

Operators and Safety Manual

Model

1532E

1932E

2033E

2046E

2646E

2658E

3120724

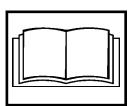
June 1, 1997

ANSI









FOREWORD

The purpose of this manual is to provide users with the operating procedures essential for the promotion of proper machine operation for its intended purpose. It is important to over-stress proper machine usage. All information in this manual should be **READ** and **UNDERSTOOD** before any attempt is made to operate the machine. **YOUR OPERATING MANUAL IS YOUR MOST IMPORTANT TOOL** - Keep it with the machine. **REMEMBER ANY EQUIPMENT IS ONLY AS SAFE AS THE OPERATOR.**

BECAUSE THE MANUFACTURER HAS NO DIRECT CONTROL OVER MACHINE APPLICATION AND OPERATION, PROPER SAFETY PRACTICES ARE THE RESPONSIBILITY OF THE USER AND HIS OPERATING PERSONNEL.

ALL INSTRUCTIONS IN THIS MANUAL ARE BASED ON THE USE OF THE MACHINE UNDER PROPER OPERATING CONDITIONS, WITH NO DEVIATIONS FROM THE ORIGINAL DESIGN. ALTERATION AND/OR MODIFICATION OF THE MACHINE IS STRICTLY FORBIDDEN WITHOUT WRITTEN APPROVAL FROM JLG INDUSTRIES. PER OSHA REGULATIONS.



THIS "SAFETY ALERT SYMBOL" IS USED TO CALL ATTENTION TO POTENTIAL HAZARDS WHICH MAY LEAD TO DEATH OR SERIOUS INJURY IF IGNORED.

Safety of personnel and proper use of the machine are of primary concern, DANGER, WARNING, CAUTION, IMPORTANT, INSTRUCTIONS and NOTE are inserted throughout this manual to emphasize these areas. They are defined as follows:



▲ WARNING

DANGER INDICATES AN IMMINENTLY HAZARD-OUS SITUATION WHICH, IF NOT AVOIDED WILL RESULT IN DEATH OR SERIOUS INJURY. WARNING INDICATES A POTENTIALLY HAZARD-OUS SITUATION WHICH, IF NOT AVOIDED COULD RESULT IN DEATH OR SERIOUS INJURY.

⚠ CAUTION

▲ IMPORTANT

CAUTION INDICATES A POTENTIALLY HAZARD-OUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY. IT MAY ALSO BE USED TO ALERT AGAINST UN-SAFE PRACTICES. IMPORTANT OR INSTRUCTIONS PROCEDURES ESSENTIAL FOR SAFE OPERATION AND WHICH, IF NOT FOLLOWED MAY RESULT IN A MALFUNCTION OR DAMAGE TO THE MACHINE.

In this Manual "Notes" are used to provide information of special interest.

All procedures herein are based on the use of the machine under proper operating conditions, with no deviations from original design intent ... as per OSHA regulations.

READ & HEED!

The ownership, use, service, and/or maintenance of this machine is subject to various federal, state and local laws and regulations. It is the responsibility of the owner/user to be knowledgeable of these laws and regulations and to comply with them. The most prevalent regulations of this type are the Federal OSHA Safety Regulations*. Listed below, in abbreviated form are some of the requirements of Federal OSHA regulations in effect as of the date of publication of this handbook.

The listing of these requirements shall not relieve the owner/user of the responsibility and obligation to determine all applicable laws and regulations and their exact wording and requirements, and to comply with the requirements. Nor shall the listing of these requirements constitute an assumption of responsibility of liability on the part of JLG Industries, Inc.

- Only trained and authorized operators shall be permitted to operate the aerial lift.
- A malfunctioning lift shall be shut down until repaired.
- The controls shall be plainly marked as to their function.
- The controls shall be tested each day prior to use to determine that they are in safe operating condition.
- When applicable by reason of local regulations or job site/employer safety rules, all personnel in the platform shall at all times wear approved fall protection devices and other safety gear as required.

- Load limits specified by the manufacturer shall not be exceeded.
- Instruction and warning placards must be legible.
- 8. Aerial lifts may be "field modified" for uses other than those intended by the manufacturer only if certified in writing by the manufacturer to be in conformity to applicable OSHA safety regulations and to be at least as safe as it was prior to modification.
- Aerial lifts shall not be used near electric power lines unless the lines have been deenergized or adequate clearance is maintained (see OSHA 20 CFR 1910.67 and 1926.400).
- Employees using aerial lifts shall be instructed how to recognize and avoid unsafe conditions and hazards.
- Ground controls shall not be operated unless permission has been obtained from personnel in the platform, except in case of an emergency.
- 12. Regular inspection of the job site and aerial lift shall be performed by competent persons.
- Personnel shall always stand on the floor of the platform, not on boxes, planks, railing or other devices for a work position.
- *Applicable Federal OSHA regulations, as of the date of publication of this manual include, but are not limited to, 29 CFR 1910.67, 29 CFR 1926.20, 29 CFR 1926.21, 29 CFR 1926.28, 29 CFR 1926.400 and 29 CFR 1926.556. Consult the current regulations for the exact wording and full text of the requirements and contact the closest Federal OSHA office for specific interpretations.

EFFECTIVITY PAGE

NOTE: This manual is split from the combined Operators and Safety, Service and Maintenance, and Illustrated Parts Manual 3123000

Original Issue - July 1996 Revised - September 1996

Operators and Safety Manual 3120724

Original Issue - April 1997

▲ IMPORTANT

NOTE: Machines through serial number 34920 are equipped with power LIFT DOWN. Machines beginning with serial number 34921 are equipped with gravity LIFT DOWN.

Machines with the following serial numbers are also equipped with gravity LIFT DOWN:

Where differences in machine operation exist, applicable serial numbers will be referenced. Refer to the listing above for exceptions to the power lift down serial number block.

Change 1 - June 1997

pages: a, b, i, ii ,1-1, 2-3, 2-5, 3-2, 3-3, 3-5, 3-9, 3-10, 4-1, 4-2, 4-3, 4-4, 4-5, 4-6, 4-7, 4-8, 5-1, 5-2

Change 2 - January 1998

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1-1. GENERAL.

This section prescribes the proper and safe practices for major areas of machine usage which have been divided into three basic categories: Driving, Operation, and Maintenance. In order to promote proper usage of the machine, it is mandatory that a daily routine be established based on the instructions given in this manual. A maintenance program, using the information provided in the Service and Maintenance Manual, must also be established by a qualified person and must be followed to ensure that the machine is safe to operate.

The user/operator of the machine should not accept operating responsibility until this manual has been read and operation of the machine, under the supervision of an experienced and qualified operator, has been completed. If there is a question on application and/or operation, JLG Industries Product Safety and Reliability should be consulted.

⚠ WARNING

MODIFICATION OF THE MACHINE WITHOUT APPROVAL OF JLG INDUSTRIES IS PROHIBITED.

1-2. DRIVING/TOWING/CARRYING.

Before driving the machine the user must be familiar with the drive, steer and stopping characteristics. This is especially important when driving in close quarters.

The user should be familiar with the driving surface before driving. The surface should be firm and level and grades should not exceed the allowable grade for the machine, 25%.

Note

Remember that the key to safe and proper usage is common sense and its careful application.

It is not recommended that this machine be towed, except in the event of a machine malfunction, a total machine power failure, or for loading on a truck. Refer to Section 6 for emergency towing procedures.

SPECIAL NOTE:

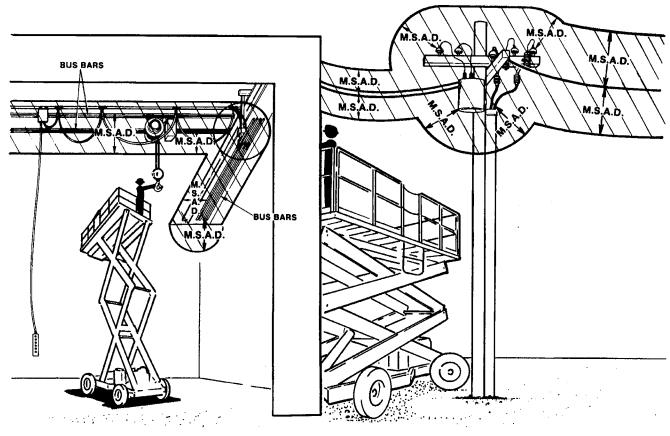
CERTAIN 'CARTOONS' IN THIS PUBLICATION SHOULD IN NO WAY BE CONSTRUED AS SHOWING THE PROPER USE OF THE MACHINES. THEY ARE INCLUDED TO PROVIDE VISUAL INDICATIONS OF INCORRECT EQUIPMENT OPERATION AND APPLICATION.

WARNING

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

Carrying or loading the unit should be accomplished using a forklift vehicle of suitable capacity with the forks being positioned correctly at the indicated areas on the machine frame. Refer to Section 4 for lifting information.

1-3. ELECTROCUTION HAZARD.





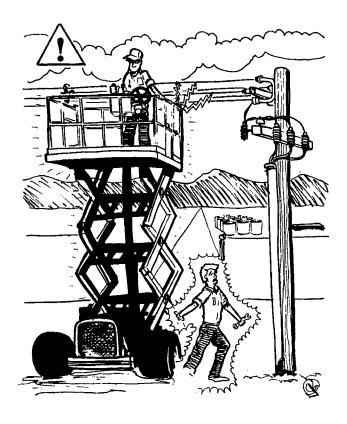
M.S.A.D. = MINIMUM SAFE APPROACH DISTANCE (SEE TABLE BELOW) MAINTAIN M.S.A.D. FROM ALL OTHER CHARGED LINES AND PARTS AS WELL AS THOSE SHOWN.

Table 1-1. Minimum Safe Approach Distances.

Minimum safe approach distances (M.S.A.D.) to energized (exposed or insulated) power lines and parts. DANGER: DO NOT maneuver machine or personnel inside PROHIBITED ZONE.

ASSUME all electrical parts and wiring are ENERGIZED unless known otherwise.

VOLTAGE RANGE (Phase to Phase)	MINIMUM SAFE APPROACH DISTANCE Feet (Meters)
0 to 300V	AVOID CONTACT
Over 300V to 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)



MAINTAIN A SAFE DISTANCE FROM ELECTRICAL LINES

MAINTAIN SAFE CLEARANCE FROM ELECTRICAL LINES AND APPARATUS. ALLOW FOR PLATFORM SWAY, ROCK OR SAG AND ELECTRICAL LINE SWAYING. THE MACHINE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.

MAINTAIN A CLEARANCE OF AT LEAST 10 FEET (3 M) BETWEEN ANY PART OF THE MACHINE OR ITS LOAD AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 50,000 VOLTS. ONE FOOT (0.3 M) ADDITIONAL CLEARANCE IS REQUIRED FOR EVERY ADDITIONAL 30,000 VOLTS OR LESS.

1-4. PRE-OPERATIONAL.

READ YOUR MANUAL. UNDERSTAND WHAT YOU'VE READ - THEN BEGIN OPERATIONS.

ALLOW ONLY THOSE AUTHORIZED AND QUALIFIED PERSONNEL TO OPERATE MACHINE WHO HAVE DEMONSTRATED THAT THEY UNDERSTAND SAFE AND PROPER OPERATION AND MAINTENANCE OF THE UNIT.

AN OPERATOR MUST NOT ACCEPT OPERATING RESPONSIBILITIES UNTIL ADEQUATE TRAINING HAS BEEN GIVEN BY COMPETENT AND AUTHORIZED PERSONS.

BEFORE OPERATION CHECK WORK AREA FOR BARE OVERHEAD ELECTRIC LINES, MACHINE TRAFFIC SUCH AS BRIDGE CRANES, HIGHWAY, RAILWAY AND CONSTRUCTION EQUIPMENT.

PRECAUTIONS TO AVOID ALL KNOWN HAZARDS IN THE WORK AREA MUST BE TAKEN BY THE OPERATOR AND HIS SUPERVISOR BEFORE STARTING THE WORK.

DO NOT OPERATE THIS MACHINE UNLESS IT HAS BEEN SERVICED AND MAINTAINED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS AND SCHEDULE.

ENSURE DAILY INSPECTION AND FUNCTION CHECK ARE PERFORMED PRIOR TO PLACING MACHINE INTO OPERATION.

NEVER DISABLE OR MODIFY ANY SAFETY DEVICE. ANY MODIFICATION OF THE MACHINE IS A SAFETY VIOLATION AND IS A VIOLATION OF OSHA RULES.

DO NOT OPERATE MACHINE WHEN WIND CONDITIONS EXCEED 30 MPH.

NEVER OPERATE OR RAISE PLATFORM WHEN MACHINE IS ON A TRUCK OR OTHER VEHICLE.

APPROVED HEAD GEAR MUST BE WORN WHEN REQUIRED BY ALL OPERATING AND GROUND PERSONNEL.

READ AND OBEY ALL WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS ON MACHINE AND IN THIS MANUAL.

BE FAMILIAR WITH LOCATION AND OPERATION OF GROUND STATION CONTROLS.

ALWAYS USE 'THREE POINT CONTACT' WITH THE MACHINE. FACE THE MACHINE WHEN ENTERING OR LEAVING THE PLATFORM. 'THREE POINT CONTACT' MEANS THAT TWO HANDS AND ONE FOOT OR ONE HAND AND TWO FEET ARE IN CONTACT WITH THE MACHINE AT ALL TIMES DURING MOUNT AND DISMOUNT.

1-5. DRIVING.

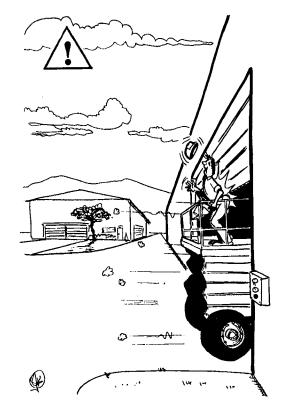
WATCH FOR OBSTRUCTIONS AROUND MACHINE AND OVERHEAD WHEN DRIVING.

CHECK TRAVEL PATH FOR PERSONS, HOLES, BUMPS, DROP-OFFS, OBSTRUCTIONS, DEBRIS, AND COVERINGS WHICH MAY CONCEAL HOLES AND OTHER HAZARDS.

WHEN DRIVING IN HIGH SPEED, SWITCH TO LOW BEFORE STOPPING. TRAVEL GRADES IN LOW DRIVE ONLY.

DO NOT DRIVE WITH PLATFORM RAISED OR RAISE PLATFORM WHILE ON A SLOPING, UNEVEN, OR SOFT SURFACE.

BEFORE DRIVING ON FLOORS, BRIDGES, TRUCKS AND OTHER SURFACES, CHECK ALLOWABLE CAPACITY OF SURFACES.



ALWAYS LOOK IN THE DIRECTION OF TRAVEL.

DO NOT TRAVEL ON SOFT OR UNEVEN SURFACES, AS TIPPING WILL OCCUR.

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

BE AWARE OF STOPPING DISTANCES WHEN TRAVELING IN HIGH AND LOW SPEEDS.

ALWAYS POST A LOOKOUT AND SOUND HORN WHEN DRIVING IN AREAS WHERE VISION IS OBSTRUCTED.

KEEP NON-OPERATING PERSONNEL AT LEAST 6 FEET (1.8 M) AWAY FROM MACHINE DURING DRIVING OPERATIONS.

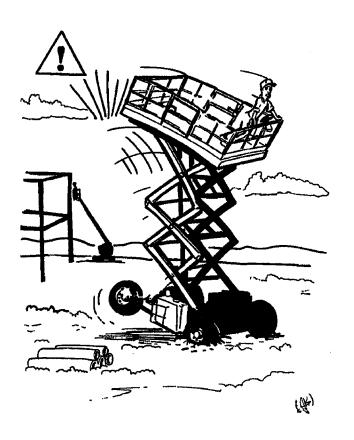
1-6. OPERATION.

READ YOUR MANUAL, UNDERSTAND WHAT YOU'VE READ - THEN BEGIN OPERATIONS.

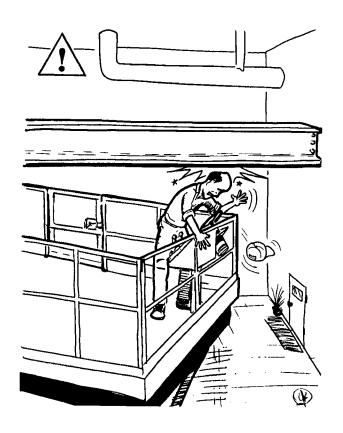
DO NOT OPERATE ANY MACHINE ON WHICH DAN-GER, WARNING, CAUTION OR INSTRUCTION PLAC-ARDS OR DECALS ARE MISSING OR ILLEGIBLE.

NEVER EXCEED MANUFACTURERS RATED PLATFORM CAPACITY - REFER TO CAPACITY DECAL ON MACHINE. DISTRIBUTE LOAD EVENLY ON PLATFORM FLOOR.

ENSURE MACHINE IS POSITIONED ON A FIRM, LEVEL AND UNIFORM SURFACE BEFORE RAISING PLATFORM.



NEVER OPERATE ON SOFT OR UNEVEN SURFACES.



THOROUGHLY CHECK ALL CLEARANCES BEFORE POSITIONING PLATFORM.

NEVER 'SLAM' A CONTROL SWITCH OR LEVER THROUGH NEUTRAL TO OPPOSITE DIRECTION. ALWAYS RETURN SWITCH TO NEUTRAL AND STOP; THEN MOVE SWITCH TO THE DESIRED POSITION. OPERATE LEVERS WITH SLOW, EVEN PRESSURE.

NEVER OPERATE A MALFUNCTIONING MACHINE. IF A MALFUNCTION OCCURS, SHUT DOWN THE MACHINE, RED TAG IT, AND NOTIFY PROPER AUTHORITIES.

CHECK CLEARANCES ABOVE, ON SIDES AND BOTTOM OF PLATFORM WHEN RAISING AND LOWERING PLATFORM.

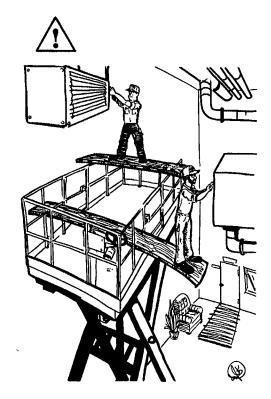
NEVER USE SCISSOR ARMS TO GAIN ACCESS TO OR LEAVE PLATFORM.

DO NOT ATTACH OVERHANGING LOADS TO THE PLATFORM OR INCREASE THE PLATFORM SIZE WITH UNAUTHORIZED DECK EXTENSIONS OR ATTACHMENTS.

DO NOT ELEVATE PLATFORM WHILE DRIVING, OR UNLESS MACHINE IS LEVEL.

DO NOT TIE OFF MACHINE TO ANY ADJACENT STRUCTURE. NEVER ATTACH WIRE, CABLE OR ANY SIMILAR ITEMS TO PLATFORM.

WHEN APPLICABLE BY REASON OF LOCAL REGULATIONS OR JOBSITE/EMPLOYER SAFETY RULES, ALL PERSONNEL IN THE PLATFORM SHALL AT ALL TIMES WEAR APPROVED FALL PROTECTION DEVICES AND OTHER SAFETY GEAR AS REQUIRED.



ALWAYS STAND ON PLATFORM FLOOR, NOT ON BOXES, PLANKS OR RAILINGS.

TO AVOID FALLING - USE EXTREME CAUTION WHEN ENTERING OR LEAVING PLATFORM ABOVE GROUND. ENTER OR EXIT THRU GATE ONLY. PLATFORM MUST BE WITHIN 1 FOOT (0.3 M) OF ADJACENT - SAFE AND SECURE - STRUCTURE.

TRANSFERS BETWEEN A STRUCTURE AND THE PLATFORM EXPOSE OPERATORS TO FALL POTENTIALS. THIS PRACTICE SHOULD BE DISCOURAGED WHEREVER POSSIBLE. WHERE TRANSFER MUST BE ACCOMPLISHED TO PERFORM THE JOB, TWO LANYARDS WILL BE USED. ONE LANYARD SHOULD BE ATTACHED TO THE PLATFORM, THE OTHER TO THE STRUCTURE. THE SAFETY LANYARD THAT IS ATTACHED TO THE PLATFORM SHOULD NOT BE DISCONNECTED UNTIL SUCH TIME AS THE TRANSFER TO THE STRUCTURE IS COMPLETE.

NO STUNT DRIVING OR HORSEPLAY IS PERMITTED.

DO NOT ALLOW PERSONNEL TO TAMPER WITH, SERVICE, OR OPERATE THIS MACHINE FROM THE GROUND WITH PERSONNEL IN PLATFORM EXCEPT IN AN EMERGENCY.

WHEN TWO OR MORE PERSONS ARE IN PLATFORM, THE OPERATOR SHALL BE RESPONSIBLE FOR ALL MACHINE OPERATIONS.

DURING OPERATION KEEP ALL BODY PARTS INSIDE PLATFORM RAILINGS.

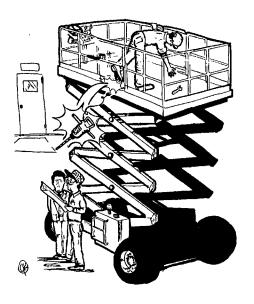
NEVER POSITION LADDERS, STEPS, OR SIMILAR ITEMS ON UNIT TO PROVIDE ADDITIONAL REACH FOR ANY PURPOSE.

WHEN RIDING IN OR WORKING FROM PLATFORM BOTH FEET MUST BE FIRMLY POSITIONED ON DECK.

DO NOT EXTEND REACH LIMITS OF THIS MACHINE WITH ADDITIONAL EQUIPMENT SUCH AS PLANKS, BOXES, ETC.

OBSERVE EXTREME CAUTION AT ALL TIMES TO PREVENT OBSTACLES FROM STRIKING OR INTERFERING WITH OPERATING CONTROLS AND PERSONS IN THE PLATFORM.





KEEP EVERYONE CLEAR OF A WORKING PLATFORM.

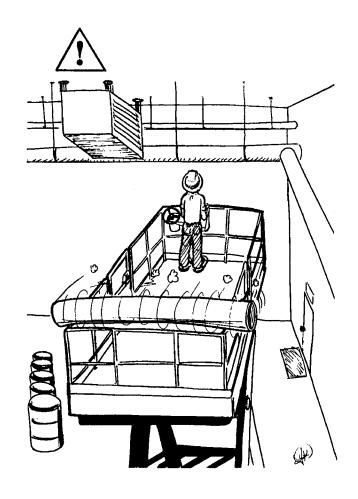
ENSURE THAT OPERATORS OF OTHER OVER-HEAD AND FLOOR LEVEL MACHINES ARE AWARE OF THE AERIAL PLATFORM'S PRESENCE. DISCON-NECT POWER TO OVERHEAD CRANES. BARRI-CADE FLOOR AREA IF NECESSARY.

DO NOT OPERATE WITHOUT HANDRAILS IN PLACE AND SECURED. IT IS A SAFETY VIOLATION.

DO NOT STEP OUTSIDE OF HANDRAILS.

ALWAYS ENSURE THAT POWER TOOLS ARE PROPERLY STOWED AND NEVER LEFT HANGING BY THEIR CORD FROM THE PLATFORM WORK AREA.

AVOID ACCUMULATION OF DEBRIS ON PLATFORM WORK AREA. KEEP MUD, OIL, GREASE AND OTHER SLIPPERY SUBSTANCES FROM FOOTWEAR AND PLATFORM DECK.



PLATFORM RAILS ARE NOT FOR HANDLING MATERIAL.

1-7. TOWING AND HAULING.

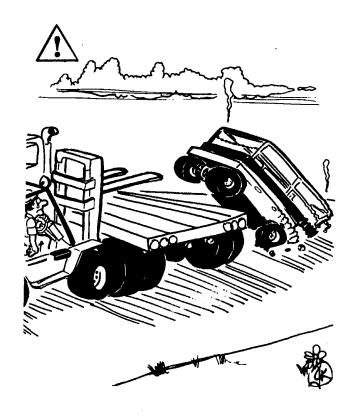
TOW OR PULL MACHINE IN THE EVENT OF AN EMERGENCY ONLY. TO MOVE MACHINE, CARRY MACHINE WITH FORKLIFT OF SUITABLE CAPACITY.

HAVE PLATFORM COMPLETELY EMPTY OF TOOLS AND DEBRIS BEFORE CARRYING.

WHEN LIFTING MACHINE, POSITION FORKS ONLY AT DESIGNATED AREAS AT REAR OR SIDE OF MACHINE.

HAVE PLATFORM FULLY RETRACTED WHILE MACHINE IS BEING CARRIED.

NEVER ALLOW PERSONNEL IN PLATFORM WHILE CARRYING.



LIFT MACHINE AT DESIGNATED AREAS ONLY.

1-8. MAINTENANCE.

This section contains the general safety precautions which must be observed during maintenance of the aerial platform. It is of utmost importance 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 qualified person and must be followed to ensure that the machine is safe to operate.

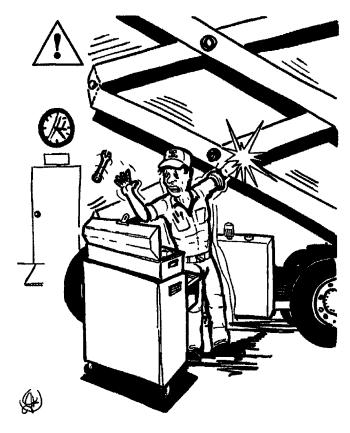
↑ WARNING

MODIFICATION OF THE MACHINE WITHOUT CERTIFICATION BY A RESPONSIBLE AUTHORITY THAT THE MACHINE IS AT LEAST AS SAFE AS ORIGINALLY MANUFACTURED IS A SAFETY VIOLATION.

The specific precautions to be observed during machine maintenance are inserted at the appropriate point in the manual. These precautions are, for the most part, those that apply when servicing hydraulic and larger machine component parts.

Your safety, and that of others, is the first consideration when engaging in the maintenance of equipment. Always be conscious of weight.

Never attempt to move heavy parts without the aid of a mechanical device. Do not allow heavy objects to rest in an unstable position. When raising a portion of the equipment, ensure that adequate support is provided.



USE SAFETY PROPS WHEN PERFORMING MAINTENANCE.

ALWAYS DISCONNECT BATTERIES WHEN REPLACING ELECTRICAL COMPONENTS.

REMOVE RINGS, WATCHES AND JEWELRY WHEN PERFORMING ANY MAINTENANCE.

DO NOT WEAR LOOSE FITTING CLOTHING OR LONG HAIR UNRESTRAINED, WHICH IS APT TO BECOME CAUGHT ON, OR ENTANGLED IN EQUIPMENT.

USE ONLY CLEAN APPROVED NONFLAMMABLE CLEANING SOLVENTS.

SHUT OFF ALL POWER CONTROLS BEFORE MAKING ADJUSTMENTS, LUBRICATING OR PERFORMING ANY OTHER MAINTENANCE.

NEVER WORK UNDER AN ELEVATED PLATFORM UNTIL IT HAS BEEN RESTRAINED FROM MOVEMENT WITH SAFETY PROPS, BLOCKING OR OVERHEAD SLING.

NEVER ALTER, REMOVE OR SUBSTITUTE ANY ITEMS SUCH AS COUNTERWEIGHTS, SOLID TIRES, BATTERIES, ETC. WHICH WOULD REDUCE THE OVERALL WEIGHT OR BASE STABILITY OF THE MACHINE.

2-1. GENERAL.

This section provides the necessary information needed by those personnel that are responsible to place the machine in operation readiness, and lists checks that are performed prior to use of the machine. It is important that the information contained in this section be read and understood before any attempt is made to operate the machine. Ensure that all the necessary inspections have been completed successfully before placing the machine into service. These procedures will aid in obtaining maximum service life and safe operation.

▲ IMPORTANT

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

2-2. PREPARATION FOR USE.

Before a new machine is put into operation it must be carefully inspected for any evidence of damage resulting from shipment and inspected periodically thereafter, as outlined in paragraph 2-3, Delivery and Periodic Inspection. The unit should be thoroughly checked for hydraulic leaks during initial start-up and run. A check of all components should be made to assure their security.

All preparations necessary to place the machine in operation readiness status are the responsibility of management personnel. Preparation requires good common sense, (i.e. lift works smoothly and brakes operate properly) coupled with a series of visual inspections. The mandatory requirements are given in paragraph 2-4, Daily Walk Around Inspection.

It should be assured that the items appearing in the Delivery and Periodic Inspection and Functional Check are complied with prior to putting the machine into service.

2-3. DELIVERY AND PERIODIC INSPECTION.

Note

This machine requires periodic safety and maintenance inspections by a JLG Dealer. A decal located on the frame provides a place to record (stamp) inspection dates. Check decal and notify dealer if inspection is overdue.

The following checklist provides a systematic inspection to assist in detecting defective, damaged, or improperly installed parts. The checklist denotes the items to be inspected and conditions to examine. Periodic inspection shall be performed monthly or more often when required by environment, severity, and frequency of usage.

Handrail Assemblies.

Properly installed; no loose or missing parts; no visible damage.

Platform Assembly.

No visible damage; free of dirt and debris.

Sizzor Arms.

No visible damage, abrasions and/or distortions.

Electrical Cable.

No visible damage; properly secured.

Pivot Pins.

No loose or missing retaining hardware; no visible damage; no evidence of pin or bushing wear.

Lift Cylinder.

No rust, nicks, scratches or foreign material on piston rod; no leakage.

Frame.

No visible damage; loose or missing hardware (top and underside).

Tire and Wheel Assemblies.

No loose or missing lug nuts; no visible damage.

Sliding Wear Pad Blocks.

No excessive wear.

Hydraulic Oil Supply.

Level should be at full mark on side of hydraulic tank (all systems shut down, machine in stowed position).

Steer Cylinder.

No rust, nicks, scratches or foreign material on piston rod; no leakage.

Steer Linkage.

No loose or missing parts; no visible damage.

Front Spindle Assemblies.

No excessive wear; no damage; evidence of proper lubrication.

Control Boxes. (Platform and Ground)

Switches operable; no visible damage; placards secure and legible; controller operable; no visible damage.

Batteries.

Proper electrolyte level; cable connections tight; no visible damage; no corrosion at battery cable connections. Ensure batteries are fully charged.

Motor/Pump Unit and Valves.

No leakage; units secure.

Platform Placards.

No visible damage; placards secure and legible.

2-4. DAILY WALK-AROUND INSPECTION.

It is the user's responsibility to inspect the machine before the start of each workday. It is recommended that each user inspect the machine before operation, even if the machine has already been put into service under another user. This Daily Walk-Around Inspection, Figure 2-2, is the preferred method of inspection.

In addition to the Daily Walk-Around Inspection, be sure to include the following as part of the daily inspection:

Overall Cleanliness.

Check all standing surfaces for oil, fuel and hydraulic oil spillage and foreign objects. Ensure overall cleanliness.

• Placards.

Keep all information and operating placards clean and unobstructed. Cover when spray painting or shot blasting to protect legibility.

· Operators and Safety Manual.

Ensure a copy of this manual is enclosed in the manual storage box.

Machine Log.

Ensure a machine operating record or log is kept. Check to see that it is current and that no entries have been left uncleared, leaving machine in an unsafe condition for operation.

Daily Lubrication.

For those items pointed out in the Daily Walk-Around Inspection requiring daily lubrication, refer to the Lubrication Chart, Figure 2-3, for specific requirements.

Daily Functional Check.

Perform functional checks in accordance with paragraph 2-5, Daily Functional Check, before attempting to operate the machine.

▲ WARNING

TO AVOID INJURY DO NOT OPERATE A MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED. USE OF A MALFUNCTIONING MACHINE IS A SAFETY VIOLATION.

2-5. DAILY FUNCTIONAL CHECK.

⚠ WARNING

TO AVOID INJURY DO NOT OPERATE A MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED. USE OF A MALFUNCTIONING MACHINE IS A SAFETY VIOLATION.

A functional check of all systems should be performed, under no load, once the walk-around inspection is complete, in an area free of overhead and ground level obstructions. Perform pre-load functional check in accordance with the following procedure:

- 1. Ensure batteries are fully charged.
- 2. Raise and lower platform several times. Check for smooth elevation and lowering. Check for High Drive cut-out as platform begins to raise. Check that pothole protection system is deployed when platform is raised and that actuating rollers are in contact with the connecting bar. (See Figure 2-1.)

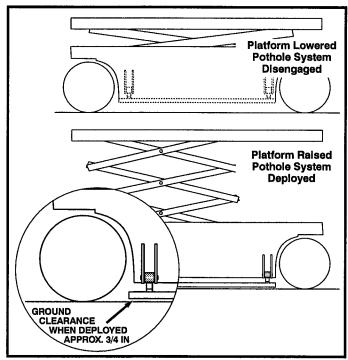


Figure 2-1. Pothole Protection System Operation.

- 2. Drive forward and reverse, check for proper operation.
- Check that drive brake holds when machine is driven up a hill, not to exceed rated gradeability, and stopped.
- Steer left and right. Check for proper operation.

5. Check fluid level on hydraulic oil reservoir. Refer to the Lubrication Chart, Figure 2-3.

2-6. TORQUE REQUIREMENTS.

The Torque Chart, Figure 2-4, consists of standard torque values based on bolt diameter and grade, also specifying dry and wet torque values in accordance with recommended shop practices. This chart is provided as an aid to the operator in the event he/she notices a condition that requires prompt attention during the walk-around inspection or during operation until the proper service personnel can be notified. The Service and Maintenance Manual provides specific torque values and periodic maintenance procedures with a listing of individual components. Utilizing this Torque Chart in conjunction with the preventive maintenance procedures in the Service and Maintenance Manual will enhance safety, reliability and performance of the machine.

2-7. BATTERY CHARGING.

At the end of the work day, the batteries should be charged for the next day's work. Position the Emergency Stop switch to OFF. Prior to charging, be sure electrolyte covers plates. Connect the battery charger to a properly grounded receptacle using a suitable extension cord. Set the battery charger timer switch, if equipped, for the desired charging time. After charging, check the electrolyte level of the batteries and adjust accordingly. Add distilled water only to batteries. A fully charged battery will have a specific gravity of between 1.260 - 1.275 on a hydrometer.

⚠ CAUTION

WHEN ADDING DISTILLED WATER TO THE BATTERIES, A NON-METALLIC CONTAINER AND/OR FUNNEL MUST BE USED. ADD WATER ONLY TO LEVEL INDICATOR OR 3/8 INCH (0.95 CM) ABOVE SEPARATORS.

NO OPEN FLAMES OR SMOKING WHEN CHARGING BATTERIES.

CHARGE BATTERIES ONLY IN A WELL VENTI-LATED AREA.

ENSURE THAT BATTERY ACID DOES NOT COME INTO CONTACT WITH SKIN OR CLOTHING.

Notes

Be sure to disconnect and store any extension cords after charging batteries and before putting machine into service.

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

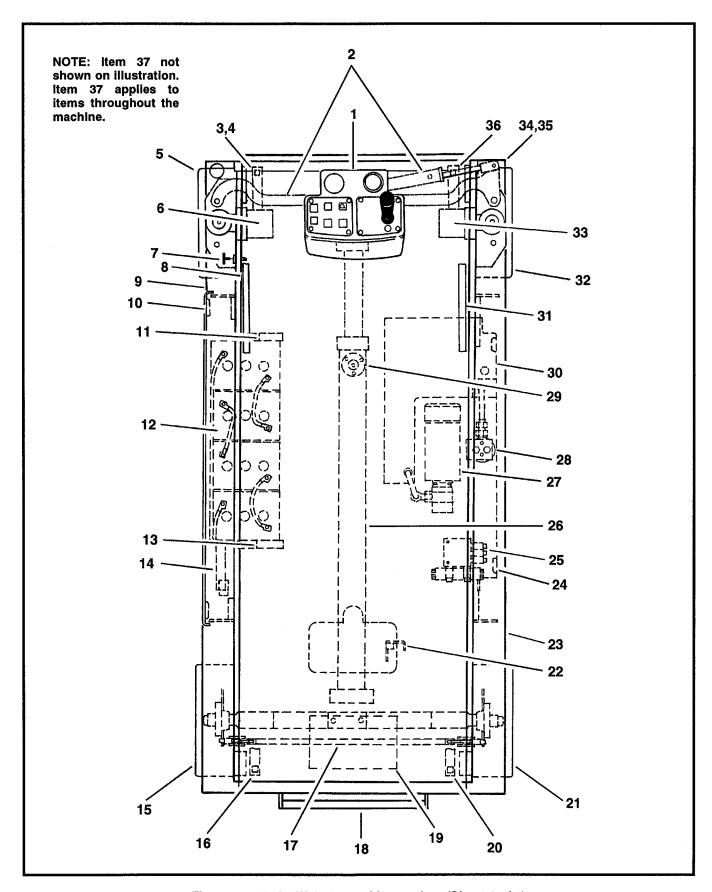


Figure 2-2. Daily Walk-Around Inspection. (Sheet 1 of 2)

GENERAL.

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

⚠ WARNING

TO AVOID INJURY DO NOT OPERATE MACHINE UNTIL ALL MALFUNCTIONS HAVE BEEN CORRECTED. USE OF A MALFUNCTIONING MACHINE IS A SAFETY VIOLATION.

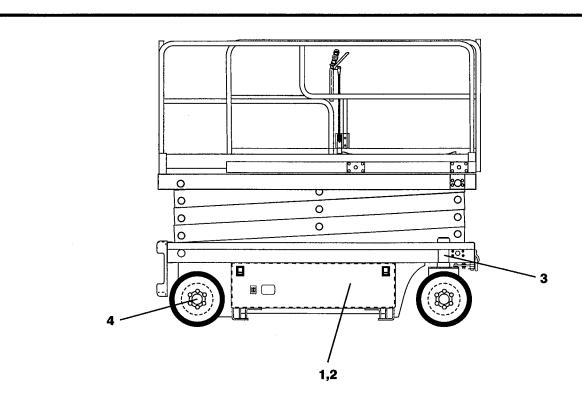
TO AVOID POSSIBLE INJURY, BE SURE MACHINE POWER IS "OFF" DURING "WALK-AROUND INSPECTION."

Note

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

- Platform Controls Properly secured; no loose or missing parts; no visible damage to control box or controller (joystick). Placards secure and legible; control markings legible; manual in manual storage box.
- Steer Cylinder and Linkage Properly secured; no loose or missing parts; no visible damage; no evidence of steer cylinder leakage.
- Scissor Arms and Sliding Wear Pads Properly secured; no visible damage; no loose or missing parts.
- Safety Prop Properly secured; no loose or missing parts; no visible damage.
- Steer/Drive Wheel and Tire Assembly, Left Front -Properly secured; no loose or missing lug nuts; no visible damage.
- **6.** Drive Motor, Left Front Properly secured; no visible damage; no evidence of leakage.
- 7. Manual Descent Cable and Pull Handle Properly secured; no loose or missing parts; no visible damage.
- Powered Deck Extension Cylinder (If Equipped) -Properly secured; no visible damage; no loose or missing parts; no evidence of leakage.
- Pothole Protection System Support bar, rollers, limit switches, springs and links properly secured; no visible damage; no loose or missing parts.
- Compartment Cover and Latches Cover and latches in working condition; properly secured; no loose or missing parts.
- 11. Machine Controller (1532E and 1932E) Properly secured; no visible damage; no loose or broken wiring.
- **12.** Battery Installation Proper electrolyte level; cables secure; no damage or corrosion. Holddowns secure.
- Machine Controller (2033E, 2046E, 2646E and 2658E) -Properly secured; no visible damage; no loose or broken wiring.

- 14. Ground Controls Properly secured; no visible damage; switches operable; placards secure and legible.
- **15.** Wheel and Tire Assembly, Left Rear Properly secured; no loose or missing lug nuts; no visible damage.
- **16.** Scissor Arms and Sliding Wear Pads Properly secured; no visible damage; no loose or missing parts.
- Parking Brake No loose or missing parts; no visible damage; no cylinder leakage.
- **18.** Ladder Properly secured; no visible damage; no loose or missing hardware.
- 19. Battery Charger No visible damage; properly secured.
- Scissor Arms and Sliding Wear Pads Properly secured; no visible damage; no loose or missing parts.
- Wheel and Tire Assembly, Right Rear Properly secured; no loose or missing lug nuts; no visible damage.
- 22. High Drive Limit Switch Properly secured; no visible damage; no loose or missing parts.
- Pothole Protection System Support bar, rollers, limit switches and links properly secured; no visible damage; no loose or missing parts.
- 24. Compartment Cover and Latches Cover and latches in working condition; properly secured; no visible damage; no loose or missing parts.
- 25. Control Valve Installation No loose or missing parts; no evidence of leakage. No unsupported wires or hoses; no damaged or broken wires.
- **26.** Lift Cylinder Properly secured; no visible damage; no loose or missing parts; no evidence of leakage.
- 27. Motor/Pump Unit Properly secured; no visible damage; no evidence of hydraulic leakage.
- 28. Hydraulic Filter No visible damage; properly secured; no evidence of leakage.
- 29. Tilt Switch Properly secured; no loose or missing parts; no visible damage; no loose or broken wiring.
- Hydraulic Reservoir No visible damage; no loose or missing parts; no evidence of leakage. Recommended hydraulic fluid level on side of tank. Breather cap secure and working.
- **31.** Powered Deck Extension Cylinder (If Equipped) Properly secured; no visible damage; no loose or missing parts; no evidence of leakage.
- **32.** Steer/Drive Wheel and Tire Assembly, Right Front Properly secured; no loose or missing lug nuts; no visible damage; tire properly inflated.
- **33.** Drive Motor, Right Front Properly secured; no visible damage; no evidence of leakage.
- **34.** Handrail Installation All railings securely attached; no visible damage; no missing parts; chain in proper working order. If equipped, access gate properly secured and in good working order.
- **35.** Platform Assembly No loose or missing parts; no visible damage; platform deck extension operates properly.
- **36.** Scissor Arms and Sliding Wear Pads Properly secured; no visible damage; no loose or missing parts.
- 37. (Not Shown on Illustration) Valves, Valve Fittings, Hosing and Tubing - Properly secured; no loose or missing parts; no visible damage; no evidence of leakage.



INDEX NUMBER	COMPONENT	NO/TYPE LUBE POINTS	LUBE/METHOD	INTERVAL HOURS	COMMENTS
1 .	Hydraulic Oil	Fill Cap/Drain Plug	HO - Check HO Level HO - Change HO	10/1200	Check oil every 10 hrs. Change oil every 1200 hrs.
2	Hydraulic Filter Element	N/A	N/A	50/300	Change filter after first 50 hours of operation, then every 300 hours thereafter.
3	Kingpin Housing	2 Grease Fittings (1 each housing)	MPG - Pressure Gun	600	N/A
4	Wheel Bearings	2 - Rear Wheels	MPG - Repack	1200	N/A

Key To Lubricants:

MPG - Multi-Purpose Grease

HO - Hydraulic Oil - Mobilfluid 424 or Kendall Hyken 052

▲ WARNING

TO AVOID PERSONAL INJURY, USE SAFETY PROP FOR ALL MAINTENANCE REQUIRING PLATFORM TO BE ELEVATED.

Notes:

- 1. Be sure to lubricate like items on each side of machine.
- 2. Recommended lubricating intervals are based on machine operations under normal conditions. For machines used in multi-shift operations and/or exposed to hostile environments or conditions, lubrication frequencies must be increased accordingly.
- 3. Lubricating intervals are calculated on 10 hours of machine operation per week.

Figure 2-3. Lubrication Chart - Models 1532E/1932E/2033E/2046E/2646E/2658E.

						Ĭ	WALGES I OIL KING I FAILE BOLIS ONLI	-		;) j	i			CAP SCREWS	KEWS
			THREAD	SAEGH	E GRADE 5 BOLTS &	OLTS &	GRADE 2 NUTS	S NUTS	SAEGR	SAE GRADE 8 BOLTS &	OLTS &	GRADE 8 NUTS	8 NUTS	UNBRAKO 1960 SERIES SOCKET HEAD CAP SCREW	60 SERIES CAP SCREW
77.77	GH		STRESS	CI AMP		TOR	QUE		CI AMP		****	TORQUE		WITH LOC-W	/EL PATCH
		ξE	AREA IN	LOAD	(DRY OR	(188.)	(LOCTITE 262)	(LOCTITE 242 08 271)	LOAD	(DRY OR	(LUB.)	(LOCTITE 262)	(LOCTITE 242 OR 271)	3	TORQUE (as received)
				(E)		LB, IN.		LB. IN.	(FB.)	- N - EB	LB. IN.		18.IN.	[.8.]	. 18.FT
,	40	0077	0.00604	380	8	9	I		540	12	6	I			
4	Γ	0.717.0	0.00661	420	6	7	l		009	13	10			1	ı
-			0.00909	280	16	12	1	I	820	23	17		I		
ဖ	40	0.1380	0.01015	610	18	13	١		920	25	19			1	
c		0.01	0.01400	006	30	22	1		1260	41	31				
x	38	0.1640	0.01474	940	3	ಜ		1	1320	43	32	1			
5	\vdash	000	0.01750	1120	43	32	I		1580	8	45	1		1	1
2	П	0.1900	0.02000	1285	49	36			1800	89	51	1			
7/7		00.0	0.0318	2020	96	75	1	105	2860	144	108		160	3180	13
4/-	Г	0.2500	0.0364	2320	120	98	I	135	3280	168	120		185	3640	41
					LB. FT.	LB. FT.	18.FL	LB. FT.		18.FT.	18.FT	18.FT.	18.ET.		
27,2	18	1070	0.0524	3340	17	13	16	19	4720	25	18	22	30	5240	25
01/0		0.3125	0.0580	3700	19	14	17	21	5220	25	20	25	30	5800	27
0/0		0.770	0.0775	4940	30	23	28	35	0002	45	35	40	20	7750	45
0/0		0.3750	0.0878	2600	35	25	32	40	2900	20	35	45	55	8780	20
7/16		7,04	0.1063	9800	20	35	45	22	0556	20	55	63	80	10630	70
01//	20	U.43/5	0.1187	7550	22	40	20	09	10700	80	09	70	6	11870	75
1/0		0002	0.1419	9050	75	55	68	85	12750	110	80	96	120	14190	110
7	Γ	00000	0.1599	10700	06	9	80	100	14400	120	90	108	135	15990	115
0/16		7	0.1820	11600	110	08	86	120	16400	150	110	139	165	18200	155
0 /6	18	0.5625	0.2030	12950	120	06	109	135	18250	170	130	154	190	20300	165
0/ 1		0100	0.2260	14400	150	110	135	165	20350	220	170	180	240	22600	210
0/0	18	0.6250	0.2560	16300	170	130	153	190	23000	240	180	204	265	25600	220
3/4		0.7500	0.3340	21300	260	200	240	285	30100	380	280	301	420	33400	365
t i	16	0.7500	0.3730	23800	300	220	268	330	33600	420	320	336	465	37300	400
7/8		0220	0.4620	29400	430	320	386	475	41600	009	460	485	999	46200	585
2	14	0.070.0	0.5090	32400	470	320	425	520	45800	099	200	534	725	20900	635
_		5	0.6060	38600	640	480	579	675	51500	900	980	687	990	00909	865
-	12	9	0.6630	42200	700	530	633	735	59700	1000	740	96/	1100	00299	915
4,1/A		4.000	0.7630	42300	800	900	714	840	68700	1280	960	1030	1400	76300	1240
2/1		1.1230	0.8560	47500	880	099	802	925	77000	1440	1080	1155	1575	85600	1380
1-1/4	7	1 0500	0.9690	53800	1120	840	1009	1175	87200	1820	1360	1453	2000	00696	1750
	12	0002.1	1.0730	29600	1240	920	1118	1300	00996	2000	1500	1610	2200	107300	1880
1.1/0	9	4	1.1550	64100	1460	1100	1322	1525	104000	2380	1780	1907	2625	115500	2320
7/1-	12	1.300	1.3150	73000	1680	1260	1506	1750	118100	2720	2040	2165	3000	131500	2440
1-1/9	9	1 500	1.4050	78000	1940	1460	1755	2025	126500	3160	2360	2530	3475	140500	3040
7/1-		- -													







These torque values do not apply to cadium plated fasteners. Note:

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3-1. GENERAL.

▲ IMPORTANT

SINCE THE MANUFACTURER HAS NO DIRECT CONTROL OVER MACHINE APPLICATION AND OPERATION, CONFORMANCE WITH GOOD SAFETY PRACTICES IN THESE AREAS IS THE RESPONSIBILITY OF THE USER AND HIS OPERATING PERSONNEL.

This section provides the necessary information needed to understand control functions. Included in this section are the operating characteristics and limitations, and functions and purposes of controls and indicators. It is important that the user read and understand the proper procedures before operating the machine. These procedures will aid in obtaining optimum service life and safe operation.

3-2. PERSONNEL TRAINING.

The scissor lift is a personnel handling device; therefore, it is essential that it be operated and maintained only by authorized personnel who have demonstrated that they understand the proper use and maintenance of the machine. It is important that all personnel who are assigned to and responsible for the operation and maintenance of the machine undergo a thorough training program and check out period in order to become familiar with the characteristics prior to operating the machine.

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

Operator Training.

Operator training must include instruction in the following:

- Use and limitations of the platform controls, ground controls, emergency controls and safety systems.
- Knowledge and understanding of this manual and of the control markings, instructions and warnings on the machine itself.
- 3. Knowledge and understanding of all safety work rules of the employer and of Federal, State and Local Statutes, including training in the recognition and avoidance of potential hazards in the work place; with particular attention to the work to be performed.
- 4. Proper use of all required personnel safety equipment.

- Sufficient knowledge of the mechanical operation of the machine to recognize a malfunction or potential malfunction.
- 6. The safest means to operate near overhead obstructions, other moving equipment, obstacles, depressions, holes, dropoffs, etc. on the supporting surface.
- Means to avoid the hazards of unprotected electrical conductors.
- 8. Any other requirements of a specific job or machine application.

Training Supervision.

Training must be done under the supervision of a qualified operator or supervisor in an open area free of obstructions until the trainee has developed the ability to safely control a scissor lift in congested work locations.

Operator Responsibility.

The operator must be instructed that he has the responsibility and authority to shut down the machine in case of a malfunction or other unsafe condition of either the machine or the job site and to request further information from his supervisor or JLG Distributor before proceeding.

Note

Manufacturer or Distributor will provide qualified persons for training assistance with first unit(s) delivered and thereafter as requested by user or his personnel.

3-3. OPERATING CHARACTERISTICS AND LIMITATIONS.

General.

A thorough knowledge of the operating characteristics and limitations of the machine is always the first requirement for any user, regardless of user's experience with similar types of equipment.

· Placards.

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

Capacities.

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

- Machine is positioned on a smooth, firm and level surface.
- 2. Load is within manufacturer's rated capacity.
- 3. All machine systems are functioning properly.

Stability.

This machine, as originally manufactured by JLG and operated within its rated capacity on a smooth, firm and level supporting surface, provides a stable aerial platform for all platform positions.

3-4. CONTROLS AND INDICATORS.

The machine is equipped with control panels that use symbols instead of words to indicate control functions. Refer to Table 3-1 for these symbols and their corresponding functions.

JLG SMART System™.

The machine is controlled by the JLG SMART System[™], a 24 volt, multiplex motor controller which works in conjunction with a joystick and several switches to operate all machine functions.

Special operating characteristics of the SMART System[™] are noted where applicable. Special attention should be paid to these operating characteristics, as they may be somewhat different from those on previous JLG machines. Refer to Section 3 of the Service and Maintenance manual for SMART System[™] troubleshooting procedures.

▲ IMPORTANT

IT IS A GOOD PRACTICE TO AVOID PRESSURE-WASHING ELECTRICAL/ELECTRONIC COMPONENTS. SHOULD PRESSURE-WASHING BE UTILIZED TO WASH AREAS CONTAINING ELECTRICAL/ELECTRONIC COMPONENTS, JLG INDUSTRIES, INC. RECOMMENDS A MAXIMUM PRESSURE OF 750 PSI (52 BAR) AT A MINIMUM DISTANCE OF 12 INCHES (30.5 CM) AWAY FROM THESE COMPONENTS. IF ELECTRICAL/ELECTRONIC COMPONENTS ARE SPRAYED, SPRAYING MUST NOT BE DIRECT AND BE FOR BRIEF TIME PERIODS TO AVOID HEAVY SATURATION.

Battery Charger.

The battery charger is located at the rear of the machine, behind the ladder. The charger, which plugs into a standard 110 volt receptacle, is a 24 volt DC charger with an output of 25 Amps. A built in automatic timer shuts down charger operation when the batteries are fully charged. A rocker switch circuit breaker is included to reset the charger in the event of a loss of power. LED's on the front panel of the charger indicate the status of charger operation (Charge Complete, 80% Charge, Incomplete Charge, Charger On, Abnormal Cycle).

Ground Control Station.

♠ WARNING

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

PERFORM AS MANY PRE-OPERATIONAL CHECKS AND INSPECTIONS FROM THE GROUND CONTROL STATION AS POSSIBLE. REFER TO SECTION 2 FOR PRE-OPERATIONAL CHECKS AND INSPECTIONS.

Note

The JLG SMART System™ shuts off machine power to the platform controls after ten minutes of inactivity in order to reduce drain on the batteries. However, the EMERGENCY STOP and POWER SELECTOR switches at the ground control station should be positioned to OFF when the machine is shut down for overnight parking or battery charging.

1. POWER SELECTOR Switch.

A three position, key-operated POWER SE-LECTOR switch supplies operating power to the platform or ground controls, as selected. When positioned to PLATFORM, the switch provides power to the EMERGENCY STOP switch at the platform controls. When positioned to GROUND, the switch provides power to the EMERGENCY STOP switch at the ground controls. With the POWER SE-LECTOR switch in the center off position, power is shut off to both platform and ground controls.

Notes

With the POWER SELECTOR switch in the OFF position, the key can be removed in order to incapacitate the machine on the jobsite to avoid unauthorized use of the machine.

With the POWER SELECTOR switch positioned to GROUND, ground functions will operate at low speed at all times.

Low speed is the default speed for all functions. When the platform is elevated, all functions operate in creep speed only.

3-2

▲ IMPORTANT

WHEN SWITCHING POWER FROM GROUND TO PLATFORM OR PLATFORM TO GROUND, TURN THE POWER SELECTOR TO THE OFF (O) POSITION, PAUSE FOR A MINIMUM OF THREE SECONDS, THEN POSITION THE SWITCH TO THE DESIRED POSITION. WAIT FOR THREE SECONDS BEFORE OPERATING CONTROL. IF POWER DOES NOT COME ON, CYCLE THE EMERGENCY STOP SWITCH OR PAUSE FOR THREE SECONDS, THEN TRY SWITCHING POWER SELECTOR AGAIN.

2. EMERGENCY STOP Switch.

A two-position, red, mushroom-shaped EMERGENCY STOP switch, when positioned to ON with the POWER SELECTOR switch positioned to GROUND, furnishes operating power to the ground control station. In addition, the switch can be used to turn off power to the function controls in the event of an emergency. Power is turned on by pulling the switch out (ON), and is turned off by pushing the switch in (OFF). Turning the EMERGENCY STOP switch OFF and then ON again will reset the SMART System™ if a system fault has occured and the machine has shut down.

3. LIFT Switch.

Note

E Series scissor lifts are equipped with either power Lift Down or gravity Lift down. To identify power Lift Down or gravity Lift Down machines, refer to the effectivity page for machine serial number identification.

A three-position, momentary-contact LIFT control toggle switch provides raising and lowering of the platform when positioned to UP or DOWN.

4. Circuit Breaker.

A push button reset 15 Amp circuit breaker, located at the ground control panel, returns interrupted power to the machine functions when depressed.

5. Hourmeter. (If Equipped)

The machine may be equipped with an hourmeter to indicate the number of hours the machine has been operated. The hourmeter operates only when a machine function is operating.

 POWERED DECK EXTENSION Switch. (If Equipped - Models 2033E, 2046E, 2646E, and 2658E Only)

If the machine is equipped with either the 4 ft. (1.2 m) or 6 ft. (1.8 m) hydraulically-powered deck extension, this three-position, mo-

mentary contact toggle switch provides extension or retraction of the deck extension when positioned to EXTEND or RETRACT.

⚠ CAUTION

IF THE MACHINE IS EQUIPPED WITH A POWERED DECK EXTENSION AND THE OPTIONAL FOLD-DOWN RAILS, THE RAILS MUST BE IN THE UPRIGHT POSITION BEFORE RETRACTING THE POWER DECK EXTENSION.

Platform Control Station.

Note

The JLG SMART System[™] shuts off machine power to the platform controls after ten minutes of inactivity in order to reduce drain on the batteries.

1. EMERGENCY STOP Switch.

A two-position, red, mushroom-shaped EMERGENCY STOP switch functions to provide power to the platform control station and also to turn off power to the platform function controls in the event of an emergency. With the POWER SELECTOR switch positioned to PLATFORM, power is turned on by pulling the switch out (ON), and is turned off by pushing the switch in (OFF). Turning the EMERGENCY STOP switch OFF and then ON again will reset the SMART System™ if a system fault has occured and the machine has shut down.

2. Footswitch. (Japanese Specification Only)

For machines built to Japanese specifications, a footswitch is provided as part of the operating system. To operate a function, depress the footswitch, turn the EMER-GENCY STOP switch ON, then activate a function as detailed in "3. Membrane Switch Panel." Power is removed from the platform controls when the footswitch is released.

3. Membrane Switch Panel.

Note

If the machine is equipped with a footswitch, the footswitch must be depressed before the EMERGENCY STOP switch is turned on.

The function switches at the platform control station are an integral part of a membrane switch panel, which contains switches for DRIVE, HIGH DRIVE, LIFT, POWERED DECK EXTENSION (if equipped), and POSI-TRAC, plus a red TILT INDICATOR light (if equipped). The DRIVE, LIFT and POWERED DECK EXTENSION function switches have a small green LED beside

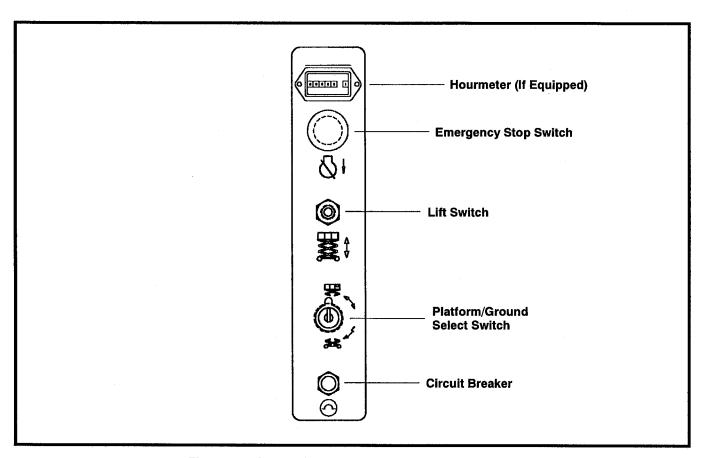


Figure 3-1. Ground Control Station - Models 1532E/1932E.

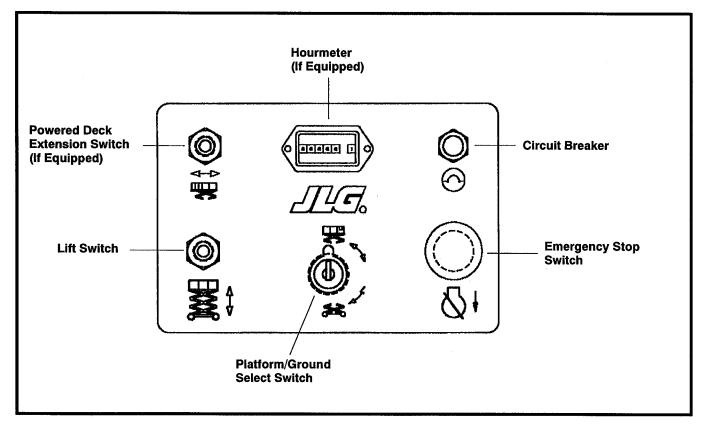


Figure 3-2. Ground Control Station - Models 2033E/2046E/2646E/2658E.

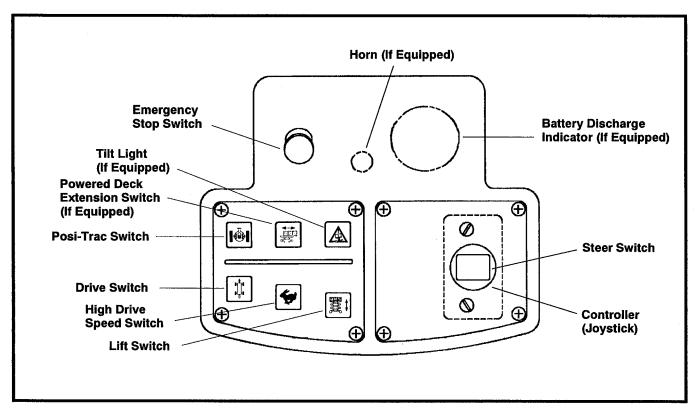


Figure 3-3. Platform Control Station - All Models.

them which is illuminated when that function is active. The function switch LED's will flash once or twice, then go out, when the platform EMERGENCY STOP switch is turned on. If the LED's fail to flash or if they fail to stop flashing, re-cycle the EMERGENCY STOP switch. To activate the DRIVE, LIFT, and POWERED DECK functions, press the applicable function switch, then activate the Controller (joystick) within three seconds to operate the function. If the joystick is not activated within three seconds, power is turned off to the function switch and the switch must be pressed again. The POSI-TRAC and HIGH DRIVE functions are used in conjunction with the DRIVE function. Do not try to operate the DRIVE, LIFT, and POWERED DECK EXTENSION functions simultaneously. If the DRIVE, LIFT, and POWERED DECK EXTENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function. Refer to the following paragraphs for more information about the function switches.

4. Controller (Joystick).

The Controller (joystick) controls three functions: speed, direction, and powered deck extension (if equipped). The joystick is used

in conjunction with the DRIVE, HIGH DRIVE. LIFT, and POWERED DECK EXTENSION switches to control speed and direction for the selected function. The DRIVE, HIGH DRIVE and POSI-TRAC functions may be operated simultaneously, but the DRIVE, LIFT, and POWERED DECK EXTENSION functions must be operated independently of each other. If the DRIVE, LIFT, and POW-ERED DECK EXTENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function. Machines manufactured through mid-June, 1997, are equipped with an OEM joystick. Machines manufactured after mid-June, 1997, are equipped with a PQ joystick, which features a mechanical interlock that engages when the joystick is returned to the center off position. To operate the PQ joystick, pull up on the joystick shaft, then position the joystick to forward or reverse, as desired.

5. STEER Switch.

The thumb-operated STEER switch, located on top of the controller, activates the steer wheels in the direction the switch is moved (left or right).

6. DRIVE Switch.

Change 2

Table 3-1. Control Panel Symbols. (Sheet 1 of 3)

Table 3-1. Control Panel Symbols. (Sheet 1 of 3)					
FUNCTION	SYMBOL	FUNCTION	SYMBOL		
AUXILIARY POWER	4	DRIVE CUT-OUT			
BATTERY DISCONNECT	Z	DUAL FUEL	₽		
CAUTION	CAUTION	ELECTRICAL HAZARD	4		
CAUTION	<u>i</u>	EMERGENCY SHUT-OFF	\varnothing †		
CHASSIS OUT OF LEVEL		EMERGENCY SWITCH DOWN			
CHOKE		EMERGENCY SWITCH UP			
CIRCUIT BREAKER	\bigcirc	ENGINE SPEED			
COLD START		EXPLOSION HAZARD			
CREEP		EXTENDABLE PLATFORM CAPACITY			
CRUSHING)	FACTORY MUTUAL APPROVED	FM		
DANGER	▲ DANGER	FAN	13		
DRIVE		FAST	*		

Table 3-1. Control Panel Symbols. (Sheet 2 of 3)

FUNCTION	SYMBOL	FUNCTION	SYMBOL
FIXED PLATFORM CAPACITY		LIFT	
FUEL		LIFT CUT-OUT	
HAND CRUSHING HAZARD		LIFTING AREA	9
HIGH ENGINE SPEED		LP GAS	
HORN	6	MANUAL	
HYDRAULIC OIL		MANUAL DESCENT	△ 3
HYDRAULIC OIL LEVEL (LOW)		MANUAL DESCENT KNOB	
HYDRAULIC OIL LEVEL (HIGH)		MASTER SWITCH	O ↑ ½
IGNITION		MASTER SWITCH OFF	0
IMPORTANT (SAFETY INSTRUCTIONS)	IMPORTANT	MAXIMUM PERMISSABLE PLATFORM SIDE LOAD	->
INDOOR USE ONLY		MAXIMUM PLATFORM LOAD	

Table 3-1. Control Panel Symbols. (Sheet 3 of 3)

FUNCTION	SYMBOL	FUNCTION	SYMBOL
MAXIMUM WIND SPEED		SLOW	
NO LIFTING AREA		STEER	
NO TIE DOWN AREA		TIE DOWN AREA	
PLATFORM ELEVATED DRIVE ON SMOOTH LEVEL SURFACE		TILT	
PLATFORM/ GROUND SELECT		TWO WHEEL DRIVE/FOUR WHEEL DRIVE	
PLATFORM TRAVERSE		TRAVERSING PLATFORM/ CAPACITY	
POSITIVE TRACTION DISENGAGED		"UL" DOUBLE E RATED	EE
POSITIVE TRACTION ENGAGED		WARNING	AWARNING
RESTRICTED DRIVE ON ROUGH TERRAIN		WHEEL SPEED	
RESTRICTED DRIVE ON SLOPE		WORK LIGHTS	/////

The DRIVE switch, when used in conjunction with the controller (joystick), provides for driving the machine in forward or reverse. DRIVE is activated by pressing the DRIVE switch and moving the joystick forward (forward) or backward (reverse). Drive speed is determined by the distance the joystick is moved forward or backward. Increased drive speed is possible when the HIGH DRIVE SPEED switch is pressed either simultaneously with the DRIVE switch or while operating the DRIVE function. The DRIVE switch is part of the enable circuit, which provides power to the joystick and the DRIVE function for 3 seconds when the DRIVE switch is pressed. If the joystick is not activated within 3 seconds, the DRIVE switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. In addition, the POSI-TRAC switch can be engaged while operating the DRIVE function to give a more evenly distributed oil flow to each drive motor. Do not try to operate the DRIVE, LIFT, and POWERED DECK EXTENSION functions simultaneously. If the DRIVE, LIFT, and POWERED DECK EXTENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function.

Notes

If the machine is equipped with the optional powered deck extension, the DRIVE function is cut out when the deck is extended with the platform raised above the stowed position.

As an option, Models 2033E and 2646E may be equipped for 1,000 lb. (454 kg) platform capacity. When equipped for 1,000 lb. (454 kg) platform capacity, Model 2033E cuts out the DRIVE function at a platform height of 17 feet (5.2 m) and Model 2646 cuts out the DRIVE function at a platform height of 19 feet (5.8 m).

The machine is equipped with a Pothole Protection System which employs automatically when the platform is raised. If the the Pothole Protection System does not fully employ, the DRIVE function is cut out until the platform is completely lowered.

7. HIGH DRIVE SPEED Switch.

The HIGH DRIVE SPEED Switch, when used in conjunction with the controller (joystick) being operated in the DRIVE mode, provides additional oil flow to the drive circuit for increased travel speed. To operate HIGH DRIVE, depress the HIGH DRIVE SPEED switch either simultaneously with the DRIVE

switch or while operating the Drive function.

CAUTION

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

▲ CAUTION

IF HIGH DRIVE IS SELECTED WHEN OIL TEMPERATURE IS VERY COLD (BELOW 40° F.) HIGH DRIVE WILL NOT ENGAGE IMMEDIATELY. AS OIL WARMS (ABOVE 40° F.) IF HIGH DRIVE IS SELECTED, IT WILL ENGAGE AUTOMATICALLY WHILE DRIVING.

Note

The High Drive Speed switch will cut-out when the platform is raised above the stowed position, returning drive speed to low until the platform is lowered completely.

▲ CAUTION

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

8. LIFT Switch.

Note

E Series scissor lifts are equipped with either power Lift Down or gravity Lift down. To identify power Lift Down or gravity Lift Down machines, refer to the effectivity page for machine serial number identification.

> The LIFT switch, when used in conjunction with the controller (joystick), provides for raising and lowering the platform. Lift is activated by pressing the LIFT switch and moving the joystick forward (LIFT UP) or backward (LIFT DOWN). LIFT UP speed is determined by the distance the joystick is moved forward. For machines equipped with power LIFT DOWN, LIFT DOWN speed is determined by the distance the joystick is moved backward; for machines equipped with gravity LIFT DOWN, LIFT DOWN speed is nonadjustable, and LIFT DOWN is attained by moving the joystick fully backward. The LIFT switch is part of the enable circuit, which provides power to the joystick and the lift function for 3 seconds when the LIFT switch is pressed. If the joystick is not activated within 3 seconds, the LIFT switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. Do not try to operate the DRIVE, LIFT, and POWERED DECK EX-TENSION functions simultaneously. If the DRIVE, LIFT, and POWERED DECK EX-

> > Change 2

TENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function.

CAUTION

DO NOT "LIFT DOWN" WITHOUT COMPLETELY RETRACTING THE PLATFORM EXTENSION.

▲ IMPORTANT

DO NOT ATTEMPT TO OPERATE THE LIFT AND DRIVE FUNCTIONS AT THE SAME TIME; NO FUNCTION WILL OPERATE AND IT WILL BE NECESSARY TO RE-SE-LECT A SINGLE FUNCTION.

WHEN OPERATING LIFT DOWN ON MACHINES EQUIPPED WITH GRAVITY DOWN, MOVE THE JOYSTICK TO THE FULL DOWN (FULLY BACKWARD) POSITION.

9. Positive Traction (POSI-TRAC) Switch.

This switch, when pressed, activates a solenoid on the main control valve, forcing oil through a flow divider in the drive circuit, maintaining hydraulic oil flow to both drive motors for improved traction. The Positive Traction (POSI-TRAC) switch activates the positive traction solenoid for a preset time when the Positive Traction (POSI-TRAC) switch is pressed. Positive traction is automatically de-activated after the preset time is out. This function will only operate when the DRIVE function is activated.

 POWERED DECK EXTENSION Switch. (If Equipped - Models 2033E, 2046E, 2646E, and 2658E Only)

If the machine is equipped with either the 4 ft. (1.2 m) or 6 ft. (1.8 m) hydraulically-powered deck extension, this switch is used in conjunction with the controller (joystick) to provide extension or retraction of the powered deck extension. Powered deck extension or retraction is activated by pressing the POWERED DECK EXTENSION switch and moving the joystick forward (EXTEND) or backward (RETRACT). The POWERED DECK EXTENSION switch is part of the enable circuit, which provides power to the joystick and the powered deck extension function for 3 seconds when the POWERED DECK EXTENSION switch is pressed. If the joystick is not activated within 3 seconds, the POWERED DECK EXTENSION switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. Do not try to operate the POWERED DECK EXTENSION, DRIVE, and LIFT functions simultaneously. If the POWERED DECK EXTENSION, DRIVE, and LIFT functions are selected simultane-

4-1. DESCRIPTION.

This machine is a self-propelled aerial work platform on top of an elevating "scissor" mechanism. The Scissor Lift's intended purpose is to position personnel with their tools and supplies at positions above ground level. The machine can be used to reach work areas located above machinery or equipment positioned at ground level.

The JLG Scissor Lift has a primary operator Control Station in the platform. From this Control Station, the operator can drive and steer the machine in both forward and reverse directions, raise and lower the platform and, if equipped, operate the powered deck extension. The machine has a Ground Control Station which will override the Platform Control Station. Ground Controls operate lift up and down and the powered deck extension (if equipped). Ground Controls are to be used only in an emergency to lower the platform to the ground or retract the platform extension should the operator in the platform be unable to do so.

Instructions and hazard warnings are posted adjacent to both operator control stations and at other places on the machine. It is extremely important that operators know what instructions and warnings are placed on the machine, and review these periodically so that they are fresh in their minds.

The JLG Scissor Lift is designed to provide efficient and safe operation when maintained and operated in accordance with warnings on the machine, the Operating and Safety Manual, the Service and Maintenance Manual and all jobsite and government rules and regulations. As with any type of machinery, the operator is very important to efficient and safe operation. It is absolutely necessary that the JLG Lift be regularly maintained in accordance with this manual and the machine Service and Maintenance Manual, and that any evidence of lack of maintenance, malfunction, excessive wear, damage or modification to the machine be reported immediately to the machine owner or the jobsite supervisor or safety manager and that the machine be taken out of service until all discrepancies are corrected.

The JLG Scissor Lift is not intended to be used to lift material other than supplies which personnel in the platform require to do their job. Supplies or tools which extend outside the platform are prohibited. It must not be used as a forklift, crane, support for overhead structure, or to push or pull another object.

The JLG Scissor Lift is powered using hydraulic motors and cylinders for the various machine motions. The hydraulic components are controlled by electrically activated hydraulic valves using switches and control levers. The speeds of functions controlled by control levers are variable from zero to maximum speed, depending upon the position of the control lever. Functions controlled by toggle or push-button switches are either on or off. In some instances, a function switch can be used in conjunction with the controller (joystick) to give the machine a higher function speed range.

The JLG Scissor Lift is a two wheel drive machine with drive power being supplied by a hydraulic motor for each drive wheel. The rear wheels are supplied with spring applied, hydraulically released brakes. These brakes are automatically applied any time the Drive controller (joystick) is returned to the neutral position.

The platform capacity of each scissor lift model is as follows:

Model 1532E - 600 lb. (272 kg)

Model 1932E - 500 lb. (227 kg)

Models 2033E and 2646E

Standard - 750 lb. (340 kg)

Optional - 1,000 lb. (454 kg)

Models 2046E and 2658E - 1,000 lb. (454 kg)

The weight in the platform should be uniformly distributed in the center of the platform. The total combined weight of personnel, tools and supplies must not exceed the above figures.

The platform may be raised only when positioned on firm, level and uniform surfaces.

4-2. GENERAL.

This section provides the necessary information needed to operate the machine. Included in this section are the procedures for starting, stopping, traveling, steering, parking, platform loading and transporting the machine. It is important that the user read and understand the proper procedures before operating the machine.

4-3. MOTOR OPERATION.

Power Selector Switch.

The POWER SELECTOR switch functions to direct battery power to the desired control station. With the switch in the GROUND position, battery power is supplied to the EMERGENCY STOP switch at the ground control station. When the switch is in the PLATFORM position, battery

power is supplied to the EMERGENCY STOP switch at the platform control station. Although the SMART System™ shuts off power to the platform controls after 10 minutes of inactivity, the POWER SELECTOR switch should be in the OFF position when recharging the batteries and/or parking the machine overnight.

▲ IMPORTANT

WHEN SWITCHING FROM GROUND TO PLATFORM OR FROM PLATFORM TO GROUND, TURN THE POWER SELECTOR SWITCH TO THE OFF (O) POSITION, PAUSE FOR A MINIMUM OF THREE SECONDS, THEN POSITION THE SWITCH TO THE DESIRED POSITION. WAIT FOR THREE SECONDS BEFORE OPERATING CONTROL. IF POWER DOES NOT COME ON, CYCLE THE EMERGENCY STOP SWITCH OR PAUSE FOR THREE SECONDS, THEN TRY SWITCHING POWER SELECTOR AGAIN.

Note

The JLG SMART System™ will shut off power to the platform controls after ten minutes of inactivity in order to reduce the drain on the batteries. To re-activate power, turn the EMERGENCY STOP switch OFF and then ON. If the machine is equipped with a footswitch (Japanese Specification Only), the footswitch must be depressed before the EMERGENCY STOP switch is turned ON. Power is removed from the platform controls when the footswitch is released.

· Emergency Stop Switch.

This switch, when in the ON (out) position, provides battery power to the ground controls or platform controls, as applicable. In addition, the switch can be used to turn off power (push the switch IN) to the function controls in the event of an emergency. If the machine shuts down due to a trouble fault, turning the EMERGENCY STOP switch OFF and then ON again will reset the JLG SMART System™.

Note

if the machine is equipped with a footswitch (Japanese Specification Only), the footswitch must be depressed before the EMERGENCY STOP switch is turned ON. Power is removed from the platform controls when the footswitch is released.

Motor Activation.

With the POWER SELECTOR switch in the appropriate position (platform or ground) and the applicable EMERGENCY STOP switch in the ON position and a function switch or controller is operated and held, the motor becomes activated and operates the desired function. When operating the platform controls, the applicable function switch must be pressed before activating the controller to operate the function.

▲ CAUTION

IF A MOTOR MALFUNCTION NECESSITATES AN UN-SCHEDULED SHUTDOWN, DETERMINE AND CORRECT THE CAUSE BEFORE RESUMING ANY OPERATION.

▲ IMPORTANT

ALTHOUGH THE JLG SMART SYSTEM™ SHUTS OFF POWER TO THE PLATFORM CONTROLS AFTER TEN MINUTES OF INACTIVITY, ALWAYS POSITION THE POWER SELECTOR AND EMERGENCY STOP SWITCHES TO THE 'OFF' POSITION WHEN THE MACHINE IS NOT IN USE.

E SERIES SCISSOR LIFTS MANUFACTURED THROUGH MID-JUNE, 1997 ARE EQUIPPED WITH AN OEM CONTROLLER. E SERIES SCISSOR LIFTS MANUFACTURED AFTER MID-JUNE, 1997 ARE EQUIPPED WITH A PQ CONTROLLER, WHICH FEATURES A MECHANICAL INTERLOCK THAT ENGAGES WHEN THE JOYSTICK IS RETURNED TO THE CENTER OFF POSITION. TO OPERATE THE JOYSTICK, PULL UP ON THE JOYSTICK SHAFT TO RELEASE THE INTERLOCK, THEN POSITION THE JOYSTICK TO FORWARD OR REVERSE, AS DESIRED.

4-4. RAISING AND LOWERING. (Lifting)

♠ WARNING

DO NOT RAISE THE PLATFORM EXCEPT ON A HARD, LEVEL SURFACE FREE OF OBSTRUCTIONS AND HOLES.

Raising.

- 1. If the machine is shut down, place the POWER SELECTOR switch to the desired position (platform or ground).
- 2. Position the applicable EMERGENCY STOP switch to the ON position.

Note

If the machine is equipped with a footswitch (Japanese Specification Only), the footswitch must be depressed before the EMERGENCY STOP switch is turned ON. Power is removed from the platform controls when the footswitch is released.

3. If operating from the ground controls, position the LIFT switch to UP and hold until the desired elevation is achieved. If operating from the platform controls, press the LIFT switch and move the controller (joystick) forward and hold until the desired elevation is reached. The LIFT switch is part of the enable circuit, which supplies power to the LIFT switch and the joystick for 3 seconds after the LIFT switch is pressed. If the joystick is not activated within 3 seconds after the LIFT switch is pressed, power is removed from the

switch and the joystick and the switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. Do not try to operate the DRIVE, LIFT, and POWERED DECK EXTENSION functions simultaneously. If the DRIVE, LIFT, and POWERED DECK EXTENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function.

Lowering.

▲ WARNING

ENSURE THE SCISSOR ARM AREA IS FREE OF PER-SONNEL PRIOR TO LOWERING THE PLATFORM.

Note

E Series scissor lifts are equipped with either power Lift Down or gravity Lift down. To identify power Lift Down or gravity Lift Down machines, refer to the effectivity page for machine serial number identification.

> If operating from the ground controls, position the LIFT switch to DOWN and hold until the desired elevation is achieved or until the platform is fully lowered. If operating from the platform controls, press the LIFT switch and move the controller (joystick) backward (fully backward for machines equipped with gravity LIFT DOWN) and hold until the desired elevation is reached or until the platform is fully lowered. The LIFT switch is part of the enable circuit, which supplies power to the LIFT switch and the joystick for 3 seconds after the LIFT switch is pressed. If the joystick is not activated within 3 seconds after the LIFT switch is pressed, power is removed from the switch and the joystick and the switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. Do not try to operate the DRIVE, LIFT, and POWERED DECK EX-TENSION functions simultaneously. If the DRIVE, LIFT, and POWERED DECK EX-TENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function.

WARNING

DO NOT 'LIFT DOWN' WITHOUT COMPLETELY RETRACTING THE PLATFORM EXTENSION.

4-5. PLATFORM EXTENSION.

Manual Platform Extension.

The machine is equipped with a mechanically extendable deck, which adds 3 feet (0.9 meters) to the front of the platform, giving the operator better access to worksites. To extend the deck, squeeze the release lever on the handle on the left side of the platform to release the lock pin, then use the handle and handrail to push the extendable deck out. To retract the deck, squeeze the release lever to release the lock pin and use the handle and handrail to pull and retract the deck. Be sure the lock pin is locked in place after the deck is retracted. Maximum capacity of the deck extension is 250 lb. (113 kg) - 1 person.

▲ IMPORTANT

IF THE MACHINE IS EQUIPPED WITH THE OPTIONAL PIPE RACKS, THE PLATFORM EXTENSION MUST BE IN THE RETRACTED POSITION WHEN THE PIPE RACKS ARE LOADED. FAILURE TO RETRACT THE PLATFORM EXTENSION COULD RESULT IN DAMAGE TO THE PLATFORM EXTENSION.

Powered Deck Extension. (If Equipped -Models 2033E, 2046E, 2646E, and 2658E)

The models listed above may be equipped with a hydraulically-powered extendable deck, which adds either 4 feet (1.2 meters) or 6 feet (1.8 meters) to the front of the platform. giving the operator better access to worksites. If operating from the ground controls, position the POWERED DECK EXTENSION switch to EXTEND or RETRACT, as required, and hold until the deck is either fully extended or fully retracted. If operating from the platform controls, press the POWERED DECK EXTENSION switch and move the controller (joystick) forward and hold until the powered deck extension is fully extended or move the joystick backward and hold until the powered deck extension is fully retracted. The POWERED DECK EXTENSION switch is part of the enable circuit, which supplies power to the POWERED DECK EXTEN-SION switch and the joystick for 3 seconds after the POWERED DECK EXTENSION switch is pressed. If the joystick is not activated within 3 seconds after the POWERED DECK EXTENSION switch is pressed, power is removed from the switch and joystick and

Change 1

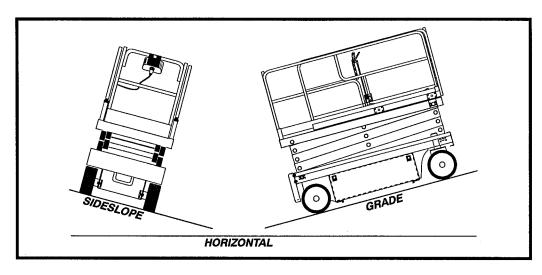


Figure 4-1. Grade and Sideslope.

the switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. Do not try to operate the DRIVE, LIFT, and POWERED DECK EXTENSION functions simultaneously. If the DRIVE, LIFT, and POWERED DECK EXTENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function. Maximum capacity of the 4 ft. (1.2 m) powered deck extension is 750 lb. (340 kg) - 2 persons. Maximum capacity of the 6 ft. (1.8 m) powered deck extension is 350 lb. (159 kg) - 1 person.

↑ CAUTION

IF THE MACHINE IS EQUIPPED WITH A POWERED DECK EXTENSION AND THE OPTIONAL FOLD-DOWN RAILS, THE RAILS MUST BE IN THE UPRIGHT POSITION BEFORE RETRACTING THE POWER DECK EXTENSION

▲ IMPORTANT

IF THE MACHINE IS EQUIPPED WITH THE OPTIONAL PIPE RACKS, THE PLATFORM EXTENSION MUST BE IN THE RETRACTED POSITION WHEN THE PIPE RACKS ARE LOADED. FAILURE TO RETRACT THE PLATFORM EXTENSION COULD RESULT IN DAMAGE TO THE PLATFORM EXTENSION.

4-6. STEERING.

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

4-7. TRAVELING. (Driving)

A WARNING

DO NOT DRIVE WITH PLATFORM RAISED EXCEPT ON A SMOOTH, FIRM AND LEVEL SURFACE FREE OF OBSTRUCTIONS AND HOLES.

TO AVOID LOSS OF TRAVEL CONTROL OR UPSET ON GRADES AND SIDESLOPES, DO NOT DRIVE MACHINE ON GRADES OR SIDESLOPES EXCEEDING THOSE SPECIFIED FOR THE MACHINE.

♠ WARNING

TRAVEL GRADES IN "LOW" DRIVE SPEED ONLY. USE EXTREME CAUTION WHEN DRIVING IN REVERSE AND AT ALL TIMES WHEN DRIVING WITH PLATFORM ELE-VATED AND ESPECIALLY WHEN DRIVING WITH ANY PART OF MACHINE WITHIN 6 FEET (1.8 METERS) OF AN OBSTRUCTION.

SELECTION OF MULTIPLE FUNCTIONS WHEN TRAVELING UP A GRADE CAN CAUSE AN OVERCURRENT SHUTDOWN TO OCCUR. IF THIS SHOULD HAPPEN, LET THE CONTROL HANDLE RETURN TO NEUTRAL, THEN PAUSE FOR 3-5 SECONDS TO ALLOW THE SYSTEM TO RESET BEFORE RE-SELECTING A FUNCTION. TO GO BACK DOWN THE GRADE, IF TRAVELING FORWARD UP THE GRADE, BUMP THE CONTROL HANDLE FORWARD SLIGHTLY TO ENSURE THE BRAKES ARE RELEASED BEFORE DESCENDING THE GRADE.

▲ IMPORTANT

WHEN TRAVELING A GRADE, MAXIMUM TRACTION IS OBTAINED BY TRAVELING IN REVERSE. REVERSE TRAVEL SHOULD BE USED WHEN LOADING ON A

TRUCK OR WHEN ADEQUATE TRACTION IS NOT ACHIEVED BY TRAVELING FORWARD.

Note

The machine is equipped with a Pothole Protection System which employs automatically when the platform is raised. If the pothole protection does not fully employ, the drive function is cut out until the platform is completely lowered.

Traveling Forward.

 Place POWER SELECTOR switch at Ground Control Station to PLATFORM.

Note

If the machine is equipped with a footswitch (Japanese Specification Only), the footswitch must be depressed before the EMERGENCY STOP switch is turned ON. Power is removed from the platform controls when the footswitch is released.

- 2. Position EMERGENCY STOP switch at Platform Control Station to ON position.
- 3. Press DRIVE switch and move controller (joystick) forward and hold for duration of travel. Drive speed is determined by the distance the joystick is moved from the center off position. The DRIVE switch is part of the enable circuit, which supplies power to the DRIVE switch and the joystick for 3 seconds after the DRIVE switch is pressed. If the joystick is not activated within 3 seconds after the DRIVE switch is pressed, power is removed from the switch and joystick and the switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. For additional drive speed, press the HIGH DRIVE SPEED switch simultaneously when depressing the DRIVE switch or while operating in the DRIVE FOR-WARD mode. The POSI-TRAC switch can also be used in conjunction with DRIVE to evenly divide the oil flow to each drive motor when traction is a problem. Do not try to operate the DRIVE, LIFT, and POWERED DECK EXTENSION functions simultaneously. If the DRIVE, LIFT and POWERED DECK EXTENSION functions are selected simultaneously, no function will operate. If this occurs, pause, then press only one of the function switches to activate the function.

▲ IMPORTANT

WHEN TRAVELING A GRADE, MAXIMUM TRACTION IS OBTAINED BY TRAVELING IN REVERSE. REVERSE

TRAVEL SHOULD BE USED WHEN LOADING ON A TRUCK OR WHEN ADEQUATE TRACTION IS NOT ACHIEVED BY TRAVELING FORWARD.

Note

If the machine is equipped with the optional powered deck extension, the DRIVE function is cut out when the deck is extended with the platform raised above the stowed position.

Note

As an option, Models 2033E and 2646E may be equipped for 1,000 lb. (454 kg) platform capacity. When equipped for 1,000 lb. (454 kg) platform capacity, Model 2033E cuts out the DRIVE function at a platform height of 17 feet (5.2 m) and Model 2646 cuts out the DRIVE function at a platform height of 19 feet (5.8 m).

· Traveling in Reverse.

 Position Power Selector switch at Ground Control Station to PLATFORM.

Note

If the machine is equipped with a footswitch (Japanese Specification Only), the footswitch must be depressed before the EMERGENCY STOP switch is turned ON. Power is removed from the platform controls when the footswitch is released.

- Position Emergency Stop switch at Platform Control Station to ON position.
- 3. Press DRIVE switch and move controller (joystick) rearward (reverse) and hold for duration of travel. Drive speed is determined by the distance the joystick is moved from the center off position. The DRIVE switch is part of the enable circuit, which supplies power to the DRIVE switch and the joystick for 3 seconds after the DRIVE switch is pressed. If the joystick is not activated within 3 seconds after the DRIVE switch is pressed, power is removed from the switch and joystick and the switch must be pressed again before activating the joystick. When the joystick is returned to the center off position, the operator has 3 seconds to re-activate the joystick or select another function before power is removed by the enable circuit. **DO NOT** activate the HIGH DRIVE SPEED switch when traveling in reverse.

4-8. PARKING AND STOWING.

Note

When parking battery-powered units overnight, batteries should be charged in accordance with instructions in Section 2 to ensure readiness for the following workday.

Park and stow machine as follows:

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

4-9. PLATFORM LOADING.

The platform maximum rated load capacity is shown on a placard located on the platform and is based upon the following criteria.

- Machine is positioned on a smooth, firm and level surface.
- 2. All braking devices are engaged.
- 3. Maximum platform capacity for each model in its standard configuration is as follows:

1532E - 600 lb. (272 kg)

1932E - 500 lb. (227 kg)

2033E/2646E - 750 lb. (340 kg)

2046E/2658E - 1,000 lb. (454 kg)

- **4.** Optional platform capacity for Models 2033E and 20646E is 1,000 lb. (454 kg).
- 5. If machine is equipped with the optional pipe racks, the maximum capacity of the pipe racks is 100 lb. (45 kg). Maximum total capacity of the pipe racks and platform combined is as follows:

2033E/2646E - 650 lb. (295 kg)

2046E/2658E - 900 lb. (408 kg)

- **6.** Maximum capacity of the manual platform extension is 250 lb. (113 kg) 1 person.
- 7. For Models 2033E, 2046E, 2646E, and 2658E only, maximum capacity of the optional 4 ft. (1.2 m) powered deck extension is 750 lb. (340 kg) 2 persons.
- For Models 2033E, 2046E, 2646E, and 2658E only, maximum capacity of the optional 6 ft. (1.8 m) powered deck extension is 350 lb. (159 kg) - 1 person.

WARNING

FOR MODELS 2033E, 2046E, 2646E, AND 2658E EQUIPPED WITH EITHER THE 4 FT. (1.2 M) OR 6 FT. (1.8

M) POWERED DECK EXTENSION, THE MAXIMUM TOTAL PLATFORM CAPACITY WITH THE EXTENSION, EXTENDED OR RETRACTED, IS 750 LB. (340 KG) - 2 PERSONS.

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

4-10. SAFETY PROP.

▲ CAUTION

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

To engage the safety prop, raise the platform, then rotate the prop clockwise until it hangs vertically. Lower the platform until the safety prop rests on the point provided on the frame. Maintenance can now begin.

To store the safety prop, raise the platform so that the prop can be rotated counterclockwise until it rests on the stop provided on the scissor arms.

4-11. TIE DOWN AND LIFTING.

Tie Down.

Note

To identify power Lift Down or gravity Lift Down machines, refer to the effectivity page for machine serial number identification.

Machines with Power Lift Down. (Figures 4-2 and 4-3.)

When transporting the machine, the platform extension must be fully retracted and the platform

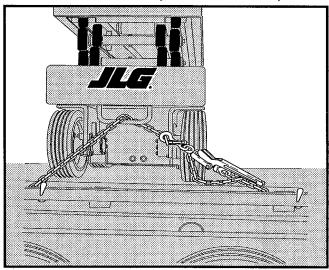


Figure 4-2. E Series Scissor Lift Tie Down (Front).
(Machines with Power Lift Down)

fully lowered in the stowed mode with the machine securely tied down to the truck or trailer deck. A u-shaped rod is welded to the front of the

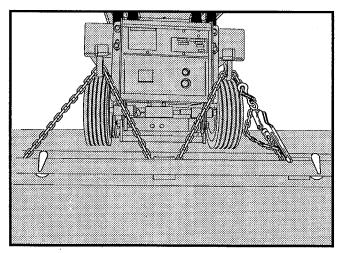


Figure 4-3. E Series Scissor Lift Tie Down (Rear). (Machines with Power Lift Down)

frame for tie-down. In addition, two loops, one on each side of the frame, are welded to the rear of the machine frame for tie-down. Refer to Figures 4-2 and 4-3 for specific tie down instructions.

Machines with Gravity Lift Down. (Figures 4-4 and 4-5.)

When transporting the machine, the platform extension must be fully retracted and the platform fully lowered in the stowed mode with the machine securely tied down to the truck or trailer deck. A d-ring is bolted to both the center front and center rear of the frame for tie-down. Refer to Figures 4-4 and 4-5 for specific tie down instructions.

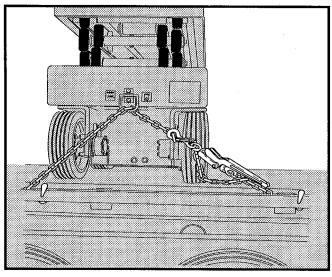


Figure 4-4. E Series Scissor Lift Tie Down (Front).
(Machines with Gravity Lift Down)

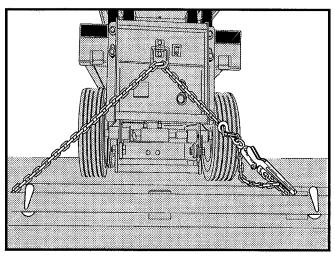


Figure 4-5. E Series Scissor Lift Tie Down (Rear).
(Machines with Gravity Lift Down)

⚠ WARNING

USE TIE DOWN EYES ONLY TO SECURE THE MACHINE FOR SHIPPING. DO NOT USE TIE DOWN EYES TO LIFT THE MACHINE.

Lifting. (Figures 4-6 and 4-7.)

If it becomes necessary to lift the machine, it is possible to lift the machine with a forklift. On all models 1532E, 1932E, 2046E, 2646E, 2658E, as well as model 2033E with gravity Lift Down, forklift pockets are provided at the rear of the machine. On model 2033E machines with power Lift Down, a forklift can be used to lift the machine as shown in Figure 4-6. At the rear of the machine, just behind and below the brake assembly, is a flip

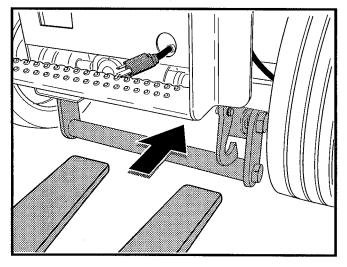


Figure 4-6. Model 2033E Forklift Lifting Procedure. (Machines with Power Lift Down)

down bar. To lift the 2033E from the rear, position the bar down and place the forklift forks between

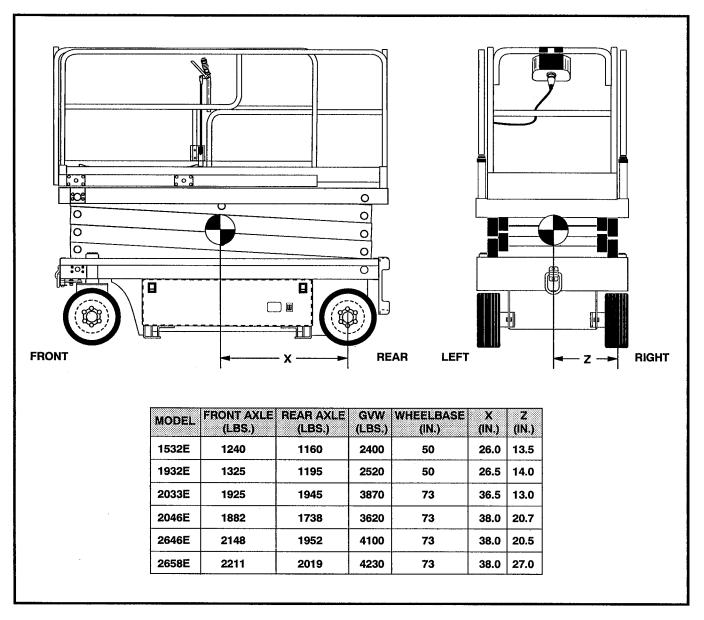


Figure 4-7. Lifting Chart - Models 1532E/1932E/2033E/2046E/2646E/2658E.

between the frame rails and the flip down bar. After moving the machine, remove the forks and raise the bar.

In addition, all models can be lifted from either side with a forklift, provided the forks are placed at the positions indicated by the decals on the machine. It is very important that the forklift operator use only the designated lifting areas to lift the machine.

Machines may be equipped with optional bolt-on lifting lugs, which are attached to the four corners of the frame. These lugs enable the machine to be lifted using cranes or other suitable lifting devices.

Note

Forklifts, cranes, or other lifting devices must be capable of handling the following weights: 1532E - 2,700 lb. (1,225 kg); 1932E - 2,800 lb. (1,270 kg); 2033E - 4,200 lb. (1,905 kg); 2046E - 3,900 lb. (1,769 kg); 2646E - 4,400 lb. (1,996 kg); 2658E - 4,500 lb. (2,041 kg).

4-12. TOWING.

It is not recommended that this machine be towed, except in the event of an emergency such as a machine malfunction or a total machine power failure. Refer to Section 6 for emergency towing procedures.

MPORTANT

WHEN ADDING AN ELECTRICAL OR ELECTRONIC OPTION TO THE MACHINE, DO NOT GROUND THE DEVICE TO THE MACHINE CHASSIS. AN ELECTRICAL OR ELECTRONIC DEVICE THAT IS GROUNDED TO THE CHASSIS IS SEEN BY THE SMART SYSTEM™ AS A SHORT CIRCUIT AND WILL CAUSE A FAULT CODE TO APPEAR. GROUND ALL ELECTRICAL OR ELECTRONIC DEVICES TO THE APPROPRIATE TERMINAL OF THE SMART SYSTEM™ CONTROLLER.

5-1. HORN.

The machine may be equipped with a warning horn, located on the frame of the machine, and controlled by a push button switch on the platform control console. The warning horn permits the operator to warn jobsite personnel when the machine is operating in the area.

5-2. TRAVEL ALARM.

The machine may be equipped with a travel alarm, mounted just below the ground control panel. The alarm produces an audible warning when the machine is in the travel (DRIVE) mode. It will function in FORWARD or REVERSE to warn jobsite personnel that the machine is traveling.

5-3. MOTION ALARM.

Note

When installing the optional motion alarm, remove the ground strap from the alarm before installing the alarm.

The machine may be equipped with a motion alarm, mounted just below the ground control panel. The alarm produces an audible warning when the machine is in the travel (DRIVE) or LIFT mode. It will function in FORWARD, REVERSE, LIFT UP or LIFT DOWN to warn jobsite personnel that the machine is traveling or lifting.

5-4. DESCENT ALARM.

The machine may be equipped with a descent alarm, mounted just below the ground control panel. The alarm produces an audible warning when the platform LIFT control is placed in the LIFT DOWN position. The alarm warns personnel in the jobsite area to avoid the sizzor arms.

5-5. TILT ALARM.

The machine may be equipped with a tilt switch, which senses when the machine is out of level in any direction approximately 5°. When activated, the switch illuminates a warning light at the platform control station and sounds the machine's horn, signaling the operator.

5-6. FLOATATION/TRACTION TIRES.

The machine may may be equipped with floatation/traction tires, which feature a wider, more aggressive tread design than the standard tires. These tires are available only on models 2046E, 2646E, and 2658E.

5-7. 800 WATT INVERTER.

The machine may be equipped with an 800 Watt inverter, mounted on the right front of the machine frame above the right front tire and wheel assembly. The inverter functions, depending on the configuration, to convert the machine's DC battery power to either 110 Volt AC or 220 Volt AC electrical power, which is sent to the platform to run assorted power tools which use AC current.

5-8. 110 VOLT RECEPTACLE.

The machine may be equipped with a 110 Volt dual receptacle, mounted on the platform kick rail. The receptacle is connected to a plug on the machine frame which can be connected to either a ground receptacle or the optional 800 Watt inverter.

5-9. 220 VOLT RECEPTACLE.

The machine may be equipped with a 220 Volt dual receptacle, mounted on the platform kick rail. The receptacle is connected to a plug on the machine frame which can be connected to either a ground receptacle or the optional 800 Watt inverter.

5-10. PLATFORM WORK LIGHTS.

The machine may be equipped with two platform work lights, installed on the left side platform rails, one at the front and one at the rear, to provide additional lighting for the operator. Each light is equipped with an on-off switch. This option is not available with fold-down handrails.

5-11. NON-MARKING TIRES.

The machine may be equipped with non-marking tires for indoor use. These tires are made from a special compound that, unlike regular tires, will not leave black skid marks on floors and other surfaces.

5-12. ROTATING BEACON.

The machine may be equipped with an amber rotating beacon, installed on the left front of the machine frame. When the machine power is turned on, the light is activated and provides a visual warning to the machine's operation.

5-13. BATTERY DISCHARGE INDICATOR.

The machine may be equipped with a battery discharge indicator, located on the platform control console. The battery discharge indicator is a gauge that provides a visual indication of the condition of the batteries.

5-14. FOLD-DOWN HAND RAILS.

The machine may be equipped with fold-down handrails, which enable the operator to take the machine into areas where platform height may pose a clearance problem. The fold-down hand rails give the operator additional clearance in tight work spaces.

5-15. LIFTING LUGS.

The machine may be equipped with bolt-on lifting lugs, which are attached to the four corners of the machine frame. These lugs enable the machine to be lifted using chains and a spreader bar or other suitable lifting devices.

5-16. HOURMETER.

The machine may be equipped with an hourmeter, which records the hours of machine operation. The hourmeter operates any time the electric motor is activated.

5-17. PLATFORM BUMPERS.

The machine may be equipped with platform bumpers, which prevent the platform from damaging an adjacent surface if it comes too close. The tubular bumper pads, made of non-marking gum rubber with a fabric core, are attached to the front, side, and rear platform kick plates.

5-18. SELF-CLOSING ACCESS GATE.

The machine may be equipped with a self-closing access gate at the rear of the platform in lieu of the standard safety chain.

5-19. PIPE RACKS.

(Models 2033E/2046E/2646E/2658E Only.)

The machine may be equipped with bolt-on pipe racks, suitable for carrying long sections of pipe, conduit, or tubing. The racks bolt to the right top rail of the platform and contain a tie down belt to secure the load being carried.

▲ IMPORTANT

TO AVOID DAMAGE TO THE PLATFORM EXTENSION, THE PLATFORM EXTENSION MUST BE IN THE RETRACTED POSITION WHEN THE PIPE RACKS ARE LOADED.

THE MAXIMUM LOAD ON THE PIPE RACKS SHOULD NOT EXCEED 100 LB. (45 KG). THE MAXIMUM TOTAL CAPACITY OF THE RACKS AND PLATFORM COMBINED IS 650 LB. (295 KG) FOR MODELS 2033E AND 2646E AND 900 LB. (408 KG) FOR MODELS 2046E AND 2658 E.

5-20. STATIC STRAP.

Machines built to UL standards (EE Rated) and those equipped with non-marking tires may experience a build-up of static electricity. To alleviate this problem, a static strap may be attached to the bottom of the machine frame.

5-21. POWERED DECK EXTENSION. (Models 2033E/2046E/2646E/2658E Only.)

Models 2033E, 2046E, 2646E, and 2658E may be equipped with either a 4 ft. (1.2 m) or 6 ft. (1.8 m) powered deck extension. The deck extension, which is hydraulically-operated, gives the operator better access to work sites. The capacity of the 4 ft. extension is 750 lb. (340 kg) - 2 persons; the capacity of the 6 ft. (1.8 m) extension is 350 lb. (159 kg) - 1 person.

5-22. KEY ATTACH LANYARD.

The machine may be equipped with a lanyard, attached to the side of the ground control box, which secures the key to the machine.

5-23. FOOTSWITCH.

(Japanese Specification Only.)

For machines built to Japanese specifications, a footswitch is provided at the platform control station as part of the operating system. Refer to Section 3 for footswitch operation procedures.

6-1. GENERAL.

This section provides information on the procedures to be followed and on the systems and controls to be used in the event an emergency situation is encountered during machine operation. Prior to operation of the machine and periodically thereafter, the entire operating manual, including this section, should be reviewed by all personnel whose responsibilities include any work or contact with the machine.

6-2. EMERGENCY TOWING PROCEDURES.

Although towing the machine is prohibited, provisions for moving the machine, in case of a malfunction, power failure, or for loading on a truck, have been incorporated. The following procedures are to be used ONLY for emergency movement to a suitable maintenance area or to load the machine on a truck. These procedures are also found on a decal affixed to the left front bumper of the machine.

- 1. Chock the wheels securely.
- 2. Turn the black-handled valve knob on the main control valve counterclockwise all the way out to disengage the drive motors.
- 3. Using a 3/4 inch wrench, release the parking brake by moving the brake cams to the horizontal position.
- Using suitable equipment for assistance, remove the chocks, and move the machine to an appropriate maintenance area or onto the truck.

After moving the machine, complete the following procedures:

- Position the machine on a firm, level surface.
- 2. Chock the wheels securely.
- 3. Using a 3/4 inch wrench, engage the parking brake by moving the brake cams to the vertical position.
- 4. Turn the black-handled valve knob on the main control valve clockwise all the way in to engage the drive motors.
- 5. Remove the chocks from the wheels.

6-3. EMERGENCY CONTROLS AND THEIR LOCATIONS.

Emergency Stop Switch.

These large red buttons, one located at the Ground Control Station and one at the Platform Control Station, will immediately stop the machine when depressed.

⚠ WARNING

CHECK MACHINE DAILY TO MAKE SURE EMER-GENCY STOP BUTTON IS IN PLACE AND THAT GROUND CONTROL INSTRUCTIONS ARE IN PLACE AND LEGIBLE.

Power Selector Switch.

The key-operated POWER SELECT switch, located at the Ground Control Station, can also be used to shut down the machine in an emergency situation. To shut off machine power, turn the POWER SELECT switch to the center OFF (O) position.

Ground Control Station.

The Ground Control Station is located on the left side of the machine frame. The controls on this panel provide the means for overriding the platform controls and for controlling the platform lift up and down functions from the ground. Place the POWER SELECT SWITCH in the GROUND position and operate the LIFT switch to lift up or down.

Manual Descent.

The manual descent valve is used, in the event of total power failure, to lower the platform using gravity. The manual descent handle is located on the left front side of the machine frame, just behind the left front wheel. The handle is connected, by a stainless steel cable, to the manual descent valve on the lift cylinder. Pulling the manual descent handle opens the valve spool, lowering the platform.

6-4. EMERGENCY OPERATION.

Use of Ground Controls.

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

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

Operator Unable to Control Machine.

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

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

Platform Caught Overhead.

If the platform becomes jammed or snagged in overhead structures or equipment, do not continue operation of the machine from either the platform or the ground until the operator and all personnel are safely moved to a secure location. Only then should an attempt be made to free the platform using any necessary equipment and personnel. Do not operate controls to cause one or more wheels to leave the ground.

Righting of Tipped Machine.

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

• Post-Incident Inspection.

Following any accident, thoroughly inspect the machine and test all functions first from the ground controls, then from the platform controls. Do not lift above 3 meters until you are certain that all damage has been repaired, if required, and that all controls are operating correctly.

6-5. INCIDENT NOTIFICATION.

It is imperative that JLG Industries, Inc. be notified immediately of any incident involving a JLG product. Even if no injury or property damage is evident, the Product Safety and Reliability Department at the factory should be contacted by telephone and provided with all necessary details.

It should be noted that failure to notify the Manufacturer of an incident involving a JLG Industries product within 48 hours of such an occurrence may void any warranty consideration on that particular machine.



TRANSFER OF OWNERSHIP

To: JLG, Gradall, Lull and Sky Trak product owner:

NOTE: Leased or rented units should not be included on this form.

If you now own, but ARE NOT the original purchaser of the product covered by this manual, we would like to know who you are. For the purpose of receiving safety-related bulletins, it is very important to keep JLG Industries, Inc. updated with the current ownership of all JLG products. JLG maintains owner information for each JLG product and uses this information in cases where owner notification is necessary.

Please use this form to provide JLG with updated information with regard to the current ownership of JLG Products. Please return completed form to the JLG Product Safety & Reliability Department via facsimile (717) 485-6573 or mail to address as specified on the back of this form.

Thank you,
Product Safety & Reliability Department
JLG Industries, Inc.
1 JLG Drive
McConnellsburg, PA 17233-9533
Telephone: (717) 485-5161
Fax: (717) 485-6573

Mfg. Model: Serial Number: Previous Owner: City: _____ State: _____ Zip: ______ Telephone: (_____) ____ Date Of Transfer: Current Owner: Address: City: ______ State: _____ Zip: ______ Telephone: (_____) ____ Who in your organization should we notify?



Title:



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