

# Operator Manual

**LX31/41/50**

**SERIAL NO. 4022 to Current**

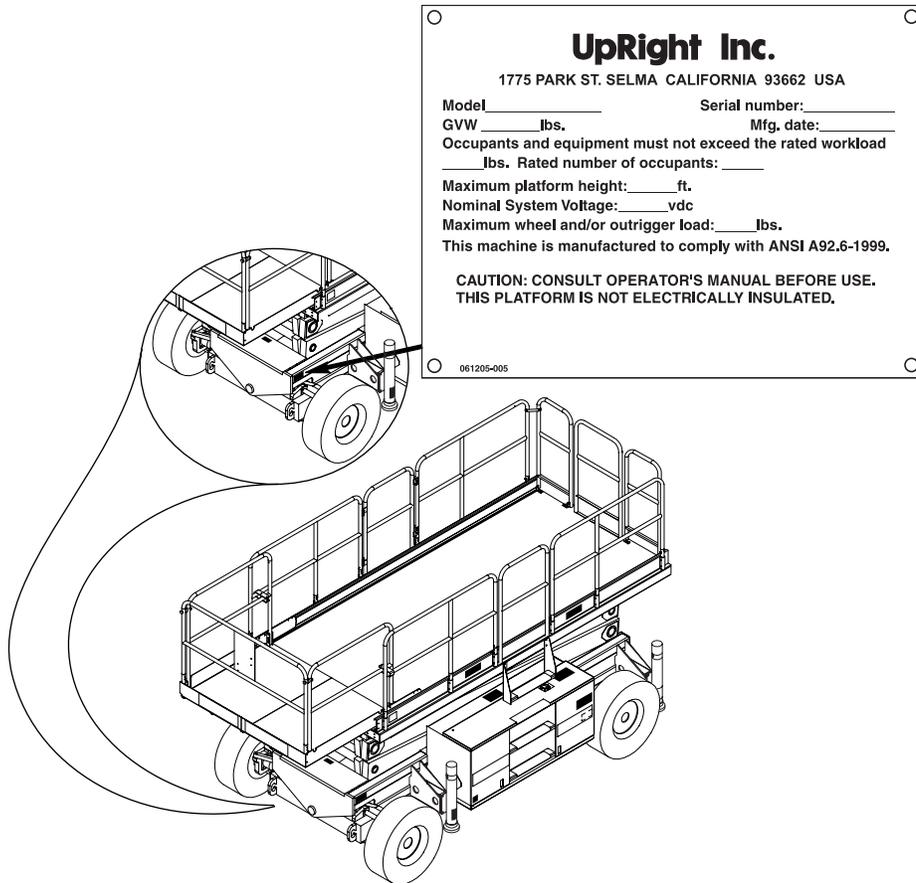
## **WARNING**

**All personnel shall carefully read, understand and follow all safety rules, operating instructions, and the Scaffold Industry Association's MANUAL OF RESPONSIBILITIES of ANSI A92.6-1999 before performing maintenance on or operating any UpRight Aerial Work Platform.**

# LX31/41/50

## Gasoline, Dual Fuel, and Diesel Models Serial Numbers 4022 - Current

When contacting UpRight for service or parts information, be sure to include the MODEL and SERIAL NUMBERS from the equipment nameplate. Should the nameplate be missing, the SERIAL NUMBER is also stamped on top of the chassis above the left front axle pivot.



### UpRight, Inc.

801 South Pine Street  
Madera, California 93637

TEL: 559-662-3900

FAX: 559-673-6184

PARTS: 1-888-UR-PARTS

PARTS FAX: 1-800-669-9884

# UpRight

Call Toll Free in U.S.A.

1-800-926-LIFT

### UpRight

Unit S1, Park West Industrial Park  
Friel Avenue  
Nangor Road  
Dublin 12, Ireland

TEL: +353 1 620 9300

FAX: +353 1 620 9301

# OPERATOR MANUAL

## **WARNING**

All personnel shall carefully read, understand and follow all safety rules, operating instructions, and the Scaffold Industry Association's MANUAL OF RESPONSIBILITIES (ANSI A92.6) before performing maintenance on or operating any UpRight Aerial Work Platform.

## **Safety Rules**

### **Electrocution Hazard**



NEVER operate the machine within ten (10) feet of power lines.  
THIS MACHINE IS NOT INSULATED.

### **Tip Over Hazard**



NEVER operate the boom or drive with the platform elevated unless on firm, level surface.

### **Collision Hazard**



NEVER position the platform without first checking for overhead obstructions or other hazards.

### **Fall Hazard**



NEVER climb, stand or sit on the platform guardrails or midrail.

- **NEVER** exceed the maximum platform load. See "Specifications" on page 20.
- **NEVER** operate the machine if all guardrails are not properly in place and secured with all fasteners properly torqued.
- **NEVER** operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps, curbs, or debris.
- **ALWAYS** close and secure the entrance after entering the platform.
- **NEVER** use ladders or scaffolding on the platform.
- **NEVER** attach overhanging loads or increase platform size.
- **LOOK** up, down and around for overhead obstructions and electrical conductors.
- **DISTRIBUTE** all platform loads evenly on the platform.
- **NEVER** use damaged equipment. (Contact UpRight for instructions. See toll free phone number on inside back cover.)
- **NEVER** change operating or safety systems.
- **INSPECT** the machine thoroughly for cracked welds, loose or missing hardware, hydraulic leaks, damaged cables or hoses, loose wire connections, and wheel bolts.
- **NEVER** climb down elevating assembly when the platform is elevated.
- **IF ALARM SOUNDS** while the platform is elevated, STOP, carefully lower the platform. Move the machine to a firm, level surface.
- **IN CASE OF EMERGENCY** push the Emergency Stop button to cut power to all machine functions.
- **NEVER** perform service on the machine while the platform is elevated without blocking the elevating assembly.
- **NEVER** recharge batteries near sparks or open flame; batteries that are being charged emit explosive hydrogen gas.
- **NEVER** replace any component or part with anything other than original UpRight replacement parts without the manufacturer's written consent.
- **VERIFY** that all labels are in place and legible before using.
- **NEVER** tow the machine. Transport by truck or trailer only.
- **AFTER USE**, secure the work platform against unauthorized use by turning the key switch off and removing the key.

### **California Proposition 65 Warning**

Gasoline and diesel engine exhaust and some of their constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

Battery Posts, terminals and related accessories contain lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

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## INTRODUCTION

This manual covers the operation of the LX31, LX41 and LX50 Internal Combustion Work Platforms. **This manual must be stored on the machine at all times.**

## GENERAL DESCRIPTION

### 1. Platform

The platform has a reinforced steel floor, guardrails with midrail, toeboards and an entrance gate at the rear and left side of the platform. The guardrails can be folded down for access through doors or for shipment.

### 2. Slide-out Deck

## ⚠ WARNING ⚠

**DO NOT** use the maintenance platform without guardrails properly assembled and in place

### 3. Platform Controls

The platform controls contain the controls to operate the machine. It should be hung on the front, left, or right guardrail.

### 4. Manual Case

### 5. Elevating Assembly

The platform is raised and lowered by the elevating assembly;

- LX31 - a three section scissor assembly powered by one single-stage lift cylinder.
- LX - a four section scissor assembly powered by one single-stage lift cylinder.
- LX50 - a five section scissor assembly powered by two single-stage lift cylinders.

### 6. Control Module

The control module contains the fuel tank, hydraulic valve manifold, horn/alarms, battery, and chassis control panel.

### 7. Power Module

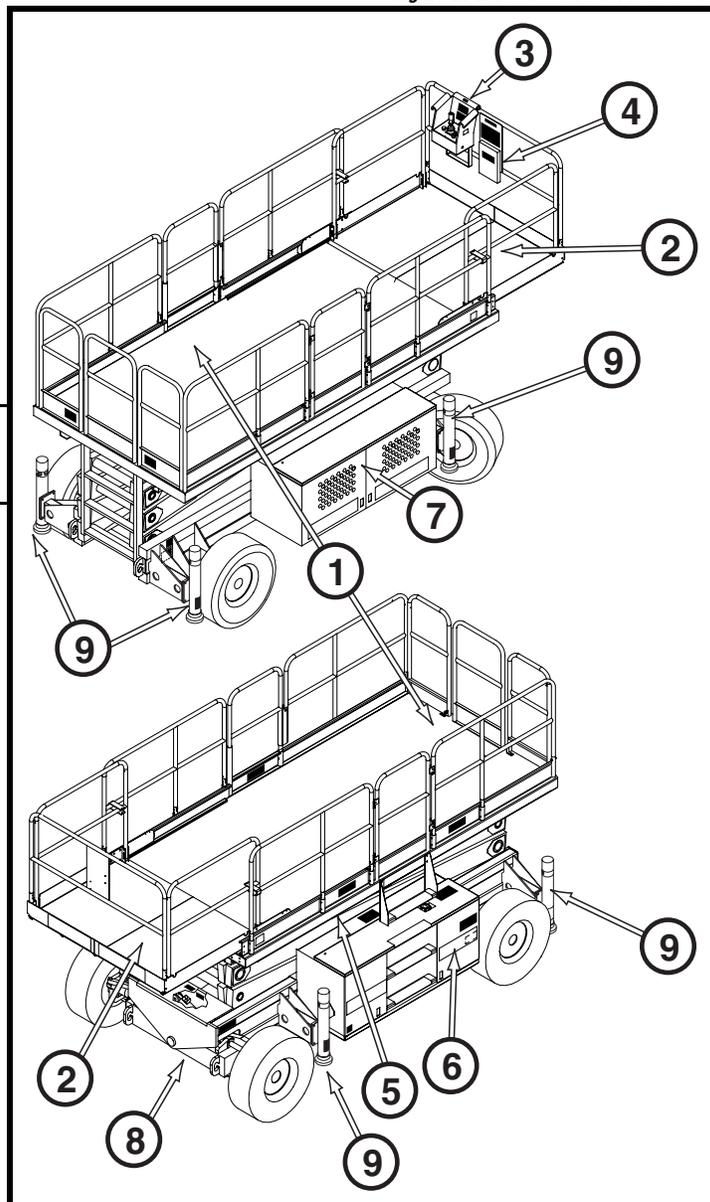
The power module contains the engine, the hydraulic pump, the hydraulic reservoir.

### 8. Chassis

The chassis is a structural frame that supports all the components of the Work Platform.

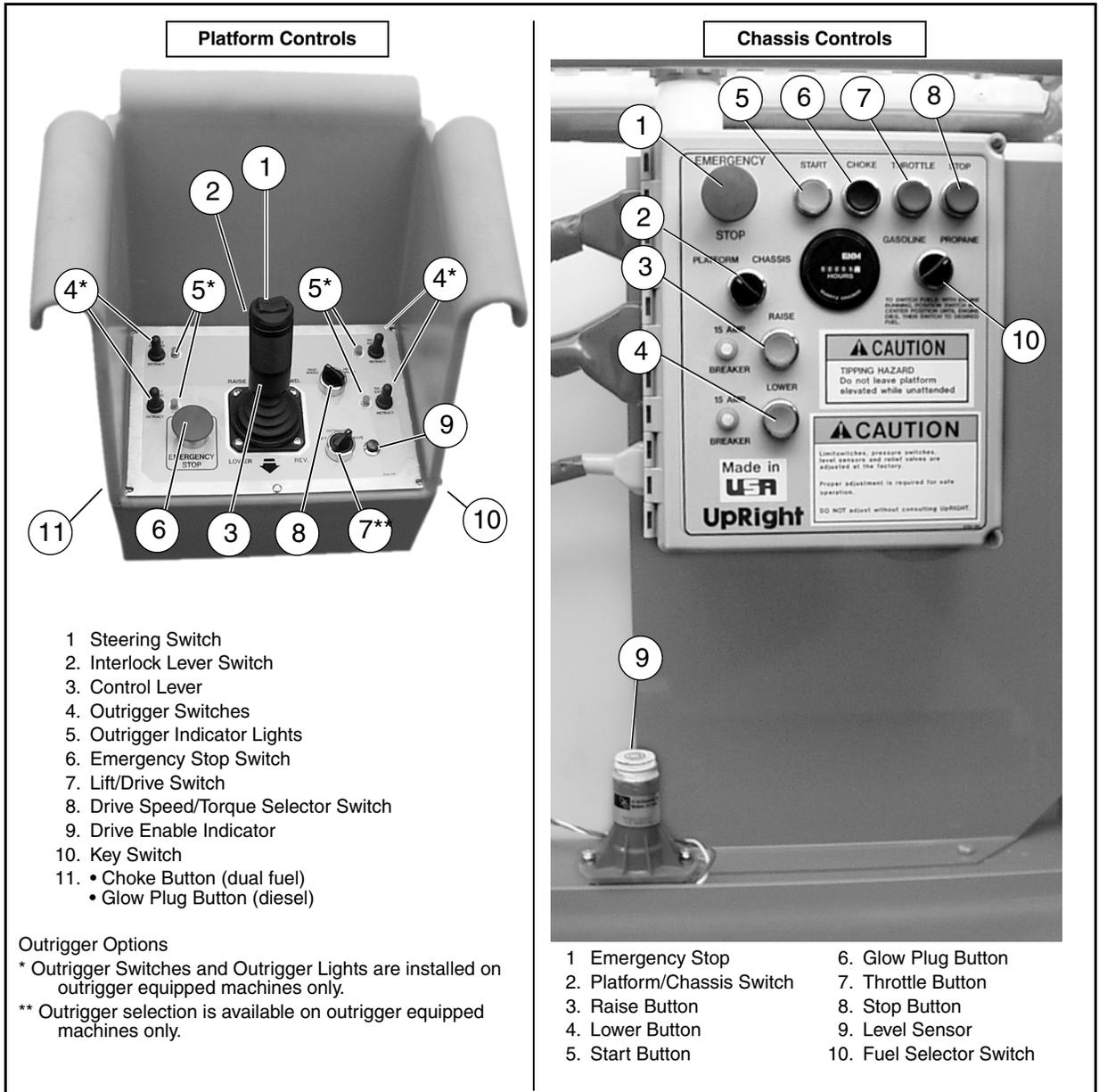
### 9. Outriggers (optional)

Figure 2: LX Series Work Platform



# CONTROLS AND INDICATORS

Figure 3: Controls and Indicators



# PRE-OPERATION & SAFETY INSPECTION

**NOTE: Carefully read, understand and follow all safety rules, operating instructions, labels and the Scaffold Industry Association's MANUAL OF RESPONSIBILITIES. Perform the following steps each day before use.**

1. Open modules and inspect for damage, oil leaks or missing parts.
2. Check the hydraulic oil level sight gauge on the hydraulic tank with the platform fully lowered. Add fluid if necessary.
3. Check that fluid level in the battery is correct (see "Battery Maintenance" on page 15).
4. Check the engine oil level and fuel level.
5. Check that all guardrails are in place, the slide-out deck extension is secured with the pin, and all fasteners are properly tightened.
6. Check tire pressure: LX31 and LX41 - 3,4 bar (**50 psi**). The LX50 is equipped with poly-filled tires.
7. Carefully inspect the entire work platform for damage such as cracked welds in structural members, loose or missing parts, oil leaks, damaged cables or hoses, loose connections and tire damage.
8. Carefully inspect the limit switches for signs of tampering.
9. Dual Fuel Models: set the dual fuel selector to the desired position. Set to the center position to purge the system when switching fuels. If the machine is to be operated on propane, open the supply valve on the tank

**NOTE: When using LP gas, use clean, water-free liquid petroleum gas, preferably from a bulk storage tank. Follow the instructions located on the power module tray for filling the tank.**

## **⚠ WARNING ⚠**

*If you smell propane, close the supply valve on the tank immediately until you have located and corrected the leak.*

10. While the engine is cool, check the engine coolant level.

## **⚠ CAUTION ⚠**

*DO NOT check coolant when engine or radiator is hot; hot coolant can cause severe burns.*

## SYSTEM FUNCTION INSPECTION

### **⚠ WARNING ⚠**

**STAND CLEAR** of the work platform while performing the following checks.

*Before operating the work platform, survey the work area for surface hazards such as holes, drop-offs, bumps and debris.*

*Check in **ALL** directions, including above the work platform, for obstructions and electrical conductors.*

*Protect control console cable from possible damage while performing checks.*

1. Move the machine, if necessary, to an unobstructed area to allow for full elevation.
2. Place chassis and platform emergency stop switches in the ON position (Figure 3, Page 4) by pulling the buttons out.
3. Verify that the platform/chassis switch is set to PLATFORM (Figure 3, Page 4).
4. Unhook the controller from the front guardrail. Firmly grasp the controller hanger in such a manner that the interlock lever switch can be depressed, while performing the following checks from the ground.
5. Turn the controller key switch clockwise to ON. Turn fully clockwise to start the engine, releasing the key once the engine starts.

**NOTE: If the engine is cold:**

- on dual fuel models, hold the choke button in while starting the engine;
- on diesel models, depress the glow plug button and hold for 6 seconds to heat the glow plugs.

6. Position the Lift/Drive switch to the DRIVE position. The drive enable light should be ON.
7. With the speed range switch first in HIGH TORQUE and then in HIGH SPEED, depress the interlock lever switch and slowly push the control lever to FORWARD then REVERSE positions to check for speed and directional control. The farther you push or pull the control lever, the faster the machine will travel.
8. Push steering switch RIGHT then LEFT to check for steering control.
9. Optional Outrigger Equipped Machines:
  - a. With the Lift/Outrigger/Drive switch in DRIVE, depress the interlock lever switch on the control lever and position each Outrigger switch to the EXTEND position.
    - Outriggers should be disabled. If an outrigger extends during this test **STOP**. Remove the machine from service until it is repaired.
  - b. Turn the Drive/Outrigger/Lift switch to OUTRIGGER.
  - c. Depress the interlock lever switch on the control lever and position each Outrigger switch to the EXTEND position to deploy all four (4) outriggers.
    - Check the outrigger indicator lights; they should be ON.

**NOTE: When the platform is elevated 1 m (3 ft.) or higher the outrigger function should be disabled.**

- d. Depress the interlock lever switch on the control lever and position each Outrigger switch to the RETRACT position.
  - Partially retract all four (4) outriggers. The outrigger indicator lights should FLASH.
  - Fully retract all four (4) outriggers. The outrigger indicator lights should be OFF.
10. Rehook the controller on the front guardrail.
11. Open the Control Module covers to gain access to the chassis controls and tilt sensor.
12. Turn the Platform/Chassis switch to CHASSIS.
13. Push the throttle button in. Push the Raise button to elevate platform while pushing the tilt sensor off of level. The platform should only partially elevate and the tilt alarm should sound. If the platform continues to elevate and/or there is no alarm, **STOP** and remove the machine from service until it is repaired.
14. Release the tilt sensor and fully elevate the platform.
15. Visually inspect the elevating assembly, lift cylinder, cables and hoses for damage or erratic operation. Check for missing or loose parts.
16. Lower the platform partially by pushing in on the Lower button, and check operation of the audible lowering alarm.
17. Open the chassis emergency lowering valve to check for proper operation by pulling and holding the knob out (refer to "Emergency Lowering" on page 9). Once the platform is fully lowered, close the valve by releasing the knob.
18. Turn the Platform/Chassis switch to PLATFORM.
19. Close and secure the module covers.
20. Enter the platform making sure the gate is latched.
21. Position the Lift/Drive switch to LIFT.
22. Depress the interlock lever switch and slowly push the control lever to UP to raise the platform; fully actuate the control lever to check proportional lift speed. Slowly pull the control lever to the DOWN position to lower the platform. Check that the lowering alarm sounds.
23. Optional Outrigger Equipped Machines:
  - a. With the Lift/Outrigger/Drive switch in LIFT, depress the interlock lever switch on the control lever and position any outrigger switch to the EXTEND position.
    - Outriggers should be disabled. If an outrigger extends during this test, **STOP**. Lower the platform and remove the machine from service until it is repaired.
24. Turn the controller key switch to OFF, push the Emergency Stop button, and dismount the platform.

## OPERATION

**NOTE:** Before operating the work platform, ensure that the pre-operation and safety inspection has been completed, any deficiencies have been corrected, and the operator has been thoroughly trained on this machine.

### **⚠ WARNING ⚠**

*Never operate the work platform with the parking brakes released. Serious injury or damage could result.*

## SWITCHING FUELS (DUAL FUEL ONLY)

1. With the engine running, turn the fuel selector switch (Figure 3: “Controls and Indicators,” on page 4) to the center position.
2. After the engine has quit running, select the appropriate fuel supply.
3. Restart the engine.

## TRAVEL WITH PLATFORM LOWERED

1. Verify the following:
  - the chassis Emergency Stop button is in the ON position (pull out)
  - the drive enable indicator is ON
  - the Platform/Chassis switch is on PLATFORM.

**NOTE:** If the drive enable indicator is OFF, verify that the platform is fully lowered and (if so equipped) the outriggers are fully retracted.

2. After mounting the platform, close and latch the gate. Check that the guardrails are in position and properly assembled, with the fasteners properly torqued.
3. Check that the route is clear of persons, obstructions, holes and drop-offs, and is capable of supporting the wheel loads.
4. Check clearances above, below and to the sides of the platform.
5. Pull the controller Emergency Stop button out to the ON position.
6. Turn the controller key switch fully clockwise to start the engine, releasing the key once the engine starts.

**NOTE:** If the engine is cold, on dual fuel models, depress and hold the choke button in while starting the engine. On diesel models, hold the glow plug button in for 6 seconds to heat the glow plugs.

7. Set the Lift/Drive switch to DRIVE.
8. Set the speed range switch to HIGH TORQUE.
9. Grasp the control lever so that the interlock lever switch is depressed (releasing the interlock lever switch cuts power to controller). Slowly push or pull the control lever to FORWARD or REVERSE to travel in the desired direction. The farther you push or pull the control lever from center, the faster the machine will travel.
10. While moving, push the speed range switch to HIGH SPEED for travel on level surfaces or to HIGH TORQUE for climbing grades or traveling in confined areas.

## TRAVEL WITH WORK PLATFORM ELEVATED

Travel with the platform elevated **ONLY** on firm and level surfaces.

**NOTE:** The work platform will travel at reduced speed when in the elevated position, and only if the front axle is parallel with the rear axle.

1. Check that the route is clear of persons, obstructions, holes and drop-offs, is level and capable of supporting the wheel loads.
2. Check clearances above, below and to the sides of the platform.
3. Position the Lift/Drive switch to the DRIVE position.
4. Push the control lever to FORWARD or REVERSE for the desired direction of travel.
5. If the machine quits driving and the tilt alarm sounds, immediately lower the platform and move the machine to a level location before re-elevating the platform.

## STEERING

Push the steering switch **RIGHT** or **LEFT** to turn the wheels. Observe the tires while maneuvering to insure proper direction.

**NOTE:** Steering is not self-centering. Wheels must be returned to the straight ahead position by operating the steering switch.

## RAISING AND LOWERING THE PLATFORM

The machine must be on a firm, level surface, capable of supporting the weight of the machine. On machines equipped with optional outriggers, use the outriggers to level the machine (refer to "Leveling the Platform (Outrigger equipped machines only)" on page 10.

1. Position the Lift/Drive switch to LIFT.
2. While holding the control lever so the interlock lever switch is depressed, push the control lever slowly to UP to raise the platform. Pushing the control lever farther increases the lift speed.
3. When the work task is completed, position the Lift/Drive switch to LIFT, and lower the platform by pulling back on the control lever until the platform is fully lowered.

## EMERGENCY LOWERING

### SERIAL # 4022 TO 4274

The Emergency Lowering Control is located at the rear of the machine at the base of the elevating assembly.

1. Open the Emergency Lowering Valve by pulling on the knob and holding it.
2. Once the platform is fully lowered, release the knob to close the valve.

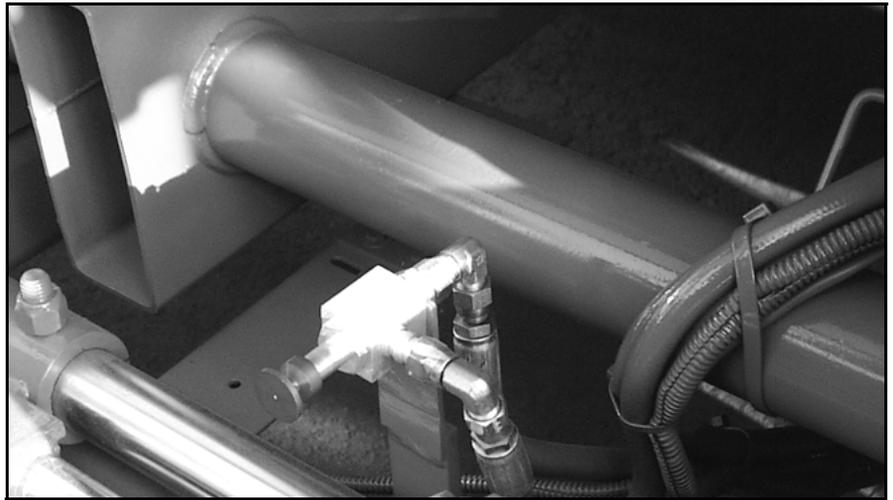


Figure 4:

### LX31 AND LX41, SERIAL # 4275 TO CURRENT

The Emergency Lowering Control Knob is located at the rear of the machine at the base of the elevating assembly.

1. Open the Emergency Lowering Valve by pulling on the knob and holding it.
2. Once the platform is fully lowered, release the knob to close the valve.



Figure 5: Emergency Lowering Knob, LX31 and LX41

### LX50, SERIAL # 4275 TO CURRENT

The Emergency Lowering Control Switch is located at the rear of the machine at the base of the elevating assembly.

1. Open the Emergency Lowering Valve by pushing down on the toggle switch and holding it.
2. Once the platform is fully lowered, release the toggle switch to close the valve.

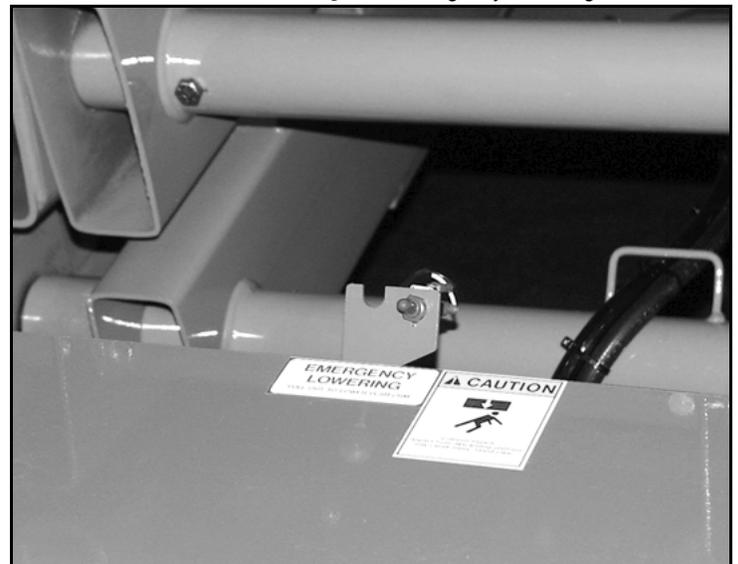


Figure 6: Emergency Lowering switch, LX50

## LEVELING THE PLATFORM (OUTRIGGER EQUIPPED MACHINES ONLY)

### **! WARNING !**

*When using outriggers, all four (4) outriggers must be in firm contact with the supporting surface.*

### OUTRIGGER SWITCHES AND INDICATOR LIGHTS

For each outrigger, there is an outrigger switch and an outrigger indicator light (refer to Figure 3, Page 4).

Each outrigger switch will raise and lower one outrigger.

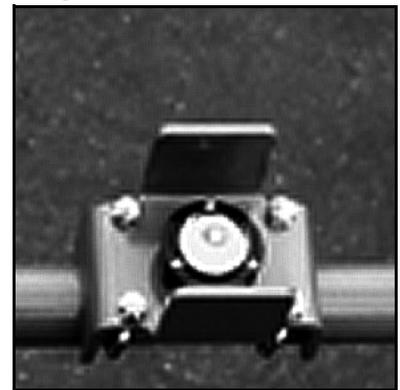
Each outrigger indicator light will indicate the position of one outrigger.

- When the indicator light is OFF - the outrigger is fully retracted.
- When the indicator light is FLASHING - the outrigger is partially extended.
- When the indicator light is ON - the outrigger is in firm contact with the supporting surface.

### TO LEVEL THE PLATFORM (EXTEND THE OUTRIGGERS)

1. Make sure that the extension deck is retracted before operating the outriggers.
2. Look around the machine; make sure that there is nothing obstructing the outriggers, and that the surface beneath them is suitable to support the weight of the machine.
3. Position the Lift/Outrigger/Drive switch set to OUTRIGGER.
4. Depress the interlock lever switch on the control lever, and operate the outrigger switches to extend each outrigger until it is making firm contact with the supporting surface.
  - Pushing the control lever forward will increase the speed of the extending outriggers.
5. While observing the bubble level on the guardrail, extend the outrigger opposite the position of the bubble until the platform is level. For example: if the bubble is to the front and left in the orbit, extend the rear right outrigger. Continue to adjust until the bubble is centered in the small circle indicating that the platform is level.
6. Confirm that all four (4) outriggers are in firm contact with the supporting surface. The outriggers are in contact with the supporting surface when the indicator lights are ON.

Figure 7: Platform Orbit Bubble Level



### TO RETRACT THE OUTRIGGERS

1. Fully lower the platform.
2. Position the Lift/Outrigger/Drive switch set to OUTRIGGER.
3. Depress the interlock lever switch on the control lever, and position each outrigger switch to RETRACT.
  - The outrigger indicator lights will be OFF when the outriggers are fully retracted.
  - The drive enable indicator light will not come on until all four outriggers are fully retracted..

## TOWING OR WINCHING

Perform the following only when the machine will not operate under its own power and it is necessary to move the machine or when winching onto a transport vehicle (see “Transporting Work Platform” on page 13).

### CAUTION

*DO NOT tow or winch the machine faster than 0,3 m/s (1 ft./s). Faster speeds will damage drive components and void the warranty.*

## PARKING BRAKE RELEASE

### WARNING

*Never operate the work platform with the parking brakes released. Serious injury or damage could result.*

*Never release the brakes if the machine is on a slope.*

*Chock the wheels before releasing the parking brakes.*

*Hook the machine to a towing vehicle before releasing the parking brakes.*

1. Close the needle valve by turning the knob clockwise.
2. Pump the brake release pump until the parking brakes release and the wheels can be turned.
3. The machine will now roll when pushed or pulled.
4. Be sure to open the needle valve and verify that the parking brakes have engaged before the machine is operated.

*Figure 8: Parking Brake Release Pump*



## AFTER USE EACH DAY

1. Ensure that the platform is fully lowered.
2. Park the machine on level ground, preferably under cover, secure against vandals, children or unauthorized operation.
3. Turn the key switch to OFF and remove the key to prevent unauthorized operation.

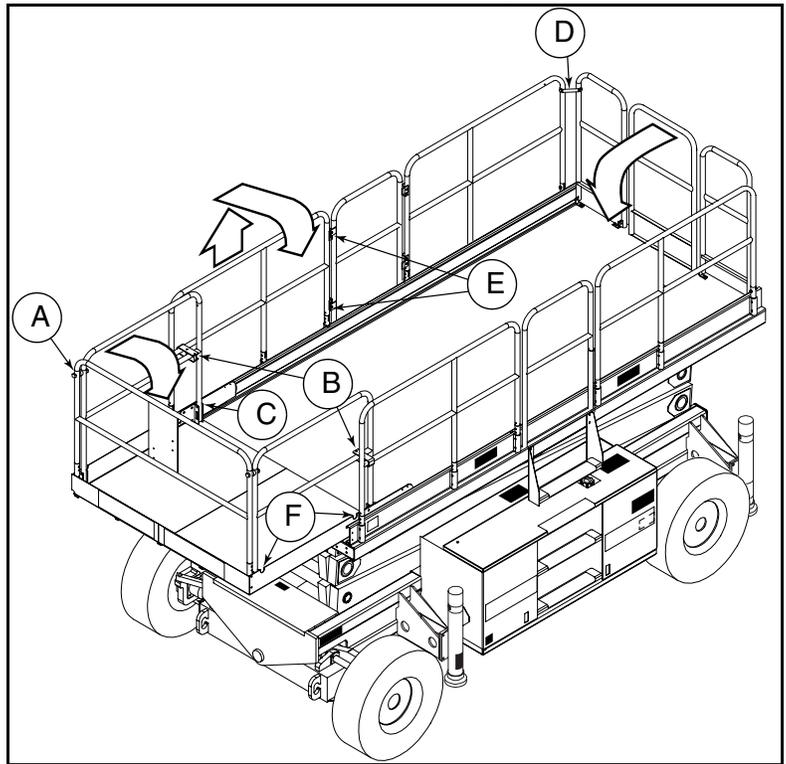
## FOLD DOWN GUARDRAILS

This procedure is only for passing through doorways. Guardrails must be returned to proper position before using the machine.

### FOLD DOWN PROCEDURE

**NOTE:** When performing the following procedures, retain all fasteners.

1. Place the controller on the platform.
2. Starting at the slide-out deck:
  - remove nuts, bolts and washers from the top front corners of guardrails (A)
  - remove the nuts, bolts and washers from the slide-out deck side guardrail midrails (B)
  - remove nuts, bolts and washers located at the top of the sockets that hold the slide-out deck side guardrails to the deck (C)
  - fold the side guardrails down onto the slide-out deck platform
  - leave the end rail up and slide the deck all the way in.
3. Go to the rear of the platform:
  - close and latch the rear gate
  - remove the nuts, bolts, washers, and corner brackets from the top of the rear guardrail
  - fold the rear guardrail down onto the platform, being careful to keep the gate latched.
4. Unlatch the side gate so the left side guardrails can be folded down in two separate pieces. Also remove the nuts, bolts and washers opposite the gate latch on the right side guardrail so it too can be separated into two pieces (E).
5. Fold the rear half of the side guardrails onto the deck:
  - lift up and fold down so the guardrails rest on the deck, on top of the rear guardrail.
6. Fold the front half of the side guardrails onto the deck:
  - lift up and fold down so the guardrails rest on the slideout deck, with the guardrail posts resting in the cutouts on the slideout deck toeboard (F).
7. Lift up and fold down the front slideout deck guardrail.



### ERECTION PROCEDURE

1. Raise the front guardrail, making sure it is pushed down to secure the guardrail in the vertical position.
2. Raise the side guardrails, making sure each is pushed down to secure the guardrail in the vertical position; align holes and install bolts, washers and nuts. Tighten securely.
3. Raise one of the slide-out deck side guardrail assemblies; align holes and install bolts, washers and nuts. Tighten securely. Repeat this procedure for the other slide-out deck side guardrails.
4. Raise the rear guardrail, and install the corner brackets, nuts, bolts and washers.
5. Hang the controller from the front guardrail.
6. Before operating work platform check that all fasteners are in place and properly torqued.

### ⚠ WARNING ⚠

*Before operating the machine, guardrails must be securely fastened in their erected position.*

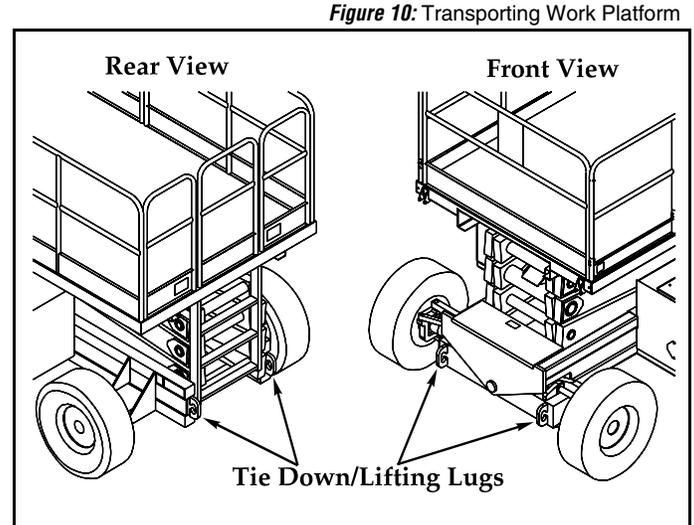
# TRANSPORTING WORK PLATFORM

## PREPARATION FOR SHIPMENT

1. Fully lower the platform.
2. Disconnect the battery negative (-) lead from the battery terminal.
3. Band the controller to the front guardrail.
4. Band the elevating linkage to the frame.

## LIFTING BY CRANE

1. Secure straps to chassis tie down/lifting lugs only.
2. Place the platform onto the transport vehicle in transport position.
3. Chock the wheels.
4. Secure the work platform to the transport vehicle with chains or straps of adequate load capacity attached to the chassis tie down/lifting lugs.



## DRIVING OR WINCHING ONTO A TRUCK OR TRAILER

**NOTE:** Do not winch faster than 0,3 m/s (1 ft/s).

1. Move the machine onto the truck or trailer;
  - A. To **Drive** the machine onto the transport vehicle:
    - a. Move the work platform up the ramp and into transport position.
    - b. Set the wheels straight and turn off the machine.
    - c. Chock the wheels.
  - B. To **Winch** the machine onto the transport vehicle:
    - a. Move the work platform up to the ramp.
    - b. Attach the winch cable to the tie down/lifting lugs.
    - c. Release the parking brakes (refer to "Parking Brake Release" on page 11).
    - d. Winch the platform into transport position
    - e. Chock the wheels.

**NOTE:** Engage the parking brakes after transporting.

2. Secure the work platform to the transport vehicle with chains or straps of adequate load capacity attached to the chassis tie down/lifting lugs.

## CAUTION

*Overtightening of chains or straps through tie down/lifting lugs may result in damage to the work platform.*

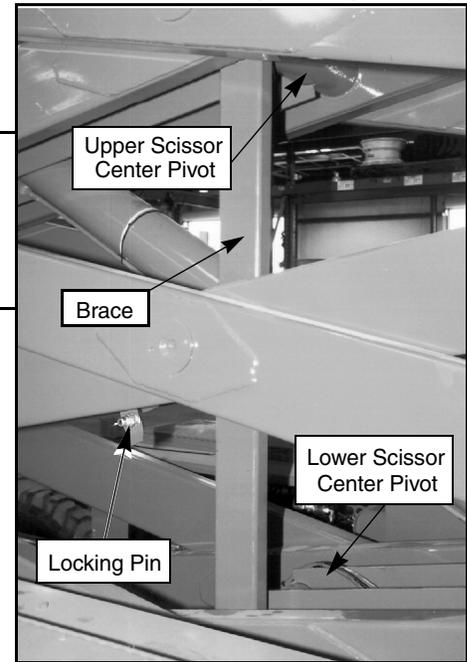
# MAINTENANCE

## ⚠ WARNING ⚠

Never perform service on the work platform in the elevating assembly area while the platform is elevated without first blocking the elevating assembly.

**DO NOT** stand in elevating assembly area while deploying or storing brace.

Figure 11: Blocking Elevating Assembly



## BLOCKING ELEVATING ASSEMBLY

### BRACE INSTALLATION

1. Park the work platform on firm, level ground.
2. Verify that the platform Emergency Stop button is ON.
3. Turn the Platform/Chassis switch to CHASSIS.
4. Start the engine, using the chassis controls.
5. Push the Throttle button in. The button will stay in and the engine speed will increase. Using the Raise button, elevate the platform until the scissor brace can be rotated to the vertical position.
6. From the left side of the machine, disengage the locking pin securing the brace. Rotate the scissor brace counterclockwise until it is vertical and between the two scissor center pivots.
7. Push the Lower button and gradually lower the platform until the brace is supporting the platform.
8. Disengage the throttle by pushing the Throttle button in again. The button will retract and the engine will come to idle speed.

### BRACE REMOVAL

1. Using the chassis controls, gradually raise the platform until the scissor brace clears the two scissor center pivots.
2. Rotate the scissor brace clockwise until the locking pin engages.
3. Push the Lower button to completely lower the platform.
4. Make sure the Throttle button is disengaged and Platform/Chassis switch is on PLATFORM.

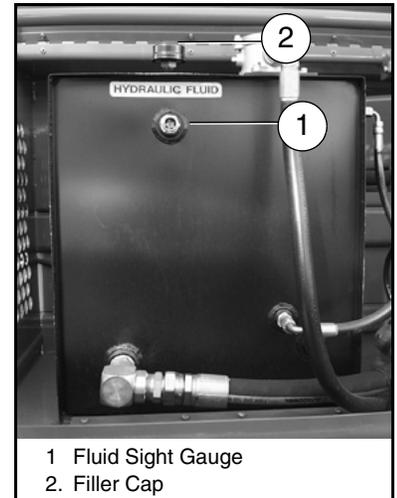
## HYDRAULIC FLUID

The hydraulic fluid tank is located in the Power Module.

**NOTE: Never add oil if the platform is elevated.**

1. Make sure that the platform is fully lowered.
2. Check fluid level by observing the oil sight gauge
3. Remove the filler cap to fill with the appropriate fluid.

Figure 12: Hydraulic Oil Tank



## BATTERY MAINTENANCE

### ⚠ WARNING ⚠

*Hazard of explosive gas mixture. Keep sparks, flame, and smoking material away from battery.*

*Always wear safety glasses when working with batteries.*

*Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.***

*Battery fluid is highly corrosive. Thoroughly rinse away any spilled fluid with clean water.*

*Always replace batteries with UpRight batteries or manufacturer approved replacements.*

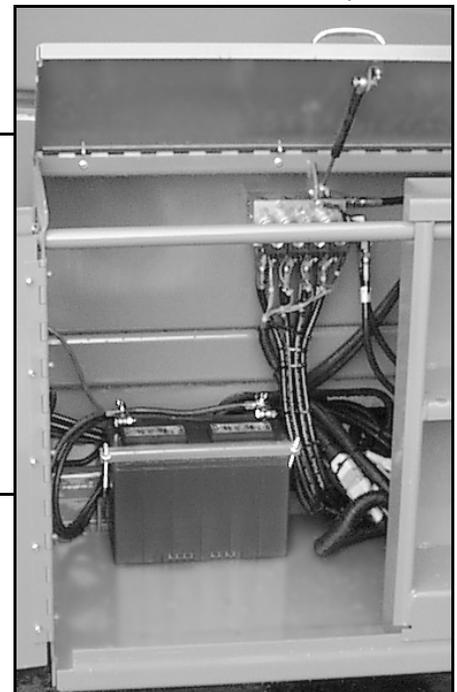
Check battery fluid level daily, especially if the work platform is being used in a warm, dry climate.

If the electrolyte level is lower than 10 mm (3/8 in.) above plates, add distilled water **ONLY**. Do not use tap water with high mineral content; it will shorten battery life.

The battery and cables should be inspected regularly for signs of cracks in the case, electrolyte leakage and corrosion of the terminals. Inspect the cables for worn spots or breaks in the insulation and for broken cable terminals.

Refer to the Service Manual to extend battery life and for complete service instructions.

Figure 13: Battery Location



## ENGINE

### COOLANT

The coolant recovery tank is mounted on the inside of the door of the power module.

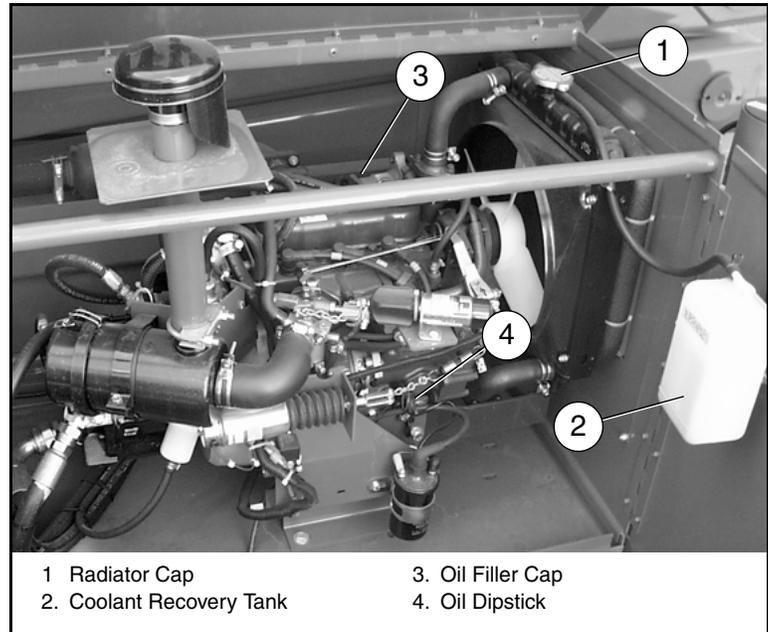
1. Remove the cap on the coolant recovery tank.
2. Add coolant to the "FULL" mark.

**NOTE:** Never remove the radiator cap when the engine is hot.

### OIL

The engine **must not be running** when you check and replenish the engine oil. Refer to the Service Manual to change the oil filter.

1. Remove the oil dipstick and check the level indicator marks.
2. If the level is low, remove the oil filler cap.
3. Replenish with the proper engine oil (refer to the engine service manual that came with the machine).



## ⚠ CAUTION ⚠

*DO NOT check coolant when engine or radiator is hot; hot coolant can cause severe burns.*

## FUEL

### DIESEL OR GASOLINE

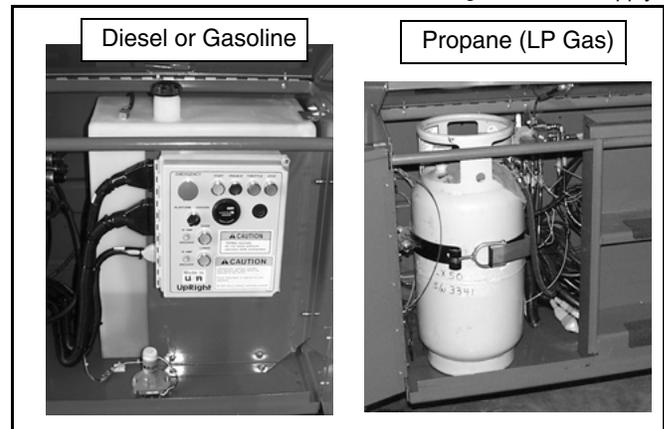
**IMPORTANT:** Fill with the correct fuel! Observe the label near the fuel tank. It will say "Gasoline Only" or "Diesel Only".

The fuel tank for gasoline or diesel machines is located in the Control Module, behind the chassis controls. The tank is translucent. Check the fuel level by observing the level of the liquid through the tank.

### PROPANE (LP GAS)

The propane tank (dual fuel machines) is located in the Control Module to the left of the ladder, in front of the battery.

**Figure 15:** Fuel Supply



## PREVENTATIVE MAINTENANCE

The complete inspection consists of periodic visual and operational checks, along with periodic minor adjustments to assure proper performance. Daily inspection will prevent abnormal wear and prolong the life of all systems. The inspection and maintenance schedule is to be performed at regular intervals. Inspection and maintenance shall be performed by personnel who are trained and familiar with mechanical and electrical procedures.

### **! WARNING !**

*Before performing preventative maintenance, familiarize yourself with the operation of the machine.*

*Always block the elevating assembly whenever it is necessary to enter the scissor assembly to perform maintenance while the platform is elevated.*

The preventative maintenance table has been designed for machine service and maintenance repair. Please photocopy the Daily Preventative Maintenance Check List and use the table as a checklist when inspecting the machine for service.

## DAILY PREVENTATIVE MAINTENANCE CHECK LIST

### MAINTENANCE TABLE KEY

Y=Yes/Acceptable

N=No/Not Acceptable

R=Repaired/Acceptable

### MAINTENANCE REPORT

Date: \_\_\_\_\_

Owner: \_\_\_\_\_

Model No: \_\_\_\_\_

Serial No: \_\_\_\_\_

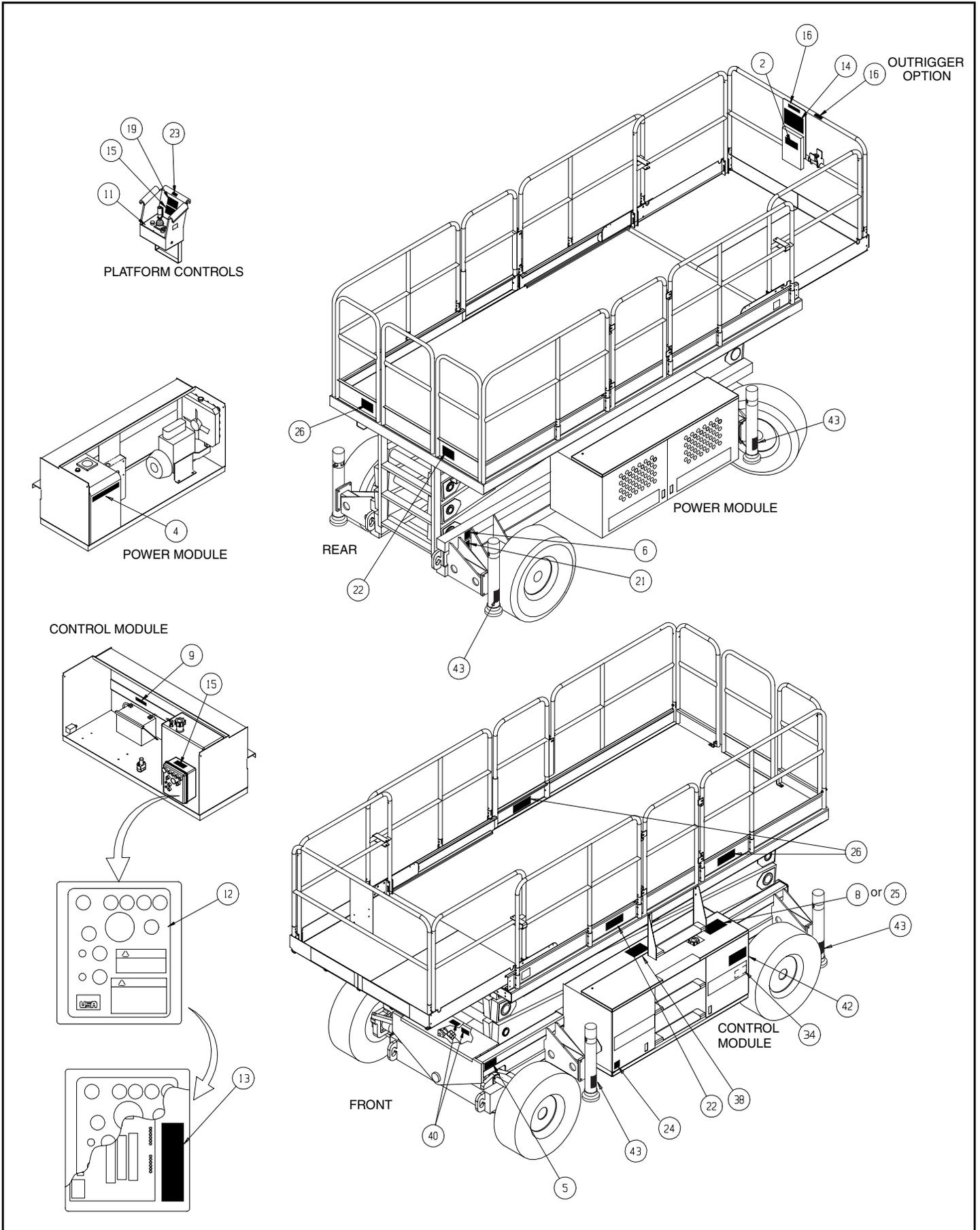
Serviced By: \_\_\_\_\_

COMPONENT	INSPECTION OR SERVICES	Y	N	R
Battery	Check electrolyte level			
Chassis	Check hoses for pinch or rubbing points			
	Check welds for cracks			
Control Cable	Check the exterior of the cable for pinching, binding or wear			
Controller	Check switch operation			
Drive Motors	Check for operation and leaks			
Elevating Assembly	Inspect for structural cracks			
Emergency Lowering System	Operate the emergency lowering valve and check for serviceability			
Entire Unit	Check for and repair collision damage			
Hydraulic fluid	Check fluid level			
Hydraulic Pump	Check for hose fitting leaks			
Hydraulic System	Check for leaks			

COMPONENT	INSPECTION OR SERVICES	Y	N	R
Labels	Check for peeling, missing, or unreadable labels & replace			
Platform Deck and Rails	Check welds for cracks			
	Check condition of deck			
Tires and Wheels	Check for damage			
Engine Oil and Filter	Check level and condition			
	Check for leaks			
Engine Fuel System	Check fuel level			
	Check for leaks			
	Check air cleaner			
Engine Coolant	Check coolant level (with engine cold)			
Torque Hubs	Check for leaks			
Outriggers	Check for operation and leaks			

# LABELS

These labels shall be present and in good condition before operating the work platform. Be sure to read, understand and follow these labels when operating the work platform.





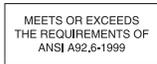
2 010076-001



4 060197-000



5 061205-005



6 061220-002



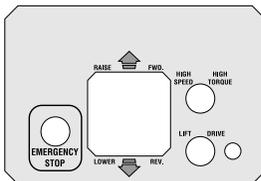
8 064166-000



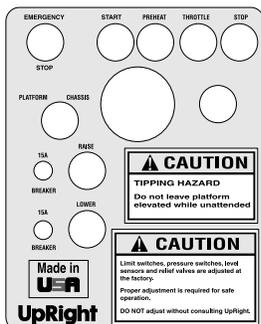
9 066552-000



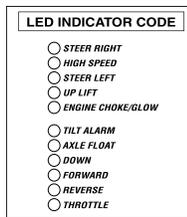
10 064189-001



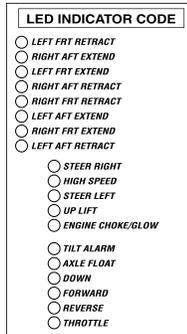
11 067642-003 (Outrigger Units: 067642-009)



12 067481-001 - Diesel  
067481-000 - Dual Fuel



13 067480-000



13 067480-001 (Outrigger Units)



14 066550-009



15 067478-000



16 066551-003



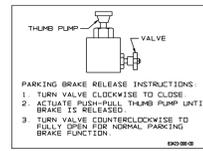
17 067822-000



17 030624-024



19 066554-000



21 063423-000



22 LX31/LX41: 066562-000



22 LX50: 066562-003



23 061515-000



25 027898-000



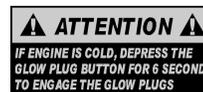
26 LX31: 101250-009



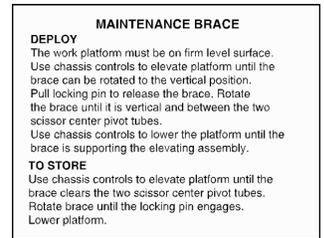
26 LX41: 101250-008



26 LX50: 101250-003



34 067822-001



38 066561-001



40 066558-000



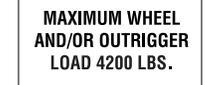
40 066558-002 LX50 S/N 4275 to current



41 066556-000 (Outrigger Units)



42 LX31: 101252-013



42 LX41: 101252-014



42 LX50: 101252-015



43 066556-001 (Outrigger Units)

# SPECIFICATIONS

Specifications subject to change without notice. Refer to the Service Manual for service information. Refer to the Parts Manual for illustrated parts breakdown. Hot weather or heavy use may reduce performance. Meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999.

ITEM	LX31	LX41	LX50
<b>Platform Size (Inside toeboards)</b>			
Standard	3,97 m x 1,73 m [156 in x 68 in.]	3,97 m x 1,73 m [156 in x 68 in.]	3,97 m x 1,73 m [156 in x 68 in.]
slide-out Deck Extended	4,8 m x 1,73 [190 in. x 68 in.]	4,8 m x 1,73 [190 in. x 68 in.]	4,8 m x 1,73 [190 in. x 68 in.]
<b>Max. Platform Capacity</b>			
Standard	907 kg [2,000 lbs.]	680 kg [1,500 lbs.]	454 kg [1,000 lbs.]
Dual Deck	794 kg [1750 lbs.]	567 kg [1,250 lbs.]	340 kg [750 lbs.]
on Extension	227 kg [500 lbs.]	227 kg [500 lbs.]	227 kg [500 lbs.]
<b>Max. No. of occupants</b>			
Standard	5 people	5 people	4 people
Dual Deck		4 people	3 people
<b>Height</b>			
Working Height	11,4 m [37 ft.]	14,33 m [47 ft.]	17 m [56 ft.]
Max. Platform Height	9,45 m [31 ft.]	12,34 m [40 ft. 6 in.]	15,09 m [49 ft. 6 in.]
Min. Platform Height	1,43 m [56.3 in.]	1,66 m [65.3 in.]	1,93 m [76 in.]
Drivable Height, Standard	9,4 m [31 ft.]	12,3 m [40 ft. 6 in.]	12,34 m [49 ft. 6 in.]
Drivable Height, Dual Deck			12,2 m [40 ft.]
<b>Dimensions</b>			
Weight, Standard	2WD: 4282 kg [9,440 lbs.] 4WD: 4404 kg [9,710 lbs.]	4994 kg [11,010 lbs.] 5117kg [11,280 lbs.]	GAS: 5756 kg [12,690 lbs.] DIES: 5788 kg [12,760 lbs.] GAS: 5879 kg [12,960 lbs.] DIES: 5910 kg [13,030 lbs.]
Weight, Dual Deck	2WD: 4613 kg [10,170 lbs.] 4WD: 4736 kg [10,440 lbs.]	5325 kg [11,740 lbs.] 5448 kg [12,010 lbs.]	GAS: 6087 kg [13,420 lbs.] DIES: 6119 kg [13,490 lbs.] GAS: 6210 kg [13,690 lbs.] DIES:6241 kg [13,760 lbs.]
Overall Width	2,29 m [90 in.]	2,29 m [90 in.]	2,29 m [90 in.]
Overall Height, guardrails up	2,53 m [99.8 in.]	2,77 m [109 in.]	3 m [118.3 in.]
Overall Height, guardrails lowered	1,64 m [64.5 in.]	1,87 m [73.5 in.]	2,1 m [82.5 in.]
Overall Length, deck in	4,06 m [160 in.]	4,06 m [160 in.]	4,06 m [160 in.]
Overall Length, deck extended	4,88 m [192 in.]	4,88 m [192 in.]	4,88 m [192 in.]
<b>Surface Speed</b>			
Platform Lowered	0 to 5,0 km/h [0 to 3.1 mph]	0 to 5,0 km/h [0 to 3.1 mph]	0 to 5,0 km/h [0 to 3.1 mph]
Platform Raised	0 to 0,48 km/h [0 to 0.5 mph]	0 to 0,48 km/h [0 to 0.5 mph]	0 to 0,48 km/h [0 to 0.5 mph]
<b>System Voltage</b>	12 Volt DC	12 Volt DC	12 Volt DC
<b>Hydraulic Tank Capacity</b>	107,13 l [28.3 US Gallons]	107,13 l [28.3 US Gallons]	107,13 l [28.3 US Gallons]
<b>Maximum Hydraulic System Pressure</b>	206,8 bar [3000 psi]	206,8 bar [3000 psi]	206,8 bar [3000 psi]
<b>Hydraulic Fluid</b>			
Normal Temperature (>32° F [0° C])	ISO #46	ISO #46	ISO #46
Low Temperature (<32° F [0° C])	ISO #32	ISO #32	ISO #32
Extreme Temperature (<0° F [-17° C])	ISO #15	ISO #15	ISO #15
<b>Lift System</b>	One Single Stage Lift Cylinder	One Single Stage Lift Cylinder	Two Single Stage Lift Cylinders
<b>Lift Speed</b>	Raise: 40 sec. Lower: 52 sec.	Raise: 45 sec. Lower: 60 sec.	Raise: 80 sec. Lower: 112 sec.
<b>Power Source</b>	Diesel or Gasoline 20 HP Kubota, 3 Cylinder, Water Cooled	Diesel or Gasoline 20 HP Kubota, 3 Cylinder, Water Cooled	Diesel or Gasoline 20 HP Kubota, 3 Cylinder, Water Cooled
<b>Drive Control</b>	Proportional	Proportional	Proportional
<b>Control System</b>	Smooth one-hand Joystick	Smooth one-hand Joystick	Smooth one-hand Joystick
<b>Horizontal Drive</b>	2WD: 2 Wheel, Hyd. Motors 4WD: 4 Wheel, Hyd. Motors	2 Wheel, Hyd. Motors 4 Wheel, Hyd. Motors	2 Wheel, Hyd. Motors 4 Wheel, Hyd. Motors
<b>Tires</b>	10-16.5 NHS 8 Ply	10-16.5 NHS 8 Ply	10-16.5 NHS 8 Ply
<b>Tire Air Pressure</b>	3,4 bar [50psi.]	3,4 bar [50psi.]	NA
<b>Parking Brakes</b>	Dual Disc, Spring Applied, Hydraulic Release	Dual Disc, Spring Applied, Hydraulic Release	Dual Disc, Spring Applied, Hydraulic Release
<b>Turning Radius (inside)</b>	1,22 m [48 in.]	1,22 m [48 in.]	1,22 m [48 in.]
<b>Maximum Gradeability:</b>	2WD: 17° [30%] 4WD: 19° [35%]	17° [30%] 19° [35%]	13,5° [24%] 13,5° [24%]
<b>Wheel Base</b>	2WD: 2,9 m [114.5 in.] 4WD: 2,95 m [116 in.]	2,9 m [114.5 in.] 2,95 m [116 in.]	2,9 m [114.5 in.] 2,95 m [116 in.]
<b>Ground Clearance</b>	0,24 m [9.5 in.]	0,24 m [9.5 in.]	0,24 m [9.5 in.]
<b>Guardrails</b>	1.1 m [43.5 in.] high, Fold Down with gate.	1.1 m [43.5 in.] high, Fold Down with gate.	1.1 m [43.5 in.] high, Fold Down with gate.
<b>Toeboard</b>	152 mm [6 in.] High	152 mm [6 in.] High	152 mm [6 in.] High

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