

# **OPERATIONS & SAFETY MANUAL**

PUSH AROUND AERIAL WORK PLATFORM

SUPO-725 REV C



# HB-P3.6

SERIES I

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Original instructions are written in English.

The purpose of this Operations and Safety manual is to provide users with the instructions and operating procedures essential to properly and safely operate the Custom Equipment Hy-Brid Lift for its intended purpose, and to position personnel and their necessary tools and materials.



#### THE OPERATION AND SAFETY MANUAL MUST BE READ AND UNDERSTOOD PRIOR TO OPERATING THE MACHINE.

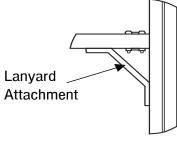
- The user/operator should not accept operating responsibility until the manual has been read and understood as well as having operated the lift under supervision of an experienced and qualified operator.
- Because the manufacturer has no direct control over machine application and operation, proper safety practices are the responsibility of the user and all operating personnel.



# ANY MODIFICATION ON THIS MACHINE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER IS PROHIBITED.

#### Fall protection notice:

The guardrail system around the perimeter of the platform is the fall protection system for push-around elevating work platforms per the EN: 280 Standard. It is prohibited to use an Aerial Work Platform manufactured by Custom Equipment, LLC, with any portion—or all—of the guardrails removed. Lanyard anchorage points on this type of equipment are not required to conform to the applicable standard. However, if anchorage points for lanyard attachments are required by site authorities or other regulations, the anchorage points on all equipment manufactured by Custom Equipment, LLC are recommended to be used for work positioning restraints of personnel only. Lanyard lengths are to be determined by operator/owner to restrict the operator to the confines within the guardrail system.





USE OF FALL ARREST SYSTEMS ATTACHED TO ANCHORAGE POINTS ON EQUIPMENT MAY CAUSE MACHINE TO TIP, RESULTING IN SERIOUS INJURY OR DEATH.

# -HY-BRID LIFTS

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# 1.1 | GENERAL

Custom Equipment's Hy-Brid Scissor Lift is an aerial work platform designed to be safe and reliable. The purpose of the machine is to elevate personnel, along with their necessary tools and materials. The machine is intended for indoor use (no wind load). Manufacturer approval is required for any use other than the intended use.

# 1.2 | EC DECLARATION OF CONFORMITY

We hereby declare that the above mentioned machine has been assessed, tested and approved in accordance with the requirements of the Machinery Directive 2006/42/EC using the document EC Community Legislation on Machinery and taking guidance from EN280:2001 + A2:2009 with the following exceptions:

Clause 5.4.1.2b: Warning is provided as required by 2006/42/EC clause 4.2.2 An EC type-examination was tested internally by the manufacturer, in accordance with EN280:2001 + A2:2009 and 2006/42/EEC Annex VII, as listed in Article 12 and Annex IV, item 17 of directive 2006/42/EEC, which excludes devices with a platform height of less than three meters.

Model Numbers: HB-P3.6 Machine Type: Mobile Elevating Work Platform Applicable Harmonised Standard: EN280:2001 + A2:2009

MANUFACTURER Custom Equipment, LLC. 2647 Hwy 175 Richfield, WI 53076 U.S.A. Phone: +1-262-644-1300 Fax: +1-262-644-1320 www.hybridlifts.comMachine Specifications

# **1.3 | MACHINE SPECIFICATIONS**

Platform Height (maximum)       5.25 ft       1.77 m         Stowed Height       63.59 in       1.62 m         Ground Clearance       2.5 in       0.06 m         Overall Width       26.6 in       0.67 m         Overall Length       41 in       1.04 m         Platform       22 in x 37 in       0.55 m x 0.94 m         Cuard Rait Height       6 in       0.15 m         Toe Board Height       6 in       0.52 m         Step Height       1.258       0.32 m         Wheel Base       3311 in       0.84 m         Wheel Base       3311 in       0.84 m         Wheel Tack       22.13 in       0.55 m         Turning Radius (Inside)       Zero       Zero         Tire Size (Solid, Non-Marking)-Front       8 in       20.3 cm         Match Maximg         Match Meight (Unloaded) (Approx.)         S75 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Wheel Load-Contact Pressure       15 psi       1482.37 kPa = 151.2 kg/cr         Minimum Machine Loading-Floor Pressure       75.9 ps f       3.65 kPa = 0.04 kg/cm <sup>2</sup> Level Surface       Level Surface <th>DIMENSIONS</th> <th>U.S.A.</th> <th>METRIC</th>	DIMENSIONS	U.S.A.	METRIC	
Stowed Height         63.59 in         1.62 m           Ground Clearance         2.5 in         0.06 m           Overall Length         41 in         1.04 m           Platform         22 in x 37 in         0.56 m x 0.94 m           Guard Rail Height         6 in         0.15 m           Platform         22 in x 37 in         0.56 m x 0.94 m           Guard Rail Height         6 in         0.15 m           Platform Entrance         20.28 in         0.52 m           Step Height         1.258         0.32 m           Wheel Base         33.11 in         0.84 m           Wheel Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm           KATED LOAD         Vertex 15 psi         26.8 kg / 1 Person           Horizontal/Manual Force         45 lb         200 N           Machine Weight (Unloaded) (Approx.)         575 lb         261 kg           Minimum Wheel Load-Contact Pressure         215 psi         1482.37 kPa = 15.12 kg/cr           Maximum Machine Loading-Floor Pressure         215 psi         1482.37 kPa = 0.04 kg/cm²           Maximum Machine Loading-Floor Pre	Working Height (maximum)	11.81 ft	3.6 m	
Ground Clearance         2.5 in         0.06 m           Overall Width         26.6 in         0.67 m           Overall Length         41 in         1.04 m           Platform         22 in x 37 in         0.56 m x 0.94 m           Quard Rail Height         43.83 in         1.1 m           Toe Board Height         6 in         0.15 m           Platform Entrance         20.28 in         0.52 m           Step Height         12.58         0.32 m           Wheel Base         33.11 in         0.84 m           Wheel Base         33.11 in         0.56 m           Turning Radius (Inside)         Zero         Zero           Tire Size (Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm <b>KATED LOAD</b> 26.8 kg / 1 Person         26.8 kg / 1 Person           Horizontal/Manual Force         45 lb         200 N           Machine Weight (Unloaded) (Approx.)         575 lb         261 kg           Minimum Mheel Load-Contact Pressure         115 psi         792.89 kPa = 8.09 kg/cm           Maximum Machine Loading-Floor Pressure         75.92 psf         3.65 kPa = 0.04 kg/cm <sup>2</sup> Minimum Machine Loading-Floor Pressure	Platform Height (maximum)	5.25 ft	1.77 m	
Overall Width         26.6 in         0.67 m           Overall Length         41 in         1.04 m           Platform         22 in x 37 in         0.56 m x 0.94 m           Guard Rail Height         6 in         0.15 m           Toe Board Height         6 in         0.52 m           Toe Board Height         1.1 m         Toe           Toe Board Height         6 in         0.52 m           Step Height         12.58         0.32 m           Wheel Base         0.311 in         0.84 m           Wheel Base         33.11 in         0.84 m           Wheel Tack         22.13 in         0.56 m           Turning Radius (Inside)         Zero         Zero           Tire Size (Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm           KATED LOAD         Eift Capacity (Evenly Distributed):         500 lbs / 1 Person         226.8 kg / 1 Person           Horizontal/Manual Force         45 lb         200 N         Machine Weight (Unloaded) (Approx.)         575 lb         261 kg           Minimum Wheel Load-Contact Pressure         115 psi         792.89 kPa = 8.09 kg/cn         482.37 kPa = 151.2 kg/cn           Maximum Machine Loading-Floor Pre	Stowed Height	63.59 in	1.62 m	
Overall Length         41 in         1.04 m           Platform         22 in x 37 in         0.56 m x 0.94 m           Guard Rail Height         43.83 in         1.1 m           Toe Board Height         6 in         0.15 m           Platform Entrance         20.28 in         0.52 m           Step Height         12.58         0.32 m           Wheel Base         33.11 in         0.84 m           Wheel Base         33.11 in         0.56 m           Turning Radius (Inside)         Zero         Zero           Tire Size (Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.8 kg / 1 Person           Horizontal/Manual Force         45 lb         200 N           Machine Weight (Unloaded) (Approx.)         575 lb         261 kg           Minimum Wheel Load-Contact Pressure         115 psi         792.89 kPa = 8.09 kg/cm           Maximum Machine Loading-Floor Pressure         75 92 psf         3.65 kPa = 0.04 kg/cm²           Nimimum Machine Loading-Floor Pressure         75 92 psf         3.65 kPa = 0.04 kg/cm²	Ground Clearance	2.5 in	0.06 m	
Platform       22 in x 37 in       0.56 m x 0.94 m         Guard Rail Height       43.83 in       1.1 m         Toe Board Height       6 in       0.15 m         Platform Entrance       20.28 in       0.52 m         Step Height       12.58       0.32 m         Wheel Base       33.11 in       0.84 m         Wheel Tack       22.13 in       0.56 m         Turning Radius (Inside)       Zero       Zero         Tire Size (Solid, Non-Marking)-Front       8 in       20.3 cm         Tire Size (Solid, Non-Marking)-Rear       8 in       20.0 N         Machine Weight (Unloaded) (Approx.)       575 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Meel Load-Contact Pressure       75.92 psf       365 kPa = 0.04 kg/cm²         Nimimum Machine Loading-Floor Pressure       75.92 psf       365 kPa = 0.04 kg/cm²         NirRONMENTAL LIMITATIONS       VirRONMENTAL LIMITATIONS       20°C to 40°C         Wind       No windy conditions / Indoor us	Overall Width	26.6 in	0.67 m	
Guard Rail Height         43.83 in         11 m           Toe Board Height         6 in         0.15 m           Platform Entrance         20.28 in         0.52 m           Step Height         12.58         0.32 m           Wheel Base         33.11 in         0.84 m           Wheel Tack         22.13 in         0.56 m           Turning Radius (Inside)         Zero         Zero           Tire Size (Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm <b>ATED LOAD</b>	Overall Length	41 in	1.04 m	
Toe Board Height       6 in       0.15 m         Platform Entrance       20.28 in       0.52 m         Step Height       12.58       0.32 m         Wheel Base       33.11 in       0.84 m         Wheel Tack       22.13 in       0.56 m         Turning Radius (Inside)       Zero       Zero         Tire Size (Solid, Non-Marking)-Front       8 in       20.3 cm         Tire Size (Solid, Non-Marking)-Rear       8 in       20.3 cm <b>ATED LOAD</b> Lift Capacity (Evenly Distributed):         500 lbs / 1 Person       226.8 kg / 1 Person         Horizontal/Manual Force       45 lb       200 N         Machine Weight (Unloaded) (Approx.)       575 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.04 kg/cm²         Maximum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.07 kg/cm²         NVRONMENTAL LIMITATIONS       No windy conditions / Indoor use only       Rated Slope         Level Surface       Level Surface       Level Surface         Temperature       -4°F to -104°F       -20°C to 40°C         Vibration       8.2 ft/s	Platform	22 in x 37 in	0.56 m x 0.94 m	
Platform Entrance         20.28 in         0.52 m           Step Height         12.58         0.32 m           Wheel Base         33.11 in         0.84 m           Wheel Track         22.13 in         0.56 m           Turning Radius (Inside)         Zero         Zero           Tire Size (Solid, Non-Marking)-Front         8 in         20.3 cm           Tire Size (Solid, Non-Marking)-Rear         8 in         20.3 cm <b>EXED LOAD</b> 111         Solo Ibs / 1 Person         226.8 kg / 1 Person           Horizontal/Manual Force         45 lb         200 N         Machine Weight (Unloaded) (Approx.)           S75 Ib         261 kg         Minimum Wheel Load-Contact Pressure         115 psi         792.89 kPa = 8.09 kg/cm           Maximum Wheel Load-Contact Pressure         215 psi         1482.37 kPa =15.12 kg/cr           Minimum Machine Loading-Floor Pressure         75.92 psf         3.65 kPa = 0.04 kg/cm²           Maximum Machine Loading-Floor Pressure         141.94 psf         6.76 kPa = 0.07 kg/cm²           NVIRONMENTAL LIMITATIONS         Wind         No windy conditions / Indoor use only           Rated Slope         Level Surface         Level Surface           Temperature         -4°F to -104°F         -20°C to 40°C           Vibration	Guard Rail Height	43.83 in	1.1 m	
Step Height       12.58       0.32 m         Wheel Base       33.11 in       0.84 m         Wheel Track       22.13 in       0.56 m         Turning Radius (Inside)       Zero       Zero         Tire Size (Solid, Non-Marking)-Front       8 in       20.3 cm         Tire Size (Solid, Non-Marking)-Rear       8 in       20.3 cm         ATED LOAD         Lift Capacity (Evenly Distributed):         S00 lbs / 1 Person       226.8 kg / 1 Person         Horizontal/Manual Force       45 lb       200 N         Machine Weight (Unloaded) (Approx.)       575 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Machine Load-Contact Pressure       215 psi       1482.37 kPa =15.12 kg/cr         Minimum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.04 kg/cm²         NVIRONMENTAL LIMITATIONS         Wind       No windy conditions / Indoor use only         Rated Slope       Level Surface       Level Surface         Temperature       -4°F to -104°F       -20°C to 40°C         Vibration       8.2 ft/s² max       2.5 m/s² max         Sound       86 dB Normal Use       86 dB Normal Use      <	Toe Board Height	6 in	0.15 m	
Wheel Base       33.11 in       0.84 m         Wheel Track       22.13 in       0.56 m         Turning Radius (Inside)       Zero       Zero         Tire Size (Solid, Non-Marking)-Front       8 in       20.3 cm         Tire Size (Solid, Non-Marking)-Rear       8 in       20.3 cm         IT ED LOAD       Solution       26.8 kg / 1 Person         Hatted Load       Solution       26.8 kg / 1 Person         Horizontal/Manual Force       45 lb       200 N         Machine Weight (Unloaded) (Approx.)       575 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.04 kg/cm²         Minimum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.04 kg/cm²         NVIRONMENTAL LIMITATIONS       No windy conditions / Indoor use only         Rated Slope       Level Surface       Level Surface         Temperature       -4°F to -104°F       -20°C to 40°C         Vibration       8.2 ft/s² max       2.5 m/s² max         Sound       86 dB Normal Use       86 dB Normal Use         OWER SYSTEMS       Iff/Lower Speed       10 / 15 sec         Lift/Lower Speed       10 / 15 sec	Platform Entrance	20.28 in	0.52 m	
Wheel Track22.13 in0.56 mTurning Radius (Inside)ZeroZeroTire Size (Solid, Non-Marking)-Front8 in20.3 cmTire Size (Solid, Non-Marking)-Rear8 in20.3 cmInter Size (Solid, Non-Marking)-RearInter Size (Solid, Non-Marking)-Rear <td col<="" td=""><td>Step Height</td><td>12.58</td><td>0.32 m</td></td>	<td>Step Height</td> <td>12.58</td> <td>0.32 m</td>	Step Height	12.58	0.32 m
Turning Radius (Inside)       Zero       Zero         Tire Size (Solid, Non-Marking)-Front       8 in       20.3 cm         Tire Size (Solid, Non-Marking)-Rear       8 in       20.3 cm         Constant of the second sec	Wheel Base	33.11 in	0.84 m	
Tire Size (Solid, Non-Marking)-Front8 in20.3 cmTire Size (Solid, Non-Marking)-Rear8 in20.3 cmTire Size (Solid, Non-Marking)-Rear8 in20.3 cmCATED LOAD26.8 kg / 1 Person26.8 kg / 1 PersonHorizontal/Manual Force45 lb200 NMachine Weight (Unloaded) (Approx.)575 lb261 kgMinimum Wheel Load-Contact Pressure115 psi792.89 kPa = 8.09 kg/cnMaximum Wheel Load-Contact Pressure215 psi1482.37 kPa = 15.12 kg/crMinimum Machine Loading-Floor Pressure75.92 psf3.65 kPa = 0.04 kg/cm²Maximum Machine Loading-Floor Pressure141.94 psf6.76 kPa = 0.07 kg/cm²NVIRONMENTAL LIMITATIONSVibration8.2 ft/s² max2.5 m/s² maxWindNo windy conditions / Indoor use onlyRated SlopeLevel SurfaceTemperature-4°F to -104°F-20°C to 40°CVibrationSound86 dB Normal Use86 dB Normal UseOWER SYSTEMSLift/Lower Speed10 / 15 sec10 / 15 secHydraulic Pressure (max)650 psi4482 kPaHydraulic Fluid Capacity1.69 quarts1.6 LPower System-Voltage12V DC12V DC12V DC	Wheel Track	22.13 in	0.56 m	
Tire Size (Solid, Non-Marking)-Rear       8 in       20.3 cm         XATED LOAD         Lift Capacity (Eventy Distributed):       500 lbs / 1 Person       226.8 kg / 1 Person         Horizontal/Manual Force       45 lb       200 N         Machine Weight (Unloaded) (Approx.)       575 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Wheel Load-Contact Pressure       215 psi       1482.37 kPa = 15.12 kg/cm         Minimum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.04 kg/cm <sup>2</sup> Maximum Machine Loading-Floor Pressure       141.94 psf       6.76 kPa = 0.07 kg/cm <sup>2</sup> NVIRONMENTAL LIMITATIONS       No windy conditions / Indoor use only         Rated Slope       Level Surface       Level Surface         Temperature       -4°F to -104°F       -20°C to 40°C         Vibration       8.2 ft/s <sup>2</sup> max       2.5 m/s <sup>2</sup> max         Sound       86 dB Normal Use       86 dB Normal Use          10 / 15 sec       10 / 15 sec         Hydraulic Pressure (max)       650 psi       4482 kPa         Hydraulic Fluid Capacity       1.69 quarts       1.6 L         Power System-Voltage       12V DC       12V DC	Turning Radius (Inside)	Zero	Zero	
ATED LOAD         Lift Capacity (Eventy Distributed):       500 lbs / 1 Person       226.8 kg / 1 Person         Horizontal/Manual Force       45 lb       200 N         Machine Weight (Unloaded) (Approx.)       575 lb       261 kg         Minimum Wheel Load-Contact Pressure       115 psi       792.89 kPa = 8.09 kg/cm         Maximum Wheel Load-Contact Pressure       215 psi       1482.37 kPa = 15.12 kg/cm         Minimum Machine Loading-Floor Pressure       75.92 psf       3.65 kPa = 0.04 kg/cm <sup>2</sup> Maximum Machine Loading-Floor Pressure       141.94 psf       6.76 kPa = 0.07 kg/cm <sup>2</sup> NVIRONMENTAL LIMITATIONS       No windy conditions / Indoor use only         Rated Slope       Level Surface       Level Surface         Temperature       -4°F to -104°F       -20°C to 40°C         Vibration       8.2 ft/s² max       2.5 m/s² max         Sound       86 dB Normal Use       86 dB Normal Use         OWER SYSTEMS         Lift/Lower Speed       10 / 15 sec         Hydraulic Pressure (max)       650 psi       4482 kPa         Hydraulic Fluid Capacity       1.69 quarts       1.6 L         Power System-Voltage       12V DC       12V DC	Tire Size (Solid, Non-Marking)-Front	8 in	20.3 cm	
Lift Capacity (Evenly Distributed): 500 lbs / 1 Person 226.8 kg / 1 Person Horizontal/Manual Force 45 lb 200 N Machine Weight (Unloaded) (Approx.) 575 lb 261 kg Minimum Wheel Load-Contact Pressure 115 psi 792.89 kPa = 8.09 kg/cm Maximum Wheel Load-Contact Pressure 215 psi 1482.37 kPa = 15.12 kg/cm Minimum Machine Loading-Floor Pressure 75.92 psf 3.65 kPa = 0.04 kg/cm <sup>2</sup> Maximum Machine Loading-Floor Pressure 141.94 psf 6.76 kPa = 0.07 kg/cm <sup>2</sup> Minimum Machine Loading-Floor Pressure 141.94 psf 6.76 kPa = 0.07 kg/cm <sup>2</sup> Minimum Machine Loading-Floor Pressure 24°F to -104°F -20°C to 40°C Vibration 8.2 ft/s <sup>2</sup> max 2.5 m/s <sup>2</sup> max Sound 86 dB Normal Use 86 dB Normal Use Mird/Lift/Lower Speed 10 / 15 sec Hydraulic Pressure (max) 650 psi 4482 kPa Hydraulic Fluid Capacity 1.69 quarts 1.6 L Power System-Voltage 12V DC 12V DC	Tire Size (Solid, Non-Marking)-Rear	8 in	20.3 cm	
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NVIRONMENTAL LIMITATIONSWindNo windy conditions / Indoor use onlyRated SlopeLevel SurfaceTemperature-4°F to -104°F-20°C to 40°CVibration8.2 ft/s² maxSound86 dB Normal UseSound86 dB Normal UseOWER SYSTEMSLift/Lower Speed10 / 15 secHydraulic Pressure (max)650 psi4482 kPaHydraulic Fluid Capacity1.69 quarts1.6 LPower System-Voltage12V DC12V DC	Minimum Machine Loading-Floor Pressure	75.92 psf	$3.65 \text{ kPa} = 0.04 \text{ kg/cm}^2$	
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Vibration8.2 ft/s² max2.5 m/s² maxSound86 dB Normal Use86 dB Normal UseOWER SYSTEMSLift/Lower Speed10 / 15 secHydraulic Pressure (max)650 psi4482 kPaHydraulic Fluid Capacity1.69 quarts1.6 LPower System-Voltage12V DC12V DC	Rated Slope	Level Surface	Level Surface	
Sound86 dB Normal Use86 dB Normal UseOWER SYSTEMSLift/Lower Speed10 / 15 sec10 / 15 secHydraulic Pressure (max)650 psi4482 kPaHydraulic Fluid Capacity1.69 quarts1.6 LPower System-Voltage12V DC12V DC	Temperature	-4°F to -104°F	-20°C to 40°C	
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Lift/Lower Speed10 / 15 sec10 / 15 secHydraulic Pressure (max)650 psi4482 kPaHydraulic Fluid Capacity1.69 quarts1.6 LPower System-Voltage12V DC12V DC	POWER SYSTEMS			
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Power System-Voltage 12V DC 12V DC				
	· · ·			
DAUCHES-DEED EVER MAINE 12V. UIOUD 24 AUM 12V. UIOUD 24 AUM	Batteries-Deep Cycle Marine	12V, Group 24 AGM	12V, Group 24 AGM	

# **SECTION 2 | SAFETY**

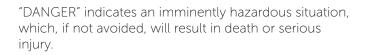
### 2.1 | SAFETY SYMBOLS



FAILURE TO FOLLOW THIS WARNING WILL CAUSE DEATH OR PERSONAL INJURY.



FAILURE TO FOLLOW THIS WARNING MAY CAUSE DEATH OR PERSONAL INJURY.



"WARNING" indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury



#### FAILURE TO FOLLOW THIS WARNING MAY CAUSE INJURY OR DAMAGE TO EQUIPMENT.

"CAUTION" indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to equipment

### 2.2 | GENERAL RULES & PRECAUTIONS

An operator of any type of work platform is subject to certain hazards that cannot be protected by mechanical means. It is therefore essential that operators be competent, careful, physically and mentally fit and thoroughly trained in safe operation of this machine.

Although Custom Equipment, LLC. Conforms to specified ANSI & OSHA, it is the responsibility of the owner to instruct operators with the safety requirements made not only by Custom Equipment, LLC, but by the various safety boards in your area, as well as additional requirements set forth by ANSI and OSHA. If you come across a situation that you think might be unsafe, stop the platform and request further information from qualified sources before proceeding.



#### NEVER REACH BETWEEN SCISSORS LINKS OR PROP UP PLATFORM.



WHEELS EXTENDING BEYOND THE SIDES OF THE BASE MAY OCCUR IN TIGHT TURNING SITUATIONS.

OPERATIONS & SAFETY HB-P3.6

## 2.3 | SAFETY FEATURES

- Puncture-proof Wheels.
- Guardrails--1.1 m height with 15 cm kick plates.
- Non-slip Deck.
- Entrance Gate.
- Automatic Parking Brake.
- Free Descent Protection. A pressure compensated flow control valve is installed in the hydraulic circuit to prevent the platform from descending in case of a ruptured hydraulic hose. The platform is hydraulically locked with a check valve and has controlled descent when valve activates.
- Decals. Danger, Caution, and Warning decals are displayed at various locations on this unit.
- Key Switch Security. A key switch is required to prevent unauthorized use.

# 2.4 | SAFETY INDICATORS & INTERLOCKS

#### Load Sensing

Movement is inhibited when the load exceeds the rated load and elevating is attempted from the stowed position. When elevating begins, an audible alarm sounds and the overload indicator lights up to indicate that the load control system is functional. If the load is less than rated load, the light and alarm will stop, and elevating may continue. If the rated load is exceeded, the alarm and light will continue and the platform will not elevate. Remove the excess load before continuing operation.

#### Armguard

When lowering the platform, the platform will stop when the ends of the scissors are 50mm apart for 3 seconds. Release the enable button. Look around all sides of the scissors to check for persons at risk. Then continue lowering the platform. If elevating platform less than 50mm, the lift will not descend due to the armguard feature. Elevate the platform higher before lowering, or use the manual override in case of emergency.

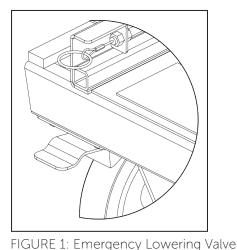
#### Descent / Motion Alarm

An audible alarm sounds when the machine is lowering.

### 2.5 | SAFETY CONTROLS

#### Descent - Manual Override

For manually lowering the scissors, a manual down valve on the cylinder is provided. To lower the scissors, pull the cable located near the rear of the machine.



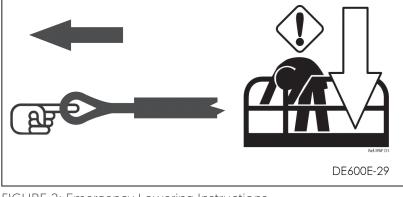


FIGURE 2: Emergency Lowering Instructions



# IF PLATFORM SHOULD FAIL TO LOWER, DO NOT ATTEMPT TO CLIMB DOWN THE BEAM ASSEMBLY. SERIOUS INJURY MAY RESULT. HAVE AN EXPERIENCED OPERATOR USE THE EMERGENCY LOWERING PROCEDURE TO SAFELY LOWER THE PLATFORM.

#### **Emergency Stop**

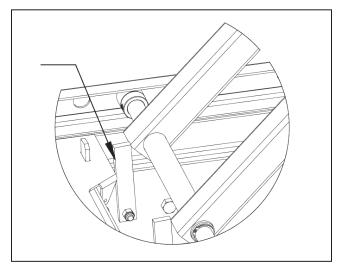
This lift is equipped with two emergency stop switches, one at the platform control and one at the base control, that when activated, will render the unit inoperable until reset. To reset, pull the button out.



PUSHING THE EMERGENCY STOP BUTTON WILL APPLY BRAKES IMMEDIATELY. THIS MAY CAUSE UNEXPECTED PLATFORM MOVEMENT AS THE MACHINE COMES TO A SUDDEN STOP. BRACE YOURSELF AND SECURE OBJECTS ON THE PLATFORM DURING OPERATION OF THE MACHINE.

### 2.6 | MAINTENANCE LOCK

The maintenance lock must be placed into position whenever the machine is being serviced in a partially raised position. Serious injury and/or death could result if maintenance lock is not used properly.





### 2.7 | SAFETY GUIDELINES

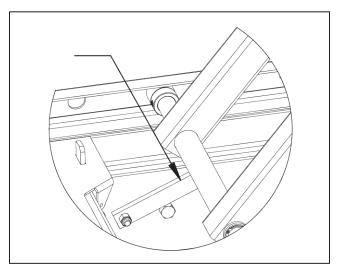


FIGURE 4: Maintenance Pin storage

#### Only qualified operators may operate this unit.

- All operators must read and understand the Operation and Safety Manual. They must understand all decals and warning labels on unit.
- Do not work on platform if your physical condition is such that you feel dizzy or unsteady in any way.
- Do not neglect/misuse machine. Report any misuse of equipment to proper personnel.
- Prevent unauthorized use; when unit is not in use, remove key.
- It is recommended all personnel on unit wear approved personal protective equipment (PPE), i.e. head gear.

#### Use machine only for purposes for which it was intended.

- Lift should never be used as a crane.
- Do not exceed the load capabilities of the platform.
- Distribute load evenly over platform floor area.
- Never use unit as electrical grounds for arc welding.
- Do not override any hydraulic, mechanical, or electrical safety devices.

#### Check job site for unsafe working conditions.

- Watch out for others. Keep others clear of operating platform. Never allow others to pass under a raised platform or position the platform over someone.
- Avoid contact with fixed (buildings, etc.) or moving (vehicles, cranes, etc.) objects. Check work area for overhead obstructions or possible hazards.
- Follow any applicable national traffic regulations.
- Use indoors only. Lift is not designed for windy conditions or electrical storms.
- Unit must be on hard level surface before elevating. Do not operate on incline or uneven surface.
- You must maintain a clearance between any part of the machine, or its load, and any electrical line or apparatus. Follow local power line clearance regulations.
- You must maintain a clearance between any part of the machine, or its load, and any electrical line or apparatus. Follow local power line clearance regulations.

# HY-BRID LIFTS



# DO NOT OPERATE MACHINE NEAR POWER LINES. THE PLATFORM AND ENCLOSURES ARE NOT INSULATED. EQUIPMENT IS ONLY AS SAFE AS THE OPERATOR.

- Do not use ladders or scaffolding on the platform to obtain greater height.
- Do not enter or exit platform while machine is in motion.
- Never mount or dismount a raised platform.
- Make sure entry gate is secured before operating machine from the platform.
- Never belt or tie off to an adjacent structure.
- Secure tools and materials.
- Personnel must maintain a firm footing on the platform floor and work only within the platform area.
- Before operation, ensure that the machine is properly serviced.
- Do not use machine if it is not working properly.
- Make sure platform rails and pins are secured.
- Operator shall use the maintenance lock when performing all types of maintenance procedures.
- Do not smoke while charging the battery.

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# **SECTION 3 | DECALS**

## 3.1 | DECAL LOCATIONS

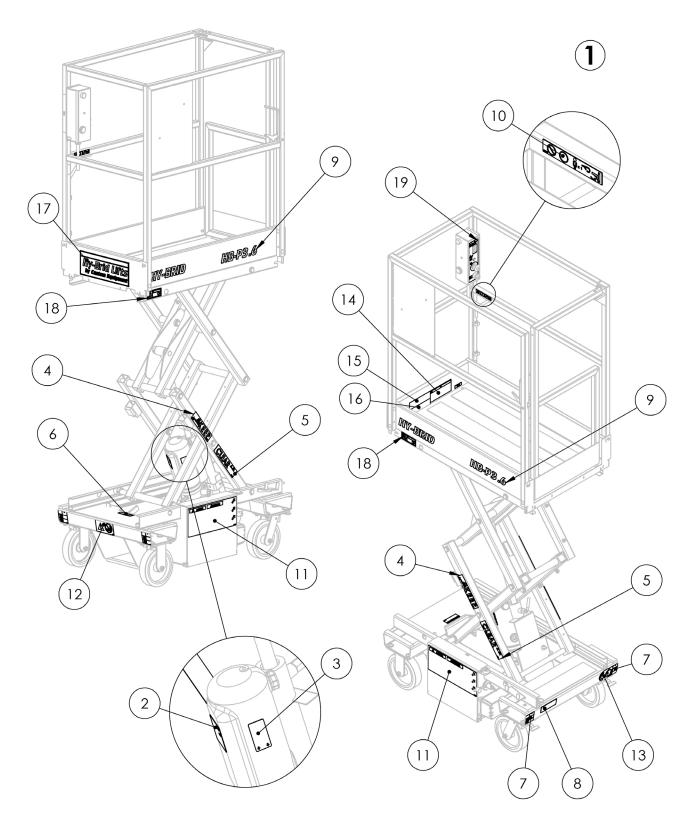


FIGURE 5: Decal Locations

# 3.2 | DECAL MEANING OR DESIGNATION

Item #	Part Number	Part Description	Notes	Qty	Superseded By
1	143-21-006-51-К	DECALS,HB-P3.6	DECAL SET	1	
2	DE674	DECAL,HYDR FLUID		1	
3	DE673	DECAL,HYDR FLUID		1	
4	DE727	DECAL,KEEP		2	
5	DE728	DECAL,CLEAR		2	
6	DE600E-14	DECAL, MAINT LOCK		1	
7	DE600E-24F	DECAL,WHEEL LOAD HB-P3.6		4	
8	DE600E-29	DECAL,E-DOWN	SUPERSEDED;	1	DE751
8	DE751	DECAL,E-DOWN CABLE		1	
9	DE601	DECAL,LOGO HY-BRID	SUPERSEDED;	1	DE821
9	DE603-5	MODEL# DECAL-HB-P3.6		2	
9	DE821	DECAL,LOGO HY-BRID		1	
10	DE613	DECAL, LANYARD ATTACHMENT	SUPERSEDED;	1	DE746
10	DE746	DECAL, LANYARD ATTACHMENT		1	
11	DE666	DECAL, LWR		1	
12	DE675	DECAL,NO FORK		1	
13	DE718	DECAL,CE		1	
14	DE706	DECAL,UPR HB		1	
15	DE726	DECAL,CAPACITY,500#,1P,I,WO/SO		1	
16	DE730	DECAL,OL ALARM		1	
17	DE821	DECAL,LOGO HY-BRID		1	
18	DE851	DECAL, PF HOLE WARNING		2	
19	DE669	DECAL, CONTROL UPR	E04-10000-E04-10346	1	
19	DE738	DECAL, CONTROL UPR		1	

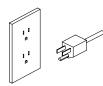
#### 3.3 | DECAL SYMBOLS

5.5   DECAL STMDOLS	
E Company	<ul> <li>No Unauthorized Use</li> <li>Do not operate this machine unless you have been trained in safe operation.</li> <li>Training includes complete knowledge of the safety and operating instructions contained in the manufacturer's manual, your employer's work rules, and applicable government regulations.</li> <li>An untrained operator subjects himself and others to death or serious injury.</li> </ul>
	<ul> <li>Read and understand all dangers and warnings in the operator's manual before operating this machine.</li> <li>Improper use of this machine could cause death or serious injury.</li> <li>Inspect machine and make sure that it is operating properly, that all name plate and hazard signs are in place and legible, and that the machine is in accordance with the manufacturer's maintenance requirements contained in the operating and maintenance manual and the daily safety checklist.</li> </ul>
××	<ul> <li>Crushing Hazard</li> <li>Do not enter the space beneath the work platform or scissor structure unless the maintenance lock is in place.</li> </ul>
	<ul> <li>Refer to Maintenance Manual</li> <li>Only qualified service personnel may service the machine. Failure to comply with listed safety precautions may result in machine damage, personnel injury, or death</li> </ul>

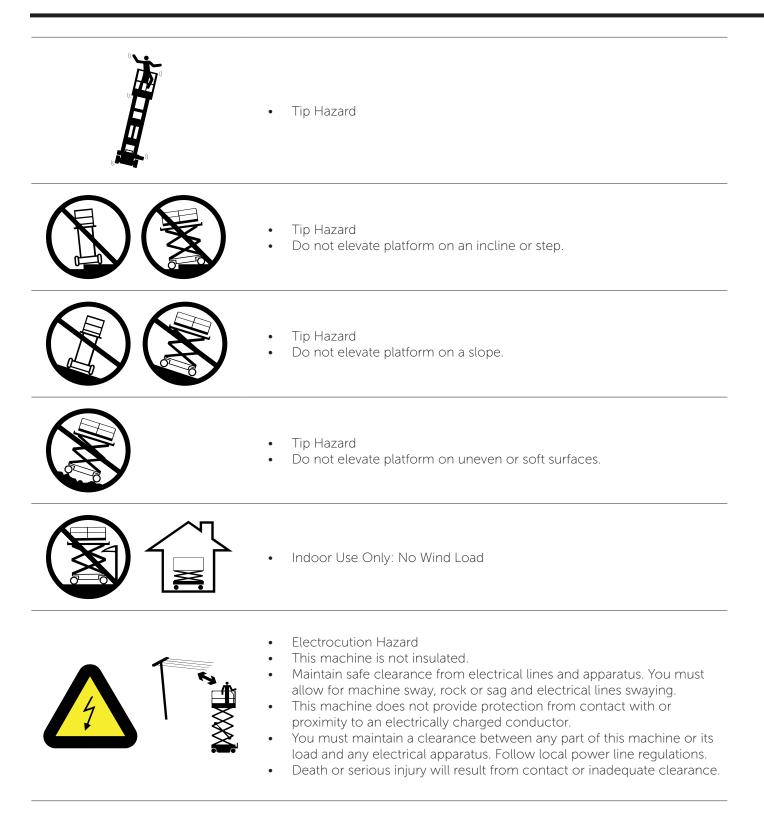
personnel injury, or death.
Replace designated items with manufacturer's specified equipment only. Failure to use these items may cause instability of platform.



- Batteries produce explosive gas. Only charge batteries in a wellventilated area.
- Do not expose to sparks or flames.
- Do not smoke while charging battery.



Battery Charger Cord



	Emergency Lowering
	• For safety and controlled handing, it is not recommended to move the unit on a slope greater than 5°
+	Battery disconnect
	• Fork pocket
arepsilon	• Hydraulic oil level
רער	Engaging mechanical Action: Enable Switch
	Lanyard anchorage point location: Capacity 1 Person
	<ul> <li>Lanyard anchorage points are for work positioning restraints only, not for fall protection.</li> <li>Use of fall arrest systems attached to anchorage points on mobile equipment may cause machine to tip, resulting in serious injury or death.</li> </ul>

HB-P3.6

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# **SECTION 4 | TRANSPORT, HANDLING & STORAGE**

### 4.1 | PRELIMINARY UNPACKING INSTRUCTIONS AND DEALER INSPECTION

Maintenance locks must be engaged prior to inspecting or servicing the unit when the platform is elevated. Inspect machine for any possible damage during shipment; perform a pre-delivery inspection. See checklist in the Maintenance Manual. Reset emergency stop switches, if necessary.

# 4.2 | STORAGE

After periods of storage, exposure to extremes of ambient conditions-heat, cold, moisture, dust etc., inspect the machine. Refer to the Pre-Delivery/ Frequent Inspection Checklist in the Maintenance Manual.

# 4.3 | TRANSPORTATION

Lower the work platform to the down position and check entire machine for loose or unsecured items. Remove any loose items from machine.

The machine can be pushed by lifting the brake levers behind each rear wheel. To resume normal operation, make sure both brake levers are down. Do not push at speeds more than 2 mph (0.9 m/s).

Do not attempt to push or tow unit with the brakes applied. Severe gear damage will occur. Towing is not recommended.

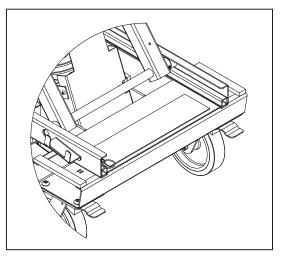


FIGURE 7: Rear Brakes

# 4.4 | LIFTING AND TIE-DOWN POINTS

Lower the work platform to the down position. Turn key switch to off position. For safety and controlled handling, it is not recommended to move the unit on a slope greater than 5°. Check entire machine for loose or unsecured items. Remove any loose items from machine. Apply manual brake lock on rear wheels.

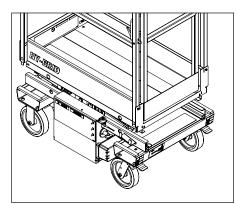


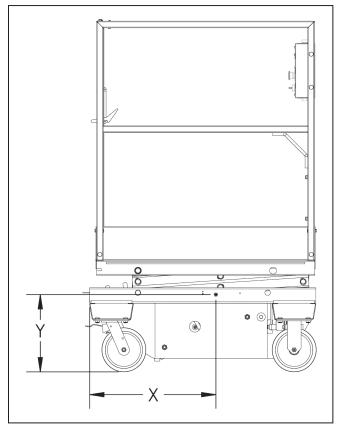
FIGURE 6: Tie-Down Points

Tie-down points are provided in the front and rear of the machine for securing the machine on a trailer or truck bed for transport between places of use. They may also be used as lift points.

### 4.5 | FORK LIFT POCKETS

Fork lift pockets are provided on the side of the unit for loading and unloading. Do not use a forklift underneath the machine from the back. When moving machine with a forklift, do not let machine slide along floor. Bring forklift to a stop and then gently lower the machine.

#### **Center of Gravity**



Center of Gravity	X Axis	Y Axis
НВ-Р3.6	54.7 cm	38.3 cm

FIGURE 8: Center of Gravity

# HY-BRID LIFTS"-

# 5.1 | BEFORE YOU OPERATE

Before use each day or at the beginning of each shift, the machine shall be given a visual inspection and functional test. Repairs (if any) must be made prior to operating the machine, as it is critical to ensure safe operation of the machine. A checklist for pre-start inspection can be found in the Daily Maintenance section of this manual.

# 5.2 | CONTROLS

#### **Platform Controls**

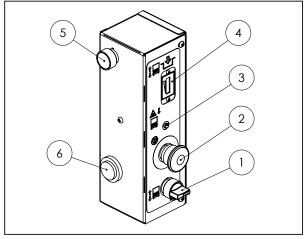
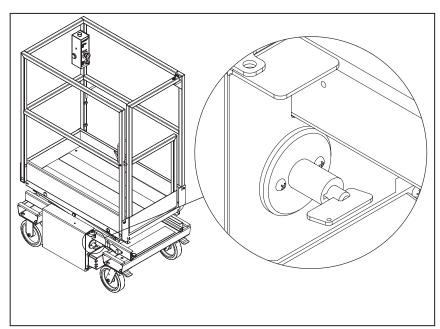


FIGURE 9: Upper Controls

Item	Control/Indicator
1	Up/Down Rotary Switch Operation described as follows
2	Emergency Stop Operation described in Section 2.4
3	Overload Indicator Light
4	Battery Voltage Meter
5	Lift Enable Button Operation described as follows
6	Alarm Sounds for descent, overload

#### **Master Power Switch**



- Check that the work area is safe
- It is not recommended to manoeuvre the unit on a slope greater than 5°
- Check that master power switch is in "ON" position
- Machine must be on a hard, level surface before operation. Check that bubble level is centered
- Engage the manual breaks on the rear casters before elevating the platform

FIGURE 10: Master Power Switch On



#### THE OPERATOR MUST BE AWARE OF THE ENVIRONMENT. DO NOT RAISE THE PLATFORM IF THE MACHINE IS NOT ON A FIRM, LEVEL SURFACE.

#### **Bubble Level and Brakes**

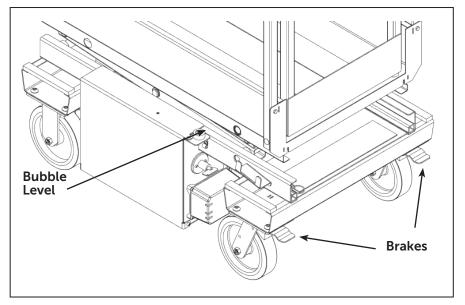


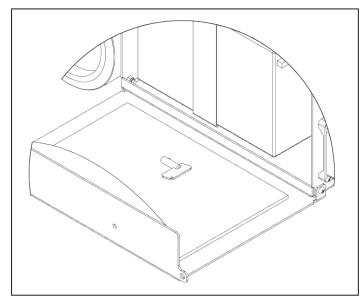
FIGURE 11: Check bubble levels and manually engage brakes

• Enter the work platform in the stowed position using the constant three point method.

• Follow all general rules and precautions stated in this manual.

#### 5.3 | SHUT DOWN

- When finished with the machine, place the platform in the stowed position.
- Carefully exit the platform using the constant three point contact method.
- NEVER JUMP OFF THE PLATFORM
- Park the machine on a level surface.
- Turn master power switch to off position.
- To prevent unauthorized use, remove the key from the master power switch.
- The key may be placed in the manual pouch and the cabinet padlocked to secure the machine in the isolated position.



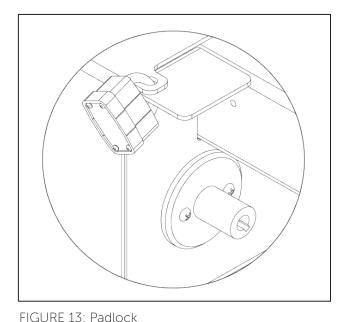


FIGURE 12: Key Removed

# 5.4 | ELEVATING AND LOWERING

To raise or lower the platform, press the Elevate / Lower Enable Button. While holding down the Enable Button, rotate and hold the Elevate/Lower switch until the platform is in the desired position.

When lowering the platform, the platform will stop when the ends of the scissors are 50mm apart for 3 seconds. Release the enable. Look around all sides of the scissors to check for persons at risk. Then continue lowering the platform. (See Safety Features on page 9).

### 5.5 | DAILY MAINTENANCE

Regular inspection and conscientious maintenance is important for efficient economical operation of this machine. It will help to assure that equipment will perform satisfactorily with a minimum of service and repair. Make checks at the stated intervals or more frequently if required by local operation conditions. A Pre-Start Inspection Checklist is included in this manual. In addition, Pre-Delivery/Frequent and Monthly Checklists are included in a separate Maintenance Manual. Also refer to the Maintenance Manual for replacement part information.

HY-BRID LIFTS



FAILURE TO PERFORM INSPECTIONS AND PREVENTATIVE MAINTENANCE AT RECOMMENDED INTERVALS MAY RESULT IN THE UNIT BEING OPERATED WITH A DEFECT THAT MAY RESULT IN INJURY OR DEATH OF THE OPERATOR. REGULAR INSPECTION AND CONSCIENTIOUS MAINTENANCE IS IMPORTANT TO EFFICIENT ECONOMICAL OPERATION OF THIS MACHINE. IT WILL HELP TO ASSURE THAT EQUIPMENT WILL PERFORM SATISFACTORILY WITH A MINIMUM OR SERVICE AND REPAIR. MAKE CHECKS AT THE STATED INTERVALS OR MORE FREQUENTLY IF REQUIRED BY LOCAL OPERATING CONDITIONS. A PRE-START INSPECTION CHECKLIST IS INCLUDED IN THIS MANUAL.

Additional maintenance for use by trained personnel is included in a separate Maintenance Manual. Refer to the Maintenance Manual for Pre-Delivery/Frequent and Monthly Checklists and replacement part information.

#### 5.6 | CHARGING THE BATTERY

This unit is equipped with a deep cycle 12-volt battery. The care and maintenance of your battery has much to do with how well this unit functions. Battery wiring should be checked monthly.

NOTE: The surrounding temperature greatly affects the power reserve within a battery.

EXAMPLE: A battery that is 100% charged at 80° F (27°C) drops to 65% at 32°F (0°C). At 0°F (-18°C), this battery will drop to 40% efficiency.



#### LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES. KEEP SPARKS AND FLAME AWAY FROM BATTERIES. DO NOT SMOKE WHILE CHARGING.

Do not operate unit while charging. Shortened battery life will result.

#### To Charge:

- Park the machine on a level surface.
- Plug charger into AC outlet until charged.
- For best battery life, leave charger plugged in until machine will be used again. The charger will maintain the battery charge.

The charger will not begin the charging cycle on severely discharged batteries.

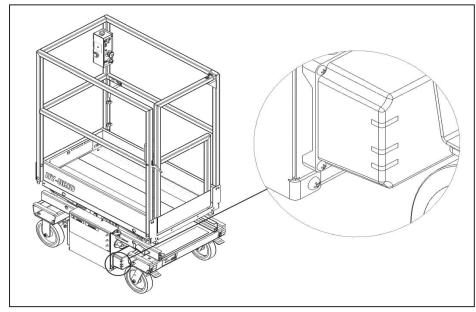


DO NOT OPERATE UNITE WHILE CHARGING



NEVER ADD ACID TO THE BATTERY

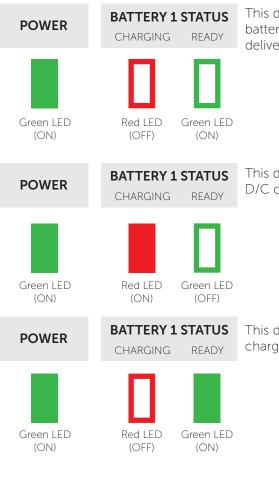
#### 5.7 | BATTERY DISPLAYS



Battery solution is at its proper strength when the battery is manufactured. Use distilled water and keep fluid up to proper level. When required, water should be added to battery after charging, unless water level is below the plates.

FIGURE 14: Battery Charger LED Display

#### Reading the Battery Displays



This display indicates that the power is on but there is no connection to a battery. The charger must see approximately five (5) volts on a battery to deliver D/C current.

This display indicates that power is on and that both outputs are delivering D/C current to the batteries.

This display indicates that power is on and that the output is finished charging and is in a float maintenance model.

OPERATIONS & SAFETY HB-P3.6 HY-BRID LIFTS

# **SECTION 6 | PRE-START INSPECTION CHECKLIST**

### 6.1 | PRE-START INSPECTION CHECKLIST



THIS CHECKLIST MUST BE USED AT THE BEGINNING OF EACH SHIFT OR AFTER EVERY SIX TO EIGHT HOURS OF USE. FAILURE TO DO SO COULD AFFECT THE SAFETY OF THE OPERATOR.

MODEL NUMBER: HB-P3.6\_\_\_\_\_\_ SERIAL NUMBER: \_\_\_\_\_

- Keep inspection records up-to-date.
- Record and report all discrepancies to your supervisor. •
- A dirty machine cannot be properly inspected. •

#### Y – Yes/Acceptable N – No/Unacceptable R – Repaired

Visual Inspections         Check that there are no damaged, dented, or bent structural members. <ul> <li>□</li> <li>□</li> </ul> There are no loose or missing parts.       □       □       □       □         Check that warning and instructional labels are legible and secure. Ensure that load capacity is clearly       □       □         marked.       □       □       □         Check the platform rails and safety gate for damage.       □       □         Platform and base controls are not missing. damaged, or disconnected.       □       □         Hydraulic hoses are not torn, frayed, or disconnected.       □       □         Hydraulic hoses are not torn o loose, and there are no leaks. Check that hoses and cables have no       □       □         Check the hydraulic fluid level with the platform fully lowered.       □       □         Check the tires for damage.       □       □       □         Check that all snap rings are secure in grooves on pivot pins.       □       □         Functional Tests       □       □       □         Gate closes automatically and latches (alignment can be adjusted with screw-on toe board or railing).       □       □         Platform Controls – Check all switches and push buttons for proper operation:       □       □       □	Description	Y	N	R	
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Brakes engage and hold when platform is elevated.	Brakes engage and hold when platform is elevated.				

DATE \_\_\_\_\_INSPECTED BY \_\_\_\_\_



Push-Around Aerial Work Platform Operation & Safety Manual HB-3.6

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