snorkel

4606SJ



CE

OPERATOR'S MANUAL

ANSI/CSA/CE/AS/NZS
Serial number 000000 and after
Replaces ANSI/CSA/CE/AS/NZS September 2021

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Limited Warranty

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General Specifications

Aerial Platform

Working height	52' 10" (16.10 m)
Maximum platform height	46' 10" (14.27 m)
Horizontal reach	41' (12.50 m)
Main boom	
Articulation	-16° to +72°
Extension	15' (4.57 m)
Jib boom	
Articulation	-65.1° to +70°
Extension	6' 6" (1.98 m)
Turntable rotation	360° continuous
Turning radius, outside	17' 1" (5.21 m)
Turning radius, inside	10' 1" (3.06 m)
Tail swing	34.5" (87.6 cm)
Wheelbase	8' 2" (2.46 m)
Ground clearance	12.5" (31.75 cm)
Maximum wheel load	13,820 lb (6,282 kg)
Maximum ground pressure	146 psi (1006.6 kPa)
Level sensor setting – ANSI	17.2 degrees
Weight, EVW approximate	22,150 lbs (10,068 kg)
Width	
Overall width	8' 2" (2.46 m)
Transport width – wheels flipped	7' 4" (2.24 m)
Stowed length	
Overall length	28' 4" (8.63 m)
Transport length	28' 9" (8.76 m)
Stowed height	7' 10" (2.38 m)

Platform

Dimensions	
Standard	39" x 96" (99 cm x 243 cm)
Rated load capacity	550 lb (250 kg)
Rotation	150 degrees
Maximum number of occupants	2 people
Optional AC generator	110 V
Optional AC generator	220 V, 3-phase, 10 kw

Function Speed

Turntable rotation	
Booms retracted – ANSI	85 to 95 seconds
Booms retracted – CE/AS/NZS	165 to 175 seconds
Main boom	
Up – ANSI	32 to 38 seconds
Up – CE/AS/NZS	50 to 55 seconds
Down – ANSI	32 to 38 seconds
Down – CE/AS/NZS	50 to 55 seconds
Extend	30 to 45 seconds
Retract	30 to 45 seconds
Jib boom	
Up	12 to 17 seconds
Down	12 to 17 seconds
Platform rotation	12 to 16 seconds
Platform leveling	
Up – ANSI	12 to 22 seconds
Up – CE/AS/NZS	50 to 55 seconds
Down – ANSI	12 to 22 seconds
Down – CE/AS/NZS	50 to 55 seconds
Drive	
High, boom down/retracted – ANSI/CE/AS/NZS	
Forward	3.5 mph (5.6 km/h)
Reverse	3.5 mph (5.6 km/h)
Low, boom up/extended – ANSI/CE/AS/NZS	
Forward	0.6 mph (0.96 km/h)
Reverse	0.6 mph (0.96 km/h)

Drive System

Standard	4WD
Gradeability	45%
Axle	front oscillating
Vertical wheel travel	8" (20.32 cm)
Maximum drive height	46' (14 m)

Tires

Foam filled	355/55 D625, 14 ply
Mass	427.5 lbf (194.3 kg)
Flotation air filled – non-directional	33/16LL500
Minimum weight with wheel	150 lb (68.2 kg)

Electrical System

Voltage	12 V DC negative chassis ground
Source	One - 12 V 1000 CCA battery

Hydraulic System

Pressure	
System maximum	4,500 psi (31,026 kPa)
Boom circuit maximum	2,900 psi (19994 kPa)
Reservoir capacity	30 US gal (113.5 l)
System capacity	40 US gal (151.4 l)
Maximum operating temperature	200°F (93°C)
Hydraulic fluid recommended	
Above -12°C (10°F)	ISO VG32
Below -12°C (10°F)	ISO VG15

Engine

Diesel	Deutz D2.9 L4
Output	49 hp (36.5kw)

Fuel Tank Capacity

Diesel	28 US gal (105.9 l)

Ambient Air Temperature Operating Range

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

Maximum Manual Force

Per occupant	45 lb (200 N)
Two occupants	90 lb (400 N)

Maximum Wind Speed

Gust or steady	28 mph (12.5 m/s)

Vibration

Hand/arm	less than 2.5 m/sec²
Body	less than 0.5 m/sec²

Sound Pressure Level

At work station	below 110 dB(A)

Sound Power Level

80 dB LWAd

Group Classification

Heavy Duty – intended life	100,000 load cycles

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⚠Danger

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 all personnel stand clear while operating the aerial platform.

- Controls to position the platform are located on the lower control panel on the turntable and on the upper control panel in the platform.
- Controls to drive the aerial platform are located on the upper control panel only.

Battery Disconnect Switch

The battery disconnect is located behind the cowling door on the right side of the turntable (refer to Figure 6.1).

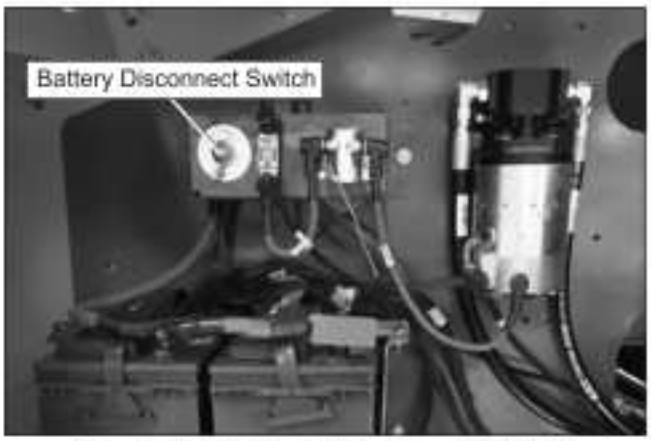


Figure 6.1 – Battery Disconnect Switch

The battery disconnect removes electrical power from all electrically controlled functions when in the off position.

- Place the switch in the on position to electrically connect the batteries to the electrical system.

⚠Caution

Only authorized personnel should operate the aerial platform. Unqualified personnel may cause injury to coworkers or property damage. Lock the battery disconnect switch in the off position before leaving the aerial platform unattended.

- Place the switch in the off position to prevent unauthorized use of the aerial platform. If so equipped, lock the battery disconnect switch in the off position.

Lower Controls

The lower controls (refer to Figure 6.2) are located on the left side of the turntable. Boom and platform functions can be operated from the lower controls. The following are located on the lower control panel:

- Start/emergency power/ground operation switch
- Emergency stop button
- Controls selector switch
- Rotation switch
- Boom elevation switch
- Boom extension switch
- Jib articulation switch
- Platform level switch
- Platform rotation switch
- Platform overload/tilt warning light
- Hydraulic system warm-up switch (option)

Start/Emergency Power/Ground Operation Switch

This switch (refer to Figure 6.2) is used to operate three machine functions. Engine start, activation of the emergency power system, and enable of the machine functions from the lower controls are all controlled with this switch.

Engine Start

The start switch (refer to Figure 6.2) function works like an automobile ignition switch.

An alarm sounds when the switch is turned on to warn others that the machine engine is being started.

- Before starting the engine, check the Diagnostic Center LCD display window. WAIT TO START will be displayed if the engine is cold and the engine heater is on. The message may appear for 1 to 12 seconds, depending on the engine and ambient air temperature.
- Do not start the engine until the wait message is no longer displayed.
- If the engine turns over but does not start while the WAIT TO START message is displayed, turn the control selector switch to the middle/off position and back to the lower controls position. Do not start the engine until the wait message is no longer displayed.
- Hold the switch downward until the engine starts, then release it to on.
- If the engine dies, the controls switch must be turned to off before the engine can be restarted.

Emergency Power

The emergency power function is used to operate turntable, boom, and platform functions using the emergency power system when the engine is off/disabled. The switch is spring returned to the engine position for aerial platform engine operation.

⚠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 batteries. Do not use this system for normal operation.

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Inspection and Maintenance Schedules

⚠Caution

Frequency and extent of periodic inspections may depend on national regulations.

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.

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Minimum Safe Approach Distance – AS/NZS

Minimum safe approach distances to energized power lines and their associated parts must be observed while operating the aerial platform.

⚠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.

AS/NZS 2550.10:2006 define minimum distances that must be observed when working near overhead power lines on poles and overhead power lines on towers. Refer to the clearance requirements decals on the machine to determine safe approach distances (refer to Figure 1).

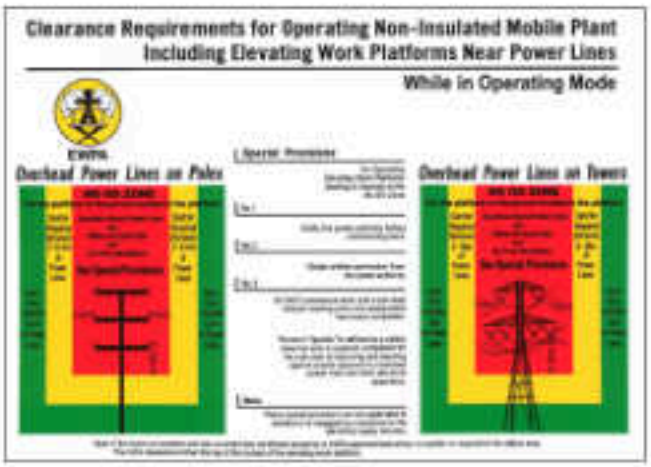


Figure 1 – Minimum Safe Approach Distance

Platform Capacity

Two people and their work materials may occupy 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 machine decals, placards, and in the machine specifications in this manual.

The maximum unrestricted rated load capacity and the maximum number of occupants for the aerial platform are stated on machine decals, placards, and in the machine specifications in this manual.

Manual Force

Manual force is the force applied by the occupants to objects such as walls or other structures outside the work 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 maximum allowable manual force indicated on the machine decals, placards, and in the machine specifications in this manual.

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

Wind Speeds

Do not add anything to the aerial platform that will increase the wind loading such as billboards, banners, flags, etc.

⚠Danger

The aerial platform can tip over if it becomes unstable. Death or serious injury will result from a tip-over accident. Do not operate the machine in wind speeds of 28 mph (12.5 m/s) or greater.

Do not operate the aerial platform in windy conditions with wind gusts or steady wind speeds of 28 mph (12.5 m/s) or greater. Refer to Figure 2.

Prestart Inspection

Perform a prestart inspection before each shift as described in Chapter 7. Do not use the aerial platform on the job unless you are trained and authorized to do so.

Work Place Inspection and Practices

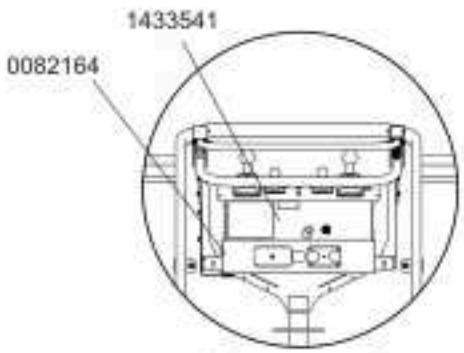
Do not use the aerial platform as a ground connection when welding.

- The welding ground clamp must be attached to the same structure that is being welded.

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 2 – Beaufort Scale

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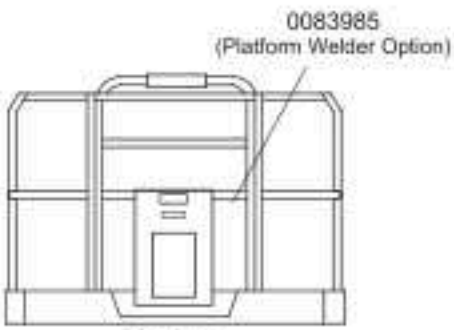
Upper Controls



1433541



0082164



Platform



0083985



0421078



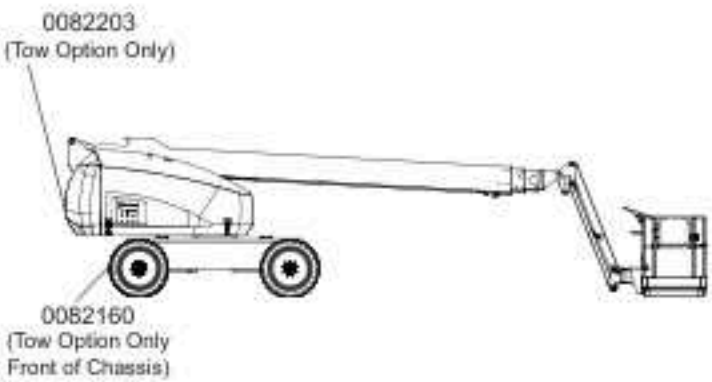
Platform Glazier Package



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0082203



Left Side



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