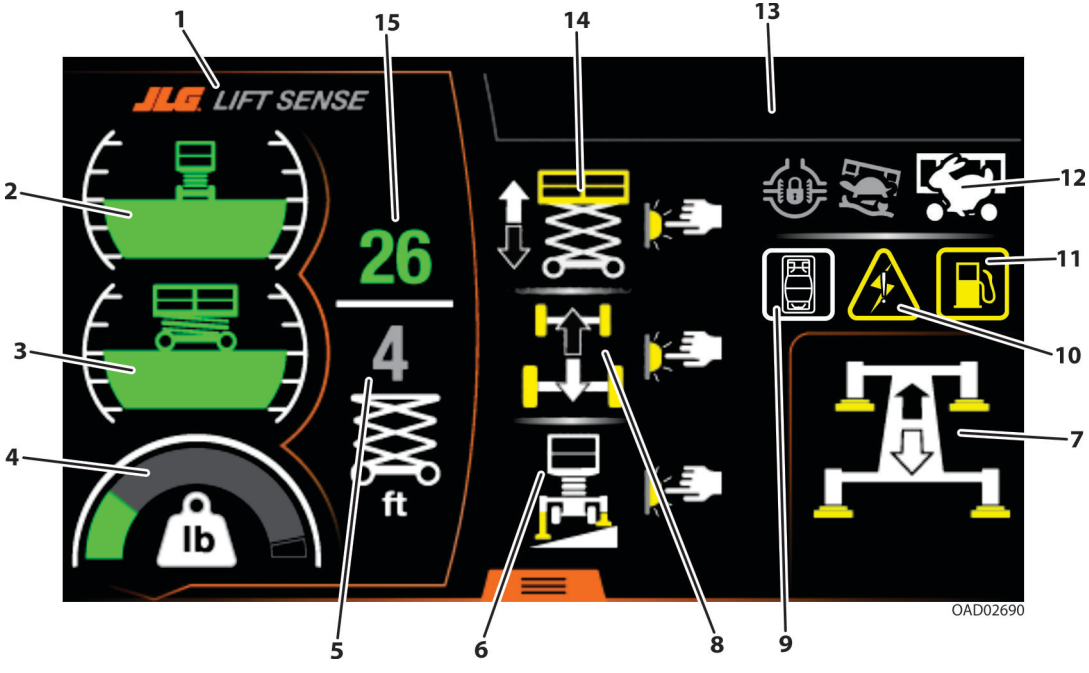
NOTE: *If the machine is also equipped with a footswitch (Korea market only), the footswitch must be pressed in conjunction with the the trigger (enable) switch located on the joystick controller. Power is removed from the platform controls when the footswitch is released.*

NOTE: *Once a function has been selected, the operator has seven seconds to engage the function.*

15. **Genset Enable Switch (If Equipped) -** Enables the ERT genset system.

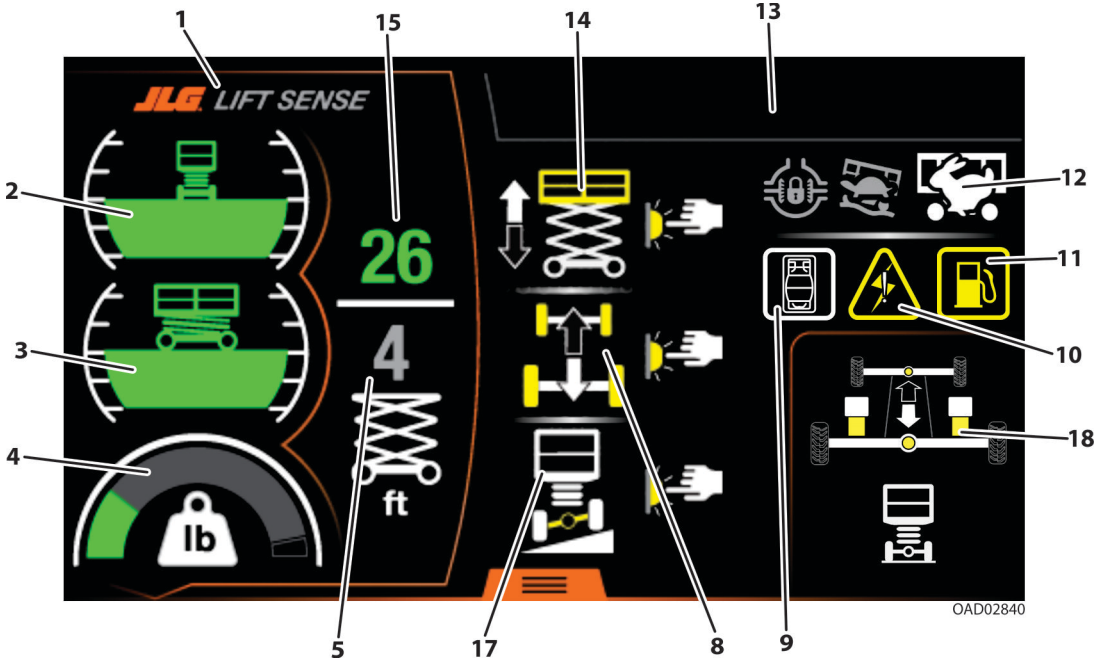
3.8 INDICATOR DISPLAY

RT Machines (If Equipped with Leveling Jacks)



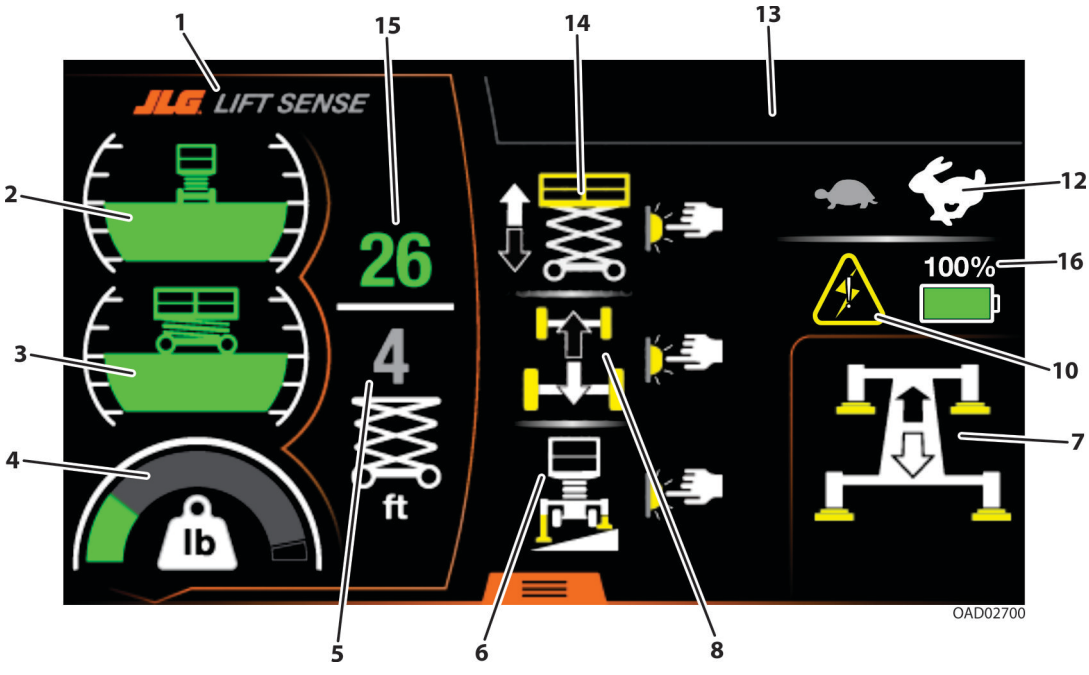
1. Lift Sense Pane
2. Side to Side Tilt
3. Front to Back Tilt
4. Platform Load Gauge
5. Current Platform Height
6. Leveling Jacks Indicator (If Equipped)
7. Leveling Jacks Status (If Equipped)
8. Drive Select Indicator
9. Dual Fuel (LP Selection)
10. System Fault Indicator
11. Low Fuel Indicator
12. Drive Speed
13. DTC Messages Display
14. Lift/Lower Indicator
15. Maximum Allowed Platform Height
16. Not Used
17. Not Used
18. Not Used

RT Machines (If Equipped with QuikLevel Advanced)



1. Lift Sense Pane
2. Side to Side Tilt
3. Front to Back Tilt
4. Platform Load Gauge
5. Current Platform Height
6. Not Used
7. Not Used
8. Drive Select Indicator
9. Dual Fuel (LP Selection)
10. System Fault Indicator
11. Low Fuel Indicator
12. Drive Speed
13. DTC Messages Display
14. Lift/Lower Indicator
15. Maximum Allowed Platform Height
16. Not Used
17. QuikLevel Advanced Indicator (If Equipped)
18. QuikLevel Advanced Status (If Equipped)

ERT Machines (If Equipped with Leveling Jacks)



1. Lift Sense Pane
2. Side to Side Tilt
3. Front to Back Tilt
4. Platform Load Gauge
5. Current Platform Height
6. Leveling Jacks Indicator (If Equipped)
7. Leveling Jacks Status (If Equipped)
8. Drive Select Indicator
9. Not Used
10. System Fault Indicator
11. Not Used
12. Drive Speed
13. DTC Messages Display
14. Lift/Lower Indicator
15. Maximum Allowed Platform Height
16. Battery State-of-Charge
17. Not Used
18. Not Used

Indicators

⚠ CAUTION

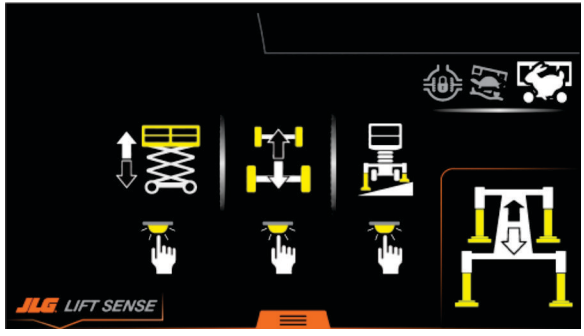
IF THE TILT INDICATOR WARNING LIGHT/ALARM IS ACTIVATED WHEN PLATFORM IS RAISED, LOWER PLATFORM AND DRIVE TO A SMOOTH, FIRM SURFACE WITHIN THE LIMITS OF THE MAXIMUM OPERATING SLOPE.

⚠ CAUTION

DO NOT OPERATE MACHINE IF HIGH DRIVE SPEED OPERATES WHEN PLATFORM IS RAISED ABOVE THE STOWED POSITION.

1. **LiftSense Pane -** The LiftSense system measures side to side tilt, current platform height, and platform load in order to provide a variable work envelope. As these three values change in the work environment, the maximum allowed platform height is calculated and displayed to the operator.

   The LiftSense pane can be hidden by pressing the far left button of the display. Press this button again to return the pane to view.



LiftSense Pane Hidden

2. **Side to Side Tilt -** Shows the current level of side to side tilt. A red warning light on the display illuminates and an audible alarm sounds when the chassis is at or beyond the tilt cutout settings.



3. **Front to Back Tilt -** Shows the current level of front to back tilt. A red warning light on the display illuminates and an audible alarm sounds when the chassis is at or beyond the tilt cutout settings.



4. **Platform Load Gauge -** Displays the calculated load on the platform. The gauge bar remains green if platform load is less than the rated capacity. If the platform is determined to be overloaded, a red warning light on the display illuminates and an audible alarm sounds.



NOTE: *If the Overload Indicator is illuminated, further elevation will be prevented. Reduce the weight in the platform so as to not exceed the rated workload indicated on the capacity decal, then the controls will work again.*

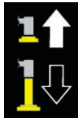
5. **Current Height -** Current platform height (bottom number).



6. **Leveling Jacks Indicator (If Equipped) -** Indicates when the leveling jacks function has been selected on the platform control console.



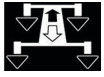
7. **Leveling Jack Status (If Equipped) -** Displays the current status of leveling jacks. When the leveling jacks are extended or retracted, the appropriate arrow will flash on the display.



- **Leveling Jacks Stowed:**



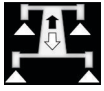
- **Leveling Jacks Extending:**



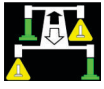
- **Leveling Jacks Set:**



- **Leveling Jacks Retracting:**



- **Leveling Jacks Fault:**



8. **Drive Select Indicator -** Indicates if drive mode has been selected on the platform control console.



9. **Dual Fuel (LP Selection) -** Indicates when LP has been selected on the platform control console.



10. **System Fault Indicator -** When a system fault has been detected, the upper right hand corner of the display will show the DTC readout. Additionally, the system fault indicator will flash the appropriate distress code.



11. **Low Fuel Indicator -** Illuminates when fuel remaining in the fuel tank is low.



12. **Drive Speed -**



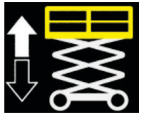
- **RT Machines:** Indicates whether high drive speed (rabbit), low drive speed (turtle), or differential lock (2WD only) has been selected on the platform control console.



- **ERT Machines:** Indicates whether high drive speed (rabbit) or low drive speed (turtle) has been selected on the platform control console.

13. **DTC Messages Display -** Displays any active DTC messages. The system fault indicator will also flash the appropriate flash code for the DTC. If no DTCs are active, this area of the display remains blank.

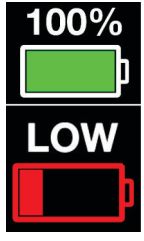
14. **Lift/Lower Indicator -** Indicates if lift mode has been selected on the platform control console.



15. **Maximum Allowed Platform Height -** Maximum allowed platform height as calculated by LiftSense system. The number is green when maximum platform height can be reached. If the machine is unable to reach maximum height, the number will change from green to yellow.



16. **Battery State-of-Charge -** Displays the battery state-of-charge for ERT machines in 5% increments. The bar remains green until 25%, after which it turns red and reads "LOW" until it reaches above 25% again.

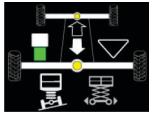


17. **QuikLevel Advanced Indicator (If Equipped) -** Indicates if QuikLevel Advanced function has been selected.



18. **QuikLevel Advanced Status (If Equipped) -**

- **Rear Axle Extend:**



- **Rear Axle Retract:**



- **Rear Axle Aligned:**



- **Rear Axle Not Aligned:**



- **Drive at Height Allowed:**



- **Drive at Height Not Allowed:**



- **Speed Restricted (Low Speed):** When rear axle and chassis are not aligned, drive speed is restricted.



19. **Glow Plug (Not Shown) -** When diesel engine-powered machines are turned on, the glow plug indicator will illuminate on the display, regardless of engine or ambient temperature. Do not start the engine until the glow plug indicator light disappears.



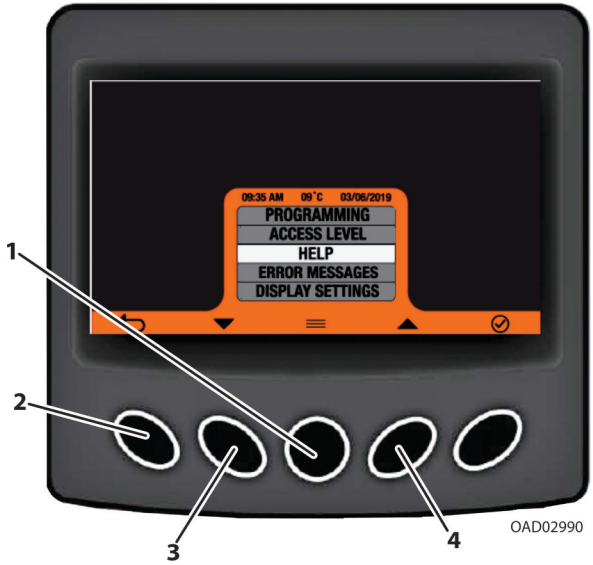
3.9 PLATFORM CONTROL INDICATOR DISPLAY

Navigating the Display



OAD02820

1. At machine start up the machine brand logo will be displayed briefly, followed by the manual/lanyard reminder and home screens.



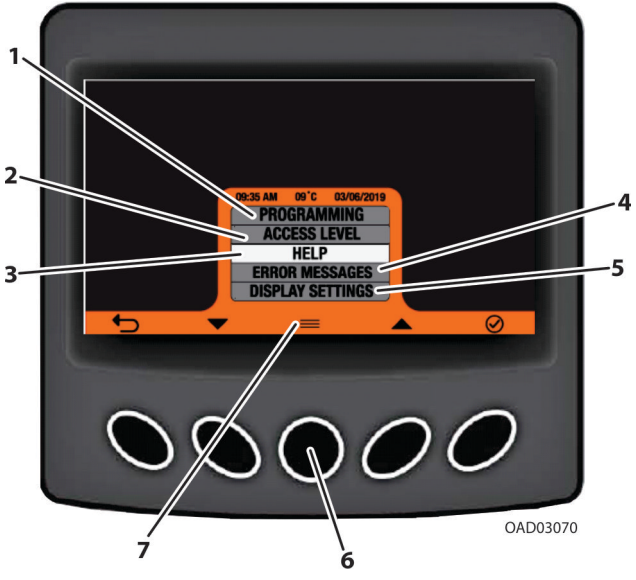
2. To view the submenus, press the Menu Select button (**1**).
3. Use the Left and Right Navigation buttons (**3**) to move through the menu items. When the desired option is highlighted (**4**), press the Menu Select button (**1**).
4. To return to the Home Screen, press the Left Navigation button (**2**).



5. Use the Scroll Page Left and Scroll Page Right buttons (**6**) to cycle through the different pages of the menu selection.
6. The page icon (**7**) will inform what page is currently being viewed.
7. To return to the Home Screen, press the Left Navigation button (**5**).

NOTE: *When navigating the submenus of the display screen, pressing the joystick trigger will return the view to the operating screen.*

Submenus



1. **Programming:** Provides the interface for updating software. A service level access code is needed. Refer to Service and Maintenance manual for further information.
2. **Access Level:** Allows for elevated levels of machine access when a certain code is entered. The machine's default is Level 2 - Operator Access (no code necessary).
3. **Help:** Provides screens that describe the user interface of the display.
4. **Error Messages:** Shows the last 25 DTCs logged by the machine's control system. Active DTCs will appear with an asterisk (*****) beside the code.
5. **Display Settings:** Allows operators to adjust display features (brightness, contrast, time, date, units, etc.)
6. **Menu Select:** Press to display submenu screen.
7. **Help Menu Select:** Press and hold for quick access to Help (**3**) screens.

3.10 ENGINE OPERATION

NOTE: *When operating a machine at high altitudes, a decrease in machine performance may occur due to a decrease in air density.*

When operating a machine at high ambient temperatures, a decrease in machine performance and an increase in engine coolant temperature may occur.

Contact JLG Customer Service for operation under abnormal conditions.

Starting Procedure

NOTE: *Perform initial start-up from Ground Controls.*

1. Check engine oil before attempting to start engine; if necessary, add oil (refer to Section 6.4 for details).
2. Pull out the red emergency stop switch (ON).
3. Position the platform/ground select switch to the desired operating control station (platform or ground).
4. If operating a dual fuel machine, press the dual fuel select switch on the platform control station to the desired position.

NOTE: *If LPG system is selected, ensure the hand valve on LPG supply tank is opened prior to attempting to start engine.*

NOTICE

IF ENGINE FAILS TO START PROMPTLY, DO NOT CRANK FOR AN EXTENDED PERIOD; DO NOT RUN STARTER MOTOR FOR MORE THAN 20 SECONDS. SHOULD ENGINE FAIL TO START ONCE AGAIN, ALLOW STARTER TO "COOL OFF" FOR 2 TO 3 MINUTES. IF ENGINE FAILS TO START AFTER SEVERAL ATTEMPTS, REFER TO ENGINE MANUAL.

5. To start machine:
   - **At Ground Controls**: Position emergency stop switch to on, press engine start switch, and hold until engine starts.
   - **At Platform Controls**: Position ground and platform emergency stop switches to on, press engine start switch, and hold until the engine starts.

NOTICE

When diesel engine-powered machines are turned on, the glow plug indicator will illuminate on the platform and ground control indicator displays, regardless of engine or ambient temperature. Do not start the engine until the glow plug indicator light disappears.

NOTICE

ALLOW ENGINE TO WARM UP BEFORE APPLYING ANY LOAD.

6. After engine has warmed, proceed with operation.

Dual Fuel System (If Equipped)

⚠ CAUTION

IT IS POSSIBLE TO SWITCH FROM ONE FUEL SOURCE TO THE OTHER WITHOUT ALLOWING THE ENGINE TO STOP. EXTREME CARE MUST BE TAKEN AND THE FOLLOWING INSTRUCTIONS MUST BE FOLLOWED.

Changing from Gasoline to Liquid Propane Gas (LPG):

1. Start the engine from the platform control station.
2. With the engine under a no load condition, open the hand valve on the LPG supply tank by turning counterclockwise.
3. While the engine is operating, place the two position LPG/GAS SELECT switch at the platform control station to LPG.

Changing from LPG to Gasoline:

1. With the engine operating on LPG under a no load condition, position the LPG/GAS SELECT switch at the platform station to the GAS SELECT position.
2. If the engine 'stumbles' because of a lack of gasoline, place the switch to the LPG position until the engine regains smoothness, then return the switch to the GAS SELECT position. Repeat as necessary until the engine runs smoothly on gasoline.
3. Close the hand valve on the LPG supply tank by turning clockwise.

3.11 DRIVING

⚠ WARNING

DO NOT DRIVE WITH PLATFORM RAISED EXCEPT ON A SMOOTH, FIRM AND LEVEL SURFACE WITHIN THE LIMITS OF THE MAXIMUM OPERATING SLOPE, FREE OF OBSTRUCTIONS AND HOLES. TO AVOID LOSS OF TRAVEL CONTROL OR UPSET ON GRADES AND SIDESLOPES, DO NOT DRIVE MACHINE ON GRADES EXCEEDING THOSE SPECIFIED IN SECTION 6.

Steering

To steer the machine, the thumb operated steer control switch on the joystick controller handle is positioned to the right for traveling right, or to the left for traveling left. When released, the switch will return to the center-off position and the wheels will remain in the previously selected position. To return the wheels to the straightened position, the switch must be activated in the opposite direction until the wheels are centered.

Driving Forward

1. Place the power selector switch at the ground control station to platform.
2. Position the emergency stop switch at the platform control station to the on position.
3. Press the drive switch and move the joystick forward and hold for the duration of travel.

   Drive speed is determined by the distance the joystick is moved from the center off position. For additional drive speed, position the high drive speed switch to high while operating in the drive forward mode.

Driving in Reverse

1. Position the power selector switch at the ground control station to platform.
2. Position the emergency stop switch at the platform control station to the on position.
3. Press the drive switch and move the drive controller rearward and hold for the duration of travel.

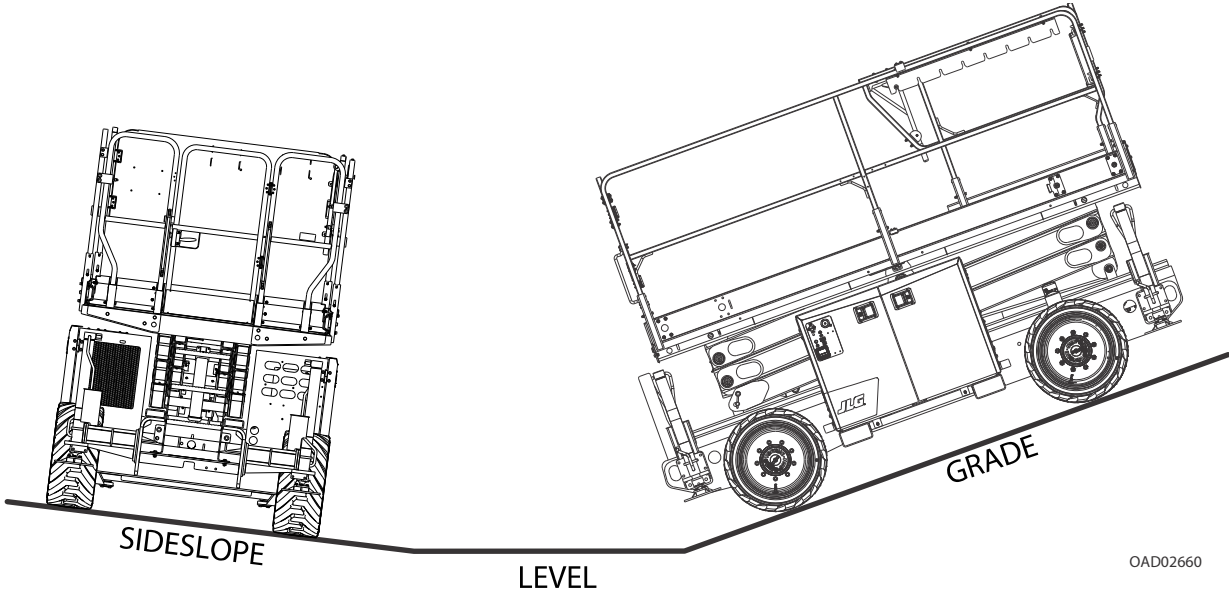
   Drive speed is determined by the distance the joystick is moved from the center off position. Do not activate the high drive speed switch when traveling in reverse.

Traveling on a Grade

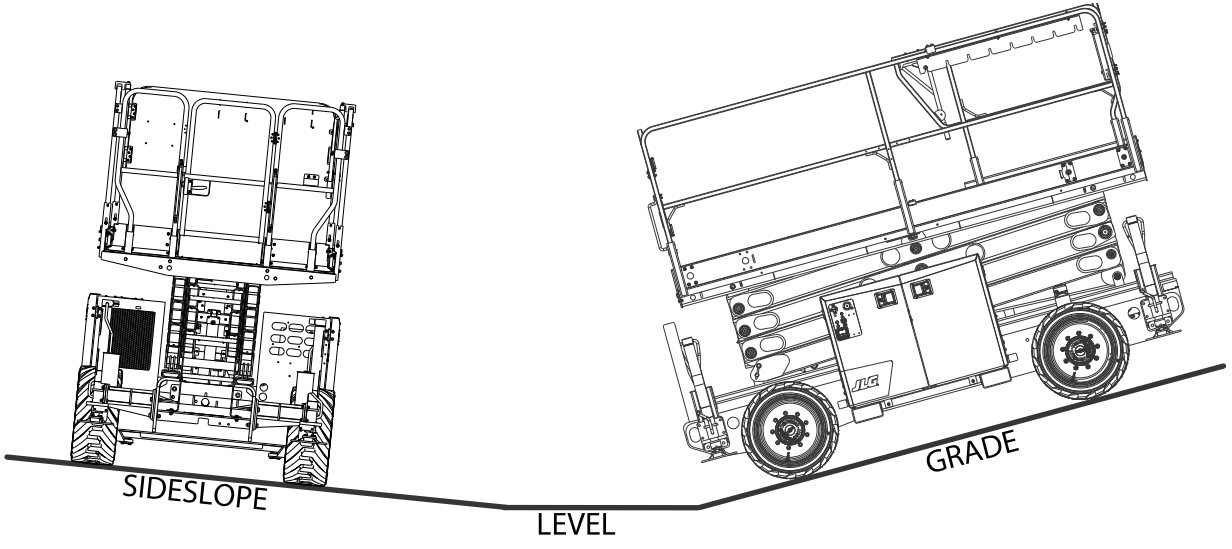
If traveling at high speed up a grade and the incline exceeds 7° to 10° (depending on machine configuration), the drive function will cut back to low speed. The drive pump will shift back into high speed once the incline decreases to 5° to 8° (depending on machine configuration). There will be a two second delay before the machine returns to high speed.

If traveling at high speed down a grade and incline exceeds 12° - 14° (depending on machine configuration), the drive function will cut back to low speed. The drive pump will shift back into high speed once the incline decreases to 5° - 8° (depending on machine configuration). There will be a two second delay before the machine returns to high speed.

Grade and Sideslope



RT2669, ERT2669



OAD02670

RT3369, ERT3369

3.12 PLATFORM

Raising

⚠ WARNING

DO NOT RAISE PLATFORM EXCEPT ON A SMOOTH, FIRM, AND LEVEL SURFACE WITHIN THE LIMITS OF THE MAXIMUM OPERATING SLOPE, FREE OF OBSTRUCTIONS AND HOLES.

1. Position the applicable emergency stop switch(s) to the ON position.
2. With the engine running, place the power select switch to desired position (platform or ground).
3. If operating from the ground controls, position the lift switch to up and hold until desired elevation is achieved. If operating from the platform controls, set the lift/drive switch to lift, depress the trigger switch, then move the control handle backward and hold until desired elevation is reached. Lift speed is determined by the distance the control handle is moved from the off center position.

Lowering

⚠ WARNING

ENSURE SCISSOR ARM AREA IS FREE OF PERSONNEL PRIOR TO LOWERING PLATFORM.

DO NOT LOWER WITHOUT COMPLETELY RETRACTING THE PLATFORM EXTENSION.

If operating from the ground controls, position the lift switch to down and hold until desired elevation is achieved or until platform is fully lowered.

If operating from the platform controls, press the lift switch and then move the control handle forward and hold until desired elevation is reached or until platform is fully lowered.

Arm Guards (If Equipped)

If the machine is equipped with electronic arm guards, the platform will stop lowering at a predetermined height and the machine's beacons will flash at a different rate to warn ground personnel. Machine lowering can continue after a three (3) second delay. Once the lowering function is re-engaged an audible alarm will sound. After a one and a half (1.5) second delay the platform will continue lowering.

Platform Extension

The machine is equipped with a mechanical extension deck, which adds 3 ft (0.9 m) to the front of the platform, giving the operator better access to work sites.

To extend the deck, lift up the extension handle so the latch clears the notch on the extension plate. Push forward on the extension handle until desired length is reached. Lower the extension handle and ensure the latch is secured in a notch on the extension plate.

To retract the deck, lift up the extension handle so the latch clears the notch on the extension plate. Pull back on the extension handle to retract the deck to the stowed position. Lower the extension handle and ensure the latch is secured in the first notch on the extension plate.

Maximum capacity of the deck extension is 300 lbs (136 kg).

⚠ WARNING

DO NOT LOWER WITHOUT COMPLETELY RETRACTING THE PLATFORM EXTENSION.

3.13 LEVELING JACKS (IF EQUIPPED)

The machine may be equipped with auto-leveling jacks with a manual adjust feature. These leveling jacks are activated through a switch on the platform control console.

Auto-Leveling

1. With the machine in the stowed position, turn the power on, start machine.
2. Press the leveling jacks button on the front of the platform control box.
3. While squeezing the trigger switch on the joystick, move the joystick forward to lower the leveling jacks.
4. Once the leveling jacks make contact with the ground surface there will be up to a 5 second delay before the actual auto-leveling begins.

NOTE: *Due to varying ground conditions, there may be several delays between machine level corrections. Be sure ample time is allowed for all leveling adjustments to be completed.*

NOTE: *The level adjustment of the machine may still be improved. Refer to Manual Level Adjustment (Trim) for more information.*

5. Continue to engage the leveling jacks until the tilt light stops blinking and is no longer lit. The platform alarm will sound three times to indicate this is complete.

NOTE: *If a 2/5 flash code through the system fault light at the platform control station, the machine is unable to level. Reposition and try again.*

6. To retract the leveling jacks, press the function button, then move the joystick backward. The platform alarm will sound two times to indicate this is complete.

NOTE: *The tilt indicator shows when the machine is outside the allowable lifting operation. When the machine reaches a position within level of the specific market specification, the tilt light will go out. Once the light is out, the level adjustment of the machine may still be improved. (See Manual Level Adjustment (Trim) section).*

NOTE: *There is a limit switch that senses when all four cylinders are fully retracted and this will light up the four leveling jack lights in the platform control station.*

The proximity sensor will not allow the jacks to be extended or retracted when the machine is elevated. If there is a proximity sensor failure the leveling jacks cannot be used.

Manual Level Adjustment (Trim)

NOTE: *There is an override feature on the leveling jack system that allows the operator to adjust (trim) the level of the machine to the left or right when the platform is completely lowered. Use the following instructions to adjust the level of the machine.*

1. With the machine in the stowed position, turn the power on, start machine.
2. Press the leveling jacks button on the front of the platform control box.
3. To adjust (trim) the machine to the right, activate the steer switch on the top of the joystick to the right until the desired position is reached.
4. To adjust (trim) the machine to the left, activate the steer switch on the top of the joystick to the left until the desired position is reached.

NOTE: *Anytime the trim function is used there is a possibility that the machine may become out-of-level. At this time the machine will no longer lift but the machine can be lowered.*

NOTE: *The machine must be in the stowed position before the trim function is operable.*

3.14 QUIKLEVEL ADVANCED (DUAL OSCILLATING AXLES) (IF EQUIPPED)

The machine may be quipped with QuikLevel Advanced, auo-leveling dual oscillating axles with a manual adjust feature. These axles are activated through a switch on the platform control console.

Auto-Leveling

1. With the machine in the stowed position, turn the power on, start machine.
2. Press the dual oscillating axles button on the front of the platform control box.
3. While squeezing the trigger switch on the joystick, move the joystick forward to begin leveling the machine.

NOTE: *Due to varying ground conditions, there may be several delays between machine level corrections. Be sure ample time is allowed for all leveling adjustments to be completed.*

NOTE: *The level adjustment of the machine may still be improved. Refer to Manual Level Adjustment (Trim) for more information.*

4. Continue to hold the joystick forward until the leveling sequence ends and the platform alarm sounds three times to indicate this is complete.
5. To realign the chassis with the rear axle, press the function button, then move the joystick backwards. The platform alarm will sound two times to indicate this is complete.

NOTE: *If a 2/5 flash code through the system fault light at the platform control station while driving in the stowed position, reattempt to realign the chassis and the rear axle.*

NOTE: *The tilt indicator shows when the machine is outside the allowable lifting operation. When the machine reaches a position within level of the specific market specification, the tilt light will go out. Once the light is out, the level adjustment of the machine may still be improved. (See Manual Level Adjustment (Trim) section).*

Manual Level Adjustment (Trim)

NOTE: *There is an override feature on the QuikLevel Advanced system that allows the operator to adjust (trim) the level of the machine to the left or right when the platform is completely lowered. Use the following instructions to adjust the level of the machine.*

1. With the machine in the stowed position, turn the power on, start machine.
2. Press the dual oscillating axle button on the front of the platform control box.
3. To adjust (trim) the machine to the right, activate the steer switch on the top of the joystick to the right until the desired position is reached.
4. To adjust (trim) the machine to the left, activate the steer switch on the top of the joystick to the left until the desired position is reached.

NOTE: *Anytime the trim function is used there is a possibility that the machine may become out-of-level. At this time the machine will no longer lift but the machine can be lowered.*

NOTE: *The machine must be in the stowed position before the trim function is operable.*

3.15 PARKING AND STOWING

Park and stow the machine as follows:

1. Drive the machine to a reasonably well-protected and well-ventilated area.
2. Ensure the platform is fully lowered.
3. Position the emergency stop switch to the off position.
4. If necessary, cover the instruction placards, caution and warning decals so that they will be protected from hostile environment.
5. Chock at least two wheels when parking the machine for an extended period of time.
6. Turn the power selector switch to off and remove the key to disable the machine from unauthorized use.

3.16 TIE DOWN/LIFTING

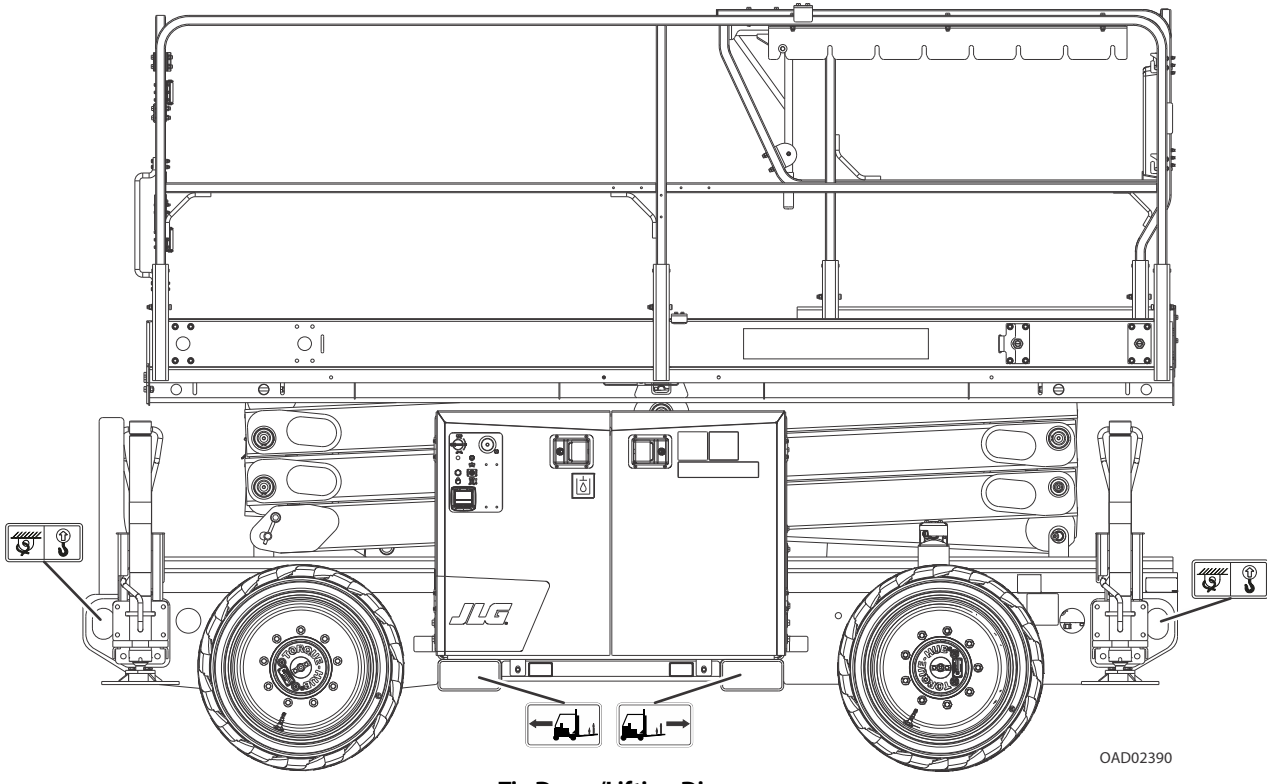
Tie Down

When transporting the machine, the platform extension must be fully retracted and the platform fully lowered in the stowed mode with the machine securely tied down to the truck or trailer deck. Four tie down eyes, one at each corner of the machine frame, are provided for machine tie-down.

Lifting

The machine may be lifted using a spreader bar and four equal length straps or chains capable of supporting the full gross weight of the machine (refer to section 6 for machine gross weight). Lift only using the four lift lugs provided at the four corners of the machine.

The machine may also be lifted using a forklift truck. Lift only using the built in forklift pockets on the side of the machine, and only with the platform in the stowed position with extensions retracted. Adjust the width of the forklift tines to properly fit the machine's forklift pockets. Slide the forklift tines into the forklift pockets and carefully lift the machine.



Tie Down/Lifting Diagram

3.17 TOWING

It is not recommended that this machine be towed except in the event of an emergency, such as a machine malfunction or a total machine power failure. Refer Section 4.3 for emergency towing procedures.

3.18 PLATFORM RAILS FOLD-DOWN PROCEDURE

⚠ WARNING

ONLY FOLD DOWN THE RAILS WHEN THE MACHINE IS IN THE STOWED POSITION. DO NOT RAISE THE PLATFORM WITH THE RAILS FOLDED DOWN. THE RAILS MUST BE IN THE UPRIGHT POSITION AND PROPERLY PINNED WHEN RAISING THE PLATFORM.

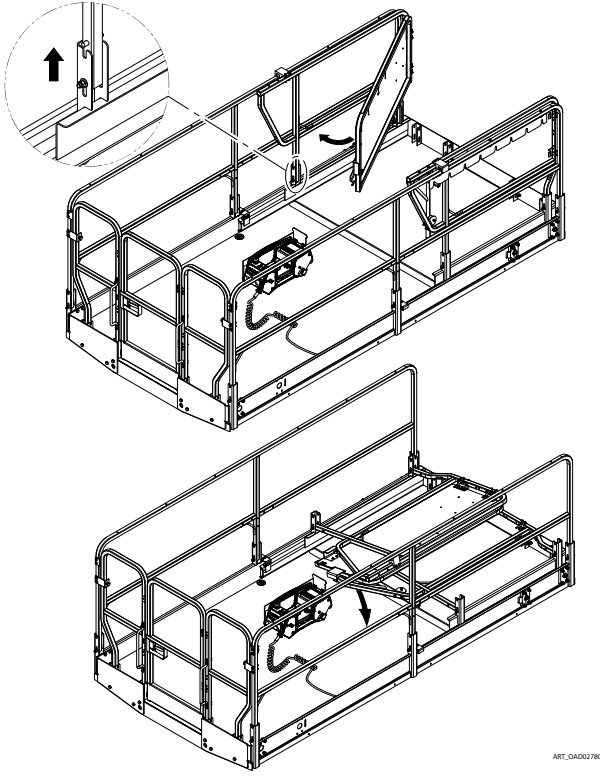
⚠ WARNING

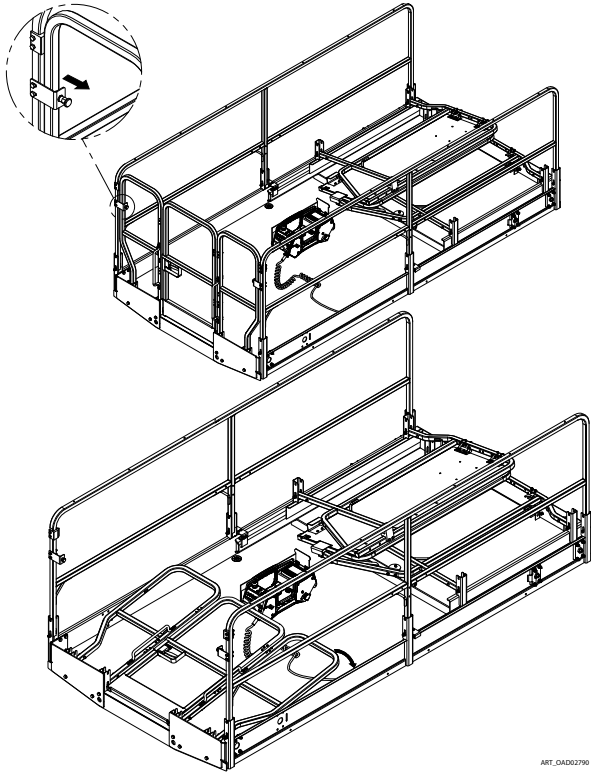
AFTER THE RAILS HAVE BEEN FOLDED DOWN, USE EXTREME CAUTION WHEN EXITING AND ENTERING THE PLATFORM. ENTER AND EXIT PLATFORM ONLY AT THE GATE AREA AND LADDER PROVIDED.

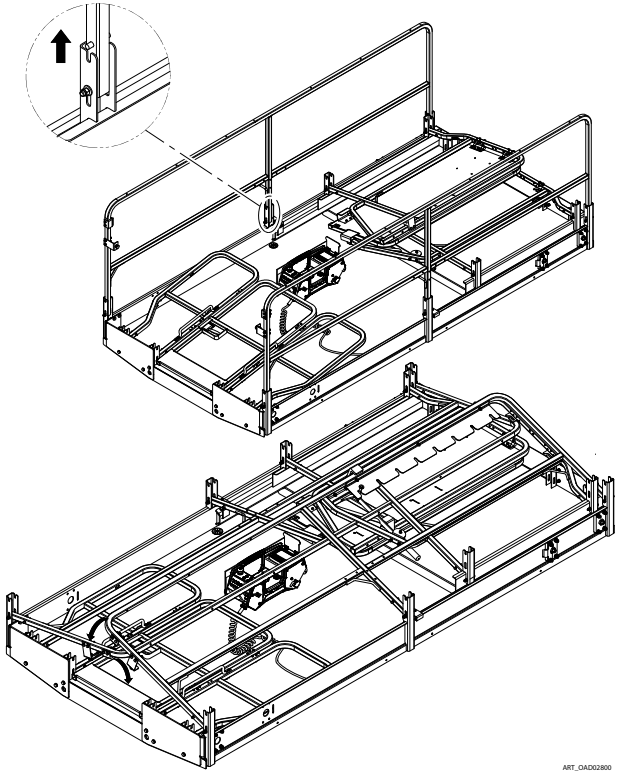
⚠ WARNING

IF DRIVING MACHINE WITH THE PLATFORM CONTROL STATION FROM GROUND, DO NOT HANG THE CONTROL BOX ON ANY PART OF THE MACHINE WHILE DRIVING. HOLD THE CONTROL BOX AND KEEP AT LEAST 3 FT (1 M) DISTANCE FROM MACHINE.

1. Remove the platform control station from the rails and place on the platform floor.
2. Lift up and pull out front platform rails to release from latch. Fold in towards side rails.
3. Lift up inner side rails and fold down to floor.
4. Pull pins at rear rails. Lift up and fold down rear gate to floor.
5. Lift up outer side rails and fold down to floor.

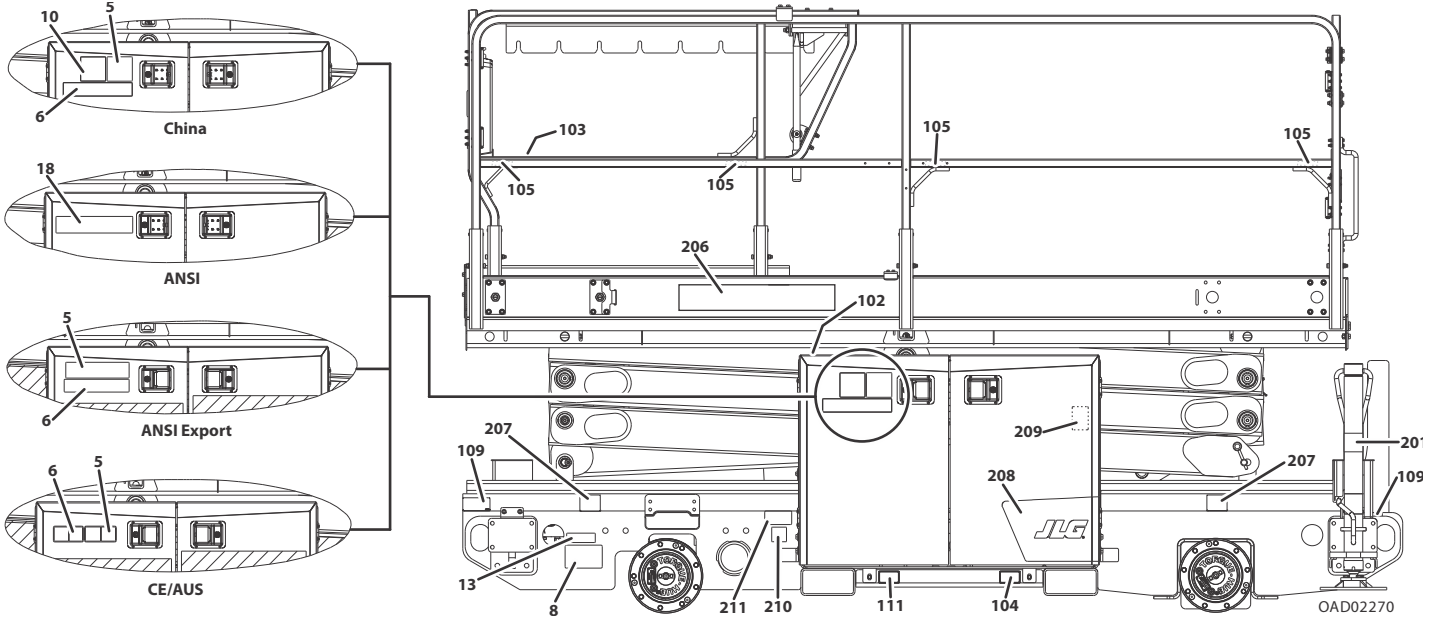


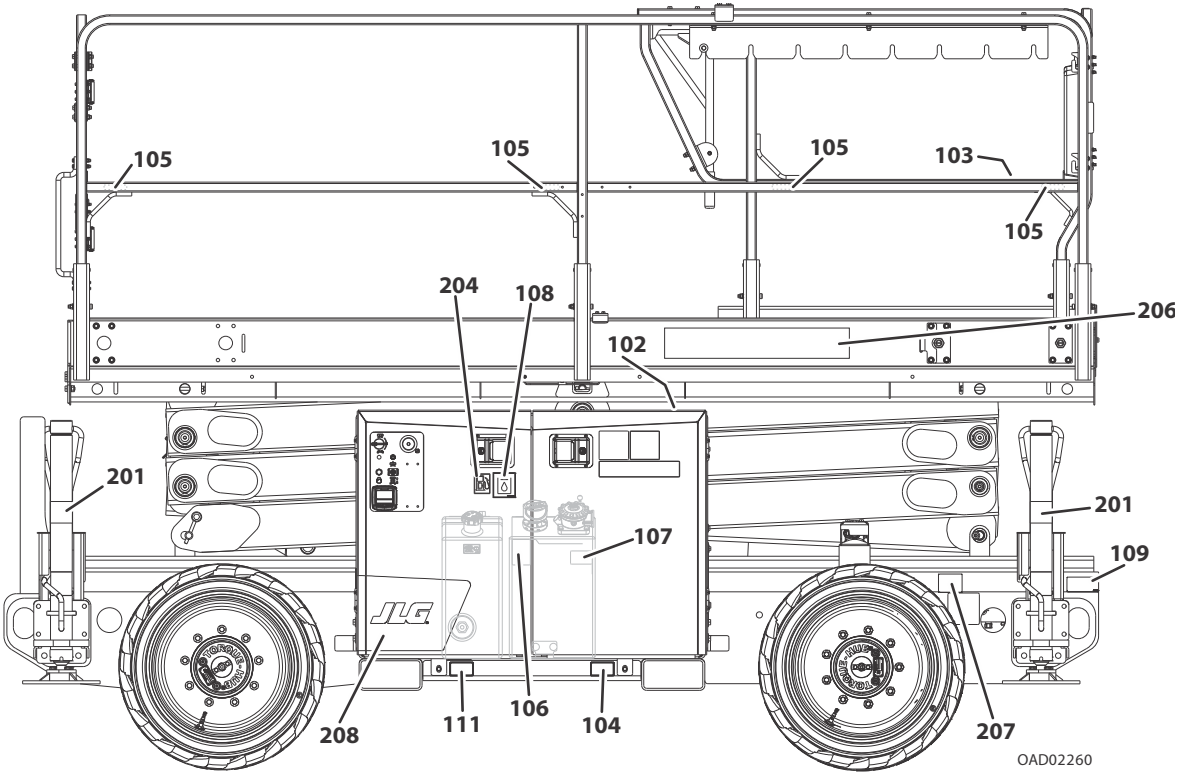

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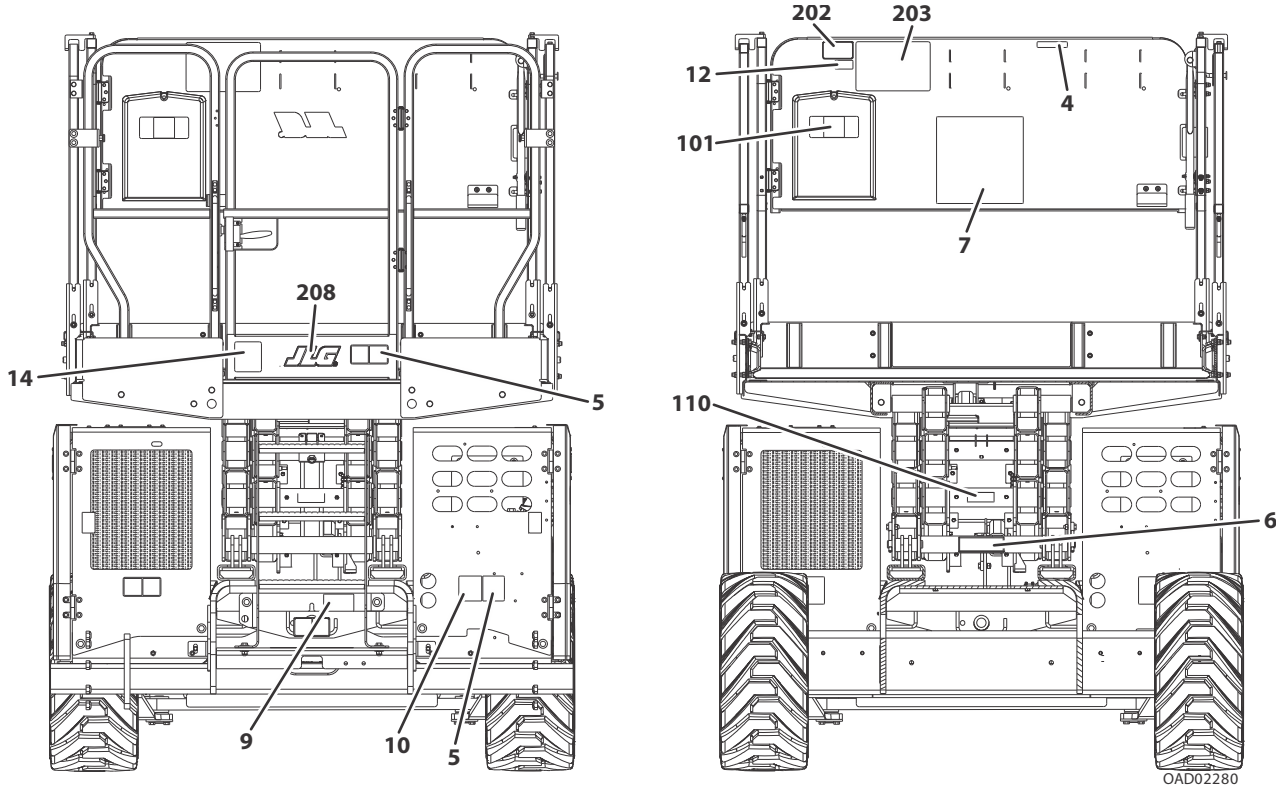

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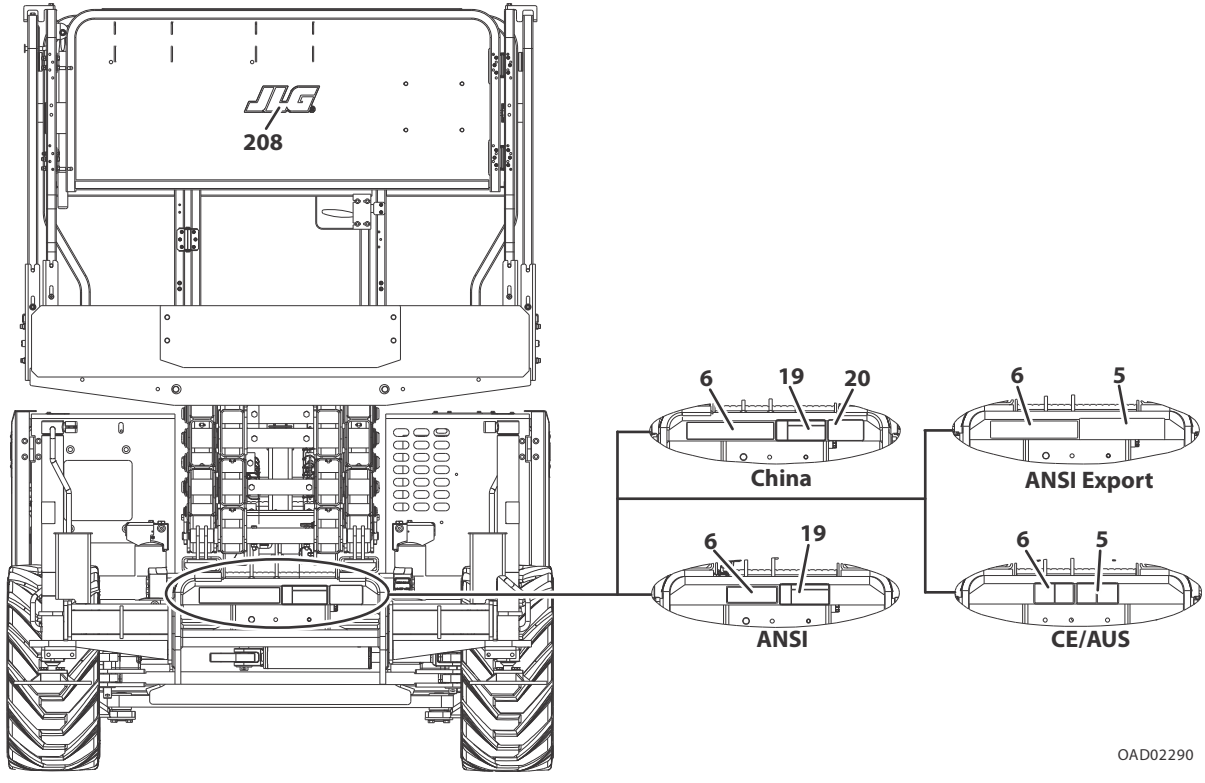
3.19 DECALS

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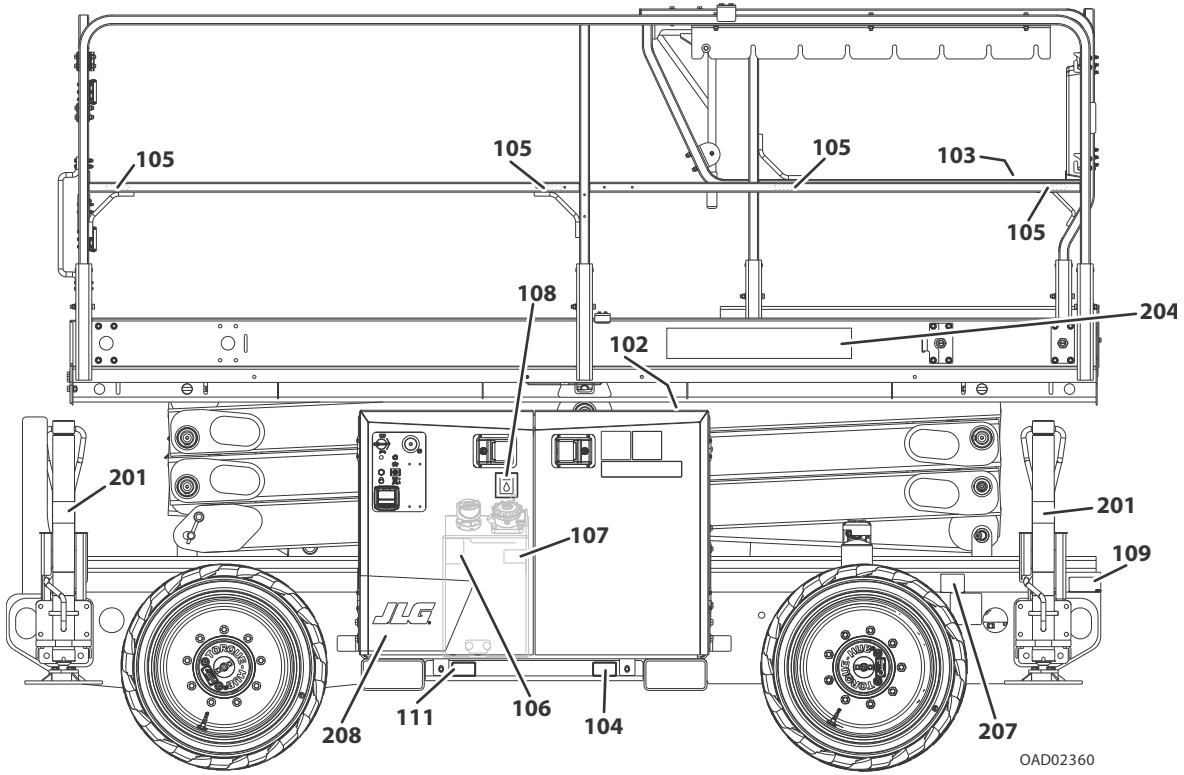

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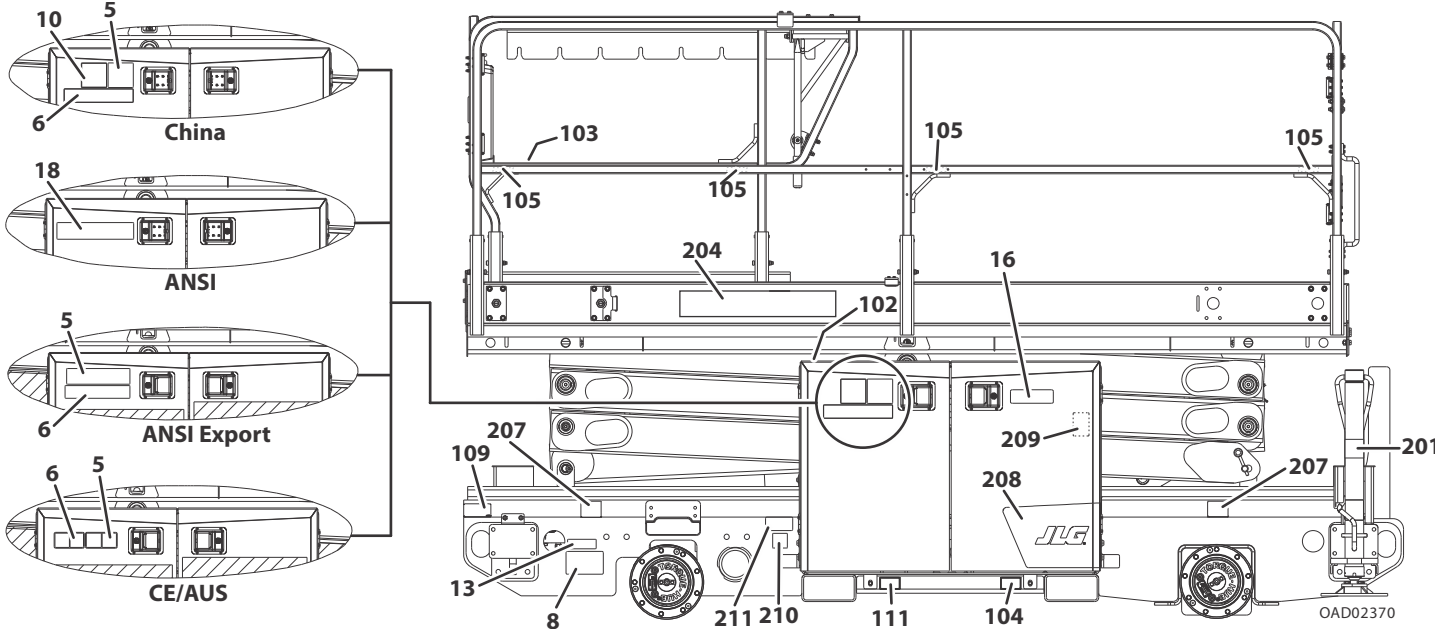

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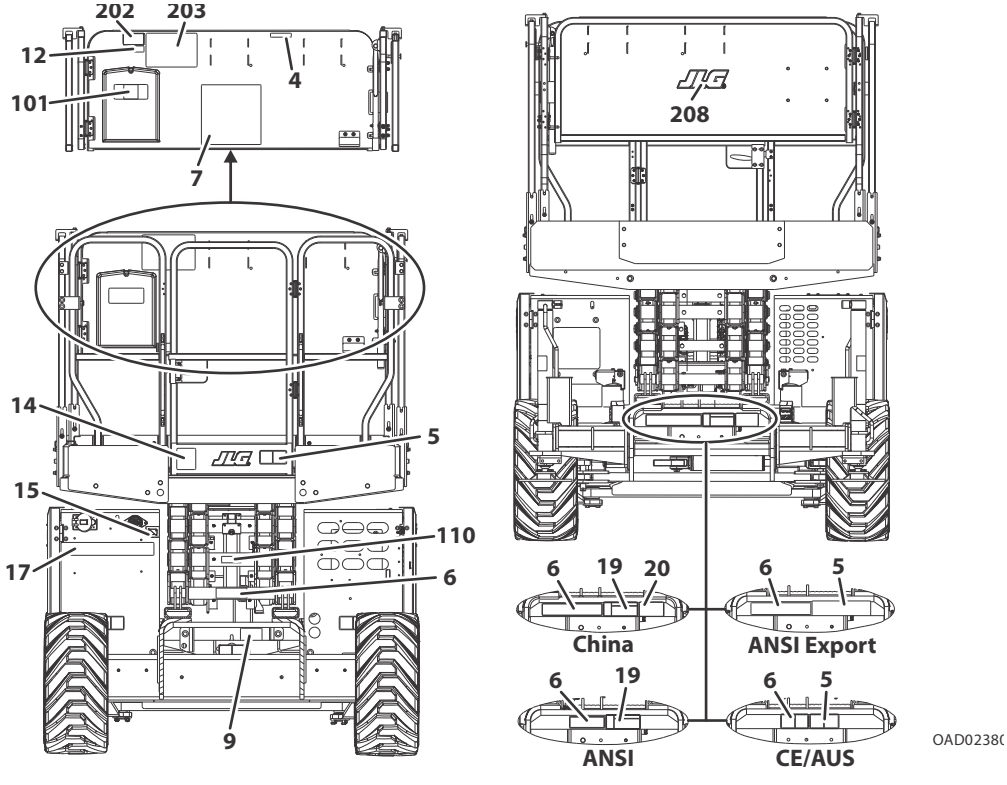
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7	1703816	1001162115	1705195	1704699	1704691	1704684	--
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11	--	--	--	--	--	--	--
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201	1701214	1001215447	1701214	1704698	1704697	1704690	1701785
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203 - 3369	1001256795	1001256795	1001256795	1001256795	1001256795	1001256795	1001256795
204	1701505 (Diesel) 1701542 (Gas)	1701505 (Diesel) 1701542 (Gas)	1701505 (Diesel) 1701542 (Gas)	1701505 (Diesel) 1701542 (Gas)	1701505 (Diesel) 1701542 (Gas)	1701505 (Diesel) 1701542 (Gas)	1701505 (Diesel) 1701542 (Gas)
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11	--	--	--	--	--	--	--	--
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19	1705695	--	1705695	--	--	--	--	--
20	--	--	1705944	--	--	--	--	--
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107	70046028	70046028	70046028	70046028	70046028	70046028	70046028	70046028
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209	1704972	1706061	1706060	1706059	1706063	1706064	1706098	1706098
210	--	--	--	--	--	--	1001214029	--

SECTION 4. EMERGENCY PROCEDURES

4.1 GENERAL

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

4.2 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, JLG must 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. DO NOT ELEVATE THE PLATFORM UNTIL IT IS CERTAIN THAT ALL DAMAGE HAS BEEN REPAIRED AND THAT ALL CONTROLS ARE OPERATING CORRECTLY. TEST ALL FUNCTIONS FIRST FROM THE GROUND CONTROL STATION THEN FROM THE PLATFORM CONTROL CONSOLE.

4.3 EMERGENCY TOWING PROCEDURES

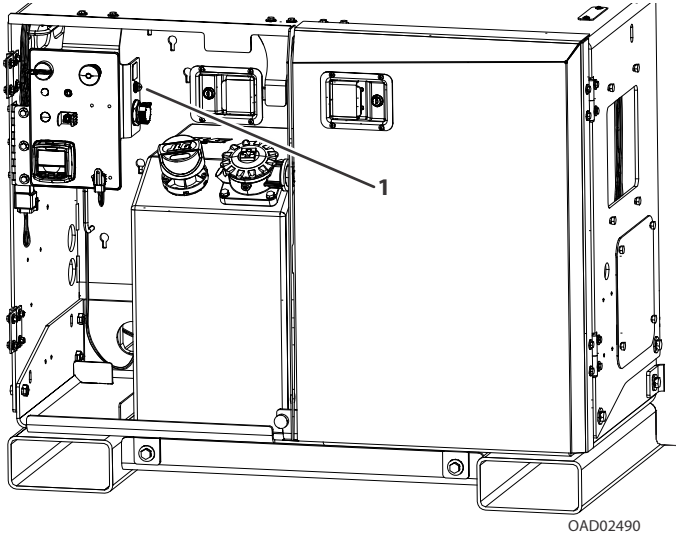
Towing this machine is prohibited, unless properly equipped. However, provisions have been incorporated to move the machine in case of a malfunction or power failure. The following procedures are to be used ONLY for emergency movement to a suitable maintenance area.

RT Machines

1. Ensure the machine is in the stowed position. Chock wheels securely.
2. Disengage drive hubs by reversing disconnect caps.
3. Connect suitable equipment, remove chocks, and move machine.
4. After moving machine, complete the following procedures:
   a. Position machine on a firm and level surface.
   b. Chock wheels securely.
   c. Engage drive hubs by reversing disconnect caps on hubs.
   d. Remove chocks from wheels as needed.

ERT Machines

1. Ensure the machine is in the stowed position. Chock wheels securely. Connect machine to suitable towing equipment.
2. Pull out the emergency stop switch and position the key-switch to ground mode.
3. Look for the yellow button (**1**) inside the hydraulic compartment on the side of the ground control panel. Press and hold for at least one second. Once released, the alarm will sound.
4. Remove chocks and tow machine.
5. After towing is complete, chock the wheels.
6. To reset the brakes, push the yellow button again, recycle power to the machine, or position the keyswitch to platform mode.



1. Electric Brake Release Button

4.4 EMERGENCY OPERATION

Use of Ground Controls

NOTICE

KNOW HOW TO USE THE GROUND CONTROLS IN AN EMERGENCY SITUATION.

Ground personnel must be thoroughly familiar with the machine operating characteristics and the ground control functions. Training should include operation of the machine, review and understanding of this section and hands-on operation of the controls in simulated emergencies.

Operator Unable to Control Machine

1. Operate the machine from ground controls ONLY with the assistance of other personnel and equipment (cranes, overhead hoists, etc.) as may be required to safely remove the danger or emergency condition.
2. Other qualified personnel on the platform may use the platform controls. DO NOT CONTINUE OPERATION IF CONTROLS DO NOT FUNCTION NORMALLY.
3. Cranes, forklift trucks or other equipment which may be available are to be used to remove platform occupants and stabilize motion of the machine in case machine controls are inadequate or malfunction when used.

Platform Caught Overhead

If the platform 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, carefully free the platform 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.

Righting of Tipped Machine

A forktruck of suitable capacity or equivalent equipment should be placed under the elevated side of the chassis, with a crane or other suitable lifting equipment used to lift the platform while the chassis is lowered by the forklift or other equipment.

Post-Incident Inspection

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 10 ft (3 m) until you are secure that all damage has been repaired, if required, and that all controls are operating correctly.

Platform Manual Descent Control

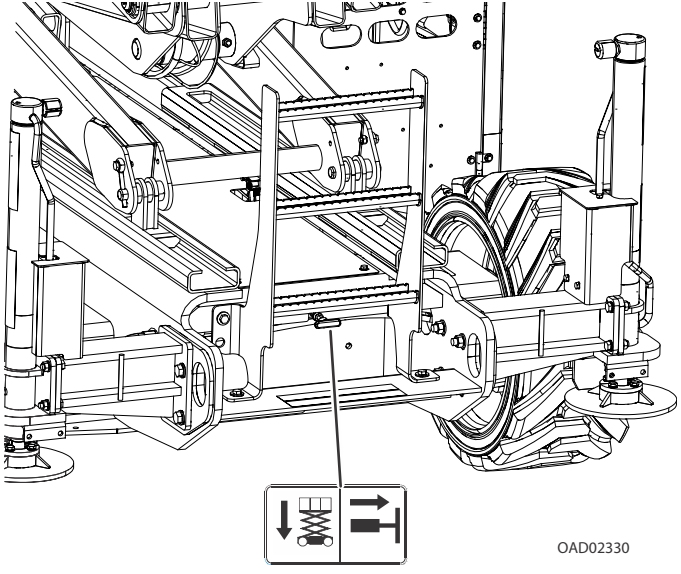
The platform manual descent control is used in the event of total power failure to lower the platform using gravity. The red T-handle is located at the rear of the machine behind the ladder. Look for the instruction decal located beside the handle.

1. Locate the red platform manual descent control T-handle.

⚠ WARNING

KEEP HANDS AND ARMS OUT OF THE PATH OF THE SCISSOR ARMS AND PLATFORM WHILE LOWERING.

2. Grasp the T-handle and slowly pull out to lower the scissor arms/platform. When the platform is lowered to the desired level, release the T-handle.

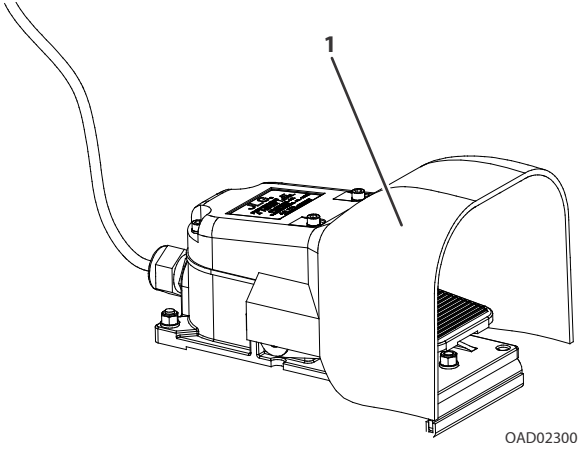


SECTION 5. ACCESSORIES

5.1 AVAILABLE ACCESSORIES

Accessory	Market						
	ANSI (USA Only)	ANSI	CSA	Korea	CE	China	AUS
Footswitch				✓			
Generator (2500W)	✓	✓	✓	✓			

5.2 FOOTSWITCH



1. Footswitch Assembly

The footswitch serves as another enable switch in the function control circuit. It must be depressed in sequence with the platform control joystick trigger switch to enable operation of machine functions when using the platform controls. Power is removed from the platform controls when the footswitch is released.

NOTE: *This accessory is only available in the Korea market.*

5.3 GENERATOR (2500W)

The generator (2500W) supplies AC power from the engine compartment to an AC receptacle in the platform.

All power regulation components are located in a watertight box connected by cable to the generator. The generator is activated by a switch on the platform control box.

Output

- 110V, 60 Hz

Safety Precautions

⚠ WARNING

DO NOT OVERLOAD PLATFORM.

- Ensure no personnel are beneath platform.
- Keep lanyard attached at all times.
- Do not use electrical tools in water.
- Use correct voltage for tool being used.
- Do not overload circuit.

Preparation and Inspection

- Ensure generator is secure.
- Check condition of belt and wiring.

Operation

Start the engine, then turn on the generator.

SECTION 6. GENERAL SPECIFICATIONS AND OPERATOR MAINTENANCE

6.1 INTRODUCTION

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

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

Other Publications Available Specific to this Machine:

Service and Maintenance Manual 31217913

Illustrated Parts Manual 31215867

6.2 SUPPLEMENTAL INFORMATION ONLY APPLICABLE TO CE MACHINES

The following information is provided in accordance with the requirements of the European Machinery Directive 2006/42/EC.

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

The guaranteed Sound Power Level (LWA) per European Directive 2000/14/EC (Noise Emission in the Environment by Equipment for Use Outdoors) based on test methods in accordance with Annex III, Part B, Method 1 and 0 of the directive, is 106 dB (RT2669 and RT3369 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.

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: RT2669, RT3369, ERT2669, ERT3369

Notified Body: TÜV SÜD Product Service GmbH

EC-Number: NB 0123

Address: Ridlerstrasse 65, 80339 Munich, Germany

Certificate Number: M6A 021821 0008

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 to the above described machine violates the validity of this declaration.*

6.3 MACHINE SPECIFICATIONS

Operating Specifications

Specification	Model			
	RT2669	ERT2669	RT3369	ERT3369
Maximum Platform Height	26 ft (8 m)	26 ft (8 m)	33 ft (10 m)	33 ft (10 m)
Gross Machine Weight				
Single Oscillating Axle	8,090 lb (3670 kg)	8,250 lb (3742 kg)	9,080 lb (4119 kg)	9,425 lb (4275 kg)
Dual Oscillating Axles	8,340 lb (3783 kg)	--	9,330 lb (4232 kg)	--
Maximum Stowed Travel Grade (Gradeability)	40% (22°)	40% (22°)	35% (19°)	35% (19°)
Maximum Stowed Travel Grade (Sideslope)	5°	5°	5°	5°
Maximum Tire Load	3,600 lb (1633 kg)	3,600 lb (1633 kg)	3,600 lb (1633 kg)	3,600 lb (1633 kg)
Maximum Ground Bearing Pressure	40 psi	40 psi	40 psi	40 psi
Turning Radius				
Inside	83 in (211 cm)	83 in (211 cm)	83 in (211 cm)	83 in (211 cm)
Outside	175 in (444 cm)	175 in (444 cm)	175 in (444 cm)	175 in (444 cm)
Drive Speed				
High Drive Speed (Rabbit)				
4WD	3.4 mph (5.6 kph)	--	3.4 mph (5.6 kph)	--
2WD	3.3 mph (5.3 kph)	3.5 mph (5.6 kph)	3.5 mph (5.3 kph)	3.3 mph (5.6 kph)
Low Drive Speed (Turtle)				
4WD	1.7 mph (2.7 kph)	--	1.7 mph (2.7 kph)	--
2WD	1 mph (1.6 kph)	1 mph	1 mph (1.6 kph)	1 mph
Elevated Drive Speed	0.5 mph (0.8 kph)	0.5 mph (0.8 kph)	0.5 mph (0.8 kph)	0.5 mph (0.8 kph)

High Drive Speed Cutout Height	70 in (1.78 m)	70 in (1.78 m)	80 in (2.03 m)	80 in (2.03 m)
Platform Lift Up Time (Rated Load)	24 - 32 sec	29 - 37 sec	32 - 40 sec	36 - 44 sec
Platform Lift Down Time (Rated Load)	29 - 37 sec	29 - 37 sec	32 - 40 sec	32 - 40 sec
Hydraulic Pressures				
Main Relief	3800 psi	2700 psi	3800 psi	2750 psi
Steer Relief (Right)	2500 psi	2500 psi	2500 psi	2500 psi
Steer Relief (Left)	1900 psi	1900 psi	1900 psi	1900 psi
Lift Relief	2750 psi	--	2750 psi	--
Electrical System Voltage	12V	48V	12V	48V
Ground Clearance	9.5 in (24.1 cm)	9.5 in (24.1 cm)	9.5 in (24.1 cm)	9.5 in (24.1 cm)
Breakover Angle	30° (57.7%)	30° (57.7%)	30° (57.7%)	30° (57.7%)
Electronic Arm Guards Pause Height (CE Only)	90 in	90 in	105 in	105 in

Dimensions

Dimension	Measurement
Stowed Height	
RT2669, ERT2669	96.7 in (2456 mm)
RT3369, ERT3369	102.91 in (2614 mm)
Machine Length	
Extension Retracted	139 in (3530 mm)
Extension Deployed	170.9 in (4340 mm)
Machine Width	69.3 in (1760 mm)
Wheelbase	81.3 in (2065 mm)

Maximum Allowable Operating Slope

Model	Lift Up and Drive prevented when elevated and tilted Front to Back beyond the following limits:	Lift Up and Drive prevented when elevated and tilted Side to Side beyond the following limits:
RT2669, ERT2669	3°	4.0° at 0% - 55% Capacity
		3.0° at 56% - 75% Capacity
		2.5° at 76% - 100% Capacity
RT3369, ERT3369	3°	3.5° at 0% - 35% Capacity
		3.0° at 36% - 55% Capacity
		2.5° at 56% - 100% Capacity

Platform Capacity

NOTE: *INDOOR USE is use of a MEWP in areas shielded from wind so that there is no wind. OUTDOOR USE is use of a MEWP in an environment that can be exposed to wind.*

Specification	Model			
	RT2669	ERT2669	RT3369	ERT3369
Maximum Occupants				
Indoor	4	4	4	4
Outdoor	4	4	2	2
Maximum Platform Capacity	1,500 lb (681 kg)	1,500 lb (681 kg)	1,000 lb (454 kg)	1,000 lb (454 kg)
Deck Extension Capacity	300 lb (136 kg)	300 lb (136 kg)	300 lb (136 kg)	300 lb (136 kg)
Maximum Allowable Wind Speed				
Indoor	0 mph (0 m/s)	0 mph (0 m/s)	0 mph (0 m/s)	0 mph (0 m/s)
Outdoor	28 mph (12.5 m/s)	28 mph (12.5 m/s)	28 mph (12.5 m/s)	28 mph (12.5 m/s)
Maximum Horizontal Side Force	90 lb (400 N)	90 lb (400 N)	90 lb (400 N)	90 lb (400 N)

Fluid Capacities

Specification	RT2669, RT3369
Fuel Tank	
Diesel	10 gal (38 L)
Gasoline	10 gal (38 L)
LP Tank	33.5 lb (15.2 kg)
Hydraulic Tank	13.2 gal (50 L)
Engine Oil	
Diesel	6 qt (5.7 L)
Dual Fuel	3.6 qt (3.4 L)
Engine Coolant	4.44 qt (4.2 L)
Drive Brake (Each) (2WD Only)	2.7 oz (0.08 L)
Drive Hub (Each)	
2WD	17 oz (0.5 L)
4WD	18.3 oz (0.54 L)

Specification	ERT2669, ERT3369
Drive Hub (Each)	18.26 oz (0.54 L)
Hydraulic Tank	10.6 gal (40 L)

Batteries (ERT Machines)

Specification	Battery	
Voltage		
Total	48V	48V
Per Battery	6V	6V
Amp Hour Rating	310 Ah @ 20 hr	225Ah @ 20 hr
Reserve Capacity	675 minutes	447 minutes

Tires

Specification	All Models
Size	26 x 12 D460 Foam-Filled
Ply Rating	10
Inflation Pressure	70 psi (4.8 bar)
Wheel Nut Torque	105 ft.lb. (230.5 Nm)

Engine

Kubota Diesel (D1305-E4B)

Emissions	CARB, EPA Tier 4 Final, EU Stage V, China III
Fuel Type	Diesel: - Low Sulfur (<500 ppm) - Ultra Low Sulfur (15 ppm) (Required to meet EPA Tier 4 Final, EU Stage V) - up to 5% biodiesel
Number of Cylinders	3
Engine RPM Control	Engine Control Unit (ECU)
Low RPM Set	1400 RPM
High RPM Set	2600 RPM
Alternator	40 Amp, 12 V, Belt-Driven
Battery	69 Amp-Hour, 700 Cold-Cranking Amps, 12 VDC
Fuel Consumption Low RPM High RPM	 0.41 gal/hr (1.5 L/hr) 2.0 gal/hr (7.6 L/hr)
Displacement	1.261 L (77 cu. in.)
Gross Power	24.8 Hp (18.5 kW) @ 2600 RPM
Gross Torque	59.1 ft.lb. (80.1 Nm) @ 1700 RPM

Kubota Dual Fuel (WG972-GL-E4)

Emissions	CARB, EPA Phase 3	
Fuel Type	Gasoline - 87 Octane minimum - Ethanol/Gas Mix-10% maximum - Methanol/Gas Mix-5% maximum - LP (Liquid Petroleum)	
Number of Cylinders	3	
Engine RPM Control	Engine Control Unit (ECU)	
Low RPM Set	1400 RPM	
High RPM Set	3500 RPM	
Alternator	40 Amp, 12 V, Belt-Driven	
Battery	69 Amp-Hour, 700 Cold-Cranking Amps, 12 VDC	
Fuel Consumption Low RPM High RPM	Gas - 0.38 gal/hr (1.45 L/hr) 1.76 gal/hr (6.66 L/hr)	LP - 1.85 lb/hr (0.84 kg/hr) 9.3 lb/hr (4.23 kg/hr)
Displacement	0.962 L (58.7 cu. in)	
Gross Power	Gas - 31.1 Hp (23.2 kW) @ 3600 RPM LP - 29.5 Hp (22.0 kW) @ 3600 RPM	
Gross Torque	Gas - 49.1 ft.lb. (66.6 Nm) @ 2400 RPM LP - 48.8 ft.lb. (66.2 Nm) @ 1800 RPM	

Battery Charger (ERT Machines)

DESCRIPTION	SPECIFICATION
Battery Charger	Delta-Q
Electrical System Voltage (DC)	48V (1200W)
Input	
AC Input Voltage	85 - 270V AC
Nominal AC Input Voltage	100 - 240VAC
Input Frequency	50 - 60Hz
Maximum AC Input Current	14.5A
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
Maximum DC Output Voltage	72V
Maximum DC Output Current	25.0A
Derated	> 104°F (40°F)
Protection	
Output Reverse Polarity	Electronic Protection-Auto Reset
Output Short Circuit	Current Limited
AC Overload	Current Limited
DC Overload	Current Limited

Hydraulic Oil

HYDRAULIC SYSTEM OPERATING TEMPERATURE RANGE	SAE VISCOSITY GRADE
0° to +23° F (-18° to -5° C)	10W
0° to +210° F (-18° to +100° C)	10W-20, 10W-30
+50° to +210° F (+10° to +100° C)	20W-20

NOTE: *Hydraulic oils must have anti-wear qualities at least to API Service Classification GL-3, and sufficient chemical stability for mobile hydraulic system service. JLG Industries recommends the use of standard UTTO.*

NOTE: *Machines may be equipped with 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: *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: *When temperatures remain consistently below 20° F (-7° C), JLG Industries recommends the use of a premium cold weather hydraulic fluid (viscosity grade 32).*

Fluid	Properties		Base				Classifications		
Description	Viscosity at 40° C (cSt, Typical)	Viscosity Index	Mineral Oils	Vegetable Oils	Synthetic	Synthetic Polyol Esters	Readily Biodegradable*	Virtually Non-toxic**	Fire Resistant***
Shell Spirax S4 TXM - *Recommended*	**67**	**146**	**X**						
Mobilfluid 424 - *Optional*	60	134	X						
Shell Tellus S4 VX 32 - *Recommended*	**32**	**296**	**X**						
Univis HVI 26 - *Optional*	26	376	X						
Shell Naturelle HF-E32 - *Recommended*	**32**	**192**			**X**		**X**	**X**	
Mobil EAL Envirosyn H32 - *Optional*	32	146			X		X	X	
Shell Tellus S2 VX32 - *Recommended*	**32**	**142**	**X**						
Mobil DTE 10 Excel 32 - *Optional*	32	161	X						

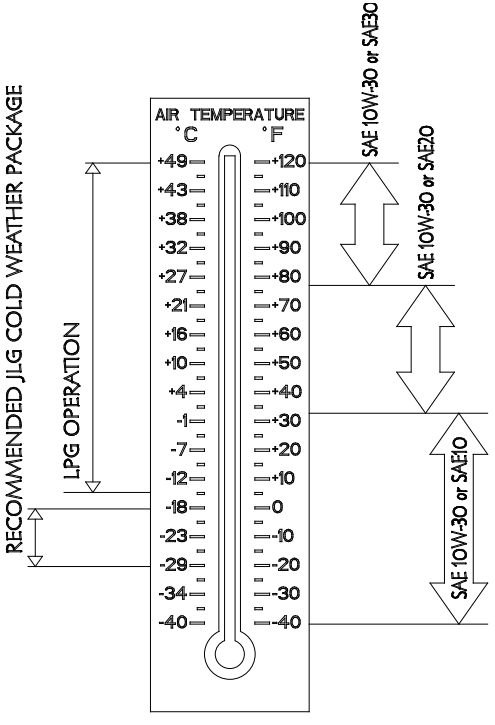
* Readily biodegradable classification indicates one of the following:
CO2 Conversion > 60% per EPA 560/6-82-003
CO2 Conversion > 80% per CEC-L-33-A-93

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

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

NOTE: *Shell Tellus S4 V32/Univis HVI 26 is available only to RT2669 and RT3369 machines.*

Fluid Operating Temperature Specifications

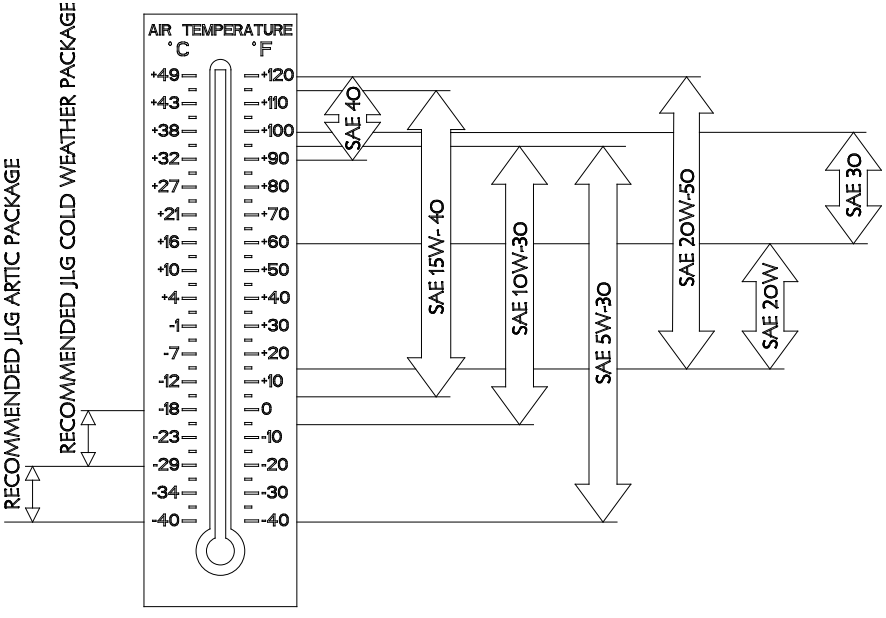


NOTICE:

MACHINE OPERATION USING NON-JLG APPROVED ENGINE OIL OR OPERATION OUTSIDE OF THE TEMPERATURE BOUNDARIES OUTLINED IN THE "ENGINE OIL OPERATION CHART" MAY RESULT IN PREMATURE WEAR OR DAMAGE TO COMPONENTS OF THE ENGINE.

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RT2669, RT3669 - Dual Fuel

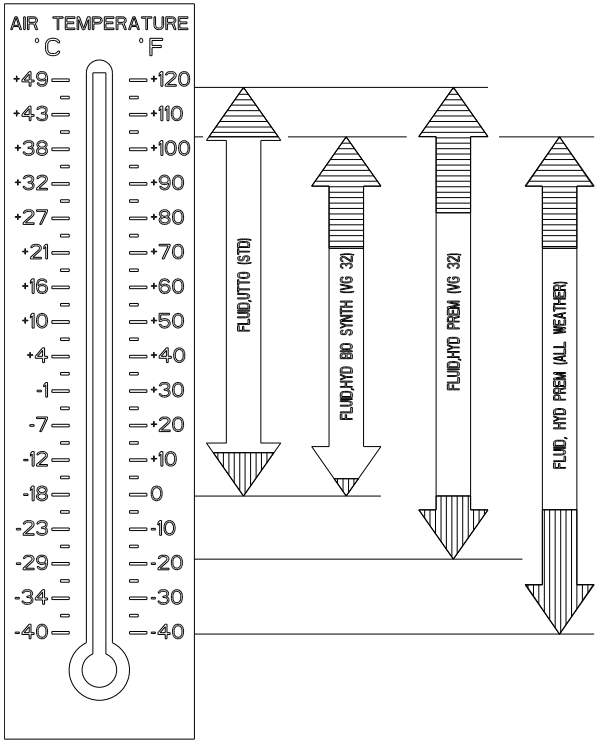


NOTICE:

MACHINE OPERATION USING NON-JLG APPROVED ENGINE OIL OR OPERATION OUTSIDE OF THE TEMPERATURE BOUNDARIES OUTLINED IN THE "ENGINE OIL OPERATION CHART" MAY RESULT IN PREMATURE WEAR OR DAMAGE TO COMPONENTS OF THE ENGINE.

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RT2669, RT3669 - Diesel Fuel



THE ADDITION OF A HYDRAULIC OIL-COOLER IS HIGHLY RECOMMENDED FOR PROLONGED OPERATION IN THIS TEMPERATURE RANGE (CONSULT JLG SERVICE)

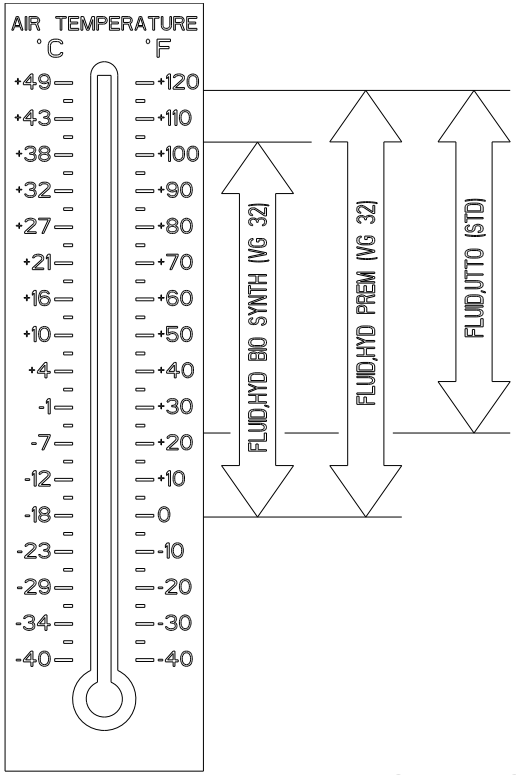
OPERATION IN THIS TEMPERATURE RANGE SHOULD INCLUDE THE USE OF HYDRAULIC SYSTEM HEATING AIDS (CONSULT JLG SERVICE)

NOTICE:
MACHINE OPERATION USING NON-JLG APPROVED HYDRAULIC FLUIDS OR OPERATION OUTSIDE OF THE TEMPERATURE BOUNDARIES OUTLINED IN THE "HYDRAULIC FLUID OPERATION CHART" MAY RESULT IN PREMATURE WEAR OR DAMAGE TO COMPONENTS OF THE HYDRAULIC SYSTEM.

MACHINE OPERATION TEMPERATURE BOUNDARIES CONTAINED IN THIS DOCUMENT APPLY TO THE FOLLOWING MODELS:
RT2669
RT3369

1001256522_A

RT2669, RT3669 - Hydraulic Oil



NOTICE:
MACHINE OPERATION USING NON-JLG APPROVED HYDRAULIC FLUIDS OR OPERATION OUTSIDE OF THE TEMPERATURE BOUNDARIES OUTLINED IN THE "HYDRAULIC FLUID OPERATION CHART" MAY RESULT IN PREMATURE WEAR OR DAMAGE TO COMPONENTS OF THE HYDRAULIC SYSTEM.

SOME FLUIDS MAY NOT BE AVAILABLE FROM THE FACTORY

MACHINE OPERATION TEMPERATURE BOUNDARIES CONTAINED IN THIS DOCUMENT APPLY TO THE FOLLOWING MODELS:
ERT2669
ERT3369

1001256524_A

ERT2669, ERT3669 - Hydraulic Oil

6.4 OPERATOR MAINTENANCE AND LUBRICATION

General Maintenance Tips

NOTE: *Lubricate like items on each side of the machine.*

NOTE: *Recommended lubricating intervals are based on machine operations under normal conditions. For machines used in multi-shift operations and/or exposed to hostile environments or conditions, lubrication frequencies must be increased accordingly.*

Operate hydraulic functions through one complete cycle before checking hydraulic oil level in tank. Oil should be visible in ADD sight window on hydraulic tank. If oil is not visible, add oil until oil is visible in both ADD and FULL sight windows on tank. Do not overfill tank.

Lubrication Specifications

KEY	SPECIFICATIONS
MPG	Multipurpose Grease having a minimum dripping point of 350° 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.
EO	Engine (crankcase) Oil. Gas - API SF/SG class, MIL-L-2104. Diesel - API CC/CD class, MIL-L-2104B/MIL-L-2104C.
HO	Hydraulic Oil. API Service Classification GL-3.

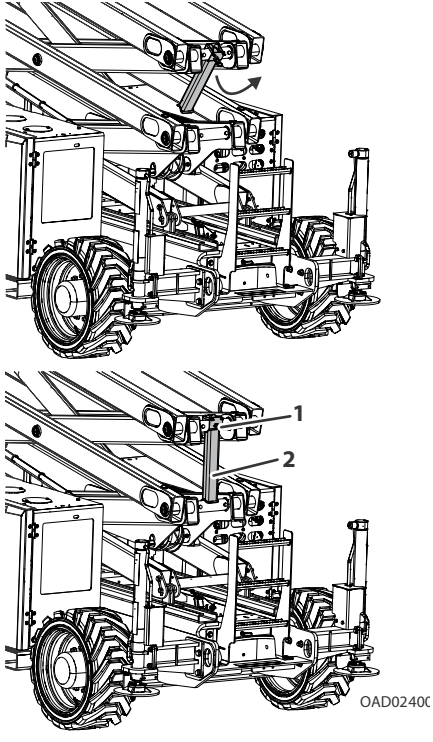
Safety Prop

⚠ CAUTION

THE SAFETY PROP MUST BE USED WHENEVER MAINTENANCE PERFORMED ON THE MACHINE REQUIRES THE SCISSOR ARMS TO BE RAISED.

The red safety prop is located at the rear of the machine in the armstack. To engage the safety prop:

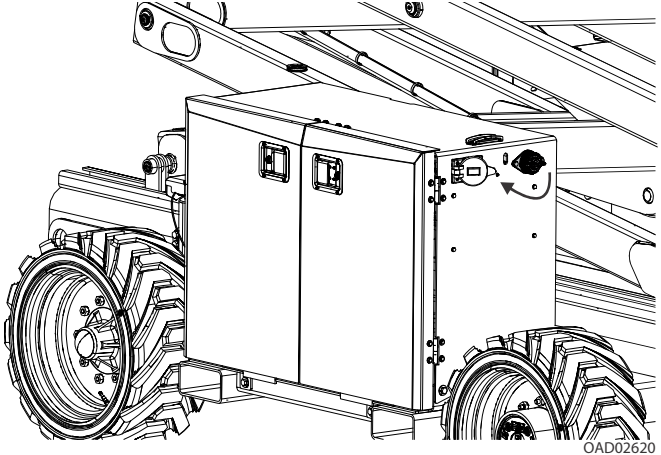
1. Ensure there is no load in the platform. From the ground controls station, raise the platform enough to allow the safety prop to be engaged.
2. Pull the ring to release the safety prop, then pull the prop down until it hangs vertically.
3. Lower the platform until the safety prop rests on the cross-shaft below.
4. To disengage, lift up the platform, pull the ring to release the prop, then lower the platform.



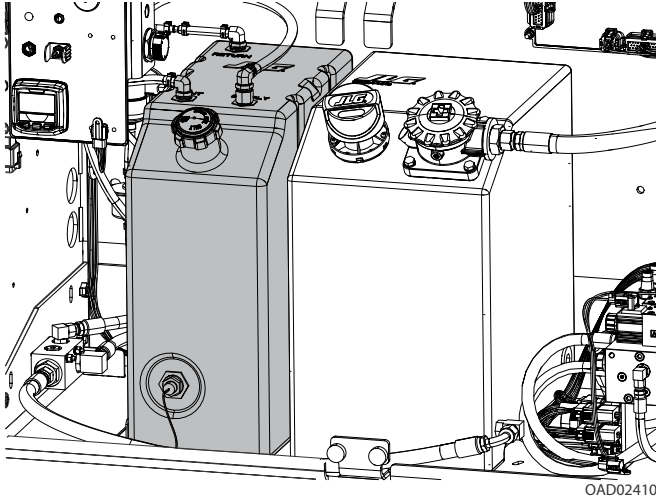
1. Release Ring
2. Safety Prop

Battery Disconnect (ERT Machines)

Electric machines have an accessible battery disconnect switch that allows all machine power to be easily disconnected at the batteries without removing battery cables from the battery posts. To disconnect batteries, locate the red switch on the right side of the battery compartment. Turn the switch clockwise to disconnect battery power from the machine. Turn the switch counterclockwise to return battery power to the machine.

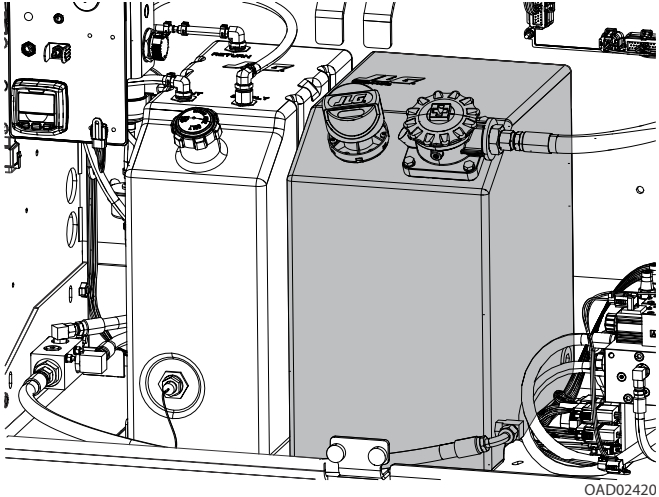

OAD02620

Fuel Tank


OAD02410

- Fuel - Diesel or Gasoline (per engine type - refer to decal on the machine)
- Fill as required.

Hydraulic Oil Tank



- Lube Point - Fill Cap/Fill Level
- Lube - HO
- Interval - Check oil every 10 hours of operation; change oil every 2 years or 1200 hours of operation.

Drive Hub

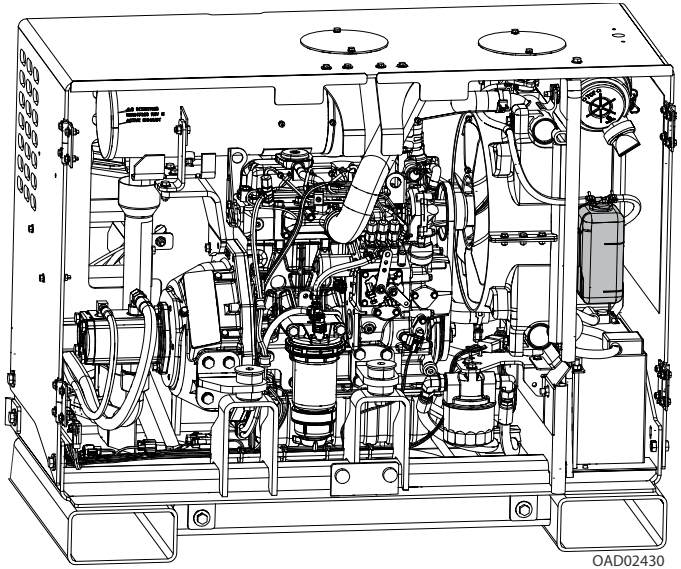


- Lube Points - Fill Plugs (4)
- Lube - EPGL
- Interval - Every 2 years or 1200 hours

Scissor Arms Wear Pads

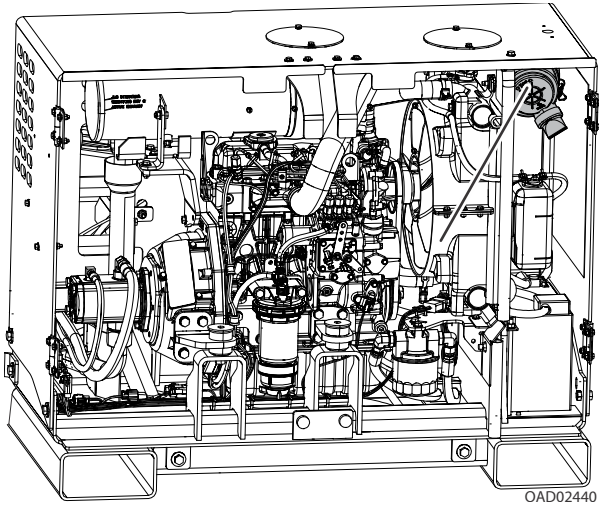
- Lube Points - 8 Sliding Wear Pads
- Lube - MPG
- Interval - Every month or 50 hours.

Engine Coolant



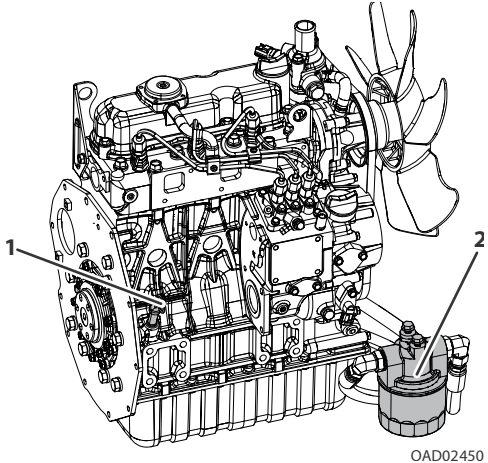
- Lube Point - Fill Cap/Fill Level
- Interval - Check coolant level daily. Ensure it is between the FULL and LOW lines. If coolant level is low, allow fluid to cool, then add as required. Replace coolant annually in accordance with engine manual.

Air Filter



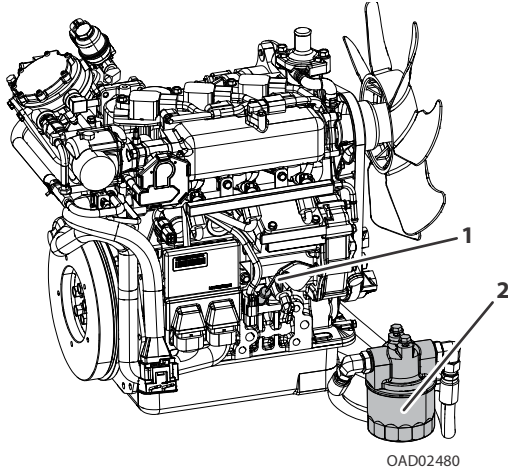
- Lube Points - Replaceable primary filter element (dry type)
- Interval - Every 6 months or 300 hours of operation. Under severe operating conditions (such as a very dusty work area) check condition of filter more often.
- Once a week, squeeze the evacuator valve on bottom of air cleaner assembly to allow collected debris to fall out of the air cleaner.

Oil Change with Filter



Kubota Diesel (D1305-E4B)

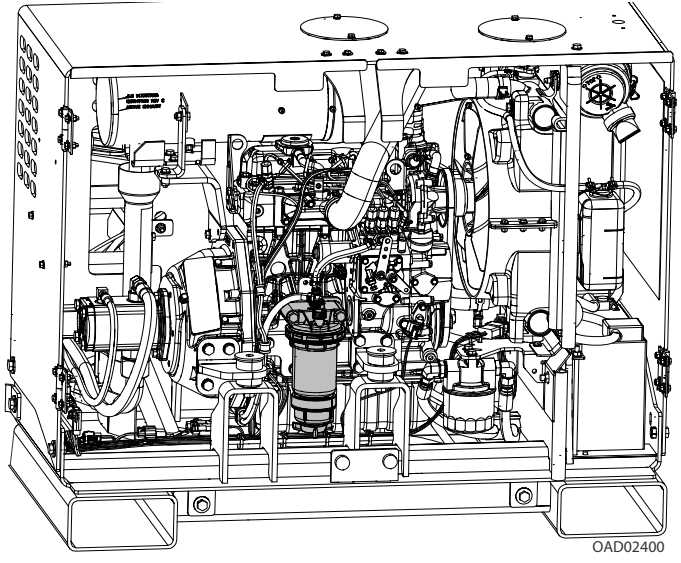
- Lube Point - Fill Cap/Spin-on Element
- Lube - EO - Minimum API CF
- Interval - Initial oil and filter change at first 50 hours of operation, then every year or 200 hours of operation
- Check oil level daily (**1**), maintain within marked level. Change oil and filter (**2**) in accordance with engine manual.



Kubota Dual Fuel (WG972-GL-E4)

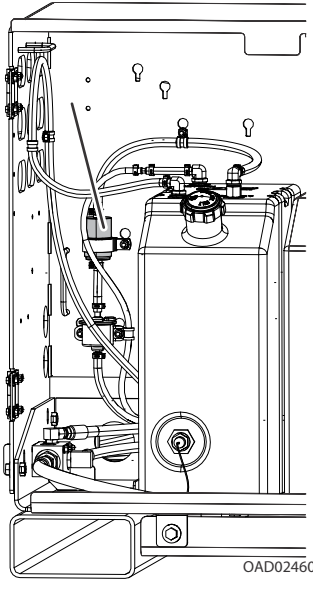
- Lube Point - Fill Cap/Spin-on Element
- Lube - EO - Minimum API SL
- Interval - Initial oil and filter change at first 50 hours of operation, then every year or 200 hours of operation
- Check oil level daily (**1**), maintain within marked level. Change oil and filter (**2**) in accordance with engine manual.

Fuel/Water Separator Filter (Diesel)



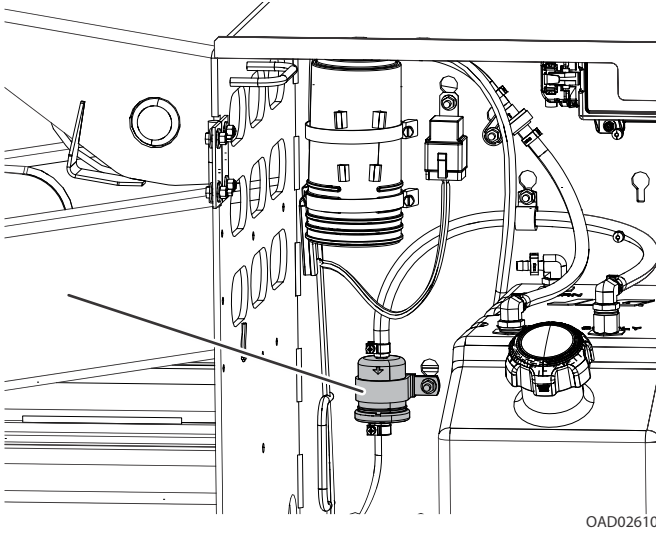
- Lube Point - Replaceable Element
- Interval (Filter) - Change every 750 hours, every other oil change, or annually, whichever comes first.
- Interval (Water Bowl) - Empty Daily. Loosen drain cock on underside of fuel filter and allow all water to drain into a container until clear fuel is visible. Tighten drain.

Fuel Strainer (Diesel)



- Lube Point - Replaceable
- Interval - Every year or 750 hours of operation

Fuel Filter (Gas)



- Lube Point - Replaceable
- Interval - Check every 100 hours; change every year in accordance with engine manual.

6.5 BATTERY MAINTENANCE AND CHARGING

⚠ WARNING

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

Battery 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:

a. 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.

b. Fully charge the batteries each day the machine is used.

c. Charge the batteries at available times between use. Flooded lead acid/AGM batteries do not develop a charging memory.

d. 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 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.*

Battery Maintenance (Quarterly)

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

⚠ CAUTION

WHEN ADDING DISTILLED WATER TO 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.*

2. Remove all vent caps and inspect electrolyte level of each cell. Electrolyte level should be to the ring approximately one inch from top of battery. Fill batteries with distilled water only. Replace and secure all vent caps.

3. Remove battery cables from each battery post one at a time, negative first. Clean cables with acid neutralizing solution (e.g. baking soda and water or ammonia) and wire brush. Replace cables and/or cable clamp bolts as required.

4. Clean battery post with wire brush then re-connect cable to post. Coat non-contact surfaces with mineral grease or petroleum jelly.

5. When all cables and terminal posts have been cleaned, ensure all cables are properly positioned and do not get pinched. Close battery compartment cover.

6. Power up machine and verify it functions properly.

6.6 PROPANE FUEL SYSTEM

Pressure Relief

⚠ CAUTION

THE PROPANE FUEL SYSTEM OPERATES AT PRESSURES UP TO 312 PSI (21.5 BAR). TO MINIMIZE THE RISK OF FIRE AND PERSONAL INJURY, RELIEVE THE PROPANE FUEL SYSTEM PRESSURE (WHERE APPLICABLE) BEFORE SERVICING THE PROPANE FUEL SYSTEM COMPONENTS.

To relieve propane fuel system pressure:

1. Close the manual shut-off valve on the propane fuel tank.
2. Start and run the vehicle until the engine stalls.
3. Turn the ignition switch OFF.

⚠ CAUTION

RESIDUAL VAPOR PRESSURE WILL BE PRESENT IN THE FUEL SYSTEM. ENSURE THE WORK AREA IS WELL-VENTILATED BEFORE DISCONNECTING ANY FUEL LINE.

Leak Test

⚠ CAUTION

NEVER USE AN OPEN FLAME OF ANY TYPE TO CHECK FOR PROPANE FUEL SYSTEM LEAKS.

Always inspect the propane fuel system for leaks after performing service. Check for leaks at the fittings of the serviced or replaced component. Use a commercially available liquid leak detector or an electronic leak detector. When using both methods, use the electronic leak detector first to avoid contamination by the liquid leak detector.

6.7 TIRES AND WHEELS

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 7.5 cm (3 in) in total length
- any tears or rips (ragged edges) in the cord plies which exceeds 2.5 cm (1 in) in any direction
- any punctures which exceed 2.5 cm 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.

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 and model. If not using a JLG approved replacement tire, JLG recommends 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 application by the tire manufacturer (Including inflation pressure and maximum tire load).

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.

Wheel Replacement

The rims installed on each product model have been designed for stability requirements which consist of track width, tire pressure, 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.

Wheel Installation

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

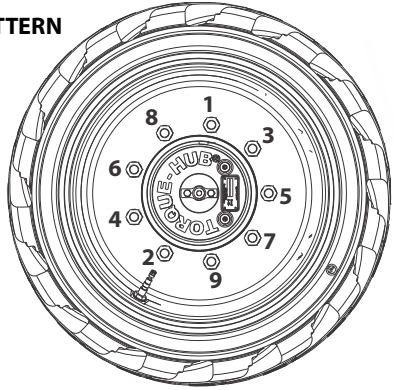
⚠ WARNING

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:

9 LUG PATTERN



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

TORQUE SEQUENCE		
1st Stage	**2nd Stage**	**3rd Stage**
85 ft. lb. (115 Nm)	110 ft. lb. (149 Nm)	170 ft. lb. (230 Nm)

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

SECTION 7. INSPECTION AND REPAIR LOG

Date	Comments

Date	Comments



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