



Operation and Safety Manual

Keep this manual with the machine at all times.

Boom Lift Models 800S



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FOREWORD

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

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

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



SAFETY ALERT SYMBOLS AND SAFETY SIGNAL WORDS



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

A DANGER

▲ CAUTION



WARNING

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

IMPORTANT

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

For:

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

Contact:

Product Safety and Reliability Department JLG Industries, Inc.

1.II G Drive

REVISION LOG

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SECTION	N - PARAGRAPH, SUBJECT PAGE	SECTIO	N - PARAGRAPH, SUBJECT	PAGE
SECTION	I - 1 - SAFETY PRECAUTIONS		General	2-9
1.1	GENERAL1-1	2.3	HORIZONTAL AND CAPACITY LIMIT	SWITCHES 2-10
1.2	PRE-OPERATION1-1	2.4	OSCILLATING AXLE LOCKOUT TES	Т
	Operator Training and Knowledge1-1		(IF EQUIPPED)	2-14
	Workplace Inspection1-2			
	Machine Inspection		N - 3 - MACHINE CONTROLS AND IN	DICATORS
1.3	OPERATION		GENERAL	3-1
	General		CONTROLS AND INDICATORS	3-1
	Trip and Fall Hazards 1-3		Ground Control Station	3-1
	Electrocution Hazards		Ground Control Indicator Panel	3-6
	Tipping Hazards 1-6	;	Platform Station	3-7
	Crushing and Collision Hazards 1-7		Platform Control Indicator Panel	3-12
1 1	TOWING LIETING AND HALILING 1.0			



SECTION - PARAGRAPH, SUBJECT	PAGE SEC	CTION - PARAGRAPH, SUBJECT	PAGI
4.6 PLATFORM	4-7	To Retract and Lower Boom To Lower Boom with Fully Retracte	_
4.7 BOOM		TION - 6 - GENERAL SPECIFICATIONS & IAINTENANCE	OPERATOR
Raising and Lowering the Boom 4.8 FUNCTION SPEED CONTROL	4-8	6.1 INTRODUCTION6.2 OPERATING SPECIFICATIONSSpecifications and Performance Date	6-
(IF EQUIPPED)	4-9	Capacities	6-
4.12 SHUT DOWN AND PARK		Tires	

SECTION	I - PARAGRAPH, SUBJECT PAGE	SECTIO	N - PARAGRAPH, SUBJECT PAGI
	Removal	4-4.	Drive Disconnect Hub4-9
	Installation	4-5.	Typical 800S/860SJ Transport 4-14
6.8	PROPANE FUEL SYSTEM PRESSURE RELIEF6-35	4-6.	Lifting and Tie Down Chart 4-15
		4-7.	Decal Location - Rear Entry Platform -
SECTION	- 7 - INSPECTION AND REPAIR LOG		Sheet 1 of 2 4-16
		4-8.	Decal Location - Rear Entry Platform -
	LIST OF FIGURES		Sheet 2 of 2 4-17
		4-9.	Decal Location - Side Entry Platform -
2-1.	Basic Nomenclature - Sheet 1 of 2 2-6		Sheet 1 of 5 4-30
2-2.	Basic Nomenclature - Sheet 2 of 2 2-7	4-10.	Decal Location - Side Entry Platform -
2-2.	Daily Walk-Around Inspection - Sheet 1 of 22-8		Sheet 2 of 5
2-3.	Daily Walk-Around Inspection - Sheet 2 of 22-9	4-11.	Decal Location - Side Entry Platform -
2-4.	Horizontal and Capacity Limit Switches -		Sheet 3 of 5 4-32



SECTION	- PARAGRAPH, SUBJECT PAGE	SECTIO	N - PARAGRAPH, SUBJECT	PAGE
6-6.	Engine Operating Temperature Specifications -	6-5	Deutz F4M2011 Specifications	6-4
	Caterpillar - Sheet 1 of 2 6-15	6-6	Caterpillar 3044C	6-5
6-7.	Engine Operating Temperature Specifications -	6-7	GM 3.0L	
	Caterpillar - Sheet 2 of 2 6-16	6-8	Battery Specifications	6-6
6-8.	Engine Operating Temperature Specifications -	6-9	Tire Specifications	6-6
	GM - Sheet 1 of 26-17	6-10	Component Weights	6-6
6-9.	Engine Operating Temperature Specifications -	6-11	Hydraulic Oil	6-7
	GM - Sheet 2 of 2	6-12	Mobilfluid 424 Specs	6-7
6-10.	Operator Maintenance and Lubrication Diagram . 6-19	6-13	Mobil DTE 13M Specs	6-8
6-11.	Filter Lock Assembly 6-34	6-14	Mobil EAL 224H Specs	6-8
		6-15	UCon Hydrolube HP-5046	6-9
	LIST OF TABLES	6-16	Exxon Univis HVI 26 Specs	6-9
		6-17	Lubrication Specifications	6-20



SECTION 1. SAFETY PRECAUTIONS

1.1 GENERAL

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

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

1.2 PRE-OPERATION

Operator Training and Knowledge

 Read and understand this manual before operating the machine.





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

Workplace Inspection

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

Machine Inspection

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



1.3 OPERATION

General

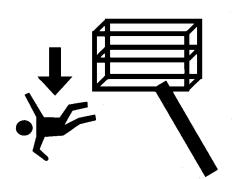
- Do not use the machine for any purpose other than positioning personnel, their tools, and equipment.
- Never operate a machine that is not working properly. If a malfunctions occurs, shut down the machine.
- Never slam a control switch or lever through neutral to an opposite direction. Always return switch to neutral and stop before moving the switch to the next function. Operate controls with slow and even pressure.
- Hydraulic cylinders should never be left fully extended or

- Supplies or tools which extend outside the platform are prohibited unless approved by JLG.
- When driving, always position boom over rear axle in line with the direction of travel. Remember, if boom is over the front axle, steer and drive functions will be reversed.
- Do not assist a stuck or disabled machine by pushing, pulling, or by using boom functions. Only pull the unit from the tie-down lugs on the chassis.
- Do not place boom or platform against any structure to steady the platform or to support the structure.
- Stow boom and shut off all power before leaving machine.

Trip and Fall Hazards



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



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

Electrocution Hazards

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







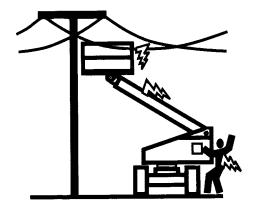


Table 1-1. Minimum Approach Distances (M.A.D.)

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

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



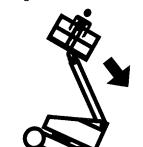
• The minimum approach distance may be reduced if insulating barriers are installed to prevent contact, and the barriers are rated for the voltage of the line being guarded. These barriers shall not be part of (or attached to) the machine. The minimum approach distance shall be reduced to a distance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

▲ DANGER

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

Tipping Hazards

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





- Do not elevate platform or drive with platform elevated while on a sloping, uneven, or soft surface.
- · Before driving on floors, bridges, trucks, and other surfaces, check allowable capacity of the surfaces.
- · Never exceed the maximum platform capacity. Distribute loads evenly on platform floor.
- · Do not raise the platform or drive from an elevated position unless the machine is on firm, level and smooth surfaces.
- Keep the chassis of the machine at least 2 ft. (0.6m) from holes, bumps, drop-offs, obstructions, debris, concealed holes, and other potential hazards on the floor/surface.

• Do not puch or pull any object with the beam

 If boom assembly or platform is in a position that one or more wheels are off the ground, all persons must be removed before attempting to stabilize the machine. Use cranes, forklift trucks, or other appropriate equipment to stabilize machine and remove personnel.

Crushing and Collision Hazards

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



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

1.4 TOWING, LIFTING, AND HAULING

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



1.5 ADDITIONAL HAZARDS / SAFETY

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

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SECTION 2. USER RESPONSIBILITIES, MACHINE PREPARATION, AND INSPECTION

2.1 PERSONNEL TRAINING

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

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

Operator Training

Operator training must cover:

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

Training Supervision

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



2.2 PREPARATION, INSPECTION, AND MAINTENANCE

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

IMPORTANT

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



Table 2-1. Inspection and Maintenance Table

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



Pre-Start Inspection

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

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

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

- "Walk-Around" Inspection Refer to Figure 2-2. and Figure 2-3.
- 6. Battery Charge as required.
- Fuel (Combustion Engine Powered Machines) Add the proper fuel as necessary.
- 8. Engine Oil Supply Ensure the engine oil level is at the Full mark on the dipstick and the filler cap is secure.
- **9. Hydraulic Oil** Check the hydraulic oil level. Ensure hydraulic oil is added as required.
- 10 Function Check Once the "Wells Around" Inspection



Function Check

Perform the Function Check as follows:

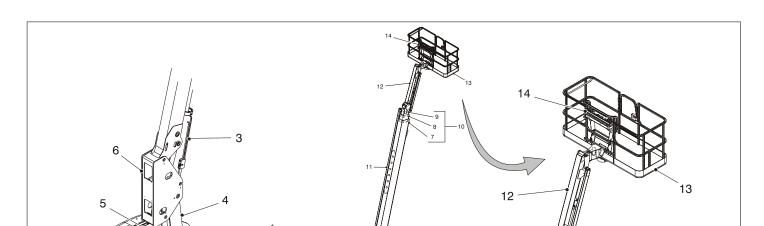
- From the ground control panel with no load in the platform:
 - a. Check that all guards protecting the switches or locks are in place;
 - Operate all functions and check all limiting and cutout switches;
 - c. Check auxiliary power (or manual descent);

Francisco de la collega de la

d. Ensure that all machine functions are disabled when the Emergency Stop Button is activated.

- **3.** With the platform in the transport (stowed) position:
 - **a.** Drive the machine on a grade, not to exceed the rated gradeability, and stop to ensure the brakes hold:
 - **b.** Check the tilt sensor alarm to ensure proper operation.

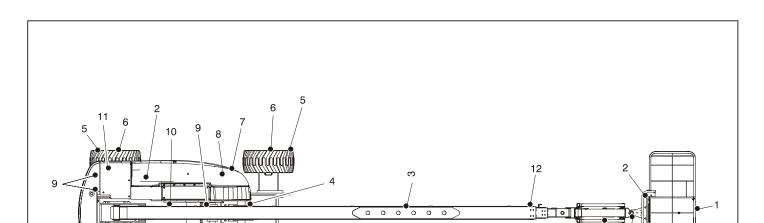




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- 1. Steer Wheels
- 2. Drive Wheels
- 3. Lift Cylinder
- 4. Tower
- 5. Level Link
- 6. Upright
- 7. Base Boom Section
- 8. Mid Boom Section







General

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



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

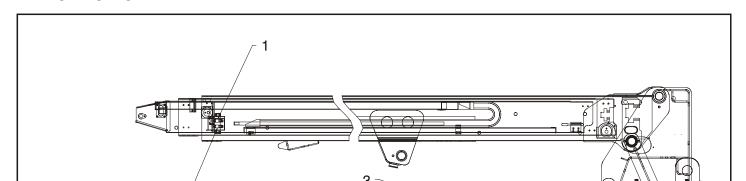
DO NOT OPERATE MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED.

INSPECTION NOTE: On all components, make sure there are

- 4. Swing Drive No evidence of damage.
- Wheel/Tire Assemblies No loose or missing lug nuts, proper inflation (pneumatic). Inspect for worn tread, cuts, tears or other discrepancies. Inspect wheels for damage and corrosion.
- **6. Drive Motor, Brake, and Hub** No evidence of leakage.
- 7. Hood Assemblies See Inspection Note.
- 8. Auxiliary Hydraulic Pump See Inspection Note.
- All Hydraulic Cylinders No visible damage; pivot pins and hydraulic hoses undamaged, not leaking.
- 10. Turntable Bearing Evidence of proper lubrication. No

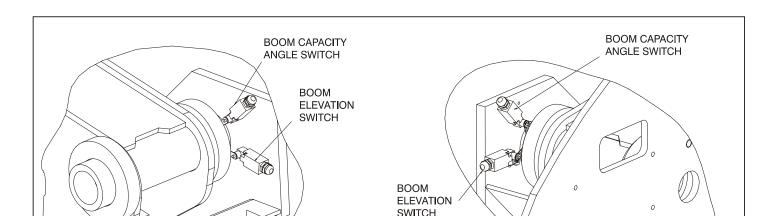


2.3 HORIZONTAL AND CAPACITY LIMIT SWITCHES

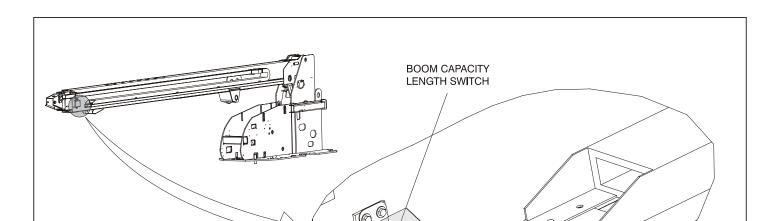


Item	Description	Operation Characteristic
1	Boom Capacity Length Switch	Activates platform capacity light to indicate the platform capacity at a designated boom length.
2	Boom Extension Switch	Reduces drive speed when boom reaches a designated length.
3	Boom Capacity Angle Switch	Activates platform capacity light to indicate the platform capacity at a designated boom height.
4	Boom Elevation Switch	Reduces drive speed when boom is raised above horizontal.











2.4 OSCILLATING AXLE LOCKOUT TEST (IF EQUIPPED)

IMPORTANT

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

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

1. Place a 6 inches (15.2 cm) high block with ascension

- **3.** Place the Drive control lever to the forward position and carefully drive machine up ascension ramp until left front wheel is on top of block.
- Carefully activate Swing control lever and position boom over right side of machine.
- With boom over right side of machine, place Drive control lever to Reverse and drive machine off of block and ramp.
- **6.** Have an assistant check to see that left front or right rear wheel remains elevated in position off of ground.
- Carefully activate Swing control lever and return boom to stowed position (centered between drive wheels).
 When boom reaches center stowed position lockout



- **8.** Place the 6 inches (15.2 cm) high block with ascension ramp in front of right front wheel.
- **9.** Place Drive control lever to Forward and carefully drive machine up ascension ramp until right front wheel is on top of block.
- **10.** With boom over left side of machine, place Drive control lever to Reverse and drive machine off of block and ramp.
- **11.** Have an assistant check to see that right front or left rear wheel remains elevated in position off of ground.

- 12. Carefully activate Swing control lever and return boom to stowed position (centered between drive wheels). When boom reaches center, stowed position, lockout cylinders should release and allow wheel to rest on ground, it may be necessary activate Drive to release cylinders.
- If lockout cylinders do not function properly, have qualified personnel correct the malfunction prior to any further operation.



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SECTION 3. MACHINE CONTROLS AND INDICATORS

3.1 GENERAL

IMPORTANT

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

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

3.2 CONTROLS AND INDICATORS

Ground Control Station

(See Figure 3-1., Ground Control Station - 800S and Figure 3-1., Ground Control Station - 860SJ)

NOTE: When Power/Emergency Stop switch is in the "ON" position and engine is not running, an alarm will sound, indicating Ignition is "ON".

A CAUTION

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



1. Indicator Panel.

The LED Indicator Panel contains indicator lights that signal problem conditions or functions operating during machine operation.



TO AVOID SERIOUS INJURY, DO NOT OPERATE MACHINE IF ANY CONTROL LEVERS OR TOGGLE SWITCHES CONTROLLING PLATFORM MOVEMENT DO NOT RETURN TO THE OFF POSITION WHEN RELEASED.

2. Telescope Control.

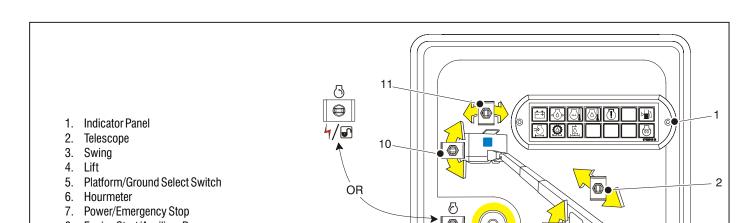
5. Platform/Ground Select Switch

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

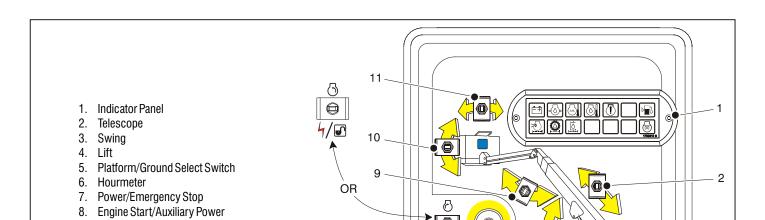
NOTE: With PLATFORM/GROUND SELECT switch in the center position, power is shut off to controls at both operating stations.

6. Hourmeter.

Registers the amount of time the machine has been in









8. Engine Start/Auxiliary Power Switch

or

Engine Start/ Auxiliary Power Switch /Function Enable.

To start the engine, the switch must be held "UP" until the engine starts.



To use auxiliary power, the switch must be held "DOWN" for duration of auxiliary pump use. Aux power can only be used if the engine is not running.



If equipped, the enable switch must be held "DOWN" to enable all boom controls when the engine is running.



9. Articulating Jib Boom. (If Equipped)

This switch provides raising and lowering of the jib.

10. Platform Leveling Override.

A three position switch allows the operator to compensate for any difference in the automatic self leveling system.

11. Platform Rotate.

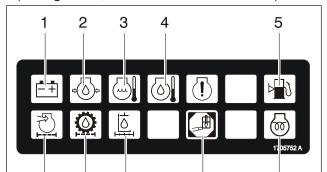
A three position switch permits rotation of the platform.

NOTE: Auviliany nower only works if there is no engine oil pres



Ground Control Indicator Panel

(See Figure 3-2., Ground Control Indicator Panel)



1. Battery Charging Indicator

Indicates a problem in the battery or charging circuit, and service is required.

2. Low Engine Oil Pressure Indicator.

Indicates that engine oil pressure is below normal and service is required.

3. High Engine Coolant Temperature Indicator (Ford)

Indicates that engine coolant temperature is abnormally high and service is required.

4. Engine Oil Temperature Indicator (Deutz).



6. Glow Plug Indicator

Indicates the glow plugs are operating. After turning on ignition, wait until light goes out before cranking engine.

- 7. Overload Indicator (If Equipped)
 - Indicates the platform has been overloaded.
- 8. Hydraulic Oil Filter Indicator (Prior to S/N 85332)
 - Indicates the return oil filter is too restrictive and in the bypass mode and needs to be replaced.
- 9. Charge Pump Oil Filter Indicator (Prior to S/N 85332)

Platform Station

(See Figure 3-3., Platform Control Console)

1. Power/Emergency Stop

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

Within about 2 seconds of pulling the switch out, the machine will perform a diagnostic check of the various electrical circuits, and if everything is OK, the platform alarm will beep once. During this time the lights on the



NOTE: MAIN LIFT, SWING, and DRIVE control levers are spring-loaded and will automatically return to neutral (OFF) position when released.

A WARNING

TO AVOID SERIOUS INJURY, DO NOT OPERATE MACHINE IF ANY CONTROL LEVERS OR TOGGLE SWITCHES CONTROLLING PLATFORM MOVEMENT DO NOT RETURN TO THE OFF OR NEUTRAL POSITION WHEN RELEASED.

3. Main Lift/Swing Controller.

An infinitely proportional dual axis joystick is provided for main lift and swing. Push forward to lift up, pull back-

5. Drive/Steer

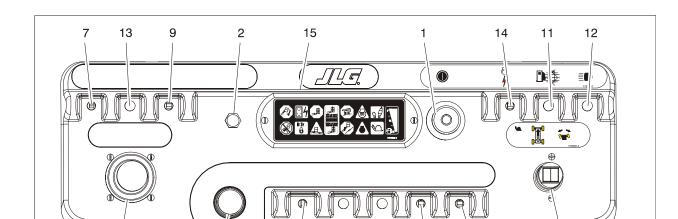
The DRIVE joystick provides for driving either forward or backward. The controller is 'ramped' to allow variable drive speed.

Steering is controlled by a thumb operated switch on top of the joystick.

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

NOTE: When boom is positioned above horizontal and any of the following switches, DRIVE SPEED/TORQUE SELECT or FUNCTION SPEED, are positioned to HIGH, high function







6. Function Speed Control

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

7. Drive Speed/Torque Select.

The forward position gives maximum drive speed by shifting the drive motors to minimum the displacement and giving high engine when drive controller is moved. The back position gives maximum torque for rough terrain and climbing grades by shifting the wheel motors to maximum displacement and giving high engine speed when drive controller is moved. The center position

10. Articulating Jib Boom. (860SJ)

Push forward to lift up, pull back to lift down. Variable lift speed is using the Function Speed Control.

11. Fuel Select (Dual Fuel Engine Only). (If Equipped)

Gasoline or liquid propane fuel may be selected by moving the switch to the appropriate position. It is unnecessary to purge the fuel system before switching fuels, so there is no waiting period when switching fuels while the engine is running.

12. Lights. (If Equipped)

This switch operates control console panel lights and



13. Steer Select. (If Equipped)

When equipped with four wheel steering, the action of the steering system is operator selectable. The center switch position gives conventional front wheel steering with the rear wheels unaffected. This is for normal driving at maximum speeds. The forward position is for "crab" steering. When in this mode both front and rear axles steer in the same direction, which allows the chassis to move sideways as it goes forward. This can be used for positioning the machine in aisle ways or against buildings. The back switch position is for "coordinated" steering. In this mode the front and rear axles steer in the opposite directions to produce the tightest turning circle for maneuvering in confined areas.

14. Start/Auxiliary Power.

When pushed forward, the switch energizes the starter motor to start the engine.

When pushed back, it energizes the electrically operated hydraulic pump, when actuated. (Switch must be held ON for duration of auxiliary pump use.)

The auxiliary pump functions to provide sufficient oil flow to operate the basic machine functions should the main pump or engine fail. The auxiliary pump will operate tower boom lift, tower telescope, main boom lift, main telescope and swing.

15 Indicator Panel



Platform Control Indicator Panel

(See Figure 3-4., Platform Light Panel)

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



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



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

1. Level System Fault Indicator

Indicates a fault in the electronic leveling system. The fault indicator will flash and an alarm sound. All functions will default to creep if the boom is extended more than 20 inches (51 cm) or elevated above horizontal.

▲ WARNING

IF THE LEVEL SYSTEM FAULT INDICATOR IS ILLUMINATED, SHUT DOWN THE MACHINE, RECYCLE THE EMERGENCY STOP, AND RESTART THE MACHINE. IF THE FAULT PERSISTS, RETURN THE PLATFORM TO THE STOWED POSITION, USING MANUAL LEVELING AS REQUIRED, AND HAVE LEVELING SYSTEM REPAIRED.



4. Capacity Indicator.

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

NOTE: Refer to the capacity decals on the machine for restricted and unrestricted platform capacities.

5. Tilt Alarm Warning Light. (Red)

Indicates that the chassis is on a slope (over 5 degrees). If the boom is above horizontal and the machine is on a slope, an alarm will sound and CREEP is automatically

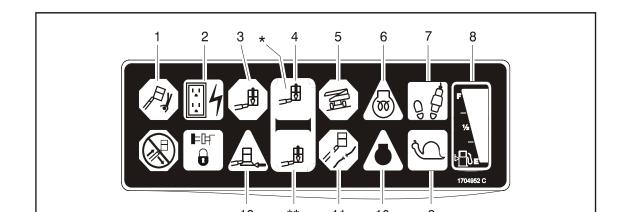
7. Footswitch/Enable Indicator

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

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

A WARNING







8. Fuel Level Indicator.

Indicates the level of fuel in the fuel tank.

9. Creep Speed Indicator.

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

10. Engine Malfunction Indicator.

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

11. Cable Service Indicator. (If Equipped)

When illuminated, the light indicates the boom cables are loose or broken and must be repaired or adjusted immediately.



IF THE CABLE SERVICE INDICATOR IS ILLUMINATED, RETURN THE PLATFORM TO THE STOWED POSITION, SHUT DOWN THE MACHINE, AND HAVE THE BOOM CABLES INSPECTED.

12. Soft Touch Indicator. (If Equipped)

Indicates the Soft Touch bumper is against an object. All



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SECTION 4. MACHINE OPERATION

4.1 DESCRIPTION

This machine is a self-propelled hydraulic lift equipped with a work platform on the end of an elevating and rotating boom. Vibrations emitted by these machines are not hazardous to an operator in the work platform. The equivalent continuous A-Weighted sound pressure level at the work platform is less than 70dB(A).

The primary operator control station is in the platform. From this control station, the operator can drive and steer the machine in both forward and reverse directions. The operator can raise or lower the upper or lower boom or swing the

4.2 OPERATING CHARACTERISTICS AND LIMITATIONS

Capacities

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

- Machine is positioned on a smooth, firm and level surface.
- 2. Load is within manufacturer's rated capacity.



▲ WARNING

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

4.3 ENGINE OPERATION

NOTE: Initial starting should always be performed from the Ground Control station.

Starting Procedure

Storting Dropoduro

A CAUTION

ALLOW ENGINE TO WARM-UP FOR A FEW MINUTES AT LOW SPEED BEFORE APPLYING ANY LOAD.

- 2. After engine has had sufficient time to warm up, shut engine off.
- 3. Turn SELECT switch to PLATFORM.
- From Platform, pull POWER/EMERGENCY STOP switch out, then push the ENGINE START switch until engine starts.

NOTE: Footswitch must be in released (up) position before starter will operate. If starter operates with footswitch in

A CALITION

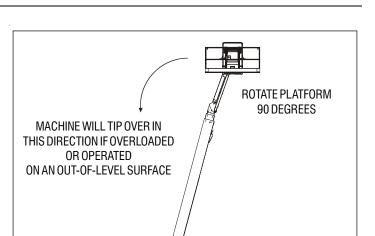


Shutdown Procedure

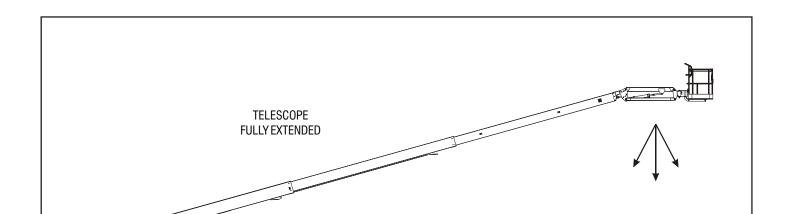
A CAUTION

IF AN ENGINE MALFUNCTION CAUSES AN UNSCHEDULED SHUTDOWN, DETERMINE THE CAUSE AND CORRECT IT BEFORE RESTARTING THE ENGINE.

- 1. Remove all load and allow engine to operate at low speed for 3-5 minutes; this allows further reduction of internal engine temperature.
- 2. Push POWER/EMERGENCY STOP switch in.
- 3. Turn MASTER switch to Off.









4.4 TRAVELING (DRIVING)

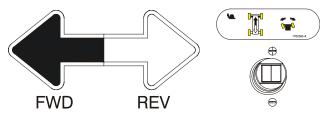
NOTE: When the upper boom is raised approximately 11 degrees above horizontal, the high drive function will automatically be in low drive.

▲ WARNING

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

TO AVOID LOSS OF TRAVEL CONTROL OR "TIP OVER", DO NOT DRIVE MACHINE ON GRADES EXCEEDING THOSE SPECIFIED ON THE SERIAL NUMBER PLATE.

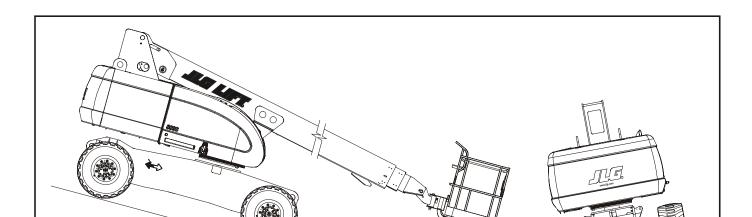
MOVE THE DRIVE CONTROLS IN A DIRECTION MATCHING THE DIRECTIONAL ARROWS.



Traveling Forward and Reverse

1. At Platform Controls, pull out Emergency Stop switch,







4.6 PLATFORM

Platform Level Adjustment

During normal operation of the machine, the platform will automatically maintain it's position. To manually Level Up or Down - Position the Platform/Level control switch Up or Down and hold until the desired platform position is obtained.

Platform Rotation

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

4.7 BOOM



DO NOT SWING OR RAISE BOOM ABOVE HORIZONTAL WHEN MACHINE IS OUT OF LEVEL.

DO NOT DEPEND ON TILT ALARM AS A LEVEL INDICATOR FOR THE CHASSIS.

TO AVOID TIP OVER, LOWER PLATFORM TO GROUND LEVEL. THEN DRIVE MACHINE TO A LEVEL SURFACE BEFORE RAISING BOOM.

TO AVOID SERIOUS INJURY, DO NOT OPERATE MACHINE IF ANY CONTROL LEVER OR TOGGLE SWITCH CONTROLLING PLATFORM MOVE-



Swinging the Boom

To swing boom, use SWING control to select RIGHT or LEFT direction.

IMPORTANT

WHEN SWINGING THE BOOM MAKE SURE THERE IS AMPLE ROOM FOR THE BOOM TO CLEAR SURROUNDING WALLS, PARTITIONS AND EQUIPMENT.

Raising and Lowering the Boom

To raise or lower the Boom, use Boom Lift control to select

4.9 OSCILLATING AXLE LOCKOUT TEST (IF EQUIPPED)

IMPORTANT

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

Refer to Section 2.4, Oscillating Axle Lockout Test (If Equipped) for procedure.



4.10 EMERGENCY TOWING

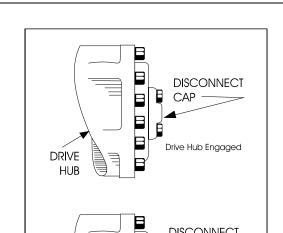
▲ WARNING

RUNAWAY VEHICLE/MACHINE HAZARD. MACHINE HAS NO TOWING BRAKES. TOWING VEHICLE MUST BE ABLE TO CONTROL MACHINE AT ALL TIMES. ON-HIGHWAY TOWING NOT PERMITTED. FAILURE TO FOLLOW INSTRUCTIONS COULD CAUSE SERIOUS INJURY OR DEATH.

MAXIMUM TOWING SPEED 5 M.P.H. (8 K.M.H.)

MAXIMUM TOWING GRADE 25%.







4.11 TOW BAR (IF EQUIPPED)

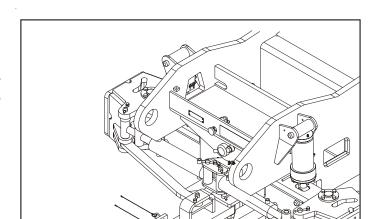
▲ WARNING

RUNAWAY VEHICLE/MACHINE HAZARD. MACHINE HAS NO TOWING BRAKES. TOWING VEHICLE MUST BE ABLE TO CONTROL MACHINE AT ALL TIMES. ON-HIGHWAY TOWING NOT PERMITTED. FAILURE TO FOLLOW INSTRUCTIONS COULD CAUSE SERIOUS INJURY OR DEATH.

MAXIMUM TOWING SPEED 5 M.P.H. (8 K.M.H.)

MAXIMUM TOWING GRADE 25%.

Prior to towing the machine, complete the following:

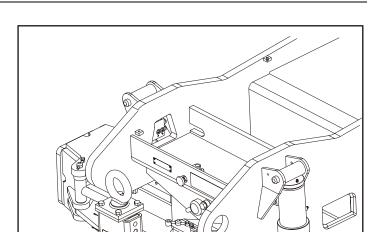




4. Position steer/tow selector valve for towing; pull valve knob OUT for towing. The machine is now in the towing mode.

After towing the machine, complete the following:

- Actuate steer/tow selector valve for steering; push valve knob IN to the actuated position.
- 2. Reconnect drive hubs by inverting disconnect cap.
- **3.** Disconnect towbar from towing vehicle and place it in the stowed position as shown below. The machine is now in the driving mode.





4.12 SHUT DOWN AND PARK

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

- 1. Drive machine to a reasonably well protected area.
- 2. Ensure boom is lowered over rear drive axle.
- 3. Push in the Emergency Stop at Platform Controls.
- Push in the Emergency Stop at Ground Controls. Position Platform/Ground Select switch to center OFF.
- If necessary, cover Platform Controls to protect instruction placards, warning decals and operating controls from hostile environment.

4.13 LIFTING AND TIE DOWN

Lifting

- Call JLG Industries or weigh the individual unit to find out the Gross Vehicle Weight.
- Place the boom in the stowed position with the turntable locked.
- 3. Remove all loose items from the machine.
- **4.** Properly adjust the rigging to prevent damage to the machine and so the machine remains level.



Tie Down

IMPORTANT

WHEN TRANSPORTING THE MACHINE, THE BOOM MUST BE FULLY LOWERED INTO THE BOOM REST.

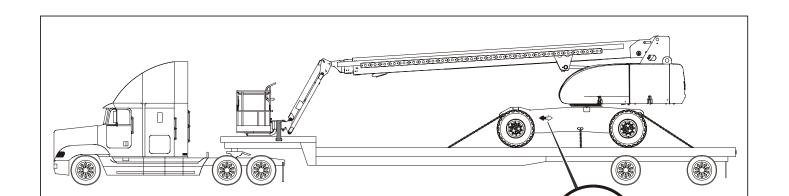
- 1. Remove all loose items from the machine.
- When transporting an 800S/860SJ a step-deck or single-drop trailer is required. To avoid damage to the platform and to obtain proper weight distribution, load the machine onto the trailer as follows;
 - a. Position the boom over the front wheels.

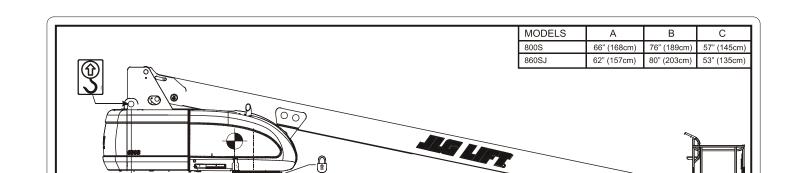
IMPORTANT

DRIVE AND STEER CONTROLLERS WILL BE REVERSED WHEN THE BOOM IS POSITIONED OVER THE FRONT WHEELS.

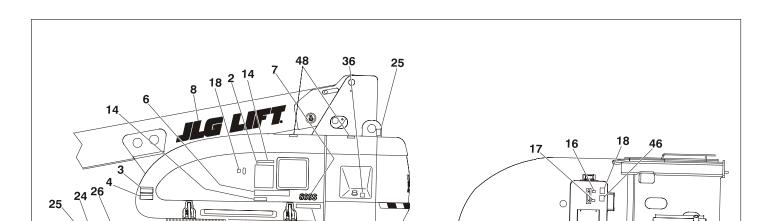
- c. Drive it onto the trailer with the boom and platform positioned towards the truck. Refer to Figure 4-5., Typical 800S/860SJ Transport.
- **3.** Secure the chassis and the platform using straps or chains of adequate strength.













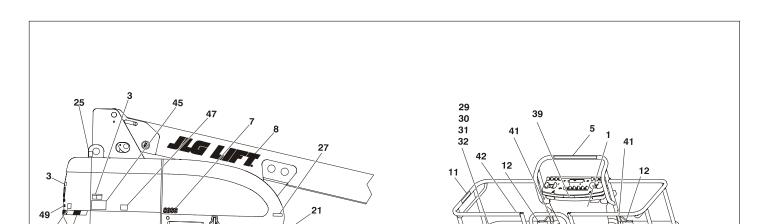




Table 4-1. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
1	1703797	1703992	1703925	1704809	1705053	1704811	1703924	1704767	1704810
2	1703798	1704819	1703931	1704821	1705055	1704823	1703930	1704820	1704822
3	1703805		1703937				1703936		
4	1703804	1701518	1703949	1701518	1701518	1701518	1703948	1701518	1701518
5	1705015						1705015		
6	1703808						1703808		



Table 4-1. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
13	1705088	1705088 (800S) 1704995 (860SJ)	1704101				1704099		
14	1705089	1705089 (800S) 1704996 (860SJ)	1704109				1704107		



Table 4-1. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
25	1701500	1701500	1701500	1701500	1701500	1701500	1701500	1701500	1701500
26	1701501	1701501	1701501	1701501	1701501	1701501	1701501	1701501	1701501
27									
28									
29									
30									
31							-		



Table 4-1. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
40									
41									
42									
43									
44	1701499	1701499	1701499	1701499	1701499	1701499	1701499	1701499	1701499
45	3252781	3252781	3252781	3252781	3252781	3252781	3252781	3252781	3252781
46	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412



Table 4-2. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
1	1703797	1703992	1703925	1704809	1705053	1704811	1703924	1704767	1704810
2	1703798	1704819	1703931	1704821	1705055	1704823	1703930	1704820	1704822
3	1703805		1703937				1703936		
4	1703804	1701518	1703949	1701518	1701518	1701518	1703948	1701518	1701518
5	1705015						1705015		
6	1703808						1703808		
7	1704906	1704906	1704906	1704906	1704906	1704906	1704906	1704906	1704906



Table 4-2. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
13	1705088	1705088 (800S) 1704995 (860SJ)	1704101				1704099		
14	1705089	1705089 (800S) 1704996 (860SJ)	1704109				1704107		



Table 4-2. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
25	1701500	1701500	1701500	1701500	1701500	1701500	1701500	1701500	1701500
26	1701501	1701501	1701501	1701501	1701501	1701501	1701501	1701501	1701501
27									
28									
29									
30									
31									



Table 4-2. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	ANSI 0270907-2 0270908-2	Australian 0270909-2 0270910-2	China/ English 0270931-1 0270932-1	Dutch 0270915-2 0270916-2	Finnish 0271830-2 0271831-1	French 0270919-2 0270920-2	French/ English 0270929-1 0270930-1	German 0270913-2 0270914-2	Italian 0270917-2 0270918-2
40									
41									
42									
43									
44	1701499	1701499	1701499	1701499	1701499	1701499	1701499	1701499	1701499
45	3252781	3252781	3252781	3252781	3252781	3252781	3252781	3252781	3252781
46	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412	1704412



Table 4-3. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	Japan 0270923-1 0270924-1	Korean 0270925-1 0270926-1	Portuguese 0271392-2 0271393-2	Portuguese/ Spanish 0270933-1 0270934-1	Spanish 0270921-2 0270922-2	Spanish/ English 0270927-1 0270928-1	Swedish 0271832-2 0271833-2	UK 0270911-2 0270912-2
1	1703926	1703927	1704985	1703928	1704812	1703923	1705054	1704808
2	1703932	1703933	1704986	1703934	1704824	1703929	1705056	1704819
3	1703938	1703939		1703940		1703935		
4	1703950	1703951	1701518	1703952	1701518	1703947	1701518	1701518
5						1705015		
6						1703808		
7	1704906	1704906	1704906(1704906(8	1704906	1704906	1704906	1704906



Table 4-3. Decal Location Legend - Rear Entry Platform

Item # 800S 860SJ	Japan 0270923-1 0270924-1	Korean 0270925-1 0270926-1	Portuguese 0271392-2 0271393-2	Portuguese/ Spanish 0270933-1 0270934-1	Spanish 0270921-2 0270922-2	Spanish/ English 0270927-1 0270928-1	Swedish 0271832-2 0271833-2	UK 0270911-2 0270912-2
16	1701502	1701502	1701502	1701502	1701502	1701502	1701502	1701502
17	1701503	1701503	1701503	1701503	1701503	1701503	1701503	1701503
18	1701504	1701504	1701504	1701504	1701504	1701504	1701504	1701504
19				1704008		1704007		
20	1702631	1702631	1702631	1702631	1702631	1702631	1702631	1702631
21	1700584	1700584	1700584	1700584	1700584	1700584	1700584	1700584
22						-	-	



Table 4-3. Decal Location Legend - Rear Entry Platform

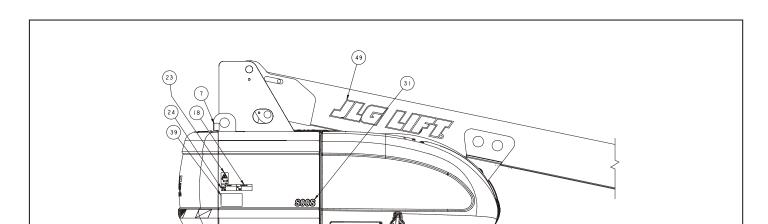
Item # 800S 860SJ	Japan 0270923-1 0270924-1	Korean 0270925-1 0270926-1	Portuguese 0271392-2 0271393-2	Portuguese/ Spanish 0270933-1 0270934-1	Spanish 0270921-2 0270922-2	Spanish/ English 0270927-1 0270928-1	Swedish 0271832-2 0271833-2	UK 0270911-2 0270912-2
33								
34	1703980	1703981	1701600	1703985	1701791	1703983	1701600	
35	1703475	1703475	1703475(1703475(8	1703475	1703475	1703475	1703475
	(800S)	(800S)	800S)	00S)	(800S)	(800S)	(800S)	(800S)
	1703482	1703482	1703482	1703482	1703482	1703482	1703482	1703482
	(860SJ)	(860SJ)	(860SJ)	(860SJ)	(860SJ)	(860SJ)	(860SJ)	(860SJ)
36							-	
37				1				

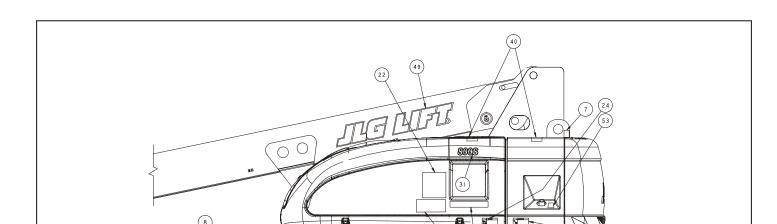


Table 4-3. Decal Location Legend - Rear Entry Platform

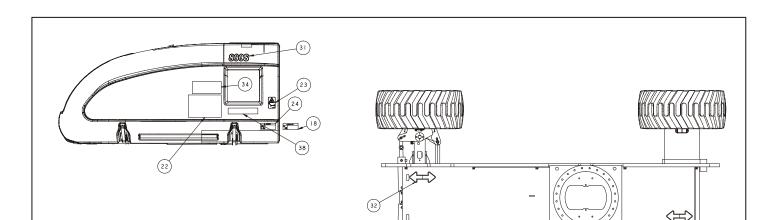
Item # 800S 860SJ	Japan 0270923-1 0270924-1	Korean 0270925-1 0270926-1	Portuguese 0271392-2 0271393-2	Portuguese/ Spanish 0270933-1 0270934-1	Spanish 0270921-2 0270922-2	Spanish/ English 0270927-1 0270928-1	Swedish 0271832-2 0271833-2	UK 0270911-2 0270912-2
48	1701691	1701691	1701691	1701691	1701691	1701691	1701691	1701691
49								
50								
51								
52								



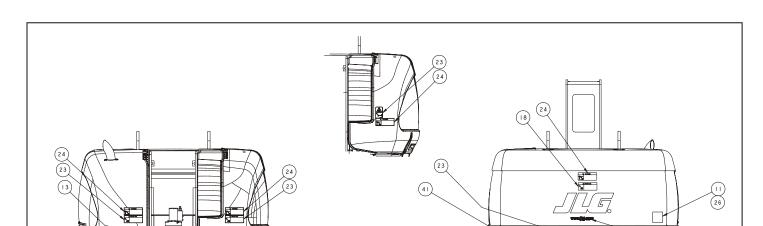














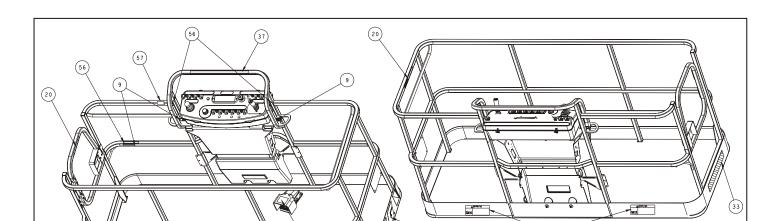




Table 4-4. Decal Location Legend, 800S - Side Entry Platform

Item #	ANSI 0274499-3	Korean 0274501-3	Chinese 0274503-3	Spanish 0274513-3	Portuguese 0274505-4	French 0274507-3	Japanese 0274511-3
1							
2	1701499	1701499	1701499	1701499	1701499	1701499	1701499
3	1701502	1701502	1701502	1701502	1701502	1701502	1701502
4	1701503	1701503	1701503	1701503	1701503	1701503	1701503
5	1701509	1701509	1701509	1701509	1701509	1701509	1701509
6							
7	1703811	1703811	1703811	1703811	1703811	1703811	1703811
8	1703814	1703814	1703814	1703814	1703814	1703814	1703814



Table 4-4. Decal Location Legend, 800S - Side Entry Platform

Item #	ANSI 0274499-3	Korean 0274501-3	Chinese 0274503-3	Spanish 0274513-3	Portuguese 0274505-4	French 0274507-3	Japanese 0274511-3
19							
20	1702868	1705969	1702868	1704001	1705967	1704000	
21	1703797	1703927	1703925	1703923	1705895	1703924	1703926
22	1705336	1705345	1705348	1705917	1705896	1705347	1705344
23	1703804	1703951	1703949	1703947	1705898	1703948	1703950
24	1703805	1703939	1703937	1703935	1705897	1703936	1703938
25		1703981	1703982	1703983	1705902	1703984	1703980
26	3251813		3251813	3251813	3251813	3251813	3251813
27							



Table 4-4. Decal Location Legend, 800S - Side Entry Platform

Item #	ANSI 0274499-3	Korean 0274501-3	Chinese 0274503-3	Spanish 0274513-3	Portuguese 0274505-4	French 0274507-3	Japanese 0274511-3
37	1705015	1705015	1705015	1705015	1705015	1705015	1705015
38	1706941	1706941	1706941	1706941	1706941	1706941	1706941
39	3252781	3252781	3252781	3252781	3252781	3252781	3252781
40	1701691	1701691	1701691	1701691	1701691	1701691	1701691
41							
42							
43							
44							
45							



Table 4-4. Decal Location Legend, 800S - Side Entry Platform

Item #	ANSI 0274499-3	Korean 0274501-3	Chinese 0274503-3	Spanish 0274513-3	Portuguese 0274505-4	French 0274507-3	Japanese 0274511-3
55							
56							
57							
58							



Table 4-5. Decal Location Legend, 860SJ - Side Entry Platform

Item #	ANSI 0274500-3	Korean 0274502-3	Chinese 0274504-3	Spanish 0274514-3	Portuguese 0274506-4	French 0274508-3	Japanese 0274512-3
1							
2	1701499	1701499	1701499	1701499	1701499	1701499	1701499
3	1701502	1701502	1701502	1701502	1701502	1701502	1701502
4	1701503	1701503	1701503	1701503	1701503	1701503	1701503
5	1701509	1701509	1701509	1701509	1701509	1701509	1701509
6							
7	1703811	1703811	1703811	1703811	1703811	1703811	1703811
8	1703814	1703814	1703814	1703814	1703814	1703814	1703814



Table 4-5. Decal Location Legend, 860SJ - Side Entry Platform

Item #	ANSI 0274500-3	Korean 0274502-3	Chinese 0274504-3	Spanish 0274514-3	Portuguese 0274506-4	French 0274508-3	Japanese 0274512-3
19							
20	1702868	1705969	1705968	1704001	1705967	1704000	
21	1703797	1703927	1703925	1703923	1705895	1703924	1703926
22	1705336	1705345	1705348	1705917	1705896	1705347	1705344
23	1703804	1703951	1703949	1703947	1705898	1703948	1703950
24	1703805	1703939	1703937	1703935	1705897	1703936	1703938
25		1703981	1703982	1703983	1705902	1703984	1703980
26	3251813		3251813	3251813	3251813	3251813	3251813
27					= =	= =	



Table 4-5. Decal Location Legend, 860SJ - Side Entry Platform

Item #	ANSI 0274500-3	Korean 0274502-3	Chinese 0274504-3	Spanish 0274514-3	Portuguese 0274506-4	French 0274508-3	Japanese 0274512-3
37	1705015	1705015	1705015	1705015	1705015	1705015	1705015
38	1706941	1706941	1706941	1706941	1706941	1706941	1706941
39	3252781	3252781	3252781	3252781	3252781	3252781	3252781
40	1701691	1701691	1701691	1701691	1701691	1701691	1701691
41							
42							
43							
44							
45							



Table 4-5. Decal Location Legend, 860SJ - Side Entry Platform

Item #	ANSI 0274500-3	Korean 0274502-3	Chinese 0274504-3	Spanish 0274514-3	Portuguese 0274506-4	French 0274508-3	Japanese 0274512-3
55							
56							
57							
58							



SECTION 5. EMERGENCY PROCEDURES

5.1 GENERAL

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

5.2 INCIDENT NOTIFICATION

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

In USA:

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

IMPORTANT

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

5.3 EMERGENCY OPERATION

Operator Unable to Control Machine



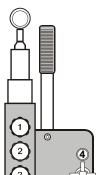
Platform or Boom Caught Overhead

If the platform or boom becomes jammed or snagged in overhead structures or equipment, rescue platform occupants prior to freeing the machine.

5.4 EMERGENCY TOWING PROCEDURES

Towing this machine is prohibited, unless properly equipped. However, provisions for moving the machine have been incorporated. For specific procedures, refer to Section 4.

5.5 MANUAL DESCENT INSTRUCTIONS (IF EQUIPPED)





To Retract and Lower Boom

- 1. Turn knob #1 and #4 clockwise until tight.
- 2. Turn knobs #2 and #3 counterclockwise 3 turns.
- 3. Pump the hand pump until tight.
- **4.** After telescope has fully retracted turn knob #4 counterclockwise until fully open to continue lowering boom.

To Lower Boom with Fully Retracted Telescope

- Turn knob #1 and #3 clockwise until tight.
- 2. Turn knob #2 counterclockwise 3 turns.
- 3. Turn knob #4 counterclockwise until fully open.
- 4. Pump the hand pump until tight.

NOTE: When the manual descent operation has been completed, knobs #1, #2, and #3 should be open (counterclockwise), knob #4 should be closed (clockwise).

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SECTION 6. GENERAL SPECIFICATIONS & OPERATOR MAINTENANCE

6.1 INTRODUCTION

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

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

Other Publications Available:

6.2 OPERATING SPECIFICATIONS

Table 6-1. Operating Specifications

Maximum Work Load (Capacity) Unrestricted: Restricted	500 lb (230 kg) Refer to Capacity Decals on machine for restricted platform capacities
Maximum Capacity - Dual Rating 800S 860SJ	1000 lb. (450 kg) 750 lb. (340 kg)



Table 6-1. Operating Specifications

Maximum Drive Speed:	3.5 mph (1.5 m/s)
Max. Hydraulic System Pressure	4500 psi (310 Bar)
Maximum Wind Speed	28 mph (12.5 m/s)
Maximum Manual Force	400 N
Electrical System Voltage	12 Volts
Gross Machine Weight (Platform Empty)	
800S	34,700 lbs. (15,740 kg)
860SJ	37,900 lbs. (17,191 kg)

^{*} With boom in stowed position

Specifications and Performance Data

Table 6-2. Specifications and Performance Data

Swing	360°
Tail Swing	4'8" (1.42 m)
Platforms	36"x72" (0.91mx1.83m) 36"x96" (0.91mx2.44m)
Overall Width	8' 2" (2.5 m)
Stowed Height 800S 860SJ	9' 10.6" (3.01 m) 10' (3.04 m)
Stowed Length	37' 3 25" (11 /l m)



Table 6-2. Specifications and Performance Data

Ground Bearing Pressure - 800S	
15-625	72 psi (5.0 kgm/cm ²)
15-625FF	79 psi (5.5 kgm/cm ²)
41/18LLx22.5	68 psi (4.8 kgm/cm ²)
Ground Bearing Pressure - 860SJ	
15-625	81 psi (5.7 kgm/cm ²)
15-625FF	92 psi (6.5 kgm/cm ²)
41/18LLx22.5	79 psi (5.5 kgm/cm ²)
Max. Tire Load - 800S	
15-625	16,900 lbs. (7665 kg)
15-625FF	17,200 lbs. (7802 kg)
44/4011 00 5	47.000 (70501.)

Capacities

Table 6-3. Capacities

Approx. 31 gallons (117 liters)
Approx. 47.8 gallons (181 liters)
4.5 Quarts (4.25 L) w/Filter
5 Quarts (4.5 L) 11 Quarts (10.5 L) w/Filter 16 Quarts (15 L) 10.6 quarts (10 L) 4.5 Quarts (4.25 L) w/Filter



Engine Data

Table 6-4. Ford LRG-425 Specifications

Туре	Water-cooled
Fuel	Gasoline
Oil Capacity	4.5 Quarts (4.25 L) w/Filter
Idle RPM	1000
Low RPM	1800
High RPM	2800
Alternator	95 Amp, Belt Drive
Fuel Consumption	
Low RPM	3.45 GPH (13.06 lph)
High RPM	4 60 GPH (17 41 lph)

Table 6-5. Deutz F4M2011 Specifications

Туре	Liquid Cooled (Oil)
Fuel	Diesel
Oil Capacity Cooling System Crankcase Total Capacity	5 Quarts (4.5 L) 11 Quarts (10.5 L) w/Filter 16 Quarts (15 L)
Idle RPM	1000
Low RPM	1800
High RPM	2800
Alternator	55 Amp, belt drive
Fuel Consumption	



Table 6-6. Caterpillar 3044C

Туре	Four Stroke Cycle
Cylinders	4 in-line
Bore	3.70 inch (94 mm)
Stroke	4.72 inch (120 mm)
Aspiration	turbocharged
Compression ratio	19:1
Displacement	203 in ³ (3.33 L)
Firing Order	1-3-4-2
Rotation (viewed from flywheel)	Counterclockwise
Oil Capacity (w/filter)	10.6 quarts (10 L)

Table 6-7. GM 3.0L

Fuel	Gasoline or Gasoline/LP Gas
No. of Cylinders	4
BHP Gasoline LP	83 hp @ 3000 rpm 75 hp @ 3000 rpm
Bore	4.0 in. (101.6 mm)
Stroke	3.6 in. (91.44 mm)
Displacement	181 cu.in. (3.0 L, 2966 cc)
Oil Capacity w/filter	4.5 qts. (4.25 L)
Minimum Oil Pressure at idle	6 psi (0.4 Bar) @ 1000 rpm



Battery

Table 6-8. Battery Specifications

Voltage	12 Volt
Туре	31-950
Cold Cranking Amps	950 CCA @ 0° F (-18° C)
Reserve Capacity	205 Minutes @ 80° F (27° C)

Tires

Table 6-9. Tire Specifications

Size	Туре	Ply Rating	Load Range	Weight (Tire & Wheel)

Major Component Weights

Table 6-10. Component Weights

Component	Pounds	Kilograms
Turntable (bare)	3700	1678
Counterweight (800S)	7000	3175
Counterweight (860SJ)	8750	3969
Upright	1050	476
Tower	685	311
Fly Boom (SJ)	472	214
Fly Boom (S)	490	222
Mid Boom (SJ)	750	340



Hydraulic Oil

Table 6-11. Hydraulic Oil

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

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 Mobilfluid 424 is desired, contact JLG Industries for proper recommendations.

Table 6-12. Mobilfluid 424 Specs

т		
SAE Grade	10W30	
Gravity, API	29.0	
-		
Density, Lb/Gal. 60°F	7.35	
Pour Point, Max	-46°F (-43°C)	
Flash Point, Min.	442°F (228°C)	



Table 6-13. Mobil DTE 13M Specs

ISO Viscosity Grade	#32	
Specific Gravity	0.877	
Pour Point, Max	-40°F (-40°C)	
Flash Point, Min.	330°F (166°C)	
Viscosity		
at 40° C	33cSt	
at 100° C	6.6 cSt	
at 100° F	169 SUS	
at 210° F	48 SUS	
cn at -20° F	6 200	

Table 6-14. Mobil EAL 224H Specs

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



Table 6-15. UCon Hydrolube HP-5046

Туре	Synthetic Biodegradable	
Specific Gravity	1.082	
Pour Point, Max	-58°F (-50°C)	
рН	9.1	
Viscosity		
at 0° C (32° F)	340 cSt (1600SUS)	
at 40° C (104° F)	46 cSt (215SUS)	
at 65° C (150° F)	22 cSt (106SUS)	
Viscosity Index	170	

Table 6-16. Exxon Univis HVI 26 Specs

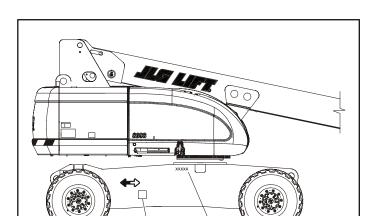
Specific Gravity	32.1	
Pour Point	-76°F (-60°C)	
Flash Point	217°F (103°C)	
Viscosity		
at 40° C	25.8 cSt	
at 100° C	9.3 cSt	
Viscosity Index 376		
NOTE: Mobil/Exxon recommends that this oil be checked		

NOTE: Mobil/Exxon recommends that this oil be checked on a yearly basis for viscosity.

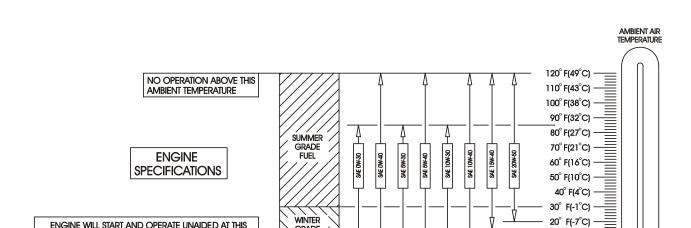


6.3 SERIAL NUMBER LOCATION

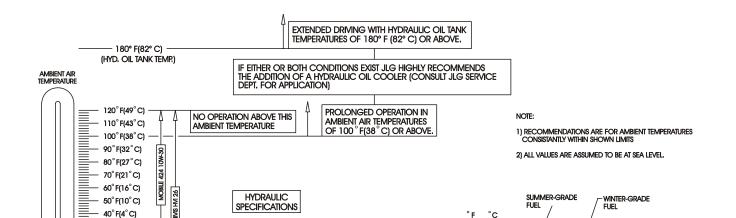
A serial number plate is affixed to the left rear side of the frame. If the serial number plate is damaged or missing, the machine serial number is stamped on the left side of the frame.



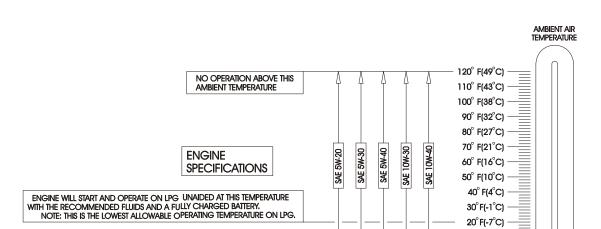




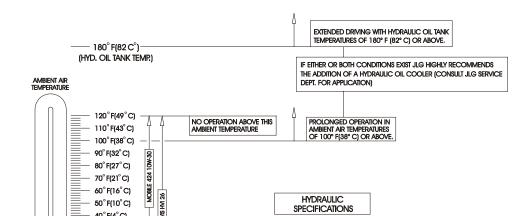




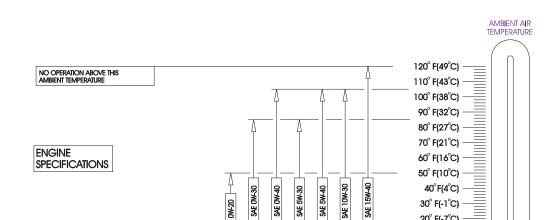




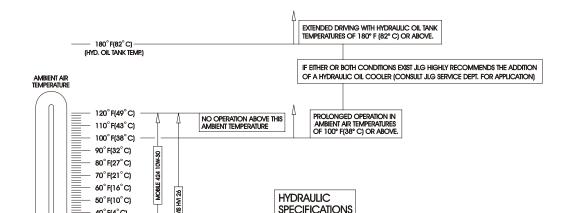


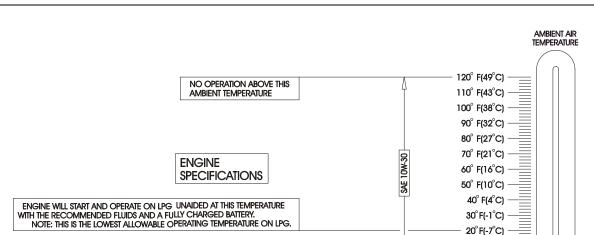




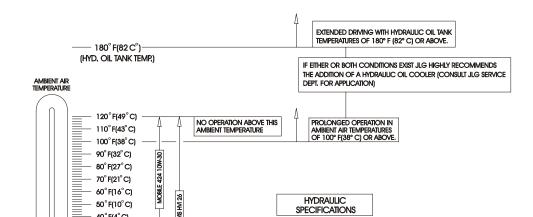




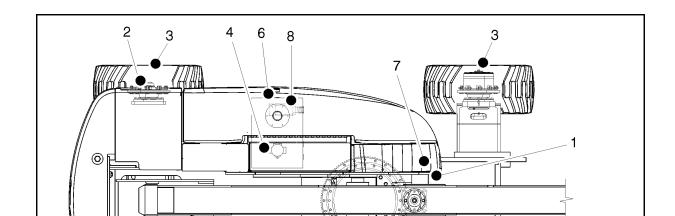














6.4 OPERATOR MAINTENANCE

NOTE: The following numbers correspond to those in Figure 6-10., Operator Maintenance and Lubrication Diagram.

Table 6-17. Lubrication Specifications

KEY	SPECIFICATIONS
MPG	Multipurpose Grease having a minimum dripping point of 350° F (177° C). Excellent water resistance and adhesive qualities, and being of extreme pressure type. (Timken OK 40 pounds minimum.)
EPGL	Extreme Pressure Gear Lube (oil) meeting API service classification GL-5 or MIL-Spec MIL-L-2105

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

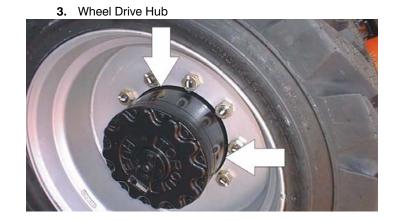
1. Swing Bearing - Internal Ball Bearing





2. Wheel Bearings











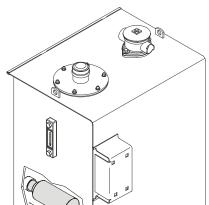




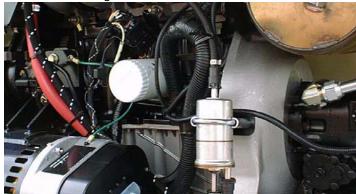














10. Oil Change w/Filter - Deutz



11. Oil Change w/Filter - Caterpillar

Lube Point(s) - Fill Cap/Spin-on Element (JLG P/N 7026855)

Capacity - 10.6 Quarts

Lube - EO

Interval - 3 Months or 150 hours of operation

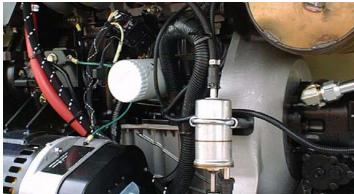
Comments - Check level daily/Change in accordance with engine manual.



12. Oil Change w/Filter - GM









14. Fuel Filter - Deutz



15. Fuel Filter - Caterpillar

Lube Point(s) - Replaceable Element Interval - Every Year or 600 hours of operation

16. Fuel Filter (Gasoline) - GM

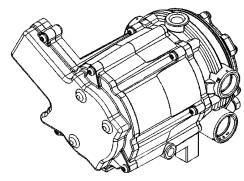
Lube Point(s) - Replaceable Element Interval - Every 6 months or 300 hours of operation

17. Air Filter





18. Electronic Pressure Regulator (LP only)



Interval - 3 Months or 150 hours of operation

19. Fuel Filter (Propane) - GM Engine



Interval - 3 Months or 150 hours of operation



6.5 TIRES & WHEELS

Tire Inflation

The air pressure for pneumatic tires must be equal to the air pressure that is stenciled on the side of the JLG product or rim decal for safe and proper operational characteristics.

Tire Damage

For pneumatic tires, JLG Industries, Inc. recommends that when any cut, rip, or tear is discovered that exposes sidewall or tread area cords in the tire, measures must be taken to remove the JLG product from service immediately. Arrangements must be made for replacement of the tire or tire assembly.

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

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

If a tire is damaged but is within the above noted criteria, the tire



Tire Replacement

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

- Equal or greater ply/load rating and size of original
- Tire tread contact width equal or greater than original
- Wheel diameter, width, and offset dimensions equal to the original
- Approved for the application by the tire manufacturer

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

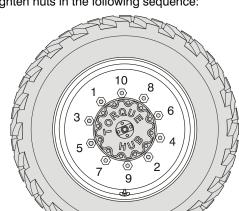
It is extremely important to apply and maintain proper wheel mounting torque.

▲ 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

2. Tighten nuts in the following sequence:





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

Table 6-18. Wheel Torque Chart

TORQUE SEQUENCE				
1st Stage	2nd Stage	3rd Stage		
70 ft. lbs. (95 Nm)	170 ft. lbs. (225 Nm)	300 ft. lbs. (405 Nm)		

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

6.6 DRAINING OIL BUILD UP FROM THE PROPANE REGULATOR

During the course of normal operation oils may build inside the primary and secondary chambers of the propane pressure regulator. These oils may be a result of poor fuel quality, contamination of the fuel supply chain, or regional variation in the make up of the fuel. If the build up of the oil is significant this can effect the operation of the fuel control system. Refer to Section 6.4, Operator Maintenance for maintenance intervals. More frequent draining may be required if the fuel supply has been contaminated.





4. Push in the Emergency Switch once the engine stops.

5. Disconnect the electrical connection to the LPG fuel temperature sensor in the auxiliary fuel port of the EPR.

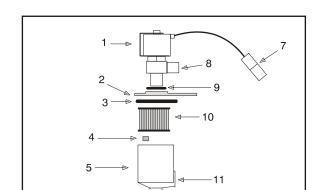


6. Remove the retainer clip for the LPG fuel temperature sensor and remove the sensor from the regulator body.





6.7 PROPANE FUEL FILTER REPLACEMENT



Removal

- **1.** Relieve the propane fuel system pressure. Refer to Propane Fuel System Pressure Relief.
- 2. Disconnect the negative battery cable.
- Slowly loosen the Filter housing retaining bolt and remove it.
- 4. Pull the filter housing from the Electric lock off assembly.
- 5. Locate Filter magnet and remove it.
- 6. Remove the filter from the housing.
- 7. Remove and discard the housing seal.



Installation

IMPORTANT

BE SURE TO REINSTALL THE FILTER MAGNET INTO THE HOUSING BEFORE INSTALLING NEW SEAL

- 1. Install the mounting plate to lock off O-ring seal.
- 2. Install the retaining bolt seal.
- 3. Install the housing seal.
- 4. Drop the magnet into the bottom of the filter housing.
- 5. Install the filter into the housing.

6.8 PROPANE FUEL SYSTEM PRESSURE RELIEF

A 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:

- Close the manual shut-off valve on the propane fuel tank.
- 2 Start and run the vehicle until the engine stalls

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CECTION	INSPECTION	ANID		$I \cap \cap$
SF(.II()N / =	INSPECTION	ΔNIJ	RFPAIR	1 ()(7

SECTION 7. INSPECTION AND REPAIR LOG

Machine Serial Number	

Table 7-1. Inspection and Repair Log

Date	Comments



SECTION 7 - INSPECTION AND REPAIR LOG

Table 7-1. Inspection and Repair Log

Date	Comments

PROPOSITION 65 WARNING

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





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