

# **Operation, Safety, Service and Maintenance Manual**

Keep this manual with the machine at all times.

# LiftPod Models FS80 & FS60



LIFTPOD by JLG www.liftpod.com P/N - 1001070465

24 October 2011

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# FOREWORD

Original Instructions. Keep this manual 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. (JLG) reserves the right to make specification changes without prior notification. Contact JLG 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



INDICATES AN IMMINENTLY HAZARDOUS SITUATION. IF NOT AVOIDED, <u>will</u> result in serious injury or death. This decal will have a red background.

# 

INDICATES A POTENTIALITY HAZARDOUS SITUATION. IF NOT AVOIDED, <u>May</u> result in minor or moderate injury. It may also alert against unsafe practices. This decal will have a yellow background.

### **WARNING**

INDICATES A POTENTIALITY HAZARDOUS SITUATION. IF NOT AVOIDED, <u>Could</u> result in serious injury or death. This decal will have an orange background.

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· Standards and regulations

compliance information

· Questions regarding spe-

cial product applications

· Questions regarding prod-

uct modifications

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THIS PRODUCT MUST COMPLY WITH ALL SAFETY RELATED BULLE-TINS. CONTACT JLG OR THE LOCAL AUTHORIZED JLG REPRESENTA-TIVE FOR INFORMATION REGARDING SAFETY RELATED BULLETINS WHICH MAY HAVE BEEN ISSUED FOR THIS PRODUCT.

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### For:

- Accident reporting
- Product safety publications
- · Current owner updates
- Questions regarding
   product safety

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or your local JLG office (see addresses on manual's rear cover)

# **REVISION LOG**

Original Issue of Manual 24 July 2009
Revised 14 August 2009
Revised
Revised
Revised 4 April 2011
Revised 12 April 2011
Revised
Revised

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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. 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 must also be established by a qualified person and must be followed to ensure that the machine is safe to operate.

Before operation, the operator shall:

- 1. Read and understand the manufacturer's operating instruction(s) and user's safety rules or have them explained.
- 2. Understand all labels, warnings and instructions displayed on the machine or have them explained.
- **3.** Ensure all occupants of the machine wear appropriate personal protection equipment (PPE) for the conditions, including the environment in which the machine will be operated.

If there are any questions with regard to safety, training, inspection, maintenance, application, and operation, please contact JLG.

## 

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

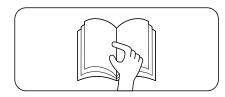


Figure 1-1. Read your manual

#### **Operator Training and Knowledge**

- Do not operate this machine until the operator has read and understood the Operation, Safety, Service and Maintenance Manual.
- Only competent personnel can operate 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**

- The operator is to take safety measures to avoid all hazards in the work area prior to machine operation.
- Do not operate or raise the platform while on trucks, trailers, railway cars, floating vessels, scaffolds or other equipment unless approved in writing by JLG.
- This machine can be operated in temperatures of 0°C to 40°C (32°F to 104°F). Consult JLG for operation outside this range. Machine performance may vary from published specification in very hot or cold conditions.

### **Machine Inspection**

- Before machine operation, perform inspections and functional checks. Refer to Section 2 of this manual for further instructions.
- Do not operate this machine until it has been serviced and maintained according to requirements specified in accordance with this manual.

### **WARNING**

# MODIFICATION OR ALTERATION OF A MACHINE 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.
- Avoid any build up of debris on platform floor. Keep mud, oil, grease, and other slippery substances from footwear and platform floor.

## 1.3 OPERATION

#### General

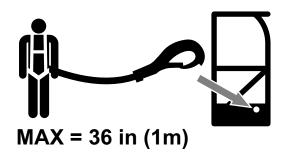
- Do not use the machine for any purpose other than positioning personnel, their tools and equipment.
- Never operate a machine that is not working properly. If a malfunction occurs, shut down the machine and contact JLG.
- Never slam a control switch or lever through neutral to an opposite direction. 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.
- Always ensure that power tools are properly stowed and never left hanging by their cord from the platform work area.
- Fully lower platform and shut off all power before leaving machine.
- No riders are permitted on the machine. Only the operator is permitted in the machine during operation.

- Do not allow ropes to contact surfaces with a temperature higher than 60°C/140°F
- When performing welding, cutting or grinding operations, avoid direct contact of heat, sparks and debris with the ropes and carriage drive assembly.
- Charge batteries only in a well ventilated area.

Vibrations emitted by this machine is 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).

### **Trip and Fall Hazard**

- Do not enter or leave the platform while elevated.
- JLG recommends that the operator utilises a fall restraint system in the platform with a maximum 36 inch (91.4cm)



lanyard attached to the authorised lanyard anchorage point. For further information regarding fall protection requirements on JLG products, contact JLG.

- Before operating the machine, make sure all railings and gates are fastened in their proper position.
- Keep both feet firmly positioned on the platform floor at all times. Never use ladders, boxes, steps, planks, or similar items on platform to provide additional reach.



• Never use the mast assembly to enter or leave the platform.

- Use extreme caution when entering or leaving the platform. Ensure that the mast 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.

### **Electrocution Hazard**



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

- Maintain distance from electrical lines, apparatus, or any energized (exposed or insulated) parts according to the Minimum Approach Distance (MAD) as shown in Table 1-1.
- Allow for machine movement and electrical line swaying.

VOLTAGE RANGE (PHASE TO PHASE)	MINIMUM SAFE APPROACH DISTANCE - Feet (Meters)		
0-50KV	10 (3)		
Over 50KV to 200KV	15 (5)		
Over 200KV to 350KV	20 (6)		
Over 350KV to 500KV	25 (8)		
Over 500KV to 750KV	35 (11)		
Over 750KV to 1000KV	45 (14)		
<b>NOTE:</b> This requirement shall apply except where employer, local, or gov- ernmental regulations are more stringent.			

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

• Maintain a clearance of at least 10 ft. (3m) between any part of the machine and its occupants, their tools, and their equipment from any electrical line or apparatus car-

rying up to 50,000 volts. One foot (0.3m) additional clearance is required for every additional 30,000 volts or less.

• The minimum safe approach distance may be reduced if insulating barriers are installed to prevent contact, and if 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 safe 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 employer, local, or governmental requirements for work practices near energized equipment.

# **A** DANGER

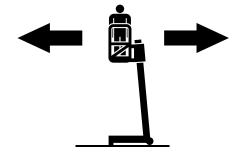
DO NOT MANEUVER MACHINE OR PERSONNEL INSIDE PROHIBITED ZONE (MAD). ASSUME ALL ELECTRICAL PARTS AND WIRING ARE ENERGIZED UNLESS KNOWN OTHERWISE.

### ad If hed if hed nce orkinance for

**Tipping Hazards** 

- Only elevate the platform on a firm and level surface.
- Check that the two wheels and the two adjustable feet are in contact with the ground prior to using the machine. Adjust the front feet to eliminate any base frame movement and check the bubble level indicates level prior to use.
- Ensure castor wheels are locked (if equipped).

• Do not perform work that will subject unit to a horizontal force or create a swaying motion of the platform.



- Do not elevate if wind exceeds a gentle breeze (5m/s, Beaufort scale 3 - small twigs in constant motion/flags fly extended). Refer to Table 5-2 for Australia and New Zealand wind rating.
- The user should be familiar with the operating surface.
- Do not elevate platform while on a slope, or on an uneven or soft surface.
- Before using on floors, bridges, and other surfaces, check allowable capacity of the surfaces.
- Never exceed the maximum platform capacity. Distribute loads evenly on platform floor and tool tray.
- Keep the base of the machine a minimum of 0.6m (2 ft) from holes, bumps, drop-offs, obstructions, debris, con-

cealed holes, and other potential hazards at the ground level.

- Never attempt to use the machine as a crane. Do not tieoff machine to any adjacent structure.
- Do not increase the platform size with unauthorised extensions or attachments, increasing the area exposed to wind will decrease stability.
- If mast assembly or platform is caught so that one or more wheels are off the ground, the operator must be removed before attempting to free the machine. Use cranes, forklift trucks, or other appropriate equipment to stabilize machine and remove personnel.

### **Crushing and Collision Hazards**



### **SECTION 1 - SAFETY PRECAUTIONS**

- Appropriate personal protection equipment must be worn by all operating and ground personnel.
- Check work area clearances above, on sides, and bottom of platform while moving, lifting or lowering platform.
- During operation keep all body parts inside platform railing.
- 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 machine's presence. Disconnect power to overhead cranes.
- Warn personnel not to work, stand, or walk under a raised platform. Position barricades on floor as necessary.

## 1.4 MOVING, LIFTING AND REPOSITIONING

### General

Never allow personnel in platform while moving, lifting or repositioning the machine.

This machine shall not be towed by a vehicle.

Ensure platform is fully retracted and completely empty of tools prior to disassembly, lifting or hauling.

Remove powerpack and tool tray (if fitted) from platform when transporting in a vehicle.

Refer to the Machine Operation section of this manual for lifting information.

### **Additional Safety Information**

- Do not use machine as ground for welding.
- Keep all naked flames and sharp edges away from ropes.
- Do not attempt to transport assembled machinery by forklift.
- Avoid contact of the ropes with stem pipes and other hot surfaces

# SECTION 2. PREPARATION AND INSPECTION

### 2.1 Personnel Requirements

This machine is a personnel handling device; so it is necessary that it be operated and maintained by competent 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 Requirements**

Before operating this machine the operator is required to have read and understood the Operation, Safety, Service and Maintenance Manual.

The operator must be familiar with:

- 1. Use and limitations of the controls in the platform and emergency controls.
- 2. Decals, instructions, and warnings on the machine.
- 3. Employer and government regulations.
- 4. Correct assembly of the machine.
- **5.** Use of approved fall protection device.

- **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, drop-offs are present.
- **8.** Means to avoid the hazards of unprotected electrical conductors.
- 9. Specific job requirements or machine application.

### **Operator Responsibility**

The operator must shut down the machine in case of a malfunction or other unsafe condition of either the machine or the job site.

### 2.2 Preparation, Inspection, and Maintenance

The following table covers the periodic machine inspections and maintenance recommended by JLG. Consult local regulations for any further requirements.

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.

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ТҮРЕ	FREQUENCY	PRIMARY Responsibility	SERVICE QUALIFICATION	REFERENCE
Pre-Start Inspection	Before starting each day or at each workshift change	Operator	User or Operator	Operation, Safety, Service & Maintenance Manual
Frequent Inspection	In service for 3 months; out of service for a period of more than 3 months; or purchased used.	Owner, Dealer or User	Qualified Mechanic (*)	Operation, Safety, Service & Maintenance Manual and applicable JLG LiftPod inspection form
Annual Machine Inspection	Every 12 months	Owner, Dealer or User	Qualified Mechanic (*)	Operation, Safety, Service & Maintenance Manual and applicable JLG LiftPod inspection form
5 Year Replacement	When rope is worn or no more than 5 years from first use. Refer to Figure 2-4. for wear criteria.	Owner, Dealer or User	Authorized JLG Service Centre	Factory Training
NOTE: Use this manual to perform inspections.				
<b>NOTE:</b> (*) A person who has acquired by training, qualifications, experience or a combination of these, the knowledge and skill enabling the person to inspect and repair the machine to the level required by the complexity of the task.				

Table 2-1. Inspection and Maintenance Table

### **Pre-Start Inspection**

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

- 1. Cleanliness Check all surfaces for leakage, debris or foreign objects.
- 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. (Reference Section 5.2, Decal Installation).
- 3. Operation, Safety, Service & Maintenance Manual Make sure a copy of the Operation, Safety, Service & Maintenance Manual is enclosed in the weather resistant storage container.
- **4. Assembly** The machine must be fully assembled in accordance with Section 3.3.
- 5. Walk-Around Inspection Refer to Section 2.3.
- 6. Powerpack Charge as required (Section 3.4).
- Function Check Once the Walk-Around Inspection is complete, perform a function check of all systems in an area free of overhead and ground level obstructions. Refer to Section 2.4 for more specific instructions.

# 2.3 DAILY WALK-AROUND INSPECTION

Begin the Walk-Around Inspection at item one (1) as noted on the diagram Figure 2-1. Continue around machine checking each item in sequence for the conditions listed in the following check list.

# 

TO AVOID POSSIBLE INJURY, BE SURE DIRECTION SELECTOR IS IN THE "OFF" POSITION DURING WALK-AROUND INSPECTION. DO NOT OPERATE MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED.

- **NOTE:** Do not overlook visual inspection of the base frame underside. Check this area for objects, debris, corrosion and cracks.
- **NOTE:** The mast and carriage components should be clean and free from oil, grease and dirt. Do not lubricate mast or carriage components, especially brake shoes.

#### **Walk-Around Inspection Components**

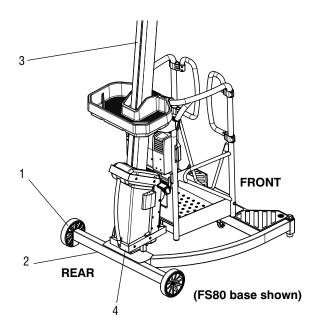


Figure 2-1. Daily Walk-Around Inspection (Sheet 1 of 2)

#### **SECTION 2 - PREPARATION AND INSPECTION**

- **NOTE:** On all components, make sure there are no loose or missing parts, everything is securely fastened, no visible damage, or excessive wear exists in addition to any other criteria mentioned.
  - 1. **Rear Wheels** Check for any debris stuck to or around wheels. Make sure bolts are fastened. Make sure castor locks operate properly (if equipped).
  - 2. Base Frame Check for cracks or corrosion, especially around the mast-stump base (see Figure 2-2.). Check level bubble is clean and secure.
  - 3. Mast Assembly No cracks or corrosion, especially around base and flange; no excess wear, kinks, nicks or damage; carriage running surfaces smooth and unob-structed; free of dust, oil & grease.
  - 4. Carriage Frame check for visible cracks; check rollers for visible wear; check carriage frame welds for visible cracks (see Figure 2-2.).
  - 5. Gearbox check for any oil leaks, especially around bottom shaft seal.
  - 6. Swivel Castor Mechanism and Adjustable Feet -Check for any debris stuck to or around wheels or mechanism. Check adjustable feet for damage. Rubber pads and tire must be in good order.

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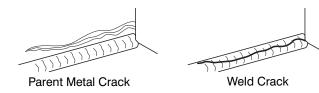
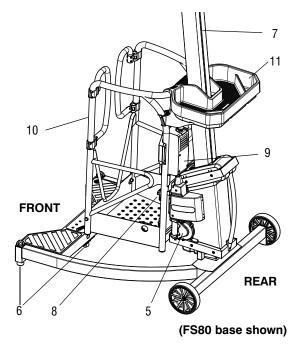
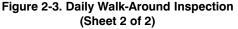


Figure 2-2. Examples of cracks

- 7. Rope Assembly Check rope is not frayed or damaged (Figure 2-4.). Ensure it is tensioned tightly and seated properly around take-up drum (view via carriage inspection window - see Figure 6-3.). Ensure it is seated correctly over mast-cap (Figure 2-5.) and at anchor point at back of mast (Figure 2-6.). Indications that rope needs replacement include:
  - 1. Frayed or fluffy rope (Figure 2-4.)
  - 2. Braiding no longer visible
  - 3. Sections of rope thinned down in diameter.
- 8. Manual Descent Crank Ensure it is present and securely attached (Figure 2-8.).
- 9. Powerpack and Control Console (optional) Ensure it is properly mounted and secured. Button, triggers and switches not obscured or damaged; decals secure and legible; emergency stop switch reset for operation; control markings legible. Battery is installed and secure.





### **SECTION 2 - PREPARATION AND INSPECTION**

- **10. Platform Assembly and Gate** Check mounting pins are not loose; platform railing is undamaged; platform latch is engaged on carriage (Figure 2-7.); self-closing entry gates are in proper working order; no cracks or corrosion visible.
- **11. Tool Tray** See next page for Tool Tray Pre-Start Inspection Procedure.

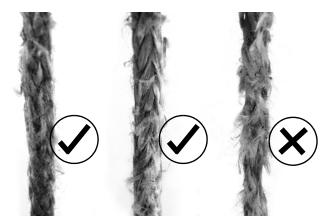


Figure 2-4. Examples of new, acceptable and unacceptable ropes

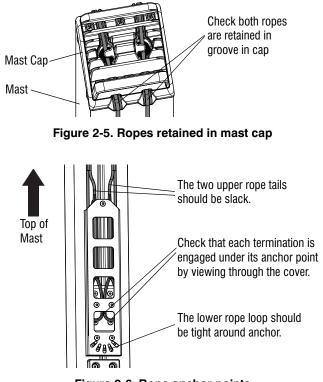


Figure 2-6. Rope anchor points

#### **SECTION 2 - PREPARATION AND INSPECTION**

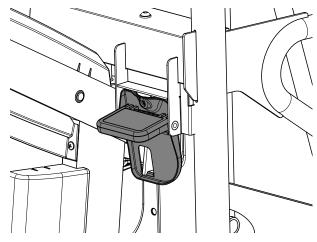


Figure 2-7. Platform latch shown engaged

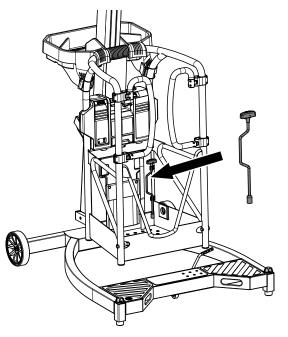


Figure 2-8. Location of manual descent crank

### **SECTION 2 - PREPARATION AND INSPECTION**

#### **Tool Tray Pre-Start Inspection**

Prior to use of the tool tray, check the following:

- Tool tray is seated securely on the platform rail.
- No cracks or bends in tray.
- Both of the clips are securely attached to the platform rail (Figure 2-9.).
- Capacity decal is in place and legible.

**Maximum Load**: The maximum permissible load on the tool tray is 15kg (33 lb.) evenly distributed.

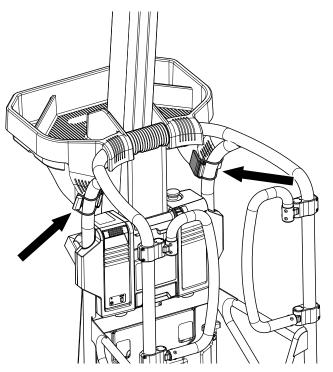


Figure 2-9. Tool tray installation

### 2.4 FUNCTION CHECK

Once the Walk-Around inspection is complete, perform a function check of all systems in an area free of overhead and ground level obstructions.



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 DEEMED SAFE FOR OPERATION.

#### **Function Check Items**

- 1. Base Brake Step on base to ensure the swivel castor retracts properly.
- 2. Adjustable Feet Check both rotate freely up and down; check that rubber pads are installed and not excessively worn.
- 3. Emergency Stop Button (optional powerpack) ensure all machine functions are disabled when the emergency stop button is activated (pressed in) - then **RESET** the emergency stop button by twisting it in the direction indicated by the arrows.



TO AVOID COLLISION AND INJURY IF PLATFORM DOES NOT STOP WHEN A CONTROL IS RELEASED, USE THE EMERGENCY STOP BUTTON TO STOP THE MACHINE.

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# **SECTION 3. MACHINE OPERATION**

### 3.1 GENERAL

**NOTE:** 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 function and operation.

### 3.2 MACHINE DESCRIPTION

The JLG LiftPod is a battery powered portable personnel platform. The platform is mounted to a mast and elevating carriage mechanism. The personnel lift's intended purpose is to provide personnel access to areas above level ground. The platform must only be elevated on a firm, level, uniform surface.

The machine consists of seven parts:

- 1. Base Frame (FS80 base shown)
- 2. Carriage/Mast Assembly
- 3. Platform
- 4. Powerpack (optional)
- 5. Spare Battery (optional)



- 6. Charger (optional)
- 7. Tool Tray (optional)

### **SECTION 3 - MACHINE OPERATION**

The primary control console is located within the removable and **D**erechargeable powerpack.

The powerpack is attached to the machine within the platform.

With the installed powerpack, the operator can raise or lower the platform through its controls.

The machine has a self retracting swivel castor mounted under the front of the base which retracts out of ground contact when loaded.

The base of the FS80 machine consists of two fixed wheels and two adjustable feet, for leveling and stabilizing the base within 2 degrees of level from front and back only. Prior to operation the adjustable feet are to be engaged to a point where the base is level as seen on the level bubble (Figure 3-8.).

The base of the FS60 machine consists of two rotating castors and two adjustable feet. Prior to operation the adjustable feet are to be engaged to a point where the base is level as seen on the bubble level. Also, the castor wheels must be locked prior to operation.

# Detailed Description

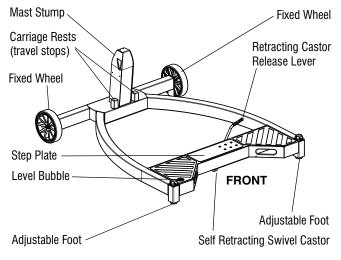


Figure 3-2. Base frame component description - FS80

Platform Swing Gates

Powerpack Latch Mount

Compartment (other side)

**Powerpack Mounts** 

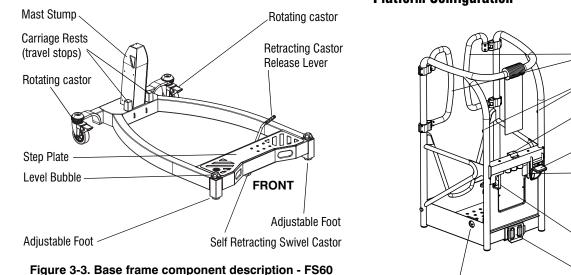
Platform Latch

Mounting Pin

Manual Storage

Mounting Pin

Platform Locator



#### **Platform Configuration**

Figure 3-4. Platform component description

Authorized Lanyard Anchorage Point

#### Mast/Carriage Components

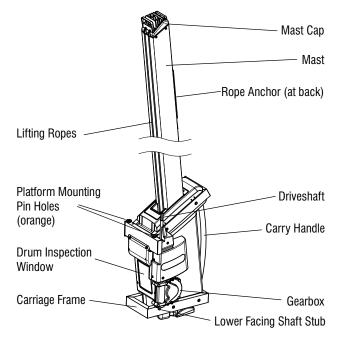


Figure 3-5. Mast/carriage component description

# 3.3 MACHINE OPERATION

### General

When the platform reaches the bottom of its travel, the rest position, the drive mechanism overrunning clutch creates a ratcheting, or buzzing noise, indicating that the machine has reached the fully lowered position.

The machine is fitted with an emergency brake which activates when the tension in the lifting ropes goes below 40kg (88 lbs).

When the platform is lowered to the rest position, the emergency brake swings into position, stopping further rotation of the rope drum and engaging a carriage lock-down latch onto the mast.

### 

IN THE EVENT THAT THE CARRIAGE LATCHES TO THE MAST WHEN FULLY LOADED OR THE ROPE CONTINUES TO FEED OUT AFTER THE PLATFORM HAS REACHED THE REST POSITION, THE MACHINE IS NOT WORKING PROPERLY AND MUST NOT BE USED UNTIL IT IS INSPECTED AND REPAIRED BY A QUALIFIED PERSON.

**NOTE:** Do not attempt to lift the mast off the base unless the carriage has been fully lowered.

#### **Getting Started**

The following control conditions must be met before the machine can be operated from the platform controls:

- Batteries must contain enough voltage to operate. Low battery warning on battery test panel indicates the need to charge the batteries. Batteries should be charged for 24 hours prior to first use.
- Emergency stop switch on optional powerpack must be in the **RESET** position (out).
- Both platform swing-in entry gates must be closed.

#### **Assembly of the Machine**

The JLG LiftPod is a user assembled machine. There are three basic parts that need to be assembled for operation. These parts are the Base Frame **1**, Carriage/Mast Assembly **2**, and the Platform **3**. Optional parts include the Powerpack **4**, and the Tool Tray **5** (Figure 3-1.).

# **WARNING**

DO NOT ATTEMPT TO ASSEMBLE OR USE A MAST ONTO A BASE FOR WHICH IT IS NOT INTENDED. EACH MAST HAS A "V" SHAPED GROOVE ALONG ITS LENGTH, WHICH WILL FIT WITHIN THE GROOVE ON A BASE STUMP FOR WHICH IT IS INTENDED. ALWAYS ENSURE THE MAST IS FULLY INSERTED ONTO THE BASE STUMP PRIOR TO OPERATION.

- 1. Position the base frame on a firm, level, uniform, supporting surface.
- 2. Push down on the base frame's step plate until the swivel castor retracts and the base sits on the adjustable feet (Figure 3-6.). The machine now rests on the two rear wheels, and the two adjustable feet at the front.
- **3.** For the FS60 machine's base (the 30FS base module), lock the castor wheels (Figure 3-7.).

## 

# CRUSH HAZARD - KEEP FEET CLEAR OF ADJUSTABLE FEET AND UNDERNEATH BASE WHEN STEPPING ON BASE TO RETRACT CASTOR.

4. Turn the adjustable feet until the level bubble is centred (see Figure 3-8.)



DO NOT USE THE MACHINE IF THE BASE CAN NOT BE LEVELLED.

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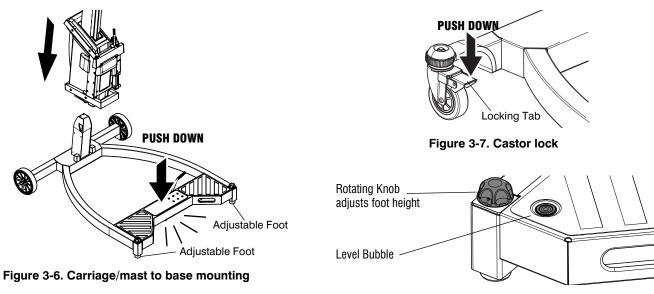


Figure 3-8. Detail view of level bubble

### **SECTION 3 - MACHINE OPERATION**

 Slide the carriage/mast assembly onto the mast stump. Make sure it is properly aligned and fully engaged. Never force it into position (see Figure 3-6.).

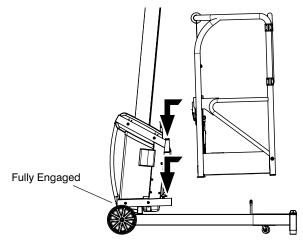


Figure 3-9. Attaching the platform to the carriage

- 6. Attach the platform to the carriage (see Figure 3-9.).
  - Make sure the platform's mounting pins are aligned with the holes in the carriage (A), then drop slowly down to seat properly.

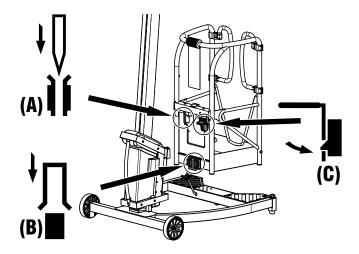


Figure 3-10. Platform attachment checks

- Ensure the platform locator (**B**) is properly engaged in the bottom of the carriage frame.
- Make sure the platform latch (C) is fully engaged. CHECK: Try to lift the platform out, if it does not release, then the platform has engaged properly.

#### **SECTION 3 - MACHINE OPERATION**

- **NOTE:** When reversing the procedure to disassemble the machine, pull the platform latch handle (**C**) to disengage the platform from the carriage.
  - 7. Fasten lanyard securely around the handle of the cordless drill. Attach the cordless drill to the top of the driveshaft, either using the supplied 7/16 (11mm) deep well drive socket (located in manual pouch), or by tightening the drill chuck directly to the hexagon on top of the driveshaft (see Figure 3-11.).

# A WARNING

CORDLESS DRILL LANYARD MUST BE INSTALLED BEFORE ELEVATING. Do not drop drill.

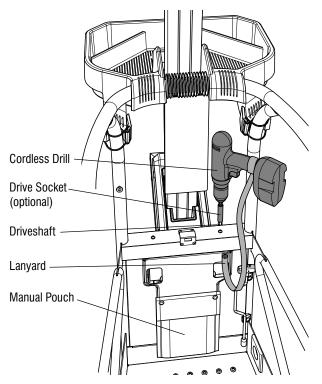


Figure 3-11. Cordless drill installation

 Place the powerpack (optional equipment) against the platform uprights, closest to the mast, and slide it down until it clicks, indicating it is fully seated (see Figure 3-12.).

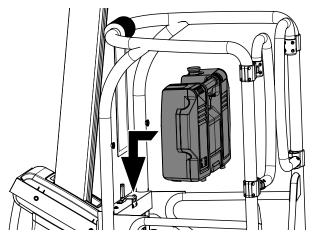


Figure 3-12. Powerpack positioned and latched into place

**NOTE:** When reversing the procedure to disassemble the machine, pull the powerpack release latch (see Figure 3-19.) while lifting to disengage the powerpack from the platform.

**9.** Tool tray: (*optional equipment*) Place on top rail of platform, and fasten the two clips firmly around the rail (see Figure 2-9.).



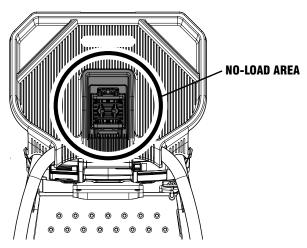
THE WEIGHT OF OBJECTS CARRIED IN A PLATFORM ACCESSORY, ALONG WITH PERSONNEL AND EQUIPMENT PLACED IN THE PLATFORM MUST NOT EXCEED THE MAXIMUM RATED PLATFORM CAPACITY. SEE TABLE 5-4.

# A WARNING

DO NOT PLACE ITEMS IN THE TOOL TRAY IN THE INDICATED AREA WHEN MAST IS BELOW THE TOOL TRAY'S TOP SURFACE (SEE FIGURE 3-13.).

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### **SECTION 3 - MACHINE OPERATION**



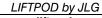
## **Disassembly of the Machine**

Reverse the above steps to disassemble the machine.



DO NOT ATTEMPT TO LIFT THE MAST OFF THE BASE UNLESS THE CAR-Riage has been fully lowered.

Figure 3-13. Tool tray load restriction



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## 3.4 Powerpack (Optional Equipment)

## **Battery Charging Operation**

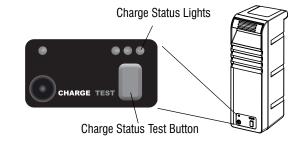


DO NOT SHORT CIRCUIT THE BATTERY. DO NOT OPEN THE BATTERY PACK AS THERE IS A DANGER OF CAUSING A SHORT CIRCUIT. PROTECT THE BATTERY AGAINST HEAT, INCLUDING AGAINST CONTIN-UOUS DIRECT SUN EXPOSURE OR OPEN FLAME.

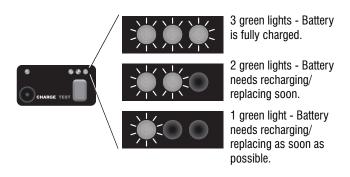
New batteries and batteries that have not been used for a long period must be fully charged. They will not reach their full capacity until fully charged and discharged through several cycles. Battery performance will be limited at low temperatures. The battery can be charged and discharged hundreds of times but will eventually wear out and need to be replaced. A significantly reduced operating period after charging indicates that the battery must be replaced.

## **Battery Charge Status Lights**

The powerpack batteries indicates battery low voltage at three (3) warning levels.



#### Figure 3-14. Battery charging plug and tester





#### **SECTION 3 - MACHINE OPERATION**

## **Charging the Batteries Using the Fast Charge Station**

NOTE: USE ONLY THE SUPPLIED CHARGING STATION.

- 1. Remove battery from powerpack (Figure 3-16.).
- 2. Place battery into recharging dock.

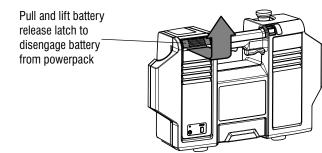


Figure 3-16. Removing the battery from the powerpack

- 3. Plug recharge dock into AC voltage wall outlet.
- 4. Once the green LED has stopped flashing, the powerpack is fully charged.

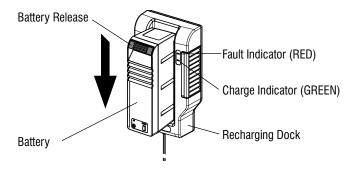


Figure 3-17. Recharge dock operations and indicators



#### TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOL-LOW THESE INSTRUCTIONS.

If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent. See Section 6.

Unless the battery is being charged, always remove the battery from the fast charger.

Always charge the battery for 12hrs for first charge. Batteries will take several full charge/discharge cycles before they reach their peak performance.

## **Fast Charge Indicator Light Guide**

SOLID GREEN: Insert battery or remove fully charged battery

FLASHING GREEN: Battery is charging.

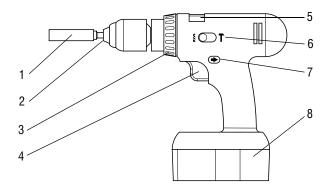
**SOLID RED**: Charging is temporarily halted to allow battery to cool down. Charging will continue automatically.

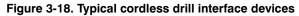
**FLASHING RED:** Please reinsert battery. If the red light continues to flash, the battery or the charger may be faulty.

To troubleshoot whether the battery or the charger is at fault, insert another battery. If this battery charges, the other battery is faulty and must not be used. If the red light continues to flash, the charger is faulty.

# 3.5 **Operation**

## **Cordless Drill**





- 1. Drive Socket (optional)
- 2. Chuck
- 3. Torque Control (optional)
- 4. Power Trigger
- 5. Speed Controller (optional)
- 6. Drill/Hammer Function Selector (optional)

#### **SECTION 3 - MACHINE OPERATION**

- 7. Direction Selector
- 8. Battery Pack

Please follow the manufacturer's instructions on safe operation and maintenance of the cordless drill.

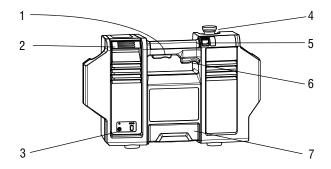
JLG recommends a cordless drill of at least 18V capacity.

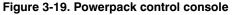
Ensure cordless drill's optional "Hammer" setting is disabled and cordless drill is in "Drill" mode on medium to high torque. Do not set to maximum torque setting.

# **WARNING**

USE ONLY CORDLESS DRILLS. DISCONTINUE USE OF THE CORDLESS DRILL IF A FAULT IS DETECTED. ENSURE CORDLESS DRILL IS IN "DRILL" MODE ON MEDUIM TO HIGH TORQUE SETTING, BUT NOT MAX-IMUM TORQUE SETTING TO AVOID INJURY.

#### **Powerpack Control Console (Optional Equipment)**





- 1. Enable Trigger
- 2. Battery Release Latch
- 3. Battery Trickle Charge Plug
- 4. Emergency Stop Button
- 5. Direction Selector
- 6. Speed Trigger
- 7. Powerpack Release Latch

The powerpack is splash resistant allowing a safe descent if it starts to rain while the unit is elevated, but JLG does not recommend that the powerpack be used in rain or exposed to water.

Whenever the machine is not in use, set the direction selector to the **OFF** position.

## A WARNING

#### DISCONTINUE USE OF THE POWERPACK IF A FAULT IS DETECTED.

## NOTICE

DO NOT PRESSURE-WASH THE POWERPACK.

MAKE SURE YOU CHECK THE REMAINING CHARGE INSIDE THE POW-ERPACK'S BATTERY BEFORE ELEVATING THE PLATFORM BY PRESSING THE CHARGE INDICATOR TEST BUTTON. IF ONLY ONE LIGHT COMES ON, REPLACE WITH FULLY CHARGED BATTERY.

## NOTICE

IF THE POWERPACK DOES NOT ACTIVATE WITH A CHARGED BATTERY INSTALLED, THE EMERGENCY BUTTON MAY NEED TO BE RESET (TWIST IN DIRECTION OF ARROWS AND POP OUT).

## Elevating

Make sure the pre-start inspection has been completed, the machine is safe to use, and the base is level.

Move the cordless drill's direction selector to the "screw-in" (clockwise) direction.

Hold the drill's handle firmly, push it down to automatically disengage the driveshaft interlock, and squeeze the trigger to elevate.

Stop using the cordless drill if any part of it becomes excessively hot. Wait until drill has cooled down and then continue operation.

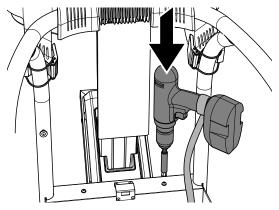


Figure 3-20. Cordless drill elevation

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## **SECTION 3 - MACHINE OPERATION**

If using the optional powerpack instead of a cordless drill, move the direction selector switch to the **UP** position (Figure 3-21.).

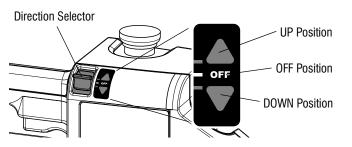


Figure 3-21. Detail view of direction selector

Hold the handle so the enable trigger is pressed and squeeze the speed trigger. The function speed is proportional to how far the speed trigger is pressed.

To stop, simply release the speed trigger. A slow release makes the platform come to a smooth stop.

Most cordless drills and the motor in the powerpack are fitted with thermal overload protection. In case of overheating, this cuts power to the motor. The cutout automatically resets itself when the motor has cooled down, allowing normal operation to resume. Depending on ambient temperature this can take 5 to 30 minutes.

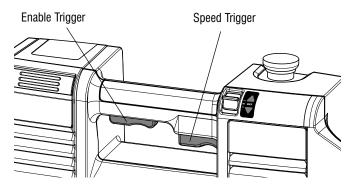


Figure 3-22. Detail view of enable & speed triggers

Engaging the triggers to run the cooling fan will decrease the thermal reset time.

The manual descent procedure (Section 4.1) can be used to lower the platform if required.

- Do not attempt to elevate with no load in the platform.
- The platform has a total capacity of 150kg (330 lb.).
- The machine is not intended for use by children.
- Children must be supervised to ensure they do not use or play with the machine.

• Only **one** person is allowed to be lifted by the platform.



## Descending

# 

CRUSHING HAZARD - BE AWARE OF DESCENDING PLATFORM WHEN LOWERING THE PLATFORM. KEEP HANDS OR FEET OFF THE MAST ASSEMBLY AND FROM BENEATH PLATFORM.

On the cordless drill, move the direction selector to the "unscrew" (anti-clockwise) direction. Push the cordless drill down to disengage the driveshaft interlock and squeeze the trigger to descend.

If using the optional powerpack, move the direction selector to the **DOWN** position. Hold the handle so the enable trigger is pressed and squeeze the speed trigger.

To stop at anytime, simply release the speed trigger.

To exit the platform, ensure the platform is all the way down until it touches-down on the base. This will engage the drive mecha-

nism's overdrive ratchet, making a ratcheting sound. This means the platform has reached its lowest position and the trigger should be released.

**NOTE:** Before transporting, maneuvering or disassembling machine, ensure the platform is all the way down. The carriage lock is engaged automatically when the platform is fully lowered and all load is removed.

## **Powerpack Emergency Stop/Shutdown Button**

If the platform stops responding to operator input at any time while the platform is moving, use the emergency stop button to cut the power to the motor.

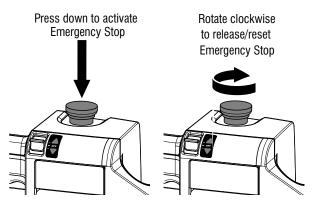


Figure 3-23. Emergency stop button operation

#### **Unpowered Descent**

The platform manual descent crank (Figure 2-8.) is provided to:

- Allow the platform operator to lower the platform in the event that the cordless drill or powerpack batteries run out of sufficient charge to lower the platform;
- Allow ground personnel to lower the platform in event that the platform operator becomes incapacitated.

For emergency operation please see Section 4 - Emergency Procedures.

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## 3.6 TRANSPORT AND MANEUVERING (MOVING)

#### General

The machine may be manually maneuvered or transported in a vehicle disassembled.

# **WARNING**

DO NOT ATTEMPT TO TRANSPORT OR MOVE MACHINE UNLESS THE CARRIAGE IS FULLY DOWN AND THE CARRIAGE TO MAST LOCK IS ENGAGED. DO NOT MOVE MACHINE WITH PERSONNEL IN PLATFORM.

# **WARNING**

#### WHEN TRANSPORTING THE MACHINE, ENSURE THE ROPES ARE PRO-TECTED AND NOT DAMAGED.

The machine may be moved around a worksite using the following methods:

- Fully assembled, pushed around the floor using the wheels and castor;
- Fully assembled, tilted over.
- Disassembled, with each major component carried separately.

## **Fully Assembled Maneuvering**

There are two ways to move the assembled machine:

#### PUSHED UPRIGHT

The machine can be pushed around using the built-in wheels and castor. The floor is required to be smooth, level, clean and dry. There can be no significant load on the machine while it is being rolled around, or the swivel castor will retract automatically.

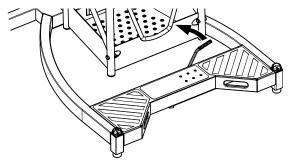


Figure 3-24. Activate the handle to extend the swivel castor

Lift the handle to engage the swivel castor.

The machine is easily positioned as required.

## **SECTION 3 - MACHINE OPERATION**

The swivel castor underneath the step plate toggles out of the way when loaded, and the machine rests securely on the rear wheels and two adjustable feet.

#### PUSHED TILTED OVER

The machine can be tilted over and maneuvered as shown in Figure 3-25.

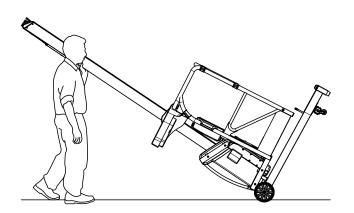


Figure 3-25. Maneuvering when tilted back

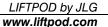
#### FULLY ASSEMBLED THROUGH DOORWAY

The FS60 can be tilted back and pushed through a doorway as shown in Figure 3-26.

# 

Figure 3-26. Maneuvering FS60 through doorway

**NOTE:** Ensure powerpack and tool tray are securely attached and tool tray and platform are empty before moving.



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# 

ONLY ATTEMPT TO TILT THE UNIT BACK, OR RETURN TILTED UNIT TO THE UPRIGHT POSITION, ON A FLAT AND LEVEL SURFACE, CLEAR OF ANY PERSONNEL. ENSURE A FIRM GRIP WITH TWO HANDS ON THE MAST, AND ENSURE WEIGHT IS DISTRIBUTED TO AVOID THE USER OR THE MACHINE BEING THROWN BY THE MOVING WEIGHT OF THE MACHINE.

#### **Disassembled Maneuvering**

The machine is designed to be used and assembled by a single operator. To improve portability, it is divided into a number of self contained sub-assemblies (see Figure 3-1.).



TAKE PRECAUTIONS TO AVOID MANUAL HANDLING INJURIES. USE PROPER LIFTING TECHNIQUES: BEND AT KNEES ONLY, NEVER TWIST YOUR BACK WHEN HOLDING OR CARRYING A LOAD, AND/OR GET HELP. ONLY CARRY ONE COMPONENT AT A TIME.

The mast/carriage assembly can be carried by the built-in handle (see Figure 3-27.).

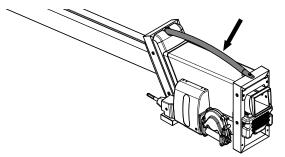


Figure 3-27. Mast/carriage handle

#### **Parking and Storage**

- Move machine to a dry, well-protected and well-ventilated area out of direct sunlight.
- Ensure the platform is fully lowered. If installed, move the powerpack's direction control switch to the OFF position.
- If necessary, remove the cordless drill or optional powerpack from the platform to prevent unauthorized use.
- Ensure the swivel castor is retracted and the machine is resting on the adjustable feet.

#### NOTICE

DO NOT STORE IN LOCATIONS WHERE THE MACHINE MAY ACCUMU-LATE ICE, GREASE OR AIRBOURNE DEBRIS.

#### **Vehicle Transport**

When transporting the machine by vehicle, it should be disassembled into its major components (see Figure 3-1.) and each component secured separately. Restrain each component of the machine securely during transport. Ensure the swivel castor is retracted in the base frame and the base frame is resting on the adjustable feet.

## NOTICE

# USE OF EXCESSIVE FORCE WHEN SECURING MACHINE CAN CAUSE DAMAGE TO THE MACHINE.

Secure machine to the transport vehicle with adequately rated rope or straps. Do not overtension such devices and place a buffer between the device and any part of the machine.

# **SECTION 4. EMERGENCY PROCEDURES**

## 4.1 GENERAL INFORMATION

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

#### **Manual Descent Crank**

The platform manual descent crank is provided to:

- Allow the platform operator to lower the platform in the event that the cordless drill or powerpack batteries run out of sufficient charge to lower the platform;
- Allow ground personnel to lower the platform in the event that the platform operator cannot lower the platform once elevated.

## NOTICE

THE CRANK IS DESIGNED FOR DESCENT IN CASE OF LOSS OF POWER ONLY. IT MUST NOT BE USED TO ELEVATE THE PLATFORM OR FOR GENERAL OPERATIONS.

# **WARNING**

IF THE BATTERIES ARE DISCHARGED WHILE THE UNIT IS ELEVATED, DO NOT CLIMB OUT OF THE PLATFORM. USE THE MANUAL DESCENT CRANK.

#### **Discharged Battery**

If the battery should run out of charge before the platform has fully descended:

- 1. Remove the cordless drill and place it inside the platform. If the optional powerpack is installed, remove it and place it sideways against the back panel in the platform (see Figure 4-1.).
- 2. Remove the manual descent crank from the mounting clips inside the platform.
- **3.** Engage the hexagon at the top of the driveshaft with the socket end of the manual crank.
- **4.** Push down on top of the handle to disengage the driveshaft lock and wind anti clockwise until the platform comes to rest against the stops on the base.

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## **SECTION 4 - EMERGENCY PROCEDURES**

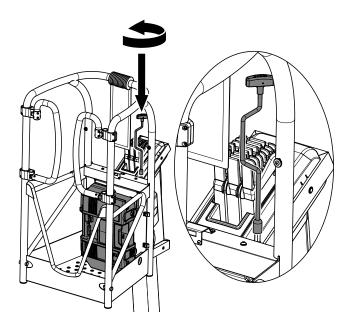


Figure 4-1. Manual descent crank operation from inside platform

#### **Operator Unable to Control Machine**

If the platform operator is pinned, trapped or unable to operate or control the machine other personnel should operate the machine from ground using the manual descent crank on the lower facing shaft stub.

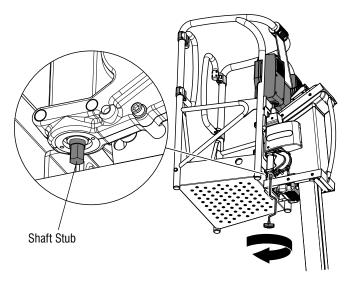


Figure 4-2. Manual descent crank operation from outside platform



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## NOTICE

IF THE OPTIONAL POWERPACK IS NOT INSTALLED, USE THE LANYARD IN THE PLATFORM TO SECURE THE DRIVESHAFT IN A DEPRESSED (PUSHED-IN) POSITION, RELEASING THE DRIVE INTERLOCK. WHEN USING THE LANYARD, THE MANUAL DESCENT CRANK SHOULD BE USED AS SHOWN IN FIGURE 4-2. NEVER USE A POWER TOOL TO LOWER THE MACHINE FROM BELOW WHEN USING THE LANYARD.



DO NOT ACTIVATE THE POWERPACK WHILE THE MANUAL DESCENT CRANK IS ATTACHED.

#### **Platform Caught Overhead**

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

Rescue equipment can be used to remove the platform occupant. Cranes and forklifts can be used to stabilize motion of the machine.

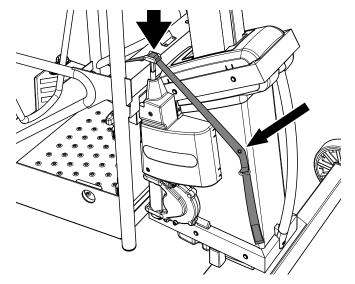


Figure 4-3. Releasing the drive interlock using the lanyard

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#### **Rope Failure**

The carriage and platform are elevated by two ropes.

#### Single Rope Failure

If one of the ropes fails while the platform is elevated, the other rope will allow safe descent.

Upon failure of one of the ropes, immediately lower the platform. Inform other personnel that the machine is out of service. Disassemble and clearly label the machine as being out of service. Contact your nearest Authorized JLG Service Center to arrange rope replacement.

## 

DO NOT ELEVATE PLATFORM WHEN IT IS ONLY SUPPORTED BY A SIN-GLE ROPE.

## **WARNING**

ROPE REPLACEMENT SHALL ONLY BE CARRIED OUT BY AN AUTHO-RIZED JLG SERVICE CENTER.

#### **Double Rope Failure**

If both ropes fail while the platform is elevated, the emergency brake will activate automatically, locking the carriage to the mast.

In this condition the manual descent crank cannot be used to lower the platform.

#### Operator elevated in Platform - Platform will not lower

If the operator cannot lower the platform to the support surface call for help. The operator should then be safely removed from the platform using suitable equipment.

# 

DO NOT CLIMB OUT OF THE PLATFORM WHILE ELEVATED. THIS MAY AFFECT THE MACHINE'S BALANCE, CAUSING IT TO TIP OVER. ONLY EXIT THE PLATFORM VIA THE PLATFORM GATES. DO NOT ATTEMPT TO CLIMB DOWN MAST.

## 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, the factory should be contacted by telephone and provided with all necessary details.

Product Safety and Reliability Department JLG Industries, Inc. 13244 Fountainhead Plaza Hagerstown, MD 21742 USA

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

Outside USA: Phone: 717-485-6591 E-mail: ProductSafety@JLG.com

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

## NOTICE

FOLLOWING ANY ACCIDENT, THOROUGHLY INSPECT THE MACHINE AND TEST ALL FUNCTIONS. DO NOT ELEVATE PLATFORM UNTIL YOU ARE SURE THAT ALL DAMAGE HAS BEEN REPAIRED IF REQUIRED, AND THAT ALL CONTROLS ARE OPERATING CORRECTLY.

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4-6

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# **SECTION 5. GENERAL SPECIFICATIONS**

## 5.1 Introduction

This section of the manual provides operating specifications and information necessary for proper maintenance of this machine.

## 5.2 Decal Installation

No.	CE	JLG Part Number				
	BASE - FS80					
A1	Crushing Hazard-ISO	100 107 0325				
A2	Bubble Level-ISO	100 107 0327				
A3	Base Crush Hazard-ISO	100 107 0439				
A4	Step Plate Decal	100 107 0280				
A5	General Brand	100 107 0281				
A6	Contact Branding Base-CE	100 107 0449				

No.	CE	JLG Part Number				
	BASE - 30FS					
B1	Crushing Hazard-ISO	100 107 0325				
B2	Bubble Level-ISO	100 107 0327				
B3	30FS Base Crush Hazard-ISO	100 107 1388				
B4	30FS Step Plate Decal	100 107 1387				
B5	General Brand	100 107 0281				
B6	Lock Wheels-30FS-ISO	100 107 0428				
B7	Contact Branding Base-CE	100 107 0449				
	MAST/CARRIAGE - FS80					
C1	Patent	100 107 0307				
C2	Manual Descent-ISO	100 107 0328				
C3	Manufacturer Nameplate-ISO-FS80	100 107 0311				
C4	Mast Cap Warning-ISO	100 107 0435				

No.	CE	JLG Part Number
C5	Cowling Side Brand	100 107 0410
C6	General Brand	100 107 0281
C7	Manufacturer Nameplate-ISO-AUS-FS80	100 107 0402
C8	FS80 Mast Branding	100 107 0414
	MAST/CARRIAGE - FS	60
D1	Patent	100 107 0307
D2	Manual Descent-ISO	100 107 0328
D3	Manufacturer Nameplate-FS60-ISO	100 107 0495
D4	Manufacturer Nameplate-ISO-AUS-FS60	100 107 0467
D5	Mast Cap Warning-ISO	100 107 0435
D6	Cowling Side Brand	100 107 0410
D7	FS60 Mast Branding	100 107 0444
D8	General Brand	100 107 0281

No.	CE	JLG Part Number				
	PLATFORM					
E1	Capacity-ISO	100 107 0301				
E2	Tipping-ISO	100 107 0321				
E3	Platform Warning Chevrons	100 107 0409				
E4	Platform Latch Release-ISO	100 107 0461				
E5	Drill Instructions-ISO	100 107 0464				
E6	Electrocution-ISO	100 107 0322				
E7	Read Manual-ISO	100 107 0323				
E8	FS Quickstart Guide-ISO	100 107 0459				
E9	Manual-CE	100 107 0465				
E10	Contact Branding Platform-CE	100 107 0448				
	POWERPACK					
F1	Powerpack Socket Warning-ISO	100 107 0452				

No.	CE	JLG Part Number			
F2	E-Stop-ISO	100 107 0453			
F3	Powerpack Drive Directions-ISO	100 107 0454			
F4	Powerpack Battery Test-ISO	100 107 0455			
F5	Powerpack Front Main Housing-ISO	100 107 0456			
F6	Powerpack Instructions-ISO	100 107 0457			
F7	Battery Charger Front-ISO	100 107 0458			
F8	Battery Latch Instructions-ISO	100 107 0460			
F9	Battery Warning-ISO	100 107 0462			
F10	Fast Charger Back-ISO	100 107 0463			
F11	Battery Charger Branding	100 107 0408			
F12	General Brand	100 107 0281			
	ACCESSORY TRAY				
G1	Tool Tray-ISO	100 107 0434			

Table 5-1. Decal Descriptions.

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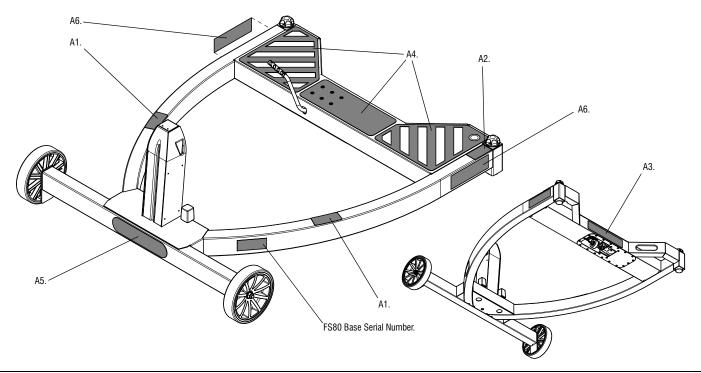


Figure 5-1. Base Decal Installation - CE - FS80

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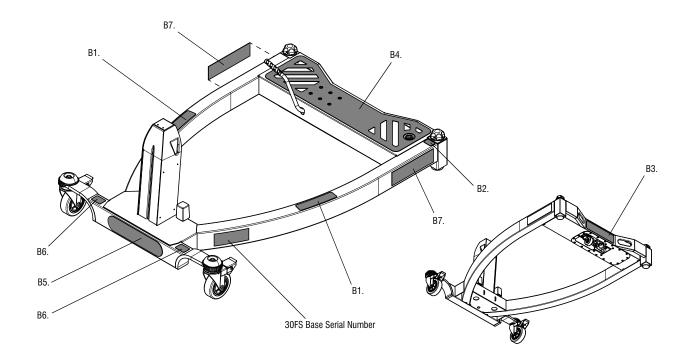


Figure 5-2. Base Decal Installation - CE - 30FS

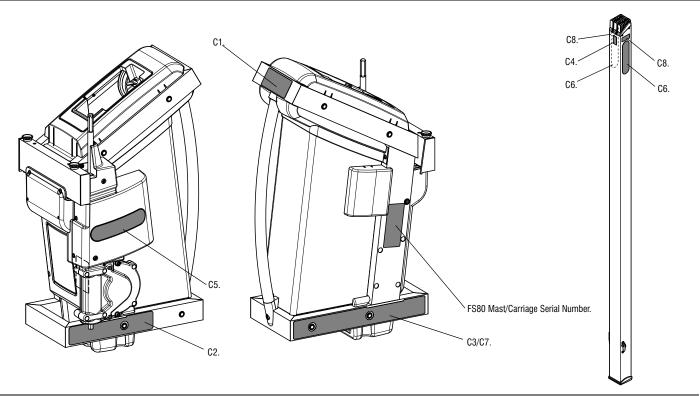


Figure 5-3. Carriage/Mast Decal Installation - CE - FS80

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#### **SECTION 5 - GENERAL SPECIFICATIONS**

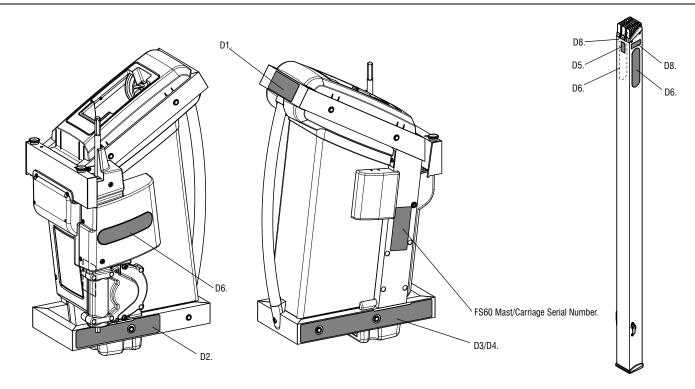


Figure 5-4. Carriage/Mast Decal Installation - CE - FS60

#### **SECTION 5 - GENERAL SPECIFICATIONS**

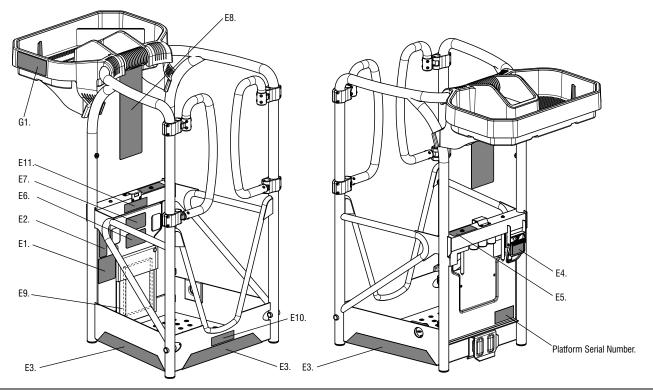


Figure 5-5. Platform Decal Installation - CE

## F12. A CONTRACTOR OF CONT F12. F3. F6. F2. F8. F7. 0 ø F10. F1. Fast Charger Serial Number. F9. Powerpack Serial Number. </ F11. F4. F5.

Figure 5-6. Powerpack Decal Installation - CE

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## **SECTION 5 - GENERAL SPECIFICATIONS**

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## 5.3 General Specifications

## **Machine Specifications (assembled)**

SPECIFICATION	F\$80	F\$60	FS60 Mast & FS80 Base
Gross Machine Weight: (without optional tool tray or powerpack)	64.8kg (142.9 lb.)	56.4kg (124.1 lb.)	60.1kg (132.22 lb.)
Machine Height:	2.97m (9 ft 9 in)	2.37m (7 ft 9 in)	2.37m (7 ft 9 in)
Maximum Platform Floor Height:	2.32m (7 ft 7 in)	1.71m (5 ft 7 in)	1.71m (5ft7in)
Maximum Wind Speed:	*5m/sec (18 kph)	*5m/sec (18 kph)	*5m/sec (18 kph)
Maximum Working Height: (typical person)	4.32m (14 ft 4 in)	3.71m (12 ft 2 in)	3.71m (12 ft 2 in)
Machine Overall Footprint:	1,250mm x 1,040mm (4 ft 1 in x 3 ft 5 in)	1,100mm x 760mm (3 ft 7 in x 2 ft 6 in)	1,250mm x 1,040mm (4 ft 1 in x 3 ft 5 in)
Rated Horizontal Force	*100N (22 lb.)	*100N (22 lb.)	*100N (22 lb.)

\* For Australia & New Zealand the wind rating is 12.5m/sec and the rated horizontal force is 200N (44 lb.)

Table 5-2. Machine Specifications (assembled)

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# **Optional Powerpack Electrical Specifications**

SPECIFICATION		F\$80/F\$60		
Batteries - Powerpack:		28.8 Volts DC		
Nominal Duty Cycle at Rated Capacity:		4 cycles per 15 minutes (reduces at high and low ambient temperature)		
Battery Specifications:		Battery Type	Nickel Metal Hydride	
		Voltage	28.8 Volts DC	
		Amp Hour (AH) Rating	4.5 Ah	
		Weight	2.3kg (5 lb.)	
Battery Fast Charger:	Input:	110/240 Volts AC - 2.2A - 50/60 Hz		
FC 100 107 1732	Output:	28.8 Volts DC - 2.5A - w/Auto Charge Sensing Circuit		
Approvals:		UL, cUL, CE		

Table 5-3. Optional Powerpack Electrical Specifications

## **Platform Data**

SPECIFICATION		F\$80
Occupants: (Persons allowed in Platform)		1
Platform Capacity :	CE:	150kg (330 lb.)

Table 5-4. Platform Data

5-12

#### **SECTION 5 - GENERAL SPECIFICATIONS**

## **Interchangeable Modules**

**NOTE:** Certain liftpod modules can be used in various machine configurations. Components that are not interchangeable are keyed to prevent improper assembly.

	Platform	FS80B	30FSB	FS80M	FS60M	AT	PP
Platform				<ul> <li>Image: A start of the start of</li></ul>			$\checkmark$
FS80B							
30FSB				×			
FS80M			×				
FS60M							
AT							
PP							

#### Table 5-5. Interchangeable Modules

Module Abbreviation	Name of Module	Part Number	
FS80B	FS80 Base	1001071599	* For Australia the FS80
30FSB	30FS/FS60 Base	1001071485	Mast/Carriage Part
FS80M	FS80 Mast/Carriage	*1001071197	Number is 1001071193
FS60M	FS60 Mast / Carriage	**1001071416	**For Australia the FS60
AT	Accessory Tray	1001071725	Mast/Carriage Part
PP	Powerpack (optional) Kit	1001071206	Number is 1001071194

Table 5-6. Module Key

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## **Machine Component Weights**

SPECIFICATION	WEIGHT
Base Frame - FS80	25.2kg (55.4 lb.)
Base Frame - 30FS	21.5kg (47.3 lb.)
Carriage/Mast - FS80	22.2kg (48.8 lb.)
Carriage/Mast - FS60	20.2kg (44.4 lb.)
Platform	14.7kg (32.3 lb.)
Optional Powerpack (inc Battery)	8.0kg (17.6 lb.)
Optional Tool Tray	3.6kg (7.9 lb.)

## **Serial Number Locations**

For machine component identification, serial number barcode decals are affixed to the various modules. The barcodes are located as indicated in Figure 5-1. to Figure 5-6.

## 5.4 Supplemental Information

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

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

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

# SECTION 6. SERVICE AND MAINTENANCE

## 6.1 INTRODUCTION - MAINTENANCE SAFETY PRECAUTIONS

#### General

This section contains the general safety precautions which must be observed during maintenance of the machine. It is important that maintenance personnel pay strict attention to these warnings and precautions to avoid possible injury to themselves or others or damage to the equipment. A maintenance program must be established by a competent person and must be followed to ensure that the machine is safe to operate.

#### NOTICE

JLG MAY HAVE ISSUED SAFETY BULLETINS FOR YOUR JLG PRODUCT. CONTACT JLG OR THE LOCAL AUTHORIZED JLG SERVICE CENTRE FOR INFORMATION CONCERNING SAFETY RELATED BULLETINS WHICH MAY HAVE BEEN ISSUED FOR YOUR JLG PRODUCT. ALL ITEMS REQUIRED BY THE SAFETY RELATED BULLETINS MUST BE COMPLETED ON THE AFFECTED JLG PRODUCT.

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

# 

#### MODIFICATION OF THE MACHINE WITHOUT THE MANUFACTURERS APPROVAL IS A PROHIBITED PRACTICE AND A DIRECT SAFETY VIOLA-TION.

Your safety, and that of others, is the first consideration when engaging in the maintenance of equipment. Always be conscious of moving parts and pinch points. Do not allow heavy objects to rest in an unstable position. When raising a portion of the equipment, ensure that adequate support is provided.

## 

SINCE THE MACHINE MANUFACTURER HAS NO DIRECT CONTROL OVER THE FIELD INSPECTION AND MAINTENANCE, SAFETY IN THESE AREAS IS THE RESPONSIBILITY OF THE OWNER/OPERATOR.

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#### **Maintenance Safety**

## A WARNING

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

- REMOVE ALL RINGS, WATCHES, AND JEWELRY WHEN PERFORMING ANY MAINTENANCE.
- DO NOT WEAR LONG HAIR UNRESTRAINED, OR LOOSE FITTING CLOTHING AND NECKTIES WHICH ARE APT TO BECOME CAUGHT ON OR ENTANGLED IN EQUIPMENT.
- OBSERVE AND OBEY ALL DANGER, WARNING, CAUTION AND OTHER INSTRUCTIONS ON MACHINE AND IN OPERA-TION, SAFETY, SERVICE & MAINTENANCE MANUAL.
- KEEP STANDING SURFACES AND HAND HOLDS FREE OF OIL, GREASE, WATER, ETC.
- NEVER WORK UNDER AN ELEVATED PLATFORM UNTIL PLATFORM HAS BEEN SAFELY RESTRAINED FROM ANY MOVEMENT BY BLOCKING OR OVERHEAD SLING.
- BEFORE MAKING ADJUSTMENTS OR PERFORMING ANY OTHER MAINTENANCE, SHUT OFF ALL POWER CON-TROLS.

- KEEP ALL SUPPORT EQUIPMENT AND ATTACHMENTS STOWED IN THEIR PROPER PLACE.
- USE ONLY APPROVED, NONFLAMMABLE CLEANING SOL-VENTS.

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# 6.2 MACHINE PREPARATION, INSPECTION AND MAINTENANCE

#### General

This section provides the necessary information needed by those personnel that are responsible to place the machine in operation readiness and maintain its safe operating condition. For maximum service life and safe operation, ensure that all necessary inspection and maintenance has been completed before placing the machine into service.

#### Preparation, Inspection, and Maintenance

It is important to establish and conform to a comprehensive inspection and preventive maintenance program. Table 2-1 outlines the periodic machine inspection and maintenance recommended by JLG. Consult your national, regional, or local regulations for any further requirements. The frequency of inspection and maintenance must be increased as environment, severity and frequency of usage requires.

#### **Pre-Start Inspection**

It is the user's or operator's primary responsibility to perform a Pre-Start Inspection of the machine prior to use daily or at each change of operator. Reference Section 2 in this manual for completion procedures for the Pre-Start Inspection. The manual must be read in its entirety and understood prior to performing the Pre-Start Inspection.

#### **Frequent and Pre-Delivery Inspection**

The Frequent Inspection and Pre-Delivery Inspection shall be performed by a competent person or a qualified mechanic.

The Frequent Inspection and Pre-Delivery Inspection procedures are performed in the same manner, but at different times. The Pre-Delivery Inspection shall be performed prior to each sale, lease, or rental delivery. The Frequent Inspection shall be accomplished for each machine in service for 3 months; out of service for a period of more than 3 months; or when purchased used. The frequency of this inspection must be increased as environment, severity and frequency of usage requires.

Reference the appropriate areas of this manual for servicing and maintenance procedures.

#### **Annual Machine Inspection**

The Annual Machine Inspection must be performed by a competent person or a qualified mechanic on an annual basis, no later than thirteen (13) months from the date of the prior Annual Machine Inspection.

Reference the Service and Maintenance Sections of this Manual and appropriate JLG inspection form for performance of this inspection. Reference the appropriate areas of this manual for servicing and maintenance procedures.

#### **5 Year Machine Inspection & Rope Replacement**

The mast and carriage module must be inspected and the ropes replaced by an Authorized JLG Service Center when:

- The rope is worn beyond specification (see Figure 2-4.);
- A rope is tangled, damaged or broken;
- · When the machine has been in service for 5 years.

## NOTICE

IT IS IMPORTANT THAT JLG HAS UPDATED OWNERSHIP INFORMATION FOR EACH MACHINE COMPONENT. WHEN PERFORMING EACH ANNUAL MACHINE INSPECTION, NOTIFY JLG OF THE CURRENT MACHINE COM-PONENT OWNERSHIP.

#### **Preventive Maintenance**

In conjunction with the specified inspections, maintenance shall be performed by a competent person such as a qualified JLG equipment mechanic.

# 6.3 PREVENTIVE MAINTENANCE AND INSPECTION SCHEDULE

The preventive maintenance and inspection checks are listed and defined in the following table. This table is divided into two basic parts, the "AREA" to be inspected and the "INTERVAL" at which the inspection is to take place. Under the "AREA" portion of the table, the various systems along with the components that make up that system are listed. The "INTERVAL" portion of the table is divided into four columns representing the various inspection time periods. The numbers listed within the interval column represent the applicable inspection code for which that component is to be checked.

The checks and services listed in this schedule are not intended to replace any local or regional regulations that may pertain to this type of equipment nor should the lists be considered as all inclusive. Variances in interval times may occur due to climate and/or conditions and depending on the location and use of the machine.

#### **SECTION 6 - SERVICE AND MAINTENANCE**

#### Inspection and Maintenance Codes:

- 1. Check for proper and secure installation
- 2. No gouges, excessive wear, or dents showing
- 3. Visually inspect for excessive wear, damage, cracks, or distortion
- 4. Check for cracked or broken welds
- 5. Check area is clean and free of debris
- 6. Check for proper adjustment
- 7. Check proper operation

- 8. Check returns to neutral or "off" position when released
- 9. Check for signs of leakage
- 10. Check for wear and/or proper routing
- 11. Check for proper tolerances
- 12. Check proper and authorized components installed
- 13. Verify
- 14. Perform
- 15. Replace
- 16. Inspect per Service and Maintenance Manual

Area on Machine	Interval				
	Pre-Start Inspection	Pre-Delivery or Frequent Inspection	Annual (Yearly) Inspec- tion	5 Year Inspection	
		Prior to each sale, lease or delivery; in service for 3 months or more; or purchased used	Actually no later than 13 months from the date of the prior inspection		
Mast	1, 5,	1, 2, 5	1, 2, 3, 5		
Mast Stump	3, 5	3, 4, 5	3, 4, 5		
Rope	10, 16	10, 16	10, 16	15	
Carriage	5	3,5	1, 3, 4, 5, 7		
Gearbox	3, 9	3, 9	1,3,9		

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#### **SECTION 6 - SERVICE AND MAINTENANCE**

Area on Machine	Pre-Start Inspection	Pre-Delivery or Frequent Inspection	Annual (Yearly) Inspec- tion	5 Year Inspection
Manual Descent Crank	1	1,12	1, 3, 12	
Carriage Rollers		3,7	3, 7, 11	
Platform	1,5	1,5	1, 3, 4, 5, 7	
Platform Latch	1,7	1, 3, 6, 7	1, 3, 6, 7	
Platform Gates	1,7	1, 3, 5, 7	1, 3, 5, 7	
Lanyard Anchor		3, 4	3, 4	
Base Frame	3, 4, 5	3, 4, 5	3, 4, 5	
Adjustable Feet	1	1, 3, 7	1, 3, 7	
Bubble Level	1,7	1,7	1,7	
Wheels	1, 3, 7	1, 3, 7	1, 3, 7	
Powerpack (optional)	1,3	1, 3, 7	1, 3, 7	
Switches & Controls	1	1, 3, 7	1, 3, 7	
Speed & Safety Triggers; Battery Charge Test Button	1,8	1, 3, 7, 8	1, 3, 7, 8	

General	Pre-Start Inspection	Pre-Delivery or Frequent Inspection	Annual (Yearly) Inspec- tion	5 Year Inspection
Operator, Safety, Service & Maintenance Manual in Storage Pouch	13	13	13	
All Decals/Placards Installed, Secure & Legible	13	13	13	
Machine Inspection or Rope Replacement Due		16	16	14, 15
No Unauthorized Modifications or Additions		13	13	
All Relevant Safety Publications Incorporated		13	13	
General Structural Condition and Welds	13	3, 4	3,4	
All Fasteners, Pins, Shields and Covers	13		1,3	
Function Test of all Systems	14	14	14	
Paint and Appearance		2,5	2, 5	
Record Inspection Date in Log Book			14	
Notify JLG of Machine Ownership		14 (delivery)	14	

Table 6-1. Preventative Maintenance & Inspection Schedule

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# 6.4 SERVICING AND MAINTENANCE GUIDELINES

#### General

The following information is provided to assist you in the use and application of service and maintenance procedures contained in this chapter.

# 

WHEN AN ABNORMAL CONDITION IS NOTED AND PROCEDURES CON-TAINED HEREIN DO NOT SPECIFICALLY RELATE TO THE NOTED IRREG-ULARITY, WORK SHOULD BE STOPPED AND TECHNICALLY QUALIFIED GUIDANCE OBTAINED BEFORE WORK IS RESUMED.

#### **Safety and Workmanship**

Your safety, and that of others, is the first consideration when engaging in the maintenance of equipment. Always be conscious of moving components and pinch points. Do not allow heavy objects to rest in an unstable position. When raising a portion of the equipment, ensure that adequate support is provided.

#### Cleanliness

The most important single item in preserving the long service life of a machine is to keep dirt and foreign materials out of the vital

components. Precautions have been taken to safeguard against this. However, these items must be maintained on a scheduled basis in order to function properly.

# 

DO NOT LUBRICATE THE MACHINE. ENSURE THAT THE MAST AND EMERGENCY BRAKE ARE CLEAN AND FREE OF DEBRIS, OIL AND GREASE.

#### **Component Disassembly and Reassembly**

When disassembling or reassembling a component, complete the procedural steps in sequence. Do not partially disassemble or assemble one part, then start on another. Always recheck your work to assure that nothing has been overlooked. Do not make any adjustments, other than those recommended, without obtaining proper approval.

## 6.5 REPLACEMENT KITS OVERVIEW

The following details the various replacement kits that can be ordered from your Authorized JLG Service Center.

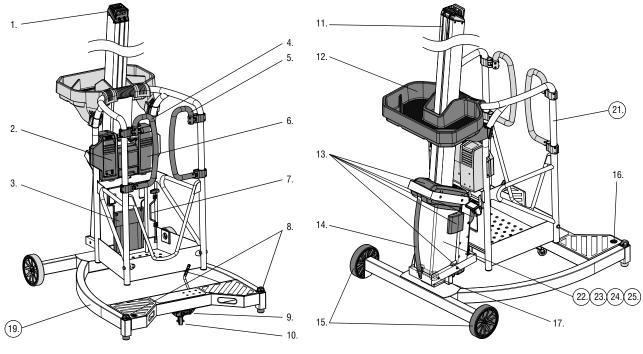
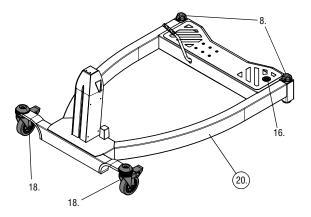


Figure 6-1. Replacement Kits



#### Figure 6-2. Replacement Kits for 30FS Base

- 1. Mast Cap Kit (JLG Part No. 1001071255)
- 2. Powerpack Battery (JLG Part No. 1001071678)
- 3. Manual Pouch Kit (JLG Part No. 1001071354)
- 4. Gate Assembly Kit LH (JLG Part No. 1001071351)
- 5. Gate Assembly Kit RH (JLG Part No. 1001071352)
- 6. Powerpack (JLG Part No. 1001071677)

- 7. Manual Descent Crank Kit (JLG Part No. 1001071353)
- 8. Adjustable Foot Kit (2 feet per kit) (JLG Part No. 1001071562)
- 9. Base Castor Mechanism Kit (JLG service only) (JLG Part No. 1001071566)
- 10. Swivel Castor Wheel Kit (JLG Part No. 1001071561)
- 11. Rope (JLG service only) (JLG Part No. 1001071257)
- 12. Accessory Tray Kit (JLG Part No. 1001071725)
- 13. Plastic Cowlings Kit (JLG Part No. 1001071250)
- 14. Carriage Handle Kit (JLG Part No. 1001071251)
- 15. Fixed Wheel Kit FS80 base (2 wheels per kit) (JLG Part No. 1001071560)
- 16. Level Bubble Kit (JLG Part No. 1001071563)
- 17. Lower Rear Roller Kit (JLG Part No. 1001071252)
- 18. Replacement Rotating Castors (30FS Base) (2 wheels per kit) (JLG Part No. 1001071386)
- **19. Complete Base Kit FS80 CE** (JLG Part No. 1001071599)
- **20.** Complete Base Kit 30FS CE (JLG Part No. 1001071485)

- 21. Complete Platform Kit CE (JLG Part No. 1001071363)
- 22. Complete Mast/Carriage Kit FS80 CE (JLG Part No. 1001071197)
- 23. Complete Mast/Carriage Kit FS80 AUS (JLG Part No. 1001071193)
- 24. Complete Mast/Carriage Kit FS60 CE (JLG Part No. 1001071416)
- 25. Complete Mast/Carriage Kit FS60 CE AUS (JLG Part No. 1001071194)
- NOTE: Following items not pictured.
  - Fast Charger (JLG Part No. 1001071732)
  - Powerpack Carry Case (JLG Part No. 1001071705)
- **NOTE:** Refer to Table 5-1 and Figure 5-1. to Figure 5-6. for replacement decal positions.
  - Decal Kit, FS80 CE (JLG Part No. 1001071343)
  - Decal Kit, FS80 CE AUS (JLG Part No. 1001070579)
  - Decal Kit, FS60 CE (JLG Part No. 1001070577)
  - Decal Kit, FS60 CE AUS (JLG Part No. 1001070578)
  - Drill Strap Kit (JLG Part No. 1001071361)

- Drill Socket Kit (JLG Part No. 1001071362)
- Replacement Pouch Rivets (JLG Part No. 1001071339)
- Decal Kit, Powerpack-CE (JLG Part No. 1001071345)

#### Manuals

- **NOTE:** Following items refer to the FS80 Operation, Safety, Service and Maintenance Manual CE (not pictured).
- **NOTE:** Not all language Manuals or Country Kits may be available. Contact your local JLG location for more information.
  - FS80 Manual English (JLG Part No. 1001070465)
  - FS80 Manual French (JLG Part No. 1001070466)
  - FS80 Manual German (JLG Part No. 1001070467)
  - FS80 Manual Dutch (JLG Part No. 1001070468)
  - FS80 Manual Italian (JLG Part No. 1001070469)
  - FS80 Manual Spanish (JLG Part No. 1001070470)
  - FS80 Manual Finnish (JLG Part No. 1001070471)
  - FS80 Manual Swedish (JLG Part No. 1001070472)
  - FS80 Manual Norwegian (JLG Part No. 1001070473)
  - FS80 Manual Danish (JLG Part No. 1001070474)

#### **SECTION 6 - SERVICE AND MAINTENANCE**

- FS80 Manual Latvian (JLG Part No. 1001070475)
- FS80 Manual Estonian (JLG Part No. 1001070476)
- FS80 Manual Lithuanian (JLG Part No. 1001070477)
- FS80 Manual Portuguese (JLG Part No. 1001070478)
- FS80 Manual Greek (JLG Part No. 1001070479)
- FS80 Manual Czech (JLG Part No. 1001070480)
- FS80 Manual Hungarian (JLG Part No. 1001070481)
- FS80 Manual Polish (JLG Part No. 1001070482)
- FS80 Manual Slovakian (JLG Part No. 1001070483)
- FS80 Manual Slovenian (JLG Part No. 1001070484)
- FS80 Manual Maltese (JLG Part No. 1001070485)
- FS80 Manual Romanian (JLG Part No. 1001070486)
- FS80 Manual Bulgarian (JLG Part No. 1001070487)
- FS80 Manual Russian (JLG Part No. 1001070488)

#### **Country Kits**

- **NOTE:** Following items refer to the Country Kits CE (not pictured).
  - Country Kit UK (JLG Part No. 1001070548)

- Country Kit French (JLG Part No. 1001070549)
- Country Kit German (JLG Part No. 1001070550)
- Country Kit Dutch (JLG Part No. 1001070551)
- Country Kit Italian (JLG Part No. 1001070552)
- Country Kit Spanish (JLG Part No. 1001070553)
- Country Kit Finnish (JLG Part No. 1001070554)
- Country Kit Swedish (JLG Part No. 1001070555)
- Country Kit Norwegian (JLG Part No. 1001070556)
- Country Kit Danish (JLG Part No. 1001070557)
- Country Kit Latvian (JLG Part No. 1001070558)
- Country Kit Estonian (JLG Part No. 1001070559)
- Country Kit Lithuanian (JLG Part No. 1001070560)
- Country Kit Portuguese (JLG Part No. 1001070561)
- Country Kit Greek (JLG Part No. 1001070562)
- Country Kit Czech (JLG Part No. 1001070563)
- Country Kit Hungarian (JLG Part No. 1001070564)
- Country Kit Polish (JLG Part No. 1001070565)
- Country Kit Slovakian (JLG Part No. 1001070566)

- Country Kit Slovenian (JLG Part No. 1001070567)
- Country Kit Maltese (JLG Part No. 1001070568)
- Country Kit Romanian (JLG Part No. 1001070569)
- Country Kit Bulgarian (JLG Part No. 1001070570)
- Country Kit Russian (JLG Part No. 1001070570)
- Country Kit Australian (JLG Part No. 1001070572)

#### Leads

- **NOTE:** Following items refer to the AC Leads (not pictured).
  - AC Lead 220V UK Blue (JLG Part No. 1001071685)
  - AC Lead 110V UK Yellow (JLG Part No. 1001071688)
  - AC Lead 220V Mainland Europe (JLG Part No. 1001071693)
  - AC Lead 220V Denmark (JLG Part No. 1001071694)
  - AC Lead 220V UK 3 Pin Domestic (JLG Part No. 1001071695)
  - AC Lead 240V Australia (JLG Part No. 1001070573)

# 6.6 Decal Replacement

All decals must be mounted to the machine as specified and be clearly legible.

Please see Figure 5-1. to Figure 5-4 and refer to Table 5-1. for positions and JLG part numbers.

To replace a damaged decal, first remove it completely, without damaging the underlying surface.

Remove any remaining adhesive with a suitable solvent. Test solvent on inconspicuous area first, to ensure it does not mark or damage the underlying surface finish.

#### NOTICE

# SURFACE DAMAGE COULD RESULT IN CORROSION AND STRUCTURAL DAMAGE.

Before applying new decal, ensure the surface is clean and dry.

Remove backing paper, apply decal along one edge then seat it gently and evenly.

If there are any air bubbles, work them gently towards the edge with a clean cloth.

Pressure sensitive adhesive reaches full strength after a several days.

# 6.7 Mast Rope Inspection Procedure

#### NOTICE

# MAST ROPES ARE TO BE INSPECTED EVERY THREE MONTHS OR MORE FREQUENTLY AS DESCRIBED FOLLOWING.

The ropes should be inspected more frequently if used in a harsh environment or high duty cycle applications. Inspection should be more frequent as ropes approach the end of their useful lives. The periodic inspection shall cover the entire length of the rope.

Only the surface of the ropes require inspection, do not attempt to open the rope or remove any carriage covers. Any deterioration resulting in any loss of original strength, such as described below, shall be noted, and then a determination made if further use would constitute a hazard.

Mast ropes must be replaced after machine has been in service for five (5) years, regardless of rope condition, or sooner if conditions dictate. This must only be conducted by a Authorized JLG Service Center.

Conditions such as the following shall be sufficient reason for questioning continual use (of the rope) or increasing the frequency of inspection:

### 1. Rope Wear

Check rope is not frayed or damaged as per Figure 2-4. in the Daily Walk-Around Inspection Section.

#### 2. Rope Misaligned

With carriage lowered and the platform removed, check the following:

**a.** Ropes on drum should be neatly wound on adjacent grooves.

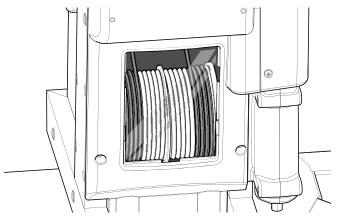


Figure 6-3. Drum view through inspection window

**b.** Ropes must be parallel going into and through the carriage, looking down the mast.

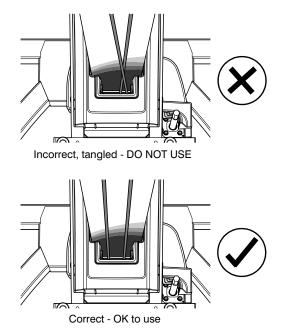


Figure 6-4. Rope alignment through carriage

#### 3. Rope Loose

In normal operation the rope is always taut and should never come loose. Should the rope lose tension, say through incorrect transport or storage, it must be corrected before next use.

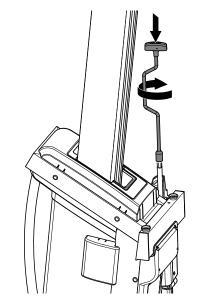


Figure 6-5. Loose rope being re-tensioned

To correct a loose rope:

- 1. If carriage is not within 1m (3 ft) of the base of the mast contact JLG. Otherwise assemble the mast onto the base lifting via mast tube above carriage.
- 2. Check the rope is correctly on drum (Figure 6-3.).
- **3.** Check rope is in correct location in carriage (Figure 6-4.).
- 4. Connect the manual descent handle directly to the carriage drive shaft (Figure 6-5.). Press down on crank and simultaneously rotate clockwise. You will hear a ratcheting noise and the drum will wind up the slack rope.
- 5. Re-check proper rope alignment (Figure 6-3. and Figure 6-4.). Both ropes must be tight. If ropes are not tight, contact an Authorized JLG Service Center.
- 6. Install platform and cordless drill (or optional powerpack). Use applicable safety precautions to enter the platform safely. Raise the platform 50mm (2 inch) to reset the emergency brake and then lower the platform to bottom of travel.
- 7. Perform all pre-operation checks before further use. Also, remove platform and re-check rope alignment per Figure 6-3. and Figure 6-4. after first elevation - which should be no higher than 1m (3 ft). Ensure both ropes are tight and remain so at all times.

# **SECTION 7. TROUBLESHOOTING**

# 7.1 GENERAL

This section contains troubleshooting information to be used for locating and correcting most of the operating problems which may develop in the machine. If a problem should develop which is not presented in this section or which is not corrected by listed corrective actions, technically qualified guidance should be obtained before proceeding with any maintenance.

#### **Troubleshooting Information**

The troubleshooting procedures applicable to the product are listed and defined in Table 7-1, Troubleshooting (below).

Each malfunction within an individual group or system is followed by a listing of probably causes which will enable determination of the applicable remedial action. The probable causes and the remedial action should, where possible, be checked in the order listed in the tables.

It should be noted that there is no substitute for a thorough knowledge of the equipment and related systems.

It should be recognised that the majority of the problems arising in the machine will be centred in the power system. For this reason, every effort has been made to ensure that all likely problems in these areas are given the fullest possible treatment. In the remaining machine groups, only those problems which are symptomatic of greater problems which have more than one probable cause and remedy are included. This means that problems for which the probable cause and remedy may be immediately obvious are not listed in this section.

TROUBLE	PROBABLE CAUSE	REMEDY
Machine does	not assemble properly	
	Improper alignment on assembly	Check each component and assembly alignment is correct.
	Platform not fully engaged	Check alignment and slide parts on until platform latch is properly engaged.

#### **SECTION 7 - TROUBLESHOOTING**

TROUBLE	PROBABLE CAUSE	REMEDY
Powerpack (option	nal) motor does not start	
	Emergency stop button is engaged (PUSHED IN) on powerpack	Disengage emergency stop button until it pops up (TURN CLOCKWISE).
	Direction selector or enable trigger or speed control trigger not activated	Select 'UP' on direction selector, then activate both the enable trigger and speed control continuously for operation.
	Battery not installed or no charge	Properly install charged battery in powerpack.
	Motor has overheated	Wait until motor cools. The temperature cutout resets itself automatically. Alternatively use manual descent procedure to lower platform (Section 4.1).
Platform does not	lift up from bottom of travel - motor starts	
	Driveshaft interlock is engaged	Push cordless drill on driveshaft down firmly to disengage driveshaft safety inter- lock.
	(If using powerpack) Powerpack driveshaft not engaged	Check powerpack is correctly fitted to platform, latch is down and drive shaft is connected to carriage drive shaft.
	Emergency brake not released from carriage lock down latch position	Ensure a load greater than 50kg (110 lbs.) is in the platform (1 person) and lifting ropes are tight. If latch has not released, attempt to lower the loaded platform slightly then try again to lift up.

TROUBLE	PROBABLE CAUSE	REMEDY
Platform will not r	nove when in elevated position - motor starts	
	Driveshaft interlock is engaged	Push cordless drill on driveshaft down firmly to disengage driveshaft safety inter- lock.
	(If using powerpack) Powerpack shaft not engaged	Check powerpack charged and in correctly fitted and is fully down and latched down.
	Drive shaft malfunction	Lower platform using manual descent procedure (see Section 4.1). Refer to Authorized JLG Service Center.
	No load in platform & will not lower	If carriage is not within 1m (3 ft) of the base of the mast contact Authorized JLG Service Center. If carriage is within 1m (3ft) from ground, apply load in platform, drive up 1", then drive down.
Ropes are loose (	ropes must never be loose)	
	Machine was disassembled without platform being fully lowered to engage the carriage lock down latch. Carriage then moved up the mast loosening the ropes	If carriage is not within 1m (3 ft) of the base of the mast contact Authorized JLG Service Center. Otherwise follow rope re-tensioning procedure detailed in Section 6.7, point 3. Ensure both ropes are tight and remain so at all times.

#### **SECTION 7 - TROUBLESHOOTING**

TROUBLE	PROBABLE CAUSE	REMEDY
Machine does not v	vheel properly	
	Retractable Swivel Castor is not properly deployed	With no load in the platform or on the base - lift the castor deploy handle on front of base, adjacent to platform gate. Castor should deploy and lift front of machine off adjustable feet to allow machine to roll easily on rear wheels and front castor.
	Castor is damaged	Replace castor.
Base will not level (	DO NOT ELEVATE UNLESS BASE FIRM AND LE	EVEL)
	Castor deployed	With no load in platform and people clear of adjustable feet - exert approximately 25kg pressure onto front of base. Castor should retract. Adjustable feet should then be able to be used to level the machine on slopes less than 2 degrees front to back. Do not use the machine on any side slope.
Machine rocks slig	htly side to side	
	Support surface is not level	Only use the machine on firm and level surfaces.
	Adjustable feet are not BOTH in contact with supporting surface	Adjust the feet so that BOTH feet are in firm contact with supporting surface AND the machine is level.
Ropes are worn or	a rope is broken or machine is 5 years old or m	achine has been in service for 5 years since previous service
	Damage or wear or machine is 5 years old	Deliver unit to an Authorized JLG Service Center for replacement.

TROUBLE	PROBABLE CAUSE	REMEDY
Platform will not lif	t full rated load	
	Battery not fully charged	Charge or replace battery.
	Overload clutch is slipping	Contact Authorized JLG Service Center.

Table 7-1. Troubleshooting

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# SECTION 8. INSPECTION AND REPAIR LOG

## 8.1 Inspection and Repair Log Table

Comments

LIFTPOD by JLG

#### **SECTION 8 - INSPECTION AND REPAIR LOG**

Date	Comments

#### Table 8-1. Inspection and Repair Log

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# **SECTION 9. EC DECLARATIONS OF CONFORMITY**

#### **EC Declaration of Conformity - English**

EC Declaration of Conf	ormity				UK
Manufacturer	JLG Industries Inc, 1 JLC	G Drive, McConnellsburg PA	17233 USA		®
Representative in EC	JLG Industries Inc, Brun	JLG Industries Inc, Bruntingthorpe, Lutterworth, LE17 5QS, UK			
Technical File	JLG Industries Inc, Brun	JLG Industries Inc, Bruntingthorpe, Lutterworth, LE17 5QS, UK			
Contact	Alan McIntyre	Position Manag	er, Engineering Support		
Product	Model	Serial Number	See Component Lab	els	
Liftpod by JLG	FS80	1599XXXXXXXX	FS80 Base	1677XXXXXXXX	Power Pack
		1197XXXXXXXX	Mast/Carriage	1732XXXXXXXX	Charger
		1363XXXXXXXX	Platform		
	FS60	1416XXXXXXXX	Mast/Carriage	1677XXXXXXXX	Power Pack
		1363XXXXXXXX	Platform	1732XXXXXXXX	Charger
		1485XXXXXXXX	30FS Base		
		1599XXXXXXXX	FS80 Base		
Machine, when assembled usi	ng components with serial nu	umbers as designated above	, complies with EC directives:		
2006/42/EC Machinery	73/23/EC	Low voltage	2004/108/EC Electror	nagnetic emissions	
Signature 68 /7	Place	Glasgo	ow, Scotland	Date October	2008
Name Alan McInty	re Position	Manag	er, Engineering Support		

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