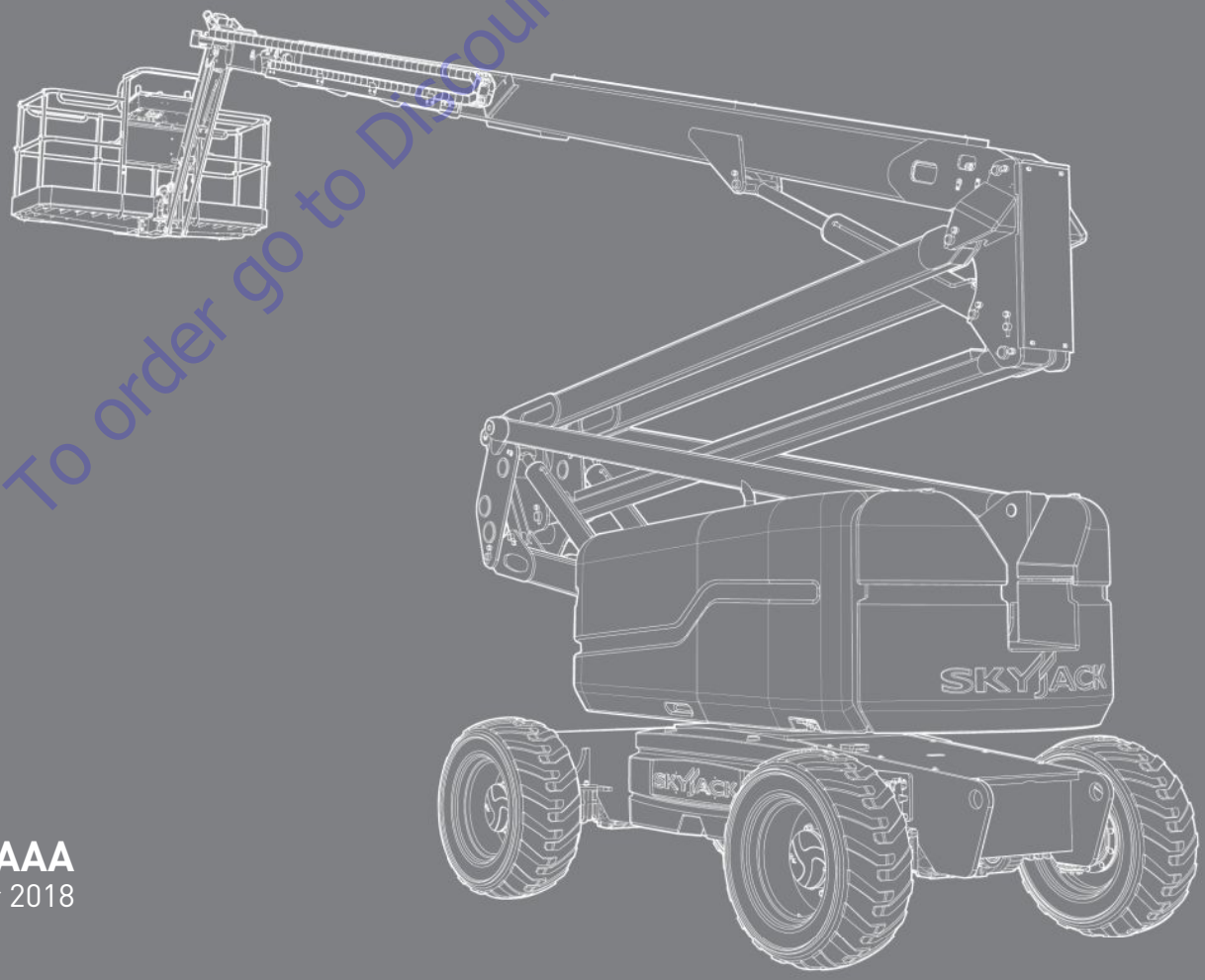
SKYJACK

OPERATING MANUAL

SJ85 AJ

ARTICULATING BOOMS



213217AAA
December 2018
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This manual is based on Serial Number(s):

SJ85 AJ: A303 000 001 & Above

Original instructions in English.

THIS SAFETY ALERT SYMBOL MEANS ATTENTION!

BE ALERT! YOUR SAFETY IS INVOLVED.

The Safety Alert Symbol identifies important safety messages on MEWPs, safety signs in manuals or elsewhere. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

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

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT

IMPORTANT indicates a procedure essential for safe operation and which, if not followed, may result in a malfunction or damage to the MEWP.

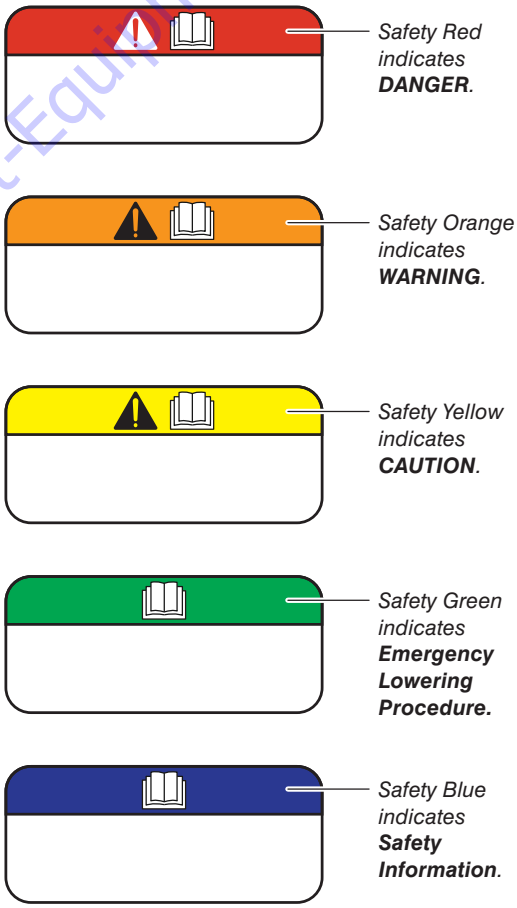


Figure 01 *Label legend*

Table of Contents

Section 1 – About This Mobile Elevating Work Platform (MEWP)

1.1 Read and Heed

Skyjack is continuously improving and expanding product features on its equipment, therefore, specifications and dimensions are subject to change without notice.

1.1-1 Mobile elevating work platform (MEWP) definition

Mobile machine intended for moving persons, tools and material to working positions, consisting of a work platform with controls, an extending structure and a chassis.

1.1-2 Purpose of equipment

The Skyjack SJ85 AJ Articulating Boom MEWP is designed to move personnel, tools and materials to working positions.

1.1-3 Use of equipment

The MEWP is a highly maneuverable, mobile work station. Work platform elevation and elevated driving must only be done on a firm, level surface. It can be driven over uneven terrain only when the platform is fully lowered.

1.1-4 Manual

The operating manual is considered a fundamental part of the MEWP. It is a very important way to communicate necessary safety information to users and operators. A complete and legible copy of this manual must be kept in the provided weather-resistant storage compartment on the MEWP at all times.

1.1-5 Operator

The operator must read and completely understand this operating manual, the safety panel label located on the platform, the limitations, operating procedures, operator's responsibility for maintenance and all other warnings and instructions in this manual and on the MEWP.

Compare the labels on the MEWP with the labels found within this manual. If any labels are damaged or missing, replace them immediately.

Only trained and authorized personnel shall be permitted to operate a MEWP.

The operator must be familiar with the employer's work rules and related government regulations and be able to demonstrate the ability to understand and operate this make and model of MEWP in the presence of a qualified/competent person.

1.1-6 Service policy and warranty

Skyjack warrants each new product to be free of defective parts and workmanship for the first 2 years or 3000 hours, whichever occurs first. Any defective part will be replaced or repaired by your local Skyjack dealer at no charge for parts or labor. In addition, all products have a 5 year structural warranty. Contact the Skyjack Service Department for warranty statement extensions or exclusions.

1.1-7 Ownership of machine

Notify Skyjack of machine ownership. If you have sold or transferred any machine, promptly notify Skyjack of new owner's contact information.

1.1-8 Optional accessories

The Skyjack MEWP is designed to accept a variety of optional accessories. These are listed under *Section 7.2*. Operating instructions for these options (if equipped) are located in *Section 5* of this manual.

For non-standard components or systems, contact the Skyjack Service Department.

Include the model and serial number for each applicable MEWP.

About This Mobile Elevating Work Platform (MEWP) Continued

1.1-9 Scope of this manual

1. This manual applies to the ANSI/SAIA and CSA versions of the Articulating Boom MEWP models listed in *Section 7.2*.
   - Equipment identified with “ANSI” meets the ANSI/SAIA A92.20:2018 standard.
   - Equipment identified with “CSA” meets the CSA B354.6:2017 standard.
2. **CSA (Canada)**
   - Operators are required to conform to national, territorial/provincial and local health and safety regulations applicable to the operation of this MEWP.
3. **ANSI/SAIA (United States)**
   - Operators are required by the current ANSI/SAIA A92.22:2018 standards to read and understand their responsibilities in this manual and the manual of responsibilities before they use or operate this MEWP.

1.2 Major Assemblies

The MEWP consists of four major assemblies: the base, turret, boom assembly and platform. Refer to *Figure 02*.

1.2-1 Base

The base is a rigid one-piece weldment. The rear axle is hydraulic motor-driven and has spring-applied, hydraulically released brakes. The front axle is steerable by a hydraulic cylinder and has spring-applied, hydraulically released brakes. The rear axle is coupled to the front axle by a drive shaft.

1.2-2 Turret

The turret rotates 360 degrees continuously. Upon the turret are two compartments. One compartment contains the engine, hydraulic pumps, battery and swing drive. The other compartment contains the base control console, main hydraulic manifold, function valves, hydraulic and fuel tanks.

1.2-3 Boom assembly

The boom assembly consists of the riser, telescoping fly and main boom assembly. The riser is mounted on the turret with the main boom attached to the riser. The riser mechanism uses two double-acting hydraulic cylinders with holding valves to control vertical movement. The SJ85 AJ model is equipped with a jib, controlled by a double-acting hydraulic cylinder.

1.2-4 Platform

The platform is constructed of a skid-resistant deck surface allowing visibility through the deck and a high tubular steel railing system with mid rails and toe boards. The platform can be entered through a tri-entry drop bar or an optional swing gate at the side of the railing system. The platform can be rotated in either direction. An AC outlet is also located on the platform.

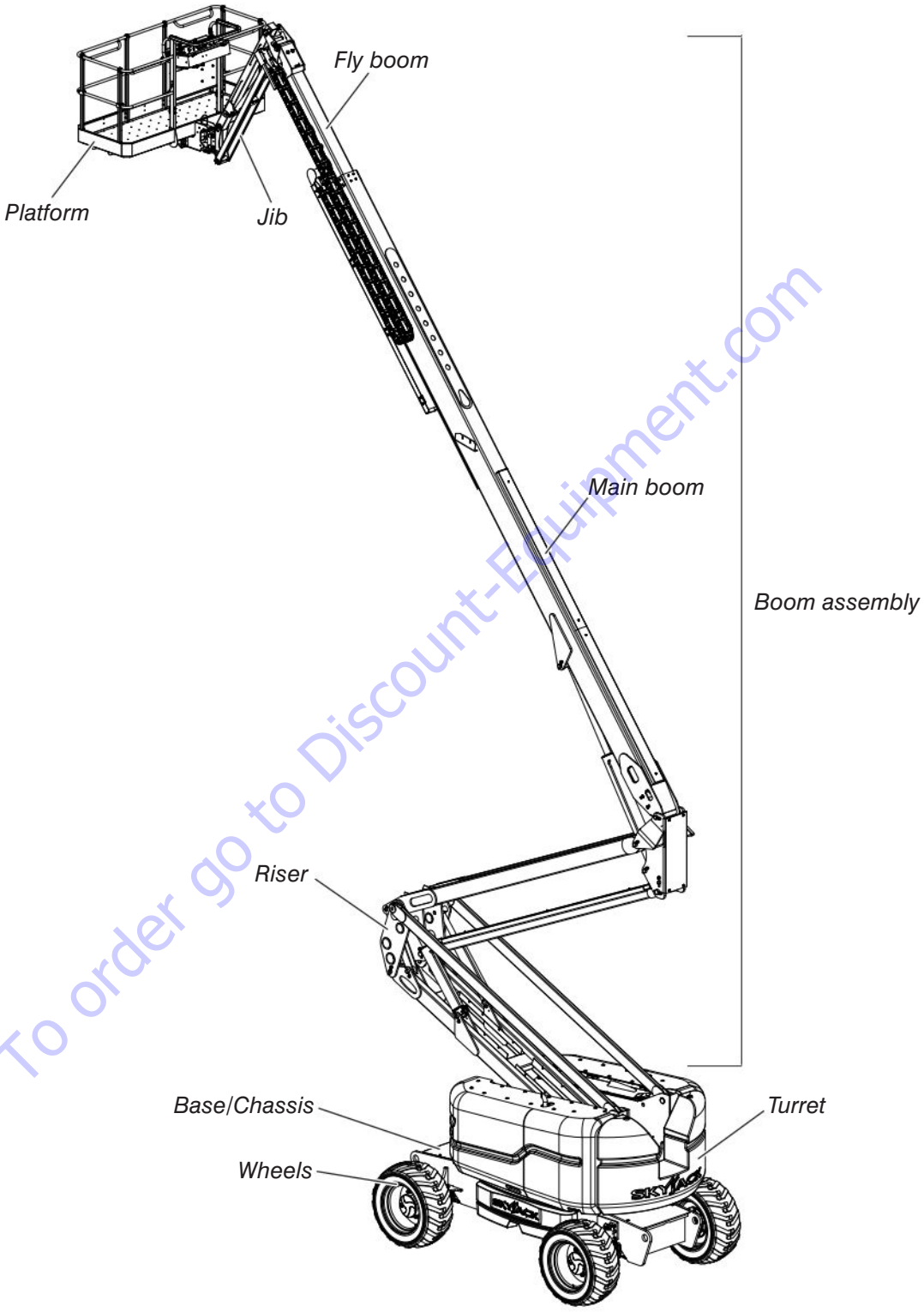


Figure 02 *Major assemblies*

1.3 Serial Number Nameplate

The serial number nameplate (refer to *Section 8*), located at the rear of the MEWP, lists the following:

- Model number
- Type
- Group
- Serial number
- High capacity zone and low capacity zone
- Capacity and maximum number of persons
- Maximum work platform height
- Maximum wind speed
- Maximum manual force
- Machine weight
- Voltage
- Maximum incline
- System pressure
- Lift pressure
- Model year
- Year of manufacture

1.4 Responsibility for Maintenance

1.4-1 Operator's responsibility for maintenance

⚠ WARNING

Maintenance must be performed by trained and qualified/competent personnel who are familiar with mechanical procedures.

Death or serious injury could result from the use of a MEWP that is not properly maintained or kept in good working condition.

The operator must be sure that the MEWP has been properly maintained and inspected before using it.

The operator must perform all the daily inspections and function tests found in *Section 4.4*, even if the operator is not directly responsible for the maintenance of this MEWP.

1.4-2 Maintenance and inspection schedule

Refer to service manual for frequent/periodic (every 3 months or 150 hours) and annual inspection details.

The actual operating environment of the MEWP may affect the maintenance schedule.

⚠ WARNING

Use original or manufacturer-approved parts and components for the MEWP.

NOTE

Refer to Skyjack's website **www.skyjack.com** *for the latest service bulletins prior to performing frequent/periodic or annual inspections.*

1.4-3 Owner's inspections

It is the responsibility of the owner to arrange daily, quarterly (or 150 hours) and annual inspections of the MEWP. Refer to the service manual for recommended maintenance and inspection areas and intervals. A record of annual inspection is kept on a label located close to the base control console on the cowling (refer to *Section 7.3*).

Section 2 – Operator Safety

⚠ WARNING

Failure to comply with your required responsibilities in the use and operation of the MEWP could result in death or serious injury.

A study conducted by St. Paul Travelers showed that most accidents are caused by the failure of the operator to follow simple and fundamental safety rules and precautions.

You, as a careful operator, are the best insurance against an accident. Therefore, proper usage of this MEWP is mandatory. The following pages of this manual should be read and understood completely before operating the MEWP.

Common sense dictates the use of protective clothing when working on or near machinery. Use appropriate safety devices to protect your eyes, ears, hands, feet and body.

Any modifications from the original design are strictly forbidden without written permission from Skyjack.

2.1 Electrocution Hazard

This MEWP is not electrically insulated. Use extreme caution around high-voltage overhead power lines and parts. Maintain a Minimum Safe Approach Distance (MSAD) of 10 ft from sources of power (refer to *Figure 03*). If the work requires to be closer than 10 ft, stop and consult a qualified person with respect to electrical transmission and distribution to have appropriate measures taken.

Adhere to all the federal/national, state/provincial, or local safety regulations for your own protection.

No part of the MEWP or payload must be brought closer to any energized overhead electrical conductor with a nominal phase voltage rating as specified in Figure 03.

Minimum Safe Approach Distance	
Voltage Range	**Minimum Safe Approach Distance**
≤ 50 KVA	3 m (10 ft)
> 50 KVA	Stop and consult a qualified person with respect to electrical transmission and distribution to have appropriate measures taken
FAILURE TO AVOID THIS HAZARD WILL RESULT IN DEATH OR SERIOUS INJURY	

Figure 03 *Minimum safe approach distance*

⚠ DANGER

Never approach any power line with any part of the MEWP. Use extreme caution—contact from any power line can cause serious injury or death.

IMPORTANT

Always assume the electrical power sources and overhead lines are energized.

MAINTAIN a minimum safe approach distance from sources of high-voltage power.

DO NOT operate the MEWP during lightning or storms. Take into account the effects of weather (e.g., wind, rain and snow) on the safe operation of the MEWP.

⚠ WARNING

Do not use the MEWP as a ground for welding.

2.2 Safety Precautions

Know and understand the safety precautions before going on to next section.

⚠ WARNING

Failure to heed the following safety precautions could result in tip over, falling, crushing, or other hazards leading to death or serious injury.

KNOW all national, state or territorial/provincial and local rules which apply to your MEWP and jobsite.

TURN main power disconnect switch off when leaving the MEWP unattended. Remove the key to prevent unauthorized use of the MEWP.

WEAR all the protective clothing and personal safety devices issued to you or called for by job conditions.

DO NOT wear loose clothing, dangling neckties, scarves, rings, wristwatches or other jewelry while operating this MEWP.

AVOID entanglement with ropes, cords or hoses.

AVOID falling. Stay within the boundaries of the guardrails. Maintain firm footing on the platform floor at all times while working thereon.

ENSURE all occupants wear personal fall protection equipment.

DO NOT raise the MEWP or operate elevated in windy or gusty conditions that exceed the limits specified in *Section 7.7*.

DO NOT increase the lateral surface area of the platform. Increasing the area exposed to the wind will decrease MEWP stability. Avoid tenting.

DO NOT elevate the MEWP if it is not on a firm, level surface.

ENSURE ground condition assessment considers subsurface voids such as cellars, basements, culverts, and pipes.

DO NOT drive elevated near depressions or holes of any type, loading docks, debris, drop-offs and surfaces that may affect the stability of the MEWP.

DO NOT elevate or drive elevated on a slope. Elevated driving must be done on a firm, level surface.

If operation in areas with holes or drop-offs is absolutely necessary, elevated driving shall not be allowed. Position the MEWP horizontally only with the platform fully lowered. After ensuring that all 4 wheels or outriggers (if equipped) have contact with a firm, level surface, the MEWP can be elevated. After elevation, the drive function must not be activated.

DO NOT drive elevated on a soft or uneven surface.

DO NOT ascend or descend a grade steeper than 45% (4WD). Boom elevated driving must only be done on firm, level surfaces.

DO NOT operate an MEWP that has ladders, scaffolding or other devices mounted on it to increase its size or work height. It is prohibited.

DO NOT exert horizontal (manual) force on MEWP that exceeds the limits specified in *Section 7.7*.

DO NOT use the MEWP as a crane. It is prohibited.

DO NOT climb on boom arm assembly. It is prohibited.

DO NOT sit, stand or climb on the guardrails. It is prohibited.

AVOID overhead obstructions. Be aware of overhead obstructions or other possible hazards around MEWP when lifting or driving.

AVOID crushing hazards. Be aware of crushing hazards when lifting or driving. Keep all body parts inside the MEWP.

BE AWARE of blind spots when operating the MEWP.

ENSURE that there are no personnel or obstructions in the path of travel, including blind spots.

DO NOT lower the platform unless the area below is clear of personnel and obstructions.

DO NOT use boom to push, pull other objects or to lift the chassis.

DO NOT raise the MEWP while it is on a truck, forklift or other device or vehicle.

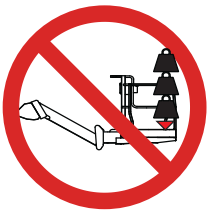
STUNT driving and horseplay are prohibited.

DO NOT use with improperly inflated/damaged tires or wheels. Refer to *Section 4.2-7: Wheel/Tire Assembly*.

DO NOT alter or disable limit switches or other safety devices.

DO NOT use the MEWP without guardrails, locking pins and the entry gate/drop bar in place.

DO NOT exceed the rated capacity of the MEWP.



DO NOT distribute load unevenly.

DO NOT use the MEWP under influence of alcohol or drugs, or if operator's performance is impaired by a medical condition, the influence of prescription or over the counter drugs, or fatigue.

DO NOT attempt to free a snagged platform with lower controls until personnel are removed from the platform.

DO NOT position the MEWP against another object to steady the platform.

DO NOT operate on slippery surfaces not capable of providing adequate traction to stop, drive or steer the MEWP.

DO NOT place materials on the guardrails or materials that exceed the confines of the guardrails unless approved by Skyjack.

DO NOT operate if MEWP is not working properly or if any parts are damaged or worn.

DO NOT leave MEWP unattended with key in key switch.

2.3 Fall Protection

All occupants of this machine must wear Personal Fall Protection Equipment (PFPE) at all times. The guardrail system of the MEWP is the primary fall protection for the occupant(s) of the machine.

⚠ WARNING

Failure to wear personal fall protection equipment may result in death or serious injury.

Use Personal Fall Protection Equipment with a short lanyard in order to minimize the risk of ejection of an occupant from the platform.

All personal fall protection equipment must comply with applicable governmental regulations and must be inspected and used in accordance with the manufacturer's recommendations.

All personal fall protection equipment must be attached only to approved anchorage points within the platform of the MEWP.

⚠ WARNING

Entering and exiting the MEWP should only be done using the three points of contact.

- **Use only equipped access openings.**
- **Enter and exit only when the MEWP is in the fully retracted position.**

- Use three points of contact to enter and exit the platform. Enter and exit the platform from the ground only. Face the MEWP when entering or exiting the platform.
- Three points of contact means that two hands and one foot or one hand and two feet are in contact with the MEWP or the ground at all times during entering and exiting.

⚠ WARNING

An operator should not use any MEWP that:

- **does not appear to be working properly.**
- **has been damaged or appears to have worn or missing parts.**
- **has alterations or modifications not approved by the manufacturer.**
- **has safety devices which have been altered or disabled.**
- **has been tagged or locked out for non-use or repair.**

Failure to avoid these hazards could result in death or serious injury.

2.4 Jobsite Inspection

Ensure operating environment (i.e. operating temperature, Electromagnetic Compatibility (EMC), and hazardous location rating) is suitable to MEWP specifications (refer to *Section 7.5*).

Be sure to follow all local, provincial/territorial/state and national regulations related to operating the MEWP. Do not use MEWP in hazardous locations.

Perform a thorough jobsite inspection prior to operating the MEWP to identify potential hazards in your work area.

Be aware of moving equipment in the area. Take appropriate actions to avoid collision.

It is the responsibility of the operator to perform a job site inspection and avoid the following hazardous situations:

- holes or drop-offs
- slopes
- ditches or soft fills
- floor obstructions, bumps or debris
- overhead obstructions
- electrical cords, hoses and high voltage conductors
- hazardous locations
- inadequate surface support to withstand all load forces imposed by the MEWP (refer to *Section 7.8*)
- wind and weather conditions
- the presence of unauthorized personnel
- the presence of other mobile equipment
- traffic hazards
- other possible unsafe conditions

Section 3 – Familiarization

⚠ WARNING

MEWP Familiarization should be given only to individuals who are QUALIFIED/COMPETENT and TRAINED to operate a MEWP.

⚠ WARNING

Do not operate this MEWP without proper authorization and training. Failure to avoid this hazard could result in death or serious injury.

⚠ WARNING

It is the responsibility of the operator to read, completely understand and follow all instructions and warnings contained in this operating manual and on the MEWP.

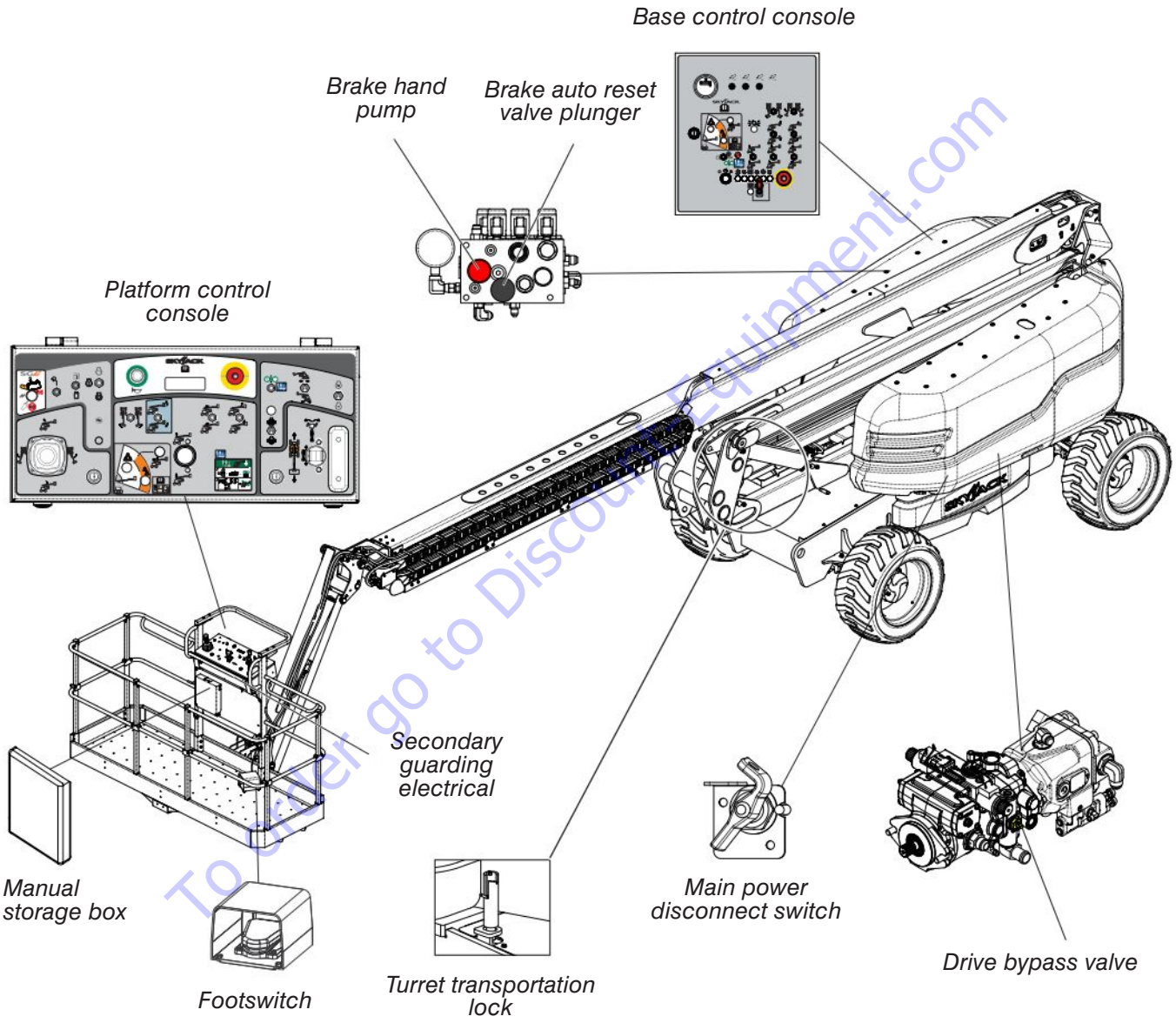
Read and completely understand the operating manual and all warnings and instruction labels (refer to *Section 8*) on the MEWP.

Before operating this MEWP, perform the following tasks:

1. Visual and daily maintenance inspections (refer to *Section 4.2*).
2. Function tests (refer to *Section 4.3*).
3. Jobsite inspection (refer to *Section 2.4*).

FAMILIARIZATION

3.1 Component Identification



3.2 Manual Storage Box

This weather-resistant box is mounted under the control console on the platform. It contains the operating manual and other important documents. The operating manual for this make and model of MEWP must remain with the MEWP and should be stored in this box.

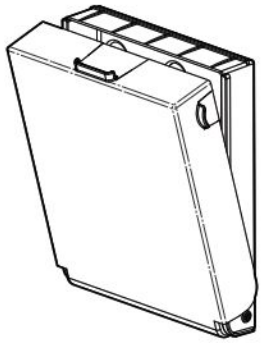


Figure 05 *Manual storage box*

3.3 Control Functions

3.3-1 Main power disconnect switch

This switch is located in the engine compartment near the battery.

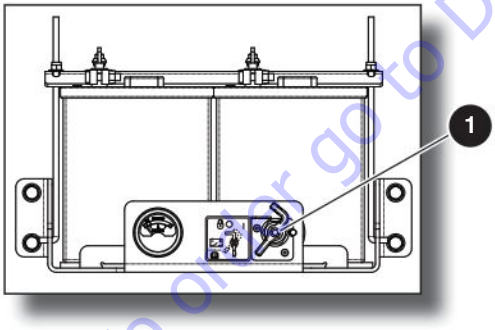


Figure 06 *Main power disconnect switch*

1. **Main power disconnect switch:** This switch, when in off position, disconnects power to all circuits. Switch must be in on position to operate any circuit. Turn switch off when transporting MEWP.

3.3-2 Footswitch

The footswitch is located on the floor of the platform. When depressed and held, it enables controls on platform control console.

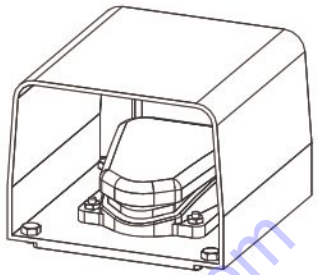


Figure 07 *Footswitch*

NOTE

The footswitch is equipped with a 7-second anti-tiedown feature that deactivates footswitch when operator depresses it for 7 seconds without activating any function.

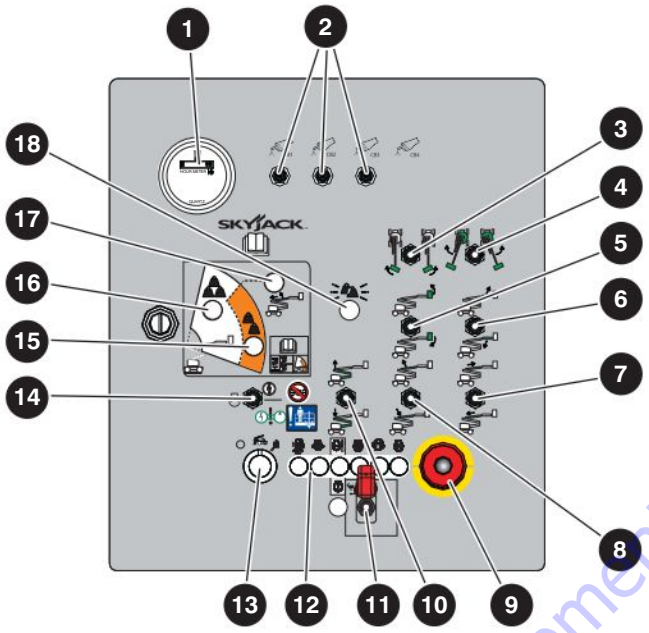
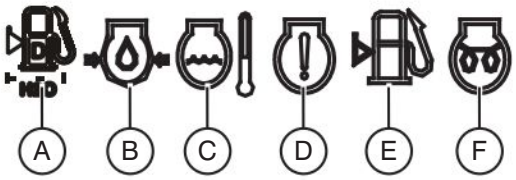


Figure 08 *Base control console*

3.3-3 Base control console

This control console is located in the panel mounted in the control compartment. It has the following controls:

1. **Hourmeter** - This gauge records accumulated operating time of engine.
2. **Circuit breakers** - In the event of a power overload or positive circuit grounding, the circuit breaker pops out. Push breaker back in to reset.
3. **Platform rotation switch** - This switch controls left or right rotation of platform.
4. **Turret rotation switch** - This switch controls left or right rotation of turret.
5. **Platform leveling override switch** - This switch overrides automatic leveling of platform and controls tilting up or tilting down of platform.
6. **Jib up/down switch** - This switch controls up or down movement of jib.
7. **Fly boom extend/retract switch** - This switch controls extension or retraction of fly boom.
8. **Main boom raise/lower switch** - This switch controls raising or lowering of main boom.
9. **Emergency stop button** - This red “mushroom-head” pushbutton disconnects power to control circuit and shuts engine off.
10. **Riser raise/lower switch** - This switch controls raising or lowering of riser.
11. **Positive air shutoff switch (if equipped)** - This switch allows the operator to shut off the air supply to the engine if the engine continues running after the main power is shut down.
12. **Status indicator pilot lights -** These lights indicate operational status and errors in any function in the controls/engine.



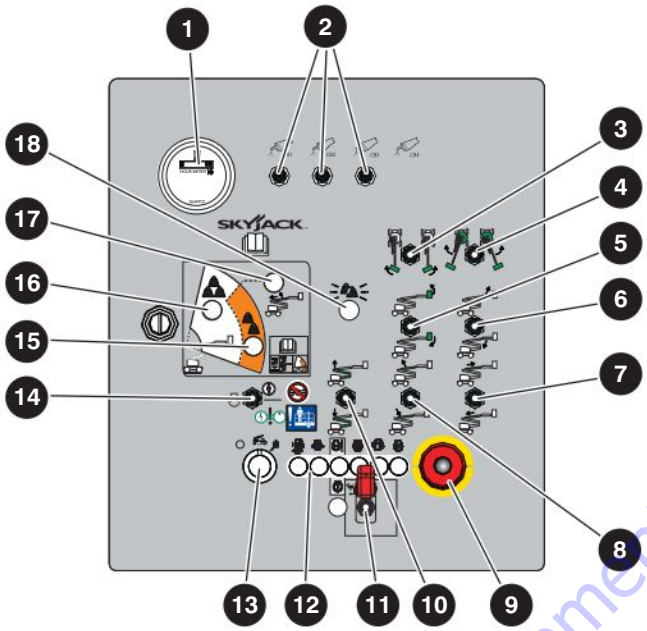


Figure 07 *Base control console*

A. **Water in fuel light** - This light indicates water separator is full. Open drain to release water. Engine damage could occur if ignored for excessive length of time.

B. **Engine oil pressure** - This light indicates low engine oil pressure.

C. **Engine coolant temperature/level** - This light indicates overheating of engine coolant and low level of engine coolant.

D. **Engine** - This light indicates failure in engine control system.

E. **Fuel** - This light indicates low fuel level.

F. **Glow plug (diesel) -** This light illuminates until glow plugs have completed their timed cycle. When the lamp goes out, the engine is ready to be started.

13 **Off/base/platform key switch** - This three-way selector switch allows operator to turn off power to MEWP or to activate either base or platform control console.

14 **Start/function enable/emergency power switch** - This momentary switch, when held in start position, starts engine. When held in function enable position, allows base control functions to operate. Engine speed increases when selected. With engine off, and when held in emergency power unit position, allows base control functions to operate using emergency power unit.

⚠ WARNING

Do not operate boom functions if platform capacity is exceeded.

15 **Low capacity zone indicator light** - Indicates MEWP is in “low” platform capacity zone. Refer to *Section 7.7*.

16 **High capacity zone indicator light** - Indicates MEWP is in “high” platform capacity zone. Refer to *Section 7.7*.

17 **Capacity zone border light** - Indicates MEWP is at limits of travel for high capacity zone. Lower and extend functions are not available.

18 **Overload light** - This red light indicates overload status. Refer to *Section 3.4-7*.

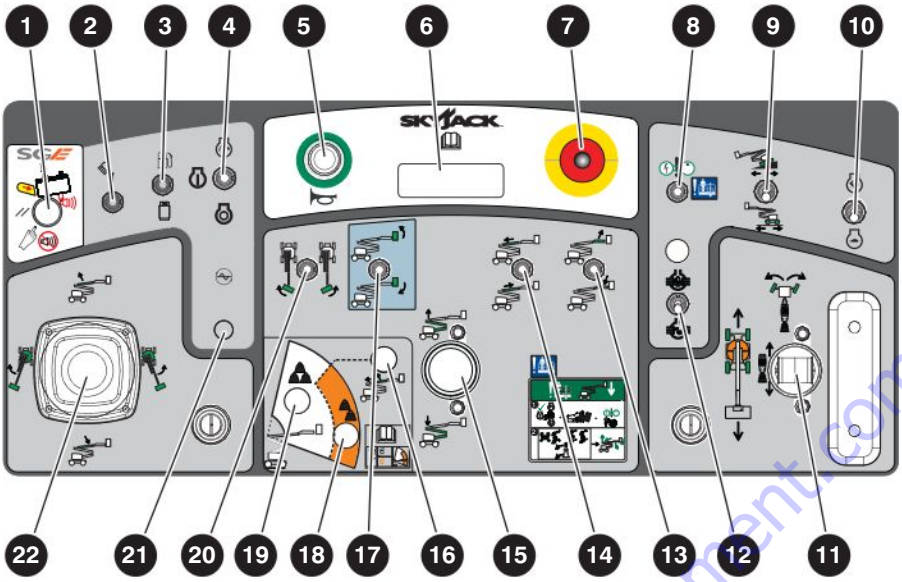
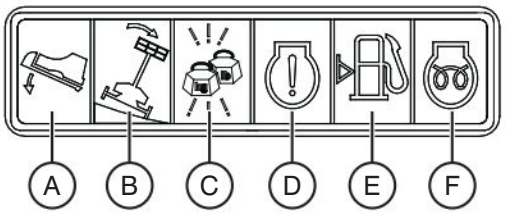


Figure 09 *Platform control console*

3.3-4 Platform control console

This control console is mounted at front guardrail of the platform. It has the following controls:

1. **Secondary guarding electrical (SGE) reset button** - This button, when depressed, shuts off the audible/visual alarm from the SGE.
2. **Work light switch (if equipped)** - This switch turns on work light.
3. **Dual fuel switch (if equipped)** - This switch selects between gasoline or liquid propane gas.
4. **Engine start/on/off switch** - This switch, when held momentarily in start position, starts engine. Once started, the switch returns to on position. When in off position, it turns engine off.
5. **Horn pushbutton** - This pushbutton sounds an automotive-type horn.
6. **Status indicator pilot lights -** These lights indicate operational status and errors in any function in the controls/engine.



A. **Footswitch** - This light illuminates when footswitch is depressed. A 7-second anti-tiedown feature deactivates footswitch when operator depresses it for 7 seconds without activating any function.

B. **Chassis tilt** - This light illuminates when the MEWP chassis is at an inclination that activates the tilt switch. At this inclination, an audible alarm will sound at the platform. Refer to *Section 6.2* for instructions regarding recovery from an inclined position.

C. **Overload light** - This red light indicates overload status. Refer to *Section 3.4-7*.

D. **Engine** - This light indicates failure in engine control system.

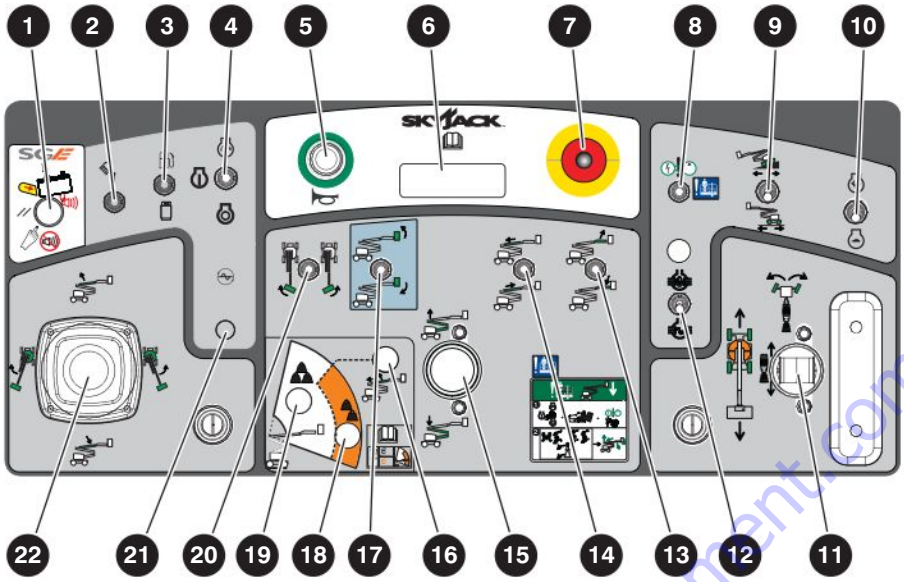


Figure 08 *Platform control console*

E. **Fuel** - This light indicates low fuel level.

F. **Glow plug (diesel)** - This light illuminates until glow plugs have completed their timed cycle. When the lamp goes out, the engine is ready to be started.

7 **Emergency stop button** - This red “mushroom-head” pushbutton disconnects power to control circuit and shuts engine off.

8 **Emergency power unit** - This switch enables emergency power unit when engine is off.

9 **Torque switch** - This switch selects low or high torque. Select low torque (higher speed) or high torque (lower speed). Select high torque when driving on a slope.

10 **Low/high throttle switch** - This switch allows selection between low and high engine throttle speeds.

11 **Drive/Steer controller** - This single-axis lever controls driving forward or backward. The rocker switch controls steering left or right. Internal springs return it to neutral when released.

12 **Differential lock switch** - This momentary switch, when pushed forward and then released, engages differential lock and turns differential light on. When pulled backward and then released, disengages differential lock and turns differential light off.

13 **Jib up/down switch** - This switch controls up or down movement of jib.

14 **Fly boom extend/retract switch** - This switch controls extension or retraction of fly boom.

15 **Riser raise/lower controller** - This single-axis lever controls raising or lowering of riser.

16 **Capacity zone border light** - Indicates MEWP is at limits of travel for high capacity zone. Lower and extend functions are not available.

17 **Platform leveling override switch** - This switch overrides automatic leveling of platform and controls tilting up or tilting down of platform.

18 **Low capacity zone indicator light** - Indicates MEWP is in “low” platform capacity zone. Refer to *Section 7.7*.

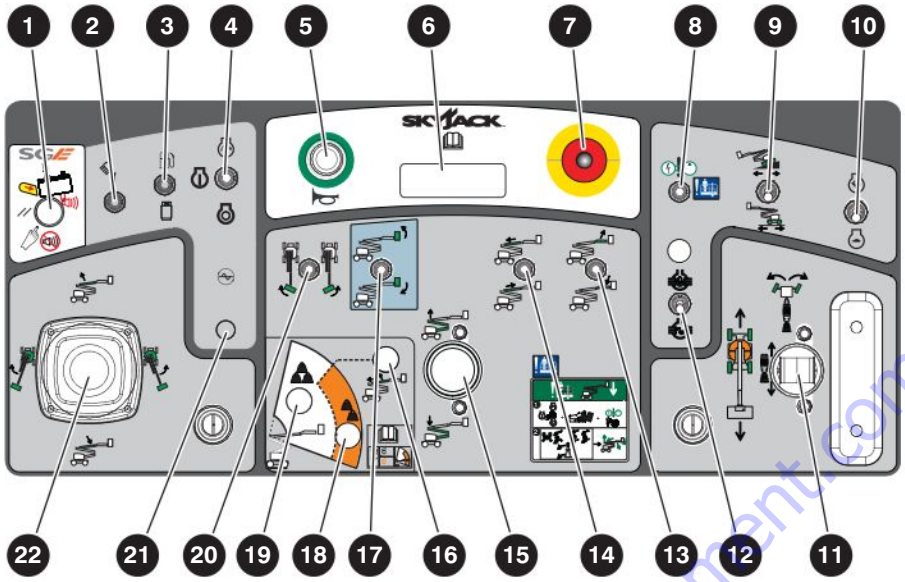


Figure 08 *Platform control console*

19 **High capacity zone indicator light** - Indicates MEWP is in “high” platform capacity zone. Refer to *Section 7.7*.

20 **Platform rotation switch** - This switch controls left or right rotation of platform.

21 **Generator on/off switch (if equipped)** - This switch turns the hydraulic generator on or off.

NOTE

All powered functions are disabled while the generator switch is on.

22 **Boom/Turret controller** - This dual-axis lever controls raising or lowering of main boom or rotating left right of turret.

3.4 Features and Devices

3.4-1 Lowered travel position and elevated travel position

Available MEWP functions depend upon a combination of machine configuration (lowered travel position/elevated travel position), chassis tilt, platform load, and boom positioning (high/low capacity).

The MEWP is in the lowered travel position if it is in ALL of the positions shown in *Figure 09*.

The MEWP is in the elevated travel position if it is in ANY of the positions shown in *Figure 10*.

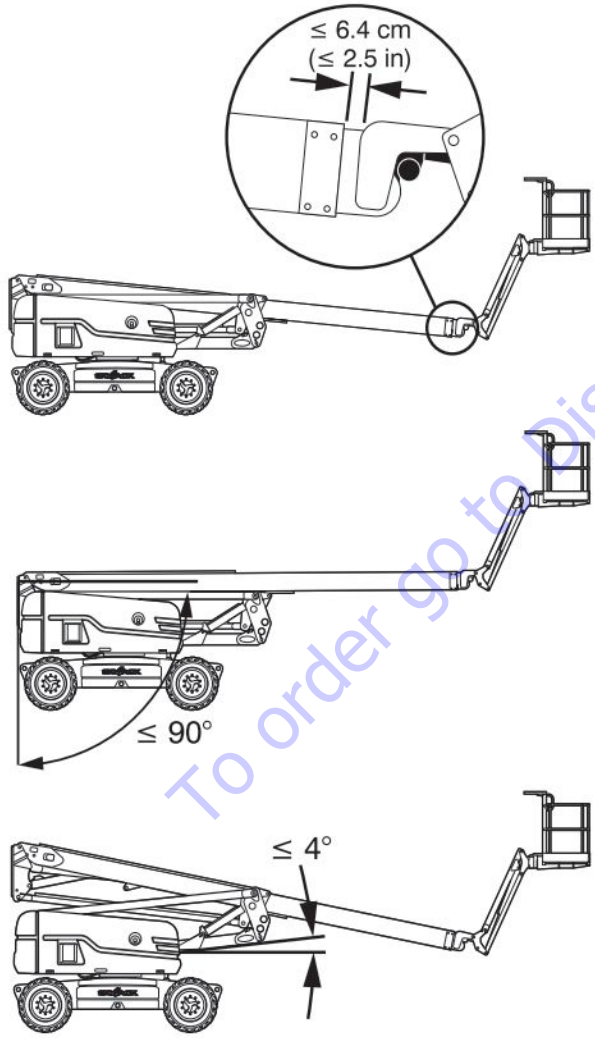


Figure 10 *Lowered travel position*

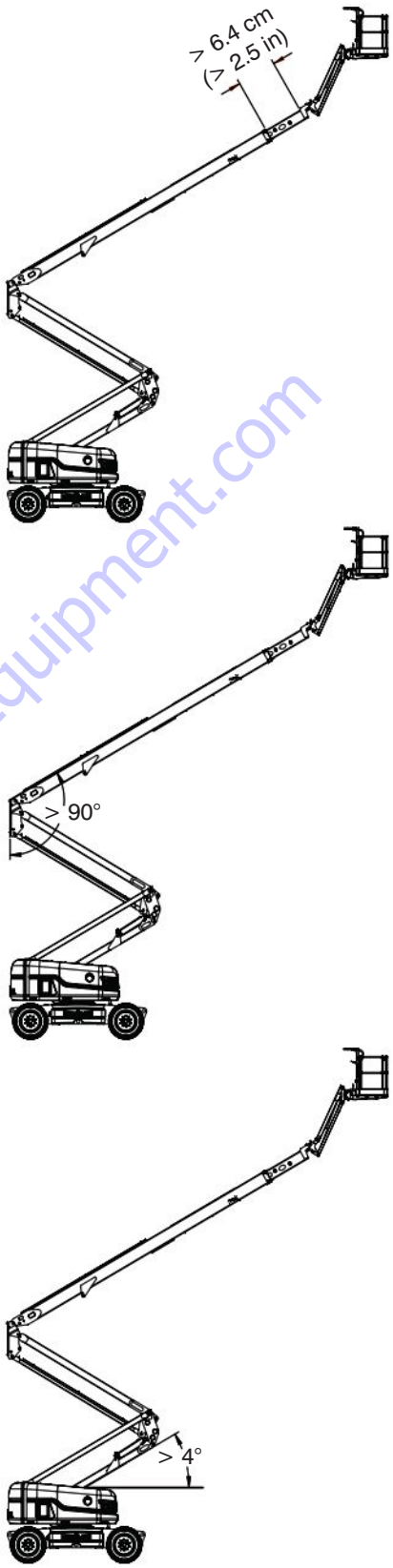


Figure 11 *Elevated travel position (any of the boom positions shown)*

3.4-2 Drive speed

The drive speed depends upon the machine configuration (lowered travel position/elevated travel position). When the MEWP is in the elevated travel position, the maximum achievable drive speed should be significantly less than the lowered travel position drive speed. Refer to *Section 7.4*.

3.4-3 Drive direction

The drive function operates in accordance with the general orientation of the turret's counterweight over the chassis (i.e. joystick forward means counterweight is facing forward). Therefore, the MEWP will move in the general direction of the joystick's movement.

3.4-4 Tilt switch

The tilt switch is located within the base control console. When the MEWP is on a slope greater than a predetermined limit, an audible alarm sounds, a visual indicator illuminates, and boom movement or drive functions are disabled (refer to *Section 3.4-5*).

⚠ WARNING

When tilt settings are exceeded, causing the alarm to sound and the light to illuminate, the platform should be lowered and retracted immediately. Refer to *Section 6.2* for instructions on how to recover from an inclined position.

NOTE

Resetting power to the controls (e.g. e-stop depressed then pulled out) when the MEWP is tilted and at the limits of the lowered travel position will cause the MEWP to be considered tilted while elevated.

3.4-5 Function restrictions when tilted

Mode/Condition	Indicator Light	Audible Alarm	Restrictions	Emergency Power (Platform)	Emergency Power (Base)
Lowered travel position, tilted	Disabled	Disabled	No restriction	Enabled	Enabled
In lowered travel position, tilted, moving into elevated travel position (at the limits of the lowered travel position)	Enabled	Enabled	Boom Extension, Boom Up, and Riser Up disabled	Enabled	Enabled
Elevated travel position	Enabled	Enabled	Drive disabled	Enabled	Enabled

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3.4-6 Platform load sensing system

The platform capacity is determined by boom position (boom extension and boom angle). Each boom position zone (high capacity zone or low capacity zone) has a separate capacity. Refer to platform capacity label(s) for maximum platform capacity of each zone.

The platform load sensing system indicates when the load is approaching overload status (refer to *Section 3.4-7*).

If the platform is overloaded while in elevated travel position, the load sensing system will disable functions as per *Section 3.4-7,* and signal the operator with an indicator light and an audible alarm.

If the platform is overloaded while in lowered travel position, the load sensing system will signal the operator with an indicator light and an audible alarm but will not disable any functions (refer to *Section 3.4-7*).

⚠ WARNING

If the platform is overloaded due to contact with an overhead obstruction, do one of the following:

- **Remove the obstruction from the platform, then after a four-second delay normal functions can be resumed.**
- **Use the emergency power unit to release the platform from the obstruction.**
- **Do not attempt to free a snagged platform with lower controls until personnel are removed from the platform.**

3.4-7 Overload status

Mode/Condition	Indicator Light	Audible Alarm	Drive Functions	Powered Boom Functions (Platform or Base)	Emergency Power (Platform)	Emergency Power (Base)
93-99% of platform capacity	On	Off	Enabled	Enabled	Enabled	Enabled
Lowered Travel Position, ≥ 100% of platform capacity	Flashing	Pulsing	Enabled	Enabled	Enabled	Enabled
Elevated Travel Position, ≥ 100% of platform capacity	Flashing	Pulsing	Disabled	Disabled	Enabled	Enabled
Elevated Travel Position, ≥ 100% of platform capacity for Low Capacity Zone, Boom extended or lowered to Border between High and Low Capacity Zones	Flashing	Off	Disabled	Boom raise and Boom retract only	Enabled	Enabled

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NOTE

Movement into the low capacity zone occurs when the boom is either lowered or extended into a position where it is raised less than 47 degrees and extended 3.1 m (10.2 ft) (refer to Figure 11 and Figure 12). There are approximately 5 1/2 cutouts visible on the fly boom when extended 3.1 m (10.2 ft).

⚠ WARNING

Movement into low capacity zone is restricted if platform capacity exceeds low capacity zone platform capacity. Refer to *Section 3.4-7.*

⚠ WARNING

If the platform load sensing system is in fault mode (capacity zone lights flash alternately, overload light flashes and capacity zone border light illuminates), do the following:

- **Ensure platform is level and there are no obstructions contacting the platform.**

If the platform load sensing system remains in fault mode, the emergency power unit may be used to lower the platform. Contact a qualified/ competent person for repairs.

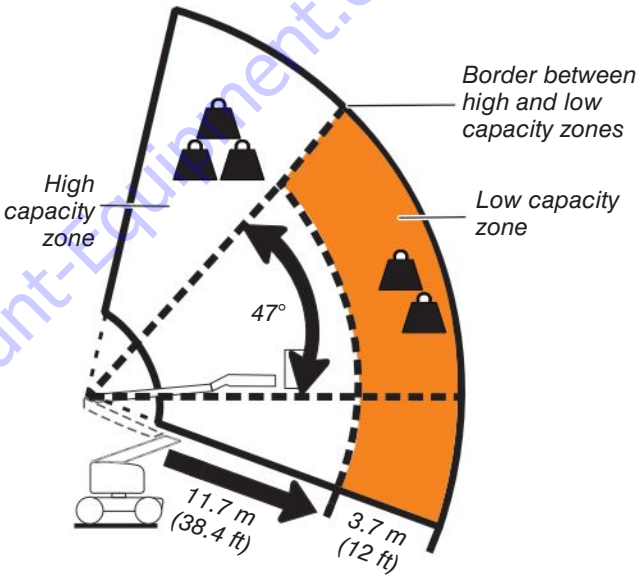


Figure 12 *High and low capacity zones*

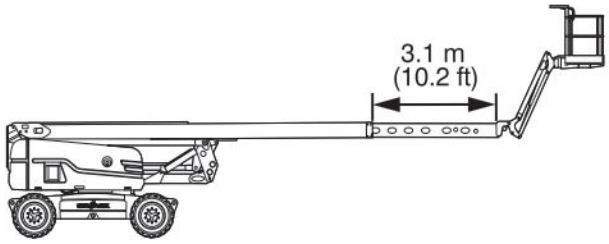


Figure 13 *Fly boom extension into low capacity zone*

3.4-8 Brake release system

The brake release system is located in the control compartment. The brakes must be manually disengaged before winching or towing. Refer to *Section 6.3-1* for procedure on how to release brakes manually. The system contains the following controls:

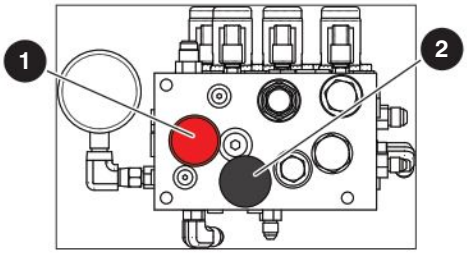


Figure 14 *Brake release system*

1. **Brake hand pump**
2. **Brake auto reset valve plunger**

3.4-9 Secondary guarding electrical (SGE)

The purpose of this device is to prevent sustained involuntary operation of the lift, which may result from accidental contact with the platform controls, and to activate an alarm (audible/visual) to alert others of the event.

⚠ WARNING

This device will not prevent collision or eliminate the potential for injuries resulting from a collision.

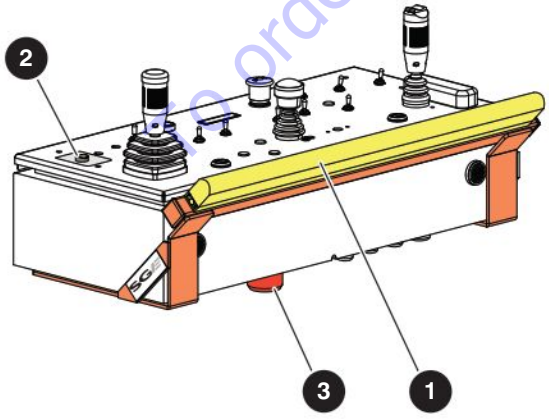


Figure 15 *Secondary guarding electrical (SGE)*

1. **Sensor bar** - This bar is located in front of the platform control console. When pressure is applied to the sensor bar, it interrupts/halts all functions.
2. **Reset button** - This button is located on the top left corner of the platform control console. It lights up when pressure is applied to the sensor bar for more than 1 second. When depressed, it shuts off the audible/visual alarm.
3. **Audible/visual alarm** - This alarm is located on the underside of the platform control console. It activates when pressure is applied to the sensor bar.

SGE operation

1. When pressure is applied to the sensor bar for less than 1 second, the audible/visual alarm will activate while the bar is being pressed, interrupting all functions. The audible/visual alarm will turn off after the sensor bar is released, and functions will resume.
2. When pressure is applied to the sensor bar for more than 1 second, the audible/visual alarm will activate and the engine will shut off, halting all functions. The reset button will illuminate. Emergency power functions remain active.
3. After removing pressure from the bar, press the reset button to shut off the audible/visual alarm and resume all functions.

3.4-10 Drive bypass valve

This valve is located on the inboard side of the drive pump and can be identified with a yellow paint mark on it.

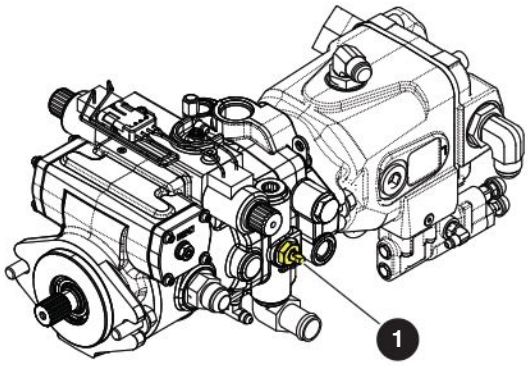


Figure 16 *Drive bypass valve*

1. **Drive bypass valve with override stems** - This valve, when loosened 90 degrees clockwise, is used to override drive relief valves so that the MEWP can be loaded or unloaded from a trailer using a winch line. Refer to *Section 6.3* for winching and towing procedure.

3.4-11 Differential lock switch

This switch is located on the platform control console. The differential locking system provides more traction by providing equal drive to each wheel regardless of terrain. Differential locks are used to prevent MEWP from getting stuck when driving on loose, muddy, or rocky terrain. Refer to *Section 4.3-25* for instructions regarding testing differential lock switch.

3.4-12 Turret transportation lock

This locking device is located in the turret.

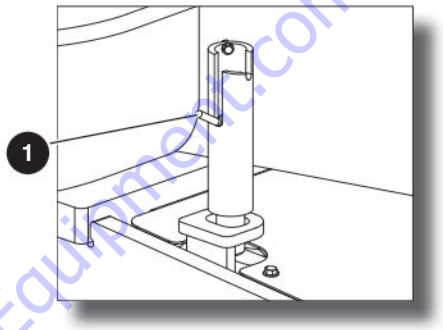


Figure 17 *Turret transportation lock*

1. **Turret transportation lock** - This locking device is used to lock turret in place during shipping only. Refer to *Section 6.5-2* for procedure on how to lock the turret.

3.4-13 All motion alarm

This alarm produces an audible sound when any boom or drive function is activated. On MEWPs with certain options, a flashing amber light will accompany this alarm.

3.5 Optional Equipment and Attachments

⚠ CAUTION

Skyjack approved modifications/attachments may affect MEWP specifications. Refer to any applicable instructions and/or labels.

NOTE

Refer to optional equipment or attachment labels for actual weight. This weight must be included when determining the total load on the platform, including personnel and other materials.

NOTE

The combined weight of the attachment, panels, occupants and tools should not exceed the rated platform capacity.

3.5-1 AC outlet on platform (if equipped)

This outlet is a source of AC power on the platform. The outlet is located on the right side of the platform control console and the plug is located beside the hydraulic tank in the control compartment.

3.5-2 Work light (if equipped)

The work light assembly is mounted on top of the railings of the platform.

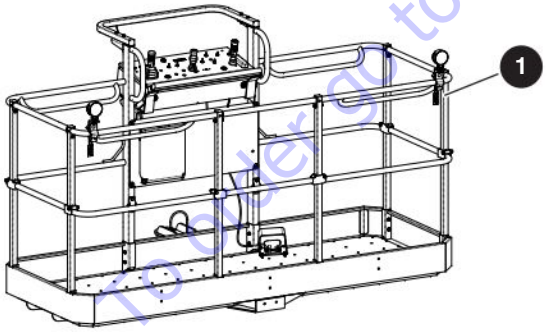


Figure 18 *Work light*

NOTE

Ensure base emergency stop button is pulled out and platform control console has been activated using off/base/platform key switch.

1 **Work light** - This light turns on when the work light switch is activated.

⚠ WARNING

Work lights are not intended to replace the ambient lighting required to navigate and operate this MEWP.

3.5-3 Flashing amber light (if equipped)

The flashing amber light is located on top of the turret of the MEWP.

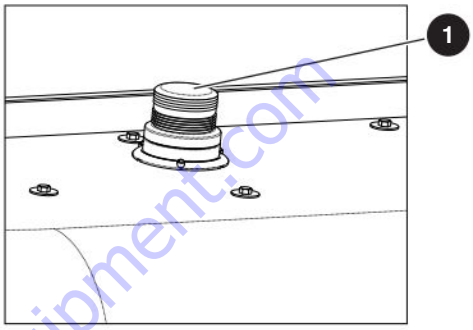


Figure 19 *Flashing amber light*

1 **Flashing amber light** - This light flashes when a boom function is activated. This works in conjunction with the all motion alarm.

3.5-4 Welder (if equipped)

The welder is installed on the platform. Refer to the welder's operating manual for proper operation and maintenance.

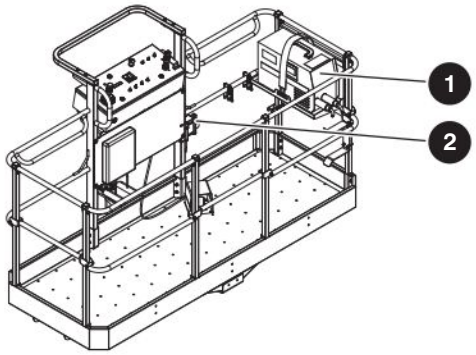


Figure 20 *Welder*

1. **Welder** - This equipment is plugged into its dedicated AC outlet on the platform.
2. **Welder AC outlet** - This AC outlet is dedicated for the welder.

NOTE

In sub-zero temperatures, the hydraulic oil should be warmed, prior to operating the welder.

⚠ WARNING

Only qualified/competent persons should install, operate, maintain and repair the welder.

⚠ CAUTION

Breathing welding fumes and gases can be hazardous to your health.

3.5-5 Cold weather start (if equipped)

The battery warmer/hydraulic oil heater cord is located in the engine compartment near the engine.

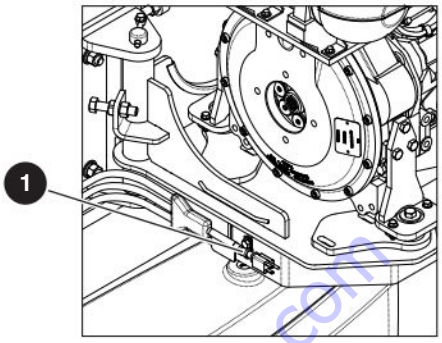


Figure 21 *Battery warmer/Hydraulic oil heater cord*

1. **Battery warmer/Hydraulic oil heater cord** - This cord is plugged into the AC outlet at least 4 hours before starting engine when temperature gets below -10°C (+14°F).

3.5-6 Arctic weather package (if equipped)

The heater plug is located in the engine compartment near the engine.

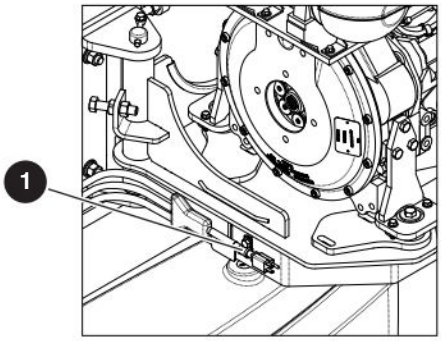


Figure 22 *Heater plug*

1. **Battery/Hydraulic oil/Engine oil heater plug** - This cord is plugged into the AC outlet at least 4 hours before starting engine when temperature gets below -18°C (0°F).

3.5-7 Elevate telematics - access control unit (if equipped)

Access control is an added functionality of the Elevate Trackunit which can be used in Skyjack vertical masts, scissor lifts, booms or telehandlers.

The access control functionality **DOES NOT** affect any of the following: emergency lowering, secondary guarding electrical (if equipped), load sensing (if equipped), and horn. These functions will always remain available. The access control unit prevents the engine from starting without an authorized code or card.

IMPORTANT

It is the owner's responsibility to provide unique PIN codes or smart ID cards for machines equipped with access control functionality. Skyjack DOES NOT provide or reset PIN codes or smart ID cards. If the PIN code or smart ID card does not work or has been lost, contact the owner of the machine for assistance.

Access control functionality enables the user to control access to machine operation. The user may be provided with unique PIN codes or smart ID cards that they need to use to unlock and activate the machine. An ElevateTelematics device and an access control keypad are required to have this functionality. Access control to the MEWP may be customized by the machine owner using the Trackunit manager (https://www.trackunit.com/services/manager/).

If PIN code or smart ID card has not been provided or does not work, contact the machine owner.

NOTE

*It is the owner's responsibility to provide unique PIN codes or smart ID cards if machines are equipped with this functionality. Skyjack **DOES NOT** provide or reset PIN codes or smart ID cards.*

If the MEWP is equipped with the access control functionality, it will require an access PIN code or smart ID card to be operated.

Figure 23 *Access control unit keypad*

1. **Orange indicator light:** This light indicates that the access control unit is ON. The keypad is always powered regardless of emergency stop, key switch, or main power disconnect position.
2. **Green indicator light:** This light indicates that the access control unit is active.

   Red indicator light - This light flashes when a cancel input has been received from the keypad.

Operation

To permit operation of the machine, the green light on the access control unit keypad must be ON and the main power disconnect switch, the base emergency stop, and the base key switch must all be in the ON position. The access control unit is enabled by entering the unique PIN code followed by the green checkmark, or tapping the smart ID card. Unless activated prior to enabling the access control unit, the main power disconnect, base emergency stop and base key switch all must be in the ON position within the time set by the machine owner for access control operation.

Using keypad:

NOTE

The keypad is touch sensitive. An audible beep will provide feedback that input was successfully received.

1. Enter PIN code.
2. Press green checkmark to confirm.
   - **Result:** Green light indicates authorized ID. Begin operation.

NOTE

If an incorrect button is pressed while inputting the PIN code, press the Cancel key to start over.

Using smart ID card:

1. Place card in front of reader.
2. A beep signal indicates card has been read.
   - **Result:** Green light indicates authorized ID. Begin operation.

NOTE

The controls must become active within the time set by the machine owner for access control operation. DO NOT use keypad and tap card simultaneously.

IMPORTANT

The access control unit will time out and become inactive if the operator has not completed the activation of the controls. The length of time before the unit times out is set by the machine owner. If the access control unit times out, the operator needs to enter the unique PIN code or tap the smart ID card again. If access control activation fails, contact the machine owner.

IMPORTANT

The access control unit will become inactive if the operator performs any of the following power disconnections, and the predetermined amount of time set by the machine owner has elapsed:

- **turns the main power disconnect to the OFF position, pushes in the base emergency stop button or turns the key switch to the OFF position.**

Skyjack DOES NOT manage the time out settings of the access control unit. Contact machine owner if time out settings need to be modified.

IMPORTANT

To reactivate the access control unit, the operator needs to enter the unique PIN code or tap the smart ID card again. To maintain access, the operator must ensure that the main power disconnect is in the ON position, the base emergency stop is pulled out, and that the key switch is in platform or base mode within the time set by the machine owner for access control functionality.

Function tests

Perform the function tests as described in *Section 4.3*.

When performing the function tests, confirm that the access control unit is active by verifying that the green light on the keypad is ON. When performing main power disconnect, base emergency stop, and off/platform/base switch function tests, the operation must be performed within the time set by the machine owner for access control operation.

Section 4 – Pre-operation

4.1 Operator's Responsibility

It is the responsibility of the operator, prior to each work shift, to perform the following:

1. **Visual and daily maintenance inspections**
   - designed to discover any damage of components before the MEWP is put into service.
   - done before the operator performs the function tests.

⚠ WARNING

Failure to locate and repair damage, and discover loose or missing parts may result in an unsafe operating condition.

2. **Function tests**
   - designed to discover any malfunctions before the MEWP is put into service.

IMPORTANT

The operator must understand and follow the step-by-step instructions to test all MEWP functions.

The operator should make a copy of the Operator's Checklist (see *Section 4.4*) and fill out the visual and daily maintenance inspections and the function tests sections while performing the items outlined in *Section 4.2* and *Section 4.3* respectively.

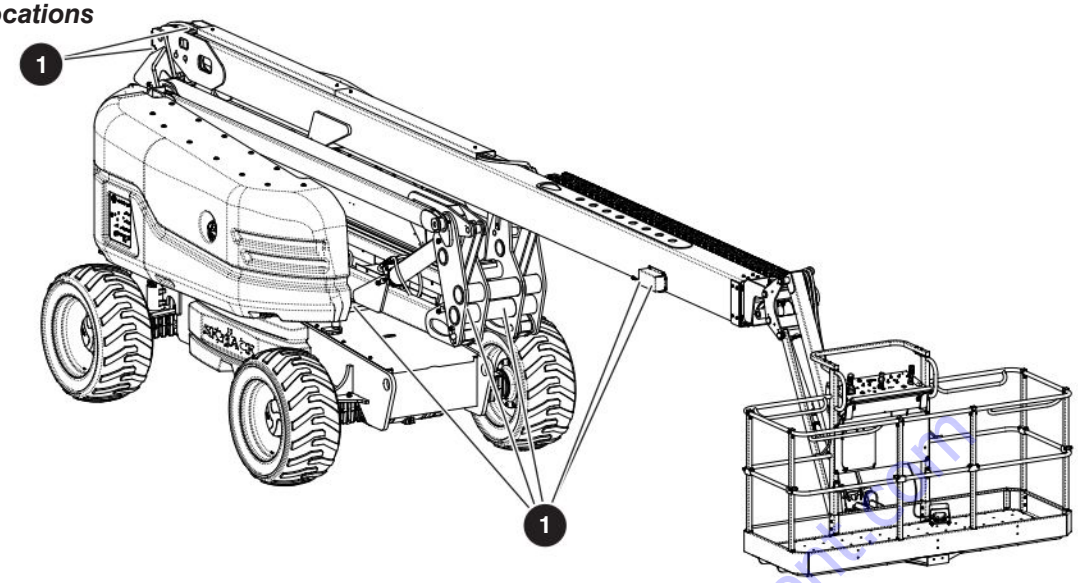
IMPORTANT

If MEWP is damaged or any unauthorized variation from factory-delivered condition is discovered, MEWP must be tagged and removed from service.

Repairs to the MEWP may only be made by qualified/competent repair personnel. After repairs are completed, the operator must perform visual and daily maintenance inspections, and function tests again.

Scheduled maintenance inspections shall only be performed by a qualified/competent person.

Limit switch locations



4.2 Visual & Daily Maintenance Inspections

Begin the visual and daily maintenance inspections by checking each item in sequence for the conditions listed in this section.

⚠ WARNING

To avoid injury, do not operate a MEWP until all malfunctions have been corrected.

⚠ WARNING

To avoid possible injury, ensure MEWP power is off during your visual and daily maintenance inspections.

⚠ CAUTION

Ensure MEWP is on a firm, level surface.

NOTE

While performing visual and daily inspections in different areas, be aware to also inspect limit switches, electrical and hydraulic components.

4.2-1 Labels

Refer to *Section 8* in this manual and determine that all labels are in place and are legible.

4.2-2 Electrical

Maintaining the electrical components is essential to good performance and service life of the MEWP.

Inspect the following areas for chafed, corroded and loose wires:

- boom to platform cable harness
- engine compartment electrical panel
- engine wiring harness
- rotary manifold wiring

4.2-3 Limit switches

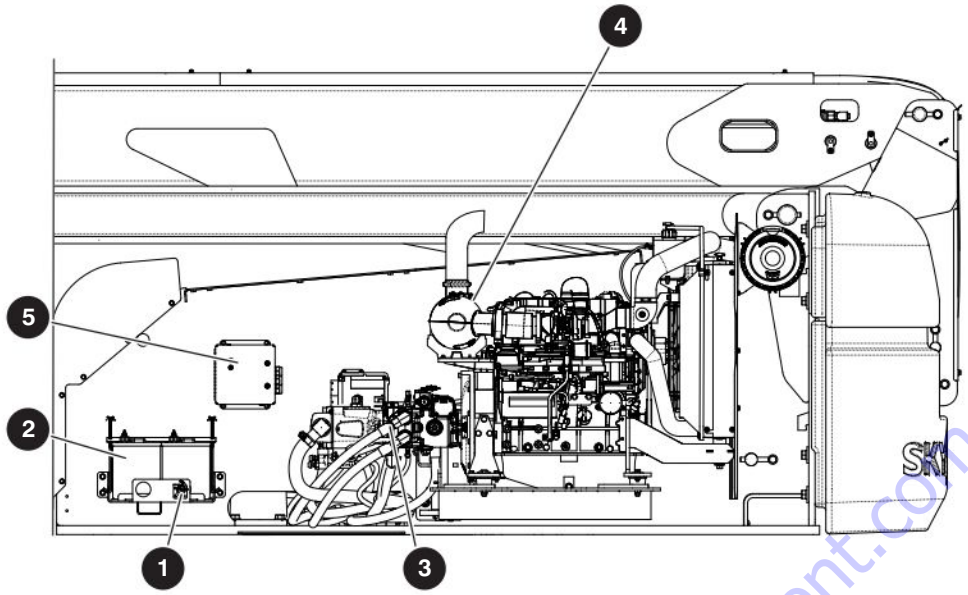
Ensure limit switches ❶ are properly secured with no signs of visible damage and movement is not obstructed.

4.2-4 Hydraulic

Maintaining the hydraulic components is essential to good performance and service life of the MEWP.

Perform a visual inspection around the following areas:

- hydraulic tank filter, fittings, hoses, emergency power unit and turret/base surface
- engine compartment fittings, hoses, main pump, filter and turret/base surface
- all hydraulic cylinders
- all hydraulic manifolds
- the underside of the turret
- the underside of the base
- ground area under the MEWP



4.2-5 Engine compartment

Ensure all compartment latches are secure and in proper working order.

1 Main power disconnect switch

- Turn main power disconnect switch to off position.
- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all cables are secure and switch is in proper working condition.

2 Batteries

- Proper battery condition is essential to good engine performance and operational safety. Improper fluid levels or damaged cables and connections can result in engine component damage and hazardous conditions.

⚠ WARNING

Explosion hazard. Keep flames and sparks away. Do not smoke near batteries. Battery acid releases explosive gas while charging. Charge batteries in a well-ventilated area.

⚠ WARNING

Battery acid is extremely corrosive - Wear proper eye and facial protection as well as appropriate protective clothing. If contact occurs, immediately flush with cold water and seek medical attention.

1. Check battery case for damage.
2. Ensure all battery connections are tight.
3. If applicable, check battery fluid level. If plates are not covered by at least 13 mm (1/2”) of solution, add distilled or demineralized water.

⚠ WARNING

Use original or manufacturer-approved parts and components for the MEWP.

3 Hydraulic pumps

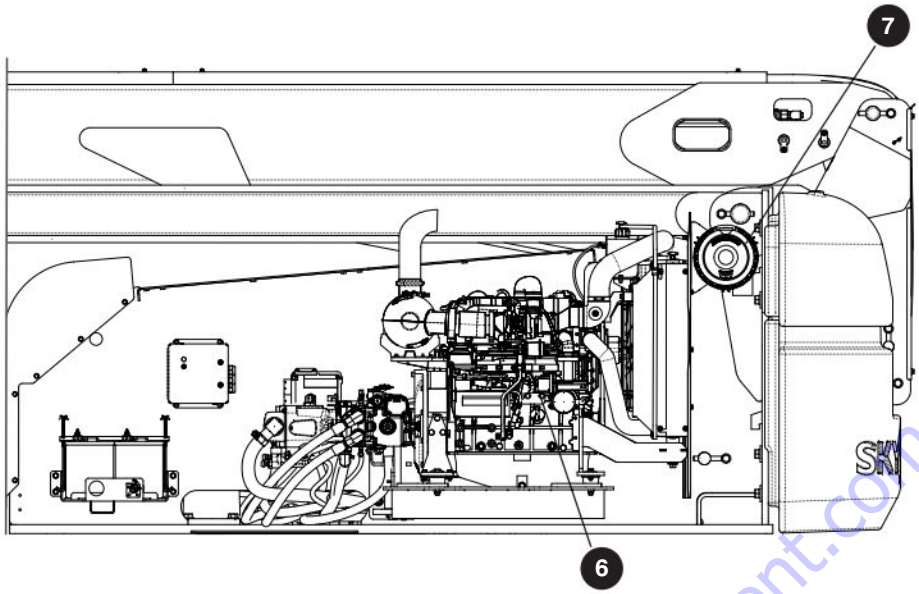
- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts are properly tightened.
- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage

4 Muffler and exhaust

- Ensure muffler and exhaust system are properly secured, with no evidence of damage.

5 Engine control console

- Ensure there are no loose or missing parts and there is no visible damage



6 Engine

Engine pivot tray

- Ensure there are no loose or missing parts and no visible damage to the engine pivot tray. Ensure engine pivot tray is secure.

Engine oil level

- Maintaining the engine components is essential to good performance and service life of the MEWP.

⚠ WARNING

Beware of hot engine components.

Check oil level on dipstick

- Oil level should be in the “safe” zone. Add oil as needed. Refer to service manual for recommended oil type.

Fuel leaks

- Ensure that there are no fuel leaks.

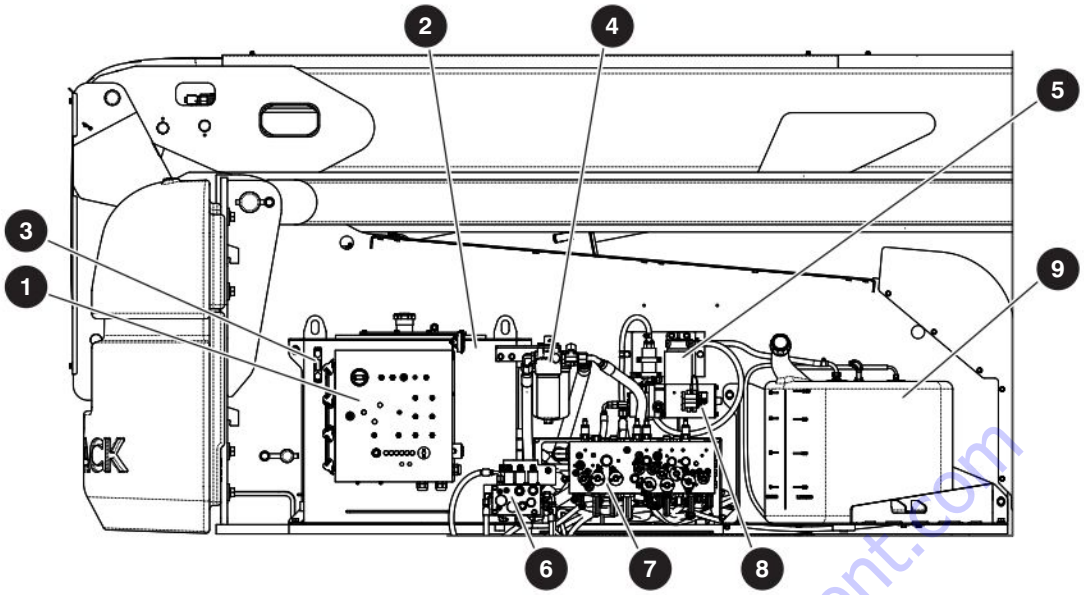
⚠ WARNING

Engine fuels are combustible. Inspect the MEWP in an open, well-ventilated area away from heaters, sparks and flames. Always have an approved fire extinguisher within easy reach.

- Ensure fuel tank, hoses and fittings show no visible damage and no evidence of fuel leakage.

7 Engine air filter

- Ensure there are no loose or missing parts and there is no visible damage.



4.2-6 Control compartment

Ensure all compartment latches are secure and in proper working order.

1 Base control console

- Ensure all switches are returned to their neutral positions.
- Ensure there are no loose or missing parts and there is no visible damage.

2 Hydraulic tank

- Ensure hydraulic filler cap is secure.
- Ensure tank shows no visible damage and no evidence of hydraulic leakage.

3 Hydraulic oil level

- Be sure that the boom is in the stowed position, and then visually inspect the sight gauge located on the side of the hydraulic oil tank.
- The hydraulic oil level should be between the minimum and maximum marks on the sight glass. Add oil as needed. Refer to service manual for recommended oil type.

4 Hydraulic return filter

- Ensure filter element is secure.
- Ensure there are no signs of leakage or visible damage.

5 High pressure filter

- Ensure housing is secure and shows no visible damage or leakage.

6 Brake manifold

- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.
- Ensure there are no loose wires or missing fasteners.

7 Main manifold

- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.
- Ensure there are no loose wires or missing fasteners.

8 Emergency power unit

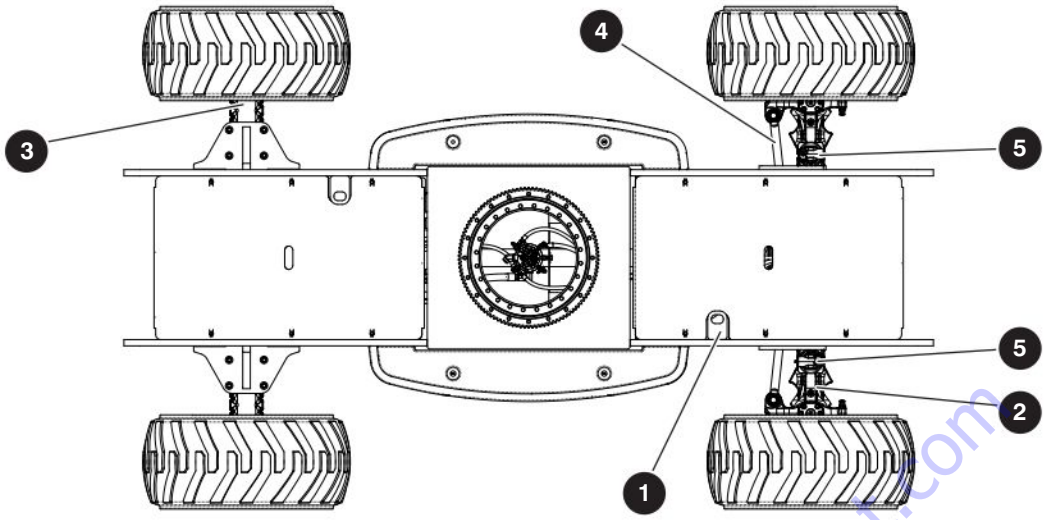
- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure there are no loose wires or missing fasteners.
- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.

9 Fuel tank

IMPORTANT

Before using your MEWP ensure there is enough fuel for expected use.

- Ensure fuel filler cap is secure.
- Ensure tank shows no visible damage and no evidence of fuel leakage.



Fuel leaks

- Ensure that there are no fuel leaks.

⚠ WARNING

Engine fuels are combustible. Inspect the MEWP in an open, well-ventilated area away from heaters, sparks and flames. Always have an approved fire extinguisher within easy reach.

- Ensure fuel tank, hoses and fittings show no visible damage and no evidence of fuel leakage.

4.2-7 Base

1 Turret transportation lock

- Ensure turret transportation lock is unlocked, there are no loose or missing parts and there is no visible damage.

Drive axles

- Ensure front drive axle 2 and rear drive axle 3 are properly secured, there are no loose or missing parts, all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.

4 Tie rod

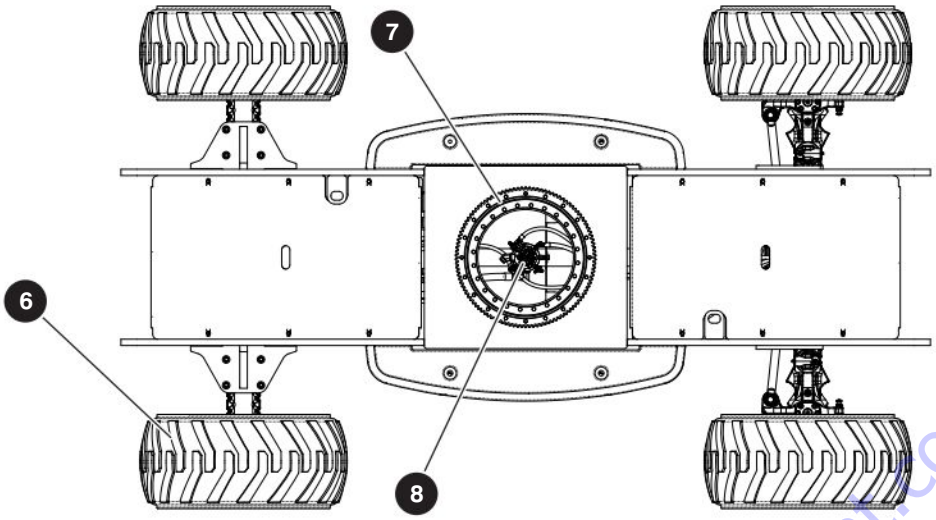
- Ensure there are no loose or missing parts, tie rod end studs are locked and there is no visible damage.

5 Oscillating cylinder assembly

- Ensure oscillating cylinder assembly is properly secured and there are no visible gaps, loose or missing parts, all fittings and hoses are properly tightened and there is no evidence of hydraulic leakage.

NOTE

Oscillating axle is locked when MEWP is in low speed (refer to Figure 37).



6 Wheel/Tire assembly

- The MEWP is equipped with foam-filled tires. Tire and/or wheel failure could result in a MEWP tip over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

1. Check all tire treads and sidewalls for cuts, cracks, punctures and unusual wear.
2. Check each wheel for damage and cracked welds.
3. Check each lug nut for proper torque to ensure none are loose.

Refer to *Section 7.6* for wheel/tire specifications.

⚠ WARNING

Do not use tires other than those specified for this machine. Do not mix different types of tires. Tires other than those specified can adversely affect stability. Failure to operate with matched, approved tires in good condition may result in death or serious injury. Replace tires with the exact, Skyjack-approved types only.

7 Turret rotation gear

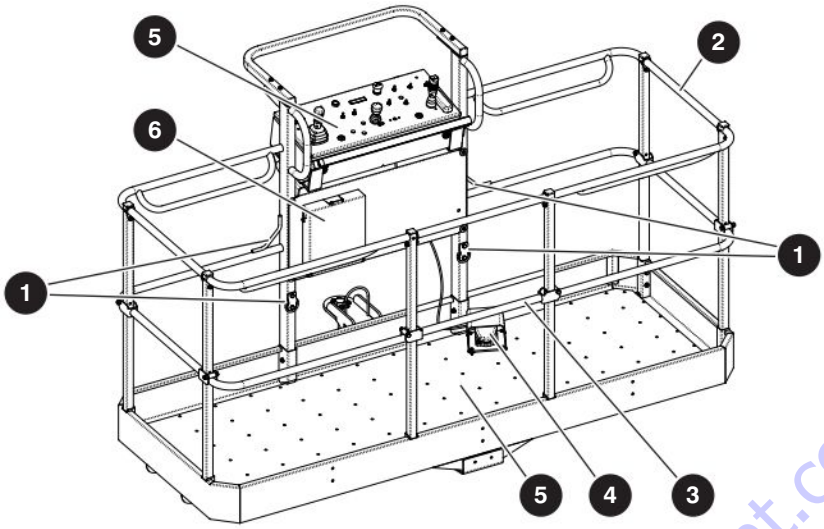
Inspect from underneath the MEWP.

- Ensure there are no loose or missing parts and there is no visible damage.

8 Rotary manifold

Inspect from underneath the MEWP.

- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.



4.2-8 Platform assembly

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all fasteners are securely in place.
- Ensure fall protection anchorage(s) 1 are secure and there is no visible damage.
- Ensure all railings 2 are properly positioned and secured.
- Ensure gates/drop bars 3 are in good working order.
- Ensure footswitch 4 is in good working order and has not been modified, disabled or blocked.
- Ensure MEWP floor 5 is secure and there is no visible damage.

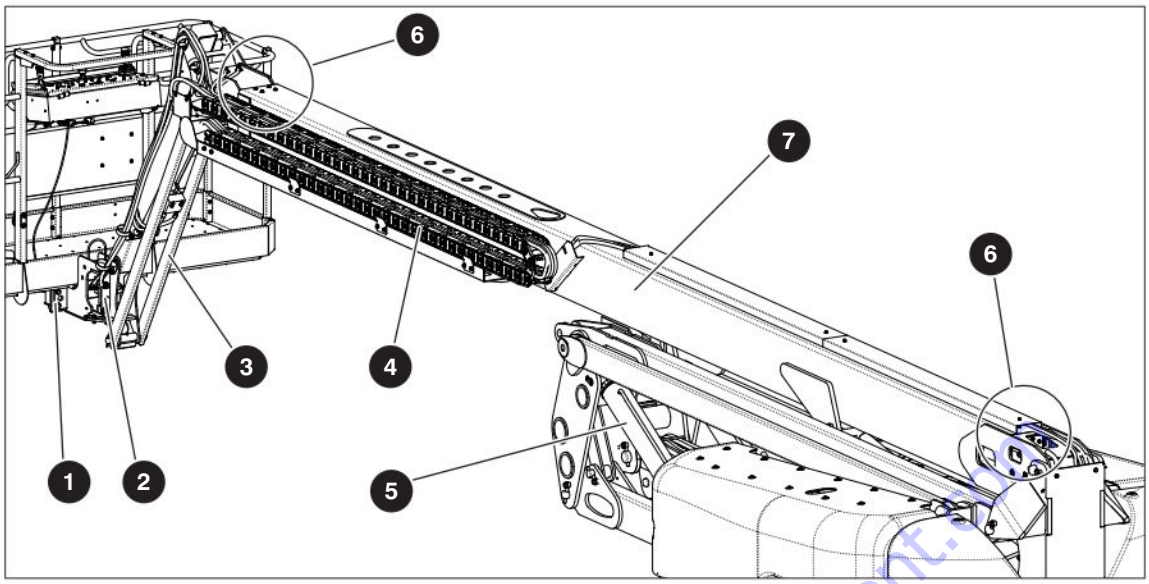
5 Platform control console

- Ensure all switches/controllers are returned to neutral.
- Ensure there are no loose or missing parts and there is no visible damage.

6 Manuals

- Ensure a copy of operating manual, and other important documents are enclosed in manual storage box.

1. Check to be sure manual storage box is present and in good condition.
2. Ensure manuals are legible and in good condition.
3. Always return manuals to the manual storage box after use.



4.2-9 Boom assembly

1 Load cell

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts are properly tightened.
- Ensure all cables are secure and are in proper working condition.
- Ensure debris is not lodged between the platform and boom adaptor.

2 Rotary actuator

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts and pins are properly tightened.
- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.

3 Jib

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts and pins are properly tightened.
- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.

4 E-chain

- Ensure there are no loose or missing parts and there is no visible damage.

5 Cylinders

- Ensure all cylinders are properly secured and there is no evidence of leakage.

6 Wear pads

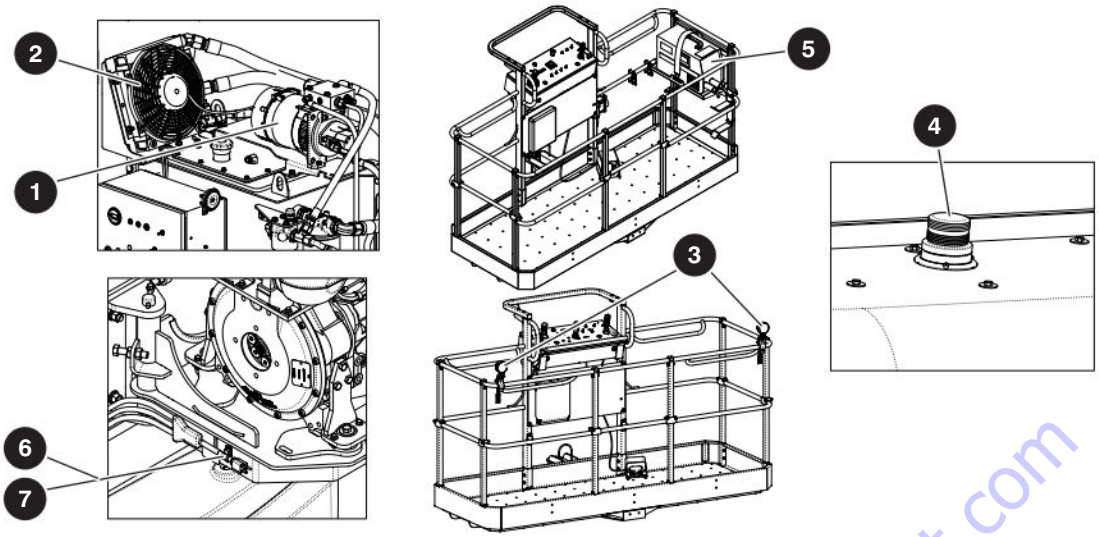
- Ensure all bolts are tight, there is no visible damage to the wear pads and that no parts are missing.

7 Boom

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts and pins are properly tightened.
- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.

Hoses

- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.



4.2-10 Optional equipment/attachments

Hydraulic generator ❶ /Oil cooler ❷ (if equipped)

- Ensure there are no loose or missing parts with no signs of visible damage.
- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.

❸ Work light (if equipped)

- Ensure lamps are properly secured with no signs of visible damage.
- Ensure mounting bracket is properly secured.
- Ensure there are no loose wires or missing fasteners.

❹ Flashing amber light (if equipped)

- Ensure lamp is properly secured with no signs of visible damage.

❺ Welder (if equipped)

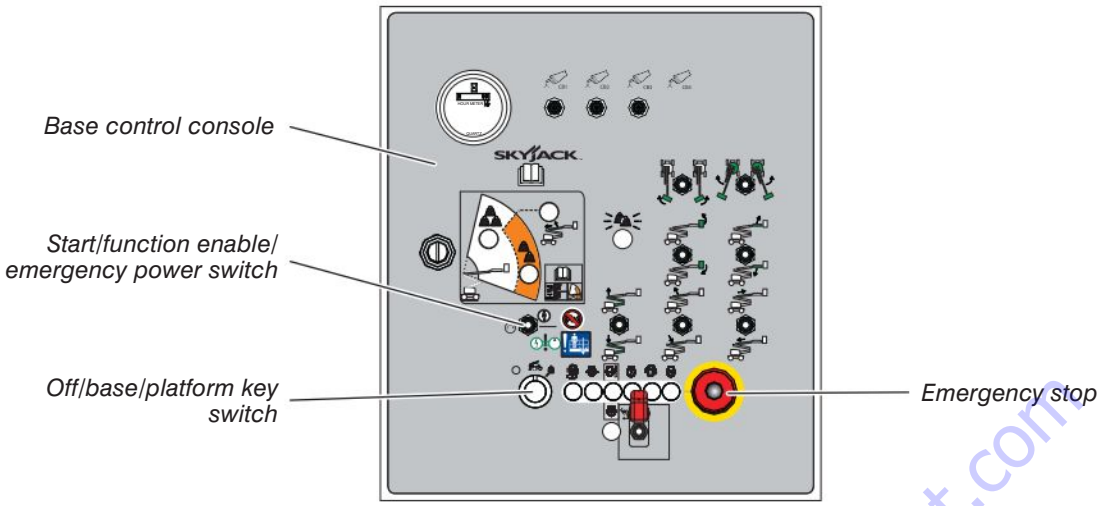
- Ensure welder and welder tray are properly secured.
- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure there are no loose wires or missing fasteners.

❻ Arctic weather package (if equipped)

- Ensure engine oil heater plug is properly secured with no signs of visible damage or hydraulic leakage.

❼ Battery warmer/Hydraulic oil heater (if equipped)

- Ensure battery warmer/hydraulic oil heater cord is properly secured with no signs of visible damage or hydraulic leakage.



4.3 Function Tests

Function tests are designed to discover any malfunctions before MEWP is put into service. The operator must understand and follow step-by-step instructions to test all MEWP functions.

⚠ WARNING

Never use a malfunctioning MEWP. If malfunctions are discovered, MEWP must be tagged and taken out of service. Repairs to MEWP may only be made by qualified/competent repair personnel.

NOTE

To perform these function tests, ensure there is sufficient space to fully raise and extend boom.

After repairs are completed, operator must perform a pre-operation inspection and a series of function tests again before putting MEWP into service.

Prior to performing function tests, be sure to read and understand *Section 5.1: Start Operation*.

NOTE

All motion alarm should sound while operating any boom or drive function.

4.3-1 Testing main power disconnect switch

1. In engine compartment, turn main power disconnect switch to off position.
   - **Result:** MEWP functions should not operate.
2. In engine compartment, turn main power disconnect switch to on position.

NOTE

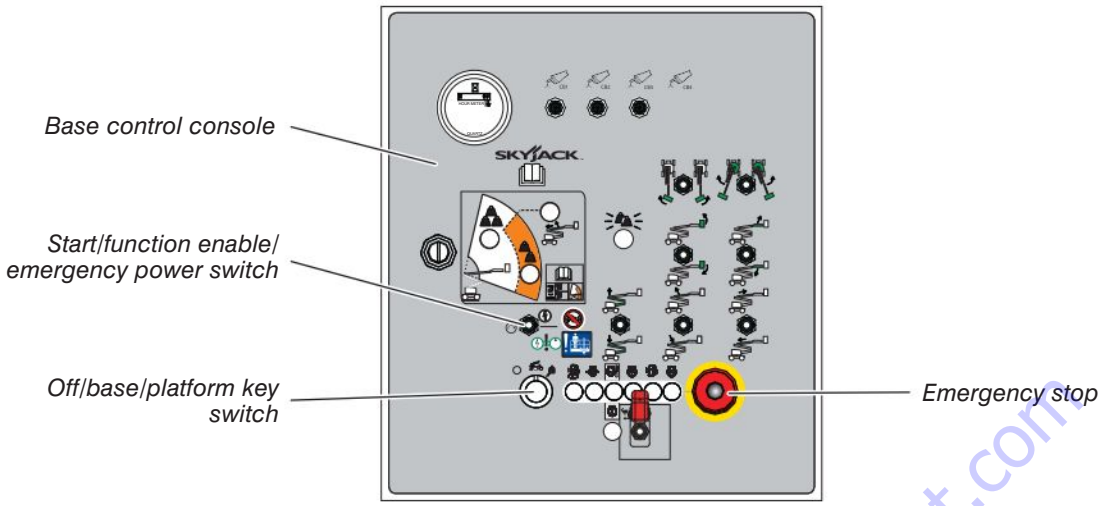
Close all cowlings before proceeding to next item.

4.3-2 Base control console

1. On platform control console, pull out emergency stop button.
2. For dual fuel engine, select fuel supply by moving fuel switch to either gasoline or liquid propane gas position.
3. On base control console, pull out emergency stop button.
4. Turn off/base/platform key switch to base position.
5. Start engine by selecting start position from start/function enable/emergency power switch.

4.3-3 Testing base emergency stop button and base emergency stop light

1. Push in emergency stop button and attempt to operate any MEWP function.
   - **Result:** Engine should shut down and MEWP functions should not operate.
2. Pull out emergency stop button and restart engine.
   - **Result:** Emergency stop light should continuously illuminate.



4.3-4 Testing start/function enable/ emergency power switch and all boom and platform functions

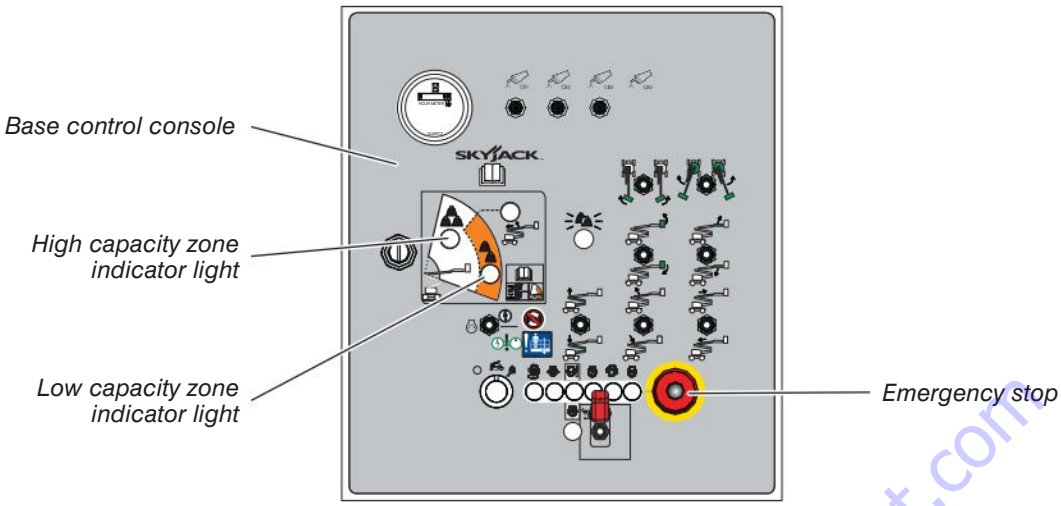
⚠ WARNING

Ensure that there are no personnel or obstructions in test area and there is sufficient room for boom to swing.

1. Ensure emergency stop button is pulled out.
2. Start engine.
3. Do not hold start/function enable/emergency power switch in function enable position. Attempt to activate each boom and platform switch.
   - **Result:** All boom and platform functions should not operate.
4. Hold start/function enable/emergency power switch in function enable position and activate each boom and platform function.
   - **Result:** Engine speed increases from idle to intermediate. All boom and platform functions should operate as selected.

4.3-5 Testing platform self-leveling

1. Lower boom to stowed position.
2. Adjust platform to a level position using platform leveling switch, which controls tilting up or tilting down of platform.
3. Fully raise main boom.
   - **Result:** Platform should remain level at all times and lifting speed should slow down before boom reaches full height.
4. Fully lower main boom.
   - **Result:** Platform should remain level at all times.



4.3-6 Testing platform capacity zone indicator lights

NOTE

To perform this function test, ensure there is sufficient space to fully raise and extend boom.

NOTE

Ensure boom is in stowed position to begin this function test.

1. Push in emergency stop button.
2. Pull out emergency stop button.
   - **Result:** Capacity zone border light should illuminate for 1 second and then turn off. High capacity zone indicator light should illuminate.
3. Extend boom until high capacity zone indicator light turns off.
   - **Result:** Low capacity zone indicator light should illuminate.
4. While boom is extended, ensure there are no visible cracks in welds or structure and there are no signs of deformation.
5. Fully retract and lower boom.

4.3-7 Testing emergency power

1. On base control console, push in emergency stop button to turn engine off.
2. On platform control console, push in emergency stop button.

⚠ CAUTION

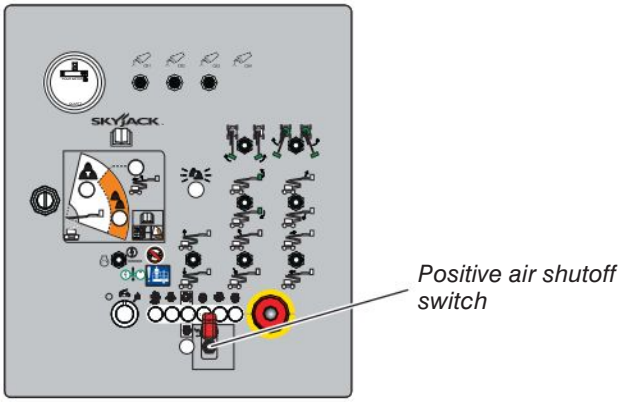
When operating on emergency power, do not operate more than one function at a time to avoid overloading 12-Volt emergency pump motor.

NOTE

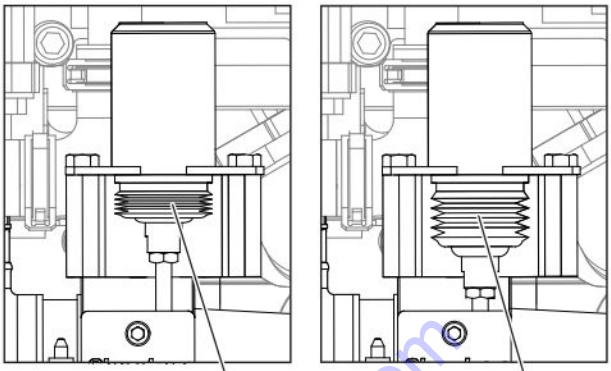
To conserve battery power, test each function through a partial cycle.

3. On base control console, pull out emergency stop button.
4. Turn off/base/platform key switch to base position.
5. Select emergency power position from start/function enable/emergency power switch and activate each boom function.
   - **Result:** All selected functions should operate.

Base control console



Positive air shutoff option



4.3-8 Testing off/base/platform switch

1. Ensure both emergency stop buttons at base and platform are pulled out.
2. Start engine.
3. On base control console, turn off/base/platform key switch to off position.
   - **Result:** Engine should shut down and MEWP functions should not operate.
4. On base control console, turn off/base/platform key switch to platform position.

⚠ WARNING

Ensure that you maintain three points of contact to mount/dismount platform.

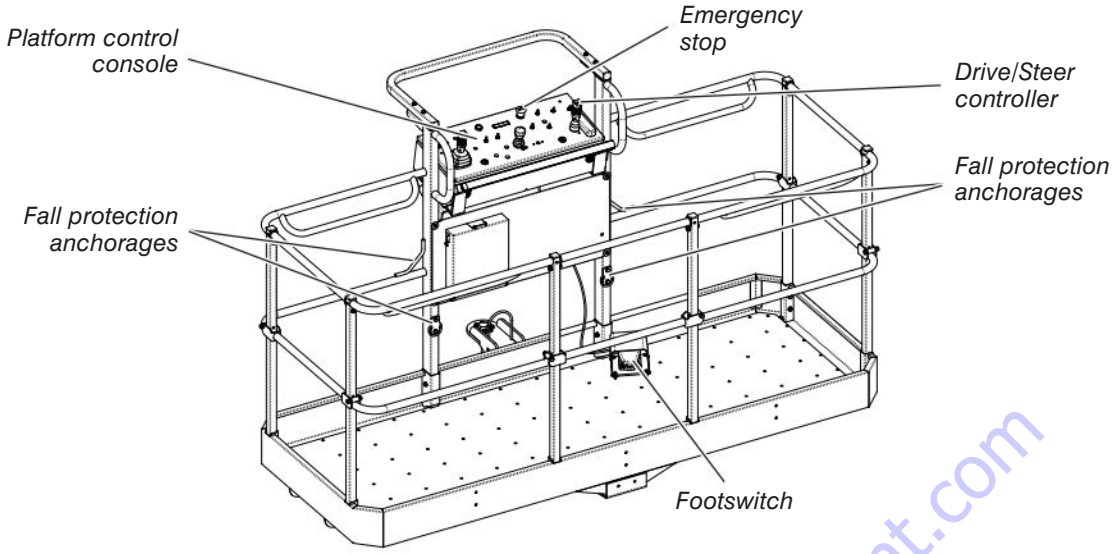
5. Enter platform and close gate/drop bar.
6. Select start position from engine start/on/off switch until engine starts.
7. Dismount from platform.
8. On base control console, attempt to activate each boom and platform switch while holding start/function enable/emergency power switch in function enable position.
   - **Result:** All boom and platform functions should not operate while holding start/function enable/emergency power switch in function enable position.
9. Push in emergency stop button to turn engine off.
10. Pull out emergency stop button.

4.3-9 Testing positive air shutoff (if equipped)

⚠ CAUTION

This function test should NOT be performed while the engine is running.

1. Open engine compartment cover.
2. On the base control console, lift switch guard and push rocker switch to “on” position.
3. Push rocker switch to “off” position. LED light should continuously illuminate. Walk back to the engine compartment side of the MEWP.
   - **Result:** The shutoff valve should disengage after 20 seconds (refer to shutoff valve diagrams).
4. Close engine compartment cover. Ensure switch is returned to “off” position and switch guard is down.



4.3-10 Platform control console

⚠ WARNING

Ensure that you maintain three points of contact to mount/dismount platform.

1. Ensure both emergency stop buttons at base and platform are pulled out.
2. On base control console, turn off/base/platform key switch to platform position.
3. Enter platform and close gate/drop bar.

⚠ WARNING

DO NOT operate any control on platform control console without proper fall protection secured to designated location in platform. Failure to avoid this hazard could result in death or serious injury.

⚠ WARNING

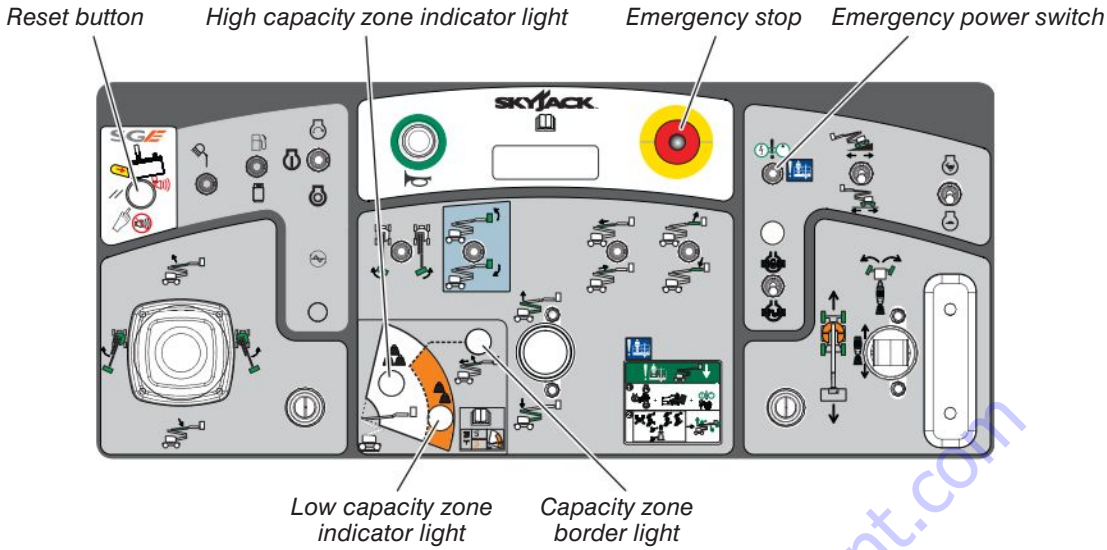
Ensure that there are no personnel or obstructions in test area and that there is sufficient room for boom to swing.

4.3-11 Testing platform emergency stop button and platform emergency stop light

1. Ensure engine is running.
2. Push in emergency stop button and attempt to operate any MEWP function.
   - **Result:** Engine should shut down and MEWP functions should not operate.
3. Pull out emergency stop button and restart engine.
   - **Result:** Emergency stop light should continuously illuminate.

4.3-12 Verifying load sensing module self-check

1. Push in emergency stop button.
2. Pull out emergency stop button.
   - **Result:** After four seconds of time elapses, the red light and audible alarm pulse two times. This indicates the system is active and there are no faults.



4.3-13 Testing footswitch and all boom and platform functions

1. Ensure emergency stop button is pulled out.
2. Ensure engine start/on/off switch is in on position.
3. Do not start engine.
4. Select generator on/off switch to off position (if equipped).
5. Depress and hold footswitch and attempt to start engine by selecting start position from engine start/on/off switch..
   - **Result:** Engine should not start.
6. Without depressing footswitch, try to start engine.
   - **Result:** Engine should start.
7. With engine running and without depressing footswitch, test each boom and platform function.
   - **Result:** MEWP functions should not operate.

NOTE

A 7-second anti-tiedown feature deactivates footswitch when operator depresses it for 7 seconds without activating any function.

8. With engine running, depress and hold footswitch and test all boom and platform functions.
   - **Result:** All MEWP functions should operate.

4.3-14 Testing boom lowering cutout switch

1. With engine running, depress and hold footswitch and raise main boom 0.6 m (2 ft).
2. Fully lower main boom and continue to command lowering for 5 seconds.
   - **Result:** Main boom should fully lower, riser should not raise, and there should be an audible sound when the pump disengages.

4.3-15 Testing platform capacity zone indicator lights

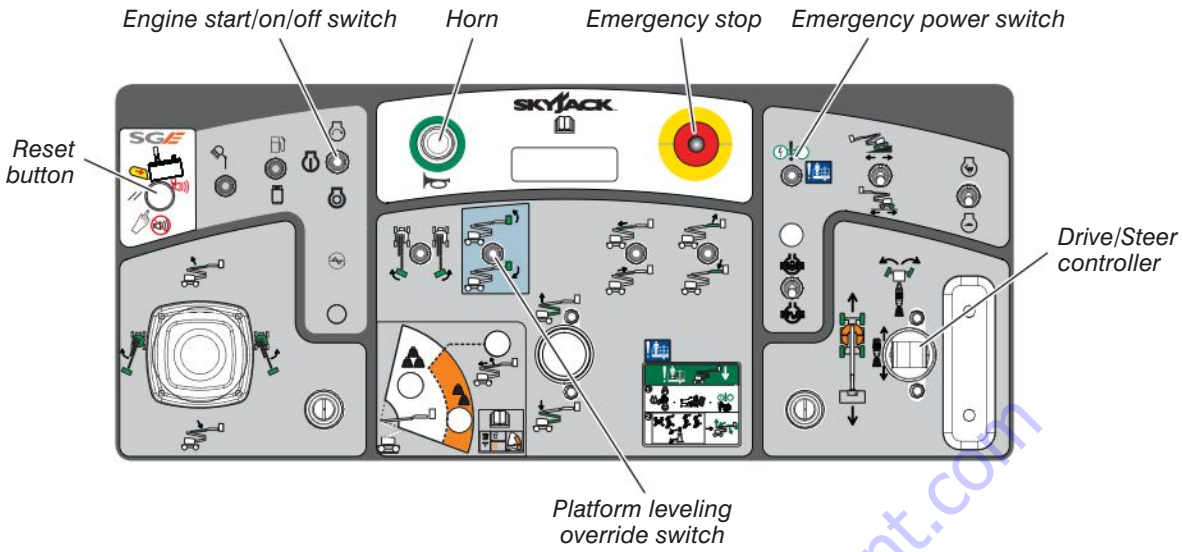
NOTE

To perform this function test, ensure there is sufficient space to fully raise and extend boom.

NOTE

Ensure boom is in stowed position to begin this function test.

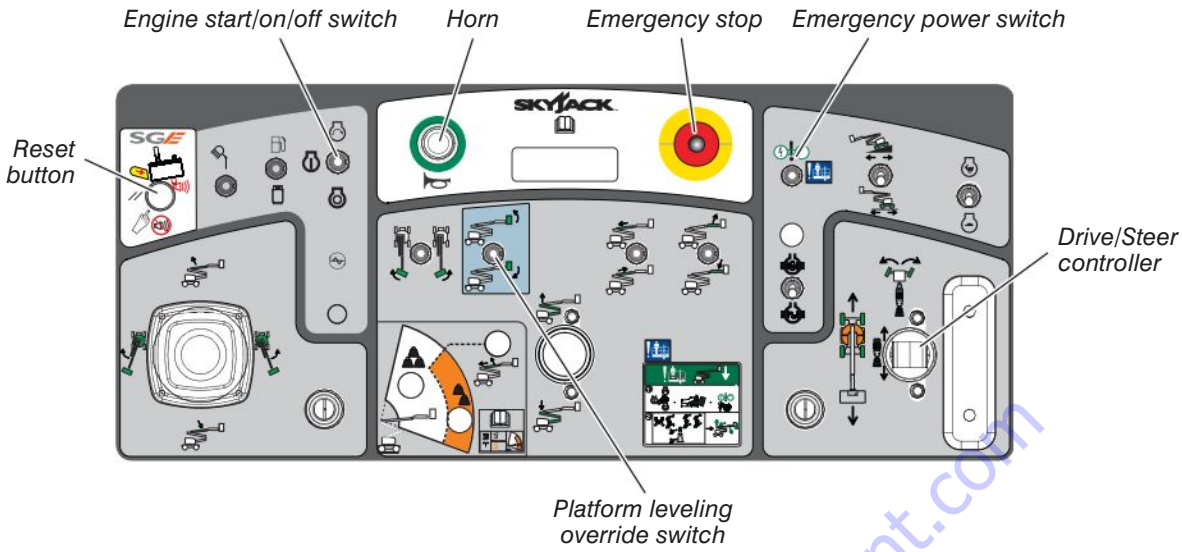
1. Push in emergency stop button.
2. Pull out emergency stop button.
   - **Result:** Capacity zone border light should illuminate for 1 second and then turn off. High capacity zone indicator light should illuminate.
3. Start engine.
4. Depress and hold footswitch and extend boom until high capacity zone indicator light turns off.
   - **Result:** Low capacity zone indicator light should illuminate.



5. Depress and hold footswitch and fully retract and lower boom.

4.3-16 Testing secondary guarding electrical (SGE)

1. Press the sensor bar for less than 1 second and then release.
   - **Result:** The audible/visual alarm should activate while the bar is being pressed and turn off after being released. The reset button should illuminate as soon as the sensor bar is pressed, and turn off when the bar is released.
2. Press the sensor bar for more than 1 second and then release.
   - **Result:** The audible/visual alarm should activate immediately and stay on after the bar is released. The reset button should illuminate.
3. Press the reset button.
   - **Result:** The audible/visual alarm and reset button light should go off.
4. Start the engine.
5. Press the sensor bar for less than 1 second and then release.
   - **Result:** The audible/visual alarm should activate while the bar is being pressed and turn off after being released. The reset button should illuminate as soon as the sensor bar is pressed, and turn off when the bar is released.
6. Press the sensor bar for more than 1 second and then release.
   - **Result:** The audible/visual alarm should activate immediately and stay on after the bar is released. The engine should shut down after 1 second. The reset button should illuminate.
7. Press the reset button.
   - **Result:** The audible/visual alarm and reset button light should go off.
8. Start the engine.
9. Activate any drive function in high torque.
10. Press the sensor bar for less than 1 second and then release.
    - **Result:** The function will stop while the bar is being pressed and motion will resume when the bar is released. The audible/visual alarm should activate while the bar is being pressed and turn off after being released. The reset button should illuminate as soon as the sensor bar is pressed, and turn off when the bar is released.
11. Press the sensor bar for more than 1 second and then release.
    - **Result:** The function will stop and the audible/visual alarm should activate immediately and stay on after the bar is released. The engine should shut down after 1 second. The reset button should illuminate.
12. Start the engine.
13. Activate any platform function (i.e. lift/extend/rotate).
14. Press the sensor bar for less than 1 second and then release.



- **Result:** The function will stop while the bar is being pressed and motion will resume when the bar is released. The audible/visual alarm should activate while the bar is being pressed and turn off after being released. The reset button should illuminate as soon as the sensor bar is pressed and turn off when the bar is released.

15. Press the sensor bar for more than 1 second and then release.
    - **Result:** The function will stop and the audible/visual alarm should activate immediately and stay on after the bar is released. The engine should shut down after 1 second. The reset button should illuminate.
16. While the audible/visual alarm is sounding, verify that the LED strobe light is also active.

4.3-17 Testing engine start/on/off switch

1. Ensure engine is running.
2. Select off position from engine start/on/off switch.
    - **Result:** Engine should shut down and platform control console is disabled.
3. Select on position from engine start/on/off switch.
    - **Result:** Platform control console is enabled.
4. Start engine by selecting start position from engine start/on/off switch.

4.3-18 Testing emergency power

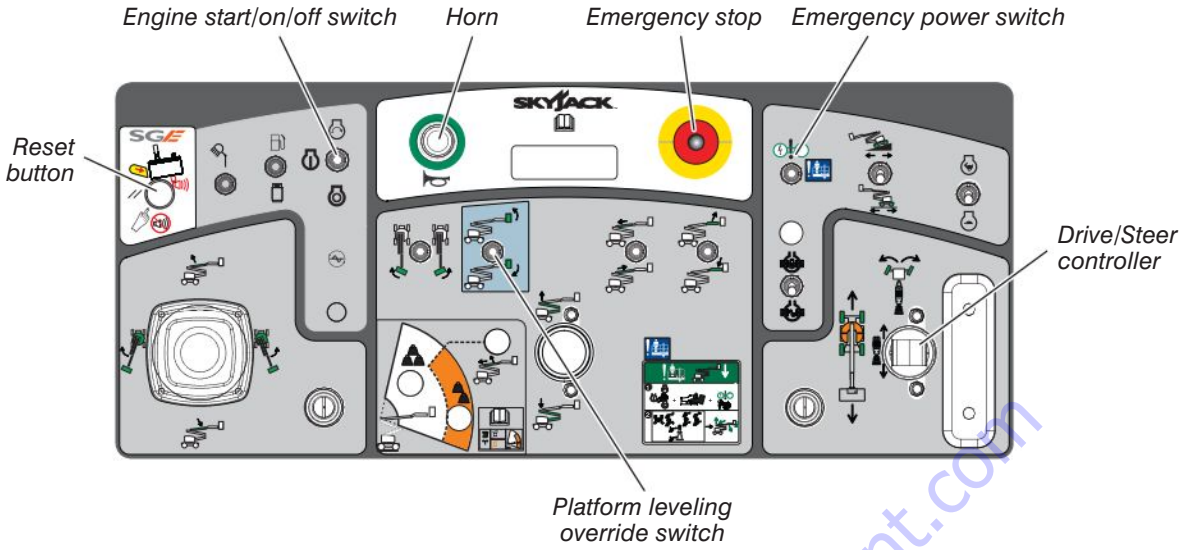
⚠ CAUTION

When operating on emergency power, do not operate more than one function at a time to avoid overloading 12-Volt emergency pump motor.

NOTE

To conserve battery power, test each function through a partial cycle.

1. On platform control console, push in emergency stop button to turn engine off.
2. Pull out emergency stop button.
3. Select on position from engine start/on/off switch.
4. Depress and hold footswitch.
5. Select from emergency power unit switch and activate each function control handle or switch.
    - **Result:** All boom functions should operate, except drive/steer functions.



4.3-19 Testing manual platform leveling

1. Start engine.
2. Depress and hold footswitch.
3. On platform leveling override switch, select up position to tilt platform up or down position to tilt platform down.
   - **Result:** Platform should tilt up or down.

4.3-20 Testing steering

1. Pull out emergency stop button.
2. Start engine by selecting start position from engine start/on/off switch.
3. Depress and hold footswitch.
4. Press rocker switch on top of drive/steer controller to left and right.
   - **Result:** Steer wheels should turn left and right.
5. Return wheels to parallel position before proceeding.

4.3-21 Testing driving function

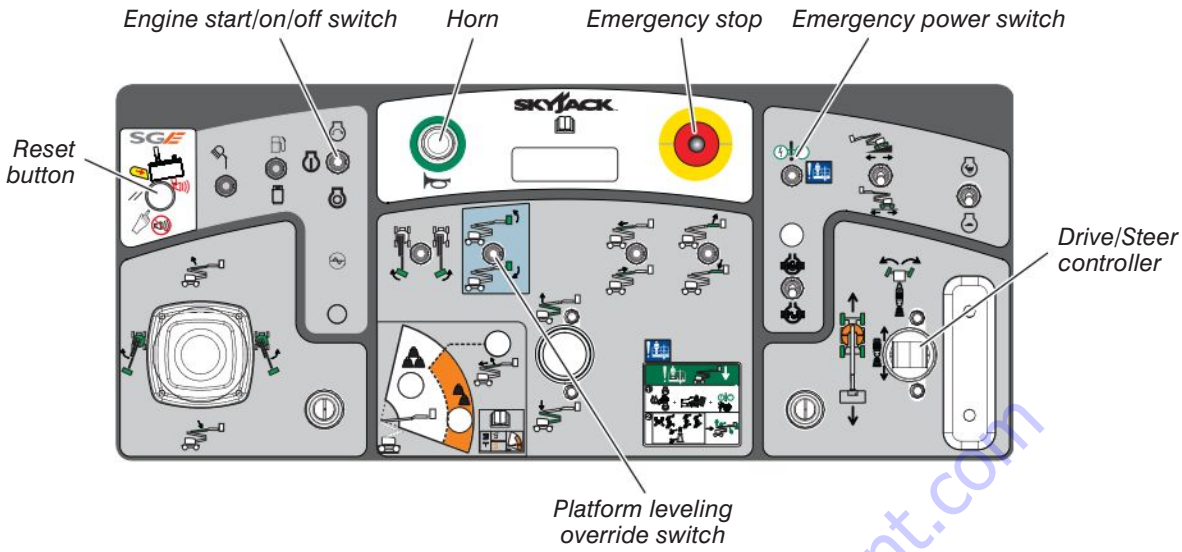
1. Ensure path of intended motion is clear.
2. Ensure boom is in stowed position and fly boom fully retracted.
3. Depress and hold footswitch.
4. Slowly move drive/steer controller in forward or reverse direction until MEWP begins to move, and then return handle to center position.
   - **Result:** MEWP should move in forward or reverse direction, and then come to a stop.

4.3-22 Testing brakes

⚠ WARNING

Brakes will engage instantly when you release footswitch, causing MEWP to stop immediately.

1. Start engine.
2. Move MEWP to a firm, level surface to ensure similar traction on left and right.
3. Ensure boom is in stowed position.
4. Depress and hold footswitch and drive MEWP first forward then reverse at full speed.
5. Remove your foot from footswitch.
   - **Result:** MEWP should come to an abrupt stop. If MEWP does not stop immediately, or if MEWP pulls to one side while stopping, do not operate MEWP until brake adjustments have been checked.



4.3-23 Testing driving speed

1. Depress and hold footswitch.
2. Raise main boom approximately 4 m (14 ft) and then slowly move drive/steer controller to full drive position.
   - **Result:** The maximum achievable drive speed should be significantly less than Lowered Travel Position drive speed.
3. Lower boom to stowed position.
4. Extend fly boom approximately 30 cm (12 in) and then slowly move drive/steer controller to full drive position.
   - **Result:** The maximum achievable drive speed should be significantly less than Lowered Travel Position drive speed.
5. Fully retract fly boom.

4.3-24 Testing horn

1. Push horn pushbutton.
   - **Result:** Horn should sound.

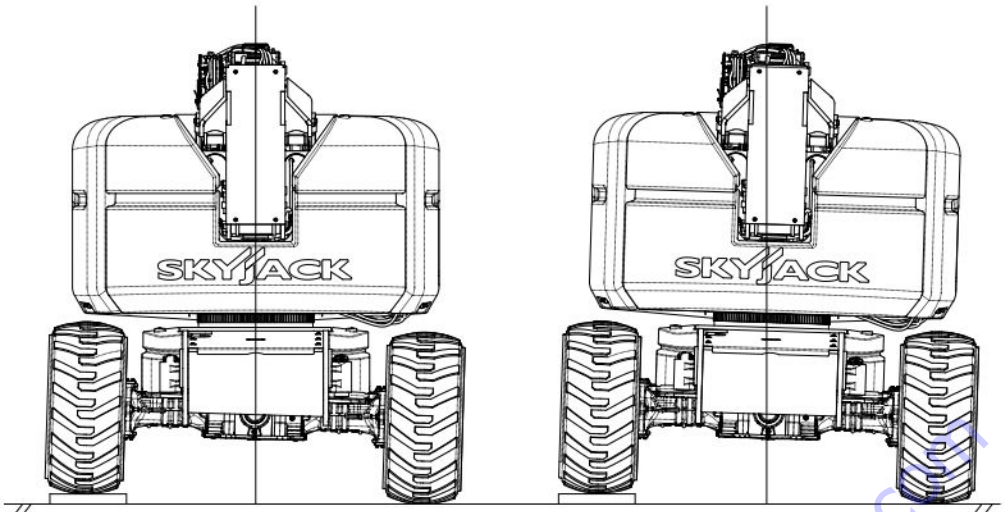
4.3-25 Testing differential lock switch

⚠ WARNING

Before engaging differential lock, ensure drive/steer controller is in neutral position.

1. On platform control console, push differential lock switch forward to the locked position and then release.
   - **Result:** Differential light should turn on. Differential lock should be engaged.
2. Pull differential lock switch backward to the unlocked position and then release.
   - **Result:** Differential light should turn off.

Differential lock will disengage when drive torque is released. Refer to *Section 5* for operation.



Oscillating axle - unlocked *Oscillating axle - locked*

4.3-26 Testing oscillating axles

⚠ WARNING

DO NOT operate any control on platform control console without proper fall protection secured to designated location in platform. Failure to avoid this hazard could result in death or serious injury!

1. Extend fly boom 30 cm (12 in) while on a firm, level surface.
   - **Result:** The steer axles should be locked.
2. Drive one of the steer tires up onto a 15 cm (6 in) block or curb.
   - **Result:** An appropriate tilt of the MEWP chassis should occur.
3. Retract fly boom while in tilt position.
   - **Result:** The steer axles should unlock and the MEWP chassis should level itself to ground.

4.4 Operator's Checklist

SKYJACK

Operator's Checklist

Serial Number: _____
Model: _____
Hourmeter Reading: _____
Date: _____
Time: _____

Operator's Name (Printed): _____

Operator's Signature: _____

Each item shall be inspected using the appropriate section of the Skyjack operating manual. As each item is inspected, check the appropriate box.

P PASS **R** REPAIRED
F FAIL **N/A** NOT APPLICABLE

	N/A	P	F	R
Visual and Daily Maintenance Inspections				
Labels				
Electrical				
Limit switches				
Hydraulic				
Engine compartment				
Main power disconnect switch				
Batteries				
Hydraulic pumps				
Muffler and exhaust				
Engine control console				
Engine				
Engine air filter				
Control compartment				
Base control console				
Hydraulic tank				
Hydraulic oil level				
Hydraulic return filter				
High pressure filter				
Brake manifold				
Main manifold				
Emergency power unit				
Fuel tank				
Base				
Turret transportation lock				
Drive axles				
Tie rod				
Oscillating cylinder assembly				
Wheel/Tire assembly				
Turret rotation gear				
Rotary manifold				
Platform assembly				
Platform control console				
Manuals				
Boom assembly				
Load cell				
Rotary actuator				
Jib				
E-chain				
Cylinders				
Wear pads				
Boom				
Optional equipment/attachments				
Hydraulic generator/Oil cooler (if equipped)				
Work light (if equipped)				
Flashing amber light (if equipped)				
Welder (if equipped)				
Arctic weather package (if equipped)				
Battery warmer/Hydraulic oil heater (if equipped)				
Function Tests				
Testing main power disconnect switch				
Base control console				
Testing base emergency stop button and base emergency stop light				
Testing start/function enable/emergency power switch and all boom and platform functions				
Testing platform self-leveling				
Testing platform capacity zone indicator lights				
Testing emergency power				
Testing off/base/platform switch				
Testing positive air shutoff (if equipped)				
Platform control console				
Testing platform emergency stop button and platform emergency stop light				
Verifying load sensing module self-check				
Testing footswitch and all boom and platform functions				
Testing boom lowering cutout switch				
Testing platform capacity zone indicator lights				
Testing secondary guarding electrical (SGE)				
Testing engine start/on/off switch				
Testing emergency power				
Testing manual platform leveling				
Testing steering				
Testing driving function				
Testing brakes				
Testing driving speed				
Testing horn				
Testing differential lock switch				
Testing oscillating axles				

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NOTE: *Make a copy of this page or visit the Skyjack website at www.skyjack.com for a printable copy.*

Section 5 – Operation

This section provides the necessary information needed to operate the MEWP. Read and completely understand the operating manual and all warnings and instruction labels (refer to *Section 8*) on the MEWP.

⚠ WARNING

Do not operate this MEWP without proper authorization and training. Doing so could result in death or serious injury.

Before operating this MEWP, perform the following tasks:

1. Visual and daily maintenance inspections (refer to *Section 4.2*).
2. Function tests (refer to *Section 4.3*).
3. Jobsite inspection (refer to *Section 2.4*).
4. If, as a result of the risk assessment, the need for rescue planning is identified, a system of communication shall be established between people working on the platform and nominated support personnel trained in the use of ground controls for platform retrieval.

⚠ WARNING

An operator should not use any MEWP that:

- **does not appear to be working properly.**
- **has been damaged or appears to have worn or missing parts.**
- **has alterations or modifications not approved by the manufacturer.**
- **has safety devices which have been altered or disabled.**

Failure to avoid these hazards could result in death or serious injury.

⚠ WARNING

DO NOT operate MEWP under engine power in an enclosed space. Use only in an open or well-ventilated area.

5.1 Start Operation

5.1-1 Activating base control console

⚠ WARNING

Ensure that you maintain three points of contact when using the ladder to mount/dismount platform.

1. Enter platform and close gate/drop bar.
2. On platform control console, pull out emergency stop button.
3. Dismount from platform.
4. In engine compartment, turn main power disconnect switch to on position.
5. On base control console, turn off/base/platform key switch to base position.
6. Pull out emergency stop button.
7. Select start position from start/function enable/ emergency power switch until engine starts.

⚠ WARNING

DO NOT over crank the starter. If engine fails to start after multiple attempts, contact qualified/ competent repair personnel.

5.1-2 Rotating platform using base control console

1. Activate function enable by selecting and holding start/function enable/emergency power switch to function enable position.
2. Push platform rotation switch to either left or right position. Release switch to stop.

5.1-3 Rotating turret using base control console

⚠ WARNING

When rotating the turret, ensure that there are no personnel or obstructions in the path of rotation, including blind spots.

1. Activate function enable by selecting and holding start/function enable/emergency power switch to function enable position.
2. Push turret rotation switch to either clockwise or counterclockwise position. Release switch to stop.

NOTE

Turret can be rotated continuously 360 degrees.

5.1-4 Moving jib up and down using base control console

1. Activate function enable by selecting and holding start/function enable/emergency power switch to function enable position.
2. Push jib up/down switch to either up or down position. Release switch to stop.

5.1-5 Moving riser up and down using base control console

1. Activate and hold function enable switch by pushing it to the right.
2. Push riser up/down switch to either up or down position. Release switch to stop.

5.1-6 Raising or lowering main boom using base control console

NOTE

Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the “high” or “low” capacity zone.

1. Activate function enable by selecting and holding start/function enable/emergency power switch to function enable position.
2. Push main boom raise/lower switch to either raise or lower position. Release switch to stop.

5.1-7 Extending or retracting fly boom using base control console

NOTE

Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the "high" or "low" capacity zone.

1. Activate function enable by selecting and holding start/function enable/emergency power switch to function enable position.
2. Push fly boom extend/retract switch to either extend or retract position. Release switch to stop.

5.1-8 Leveling platform using base control console

1. Activate function enable by selecting and holding start/function enable/emergency power switch to function enable position.
2. Push platform leveling override switch to either up or down position. Release switch to stop.

5.1-9 Operating using emergency power switch at base control console

This is a momentary-type switch. This switch allows all functions except the drive functions to operate in the event of engine malfunction. Refer to *Section 6.1* for the emergency lowering procedure.

5.1-10 Activating platform control console

1. In engine compartment, turn main power disconnect switch to on position.
2. On base control console, turn off/base/platform key switch to platform position.
3. On base control console, pull out emergency stop button.

⚠ WARNING

Ensure that you maintain three points of contact to mount/dismount the platform.

⚠ WARNING

DO NOT operate any control on operator's control console without proper fall protection secured to the designated location in the platform. Failure to avoid this hazard could result in death or serious injury.

4. Enter platform and close gate/drop bar.
5. Attach body harness lanyards of each occupant to fall protection anchorage points. Rated for one (1) person per anchorage.
6. On platform control console, pull out emergency stop button.
7. Select start position from engine start/on/off switch until engine starts.

NOTE

Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the "high" or "low" capacity zone.

⚠ WARNING

DO NOT over crank the starter. If engine fails to start after multiple attempts, contact qualified/ competent repair personnel.

NOTE

Engine will not start if you are pressing down on the footswitch.

8. Select desired engine RPM using throttle switch: high or low.

⚠ WARNING

- **DO NOT drive or steer the MEWP when the platform position does not allow you a clear view of the base.**
- **Your area of operation should be cordoned from other personnel or equipment.**

5.1-11 Driving forward or reverse using platform control console

NOTE

The driving function operates in accordance with the general orientation of the turret's counterweight over the chassis (i.e. joystick forward means counterweight is facing forward). *Therefore, the MEWP will move in the general direction of the joystick's movement.*

1. Depress and hold footswitch.
2. Push and hold drive/steer controller to drive forward or backward.
3. Release controller handle to stop.

⚠ CAUTION

When driving on a slope:

- **Torque Switch MUST be in high torque mode.**
- **DO NOT exceed the rated gradeability listed in *Section 7.4*.**
- **Ensure fuel level is above half to avoid a possible stall condition.**

5.1-12 Steering using platform control console

1. Depress and hold footswitch.
2. Press rocker on top of drive/steer controller to steer left or right.

NOTE

Driving and steering may be active at the same time.

5.1-13 Moving jib up and down using platform control console

1. Depress and hold footswitch.
2. On jib up/down switch, select to move jib up or down. Release switch to stop.

5.1-14 Moving riser up and down using platform control console

1. Depress and hold footswitch.
2. On riser up/down switch, select to move riser up or down. Release switch to stop.

5.1-15 Extending or retracting fly boom using platform control console

NOTE

Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the "high" or "low" capacity zone.

1. Depress and hold footswitch.
2. On fly boom extend/retract switch, select to extend fly boom or to retract fly boom.

5.1-16 Leveling platform using platform control console

1. Depress and hold footswitch.
2. On platform leveling override switch, move switch to upward position to tilt platform up or move switch to downward position to tilt platform down. Release switch to stop.

5.1-17 Rotating platform using platform control console

1. Depress and hold footswitch.
2. On platform rotation switch, select to rotate platform left or to rotate platform right.

5.1-18 Raising or lowering main boom using platform control console

NOTE

Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the "high" or "low" capacity zone.

1. Depress and hold footswitch.
2. Push and hold boom/turret controller to raise or lower main boom.
3. Release controller handle to stop.

5.1-19 Sounding horn

1. Press horn pushbutton to sound horn. Release pushbutton to stop sounding horn.

5.1-20 Rotating turret using platform control console

⚠ WARNING

When rotating the turret, ensure that there are no personnel or obstructions in the path of rotation, including blind spots.

1. Depress and hold footswitch.
2. Push and hold boom/turret controller to rotate clockwise or counterclockwise.
3. Release controller handle to stop.

NOTE

Turret can be rotated continuously 360 degrees.

5.1-21 Operating with emergency power switch at platform control console

This is a momentary-type switch. This switch allows all functions except drive functions to operate in the event of engine malfunction. Refer to *Section 6.1* for the emergency lowering procedure.

5.1-22 Engaging differential lock switch

1. Depress and hold footswitch.
2. On platform control console, push differential lock switch forward to the locked position and then release.

5.1-23 Disengaging differential lock switch

1. Ensure path of intended motion is clear.
2. Depress and hold footswitch
3. Pull differential lock switch backward to the unlocked position and then release.

NOTE

To disengage differential lock mechanism, it may be necessary to release drive torque. This can be accomplished by operating drive (alternating directions) and/or steer functions (alternating directions).

5.1-24 Shutdown procedure

1. Select a reasonably well-protected parking location with a firm, level surface, clear of obstructions and traffic.
2. Completely retract boom and lower platform.
3. Push in emergency stop button on platform control console and on base control console.
4. Turn base/off/platform key switch to off position. Remove key.
5. Turn main power disconnect switch to off position.
6. If necessary, cover platform control console to protect warning labels and operating controls from hostile environments.

5.1-25 Hydraulic generator (if equipped)

To start hydraulic generator:

1. Ensure engine is running.
2. On platform control console, turn generator on/off switch to on position.

To restore normal operation:

1. On platform control console, turn generator on/off switch to off position.

NOTE

An engine shut down will turn the generator off. All functions are disabled while the generator switch is on.

5.1-26 Arctic weather package (if equipped)

⚠ WARNING

- **Do not use heaters if temperature is above freezing.**
- **Use the correct fluids, and the proper diesel fuel (refer to Cold Weather Operation Chart).**
- **At temperatures below -7°C (20°F), run engine at idle for at least 5 minutes before operating MEWP.**

1. Ensure the MEWP is on level ground, boom is in stowed position and hydraulic oil level is between the minimum and maximum marks on the sight gauge.
2. Locate heater plug (item ❶ - *Figure 23*) in engine compartment.
3. Plug heater into a 110V / 15 Amp protected circuit for a minimum of 4 hours.
4. Start engine from base control console (refer to *Section 5.1-1*).

⚠ WARNING

DO NOT over crank the starter. If engine fails to start after multiple attempts, contact a Service Technician.

IMPORTANT

Ensure the heater is unplugged before operating the MEWP.

NOTE

- *If the MEWP is to be parked for an extended period of time, remove the battery and store it in a warm place.*
- *Refer to the cold weather operation chart (Figure 24) to assist in operating the MEWP in cold weather conditions.*

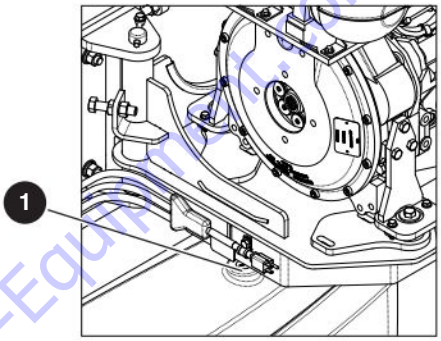


Figure 24 *Heater plug*

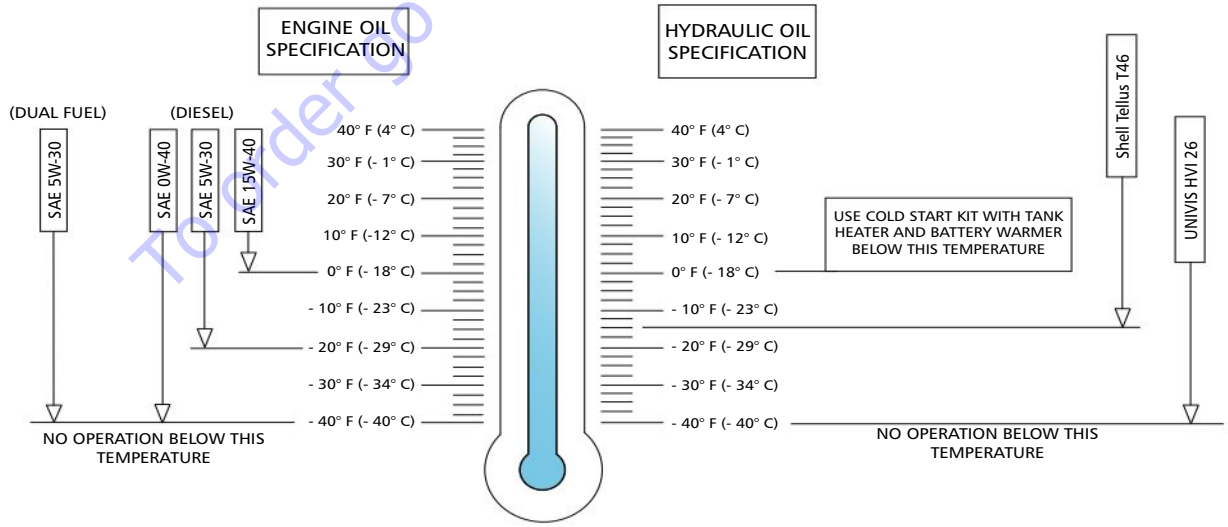


Figure 25 *Cold weather operation chart*

Section 6 – Additional Procedures

6.1 Emergency Lowering Procedure

This section guides the operator on how to use the emergency lowering system. This system allows platform lowering in the event of an emergency or engine malfunction.

⚠ WARNING

If the platform is overloaded due to contact with an overhead obstruction, do one of the following:

- **Remove the obstruction from the platform, then after a four-second delay normal functions can be resumed.**
- **Use the emergency power unit to release the platform from the obstruction (refer to *Section 3.4-7)*.**
- **Do not attempt to free a snagged platform with lower controls until personnel are removed from the platform.**

At base control console:

1. Ensure engine is off.
2. Pull out emergency stop button.
3. Select base position from key switch.
4. Select emergency power position from start/function enable/emergency power switch and activate desired boom function.

At platform control console:

1. Ensure engine is off.
2. Pull out emergency stop button.
3. Select on position from engine start/on/off switch.
4. Depress and hold footswitch.
5. Select from emergency power unit switch and activate desired boom function.

6.2 Chassis Tilt Recovery

This section guides the operator with regard to recovering from an inclined position.

IMPORTANT

When the boom is raised or extended, the MEWP must only be operated on firm, level surfaces.

⚠ WARNING

When tilt settings are exceeded, causing the alarm to sound and the light to illuminate, the platform should be lowered and retracted immediately (refer to *Section 3.4-5)*.

6.2-1 Platform uphill

If the MEWP becomes tilted with the platform uphill (refer to *Figure 25*) follow the steps below to return to a lowered and retracted position.

1. Lower main boom completely.
2. Lower riser completely.
3. Retract fly boom completely.
4. Drive to a firm, level surface.

6.2-2 Platform downhill

If the MEWP becomes tilted with the platform downhill (refer to *Figure 26*) follow the steps below to return to a lowered and retracted position.

1. Retract fly boom completely.
2. Lower riser completely.
3. Lower main boom completely.
4. Drive to a firm, level surface.

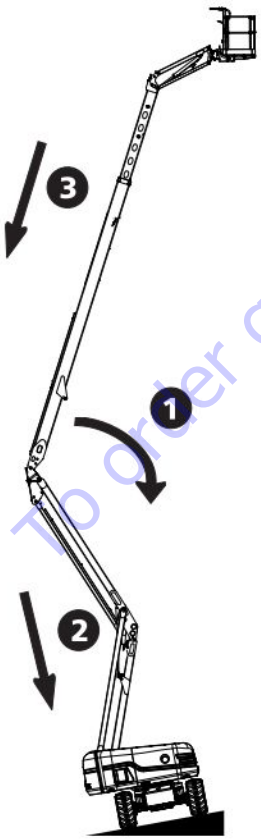


Figure 26 *Platform uphill*

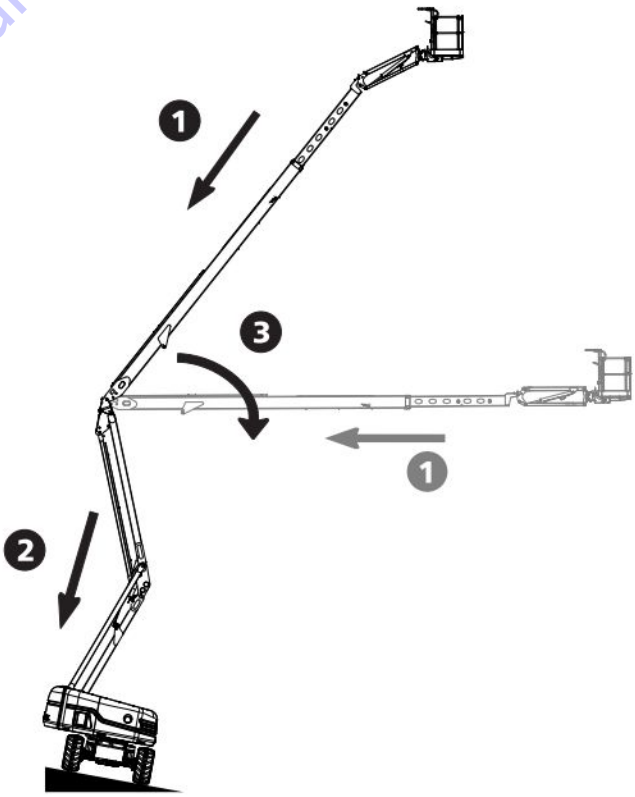


Figure 27 *Platform downhill*

6.3 Winching and Towing Procedures

This section provides the operator with the winching and towing procedure, which includes instructions on how to manually release the brakes.

⚠ WARNING

Ensure boom is in stowed position before winching or towing. Sudden motion could cause MEWP to become unstable. Death or serious injury could occur.

⚠ WARNING

In emergency situations where MEWP functions are not available and lowering is impeded by an obstacle, utmost care must be taken to move MEWP far enough to clear obstacle. In such cases, operation must be extremely smooth with no sudden movements and must not exceed a speed of 50 mm/sec (2 in/sec).

⚠ WARNING

When winching or towing, do not exceed 3.2 km/h (2 mph).

⚠ WARNING

Do not winch or tow MEWP on grade steeper than 45%.

⚠ WARNING

Do not winch or tow MEWP onto a slope, or brake the towing vehicle rapidly. Do not pull MEWP down an incline towards a winch.

1. Before winching or towing MEWP, fully retract, lower and position boom over rear drive wheels in line with direction of travel.
2. Manually release brakes (refer to *Section 6.3-1*).
3. Remove wheel chocks or blocks, and then winch or tow MEWP to desired location.
4. Position MEWP on a firm and level surface.
5. Chock or block wheels to prevent MEWP from rolling.
6. Locate the bypass valve on the inboard side of the drive pump. Re-engage the drive pump by loosening the valve stem (item ❶ - marked with yellow paint - *Figure 27*) 90 degrees counterclockwise.

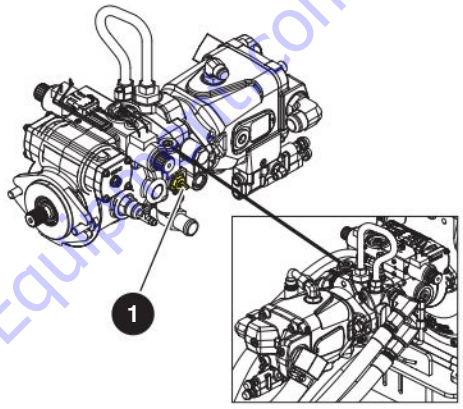


Figure 28 *Drive Bypass Valve*

7. Apply brakes by pulling out black brake auto reset valve.

NOTE

Brakes automatically apply when platform controls are engaged.

⚠ WARNING

Brakes must be applied immediately after reaching desired location.

6.3-1 Releasing brakes manually

Brakes must be manually disengaged for winching or towing.

⚠ WARNING

Do not manually disengage brakes if MEWP is on a slope.

1. Ensure MEWP is on level ground. Chock or block wheels to keep MEWP from rolling.
2. Turn main power disconnect switch to off position.

⚠ CAUTION

Do not use hydraulic power with brake disengaged.

3. Locate the bypass valve on the inboard side of the drive pump. Bypass the drive pump by loosening the valve stem (item ❶ - marked with yellow paint - *Figure 28*) 90 degrees clockwise.

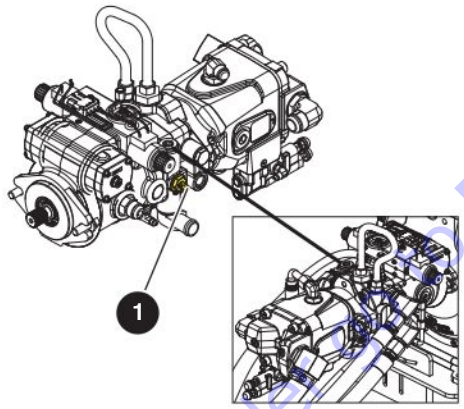


Figure 29 *Drive bypass valve*

⚠ CAUTION

Do not release brakes before disengaging drive motor.

4. Push in black brake valve plunger (item ❸ - *Figure 29*).

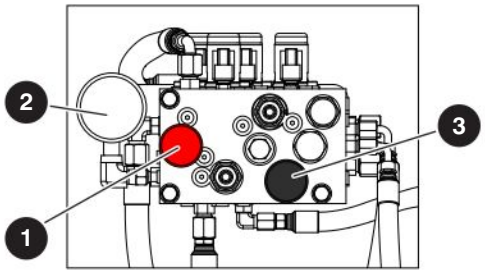


Figure 30 *Brake manifold*

5. Actuate red hand pump (item 1) slowly by moving knob in and out until pressure gauge (item 2) (if equipped) registers 300 psi/21 bar. DO NOT exceed 350 psi/24 bar. Brake is now released. If MEWP is not equipped with a pressure gauge, refer to the service manual for instructions on how to install the pressure gauge.

⚠ WARNING

Brakes must be applied immediately after reaching desired location. Refer to *Section 6.3* on how to reengage brakes.

6.4 Refueling Procedure

This section provides the operator with the procedure on how to refuel the engine and remove/install a propane cylinder.

⚠ CAUTION

When operating on a slope, ensure fuel level is above half to avoid a possible stall condition.

IMPORTANT

Before using your MEWP ensure there is enough fuel for expected use.

⚠ WARNING

Failure to heed the following safety precautions could result in death or serious injury:

- **Use extreme caution while refueling MEWPs.**
- **Ensure that engine and all systems are turned off before refueling.**
- **Refuel the MEWP only in a well ventilated area away from open flame and other sources of ignition, authorized by your employer and supervisor.**
- **Never try to start a MEWP if you smell gasoline.**
- **Gasoline engine models: Use only unleaded gasoline with an octane rating 87 or higher.**
- **Diesel engine models: Use ultra low sulfur fuel only.**
- **Liquid propane gas fuel is a gas that is heavier than air. It settles in low spots. Any flame or spark could cause a fire.**
- **When changing liquid propane gas cylinder, check all connections for damage or missing parts.**

⚠ WARNING

Do not smoke in an area where MEWPs are stored or refueled.

6.4-1 Refuelling (gasoline or diesel)

IMPORTANT

Use unleaded gasoline or ultra low sulfur diesel as indicated on fuel tank.

1. Ensure engine and all systems are turned off and emergency stop buttons are depressed.
2. Open control compartment and remove fuel cap.
3. Carefully fill the fuel tank ensuring that no spillage occurs.
4. Secure fuel cap.
5. Ensure there are no leaks in fuel system.
6. Wipe up any spilled fuel.
7. Dispose of rags in an approved container.

6.4-2 Propane

⚠ WARNING

Follow all local and federal regulations for propane handling.

To remove a propane cylinder:

1. Ensure engine and all systems are turned off and emergency stop button is depressed.
2. Turn propane cylinder's main valve clockwise to shut off fuel supply to engine.
3. Start engine and allow it to stop naturally. Restart engine to ensure fuel lines are empty.
4. Disconnect hose from empty propane cylinder by detaching the coupling. Turn fitting counterclockwise.
5. Loosen two propane cylinder straps by pulling up on the metal clips. Disconnect straps from hooks.
6. Remove the propane cylinder.

To install a propane cylinder:

1. Ensure engine and all systems are turned off and emergency stop button is depressed.
2. Place propane cylinder on bracket or in compartment.
3. Ensure metal peg on bracket or compartment is inserted into propane cylinder rim.
4. Reconnect propane cylinder straps to hooks and fasten tightly.
5. Attach coupler to propane cylinder and turn clockwise to tighten fitting.
6. Apply soap water or neutral detergent to pipe connection and cylinder.
7. Open valve 1/4 turn counterclockwise and check for any gas leaks.
8. Wipe off soap water or detergent after inspection is completed.
9. Open main valve fully if there are no leaks.

6.5 Loading/Unloading

When the MEWP is loaded/unloaded from a transporting vehicle on a public road, implement measures to protect the person(s) involved or affected. These measures may include:

1. Warning cones;
2. Road signs and signalling devices;
3. Use of appropriate personal protective equipment, such as reflective clothing;
4. Flag personnel to warn other vehicles of the presence of the MEWP and any associated vehicles;
5. Or any other appropriate control measures.

Know and heed all national, state/provincial and local rules which apply to transporting of MEWPs.

Only qualified/competent personnel shall operate the MEWP during loading/unloading.

Be sure vehicle capacity and loading equipment hoists, chains, straps, etc., are sufficient to withstand maximum MEWP weight.

The transport vehicle must be parked on a level surface and must be secured to prevent rolling while MEWP is being loaded or unloaded.

6.5-1 Loading and tie-down

1. Lock turret using turret transportation lock (refer to *Section 6.5-2*).
2. Turn key switch to off position and remove key before transporting.
3. Turn main power disconnect switch to off position.
4. Chock MEWP wheels (if necessary).
5. Remove all loose items.
6. Anchor down MEWP to transport surface using tie-down points (refer to *Figure 30*).
7. Secure boom from side-to-side movement using lower platform mount between boom end and platform. Do not use excessive downward force when securing boom section.
8. Place block underneath platform rotator and gently lower rotator onto block and secure in place. Strap must be secured underneath hoses and cables to avoid damage to MEWP (refer to *Figure 31*). Do not use excessive downward force when securing platform.

⚠ WARNING

Inspect MEWP for loose or unsecured items.

NOTE

For loading and unloading using a winch line, refer to Section 6.3.

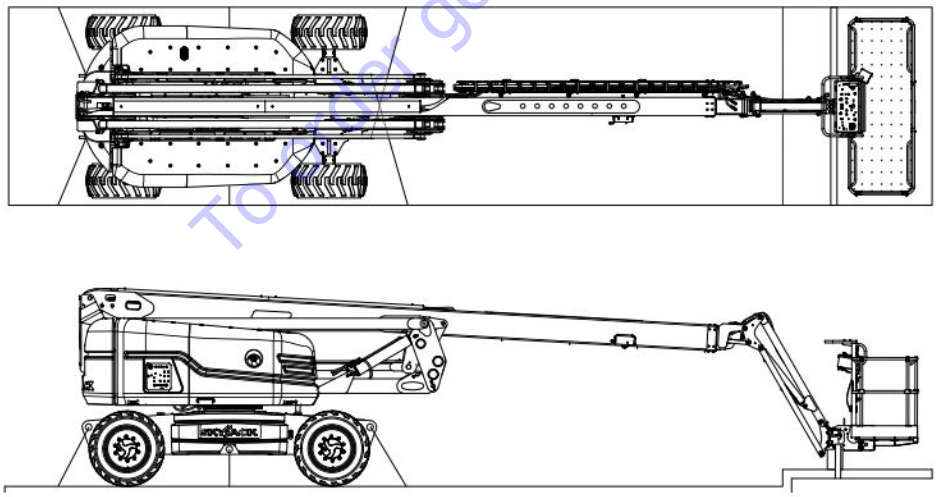


Figure 31 *Tie-down points*

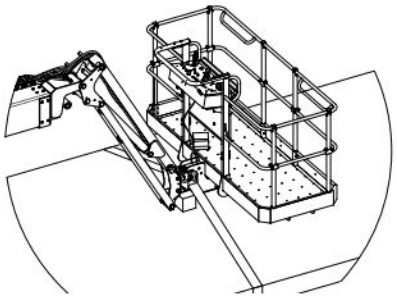


Figure 32 *Platform tie-down*

6.5-2 Locking the turret

1. Ensure that turret is positioned so that turret transportation lock tube (*item* ❷ *– Figure 32*) is aligned into one of two turret locking points on the chassis.
2. Lift turret lock retaining pin (*item* ❶ *– Figure 32*) and rotate 90 degrees. Lower turret lock retaining pin into locked position.

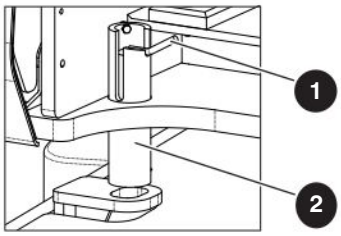


Figure 33 *Turret transportation lock*

6.5-3 Lifting

1. Rotate the boom and position the MEWP as shown in *Figure 35*.

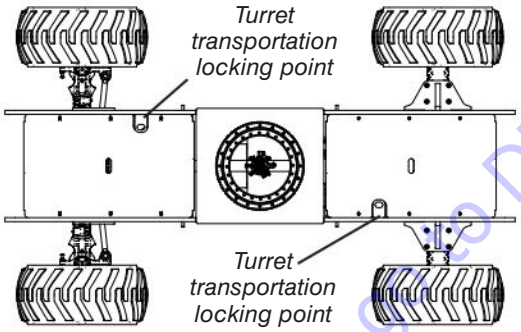


Figure 34 *Turret transportation locking points*

2. Turn main power disconnect switch to off position.
3. Clear platform of all personnel, tools and materials.

⚠ WARNING

When lifting the MEWP, lifting devices must be attached to designated lifting points only (refer to *Figure 34*).

⚠ WARNING

Use chains with load capacity sufficient to withstand MEWP weight. Refer to the serial plate of the MEWP for specific weight.

4. Properly adjust rigging to ensure MEWP remains level during lifting. See Center of gravity location (*Figure 35*).

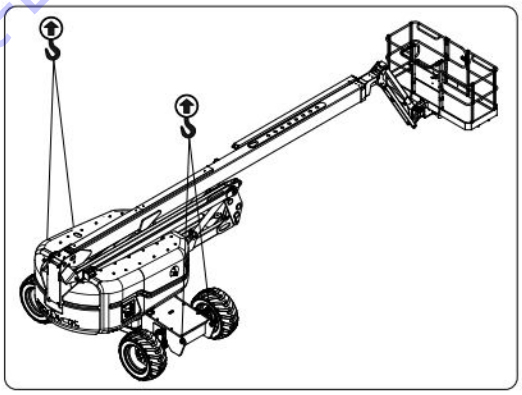


Figure 35 *Lifting points*

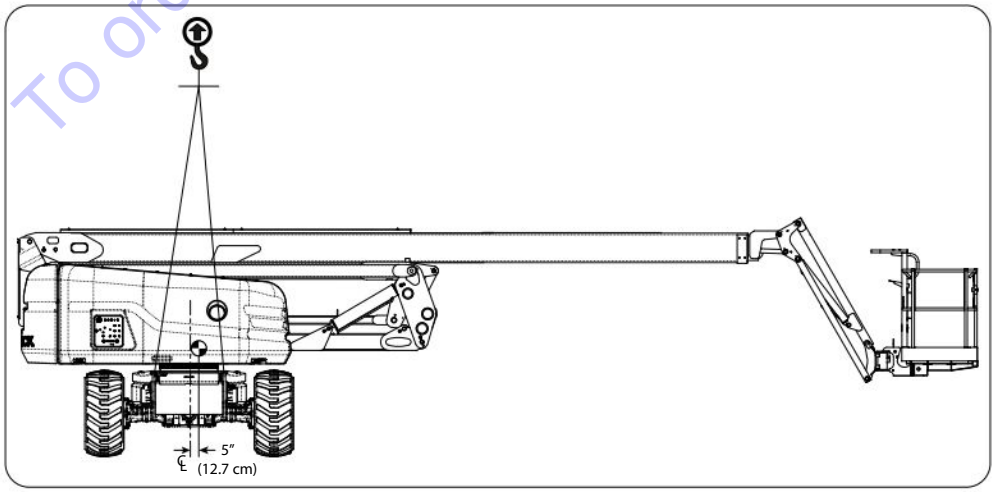


Figure 36 *Center of gravity*

Section 7 – Technical Diagrams & Specifications

7.1 Technical Diagrams

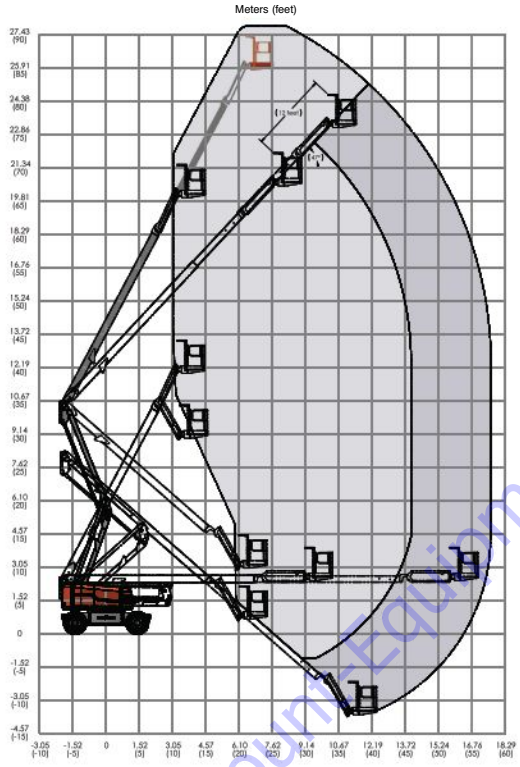
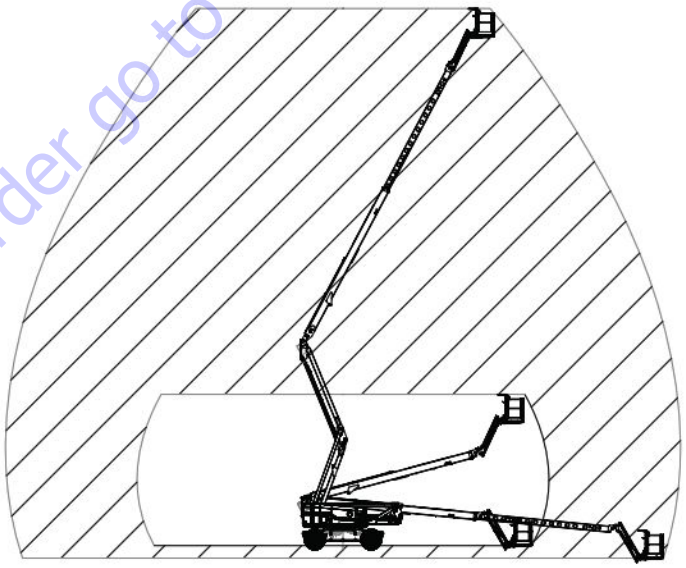


Figure 37 *Reach diagram - SJ85 AJ*



Axle oscillation free (lowered travel position) - drive speed 4.8 km/h (3.0 mph) max.

Axle oscillation locked (elevated travel position) - drive speed 0.8 km/h (0.5 mph) max.

Figure 38 *Axle oscillation - SJ85 AJ*

Technical Diagrams Continued

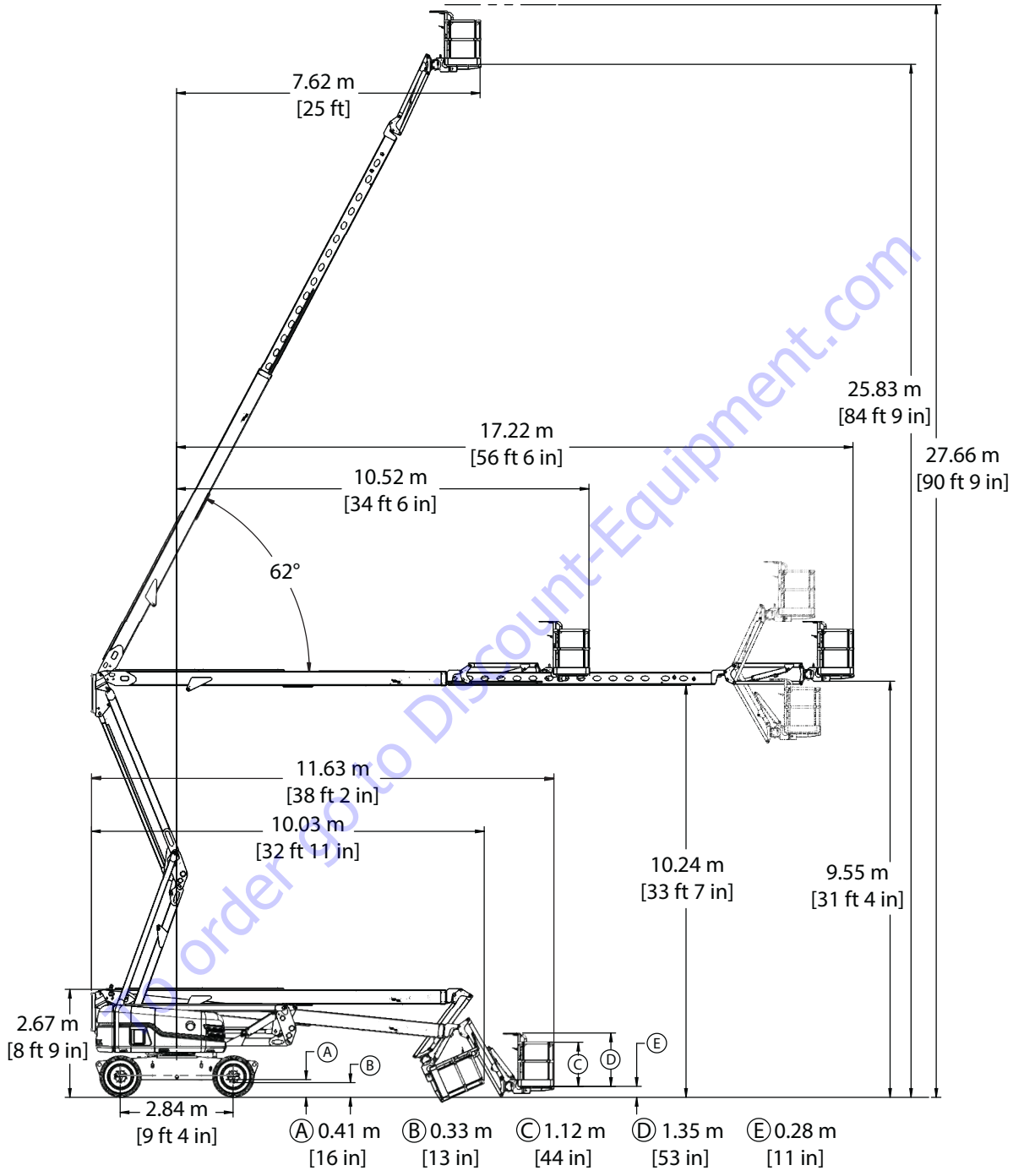


Figure 39 *Dimensions - SJ85 AJ*

Technical Diagrams Continued

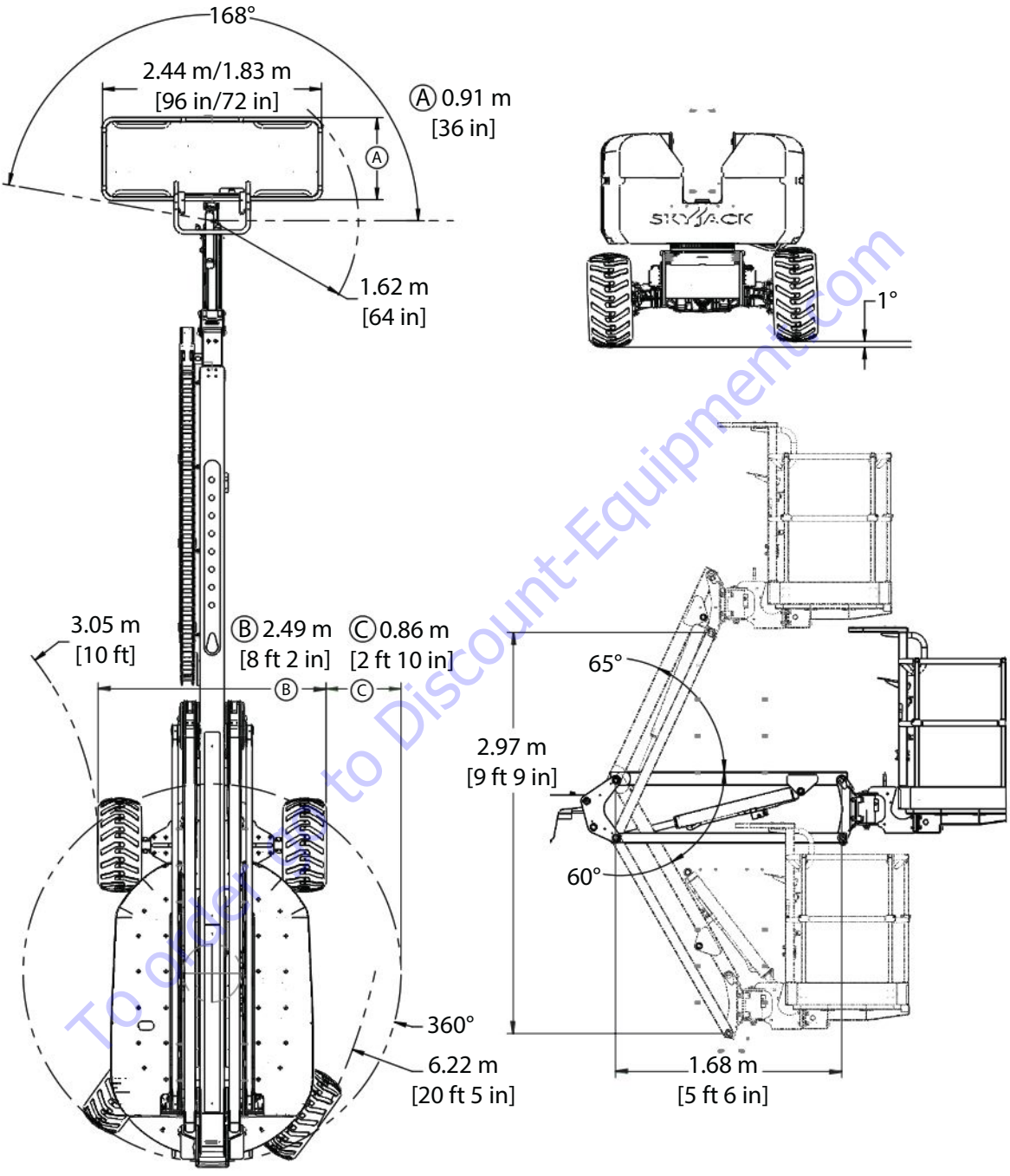


Figure 40 *Dimensions - SJ85 AJ*

7.2 Standard and Optional Equipment

Model	SJ85 AJ
Standard Equipment	
12 Volt DC emergency power	✓
1.68 m (5 ft 6 in) jib	✓
2.44 m x 0.91 m (96 in x 36 in) platform	✓
Base controls	✓
Continuous drive and steer directional sensing	✓
Diesel engine	✓
Engine anti-restart protection	✓
Foam-filled tires	✓
Four-wheel drive	✓
Glow plug heaters (diesel only)	✓
110V outlet on platform	✓
Load sensing system	✓
Manual brake release	✓
Operator horn	✓
All motion alarm	✓
Oscillating axle (steer)	✓
Platform controls	✓
Tri-entry drop bar	✓
Spring-applied hydraulically released brake	✓
Variable speed drive and function controls	✓
Operator-engaged differential lock	✓
Dual capacity rating	✓
SGE	✓
Optional Equipment	
Side entry spring hinged gate	✓
Welder package with 12kW hydraulic generator	✓
Oil cooler (included with generators)	✓
3500W hydraulic generator	✓
Cold weather start kit	✓
Arctic weather package	✓
Flashing amber light	✓
Platform work light	✓
Air line to platform	✓
1.83 m x 0.91 m (72 in x 36 in) platform	✓
Foam-filled non-marking tires	✓
Pipe rack	✓
Hostile environment package	✓
Control box cover	✓
External platform top rail	✓
Bio oil	✓
SGM	✓
Positive air shutoff	✓
Tool caddy	✓
Diesel scrubber	✓

1743AA_ANSI

7.3 Owner's Annual Inspection Record

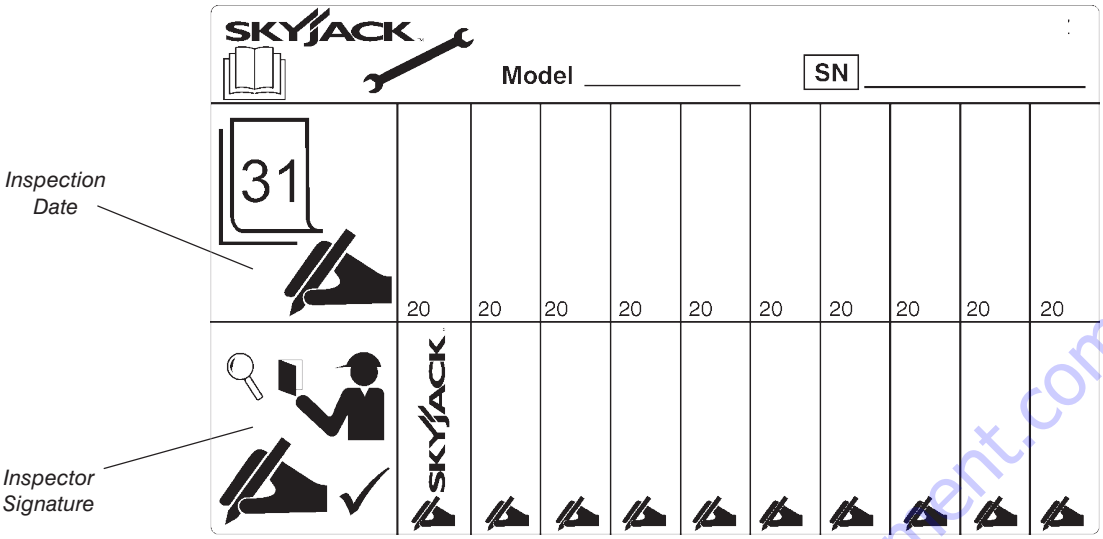


Figure 41 *This decal is located on the scissor assembly. It must be completed after an annual inspection has been completed. Do not use the MEWP if an inspection has not been recorded in the last 13 months.*

7.4 Specifications and Features-A

Model			SJ85 AJ
Platform Size	Total platform length (outside)		2.44 m / 1.83 m (96 in / 72 in)
	Total platform depth (outside)		0.91 m (36 in)
Height	Working		28 m (91 ft)
	Platform elevated		26 m (85 ft)
	Drive		driveable at all heights
	Stowed		2.67 m (8 ft 9 in)
Length	Overall with platform		11.63 m (38 ft 2 in)
Width	Outside std. tires		2.49 m (8 ft 2 in)
Weight	With foam-filled tires		16, 465 kg (36, 300 lb)
Platform rotation			168 degrees
Horizontal reach			17.22 m (56 ft 6 in)
Wheelbase			2.84 m (9 ft 4 in)
Turret rotation			360 degrees continuous
Turret tailswing			0.86 m (2 ft 10 in)
Gradeability (torque equivalent to)			45%
Ground clearance under axle			0.33 m (13 in)
Turning Radius	Inside	4WD	3.05 m (10 ft)
	Outside		6.22 m (20 ft 5 in)
System voltage			12 V DC
Battery	Type		Lead/Acid
	Cold cranking amperes		800 A
Operating Times	Main boom up		85 - 95 seconds (approx.)
	Main boom down		85 - 95 seconds (approx.)
	Riser up		25 - 35 seconds (approx.)
	Riser down		25 - 35 seconds (approx.)
	Fly boom extend		45 - 55 seconds (approx.)
	Fly boom retract		35 - 45 seconds (approx.)
	Jib up		20 - 30 seconds (approx.)
	Jib down		15 - 25 seconds (approx.)
	Turret rotate		95 - 130 seconds (approx.)
	Platform rotate		10 - 20 seconds (approx.)
Driving Speeds	Drive speed (maximum-stowed)		4.8 km/h (3.0 mph)
	Drive speed (maximum-elevated)		0.8 km/h (0.5 mph)

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7.5 Specifications and Features-B

Model	SJ85 AJ
Electromagnetic Compatibility (EMC)	Meets EN13309:2010 requirements
Hazardous Location Rating	MEWP not rated for hazardous locations
Operating Temperatures	
Standard	-20°C (-4°F) to +40°C (+104°F)
Cold Weather Package	Below -10°C (+14°F)
Arctic Weather Package	Below -18°C (0°F)

1745AA_ANSI

7.6 Tire/Wheel Specifications

SJ85 AJ	
Tire Size	Outrigger R4 18-625
	0.47 m x 1.05 m (18.7 in x 41.2 in)
Type	Foam-filled
Tire Ply Rating	16
Wheel Nuts Torque	373 Nm

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7.7 Maximum Platform Capacities

SJ85 AJ	
Total Capacity (High)	340 kg (750 lb)
	3 Persons
Total Capacity (Low)	227 kg (500 lb)
	2 Persons
Maximum Wind	12.5 m/s
Maximum Side Force	400 N
Tilt Cutout Setting	5 degrees x 5 degrees

1747AA_ANSI

7.8 Floor Loading Pressure

Model	Gross MEWP Weight		Total MEWP Load					
			Wheel		LCP		OUP	
	kg	lb	kg	lb	kPa	psi	kPa	psf
SJ85 AJ	16,805	37,050	7,500	16,500	1,179	171	17	355

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• Gross MEWP Weight = Weight + platform capacity
• LCP – Locally Concentrated Pressure – is a measure of how hard the MEWP tire tread presses on the area in direct contact with the floor. The floor covering (tile, carpet, etc.) must be able to withstand more than the indicated values above.
• OUP – Overall Uniform Pressure – is a measure of the average load the MEWP imparts on the whole surface projected directly underneath it. The structure of the operating surface (beams, etc.) must be able to withstand more than the indicated values above.
• Welder option will add approximately 158.8 kg (350 lb) to total MEWP weight and 79.4 kg (175 lb) to max. wheel load.

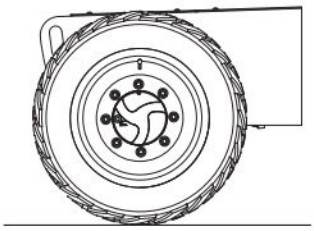
NOTE

The LCP or OUP that an individual surface can withstand varies from structure to structure and is generally determined by the engineer or architect for that particular structure.

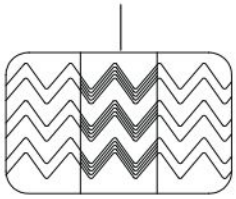
7.8-1 Locally concentrated pressure (LCP)

Foot print area identified by test.

$$LCP = \frac{\text{Wheel load}}{\text{Foot print area}}$$



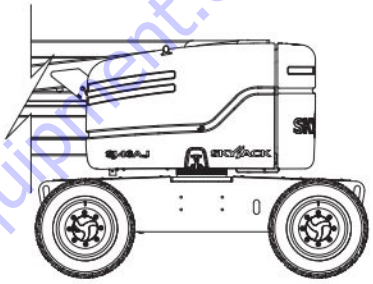
Foot print area

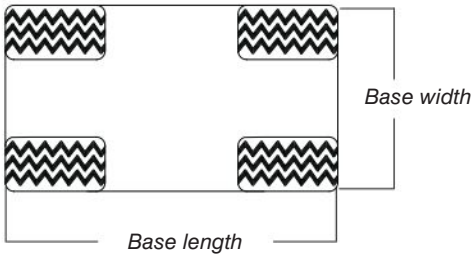


7.8-2 Overall uniform pressure (OUP)

Base area = length x width

$$OUP = \frac{\text{Weight of MEWP + capacity}}{\text{Base area}}$$





⚠ WARNING

Do not use tires other than those specified for this machine. Do not mix different types of tires. Tires other than those specified can adversely affect stability. Failure to operate with matched, approved tires in good condition may result in death or serious injury. Replace tires with the exact, Skyjack-approved types only.

Section 8 – Labels

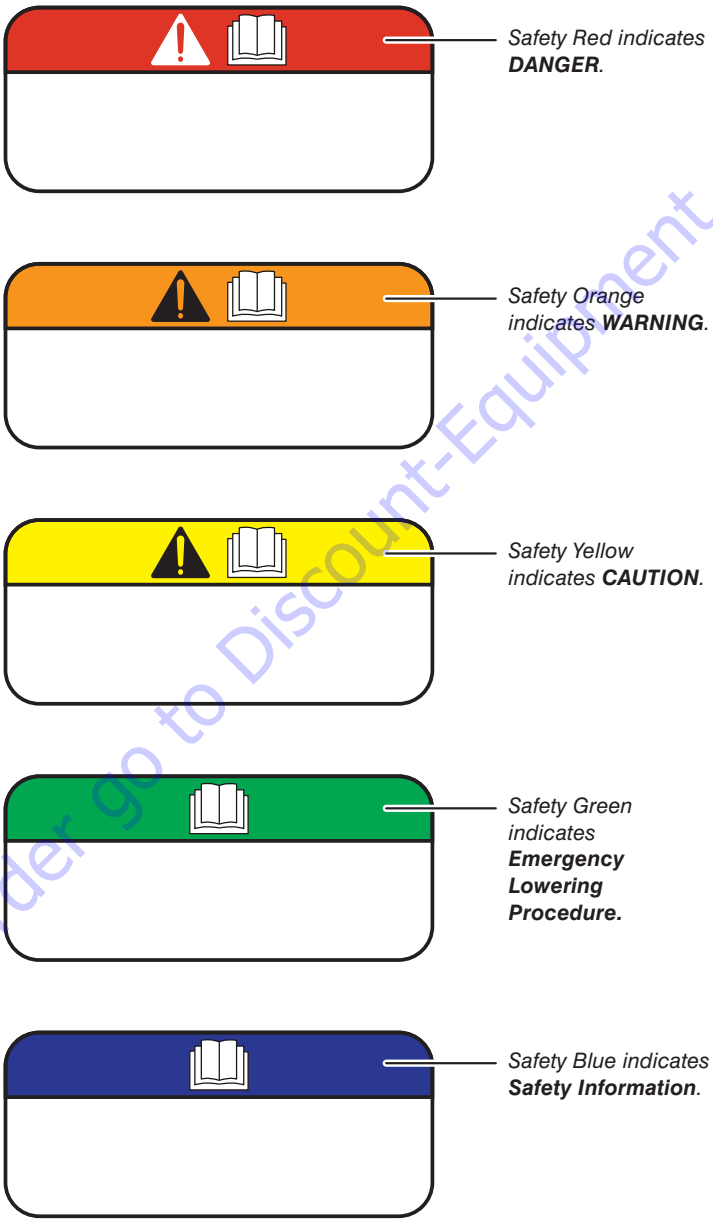
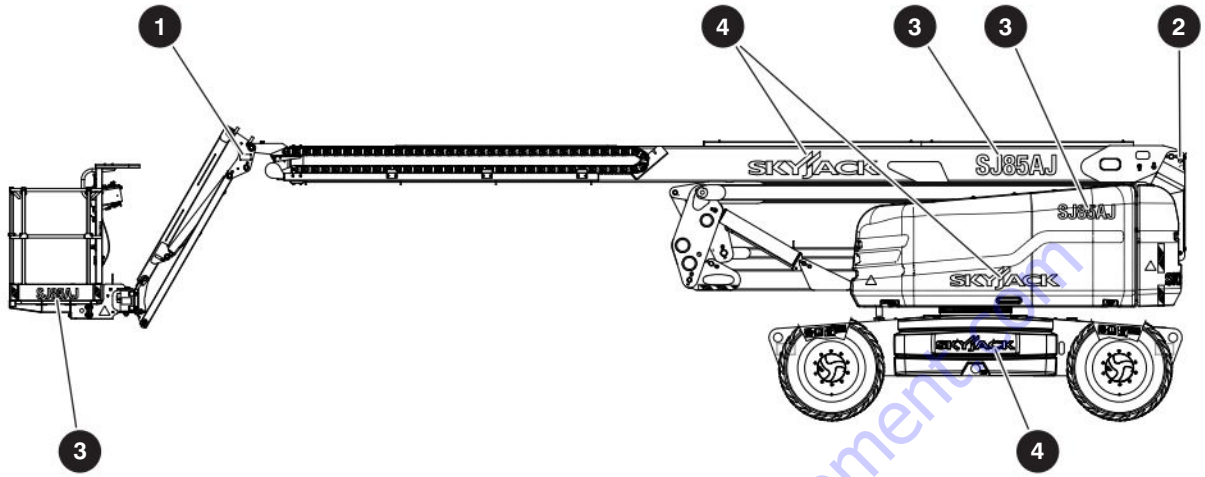


Figure 42 *Label legend*

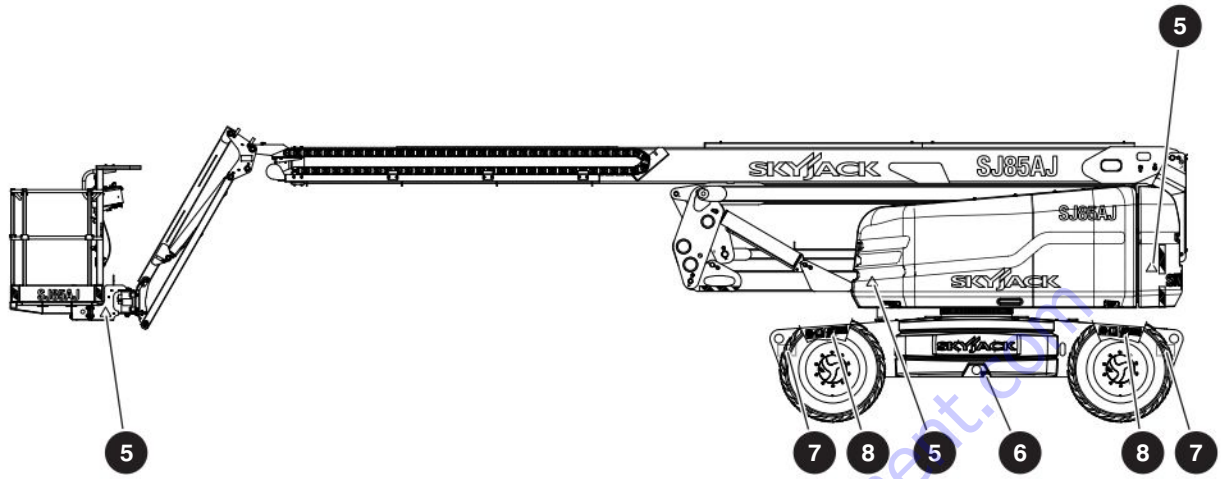
8.1 SJ85 AJ Labels

8.1-1 Engine side



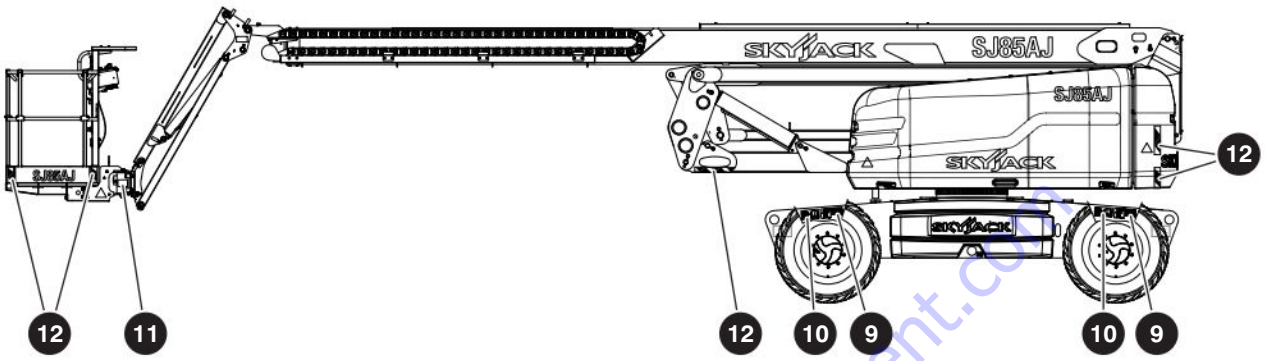
Description	Label Pictorial
1 Crushing hazard Warning - Crushing hazard	
2 Warning - Do not alter Do not alter or disable limit switches or other safety devices.	
3 Model number* Product Identifier *Model number will vary, may not be as shown.	SJ85 AJ
4 Skyjack logo Skyjack	SKYJACK

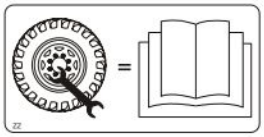
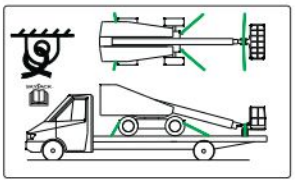
Engine side (continued)



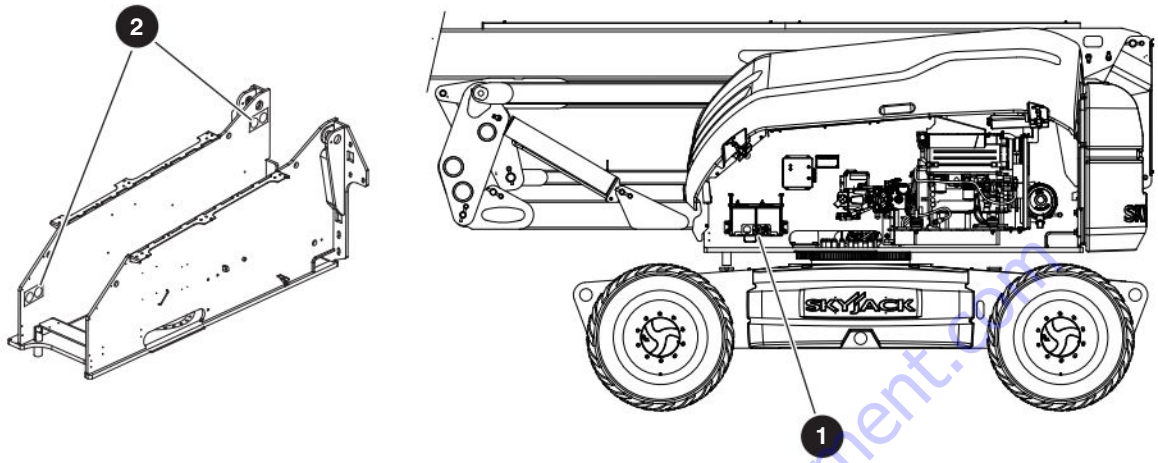
Description	Label Pictorial
5 Body crushing hazard Warning - Body crushing hazard	
6 Tie down points Only use these points for tying down.	
7 Lift and tie down points Only use these points for lifting or tying down.	
8 Wheel load* Indicates rated wheel load. *Wheel load will vary over different MEWPs.	

Engine side (continued)



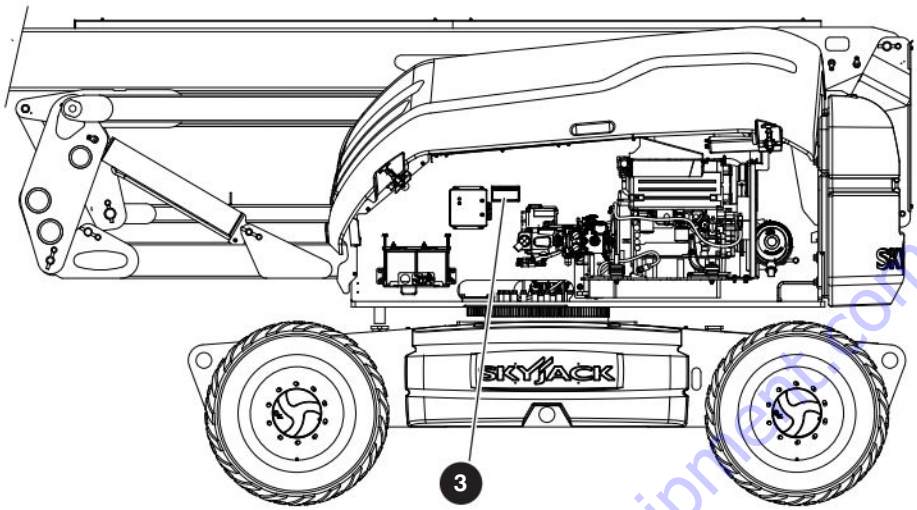
Description	Label Pictorial
9 Tip-over hazard Do not use air-filled tires. Use approved, matching foam-filled tires only.	
10 Wheel specifications Refer to manual for wheel type, offset, pressure and torque.	
11 Tie down points Only use these points for tying down.	
12 Caution tape stripe	

Engine compartment



Description	Label Pictorial
1 Main power disconnect Main power disconnect lever	
2 Warning - Maintenance support Do not enter the space beneath the work platform or extending structure during maintenance unless a means of structure support is in place. Refer to service manual for instructions regarding machine power isolation and structure support during maintenance.	

Engine compartment (continued)



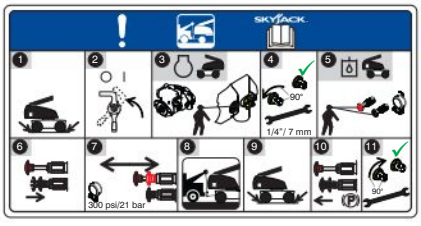
Description	Label Pictorial

3 Winching & towing procedure

Refer to operating manual.

1. Block or chock wheels to prevent MEWP from rolling.
2. Turn main power disconnect switch to off position.
3. At engine side, locate bypass valve (marked with yellow color) on inboard side of drive pump.
4. Rotate bypass valve flat using pliers or 7mm (1/4”) wrench by 90 degrees (clockwise).
5. At hydraulic tank side, locate brake valve and pump.
6. Push in black knob.
7. Pump by slowly pushing red knob in and out until 300 psi/ 21 bar shows on the gauge (if equipped). Brake is now released. Refer to *Section 6.3: Winching & Towing Procedure*.
8. A) Remove blocks from wheels.

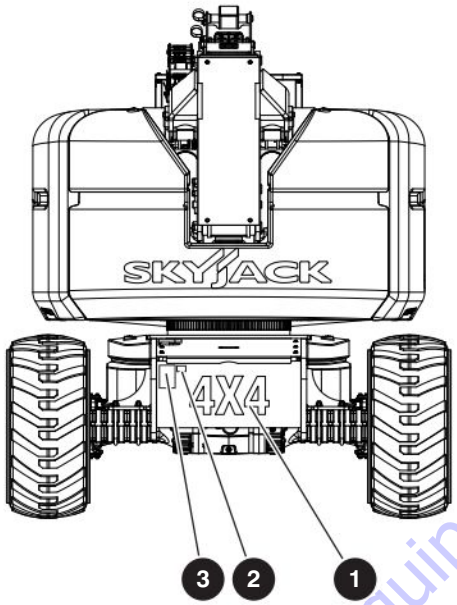
   B) Winch/tow to desired location.
9. Block or chock wheels to prevent MEWP from rolling.
10. At hydraulic tank side, reset brake by pulling out black knob.
11. At engine side, close bypass valve by rotating 90 degrees (counterclockwise) to normal condition (flat is parallel to shaft axis).



NOTE

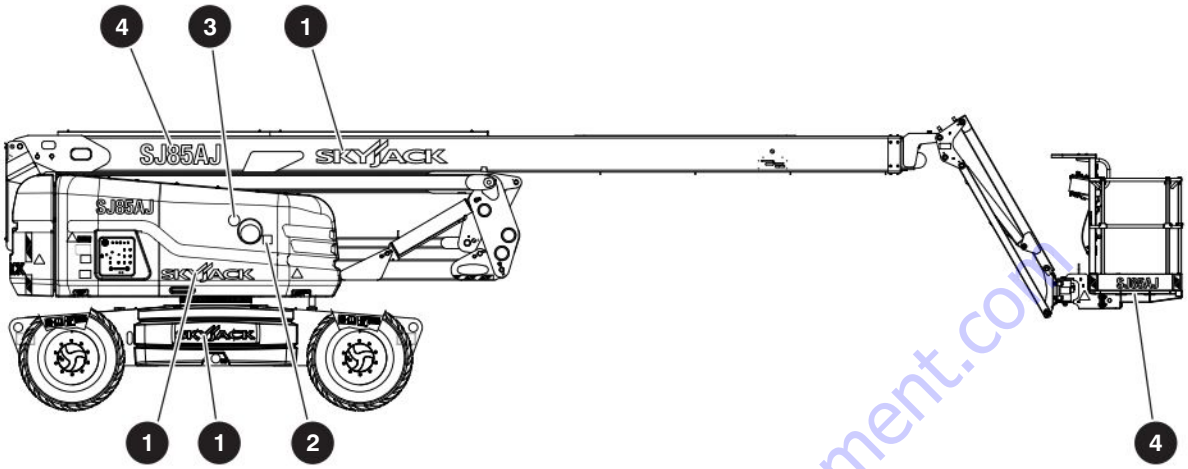
Before operation, ensure all blocks are removed from wheels.

8.1-2 Front side



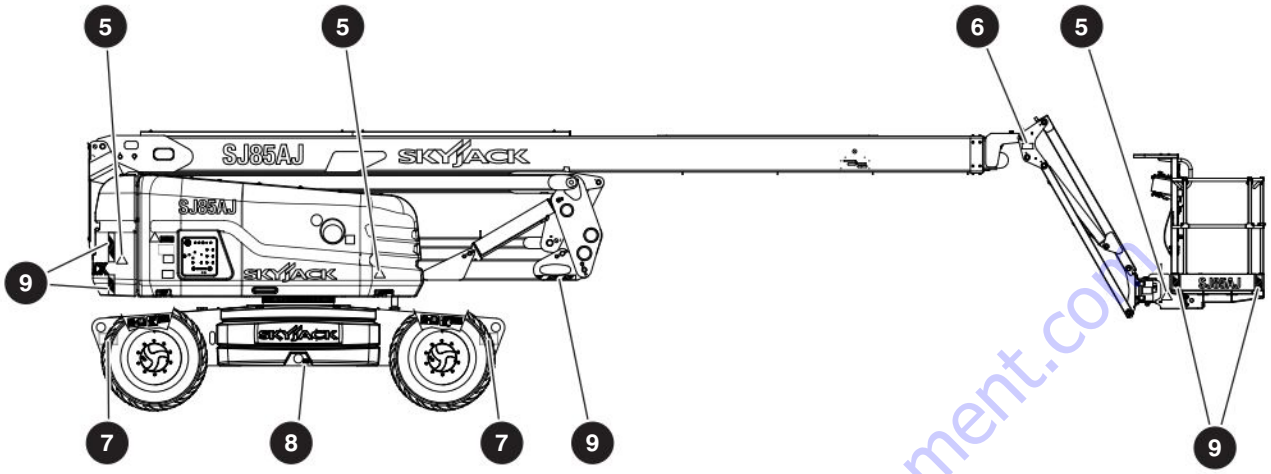
Description	Label Pictorial
❶ **4x4 (if equipped)** Product identifier - 4 wheel drive	4X4
❷ **Skyjack manufactured date**	SKYJACK™ Manufactured MM/YYYY
❸ **Serial plate*** Product identification and specifications *Serial plate will vary, may not be as shown.	Mobile Elevating Work Platform This MEWP has been designed and tested to the following requirements: ANSI/SAIA A92.20-2018 and CAN/CSA-B354.6:17 SKYJACK Made in Canada Model number Type Group Serial number SJ85 AJ High capacity zone Capacity and maximum number of persons kg lb = persons + equipment Max. work platform height m ft Max. wind speed m/s mph Max. manual force N lbf Low capacity zone Capacity and maximum number of persons kg lb = persons + equipment Max. work platform height m ft Max. wind speed m/s mph Max. manual force N lbf Machine weight kg lb Voltage V Max. incline System pressure bar psi Lift pressure bar psi Model year Year of manufacture Skyjack Inc. 55 Campbell Road, Guelph, Ontario N1H 1B9 Canada

8.1-3 Control side



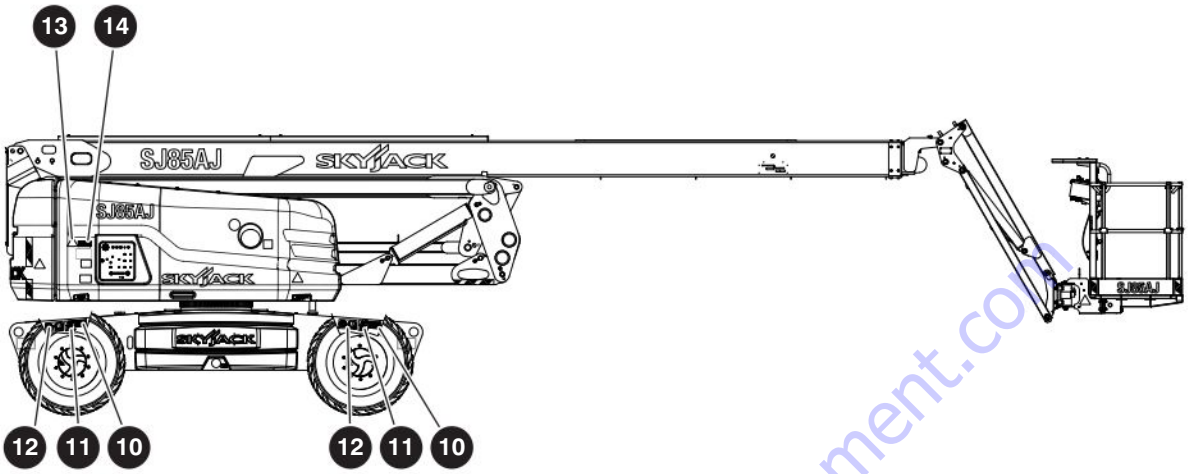
Description	Label Pictorial
❶ **Skyjack logo** Skyjack	
❷ **Diesel** Use ultra low sulfur fuel only.	
Unleaded fuel Use unleaded gasoline only.	
❸ **No smoking** Do not smoke near this location.	
❹ **Model number*** **Product Identifier** *Model number will vary, may not be as shown.	SJ85 AJ

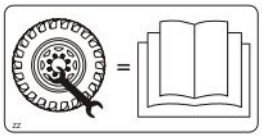
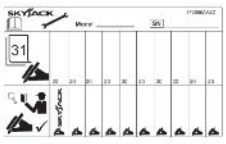
Control side (continued)



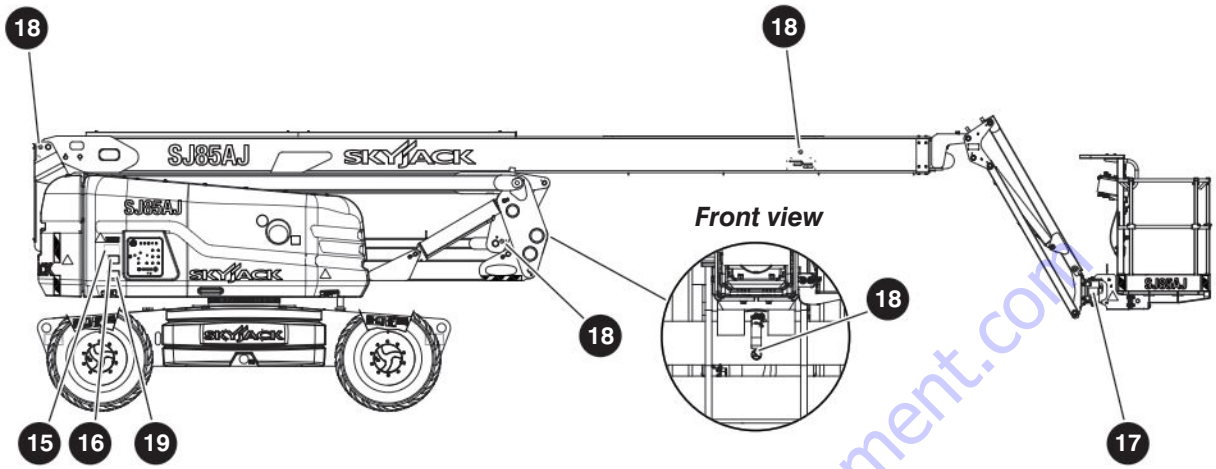
Description	Label Pictorial
5 Body crushing hazard Warning - Body crushing hazard	
6 Crushing hazard Warning - Crushing hazard	
7 Lift and tie down points Only use these points for lifting or tying down.	
8 Tie down points Only use these points for tying down.	
9 Caution tape stripe	

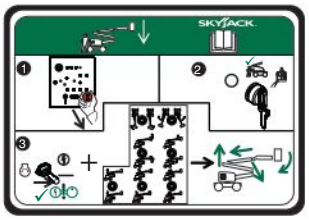
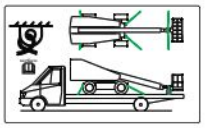
Control side (continued)



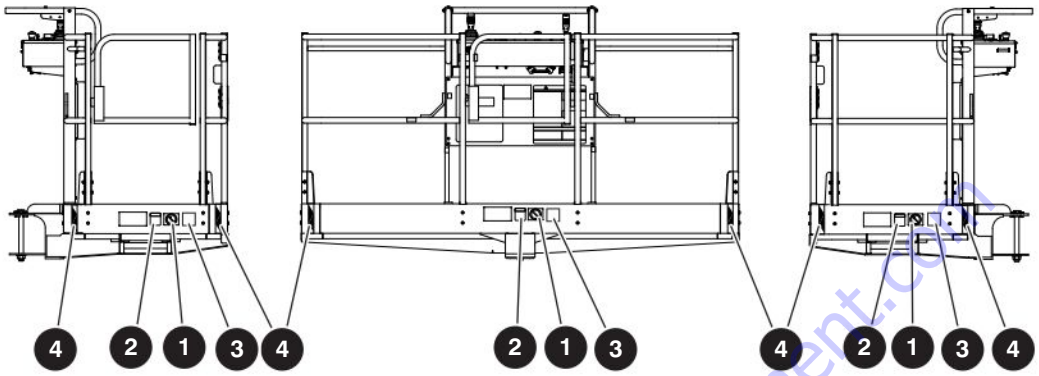
Description	Label Pictorial
10 Tip-over hazard Do not use air-filled tires. Use approved, matching foam-filled tires only.	
11 Wheel load* Indicates rated wheel load. *Wheel load will vary over different MEWPs.	
12 Wheel specifications Refer to manual for wheel type, offset, pressure and torque.	
13 Warning - Annual inspection Refer to operating manual. Ensure Annual and Daily Inspections are performed.	
14 Annual inspection Ensure that work platform has received annual inspection prior to operation.	

Control side (continued)



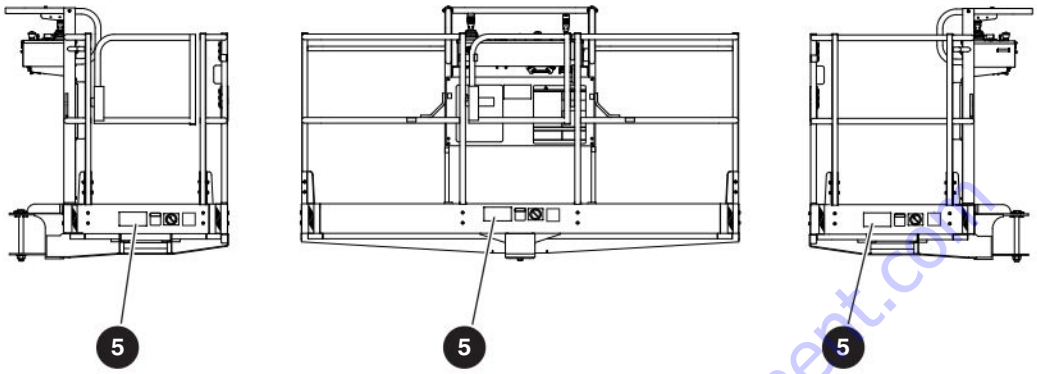
Description	Label Pictorial
15 Emergency lowering procedure Refer to operating manual. **1.** Pull out emergency stop button. **2.** Turn off/base/platform key switch to base position. **3.** Select emergency power position from start/function enable/ emergency power switch and activate desired boom function to lower platform.	
16 Emergency lowering identification	
17 Tie down points Only use these points for tying down.	
18 Warning - Do not alter Do not alter or disable limit switches or other safety devices.	
19 Elevate - Powered by Trackunit (if equipped) This MEWP is equipped with additional functionality.	

8.1-4 Platform



Description	Label Pictorial
❶ **No jewelry** Caution - Do not wear jewelry.	
❷ **Operator's daily inspection** Refer to the operating manual. Perform visual inspection and function tests at the beginning of each shift. Refer to *Section 4.4: Operator's Checklist*.	
❸ **No Insulation** This MEWP is not electrically insulated. Maintain a Minimum Safe Approach Distance (MSAD) from energized power lines and parts..	
❹ **Caution tape stripe**	

Platform (continued)

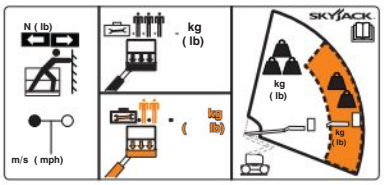


Description	Label Pictorial

5 Platform capacity*

Rated work load in each configuration. Rated work load includes the weight of both personnel and material, and maximum number of people in each configuration. Do not exceed total weight or maximum number of people. Load platform uniformly.

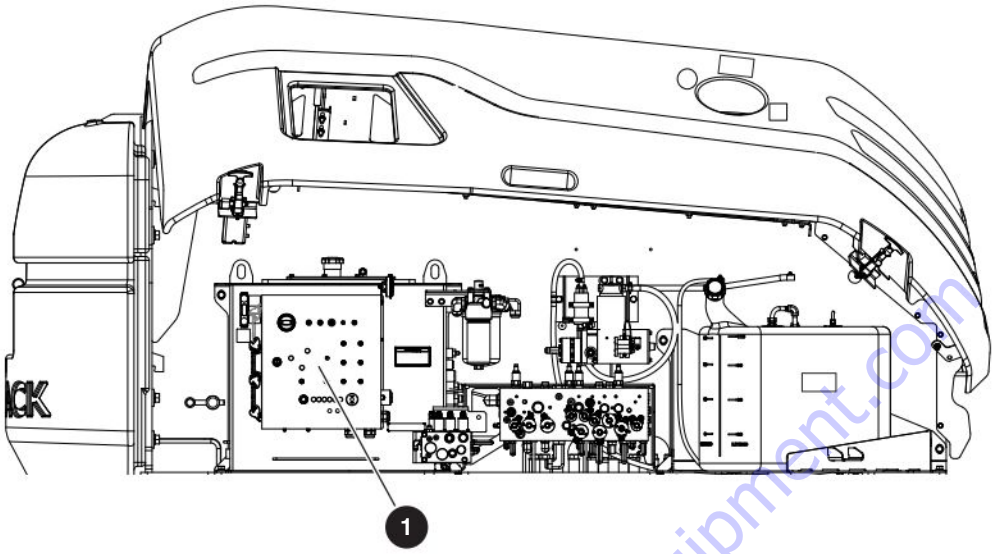
**Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the "high" or "low" capacity zone.*



Horizontal load rating

Apply no more than the indicated side load. Operate below indicated wind speed only.

8.1-5 Control compartment



Description	Label Pictorial

1 Base control console

Push circuit breaker back in to reset.

Read operating manual.

Select platform rotation switch to rotate platform to the left or right.

Select platform leveling override switch to tilt platform up or down.

Select jib up/down switch to move jib up or down.

Select riser raise/lower switch to raise or lower riser.

Select turret rotation switch to rotate turret to the left or right.

Select main boom raise/lower switch to raise or lower main boom.

Select fly boom extend/retract switch to extend or retract fly boom.

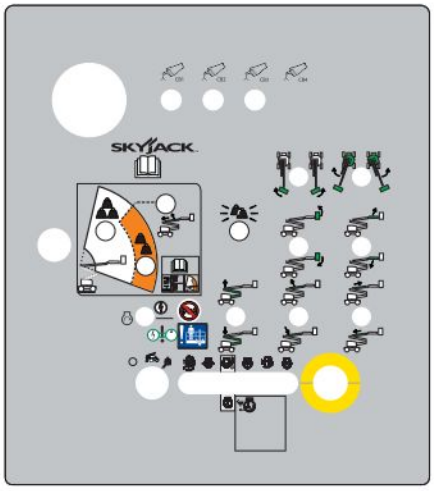
Select off position to turn engine off, base position to enable base control console, or platform position to enable platform control console.

Push emergency stop button to stop engine and disable controls.

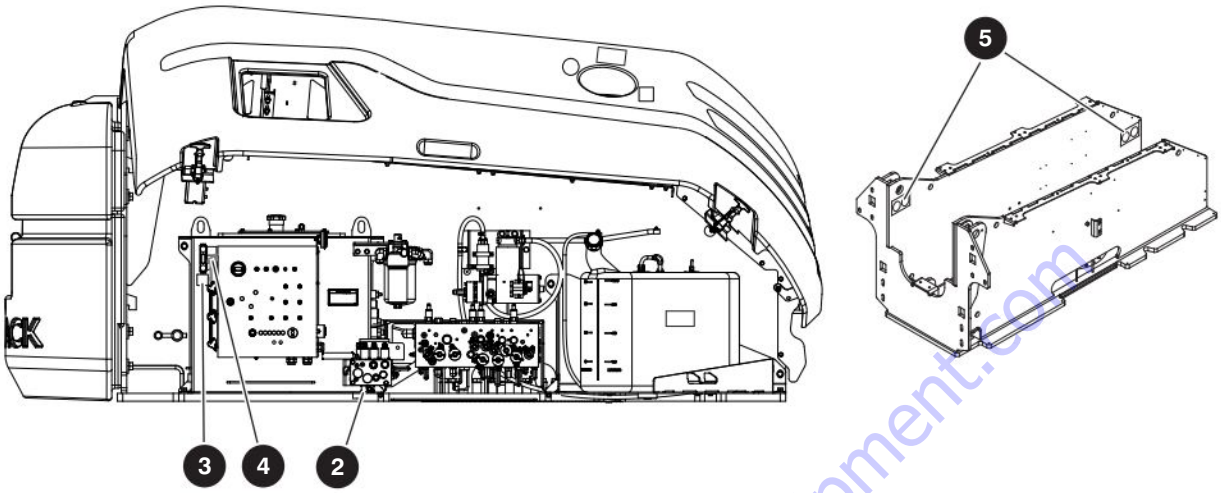
Push and hold start/function enable/emergency power switch in the start position to start engine.

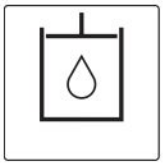
Push and hold start/function enable/emergency power switch in the function enable position to enable base control functions.

With engine off, push and hold start/function enable/emergency power switch in the emergency power position to enable the emergency power unit for emergency descent.

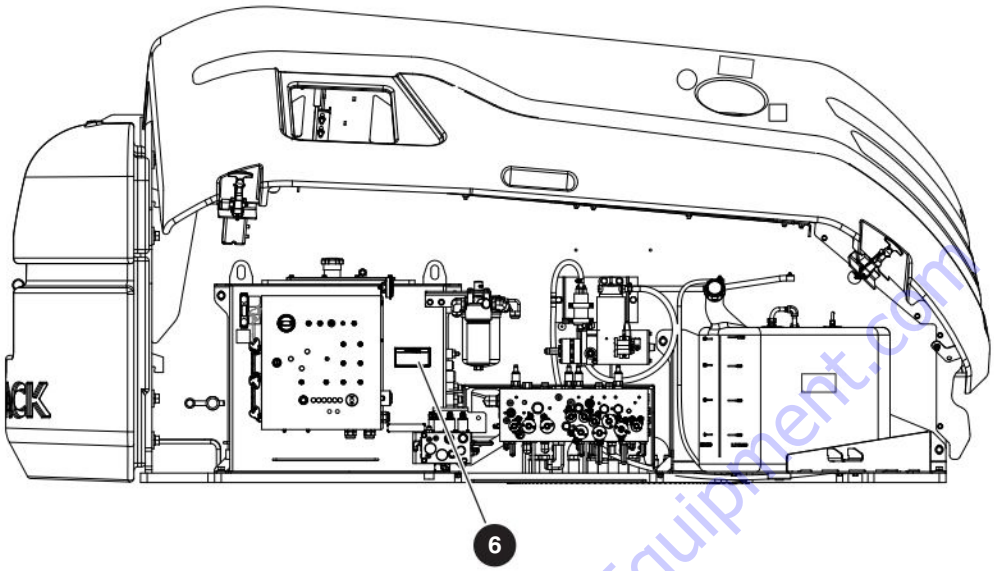


Control compartment (continued)



Description	Label Pictorial
2 Grease points maintenance Refer to service and maintenance manual for lubricating MEWP.	
3 Hydraulic oil Replace hydraulic fluid with approved type (see service manual).	
4 Hydraulic oil level Indicates minimum/maximum oil level.	
5 Warning - Maintenance support Do not enter the space beneath the work platform or extending structure during maintenance unless a means of structure support is in place. Refer to service manual for instructions regarding machine power isolation and structure support during maintenance.	

Control compartment (continued)



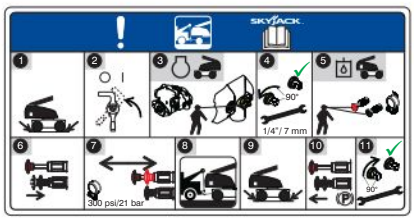
Description	Label Pictorial

6 Winching & towing procedure

Refer to operating manual.

1. Block or chock wheels to prevent MEWP from rolling.
2. Turn main power disconnect switch to off position.
3. At engine side, locate bypass valve (marked with yellow color) on inboard side of drive pump.
4. Rotate bypass valve flat using pliers or 7mm (1/4”) wrench by 90 degrees (clockwise).
5. At hydraulic tank side, locate brake valve and pump.
6. Push in black knob.
7. Pump by slowly pushing red knob in and out until 300 psi/ 21 bar shows on the gauge (if equipped). Brake is now released. Refer to *Section 6.3: Winching & Towing Procedure.*
8. A) Remove blocks from wheels.

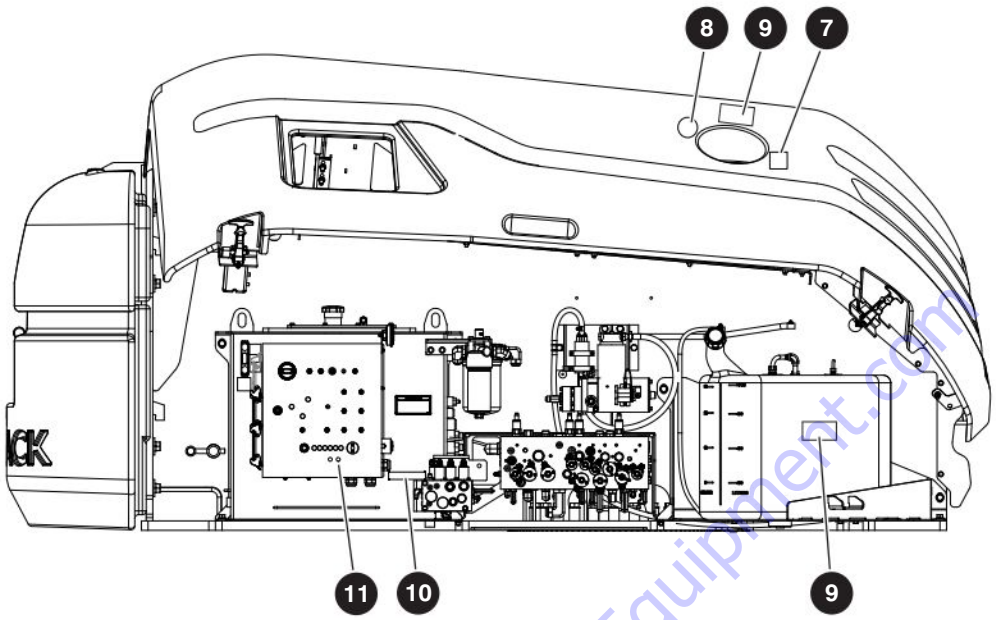
   B) Winch/tow to desired location.
9. Block or chock wheels to prevent MEWP from rolling.
10. At hydraulic tank side, reset brake by pulling out black knob.
11. At engine side, close bypass valve by rotating 90 degrees (counterclockwise) to normal condition (flat is parallel to shaft axis).

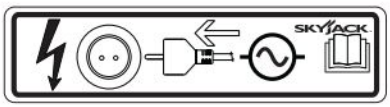


NOTE

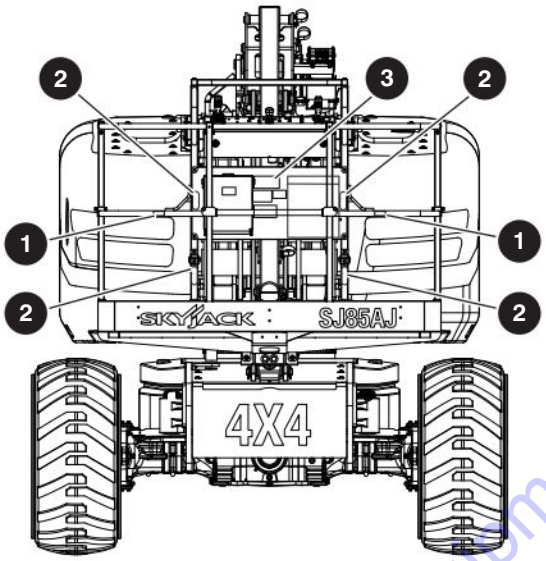
Before operation, ensure all blocks are removed from wheels.

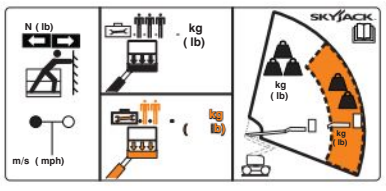
Control compartment (continued)



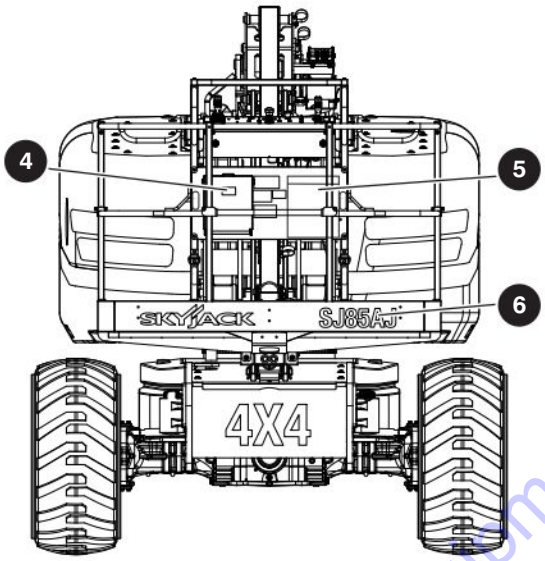
Description	Label Pictorial
7 Diesel Use ultra low sulfur fuel only.	
Unleaded fuel Use unleaded gasoline only.	
8 No smoking Do not smoke near this location.	
9 Open fuel cap slowly Refer to operating manual. Open fuel cap slowly to prevent fuel from spraying out of fuel tank.	
10 Connect AC supply Connect AC supply here.	
11 Positive air shutoff (if equipped) Use this switch to trigger the positive air shutoff valve.	

8.1-6 Rear side



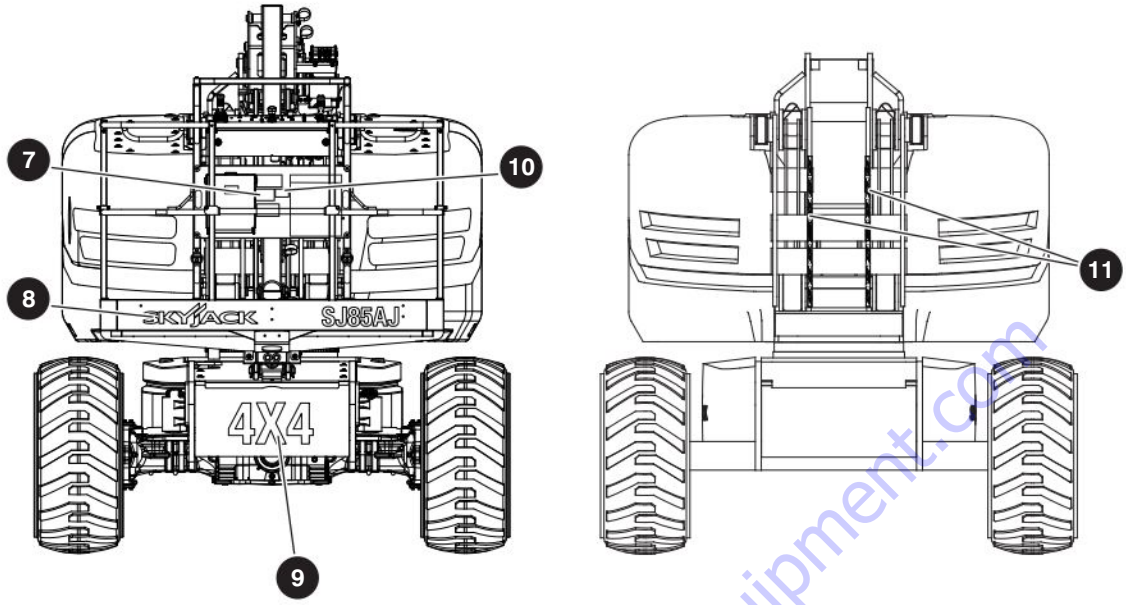
Description	Label Pictorial
1 Warning - No step No step warning	
2 Fall protection anchorage Attach personal Fall protection lanyard of each occupant to fall protection anchorage point. Rated for one (1) person per anchorage. Used for fall restraint or fall arrest.	
3 Platform capacity* Rated work load in each configuration. Rated work load includes the weight of both personnel and material, and maximum number of people in each configuration. Do not exceed total weight or maximum number of people. Load platform uniformly. **Maximum platform capacity varies with boom position. Indicator lights on the base and platform control consoles indicate whether platform is in the "high" or "low" capacity zone.* **Horizontal load rating** Apply no more than the indicated side load. Operate below indicated wind speed only.	

Rear side (continued)



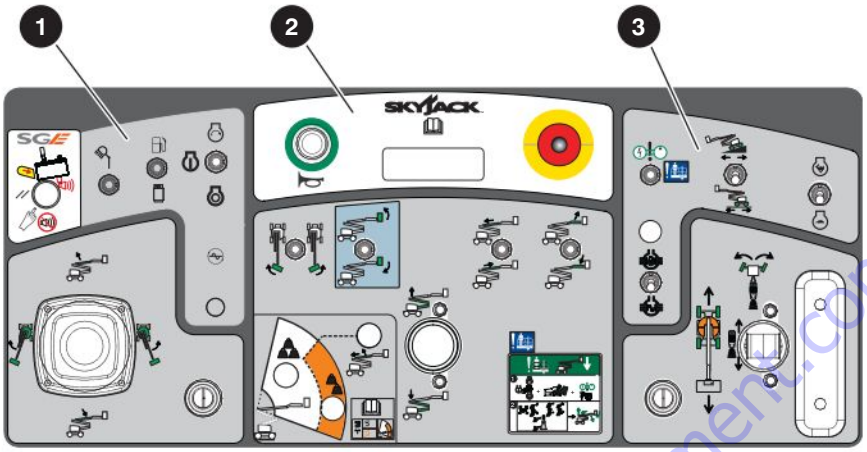
Description	Label Pictorial
4 Manual box Indicates location of operating manual.	
5 Hazard identification Refer to *Section 2: Operator Safety*. Read and understand outlined risks associated with this work platform prior to operation.	
6 Model number* Product Identifier *Model number will vary, may not be as shown.	SJ85 AJ

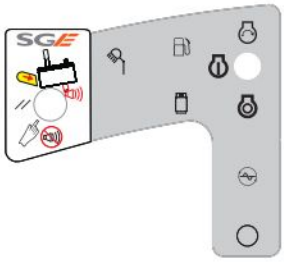
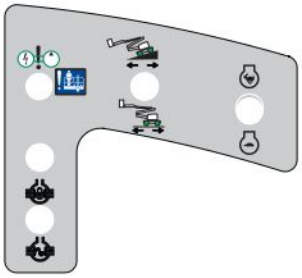
Rear side (continued)



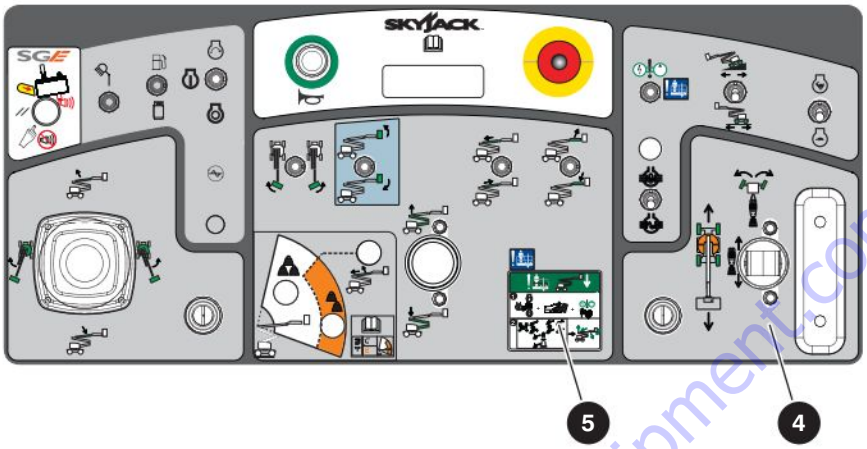
Description	Label Pictorial
7 IPAF "Click It!" Wear a full body harness with a short lanyard in boom type platforms.	
8 Skyjack logo Skyjack	
9 4x4 (if equipped) Product identifier - 4 wheel drive	
10 Warning - California proposition 65 Cancer and Reproductive Harm- https://www.p65warnings.ca.gov/.	
11 Caution tape stripe	

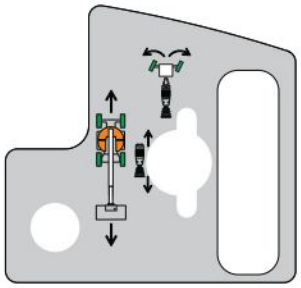
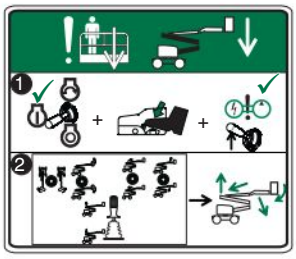
8.1-7 Platform control console



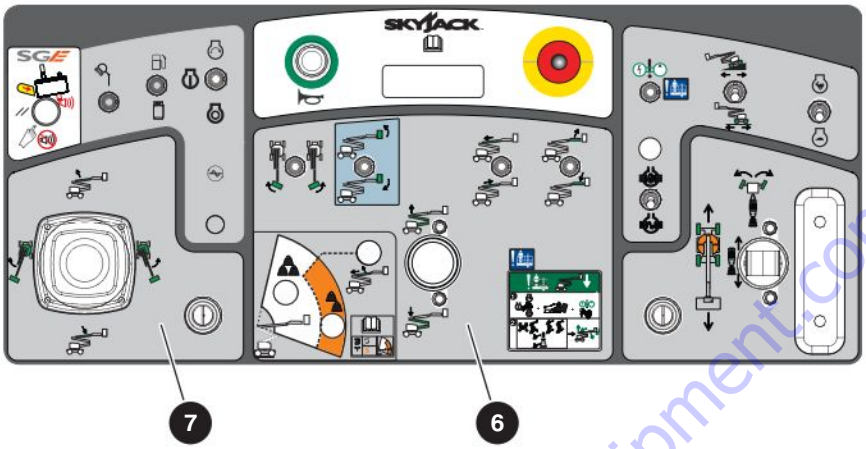
Description	Label Pictorial
1 SGE reset/Work light (if equipped)/Start engine/Generator (if equipped) Select SGE reset button to reset SGE. Select work light switch to enable work light (if equipped). Select dual fuel switch for gasoline or liquid propane gas. Push and hold engine start/on/off switch to start engine and then return to on position, or select off to turn engine off. Select generator on/off switch to turn hydraulic generator (if equipped) on or off.	
2 Horn/Emergency stop Select horn pushbutton to sound horn. Read operating manual. Push emergency stop button to stop engine and disable controls.	
3 Emergency power unit/Engine controls Select emergency power switch to enable emergency power unit. Select low torque (higher speed) or high torque (lower speed) using the torque switch. Select high torque when driving on a slope. Select either high or low engine throttle speed using the low/high throttle switch. Select differential lock switch to engage or disengage differential lock.	

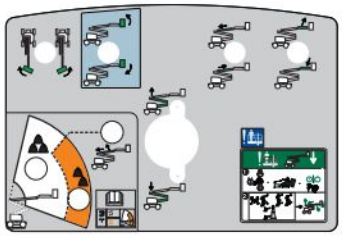
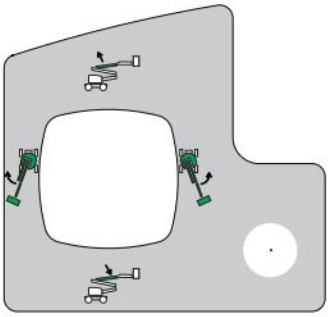
Platform control console continued



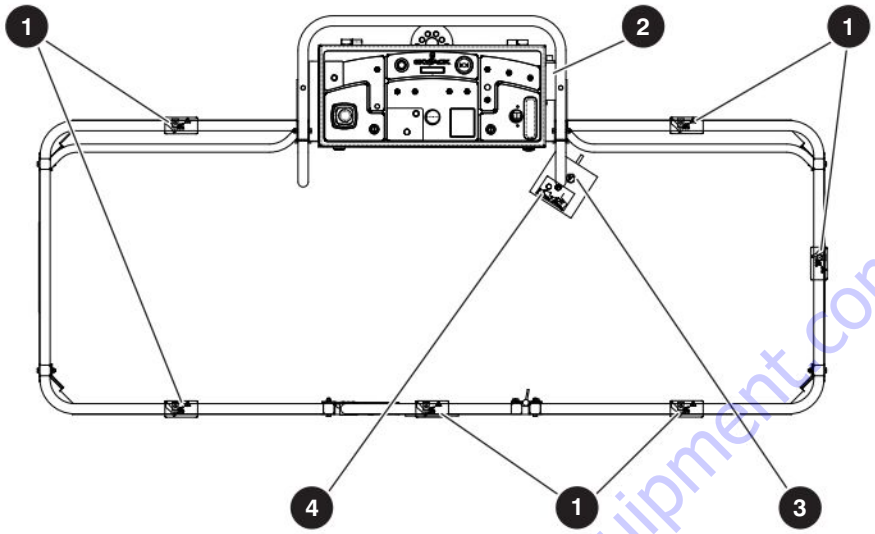
Description	Label Pictorial
4 Drive/Steer controller Press rocker switch to steer left or right. Push and hold controller to drive forward or backward.	
5 Emergency lowering procedure Refer to operating manual. **1.** Select on position from engine start/on/off switch, depress and hold footswitch, and select emergency power. **2.** Activate desired boom function to lower platform.	

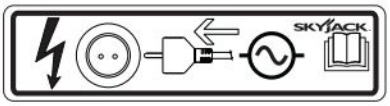
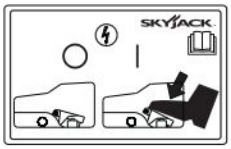
Platform control console continued



Description	Label Pictorial
6 Boom/Jib/Platform controls Select platform rotation switch to rotate platform to the left or right. Select platform leveling override switch to tilt platform up or down. Select fly boom extend/retract switch to extend or retract fly boom. Select jib up/down switch to move jib up or down. Select riser raise/lower controller to raise or lower riser.	
7 Boom/Turret controller Push and hold controller to rotate turret to the left or right. Push and hold the controller to raise or lower main boom.	

Platform railing



Description	Label Pictorial
1 Crushing hazard Warning - Crushing hazard	
2 Connect AC supply Connect AC supply here.	
3 Warning - Do not alter Do not alter or disable limit switches or other safety devices.	
4 Footswitch enable (on/off) Depress and hold footswitch to enable platform function.	

Section 9 – Unique Skyjack Features

Your Skyjack MEWP may be equipped with the following unique features:

ACCESSORYZERS™

Having equipment with features and functionality that allow you and your customers to do more is a vital part of the utilization equation. Skyjack offers a range of accessory products to further expand a given product's adaptability and your power to offer a truly flexible rental choice.

AXLDRIVE™

Skyjack's mechanical "axle based" drive system gives positive traction and excellent rough ground "terrain-ability'. This is achieved using an automatic or manual (model dependent) locking differential on the rear axle and limited slip differential on the front axle. This means machines can climb grades of up to 30% in the case of Rough Terrain Scissors Lifts, and 50% in the case of Boom Lifts. This industry leading terrain capability means one can use the Skyjack Rough Terrain Scissor Lifts and Boom Lifts in the most challenging of conditions.

EASYDRIVE™

A unique boom feature only utilized by Skyjack - the Boom Lift drive function operates in accordance with the general orientation of the turret's counterweight over the chassis (i.e. joystick forward = counterweight facing forward). This provides intuitive operation by allowing the unit to move in the general direction of the joystick's movement.

SKYCODED™

At the heart of every Skyjack machine, proven and simplistic control systems using Skyjack's colour coded and numbered wiring system make our machines the easiest to troubleshoot and repair. – Black #14 is for the lift function on a 3219, and it is also the lift function on a 63AJ. Using an analog based control system allows the Skyjack AWPs to operate using a simplified system with fewer and less expensive components – less maintenance and lower costs.

SKYRISER™

A unique feature found on Skyjack's articulating boom lift. It ensures that the riser and main pivot point connecting the fly boom to the riser travel in a straight vertical line. Movement in a true vertical manner, without drifting forward or back, reduces the amount of repositioning the operator needs to do in order to stay close to a building façade.

SPEEDYREACH™

Skyjack's Articulated Boom Lifts feature a boom geometry that allows the operator to lower the main fly boom to ground level to restock on material or supplies then return to full height at the original working position - without lowering the riser section. This functionality adds to the versatility and productivity of Skyjack's Articulating Boom Lifts, especially as it can be quickly executed and there is no need for machine repositioning or having to remember the sequence of operations to get back to the original working position.

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