

Operator Manual

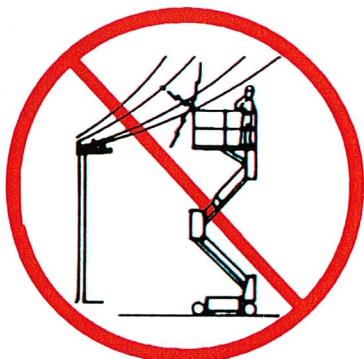
SL-20

SERIAL NO. 3801 TO CURRENT

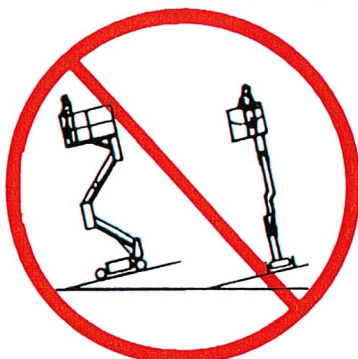
WARNING

All personnel shall carefully read, understand and follow all safety rules and operating instructions before performing maintenance on or operating any UpRight work platform.

SAFETY RULES



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



NEVER elevate the platform or drive the machine while elevated unless the machine is on firm level surface.



NEVER sit, stand or climb on guardrail or midrail.

NEVER operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps and debris before operating machine.

NEVER operate the machine if all guardrails are not properly in place and secured with all fasteners properly torqued.

CLOSE gate across entrance after mounting 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 loads evenly on the platform. See the back cover for maximum platform load.

NEVER use damaged equipment. (Contact UpRight for instructions. See toll free number on back cover.)

NEVER change operating or safety systems.

INSPECT the machine thoroughly for cracked welds, loose hardware, hydraulic leaks, damaged control cable, loose wire connections and wheel bolts.

NEVER climb down elevating assembly with the platform elevated.

NEVER perform service on machine while platform is elevated without blocking elevating assembly.

NEVER recharge batteries near sparks or open flame; batteries that are being charged emit highly explosive hydrogen gas.

AFTER USE secure the work platform against unauthorized use by turning key switch off and removing key.

NEVER replace any component or part with anything other than original UpRight replacement parts without the manufacturers consent.

Introduction

This manual covers both the Two Speed, toggle switch activated Controller (Figure 3) and the Proportional Controller (Figure 4). Determine which Controller type you are using and then follow the appropriate instructions.

Pre-Operation and Safety Inspection

Read, understand and follow all safety rules and operating instructions and then perform the following steps each day before use.

1. Open module covers and inspect for damage, oil leaks or missing parts.
2. Check the level of the hydraulic oil with the platform fully lowered. Oil should be visible in the sight gauge (Figure 1). Add ISO #46 hydraulic oil if necessary.
3. Check that fluid level in the batteries is correct (See Battery Maintenance, page 8).
4. Verify batteries are charged.
5. Check that A.C. extension cord has been disconnected from charger.
6. Check that all guardrails are in place with fasteners properly tightened.
7. Carefully inspect the entire work platform for damage such as cracked welds or structural members, loose or missing parts, oil leaks, damaged cables or hoses, loose connections and tire damage.
8. Move machine, if necessary, to unobstructed area to allow for full elevation.
9. Turn Chassis and Platform Emergency Stop Switch ON (Figure 1 or 2). Either open the switch guard and push the switch toward the guard **OR** turn the button clockwise.
10. If equipped, turn the Chassis Key Switch (Figure 2) to **CHASSIS**.
11. Push Chassis Lift Switch (Figure 1 or 2) to **UP** position and fully elevate platform.
12. Visually inspect the elevating assembly, lift cylinder, cables and hoses for damage or erratic operation. Check for missing or loose parts.
13. Partially lower the platform by pushing Chassis Lift Switch to **DOWN**, and check operation of the audible lowering alarm.
14. Open the Chassis Emergency Lowering Valve (Figure 1) by turning knob counterclockwise to check for proper operation. Once the platform is fully lowered, close the valve by turning knob clockwise.

15. If equipped, turn the Chassis Key Switch (Figure 2) to **DECK**.
16. Close and secure module covers.
17. Unhook Controller from guardrail. Firmly grasp Controller hanger and Foot Switch together, in such a manner that the Foot Switch can be depressed, while performing the following checks from the ground.



WARNING



STAND CLEAR of work platform while performing checks.

Protect Controller cable from possible damage while performing checks.

TWO SPEED CONTROLLER (Figure 3)

1. Turn the Emergency Stop Switch to the ON position. Open the switch guard and push the switch toward the guard.
2. Turn Controller Key Mode Switch to **DRIVE**.
3. While depressing Foot Switch, with the Speed Range Switch in **LOW** and then **HIGH**, push the Drive Switch to **FORWARD** and then **REVERSE** to check for speed and directional control.
4. Push Steering Switch **RIGHT** then **LEFT** to check for steering control.
5. Turn Key Switch to **OFF** and push the Emergency Stop Switch guard.
6. Rehook Controller on front guardrail and place Foot Switch on deck.

PROPORTIONAL CONTROLLER (Figure 4)

1. Turn the Emergency Stop Button clockwise to the ON position.
2. Turn Controller Key Switch **ON**.
3. Turn Drive/Lift Switch to **DRIVE**.
4. While depressing Foot Switch, slowly push Control Lever to **FORWARD** then **REVERSE** to check for speed and directional control. The farther you push or pull the Control Lever the faster the machine will travel.
5. Push Steering Switch **RIGHT** then **LEFT** to check for steering control.
6. Turn Key Switch to **OFF** and push the Emergency Stop Button.
7. Rehook Controller on front guardrail and place Foot Switch on deck.

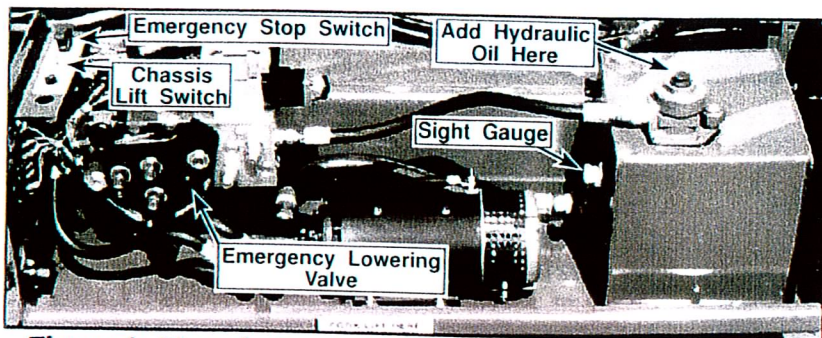


Figure 1: Chassis Control Module, with Domestic Control Panel

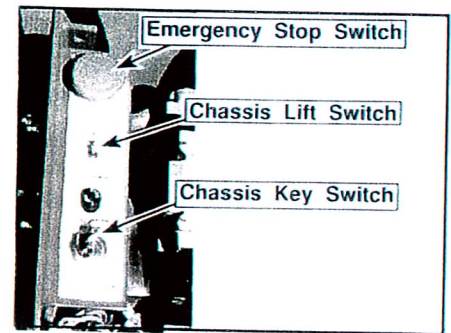


Figure 2: European Chassis Control Panel

Operation

Before operating work platform ensure that pre-operation and safety inspection has been completed and any deficiencies have been corrected.

TWO SPEED CONTROLLER (Figure 3)

Travel With Platform Lowered

1. Check that route is clear of obstructions, holes and drop-offs and is capable of supporting wheel loads.
2. Verify Chassis Emergency Stop Switch is ON, open the switch guard and push the switch toward the guard.
3. After mounting platform close and latch gate. Check that guardrails are properly assembled and in position. Hang Controller on front guardrail.
4. Check clearances above, below and to the sides of platform.
5. Turn Controller Emergency Stop Switch ON, open the switch guard and push the switch toward the guard. When the switch guard is closed, Emergency Stop Switch will automatically go to OFF position.
6. Turn Controller Key Mode Switch to **DRIVE**.
7. While depressing Foot Switch, with the Speed Range Switch in **LOW**, push the Drive Switch to **FORWARD** or **REVERSE** to travel in the desired direction. While moving, push Drive/Lift Speed Range Switch to **HIGH** if faster speed is desired. Set Speed Range Switch to **HIGH** for faster travel on level surfaces or to **LOW** for climbing grades or traveling in confined areas.

Steering

1. Turn the Key Mode Switch to **DRIVE**.
2. While depressing the Foot Switch, push the Steering Switch to **RIGHT** or **LEFT** to turn wheels in the desired direction. Observe the tires while maneuvering the work platform to ensure proper direction.

NOTE: Steering is not self-centering. Wheels must be returned to straight ahead position by operating Steering Switch.

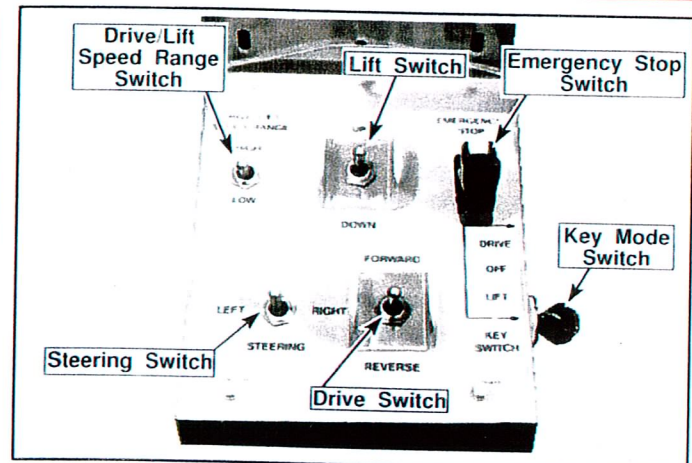


Figure 3: Two Speed Controller

Elevating Platform

1. Position Key Mode Switch to **LIFT**.
2. Set Drive/Lift Speed Range Switch to **HIGH** for normal lift speed, to **LOW** for slow lift speed.
3. While depressing Foot Switch, push Lift Switch to **UP**.

Travel With Platform Elevated

NOTE: Work platform will travel at reduced speed when platform is elevated.

1. Check that 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 platform.
3. Position Key Mode Switch to **DRIVE** position.
4. While depressing Foot Switch, push Drive Switch to **FORWARD** or **REVERSE** for desired direction of travel.

Lowering Platform

1. Turn Key Mode Switch to **LIFT** position.
2. While depressing Foot Switch, push Lift Switch to **DOWN**.

PROPORTIONAL CONTROLLER (Figure 4)

Travel With Platform Lowered

1. Check that route is clear of obstructions, holes and drop-offs and is capable of supporting wheel loads.
2. Verify Chassis Emergency Stop Switch is ON, turn button clockwise.
3. After mounting platform close and latch gate. Check that guardrails are properly assembled and in position. Hang Controller on front guardrail.
4. Check clearances above, below and to the sides of platform.
5. Turn Controller Emergency Stop Button clockwise to ON. When button is pushed down, Emergency Stop Switch will automatically go to OFF position.
6. Turn Controller Key Switch to **ON**.
7. Turn Drive/Lift Switch to **DRIVE**.
8. While depressing Foot Switch, slowly push Control Lever to **FORWARD** or **REVERSE** position to travel in the desired direction. The farther you push or pull the Control Lever the faster the machine will travel.

Steering

1. Turn the Key Switch **ON**.
2. While depressing the Foot Switch, push the Steering Switch to **RIGHT** or **LEFT** to turn wheels in the desired direction. Observe the tires while maneuvering the work platform to ensure proper direction.

NOTE: Steering is not self-centering. Wheels must be returned to straight ahead position by operating Steering Switch.

Elevating Platform

1. Position Drive/Lift Switch to **LIFT**.
2. While depressing Foot Switch, push the Control Lever slowly forward to raise the platform, increasing the Control Lever angle increases the lift speed.

Travel With Platform Elevated

NOTE: Work platform will travel at reduced speed when platform is elevated.

1. Check that 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 platform.
3. Position Drive/Lift Switch to **DRIVE** position.
4. While depressing Foot Switch, push Control Lever to **FORWARD** or **REVERSE** for desired direction of travel.

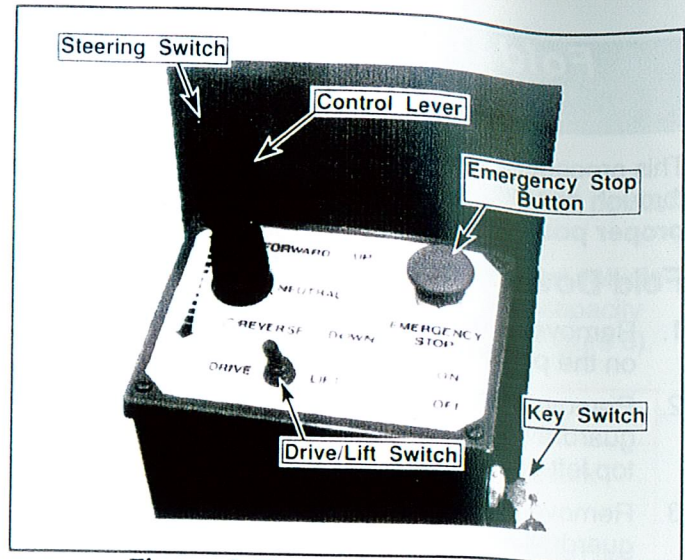


Figure 4: Proportional Controller

Lowering Platform

1. Position Drive/Lift Switch to **LIFT**.
2. While depressing Foot Switch, pull back on the Control Lever.

EMERGENCY LOWERING



WARNING



If the platform should fail to lower, **NEVER** climb down the elevating assembly.

Ask a person on the ground to open the Emergency Lowering Valve to lower the platform. This valve is located through the cutout in the Chassis Module cover (See Figure 1) on the right hand side of the chassis.

1. Open the Emergency Lowering Valve by turning the knob counterclockwise.
2. To close, turn the Emergency Lowering Valve clockwise.

Once the platform is fully lowered, be certain that the Emergency Lowering Valve is closed again. The platform will not elevate if the Emergency Lowering Valve has not been closed.

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 (Figure 5)

This procedure is only for the purpose of passing through doorways. **Guardrails must be returned to proper position before using the work platform.**

Fold Down Procedure

1. Remove Controller from front guardrail and lay it on the platform deck.
2. Remove retaining pin at right side of top rear guardrail and rotate guardrail into position along top left guardrail and pin in place.
3. Remove retaining pin at left side of top front guardrail and rotate guardrail into position along top right guardrail and pin in place.
4. Lift up on top left guardrail until slots disengage from pins and fold guardrail in.
5. Lift up on top right guardrail until slots disengage from pins and fold guardrail in.

Erection Procedure

1. Raise the top right guardrail and push down to engage pins with slots.
2. Raise the top left guardrail and push down to engage pins with slots.
3. Remove retaining pin securing top rear guardrail to top left guardrail and swing top rear guardrail into place across rear of work platform and pin to top right guardrail.
4. Remove retaining pin securing top front guardrail to top right guardrail and swing top front guardrail into place across front of work platform and pin to top left guardrail.
5. Rehook Controller over top front guardrail.

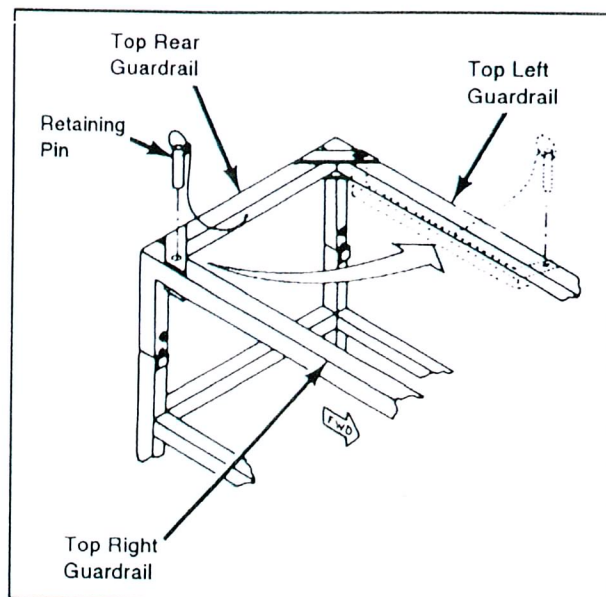


Figure 5: Fold Down Guardrails

Transporting Work Platform

By Forklift

NOTE: Forklifting is for transporting only.



CAUTION



See specifications for weight of work platform and be certain that forklift is of adequate capacity to lift platform.

Forklift from the side by lifting under Chassis Modules (Figure 6).

By Truck

1. Maneuver the work platform into transport position and chock wheels.
2. Secure the work platform to the transport vehicle with chains or straps of adequate load capacity attached to the chassis tie down lugs (Figure 6).



CAUTION



Tie down lugs are not to be used to lift work platform.

Over-tightening of chains or straps through tie down lugs may result in damage to work platform.

3. Open Chassis Emergency Lowering Valve.

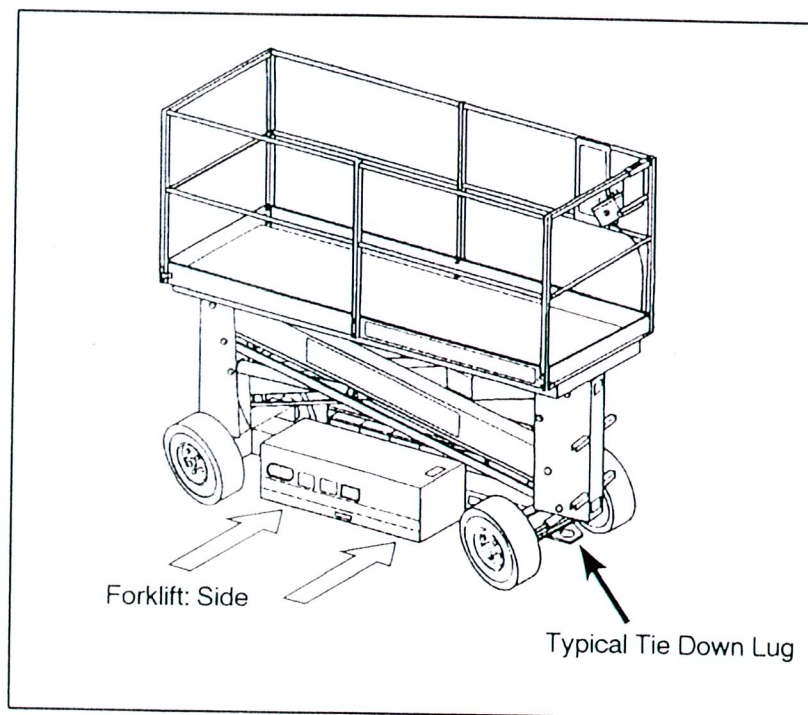


Figure 6: Transporting Work Platform

Maintenance



DANGER



Never perform service on the work platform while platform is elevated without first blocking the Elevating Assembly.

DO NOT stand in Elevating Assembly area while installing or removing jack stand.

BLOCKING ELEVATING ASSEMBLY (Figure 7)

Use a minimum one ton capacity jack stand to block Elevating Assembly.

Installation

1. Park the work platform on firm, level ground.
2. Open Control Module cover.
3. Position Chassis Lift Switch to **UP** and elevate platform approximately four feet.
4. Place the jack stand between the lower boom and Chassis just behind the front crossmember. Be careful not to place it on a hydraulic hose.
5. Push Chassis Lift Switch to **DOWN** position and gradually lower platform until lower boom is supported by the jack stand.

Removal

1. Push Chassis Lift Switch to **UP** position and gradually raise platform until jack stand can be removed.
2. Remove jack stand.
3. Push Chassis Lift Switch to **DOWN** position and completely lower platform.
4. Close Control Module cover.

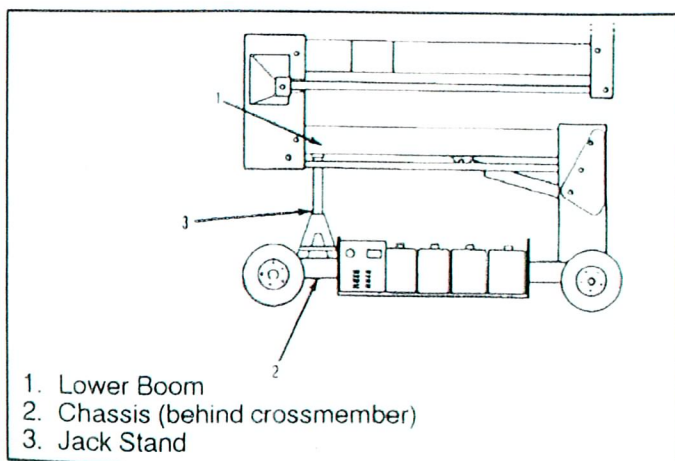


Figure 7: Blocking Elevating Assembly

ROUTINE SERVICE

Use the following table as a guide for routine maintenance, refer to the Service Manual for complete service instructions.

SERVICE OPERATION	INTERVAL					
	Daily	Weekly	Monthly or 50 Hrs.	6 Months or 250 Hrs.	Yearly or 500 Hrs.	2 Years or 1000 Hrs.
Clean entire work platform	X					
Check battery fluid level	X					
Charge batteries	X					
Check tires for damage	X					
Check lug nuts/bolts	X					
Check Hydraulic Fluid Level	X					
Check for peeling, faded or missing labels & replace	X					
Check deck and guardrail fasteners for proper torque	X					
Inspect elevating assembly for bends or cracking	X					
Check for & repair collision damage	X					
Check emergency lowering valve operation	X					
Lubricate entire work platform		X				
Check electric motor brushes			X			
Check pivot pin snap rings			X			
Change hydraulic filter				X		
Check all fasteners for proper torque				X		
Grease wheel bearings					X	
Change hydraulic fluid						X

BATTERY MAINTENANCE



WARNING



Hazard of explosive gas mixture. Keep sparks, flame and smoking materials away from batteries.

Always wear safety glasses when working with batteries.

Battery fluid is highly corrosive. Rinse away any spilled fluid thoroughly with clean water.

Always replace batteries with UpRight batteries or manufacturer approved replacements weighing 62 lbs. each.

Check battery fluid level daily (Figure 8), especially if work platform is being used in a warm, dry climate.

If electrolyte level is lower than $\frac{3}{8}$ in. above plates add distilled water only. DO NOT use tap water with high mineral content it will shorten battery life.

Keep terminals and tops of batteries clean.

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

Battery Charging

Charge batteries at end of each work shift or sooner if batteries have been discharged.



WARNING



Charge batteries in a well ventilated area.

Do not charge batteries when the work platform is in an area containing sparks or flames.

Permanent damage to batteries will result if batteries are not immediately recharged after discharging.

Never leave charger operating unattended for more than two days.

Never disconnect cables from batteries when charger is operating.

Keep charger dry.

1. Check battery fluid level (Figure 8). If electrolyte level is lower than $\frac{3}{8}$ in. above plates add distilled water only.
2. Connect plug to properly grounded outlet of proper voltage and frequency.
3. Charger turns on automatically after a short delay.
4. Charger turns off automatically when batteries are fully charged.

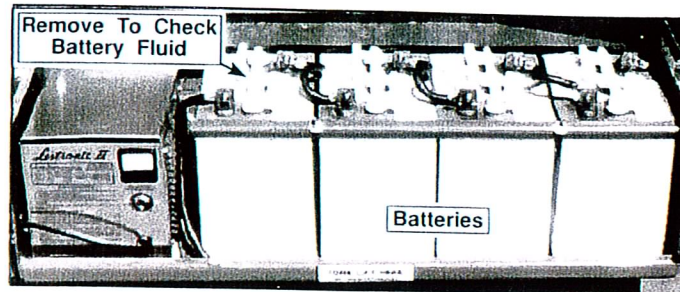


Figure 8: Chassis Power Module, Left Side

LUBRICATION (Figure 9)

Linkage Gears

1. Raise platform fully.
2. Using another work platform or ladder get up high enough to comfortably reach gears.
3. Use a long handled brush to apply multi-purpose grease to the face of the gears.



WARNING



DO NOT use hands to apply grease or allow any body part to enter the elevating assembly.

4. Lower the platform after greasing.

King Pins

Apply one or two drops of motor oil to each king pin bearing.

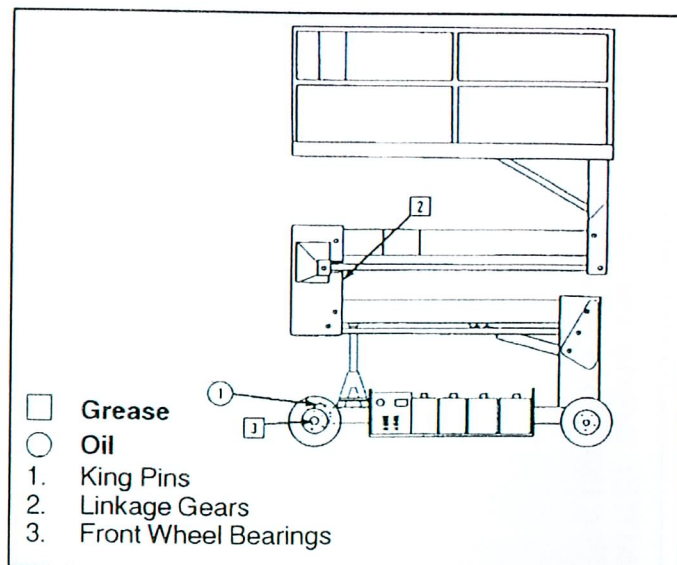
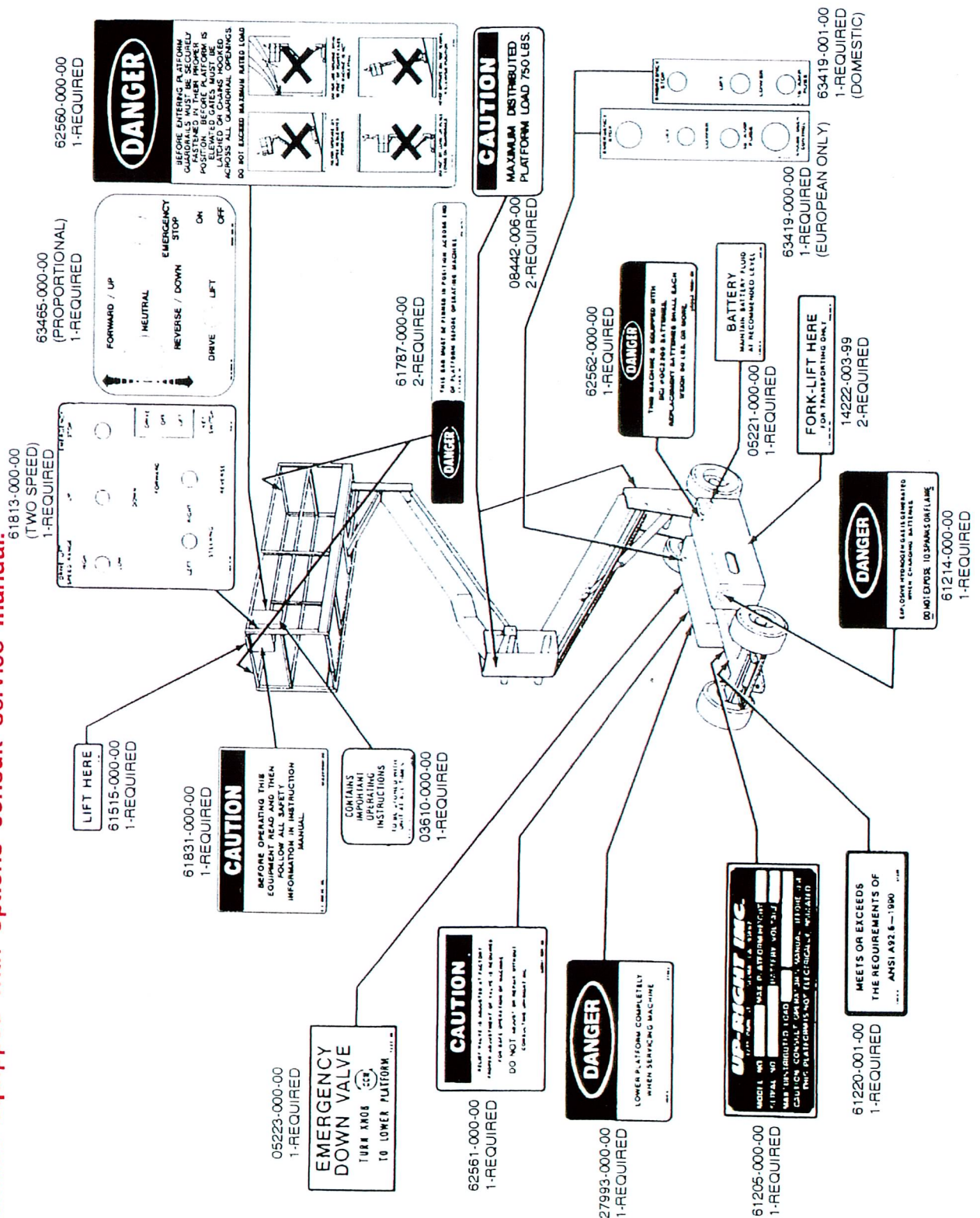


Figure 9: Lubrication Points

**NOTE: Labels can be ordered by using Part Number located by each label.
For machines equipped with options consult service manual.**



SL-20 LABEL INSTALLATION: 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.

Specifications*

ITEM	SL-20
Platform Size	30" x 96" [762 mm x 2.44 m] Inside Toeboards
Max. Platform Capacity	
Standard	750 lbs. [340 kg]
w/ Cantilever Cage	550 lbs. [250 kg]
w/ Deck Extension	650 lbs. [295 kg]
on Cage/Extension	250 lbs. [110 kg]
Max. No. of occupants	
Standard	3 People
w/ Cantilever Cage or Deck Ext.	2 People
on Cage/Extension	1 Person
Height	
Working Height	26 ft. [7.92 m]
Max. Platform Height	20 ft. [6.09 m]
Min. Platform Height	47 in. [1.19 m]
Dimensions	
Weight	2,830 lbs. [1284 kg]
Overall Width	32 1/2 in. [83 m]
Overall Height	89 in. [2.26 m]
Overall Length	96 in. [2.44 m]
Driveable Height	20 ft. [6.1 m] Standard
Surface Speed	
Platform Lowered	0 to 2 mph [0 to 3.22 kph]
Platform Raised	0 to .6 mph [0 to .97 kph]
Energy Source	24 Volt Battery Pack (4-220 Amp Hour, 6 Volt Batteries, Min. Wt. 62 lbs. each), 4 HP DC Electric Motor
System Voltage	24 Volt DC
Battery Charger	25 AMP
Battery Duty Cycle	25% for 8 Hours
Hydraulic Tank Capacity	4 Gallons [15.2 l]
Max. Hydraulic System Pressure	2000 psi [183 bar]
Lift System	Single Lift Cylinder
Drive Control	
Two Speed	2 Speed, Forward and Reverse
Proportional	Proportional
Control System	
Two Speed	Toggle Switches for All Functions, Foot Operated Interlock Switch
Proportional	Proportional Controller, Toggle Selector Switch, Red Mushroom Emergency Stop, Foot Operated Interlock Switch
Horizontal Drive	Dual Rear Wheel Hydraulic Motors
Tires	16 in. [410 mm] Diameter Solid Rubber
Parking Brake	Spring Applied, Hydraulic Release
Turning Radius	88 in. [2.24 m] Inside
Maximum Gradeability	25%
Wheel Base	73 in. [1.85 m]
Guardrails	43 1/2 in. [1.11 m]
Toeboard	6 in. [152 mm] High

* Specifications subject to change without notice.

Meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1990
Refer to Service Manual for complete parts and service information.

FOR MORE INFORMATION

UpRight

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