snorkel

A38E



CE

OPERATOR'S MANUAL

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Serial number 01-xxxx00708 and after
Replaces October 2021

Original Instructions

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Limited Warranty

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ITEM	METRIC	IMPERIAL (ANSI)
Duty Cycle	45% of 8 hour shift	45% of 8 hour shift
Platform Size	0.72 m x 1.2 m (inside guardrails)	2 ft 4 in x 4 ft (inside guardrails)
Max. Platform Capacity	215 kg	475 lbs
Indoors	2 People	2 People
Outdoors	1 Person	1 Person
Height Maximum Working Height Maximum Platform Height Min. Platform Floor Height (stowed)	 13 m 11 m 0.84 m	 42 ft 8 in 36 ft 5 in 1 ft 9 in
Max. Working Outreach	6.10 m	20.00 ft
Platform Height At Maximum Outreach	5.40 m	17 ft 8 in
Stowed Dimensions Length Width Height	 4.1 m 1.50 m 2.00 m	 13 ft 5.5 in 5 ft 6 ft 7 in
Ground Clearance	0.12 m	4.5 in
Wheel Base x Gauge	2.00 m x 1.27 m	6 ft 7 in x 4 ft 2 in
Rotation (Elevated)	360 degrees non-continuous	360 degrees non-continuous
Rotation (Stowed)	263 degrees when stowed	263 degrees when stowed
Unloaded Weight (FLA batteries) (AGM batteries)	3,843 kg 3,880 kg	8,472 lbs 8,554 lbs
With Load/ Max Weight (FLA batteries) (AGM batteries)	4,058 kg 4,095 kg	8,946 lbs 9,028 lbs
Drive Speed Stowed (FWD) (REV)	0 - 0.83 m/s (3 kph) 0 - 0.76 m/s (2.7 kph)	0 - 1.9 mph 0 - 1.7 mph
Drive Speed Elevated (FWD) (REV)	0 - 0.1 m/s (0.36 kph) 0 - 0.09 m/s (0.40 kph)	0 - 0.22 mph 0 - 0.2 mph
Max Ground Pressure	18.8 kg/cm2	268 psi
Maximum Gradeability	36%	36%
Inside Turning Radius	1.12 m	3 ft 8 in
Outside Turning Radius	2.40 m	7 ft 2.5 in
Power Source	48V DC 4kW, 8 X 6V 220Ah Batteries	48V DC 5.4HP, 8 X 6V 220Ah Batteries
System Voltage Control	12V	12V
Battery Charger	Auto Dual AC input 100-240V ~ 50/60Hz 15A Output 48V, 35A	(Auto Dual AC input 100-240V ~ 50/60Hz 15A) Output 48V, 35A
Hydraulic Oil Tank Capacity	25 Litres	6.5 Gallons US
Max. Hydraulic Pressure	195 bar	2828 psi
Hydraulic Oil Grade	ISO #32	ISO #32
Cylinder Types	2 Double Acting Lift Cylinders With Lock Valves And Manual Emergency Lowering Facility. 1 Double ActingTelescopic Cylinder 1 Double Acting Plat. Rotate Cylinder	2 Double Acting Lift Cylinders With Lock Valves And Manual Emergency Lowering Facility. 1 Double ActingTelescopic Cylinder 1 Double Acting Plat. Rotate Cylinder
Control System	One handed Proportional Joystick Operating Energy Efficient Motor Control System	One handed Proportional Joystick Operating Energy Efficient Motor Control System
Wheels/Tyres	400 mm Diameter Steel Disc Wheel With Solid All Surface Tyres	15.75 inch Diameter Steel Disc Wheel With Solid All Surface Tyres
Braking	Automatic Spring Applied Hydraulic Release	Automatic Spring Applied Hydraulic Release
Operating temperature range	-20°C to +50°C	-20°C to +50°C
Sound pressure level (at lower Control station)	78.6 dB(A)	78.6 dB(A)
Machine vibration	Whole body vibration < 0.5 m/s2, Hand/arm vibration < 2.5 m/s2	Whole body vibration < 0.5 m/s2, Hand/arm vibration < 2.5 m/s2

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Chapter 6 – Batteries

The battery trays, located on each side of the chassis, contain eight, 220 Amp hour, 6 Volt batteries to operate the aerial platform drive and control systems.
To access the batteries, loosen the knob on each side of the tray and remove the cover.

For optimal battery performance the battery fluid level must be maintained and the battery connections must be kept clean.

General Maintenance

Always keep the batteries clean, free of dirt and corrosion. A film on top of the battery can accelerate discharge.

⚠Warning

Battery acid can damage the skin and eyes. Serious infection or reaction could result if medical treatment is not given immediately. Wear face and eye protection when working near the batteries.

If necessary, clean the batteries, terminals, and cable ends (refer to Figure 6.1) with a wire brush or terminal cleaning tool.

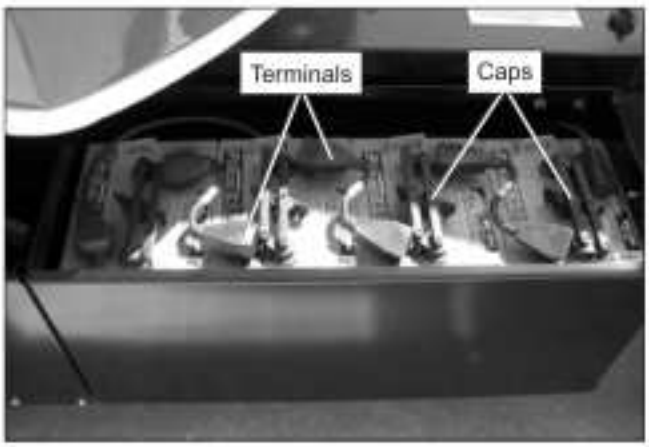


Figure 6.1 – Battery Tray

Use distilled water to refill the batteries. Avoid water containing metallic solids such as iron which can reduce the life of the batteries.

Consult a battery charger specialist if extreme temperature use is unavoidable.

- Cold reduces battery capacity and retards charging.
- Heat increases water usage and can result in overcharging.
- Very high temperatures can cause thermal run away which may lead to an explosion or fire.

Note
Machines can also be supplied with AGM batteries. Maintenance-free AGM batteries are sealed units and do not represent a battery acid hazard .

Charging

The aerial platform is equipped with a 25 amp battery charger. The battery charger is located in the electrical compartment on the right side of the chassis.

⚠Warning

Batteries give off hydrogen and oxygen that can combine explosively. Death or serious injury can result from a chemical explosion. Charge the batteries only in a well ventilated area away from sparks or flame.

⚠Caution

The batteries may be overcharged and/or damaged if the charger is plugged in after the charge cycle is complete. Do not leave the battery charger on for more than 48 hours.

It may take from 1½ to 16 hours to recharge the batteries depending on the amount of discharge. If the charging cycle exceeds 16 hours without the batteries being fully recharged, unplug the charger and have the batteries checked.

Fully recharge the batteries, immediately after use.

- One charging cycle per day is preferred.
- Fully charged batteries perform best.
- The deeper the discharge, the fewer number of cycles a battery will deliver. Deep discharges deteriorate the battery quicker than light shallow cycles.
- An overly discharged battery may need to be cycled a few times before it can fully recover.
- If a battery begins to heat before becoming fully charged, it may be necessary to recharge and discharge the battery a few times.

Use the following procedure to charge the batteries.

1. Make sure the battery disconnect switch at the side of the chassis is set to the ON position before charging. (refer to Figure 6.2).



Figure 6.2 – Battery Disconnect Switch

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Tires and Wheels

Visually inspect the tires and wheels (refer to Figure 8.8) to make sure they are suitable for service.



Figure 8.8 – Tires and Wheels

To inspect the tires and wheels:

1. Visually inspect the tires. They should be smooth without any cuts, gouges, or missing rubber that might affect aerial platform stability.

2. Check the wheels to see that the fasteners are in place and are not damaged or loose.

Lower Control Station

With no personnel in the platform, test the operation of each control from the lower controls (refer to Figure 8.9).

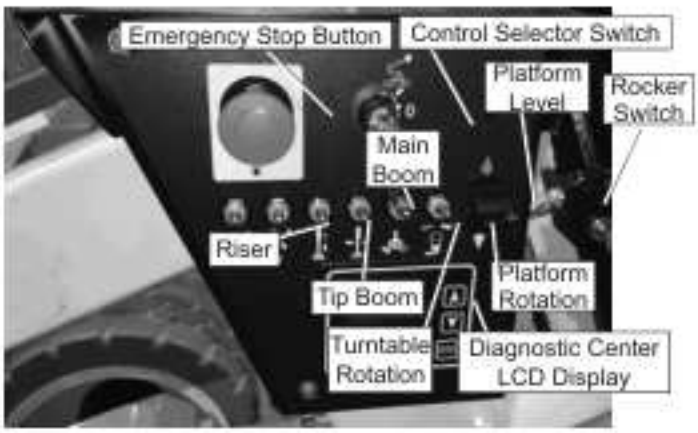


Figure 8.9 – Lower Controls

Operating Controls

Use the following procedure to operate the machine from the lower controls.

1. Make sure the battery disconnect switch is set to the ON position.

2. At the lower and upper controls, twist the emergency stop button clockwise to restore power.

3. Insert the key into the control selector switch and turn the switch to the lower controls position.

4. Press and hold a boom function switch while operating the rocker switch to test machine operation.

⚠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 of the aerial platform while performing the pre-start inspection.

⚠Warning

The potential for an accident increases when operating an aerial platform that is damaged or malfunctioning. Death or serious injury could result from such accidents. Do not operate the aerial platform if it is damaged or malfunctioning.

5. Test the operation of each boom function in both directions.

Lowering Alarm

While the platform is lowering listen to ensure that the alarm sounds to warn personnel in the area that the platform is lowering.

Emergency Stop

To test the emergency stop button from the lower controls:

1. Push the emergency stop button inward to turn off electrical power.

2. Test the lower control functions to make sure they no longer operate.

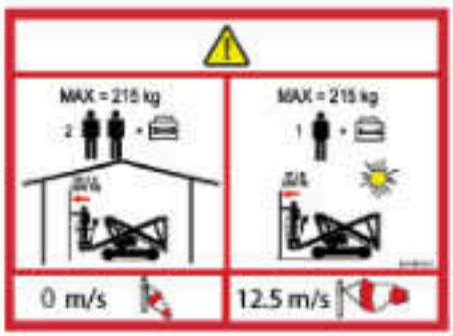
Emergency Lowering

Use the following procedure to test the emergency lowering valve:

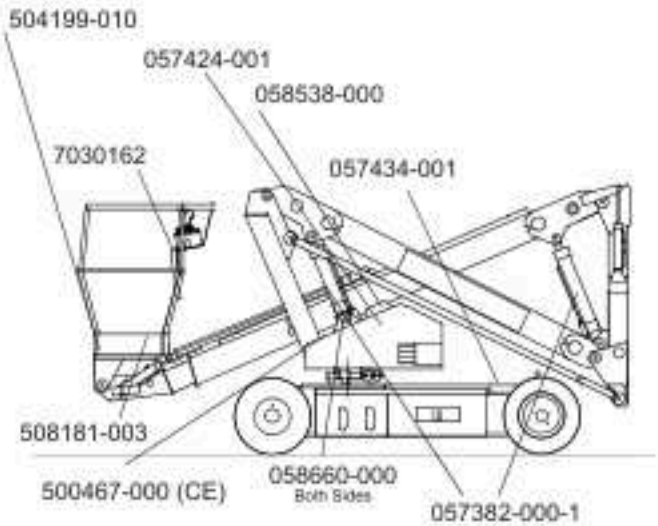
1. Partially raise the riser and main booms from the lower controls.

2. While standing clear of the chassis and platform, push the emergency lowering knob (refer to Figure 8.10) inward on each cylinder. The boom will begin to lower as the knob is pushed in.

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504199-010 (CE)



Left Side



500467-000 (CE)



057382-000-1 (CE)



058181-003 (CE)



7030162 (ANSI/CE)



058538-000 (ANSI)



057424-001 (ANSI)



057434-001 (ANSI)

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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).

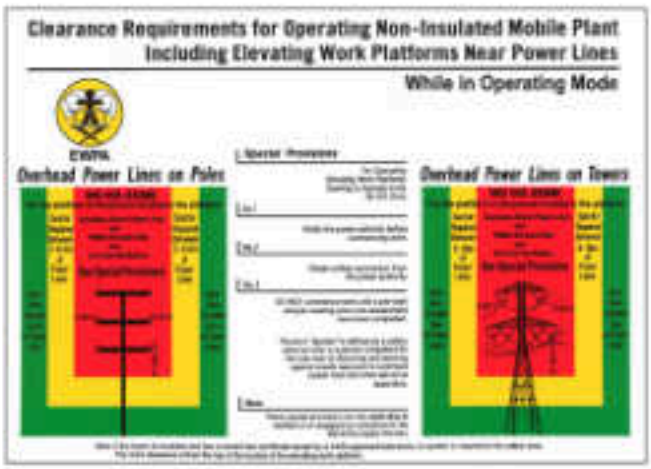


Figure 1 – Minimum Safe Approach Distance

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 8. 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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