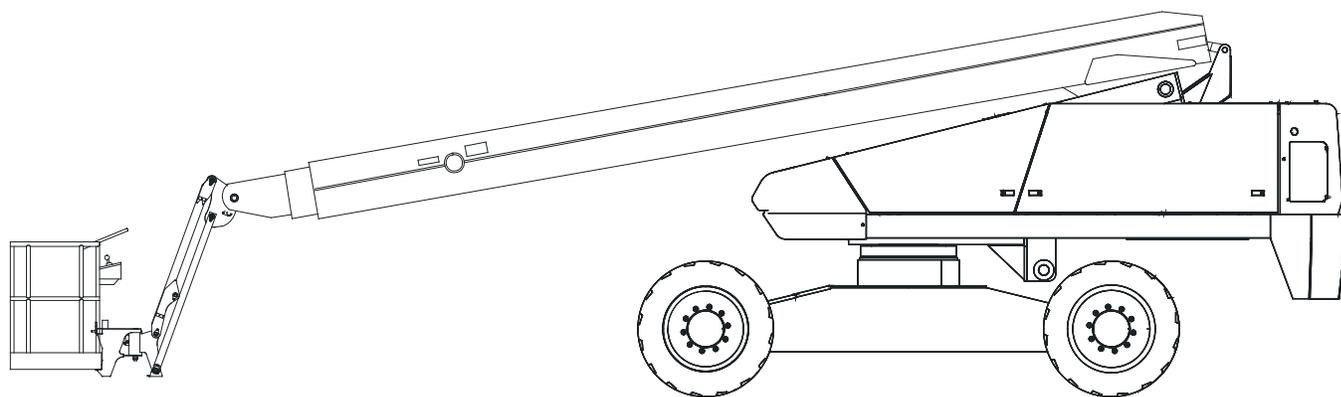


Operator Manual



(EN) Manual Part Number 0112998 (508381-000-EN) for Serial Numbers 10000 to Current.

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EC DECLARATION OF CONFORMITY FOR MACHINERY

MACHINERY:

Powered Aerial Platform known as:

Type: SNORKEL TB85J FA (Upright SB85J)

Serial Number:

The machine specified above conforms to the following provisions:

Machinery directive 98/37/EC (using document **EC Community Legislation on Machinery** and taking guidance from EN280:2001 + Amendment A1:2004)

Council Directive 89/336/EEC on Electromagnetic Compatibility as amended by 93/68/EEC and 92/31/EC

Council Directive 73/23/EEC on Low Voltage Equipment Safety as amended by 93/68/EE

Council Directive 2000/14/EC on Noise Emission in the Environment by Equipment for use Outdoors

<i>As performed in accordance with EN 3744:1995</i>		
Measured sound power level	91 dB	Min
	100dB	Max
Guaranteed sound power level	100dB	

E. C. Type Examination Certificate No:



Note: Modification of the specified unit renders this declaration invalid

SAFETY RULES

⚠ Warning

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

Electrocution Hazard



THIS MACHINE IS NOT INSULATED!

Tip Over Hazard



NEVER elevate the platform or drive the machine while elevated unless the machine is on a 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 platform guardrails or midrail.

USE OF THE AERIAL WORK PLATFORM: This aerial work platform is intended to lift persons and his tools as well as the material used for the job. It is designed for repair and assembly jobs and assignments at overhead workplaces (ceilings, cranes, roof structures, buildings etc.). Uses or alterations to the aerial work platform must be approved by **UpRight**.

THIS AERIAL WORK PLATFORM IS NOT INSULATED! For this reason it is imperative to keep a safe distance from live parts of electrical equipment!

Exceeding the specified permissible maximum load **is prohibited!** See “Platform Capacity” on page 5 for details.

The use and operation of the aerial work platform as a lifting tool or a crane **is prohibited!**

NEVER exceed the manual force allowed for this machine. See “Manual Force” on page 5 for details.

DISTRIBUTE all platform loads evenly on the platform.

NEVER operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps, curbs, or debris; and avoiding them.

OPERATE machine only on surfaces capable of supporting wheel loads.

NEVER operate the machine when wind speeds exceed this machine’s wind rating. See “Beaufort Scale” on page 5 for details.

Do not operate the aerial platform in windy or gusty conditions. Do not add anything to the aerial platform that will increase the wind loading such as billboards, banners, flags, etc.

IN CASE OF EMERGENCY push EMERGENCY STOP switch to deactivate all powered functions.

IF ALARM SOUNDS while platform is elevated, STOP, carefully lower platform. Move machine to a firm, level surface.

Climbing up the railing of the platform, standing on or stepping from the platform onto buildings, steel or prefab concrete structures, etc., **is prohibited!**

Dismantling the entry gate or other railing components **is prohibited!** Always make certain that the entry gate is closed!

It is prohibited to keep the entry gate in an open position when the platform is raised!

To extend the height or the range by placing of ladders, scaffolds or similar devices on the platform **is prohibited!**

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

INSPECT the machine thoroughly for cracked welds, loose or missing hardware, hydraulic leaks, loose wire connections, and damaged cables or hoses before using.

VERIFY that all labels are in place and legible before using.

NEVER use a machine that is damaged, not functioning properly, or has damaged or missing labels.

To bypass any safety equipment **is prohibited** and presents a danger for the persons on the aerial work platform and in its working range.

NEVER charge batteries near sparks or open flame. Charging batteries emit explosive hydrogen gas.

Modifications to the aerial work platform **are prohibited** or permissible only at the approval by **UpRight**.

AFTER USE, secure the work platform from unauthorized use by turning the keyswitch off and removing key.

The driving of MEWP’s on the public highway is subject to national traffic regulations.

Certain inherent risks remain in the operation of this machine despite utilizing proper design practices and safeguarding.

Harness attachment points are provided in the platform and the manufacturer recommends the usage of a fall restraint harness, especially where required by national safety regulations.

Care must be taken to ensure that the machines meets the requirements of stability during use, transportation, assembly, dismantling when out of service, testing, or foreseeable breakdowns.

In the event of an accident or breakdown see “Emergency Lowering” on page 13, do not operate the aerial platform if it is damaged or not functioning properly. Qualified maintenance personnel must correct the problem before putting the aerial platform back into service.

Introduction

Introduction

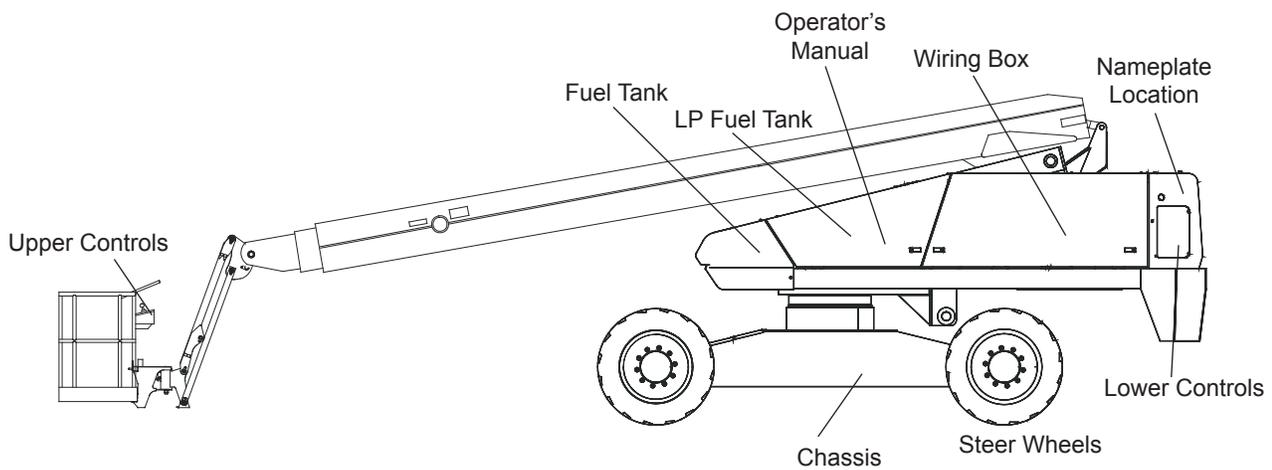
This manual covers the SB85J Fixed Axle Aerial Work Platform.

This manual must be stored on the machine at all times.

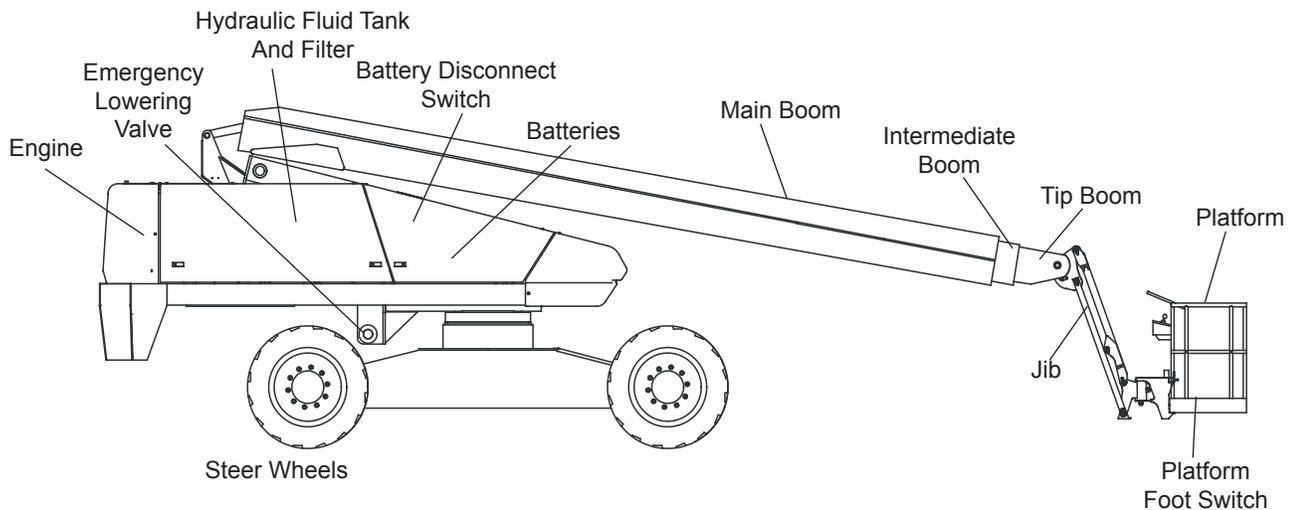
Read, Understand and follow all safety rules and operating instructions before attempting to operate the machine.

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 at the rear of the chassis.

Component Identification



Right Side



Left Side

Special Limitations

Travel with the platform raised is limited to creep speed range. Elevating the platform is limited to firm, level surfaces only.

⚠ Danger

The elevating function shall **ONLY** be used when the work platform is level and on a firm surface.

The work platform is **NOT** intended to be driven over uneven, rough, or soft terrain.

Platform Capacity

Two people and tools may occupy the platform. The maximum platform capacity for the aerial platform is stated in the "Specifications" on page 21.

⚠ Danger

DO NOT exceed the maximum platform capacity or the platform occupancy limits for this machine.

Manual Force

Manual force is the force applied by the occupants to objects such as walls or other structures outside the work platform.

The maximum allowable manual force is limited to 200N (45 lbs) of force per occupant, with a maximum of 400 N (90 lbs) for two occupants.

⚠ Danger

DO NOT exceed the maximum amount of manual force for this machine.

Platform Overload Sensing System

All functions are stopped from the upper and lower controls, when the platform overload limit is exceeded. The horn will sound intermittently and the platform overload light will blink until the excess load is removed from the platform. At that time, the machine functions are again operational.

If the platform becomes significantly overloaded, or if an upward force on the platform exceeds approximately 2225 N (500 lb), the system will enter into error mode, stopping all functions from the upper and lower controls. The horn will then sound constantly and the overload light will stay illuminated at the upper and lower controls.

The system will remain in error mode until the excess load is removed from the platform and the emergency stop button or start switch is cycled off and back on, resetting the system. At that time, the machine functions are operational.

⚠ Caution

The emergency power system is for emergency lowering and stowing only. The length of time the pump can be operated depends on the capacity of the battery. **Do not use this system for normal operation.**

If the platform overload sensing system is tripped while operating the machine or if the system is in error mode and can not be reset, the emergency power system may still be used for emergency machine operation from either the lower or upper controls.

⚠ Danger

The aerial platform can tip over if it becomes unstable. **Death or serious injury will result from a tip-over accident. Do not exceed the capacity values indicated on the platform rating placard.**

The overload sensing system is not active when the machine is being driven with the booms in the stowed position. This allows the machine to be driven without the system sensing an overload due to rough ground conditions.

To eliminate repeated tripping of the system during machine operation, there is a five second delay in machine functions following:

- starting the engine.
- placing the drive/boom selector switch in the boom position when the main boom is below horizontal and fully retracted.
- removing excess load from the platform.

Beaufort Scale

Never operate the machine when wind speeds exceed 12.5 m/s (28mph) [Beaufort scale 6]. Refer to Figure 1.

BEAUFORT RATING	WIND SPEED				GROUND CONDITIONS
	m/s	km/h	ft/s	mph	
3	3,4~5,4	12,25~19,4	11.5~17.75	7.5~12.0	Papers and thin branches move, flags wave.
4	5,4~8,0	19,4~28,8	17.75~26.25	12.0~18	Dust is raised, paper whirls up, and small branches sway.
5	8,0~10,8	28,8~38,9	26.25~35.5	18~24.25	Shrubs with leaves start swaying. Wave crests are apparent in ponds or swamps.
6	10,8~13,9	38,9~50,0	35.5~45.5	24.5~31	Tree branches move. Power lines whistle. It is difficult to open an umbrella.
7	13,9~17,2	50,0~61,9	45.5~56.5	31.~38.5	Whole trees sway. It is difficult to walk against the wind.

Figure 1 – Beaufort Scale

Controls and Indicators

The operator shall know the location of each control and indicator and have a thorough knowledge of the function and operation of each before attempting to operate the machine.

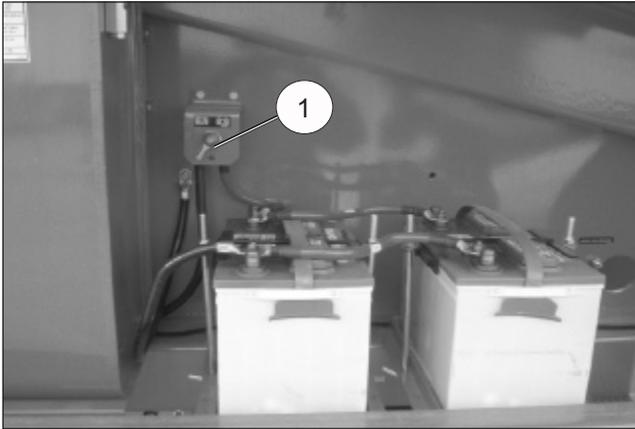


Figure 2 – Battery Disconnect Switch

- 1. Battery Disconnect Switch

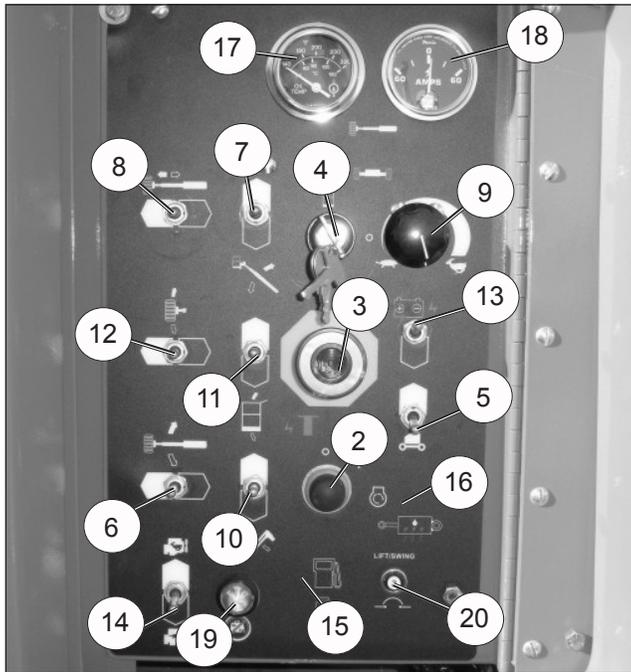


Figure 3 – Lower Controls and Indicators

- 2. Start switch
- 3. Emergency stop button
- 4. Controls selector switch
- 5. Ground operation switch
- 6. Rotation switch
- 7. Main boom elevation switch
- 8. Boom extension switch
- 9. Boom speed knob
- 10. Jib articulation switch
- 11. Platform level switch
- 12. Platform rotate switch

- 13. Engine/Emergency power switch
- 14. Engine speed switch
- 15. Fuel switch (dual fuel machines)
- 16. Hydraulic warm-up switch (option)
- 17. Engine temperature gauge
- 18. Ammeter
- 19. Platform overload light
- 20. Circuit breaker reset

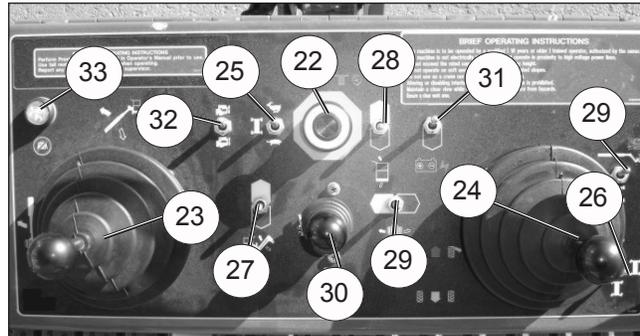


Figure 4 – Upper Controls and Indicators

- 21. Start switch
- 22. Emergency stop button
- 23. Boom joystick
- 24. Drive joystick
- 25. Drive range switch
- 26. Steer mode switch
- 27. Jib articulation switch
- 28. Platform level switch
- 29. Platform rotate switch
- 30. Boom extend/retract joystick
- 31. Engine/emergency power switch
- 32. Throttle switch
- 33. Platform overload light
- 34. Circuit breaker reset
- 35. Machine/Generator Switch

Pre-Operation Safety Inspection

Note

Carefully read, understand and follow all safety rules, operating instructions, labels and National Safety Instructions/Requirements. Perform the following steps each day before use.

1. Open the turntable covers and inspect for damage, fluid leaks or missing parts.
2. Check the level of the hydraulic fluid with the platform fully lowered. The fluid level must be between the full and add marks as viewed on the sight glass. Add recommended hydraulic fluid if necessary. See "Specifications" on page 21.
3. Check that the fluid level in the batteries is correct. See "Battery Maintenance" on page 15.
4. Check that all guardrails are in place and all fasteners are properly tightened.
5. Inspect the machine thoroughly for cracked welds and structural damage, loose or missing hardware, hydraulic leaks, damaged control cable and loose wire connections.

System Function Inspection

Refer to “Controls and Indicators” on page 6 for the locations of various controls and indicators.

Warning

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

Before operating the machine, 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.

1. Move the machine, if necessary, to an unobstructed area to allow for full elevation.
2. Pull the Lower Control Emergency Stop Switch to the ON position.
3. Pull the Upper Control Emergency Stop Switch to the ON position.
4. Visually inspect the elevating assembly, lift cylinder, cables, and hoses for cracked welds and structural damage, loose hardware, hydraulic leaks, loose wire connections, and erratic operation. Check for missing or loose parts.
5. Test each machine function (Lift, Slew, Telescope) from the lower control station by holding the ground operation switch up while operating the control toggle switches (ref: Figure 3 on page 6).
6. Test the engine/emergency power switch for proper operation.
7. Push the Lower Control Emergency Stop Button to check for proper operation. All machine functions should be disabled. Pull the Lower Control Emergency Stop Button outward to resume.
8. Enter the platform and close the gate.
9. Check that the route is clear of obstacles (persons, obstructions, debris), is level, and is capable of supporting the wheel loads.
10. Test each machine function (Drive, Lift, Slew, Telescope, Platform Rotate, Platform Level) from the upper control station by stepping on the platform foot switch and operating the function controls (ref: Figure 4 on page 6).
11. Push the Upper Control Emergency Stop Button to check for proper operation. All machine functions should be disabled. Pull the Upper Control Emergency Stop Button outward to resume.

Operation

The aerial platform may be operated from either the lower or upper controls.

Danger

The aerial platform is not electrically insulated. Death or serious injury will result from contact with, or inadequate clearance from, an energized conductor. Do not go closer than the minimum safe approach distance as defined by national safety regulations.

Pinch points may exist between moving components. Death or serious injury will result from becoming trapped between components, buildings, structures or other obstacles. Make sure there is sufficient clearance around the machine before moving the chassis, booms, or platform. Allow sufficient room and time to stop movement to avoid contact with structures or other hazards.

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Operate the aerial platform on a firm, flat, level surface. Avoid travel speeds and/or rough terrain that could cause sudden changes in platform position. Do not drive or position the aerial platform for elevated use near any drop-off, hole, slope, soft or uneven ground, or other tip-over hazard.

The platform rated work load is the total weight of the personnel and equipment that may be lifted in the platform. The work loads are stated on the platform rating placard mounted at the rear of the platform.

Danger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not exceed the capacity values indicated on the platform rating placard.

Capacity values indicate the rated lifting capacity and do not indicate aerial platform stability.

The operator bears ultimate responsibility for ensuring that the aerial platform is properly set up for the particular conditions encountered.

Cold Weather Start-Up

If the ambient temperature is 0°C (32°F) or below, the engine and hydraulic system oil may need to be warmed before operation. Do not operate the engine at more than a fast idle until the engine and hydraulic oil has had a chance to warm. The engine may be equipped with an optional cold weather start kit.

Cold, thick hydraulic oil does not flow well and may cause delay in response to control movement and improper voltage output of the AC generator. Cold oil may also cause cavitation and pump damage. The hydraulic system may be equipped with an optional cold weather warm-up kit.

Engine Cold Weather Start Kit

The optional engine cold weather start kit may be an engine block heater, manifold air pre-heater, or a radiator hose in-line heater. The type of starting assist system depends on the engine manufacturer.

The last two letters of the model number stamped on the serial number placard indicates the engine manufacturer (refer to Figure 5). The serial number placard is mounted on the front of the turntable.

Last Two Letters of Model Number	Engine Manufacturer	Cold Weather Start System
CU	Cummins	Engine block heater or ether injection
GM	General Motors	Radiator Hose In-Line

Figure 5 – Engine Manufacturer/Start System

Refer to the engine manufacturer below for specific cold weather start-up information for that particular engine type and cold weather start system.

Cummins — Block Heater

Plug the heater cord into a 125 Volt AC, 600 watt source eight hours before starting the engine. The heater will warm the engine block to make cold weather starting easier. Unplug the power cord before starting the engine.

Cummins — Ether Injection

Some Cummins engines may have an ether injection system instead of a block heater. Ether injection should only be used to start a cold engine when the ambient temperature is below 0°C (32°F).

Make sure there is a can of ether installed in the holder, in the engine compartment on the right side of the machine. Use the following procedure to install a can of ether as necessary:

1. Place the battery disconnect switch in the off position.
2. Unscrew the holding cup.
3. Place a new can of ether in the cup.
4. Screw the holding cup firmly into position.
5. Place the battery disconnect switch in the on position.

Activate the toggle switch while the start switch is in the start position to inject a measured amount of ether into the intake manifold.

Note

Do not crank the engine longer than 20 seconds. If the engine does not start wait for two minutes before trying to start the engine again.

Operation

GM — Radiator Hose In-Line

Plug the heater cord into a 125 Volt AC, 600 watt source eight hours before starting the engine. The heater will warm the water in the lower radiator hose to make cold weather starting easier.

Unplug the power cord before starting the engine.

Hydraulic System Cold Weather Warm-Up

The hydraulic oil may be warmed by bottoming out the boom extension cylinder. Raise the main boom so it is horizontal and operate the boom retract function while the machine is stowed. With the cylinder bottomed out the oil flow will produce heat to warm the hydraulic oil.

Caution

Not all hydraulic fluid is suitable to use in the hydraulic system. Some have poor lubricating characteristics and can increase component wear. Only use hydraulic fluid as recommended.

Use cold weather hydraulic oil as recommended in the machine General Specifications in temperatures of -12°C (10°F) or below.

Preparing for Operation

Use the following procedure to prepare the aerial platform for operation.

1. Perform a prestart inspection as described in the “Daily Preventative Maintenance Checklist” on page 17.
2. Place the battery disconnect switch in the on position.
3. Close and latch the doors.
4. Before painting or sandblasting make sure the sandblast protection kit and the platform control cover are properly installed. These options, when used properly will protect the control placards and cylinder rods from paint overspray and abrasion while sandblasting.

Lower Controls

The lower controls override the upper controls. This means that the lower controls can always be used to operate the platform regardless of the position of the upper control emergency stop button.

Boom, turntable, and platform functions may be operated from the lower controls. The lower controls may be used for initial set up of the aerial platform, and for testing and inspection.

Use the following procedure to operate boom, turntable, or platform functions using the lower controls (ref: Figure 3 on page 6).

1. On dual fuel machines, set the fuel switch to either LPG or gasoline.
2. Open the shut-off valve on the tank if using LPG.

3. Pull the emergency stop button outward. Insert the key in the control selector and turn the switch to the lower control position.
4. Press the start button until the engine starts, then release. The engine will not start if the control selector switch is left in the lower control position for 30 seconds or longer before starting the engine. The control selector switch must be turned back to off before the engine will start.
5. Let the engine warm to operating temperature.
6. Turn the boom speed knob to slow.
7. Hold the ground operation switch in the on position while operating the boom and turntable control toggle switches.
8. Hold the appropriate toggle switch in the desired direction.
9. Gradually turn the boom speed knob to control the main boom raise/lower and turntable rotation speed.
10. Release the function toggle switch to stop movement.
11. Place the ground operation switch in the off position when no functions are being operated.

Upper Controls

The upper controls may be used for driving the aerial platform and positioning the booms and platform while on the job.

Use the following procedure to operate machine functions using the upper controls.

1. At the lower controls, pull the emergency stop button outward. Insert the key in the control selector and turn the switch to the upper control position.
2. On dual fuel machines, set the fuel switch to either LPG or gasoline.
3. Open the shut-off valve on the tank if using LPG.
4. Enter the platform and securely close the gate.
5. Attach the fall restraint lanyard to one of the anchor points.
6. Pull the emergency stop outward.
7. Turn the anti-restart master switch to on and pause a few seconds while the alarm sounds to alert others that the machine is about to start. Turn the switch to start, then release it to on. The engine will not start if the switch is left in the on position for 30 seconds or longer before turning it to start. The switch must be turned back to off before the engine will start.

- Let the engine warm to operating temperature.

Boom Operation

Use the following procedure to operate the turntable, boom, or platform functions.

- Step down on the platform foot switch. This switch must be held down to operate the upper controls.
- Hold the appropriate control in the desired direction. Always look in the direction of movement.
- Releasing the control to its neutral position, or releasing the foot switch will stop movement.

Driving and Steering

Danger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not drive an elevated aerial platform on soft, uneven, or sloping surfaces. Do not drive the machine on grades that exceed 30 percent.

For operation on grades up to 30 percent, it is recommended that the main boom be near horizontal and the jib elevated just enough to provide adequate ground clearance. A 30 percent grade is a 0.91 m (36") vertical rise in 3.05 m (10') horizontal length.

Avoid driving with the platform over the front (steer) end of the chassis. In this position the machine is difficult to control because:

- drive and steer control movements and their resulting machine movements are reversed.
- when driving fast, sudden turns or stops produce more severe reactions to platform occupants.
- more turning space is required to prevent the platform from colliding with obstacles several feet beyond the path of the tires.

Warning

Death or serious injury can result from improperly driving or steering the aerial platform. Read and understand the information in this manual and on the placards and decals on the machine before operating the aerial platform on the job.

The blue and yellow arrows on the chassis indicate the direction the chassis will move when the drive or steer control is moved toward the corresponding color.

When the machine is in the stowed position, with the booms centered between the rear wheels, the direction of drive and steer control movement corresponds with the direction of chassis movement.

When the turntable is rotated from the stowed position, with the booms to either side of or in front of the chassis, the direction of control movement does not correspond with the direction of chassis movement.

To avoid confusion, always drive to the work area or move between work areas with the turntable and booms in the stowed position. After arriving at the work area, the booms may be positioned to the side or the front of the chassis for final positioning. Always look in the direction of movement as indicated by the directional arrows on the chassis.

Use the following procedure to operate the drive and steer functions:

- Determine the desired drive range for the specific driving conditions. Place the switch in the appropriate position to achieve the desired drive wheel operation.
 - Use high range (two wheel drive) when traveling across firm, flat, level surfaces. High range can only be activated when the booms are stowed. High range is for high speed, low torque operation.
 - Use mid range (four wheel drive) when traveling across soft surfaces or those with small inclines. Mid range can only be activated when the booms are stowed. Mid range is for medium speed, high torque operation.
 - Use low range (four wheel drive) for driving on loading ramps or other steep grades and when safety considerations demand slow deliberate machine movement. Low range is for low speed, high torque operation.
- Determine the desired steer mode for the specific driving conditions. Place the switch in the four wheel coordinated, two wheel, or crab steer mode position to achieve the desired machine movement.

Steer Modes		
Four Wheel Coordinated 	Two Wheel 	Crab 
<ul style="list-style-type: none"> Front wheels turn in steer direction Rear wheels turn in the opposite direction 	<ul style="list-style-type: none"> Front wheels turn in steer direction Rear wheels do not turn 	<ul style="list-style-type: none"> Front and rear wheels turn in steer direction

Figure 6 – Steer Modes

- Use two wheel steer for most machine operation such as travel between jobs and to position the machine near the job location.

Operation

- Use four wheel coordinated steer when a tight turning radius is desired for positioning the machine.
- Use crab steer to travel in a diagonal motion in the direction of the wheels.

Note

The steering wheels are not self-centering. Set the steering wheels straight ahead after completing a turn and before switching from one steer mode to another.

3. Place the drive/boom selector switch in the drive position.
4. Step down on the platform foot switch.
5. Push the drive joystick forward to move the chassis forward, the direction of the blue arrow. Pull the joystick backward to move the chassis backward, the direction of the yellow arrow. The drive speed is proportional to the joystick position.
6. To stop drive motion, return the joystick to neutral.
7. Push the drive joystick to the right to steer to the right, the direction of the yellow arrow. Push the joystick to the left to steer to the left, the direction of the blue arrow.

Note

The steering wheels are not self-centering. Set the steering wheels straight ahead after completing a turn.

8. After driving to the desired location, release the foot switch, or push the emergency stop button to apply the parking brakes.

Drive Speeds

The drive speed is proportional to the joystick position. The farther the joystick is moved, the faster the travel speed.

Always slow down and shift the drive system to low range before traveling over rough terrain or any sloped surface.

Drive speed ranges are interlocked through a limit switch that senses the main boom position. When the boom is elevated, only the slowest drive speed will work regardless of the drive range switch position.

Warning

The potential for an accident increases when safety devices do not function properly. Death or serious injury can result from such accidents. Do not alter, disable or override any safety device.

Do not use the aerial platform if it drives faster than 1.0 km/h (0.6 miles per hour) [7.9 m (26 feet) in 30 seconds] when the booms are elevated from the stowed position.

Motion Warning Alarm

The optional motion warning alarm sounds loud intermittent beeps when the drive joystick is in the forward or reverse position.

AC Generator

The optional generator supplies power to the electrical outlet only when the engine is running and the machine is stationary. The machine functions will not operate when the machine/generator selector switch is in the generator position.

Caution

Cold hydraulic oil does not flow well and may produce improper generator output voltage. Improper outlet voltage can damage some electrical power tools and equipment. Warm the hydraulic oil before operating the generator.

Do not operate the generator unless the hydraulic oil temperature is at least 38°C (100°F). Refer to Cold Weather Start-Up for a hydraulic oil warm-up procedure.

Start the engine and place the machine/generator selector switch in the generator position (ref: upper controls illustration on page 6).

The engine will run at high idle while the generator is operating. The generator will continue to operate as long as the engine is running and the switch is in the generator position.

Dual Fuel

The dual fuel switch is located on the front of the lower control panel.

Before starting the engine, place the fuel switch in the gasoline or the LPG position. Open the shut-off valve on the LPG gas tank if using LPG. Always keep the LPG tank shut-off valve closed when not using LPG.

To switch from gasoline to LPG with the engine running:

1. Open the shut-off valve on the LPG tank.
2. Place the fuel switch in the LPG position.

To switch from LPG to gasoline with the engine running:

1. Place the fuel switch in the gasoline position.
2. Close the shut-off valve on the LPG tank.

Air Line

The optional air line may be used to conduct air for tool operation at the platform. The input connector is at the rear of the chassis and the output connector is at the platform on the rotator guard. The maximum working pressure of the line is 1,723 kPa (250 psi).

The air line may be used to conduct fluids such as water or antifreeze. Contact your local distributor or UpRight for compatibility information before using the air line to conduct other fluids.

⚠ Caution

Fluid in the air line can damage some air tools or freeze and damage the line. Drain and blow out the air line after using it to conduct fluids.

Use the following procedure to drain the air line.

1. Close the input connector on the chassis.
2. Open the output connector at the platform.
3. Raise the boom slightly above horizontal.
4. Open the input connector on the chassis.
5. Allow the fluid to drain from the line.
6. Lower the boom and close both connections.

Driving Lights

The optional driving lights are for use in dimly lit areas and are not intended for driving on public roadways. There are two headlights at the front of the chassis and two blinking taillights at the rear of the chassis. The lights are operational when the battery disconnect switch and the master switch are turned on.

Note

Working with the driving or platform work lights on, while the engine is off, can discharge the batteries enough that the engine will not start or the emergency power system will not operate. If the engine cannot be left running while the lights are on, start and run the engine for at least 15 minutes each hour.

Platform Work Lights

The optional platform work lights are located on the top rail of the platform. The direction a light points can be adjusted by using two 1/2" wrenches to loosen the clamp below the light.

The lights are operational when the upper controls emergency stop button is pulled up and the anti-restart master switch is turned on. The engine speed increases to high idle when the platform work lights are turned on.

Emergency Lowering

⚠ Warning

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

Stand clear of the elevating assembly while operating the Emergency Lowering Valve Knob.

Ask a person on the ground to open the Emergency Lowering Valve to lower the platform. The Emergency Lowering Valve is located on the base of the lift cylinder.

1. Slowly turn the knob to open the bleed down valve. Control the rate of descent by turning the knob.
2. To close, turn the knob.

NOTE: The platform will not elevate if the Emergency Lowering Valve is open.



Figure 7 – Emergency Lowering Valve

After Use Each Day

1. Ensure that the platform is fully lowered.
2. Park the machine on a firm level surface, preferably under cover, secure against vandals, children and unauthorized operation.
3. Turn the Chassis Key Switch to OFF and remove the key to prevent unauthorized operation.

Transporting the Machine

Transporting the Machine

Preparing for Transportation

Use the following procedure to prepare the aerial platform for transportation.

1. Remove any unnecessary tools, materials, or other loose objects from the platform.
2. Close and latch all cowling doors.

By Crane

Secure the straps to chassis lifting/lugs only.

Know the approximate location of the center of gravity before lifting the machine off the ground. Refer to Figure 8.

▲Danger

Lifting by Crane is for transport purposes only.

See Specifications for weight of machine and be certain that the crane is of adequate capacity to lift the machine.

By Truck

1. Maneuver the machine into transport position and chock wheels.
2. Place a wood block under the tip end of the jib foot. Lower the platform so the foot rests on the wood block.

▲Caution

Ratchets, winches, and come-alongs can produce enough force to damage machine components. Do not over tighten the straps or chains when securing the aerial platform to the transport vehicle.

3. Use a nylon strap to securely fasten the platform against the wood block. Thread the strap over the toeboard. Refer to Figure 9.



Figure 9 – Platform

4. Secure the machine to the transport vehicle with chains or straps of adequate load capacity attached to the chassis lifting/tie down points.

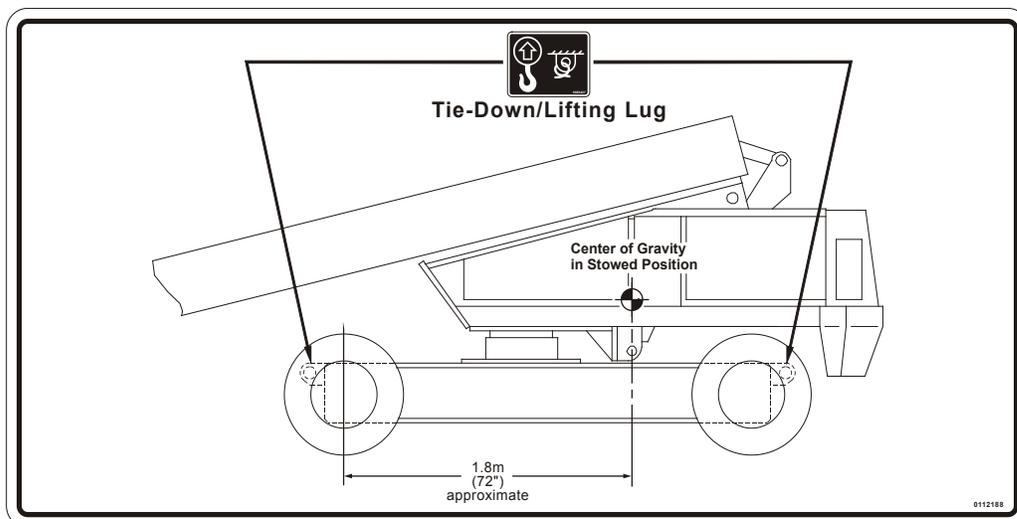


Figure 8 – Center of Gravity

Maintenance

⚠ Warning

Never perform service while the platform is elevated.

Hydraulic Fluid

The hydraulic fluid reservoir is located in the chassis door. Refer to Figure 10.



Figure 10 – Hydraulic Fluid Reservoir

Note

Never add fluid if the platform is elevated.

Check Hydraulic Fluid

1. Make sure that the platform is fully lowered.
2. Open the left front cowling door.
3. Check the fluid level on the gauge on the end of the reservoir.
4. Add the appropriate fluid to bring the level to the FULL mark. See “Specifications” on page 21.

Engine

Open the engine compartment doors on both sides of the machine and visually inspect the engine and its components with the engine off.

Oil Level

Check the engine oil level before starting the engine so the oil has drained to the pan. The proper oil level is between the add and full marks on the dipstick.

The distance between the top and bottom dipstick marks corresponds to about 1 l (1 quart US). Add oil, if necessary, before starting the engine.

Battery Maintenance

⚠ Warning

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

Always wear safety glasses when working near batteries.

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

Always replace batteries with Snorkel batteries or manufacturer approved replacements weighing 26,3 kg (58 lbs) each.

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

If electrolyte level is lower than 10 mm (3/8”) above the plates add distilled water only. DO NOT use tap water with high mineral content, as it will shorten battery life.

- Keep the terminals and tops of the batteries clean.
- Refer to the Service Manual to extend battery life and for complete service instructions.

Inspection and Maintenance Schedule

The Complete Inspection consists of periodic visual and operational checks, along with periodic minor adjustments that assure proper performance. Daily inspection will prevent abnormal wear and prolong the life of all systems. The inspection and maintenance schedule should be performed at the specified intervals and after prolonged periods of storage before returning the machine to service. 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 perform maintenance while the platform is elevated.

The daily preventative maintenance checklist has been designed for machine service and maintenance. Please photocopy the Daily Preventative Maintenance Checklist and use the checklist when inspecting the machine.

Daily Preventative Maintenance Checklist

Preventative Maintenance Report

Date: _____

Serial No: _____

Owner: _____

Serviced By: _____

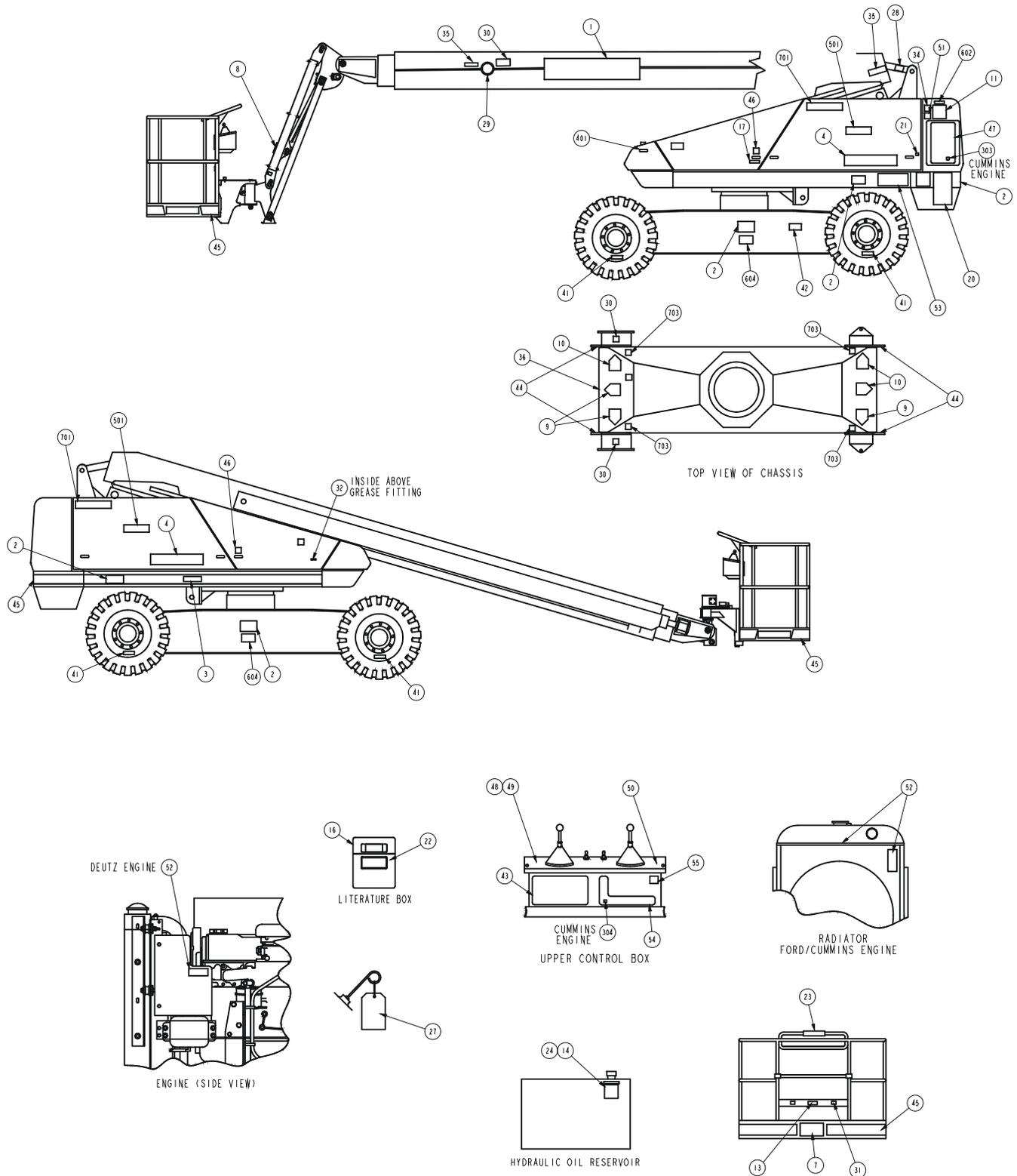
Model No: _____

ITEM	INSPECTION OR SERVICES	Y	N	R
Operator's Manual	In place, all pages readable and intact			
Engine				
Oil level	Between full and add marks			
Coolant	Liquid cooled engines-proper fluid level Air cooled engines-air intake and fan free of obstructions/belt in good condition			
Radiator	Cap tight, good condition and clean			
Fuel tank and line	Tank full, cap in place and tight/ no leaks			
Air filter	Clear indicator			
Charging system	Proper operation			
Cold weather start kit	No damage or deformation			
Electrical System				
Batteries	Condition and charged for proper operation			
Battery fluid level and terminals	Proper level/clean, connectors tight			
Cables and wiring harness	No wear or physical damage			
Hydraulic System				
Fluid level	Between full and add marks			
Fluid filter	Verify operation in the green zone			
Hose, tubes and fittings	No leaks			
Cold weather warm-up kit	Proper operation			
Tires and Wheels	Good condition			
Lower Control Station				
Operating controls	Proper operation			
Emergency stop and emergency power	Shuts off lower controls/proper operation			
Emergency Lowering	Proper operation			
Level Sensor	Sounds tilt alarm			
Flashing Light	Proper operation			
Sandblast Protection Kit	In place and proper operation			
Structures				
Weldments	Welds intact, no damage or deformation			
Slide pads	In place, no damage or deformation			
Fasteners	In place and tight.			
Wire ropes	No deformation or broken strands			
Whiffles	Parallel to boom edge			
Belleville washers	Compressed with no gaps			
Upper Control Station				
Guardrail system and lanyard anchors	Welds intact, no damage or deformation			
Operating controls	Proper operation			
Emergency stop and emergency power	Shuts off upper controls/proper operation			
Horn	Sounds when activated.			
Electrical power outlet	Proper operation of outlet			
Drive motion alarm	Sounds when aerial platform moves			
Driving and work lights	Proper operation			
Platform control cover	In place and proper operation			
Placards and Decals	In place and readable			

Maintenance Table Key: Y = Yes/Acceptable, N = No/Not Acceptable, R = Repaired/Acceptable

Decal Location

Decal Location



ITEM	PART NO.	QTY	DESCRIPTION
1	508231-001	1	DECAL UPRIGHT BRAND LOGO
2	0162336E	5	DECAL DNGR ELEC HAZARD – ENGLISH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336F	5	DECAL DNGR ELEC HAZARD – FRENCH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336P	5	DECAL DNGR ELEC HAZARD – SPANISH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336W	5	DECAL DNGR ELEC HAZARD – SWEDISH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336D	5	DECAL DNGR ELEC HAZARD – DUTCH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336G	5	DECAL DNGR ELEC HAZARD – GERMAN
	0162366	5	DECAL DNGR ELEC HAZARD
3	0070420	1	PLACARD, EMERGENCY BLEED DOWN VALVE
4	508234-000	2	DECAL, UPRIGHT BRAND LOGO
7		1	PLACARD, PLATFORM CAPACITY (CONSULT FACTORY)
8	0162336E	5	DECAL DNGR ELEC HAZARD – ENGLISH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336F	5	DECAL DNGR ELEC HAZARD – FRENCH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336P	5	DECAL DNGR ELEC HAZARD – SPANISH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336W	5	DECAL DNGR ELEC HAZARD – SWEDISH
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336D	5	DECAL DNGR ELEC HAZARD – DUTCH

ITEM	PART NO.	QTY	DESCRIPTION
	0162366	5	DECAL DNGR ELEC HAZARD
	0162336G	5	DECAL DNGR ELEC HAZARD – GERMAN
	0162366	5	DECAL DNGR ELEC HAZARD
9	0070540	3	DECAL, YELLOW ARROW
10	0070541	3	DECAL, BLUE ARROW
11	0070901	1	PLACARD, CAUTION SERIAL NUMBER
13	0071425	1	PLACARD, PLATFORM IDENTIFICATION
14	0071927	1	DECAL, HYDRAULIC OIL
16	562386	1	LITERATURE COMPARTMENT
17	0073491	1	DECAL, SAFE OPERATION INFORMATION
20	0190988E	1	PLACARD, GROUND CONTROL INSTRUCTIONS – ENGLISH
	0190988F	1	PLACARD, GROUND CONTROL INSTRUCTIONS – FRENCH
	0190988P	1	PLACARD, GROUND CONTROL INSTRUCTIONS – SPANISH
	0190988W	1	PLACARD, GROUND CONTROL INSTRUCTIONS – SWEDISH
	0190988D	1	PLACARD, GROUND CONTROL INSTRUCTIONS – DUTCH
	0190988G	1	PLACARD, GROUND CONTROL INSTRUCTIONS – GERMAN
21	5560080	8	BUMPER
22	7050004	1	RECORD POUCH
23	0072531	1	DECAL, DNGR ELEC HAZARD
24	7030003	1	DECAL, LUBE RECOMMENDATIONS
27	0073139	1	CRANKCASE OIL TAG – USED FOR SHIPPING
28	0074311	7	DECAL, DNGR CYLINDER FAILURE
29	9980013	2	CAP
30	0190989E	3	DECAL, DANGER DO NOT REACH
31	0150448	1	DECAL, ATTACH FALL RESTRAINT
32	0073492	1	DECAL, ROTATE WHILE GREASING

Decal Location

ITEM	PART NO.	QTY	DESCRIPTION
	0073492F	1	DECAL ROTATE WHILE GREASING – FRENCH
	0073492P	1	DECAL ROTATE WHILE GREASING – SPANISH
	0073492W	1	DECAL ROTATE WHILE GREASING – SWEDISH
	0073492D	1	DECAL ROTATE WHILE GREASING – DUTCH
	0073492G	1	DECAL ROTATE WHILE GREASING – GERMAN
34	0074372	1	PLACARD, ENGINE RPM
	0074372F	1	PLACARD ENGINE RPM – FRENCH
	0074372P	1	PLACARD ENGINE RPM – SPANISH
	0074372W	1	PLACARD ENGINE RPM – SWEDISH
	0074372D	1	PLACARD ENGINE RPM – DUTCH
	0074372G	1	PLACARD ENGINE RPM – GERMAN
35	0073667	2	DECAL, INSPECT WIRE ROPES
36	451986	1	DECAL, DANGER DO NOT ALTER
	451986F	1	DECAL, DANGER DO NOT ALTER – FRENCH
	451986P	1	DECAL, DANGER DO NOT ALTER – SPANISH
	451986W	1	DECAL, DANGER DO NOT ALTER – SWEDISH
	451986D	1	DECAL, DANGER DO NOT ALTER – DUTCH
	451986G	1	DECAL, DANGER DO NOT ALTER – GERMAN
41	0072276	4	PLACARD, LUG NUT TORQUE
42	0162311	1	DECAL, CE LOGO
43	0072530	1	DECAL, DNGR ELEC HAZARD
44	0083427	4	DECAL, TIE DOWN SYMBOL
45	7030001	35 FT	WARNING STRIPE, CE
46	0073585	2	DECAL, MADE IN USA
47	0112559	1	PLACARD, LOWER CONTROLS
48	0162329E	1	DECAL PRE-START INSTR – ENGLISH
	0162329F	1	DECAL PRE-START INSTR – FRENCH
	0162329P	1	DECAL PRE-START INSTR – SPANISH
	0162329W	1	DECAL PRE-START INSTR – SWEDISH

ITEM	PART NO.	QTY	DESCRIPTION
	0162329D	1	DECAL PRE-START INSTR – DUTCH
	0162329G	1	DECAL PRE-START INSTR – GERMAN
49	0162328E	1	DECAL PRE-START INSTR – ENGLISH
	0162328F	1	DECAL PRE-START INSTR – FRENCH
	0162328P	1	DECAL PRE-START INSTR – SPANISH
	0162328W	1	DECAL PRE-START INSTR – SWEDISH
	0162328D	1	DECAL PRE-START INSTR – DUTCH
	0162328G	1	DECAL PRE-START INSTR – GERMAN
50	0112551	1	placard, upper controls – top
51	0182077E	1	DECAL, CE NOISE LEVEL
52	0151410	3	DECAL, DANGER ROTATING PARTS
	0151410E		DECAL DNGR ROTATING PARTS – ENGLISH
	0151410F		DECAL DNGR ROTATING PARTS – FRENCH
	0151410P		DECAL DNGR ROTATING PARTS – SPANISH
	0151410W		DECAL DNGR ROTATING PARTS – SWEDISH
	0151410D		DECAL DNGR ROTATING PARTS – DUTCH
	0151410G		DECAL DNGR ROTATING PARTS – GERMAN
53	0112188	1	DECAL, LIFT TIE DOWN LOCATION
54	0180846	1	PLACARD, UPPER CONTROLS – FRONT
55	0161819E	1	DECAL, EMERGENCY LOWERING
303	0075564	1	PLACARD, COLDSTART GLOW PLUGS (GRD)
304	0084213	1	PLACARD, COLDSTART GLOW PLUGS (PLAT)
401	0071926	1	DECAL, DIESEL FUEL
501	508235-001	2	DECAL, 4X4 LOGO
602	0071793	1	DECAL, HYDRAULIC WARM UP INSTRUCTIONS – OPTION
604	0073298	2	PLACARD, DNGR FOAM FILLED TIRES
701	508230-001	2	DECAL, SB85J LOGO
703	0112894E	4	DECAL, WHEEL LOADING

Specifications

Aerial Platform

Working height	27.7 m (90' 11")
Maximum platform height	25.8 m (84' 11")
Horizontal reach	23.4 m (76' 8")
Main boom	
Articulation	-13.5° to +70°
Extension	13.4 m (44')
Jib boom	
Articulation	-70° to +70°
Turntable rotation	360° continuous
Turning radius, 4 wheel steer	2.4 m (7' 10")
Tail swing	1.9 m (78.5")
Wheelbase	3 m (10')
Ground clearance	33 cm (13")
Maximum wheel load	8,770 kg (19,300 lbs)
Maximum ground pressure	6.9 kg/cm ² (99 psi)
Weight, EVW	
Approximate	17,100 kg (37,600 lbs)
Width	2.5 m (8' 6")
Stowed length	11.2 m (36' 10")
Stowed length, tucked stow	11.1 m (36' 7.5")
Stowed height	2.9 m (9' 8")

Platform

Dimensions	
Standard Aluminum	76 cm x 244 cm (30" x 92")
Rated work load	227 kg (500 lb)
Optional Steel	76 cm x 152 cm (30" x 60")
Rated work load	272 kg (600 lb)
Optional Aluminum	76 cm x 152 cm (30" x 60")
Rated work load	227 kg (500 lb)
Rotation	170 degrees
Maximum number of occupants	2 people
Optional AC generator	110 V
Optional AC generator	220 V
Optional AC generator	220 V, 3-phase, 12 kw

Function Speed

Turntable rotation	
Booms retracted	168 seconds minimum
Booms extended	228 seconds minimum
Main boom	
Up	105 seconds minimum
Down	105 seconds minimum
Extend	80 to 90 seconds
Retract	60 to 70 seconds
Jib	
Up	25 to 35 seconds
Down	25 to 35 seconds
Platform rotation	16 to 20 seconds
Drive	
High, booms stowed	4.8 km/h (3.0 mph)
Mid, booms stowed	2.4 km/h (1.5 mph)
Low, booms raised/extended	1 km/h (0.6 mph)

Drive System

Standard	Four wheel drive
Gradeability – theoretical	45%

Tires

Foam filled	15-625NHS, 16 ply
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Electrical System

Voltage	12 V DC negative chassis ground
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Source

Gas engine	One -12 V 550 CCA battery
Diesel engine	Two - 12 V 550 CCA batteries
Fluid recommended	distilled water

Hydraulic System

Maximum pressure	19,305 kPa (2,800 psi)
Reservoir capacity	151 l (40 US gal)
System capacity	246 l (65 US gal)
Maximum operating temperature	93°C (200°F)
Hydraulic fluid recommended	
Above -12°C (10°F)	Mobil DTE-13M (ISO VG32)
Below -12°C (10°F)	Mobil DTE-11M (ISO VG15)

Engine

Diesel	Cummins B3.3
Diesel	Deutz F4L-2011F
Gasoline and/or LPG	General Motors 2.4

Fuel Tank Capacity

Gasoline or diesel	204 l (54 US gal)
LPG	19.7 kg (43.5 lbs)
Dual fuel gasoline	204 l (54 US gal)
Dual fuel LPG	19.7 kg (43.5 lbs)

Ambient Air Temperature Operating Range

Celsius	-18°C to 43°C
Fahrenheit	0°F to 110°F

Maximum Wind Speed

Gust or steady	45 km/h (28 mph)
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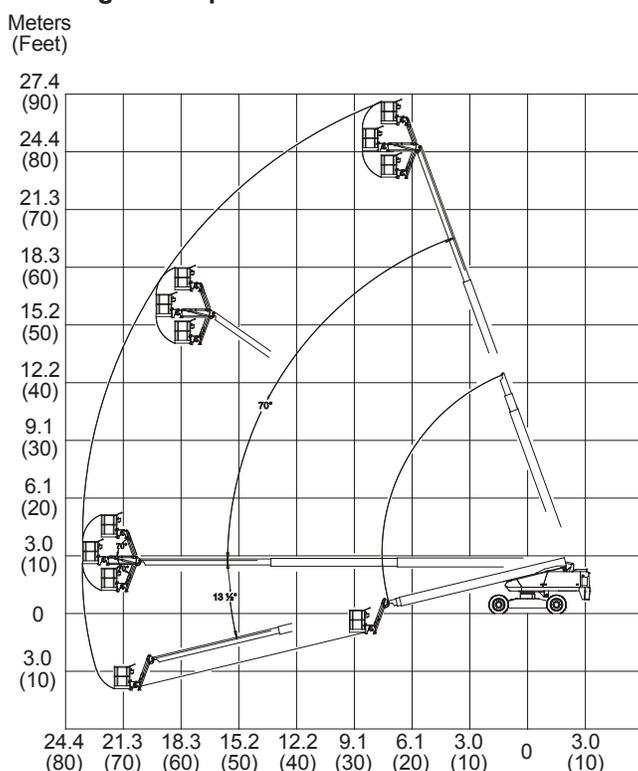
Vibration

less than 2.5 m/sec²

Sound Threshold

below 100 dB(A)

Working Envelope



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