

OPERATING MANUAL (AS)

TELESCOPIC BOOMS



This manual is based on Serial Number(s):

SJ86T 97 100 001 & Above

Please refer to the website (www.skyjack.com) for older Serial Numbers.

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The Safety Alert Symbol identifies important safety messages on MEWP, 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.



This Safety Alert Symbol means attention!

Become alert! Your safety is involved.



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



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



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.



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

Mobile Elevating Work Platform (MEWP) Definition

A mobile device that has an adjustable position platform supported from ground level by a structure.

Purpose of Equipment

The SKYJACK Telescopic Boom Series (Model SJ 8XT) MEWP is designed to transport and raise personnel, tools and materials to overhead work areas.

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.

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.

Operator

The operator must read and completely understand both this operating manual and the safety panel label located on the platform and all other warnings 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.

Service Policy and Warranty

SKYJACK warrants each new SJ 8XT series work platform to be free of defective parts and workmanship for the first 24 months. Any defective part will be replaced or repaired by your local SKYJACK dealer at no charge for parts or labor. Contact the SKYJACK Service Department for warranty statement extensions or exclusions.

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.

Optional Accessories

The SKYJACK MEWP is designed to accept a variety of optional accessories. These are listed under "Standard and Optional Features" in Table 4.1. Operating instructions for these options (if equipped) are located in Section 3 of this manual.

For non-standard components or systems, contact the SKYJACK Service Department at

*: 61 (0) 28786 3200 : 61 (0) 28786 3222

Include the model and serial number for each applicable MEWP.

Scope of this Manual

- This MEWP meets requirements of the Guideline published by the National Regulators' Committee on High Risk Plant dated 27 May 2010.
- b. Operators are required to conform to national, state or territorial/provincial and local health and safety regulations applicable to the operation of this MEWP.





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

Operator Safety Reminders

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.

Electrocution Hazard

This MEWP is not electrically insulated. Maintain a Minimum Safe Approach Distance (MSAD) from energized power lines and parts as listed below. The operator must allow for the platform to sway, rock or sag. This MEWP does not provide protection from contact with or proximity to an electrically charged conductor.

DO NOT USE MEWP AS A GROUND FOR WELDING.

DO NOT OPERATE MEWP DURING LIGHTNING OR STORMS.

DO NOT OPERATE THE MEWP NEAR POWER LINES. MAINTAIN A MINIMUM SAFE APPROACH DISTANCE (MSAD) FROM ENERGIZED POWER LINES.





	ANGER id Power Lines				
Minimum Safe Approach Distance					
AS 2550.10-2006 Requirements					
Voltage Range (Phase to Phase)	Minimum Safe Approach Distance (Meters)				
Voltage Range (Filase to Filase)	Without Spotter	With Spotter			
Up to and including 133KV	6.4	3			
Greater than 133KV	10	8			
FAILURE TO AVOID THIS HAZARD WILL RESULT IN DEATH OR SERIOUS INJURY!					

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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 "O" 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.

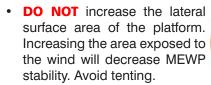


AVOID entanglement with ropes, cords or hoses.



- 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 4, Table 4.5.







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



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.





Safety Precautions (Continued)

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

• 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.



NOT exert horizontal (manual) force on MEWP that exceeds the limits specified in **Table 4.5.**



• 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.



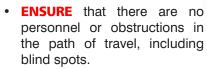
 AVOID overhead obstructions. overhead aware of obstructions or other possible hazards around MEWP when lifting or driving.



• 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.





• **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 wheels. Refer to Section 2: 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.

Safety Precautions (Continued)

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

 DO NOT exceed the rated capacity of the MEWP.



DO NOT distribute load unevenly.



 DO NOT use 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.

Safety Precautions (Continued)

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

Fall Protection



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

Skyjack recommends the use of a fall restraint system to keep an occupant within the confines of the platform, and thus not expose the occupant to any fall hazard requiring a fall arrest.

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.
- Do 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.



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.

Jobsite Inspection

- · Do not use 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.

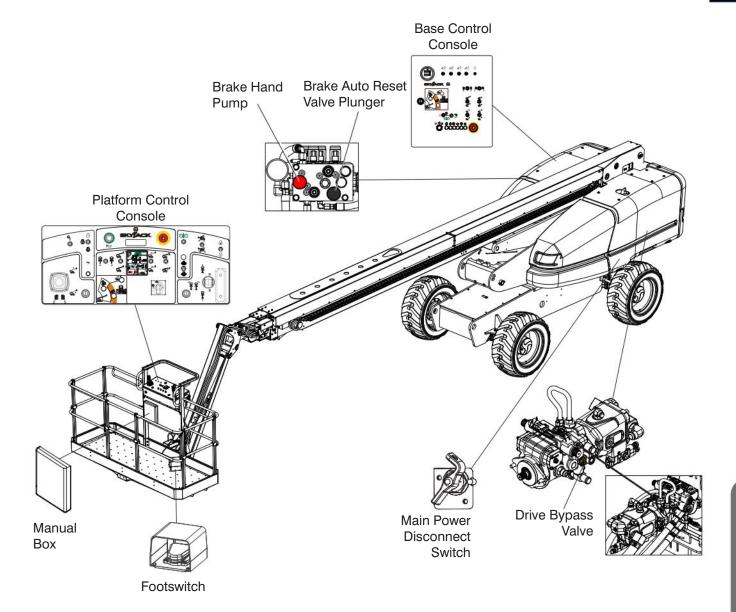
2.1 Familiarization of Telescopic Boom Series



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

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

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.





2.2 Component Identification

The following descriptions are for identification, explanation and locating purposes only.

NOTE

This MEWP is equipped with dual platform capacity. 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.

2.2-1 Main Power Disconnect Switch

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

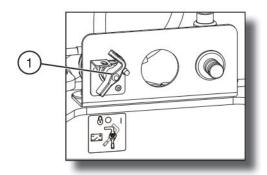


Figure 2-1. Main Power Disconnect Switch

Main Power Disconnect Switch - This switch, when in "O" off position, disconnects power to all circuits. Switch must be in "I" on position to operate any circuit. Turn switch "O" off when transporting MEWP.

2.2-2 Tilt Switch

The tilt switch is located within the base control console. It is designed to prevent driving when the MEWP is on a slope greater than a predetermined limit.



WARNING

If MEWP becomes tilted causing alarm to sound, the platform must be fully lowered immediately. Ensure that MEWP is on a firm, level surface before operating the MEWP. Refer to Section 3.10 for instructions regarding recovery from an inclined position.

2.2-3 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.

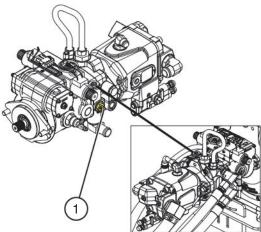


Figure 2-2. Drive Bypass Valve

 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.

2.2-4 Brake System

The brake system is located in the control compartment. The brakes must be manually disengaged before pushing, winching or towing. Refer to Section 2.5-1 for procedure on how to release brakes manually. The system contains the following controls:

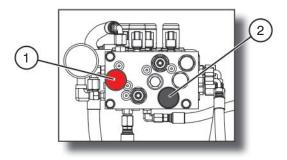


Figure 2-3. Brake System

- 1. Brake Hand Pump
- 2. Brake Auto Reset Valve Plunger



2.2-5 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 traction. Differential locks are used to prevent from getting stuck when driving on loose, muddy, or rocky terrain. Refer to Section 2.4-3 for instructions regarding testing differential lock switch.



WARNING

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

2.2-6 All Motion Alarm

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

2.2-7 Turret Transportation Lock

This locking device is located in the turret.

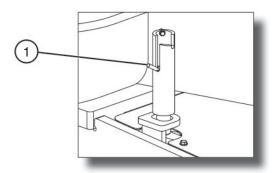


Figure 2-4. Turret Transportation Lock

 Turret Transportation Lock - This locking device is used to lock turret in place during shipping only.

Refer to Section 3.8-2 for procedure on how to lock the turret.

2.2-8 Footswitch

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

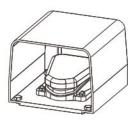


Figure 2-5. Footswitch

NOTE

The footswitch is equipped with a 15-second anti-tiedown feature that deactivates footswitch when operator depresses it for 15 seconds without activating any function.

2.2-9 Manual Storage Box

This weather-resistant box is mounted under the control console on the platform. It contains 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.



2.2-10a Platform Load Sensing System

The platform load sensing system is a device that senses for an overload on the platform before the system disables boom and drive functions. This system is active when MEWP is powered on.

If the platform is overloaded while in work mode (boom is raised greater than 15 degrees from horizontal or is extended greater than 6 inches), the load sensing system will disable all normal functions and signal the operator with an indicator light and an audible alarm.

If the platform is overloaded while in travel mode, the load sensing system will signal the operator with an indicator light and an audible alarm but will not disable any normal functions.

The following table shows the progression of warnings, indicated to the operator, up to the point of overload.

2.2-10b Overload Status Table

Weight	Indicator Light	Audible Alarm	Platform Function Controls
93% - 99%	On	Off	Enabled
≥ 100% (Work Mode)	Flashing	Pulsing	Disabled
≥ 100% (Travel Mode)	Flashing	Pulsing	Disabled

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Do not operate emergency power unit if platform capacity is exceeded. 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 at the base control console to release the platform from the obstruction.



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 competent/qualified person for repairs.

2.2-11 Base Control Console

This control console is located in the panel mounted in the control compartment.

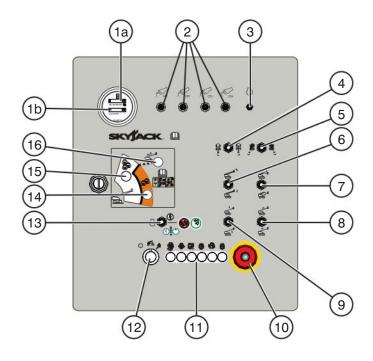


Figure 2-6. Base Control Console

- **1a. Hourmeter** This gauge records accumulated **6.** operating time of engine.
- 1b. Emergency Lowering Counter This gauge increments each time the emergency power unit is activated while MEWP is in work mode and overloaded.
- 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. Engine Diagnosis Switch When held in either direction, this switch "!" enables an error blink code for engine control unit (ECU).
- 4. Platform Rotation Switch This switch controls "2" left or "2" right rotation of platform.
- 5. Turret Rotation Switch This switch controls " I left or " right rotation of turret.

- 6. Platform Leveling Override Switch This switch overrides automatic leveling of platform and controls "a" tilting up or "a" tilting down of platform.
- 7. Jib Up/Down Switch (If Equipped) This switch controls "or "or "of jib." down movement of jib.
- 8. Boom Extend/Retract Switch This switch controls "Extension or "Extension of fly boom."
- 9. Main Boom Raise/Lower Switch This switch controls "arising or "arising or "lowering of main boom.
- 10. Emergency Stop Button This red "mushroom-head" "pushbutton disconnects power to control circuit and shuts engine off.



2.2-11 Base Control Console (Continued)

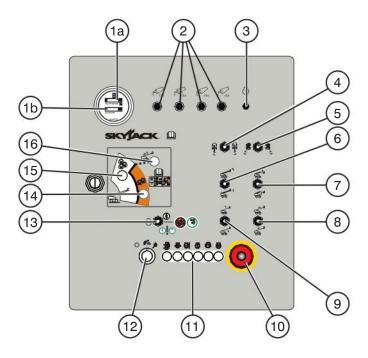
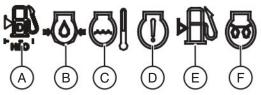


Figure 2-6. Base Control Console

11. Status Indicator Pilot Lights - These lights indicate operational status and errors in any function in the controls/engine.



- 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.

- 12. Off/Base/Platform Key Switch This three-way selector switch allows operator to "O" turn off power to MEWP or to activate either "platform control console.
- **13.** Start/Function Enable/Emergency Power Switch This momentary switch, when held in "O" start position, starts engine. When held in "O" function enable position, allows base control functions to operate. Engine speed increases when selected. With engine off, and when held in "O" emergency power unit position, allows base control functions to operate using emergency power unit.



Do not operate boom functions if platform capacity is exceeded.

2.2-11 Base Control Console (Continued)

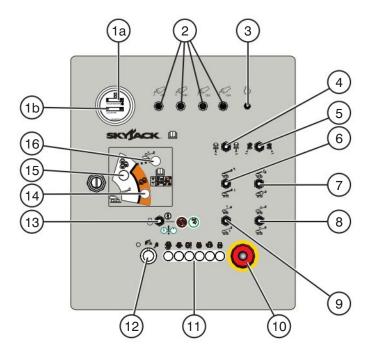


Figure 2-6. Base Control Console

- **14.** Low Capacity Zone Indicator Light Indicates MEWP is in "low" platform capacity zone. Refer to Table 4.5.
- **15. High Capacity Zone Indicator Light** Indicates MEWP is in "high" platform capacity zone. Refer to Table 4.5.
- 16. Capacity Zone Border Light Indicates MEWP is at limits of travel for high capacity zone. Lower " and " and " extend functions are not available.

2.2-12 Platform Control Console

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

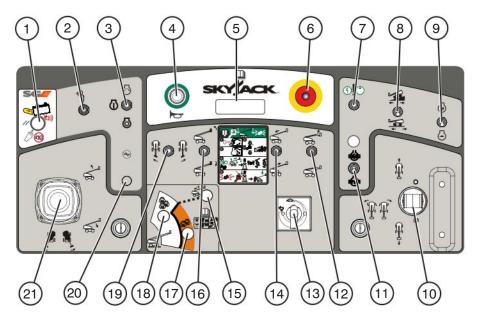
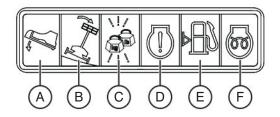


Figure 2-7. Platform Control Console

- Secondary Guarding Electrical (SGE) Reset Button (If Equipped) - 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. Engine Start/On/Off Switch This switch, when held momentarily in "O" start position, starts engine. Once started, the switch returns to "O" on position. When in "O" off position, it turns engine off.
- **4. Horn Pushbutton** This "pushbutton sounds an automotive-type horn.
- 5. 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 15-second anti-tiedown feature deactivates footswitch when operator depresses it for 15 seconds without activating any function.
- B. Chassis Tilt This light illuminates when the MEWP chassis is at an inclination that activates the tilt sensor. At this inclination, an audible alarm will sound at the platform. Refer to Section 3.10 for instructions regarding recovery from an inclined position.
- C. Overload Light This red light indicates overload status. Refer to Section 2.2-10.
- 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.
- 6. Emergency Stop Button This red "mushroomhead" "pushbutton disconnects power to control circuit and shuts engine off.
- 7. Emergency Power Unit This switch "This switch "This

2.2-12 Platform Control Console (Continued)

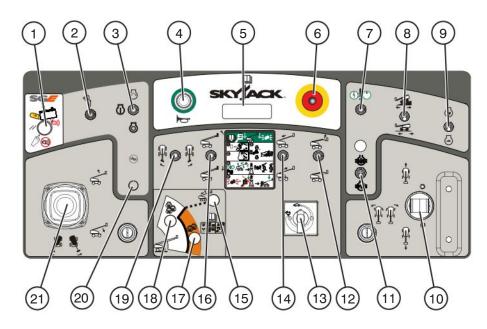


Figure 2-7. Platform Control Console

- 8. 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.
- 9. Low/High Throttle Switch This switch allows selection between " or " low and " high engine throttle speeds."
- controls driving "forward or "forward." backward.

 The rocker switch controls steering "forward or "forward." left or "forward." it to neutral when released.
- 11. 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.

- 12. Jib Up/Down Switch This switch controls "up or "odwn movement of jib."
- 13. Function Speed Adjuster Dial This variable-speed adjuster "o" controls speed of fly boom extension/retraction, jib raising/lowering and platform rotation movements. This is used with switches 12, 14 and 19.
- 14. Boom Extend/Retract Switch This switch controls "a" extension or "a" retraction of fly boom.
- 15. Capacity Zone Border Light Indicates MEWP is at limits of travel for high capacity zone. Lower "and "and "are not available."
- 16. Platform Leveling Override Switch This switch overrides automatic leveling of platform and controls "a" tilting up or "a" tilting down of platform.



2.2-12 Platform Control Console (Continued)

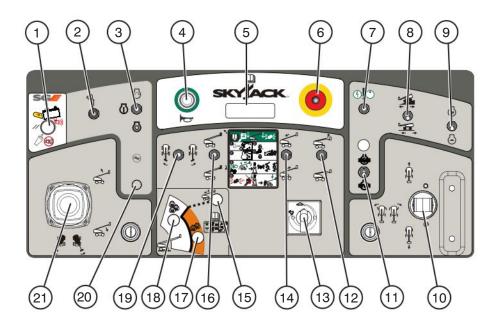


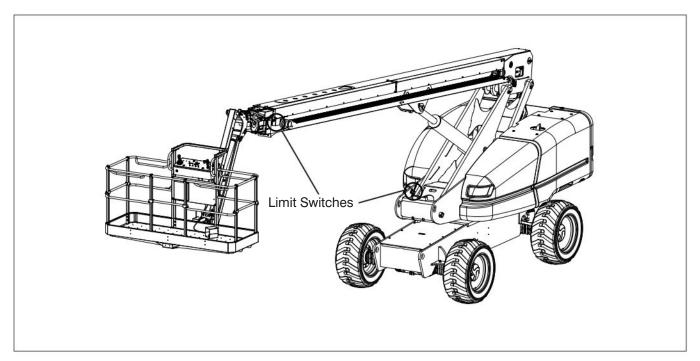
Figure 2-7. Platform Control Console

- 17. Low Capacity Zone Indicator Light Indicates MEWP is in "low" platform capacity zone. Refer to Table 4.5.
- **18. High Capacity Zone Indicator Light** Indicates MEWP is in "high" platform capacity zone. Refer to Table 4.5.
- 19. Platform Rotation Switch This switch controls "2" left or "2" right rotation of platform.
- **20.** Generator On/Off Switch (If Equipped) This switch turns the hydraulic generator "O" on or "O" off.

NOTE

All functions are disabled while the generator switch is "\(\bigcirc\)" on.

21. Boom/Turret Controller - This dual-axis lever controls "a" raising or "a" lowering of main boom or rotating "" left or "a" right of turret.



2.3 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 an 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 doing visual and daily inspections in different areas, be aware to also inspect limit switches, electrical and hydraulic components.

2.3-1 Labels

Refer to Section 5 - Labels section in this manual and determine that all labels are in place and are legible.

2.3-2 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

2.3-3 Limit Switches

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

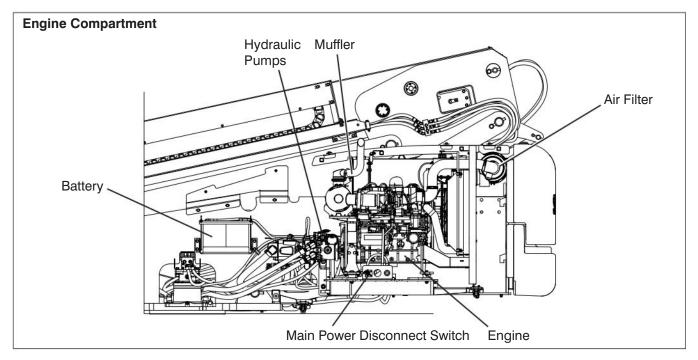
2.3-4 Hydraulic

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





2.3-5 Engine Compartment

- Ensure all compartment latches are secure and in proper working order.
- Main Power Disconnect Switch
 - Turn main power disconnect switch to "O" 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.

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.



WARNING

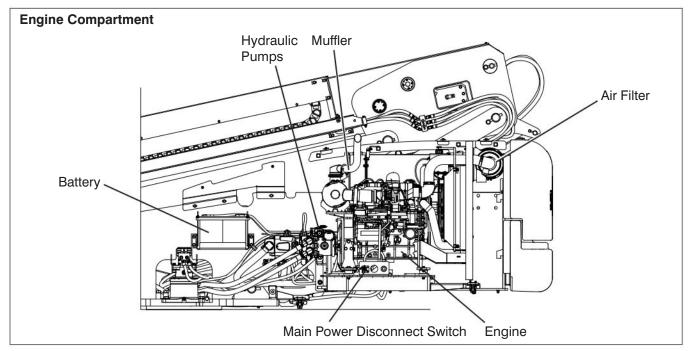
Battery acid is extremely corrosive -Wear proper eye and facial protection as well as appropriate protective clothing. If contact occurs, immediately flush with cold water and seek medical attention.

- 1. Check battery cases for damage.
- Clean battery terminals and cable ends thoroughly with a terminal cleaning tool or wire brush.
- 3. Ensure all battery connections are tight.
- 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.
- 5. Replace battery if damaged or incapable of holding a lasting charge.



WARNING

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



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.

Muffler and Exhaust

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

• 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 Table 4.2b for recommended oil type.

Engine Air Filter

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

Fuel Leaks

- Ensure that there are no fuel leaks.

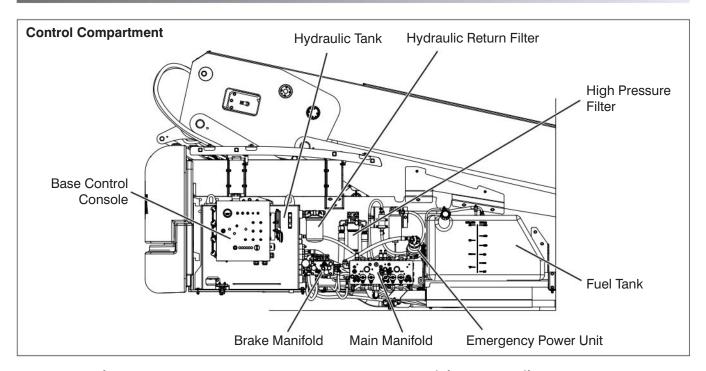


DANGER

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.





2.3-6 Control Compartment

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

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.

Hydraulic Tank

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

Hydraulic Oil

- 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 Table 4.2b for recommended oil type.

Hydraulic Return Filter

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

High Pressure Filter

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

Brake and Main Manifolds

- 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.

• 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.

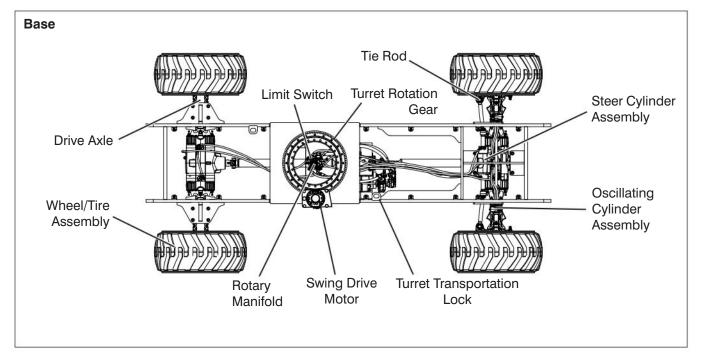
Fuel Tank

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.



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.

2.3-7 Base

Turret Transportation Lock

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

Drive Axle

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

Tie Rod

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

Oscillating Cylinder Assembly

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

NOTE

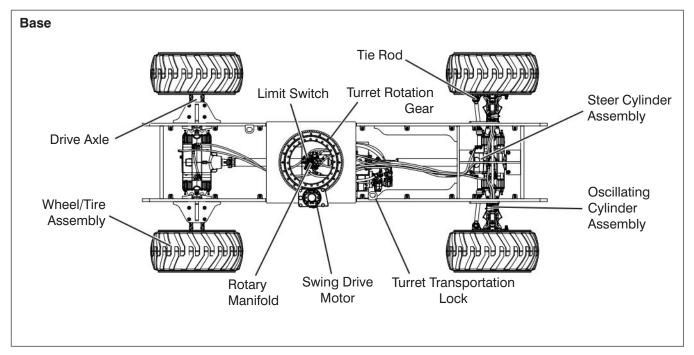
Oscillating axle is locked when MEWP is in low speed. Refer to Figure 3-13 - Axle Oscillation Diagram.

Wheel/Tire Assembly

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

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





Refer to Table 4.5 for wheel/tire specifications.



WARNING

Intermixing tires of different types or using tires of types other than those originally supplied with this equipment can adversely affect stability. Therefore, replace tires only with the exact Skyjack-approved type. Failure to operate with matched approved tires in good condition may result in death or serious injury.

Swing Drive Motor

Inspect from underneath the MEWP.

- 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.

Steer Cylinder Assembly

Inspect from underneath the MEWP.

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

Turret Rotation Gear

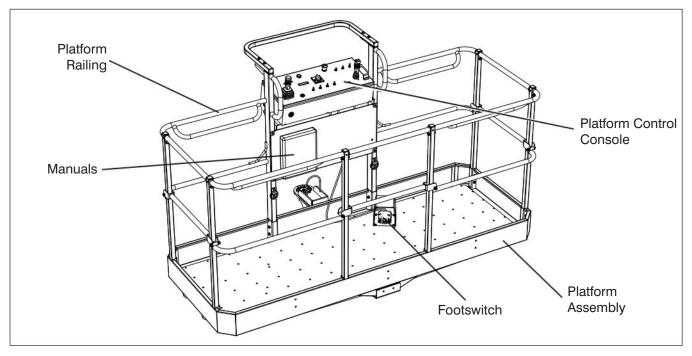
Inspect from underneath the MEWP.

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

Rotary Manifold

Inspect from underneath the MEWP.

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



2.3-8 Manuals

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

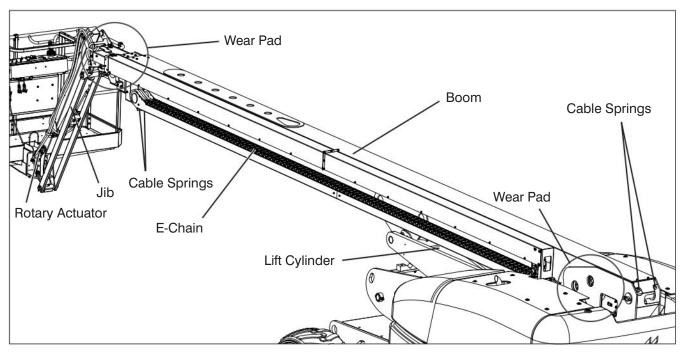
- Check to be sure manual storage box is present and in good condition.
- Ensure manuals are legible and in good condition.
- Always return manuals to the manual storage box after use.

2.3-9 Platform Assembly

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all fasteners are securely in place.
- Ensure all railings are properly positioned and secured.
- Ensure gates/drop bars are in good working order.
- Ensure footswitch is in good working order and has not been modified, disabled or blocked.

2.3-10 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.



2.3-11 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.

2.3-12 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.

2.3-13 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.

2.3-14 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.

Cylinders

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

Wear Pads

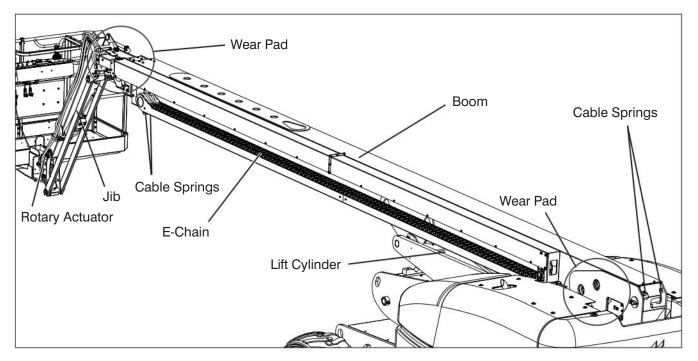
- Ensure all bolts are tight, there is no visible damage to the wear pads and that no parts are missing.

Hoses

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

• E-Chain

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



Cables

- Ensure there are no loose or missing parts with no signs of visible damage.
- Ensure that nuts are not loose and are locked together.
- Ensure that there are no gaps between cable springs (see Figure 2-8). If there are gaps, tighten nuts to remove gaps and then add another half turn more.

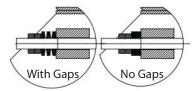
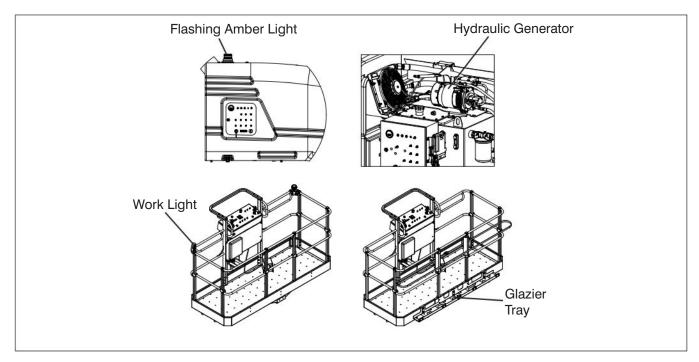


Figure 2-8. Cable Springs



2.3-15 Optional Equipment/Attachments

• Hydraulic Generator (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.

• Work Light (If Equipped)

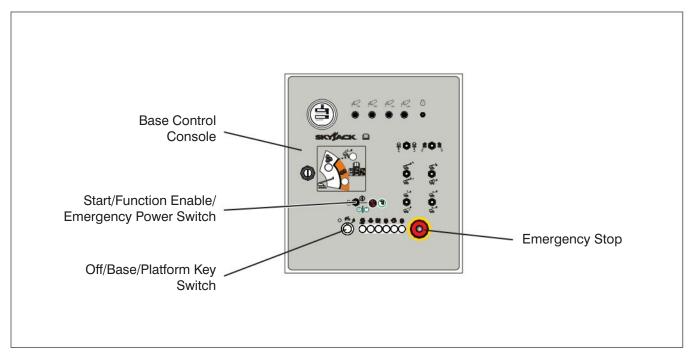
- Ensure lamps are properly secured with no signs of visible damage.
- Ensure mounting bracket is properly secured.
- Ensure there are no loose wires or missing fasteners.

• Flashing Amber Light (If Equipped)

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

Glazier Tray (If Equipped)

 Ensure tray, strap, foam supports and cover bumpers are properly secured with no signs of visible damage.



2.4 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.

IMPORTANT

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 competent/qualified repair personnel.

NOTE

To perform this function test, 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 3.7 - Start Operation.

NOTE

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

2.4-1 Test Main Power Disconnect Switch

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

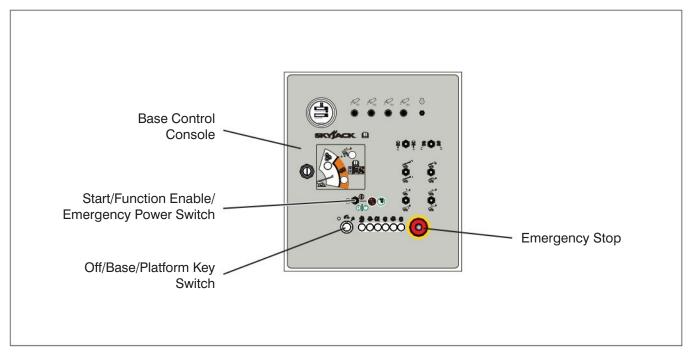
NOTE

Close all cowlings before proceeding to next item.

2.4-2 Base Control Console

- 1. On platform control console, pull out "O" emergency stop button.
- 2. On base control console, pull out "O" emergency stop button.
- 3. Turn off/base/platform key switch to "to" base position.
- 4. Start engine by selecting "O" start position from start/function enable/emergency power switch.





- Test Emergency Stop
 - 1. Push in "o" emergency stop button.

 Result: Engine should shut down and MEWP functions should not operate.
 - 2. Pull out "o" emergency stop button and restart engine.
- Test Start/Function Enable/Emergency Power Switch and All Boom Functions



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

- 1. Ensure "o" 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 "①" start/function enable/ emergency power switch in function enable position and activate each boom and platform function.

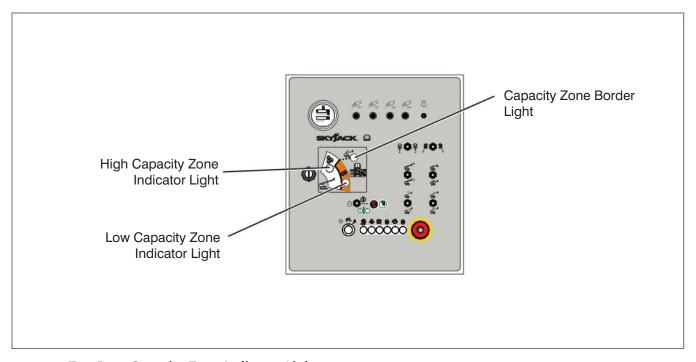
Result: Engine speed increases from idle to intermediate. All boom and platform functions should operate as selected.

Test Platform Self-leveling

- Lower boom to stowed position.
- 2. Adjust platform to a level position using platform leveling switch, which controls "stilling up or "stilling 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.



Test Base Capacity Zone Indicator Lights

NOTE

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

NOTE

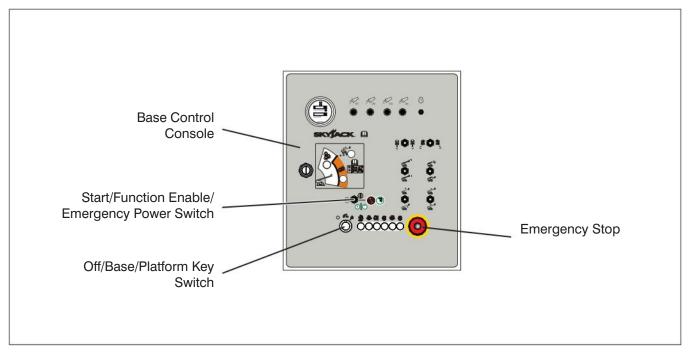
Ensure boom is in stowed position to begin this function test.

- 1. Push in "o" 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.





- Test Emergency Power
 - 1. On base control console, push in "O" emergency stop button to turn engine off.
 - 2. On platform control console, push in "emergency stop button.



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

NOTE

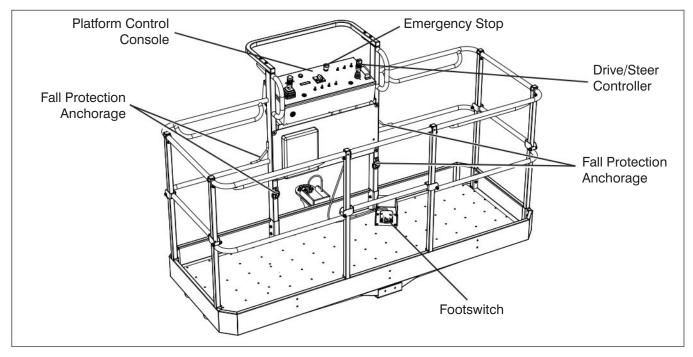
- To conserve battery power, test each function through a partial cycle.
- 3. On base control console, pull out "
 emergency stop button.

- On base control console, turn off/base/ platform key switch to "platform position."
- 5. Select "O" emergency power position from start/function enable/ emergency power switch and activate each boom function.

Result: All selected functions should operate.

- 6. Turn off/base/platform key switch to " base position."
- 7. Select "O" emergency power position from start/function enable/ emergency power switch and activate each boom function.

Result: All selected functions should operate.



Test Off/Base/Platform Switch

- 1. Ensure both "O" emergency stop buttons are pulled out.
- 2. Start engine.
- On base control console, turn off/base/ platform key switch to "O" 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 "O" 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 "o" emergency stop button to turn engine off.
- 10. Pull out "O" emergency stop button.

2.4-3 Platform Control Console

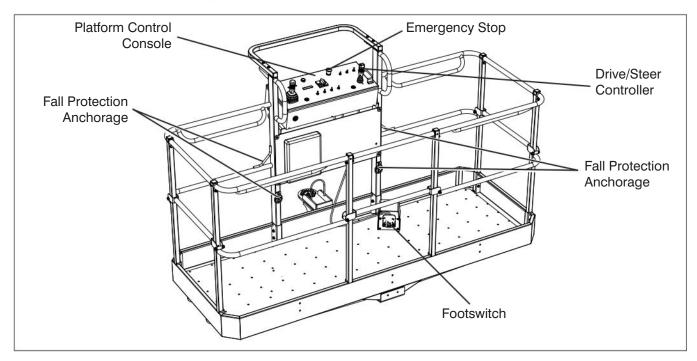


WARNING

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

- On base control console, turn off/base/platform key switch to "platform position.
- 2. Enter platform and close gate/drop bar.





1

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.

- Test Load Sensing System
 - 1. Push in "o" emergency stop button.
 - 2. Pull out "O" 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.
- Test Footswitch
 - 1. Ensure "o" emergency stop button is pulled out.
 - 2. Ensure engine start/on/off switch is in "O" on position.

- Do not start engine.
- 4. Select generator on/off switch to off position (if equipped).
- Depress and hold footswitch and attempt to start engine by selecting "O" start position from engine start/on/off switch.
 Result: Engine should not start.
- 6. Without depressing footswitch, try to start engine.

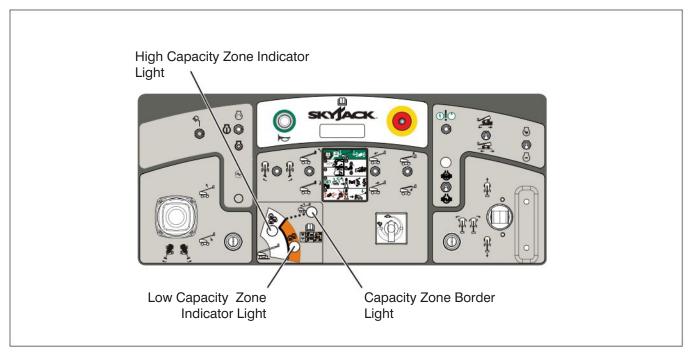
Result: Engine should start.

7. With engine running and without depressing footswitch, test each boom and platform function.

Result: MEWP functions should not operate.

NOTE

A 15-second anti-tiedown feature deactivates footswitch when operator depresses it for 15 seconds without activating any function.



 Test Platform Capacity Zone Indicator Lights

NOTE

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

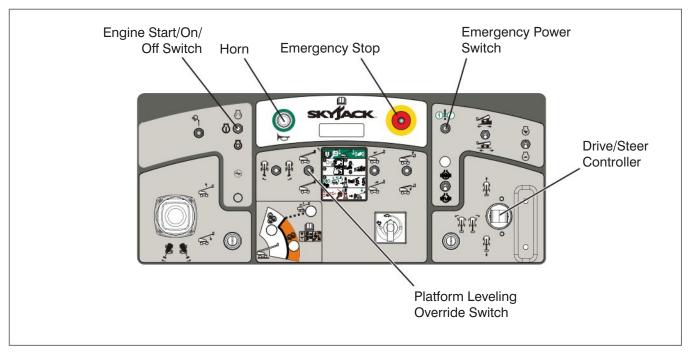
NOTE

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

- 1. Push in "O" emergency stop button.
- 2. Pull out "O" emergency stop button.

 Result: Capacity zone border light should illuminate for 1 second and then turn off. High capacity zone indicator light should illuminate.
- Depress and hold footswitch and extend
 " boom until high capacity zone
 indicator light turns off.
 Result: Low capacity zone indicator light
 should illuminate.
- 4. Depress and hold footswitch and fully retract and lower boom.





Test Engine Start/On/Off Switch

- 1. Ensure engine is running.
- 2. Select "O" off position from engine start/on/off switch.

Result: Engine should shut down and platform control console is disabled.

3. Select "①" on position from engine start/on/off switch.

Result: Platform control console is enabled.

4. Start engine by selecting "O" start position from engine start/on/off switch.

• Test Emergency Stop

- 1. Ensure engine is running.
- Push in "O" emergency stop button.
 Result: Engine should shut down and MEWP functions should not operate.

• Test Manual Platform Leveling

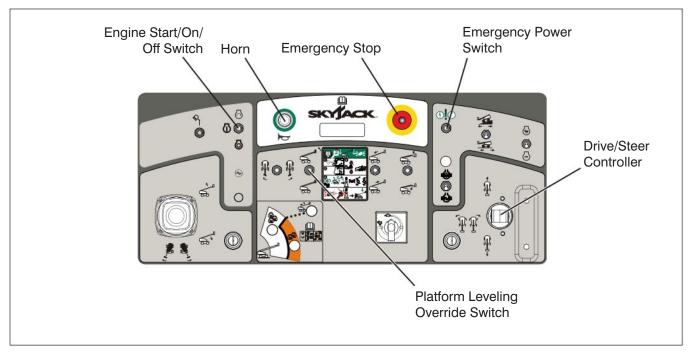
- 1. Start engine.
- 2. Depress and hold footswitch.
- 3. On platform leveling override switch, select "a" up position to tilt platform up or "a" down position to tilt platform down.

Result: Platform should tilt up or down.

Test Steering

- 1. Pull out " emergency stop button.
- 2. Start engine by selecting "O" 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.





Test Driving Function

stop.

- 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

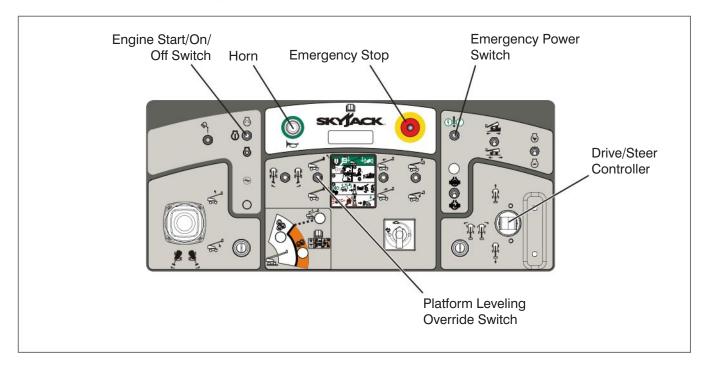
• Test Driving Speed

- 1. Depress and hold footswitch.
- 2. Raise "a" 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 stowed drive speed.
- 3. Lower boom to stowed position.
- 4. Extend " "fly boom approximately 30 cm (12 inch.) and then slowly move drive/steer controller to full drive position.

 Result: The maximum achievable drive speed should be significantly less than stowed drive speed.





Test Emergency Power



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

NOTE

- To conserve battery power, test each function through a partial cycle.
- 1. On platform control console, push in "O" emergency stop button to turn engine off.
- 2. Pull out "O" emergency stop button.
- 3. Select "O" on position from engine start/on/off switch.
- 4. Depress and hold footswitch.
- Select "Y" from emergency power unit switch and activate each function control handle or switch.

Result: All boom and steer functions should operate. Drive functions should not operate.

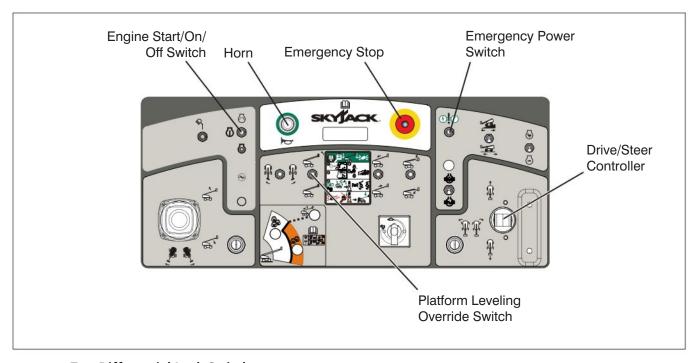
- Test Horn
 - 1. Push "" horn pushbutton. Result: Horn should sound.
- Test Brakes



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.
- 2. Ensure boom is in stowed position.
- 3. Depress and hold footswitch and drive MEWP first "I" forward then " " reverse at full speed.
- Remove your foot from footswitch.
 Result: MEWP should come to an instant and 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.





Test Differential Lock Switch



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

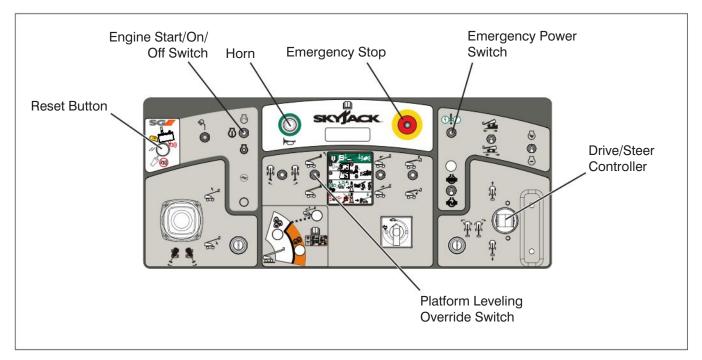
 On platform control console, push differential lock switch forward "to the locked position and then release.

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 3 for operation.



- Test Secondary Guarding Electrical (SGE) (If Equipped)
 - 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. The engine fault and glow plug indicator lights should illuminate.

3. Press the reset button.

Result: The audible/visual alarm and reset button light should go off.

- Start the engine.
- 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.

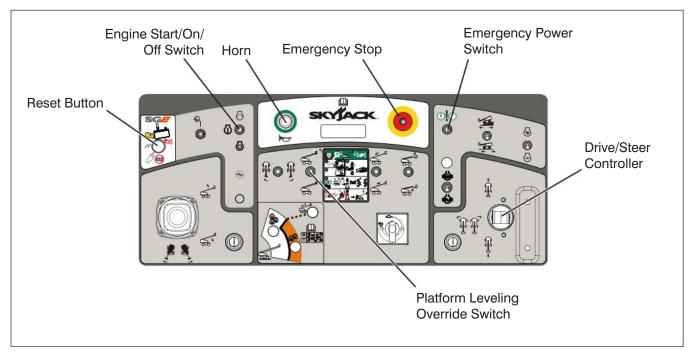
Result: The audible/visual alarm should activate immediately and stay on after the bar is released. The engine should shut down after 1 second. The reset button should illuminate. The engine fault and glow plug indicator lights should illuminate.

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. The engine fault and glow plug indicator lights 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.

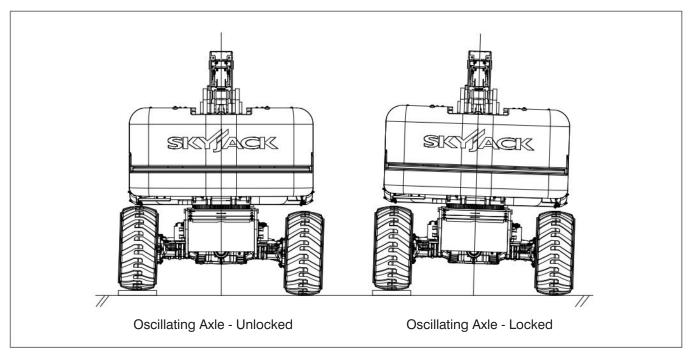
Result: The function will stop while the bar is being pressed and motion will resume when the bar is released. The audible/visual alarm should activate while the bar is being pressed and turn off after being released. The reset button should illuminate as soon as the sensor bar is pressed and turn off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

 While the audible/visual alarm is sounding, verify that the LED strobe light is also active.





Test 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.

 Retract fly boom while in tilt position.
 Result: The steer axles should unlock and the MEWP chassis should level itself to ground. Test Cables

NOTE

Cables have to be tested daily.

- Raise the main boom to approximately horizontal.
- Extend and retract the boom sections.
 Result: There should be no delay in the movement of the fly boom section.

FAMILIARIZATION

2.5 Winching and Towing Procedure

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 result.



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



WARNING

Do not winch or tow MEWP on grade steeper than 50%.



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.

- 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 2.5-1).
- 3. Remove wheel chocks or blocks, and then winch or tow MEWP to desired location.

- 4. Position MEWP on a firm and level surface.
- 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 1 marked with yellow paint) 90 degrees counterclockwise.

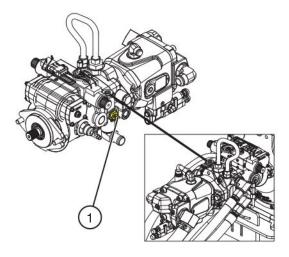


Figure 2-9. Drive Bypass Valve

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.

2.5-1 To Release 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 "O" off position.



CAUTION

Do not use hydraulic power with brake disengaged.

 Locate the bypass valve on the inboard side of the drive pump. Bypass the drive pump by loosening the valve stem (item 1 - marked with yellow paint) 90 degrees clockwise.

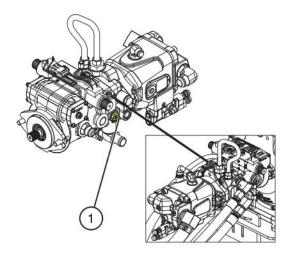


Figure 2-10. Drive Bypass Valve



Do not release brakes before disengaging drive motor!

4. Push in black brake valve plunger (item 3).

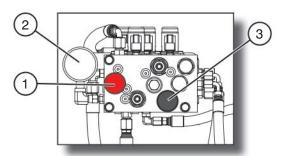


Figure 2-11. Brake Manifold

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 2.5 on how to reengage brakes.

FAMILIARIZATION

2.6 Emergency Lowering Procedures

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



WARNING

Do not operate emergency power unit if platform capacity is exceeded. The emergency power unit may be used to release the platform from an obstruction that has triggered an overload condition.

At Base Control Console:

- 1. Ensure engine is off.
- 2. Pull out "O" emergency stop button.
- 3. Select either " 55" base position or " platform position from key switch.
- 4. Select "O 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 "O" emergency stop button.
- 3. Select "O" on position from engine start/on/off switch.
- 4. Depress and hold footswitch.
- 5. Select "Or from emergency power unit switch and activate desired boom function.

NOTE

If platform is overloaded in work mode, emergency lowering is only available from base controls.

Notes

3.0 Operation

This section provides the necessary information needed to operate the MEWP. It is important that the user reads and understands this section before operating the MEWP.

3.1 General

In order for this MEWP to be in good working condition, it is important that the operator meets the necessary qualifications and follow the operator's daily inspection checklist referred to in this manual.

3.1-1 Operator Qualifications

- Only trained and authorized personnel shall be permitted to operate an MEWP.
- Safe use of this MEWP requires the operator to understand the limitations and warnings, operating procedures and operator's responsibility for maintenance. Accordingly, the operator must understand and be familiar with this operating manual, its warnings and instructions, and all warnings and instructions on the MEWP.
- The operator must be familiar with 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 competent/qualified person.

3.1-2 Operator's Responsibility for Maintenance



WARNING

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

Death or serious injury could result from the use of an 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 Table 4.7, even if the operator is not directly responsible for the maintenance of this MEWP.

3.1-3 Maintenance and Inspection Schedule

- Refer to Service manual for frequent (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

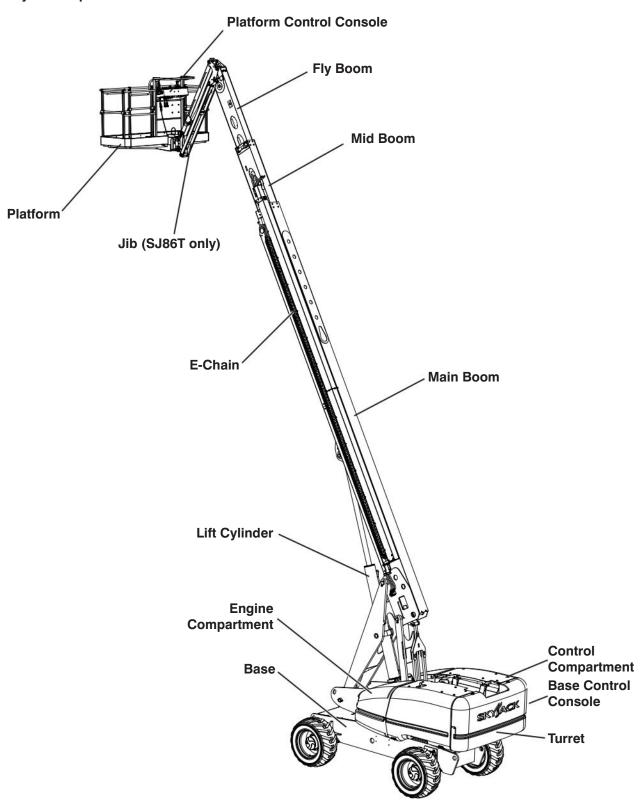
Refer to Skyjack's website www.skyjack.com for latest service bulletins prior to performing frequent or yearly inspections.

3.1-4 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 Table 4.7 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 Table 4.3 in this manual.



3.2 Major Components



SKYJACK 8XT Telescopic Boom

3.3 Major Assemblies

The MEWP consists of four major assemblies: the base, turret, boom assembly and platform.

3.3-1 Base

The base is a rigid one-piece weldment. The rear axle is hydraulic motor-driven and has a 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.

3.3-2 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, the hydraulic and fuel tanks.

3.3-3 Boom Assembly

The boom is mounted on the turret and consists of a telescoping fly, mid boom and main boom assembly. The telescoping boom mechanism uses two double-acting hydraulic cylinders with holding valves to control vertical movement. Cables are used to extend the fly boom section. The SJ86T model is equipped with a 150 cm (60 in.) boom jib, controlled by a double-acting hydraulic cylinder.

3.3-4 Platform

The platform is constructed of a skid-resistant deck surface allowing visibility through the deck and a 109 cm (43 in.) high tubular steel railing system with mid rails and 15 cm(6 in.) toe boards. The platform can be entered through a swing side gate or an optional swing gate at the center of the railing system. The platform can be rotated in either direction. An AC GFI outlet is also located on the platform.

3.4 Serial Number Nameplate

The serial number nameplate, located at the rear of the MEWP, lists the following:

- Model number
- Serial number
- Maximum capacities
- Maximum number of persons permissible on the platform
- Maximum manual force
- MEWP weight
- Maximum drivable height
- · Maximum platform height
- System pressure
- Lift pressure
- · Maximum wheel load
- · Maximum wind speed
- Voltage
- · Maximum inclination of chassis

3.5 Component Identification (Optional Equipment/Attachments)

The following descriptions are for identification, explanation and locating purposes only.

NOTE

Refer to option's manual and labels for actual weight. This weight must be included when determining the total load on the platform, including personnel and other materials.

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 platform control console and the plug is located beside hydraulic tank in control compartment.

3.5-2 Work Light (If Equipped)

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

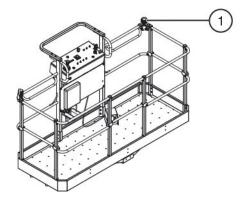


Figure 3-1. Work Light

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.

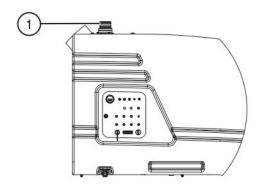


Figure 3-2. Flashing Amber Light

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

NOTE

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

3.5-4 Secondary Guarding Electrical (SGE) (If Equipped)

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.

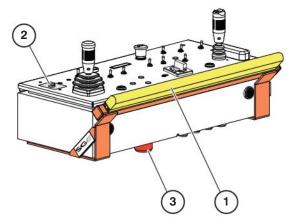


Figure 3-3. Secondary Guarding Electrical (SGE)



- 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.
- 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.
- 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

- 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.
- 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.

3.5-5 Glazier Tray (If Equipped)

The tray is installed on the front side of the platform.

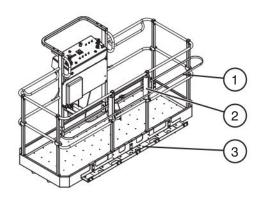


Figure 3-4. Glazier Tray

- 1. **Strap** This strap is used to secure panel in place.
- Foam Support This foam support with cover bumper is used as a cushion to protect the panel.
- 3. **Glazier Tray** This tray is used to carry the panel.

NOTE

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

3.6 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

- are designed to discover any damage of components before the MEWP is put into service.
- are 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

 are 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 Daily Inspection Checklist (see Table 4.7) and fill out the visual and daily maintenance inspections and the function tests sections while performing the items outlined in Section 2.3 and Section 2.4.

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 competent/ qualified repair personnel. After repairs are completed, the operator must perform visual and daily maintenance inspections & function tests again.

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

Section 3 - Operation Start Operation

3.7 Start Operation

Carefully read and completely understand the Operating Manual and all warnings and instruction labels (refer to Section 5 - Labels) on the MEWP.



WARNING

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

Before operating this MEWP, perform the following steps:

- 1. Visual and daily maintenance inspections (see Section 2.3)
- 2. Function tests (see Section 2.4)
- Jobsite inspection
 It is the responsibility of the operator to perform a jobsite inspection and avoid the following hazardous situations:
 - holes or drop-offs
 - · 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
 - · wind and weather conditions
 - the presence of unauthorized personnel
 - other possible unsafe conditions
- 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.

has been tagged or locked out for non-use or repair.

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.

3.7-1 To Activate Base Control Console



WARNING

Ensure that you maintain three points of contact to mount/dismount the 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 "O" 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 competent/qualified repair personnel.

3.7-2 To Rotate 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 "\[\textstyle \]" left or "\[\textstyle \]" right position. Release switch to stop.

3.7-3 To Rotate 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 "\(\bar{\phi} \)" by selecting and holding start/function enable/emergency power switch to function enable position.
- 2. Push turret rotation switch to either "2" clockwise or "2" counterclockwise position. Release switch to stop.

NOTE

Turret can be rotated continuously 360 degrees.

3.7-4 To Move Jib Up and Down Using Base Control Console

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

3.7-5 To Raise or Lower 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 "size or "size or "lower position. Release switch to stop.

3.7-6 To Extend or Retract 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 "①" 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 "are retract position. Release switch to stop.

3.7-7 To Level Platform Using Base Control Console

- 2. Push platform leveling override switch to either "gray" up or "gray" down position. Release switch to stop.

3.7-8 To Operate Using Emergency Power Switch at Base Control Console

This is a momentary-type switch. This switch allows all functions except the drive function to operate in the event of engine malfunction. Refer to Section 2.6 for the emergency lowering procedure.

Section 3 - Operation Start Operation

3.7-9 To Activate Platform Control Console

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

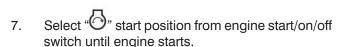


Ensure that you maintain three points of contact to mount/dismount the platform.



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.



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.



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

NOTE

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

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



- 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.

3.7-10 To Drive Forward or Reverse Using Platform Control Console



When you are in the platform and positioned over an axle, the direction you are facing will be forward.

- 1. Depress and hold footswitch.
- 2. Push and hold drive/steer controller in this direction "

 to drive forward or "

 to drive backward."
- 3. Release controller handle to stop.



The drive orientation can change when the turret is swung 90 degrees off center of the normal driving position (roughly when boom is swung past the rear tire). Drive re-orientation will not occur while driving and rotating until the joystick is released for 6 seconds or when the footswitch is released.



- When driving on a slope:
- Torque Switch MUST be in high torque mode.
- DO NOT exceed the rated gradeability listed in Table 4.2a.
- Ensure fuel level is above half to avoid a possible stall condition.



3.7-11 To Steer Using Platform Control Console

- 1. Depress and hold footswitch.
- 2. Press rocker on top of drive/steer controller in this direction "Time" to steer left or "Time" to steer right.

NOTE

Driving and steering may be active at the same time.

3.7-12 To Move Jib Up and Down Using Platform Control Console

- 1. Depress and hold footswitch.
- 2. On jib up/down switch, select "a" to move jib up or "a" to move jib down. Vary speed with "boom speed adjuster dial. Release switch to stop.

3.7-13 To Extend or Retract 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 "\$\infty\$" to extend fly boom or "\$\infty\$" to retract fly boom. Vary speed with "\$\infty\$" boom speed adjuster dial. Release switch to stop.

3.7-14 To Level 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.

3.7-15 To Rotate 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. Vary speed with "" boom speed adjuster dial. Release switch to stop.

3.7-16 To Raise or Lower 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 in this direction " to raise main boom or " to lower main boom.
- 3. Release controller handle to stop.

3.7-17 To Sound Horn

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

Section 3 - Operation Start Operation

3.7-18 To Rotate 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 in this direction " to rotate clockwise or " to rotate counterclockwise.
- 3. Release controller handle to stop.

NOTE

Turret can be rotated continuously 360 degrees.

3.7-19 To Operate Using Emergency Power Switch at Platform Control Console

This is a momentary-type switch. This switch allows all functions except drive function to operate in the event of engine malfunction. Refer to Section 2.6 for the emergency lowering procedure.

3.7-20a To Engage Differential Lock Switch

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

3.7-20b To Disengage 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).

3.7-21 Shutdown Procedure

- 1. Completely retract boom and lower platform.
- 2. Push in "o" emergency stop button on platform control console and on base control console.
- 3. Turn base/off/platform key switch to "O" off position. Remove key.
- Turn main power disconnect switch to "O" off position.

3.7-22 Hydraulic Generator (If Equipped)

To start hydraulic generator:

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

To restore normal operation:

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

NOTE

An engine shut down will turn the generator off. All functions are disabled while the generator switch is "\(\to \)" on.

3.8 Refueling Procedure

This section provides the operator with the procedure on how to refuel the engine.



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.
- Diesel engine models:
 Use ultra low sulfur fuel only.



WARNING

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



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.

3.8-1 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.

3.9 Loading/Unloading

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

Only competent/qualified 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.

3.9-1 Loading and Tie-down

- Lock turret using turret transportation lock (refer to Section 3.9-2).
- 2. Turn key switch to "O" off position and remove key before transporting.
- Turn main power disconnect switch to "O" off position.
- 4. Chock MEWP wheels (if necessary).

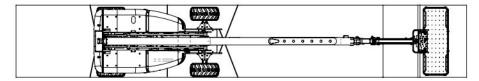
- 5. Remove all loose items.
- Anchor down MEWP to transport surface using tie-down points (refer to Figure 3-5).
- Secure boom from side-to-side movement using lower platform mount between boom end and platform. Do not use excessive downward force when securing boom section.
- Place block underneath 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 3-6). Do not use excessive downward force when securing platform.



Inspect MEWP for loose or unsecured items.

NOTE

For loading and unloading using a winch line, refer to Section 2.5.



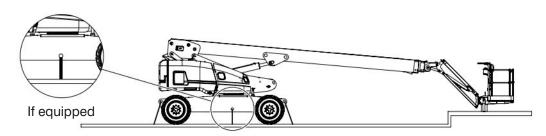


Figure 3-5. Tie-down Points

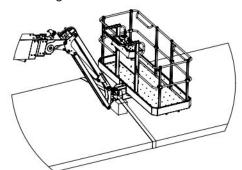


Figure 3-6. Platform Tie-down



3.9-2 Locking the Turret

- Ensure that turret is positioned so that turret transportation lock tube (item 2 – Figure 3-7) is aligned into one of two turret locking points on the chassis.
- 2. Lift turret lock retaining pin (item 1 Figure 3-7) and rotate 90 degrees. Lower turret lock retaining pin into locked position.

3.9-3 Lifting

IMPORTANTOptional lifting points are required.

- 1. Place boom in stowed position, centered between drive wheels. Lock turret using turret transportation locking pin (refer to Section 3.9-2).
- 2. Turn main power disconnect switch to "O" off position.

3. Clear platform of all personnel, tools and materials.



WARNING

When lifting the MEWP, lifting devices must be attached to designated lift points only (refer to Figure 3-8).

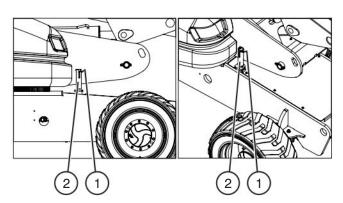


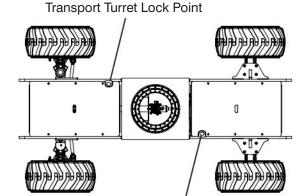
WARNING

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 3-8).





Transport Turret Lock Point

Figure 3-7. Turret Transportation Lock & Locking Points

TRANSPORT TIE-DOWN POINTS

X (81/86T) = 20* (508mm)

Figure 3-8. Lifting Points



Section 3 - Operation Chassis Tilt

3.10 Chassis Tilt

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

If the MEWP becomes tilted causing the alarm to sound, the platform must be fully lowered and retracted immediately. Drive functions are not available when the tilt alarm is active.

3.10-1 Counterweight Uphill

If the MEWP becomes tilted with the counterweight uphill (refer to Figure 3-9) follow the steps below to return to a lowered and retracted position.

- 1. Retract the boom completely.
- 2. Drive to a firm, level surface.

3.10-2 Counterweight Downhill

If the MEWP becomes tilted with the counterweight downhill (refer to Figure 3-10) follow the steps below to return to a lowered and retracted position.

- 1. Lower the jib to horizontal (if equipped).
- 2. Retract the boom completely.
- 3. Lower the boom completely.
- 4. Drive to a firm, level surface.



Figure 3-9. Counterweight Uphill

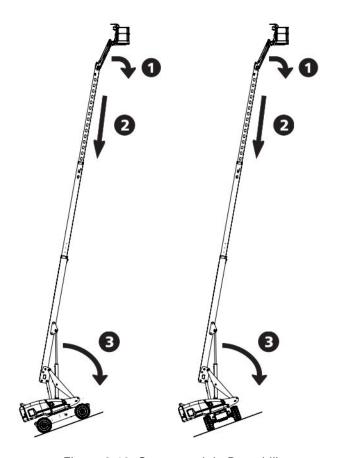


Figure 3-10. Counterweight Downhill



3.11 Technical Diagrams

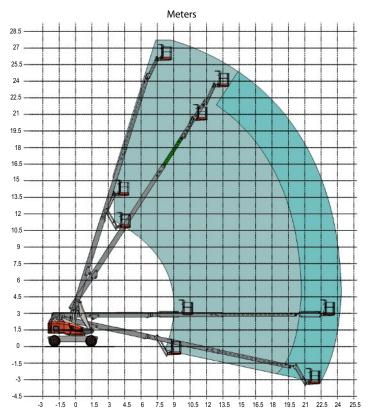


Figure 3-11. Reach Diagram - SJ86T

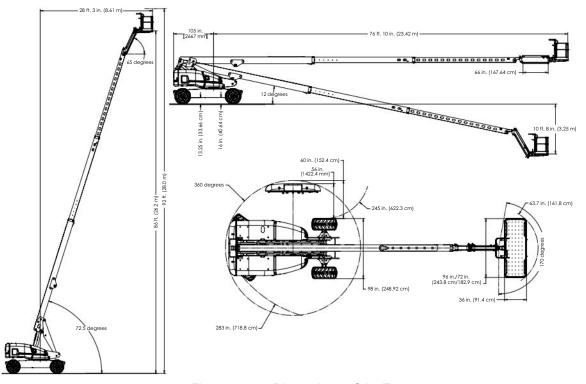
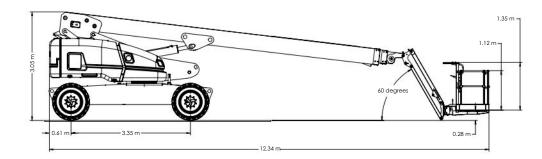


Figure 3-12a. Dimensions - SJ86T

Section 3 - Operation Diagrams

3.11 Technical Diagrams (Continued)



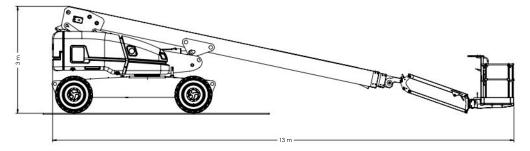
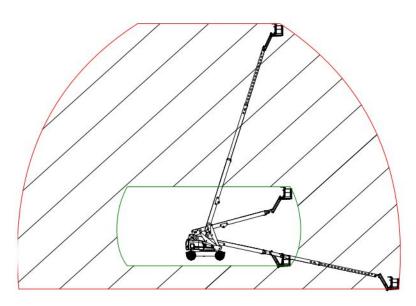


Figure 3-12b. Dimensions - SJ86T



WARNING

Do not raise the platform in work mode if it is not on a firm, level surface.



Axle oscillation free (travel mode) - drive speed 4.83 km/h max.

Axle oscillation locked (work mode) - drive speed 0.8 km/h max.

Figure 3-13. Axle Oscillation - SJ 86T

Notes

Table 4.1 Standard and Optional Features

STANDARD EQUIPMENT 12 Volt DC emergency power 1.68 m jib 9.91 m x 2.44 m platform Base controls Continuous drive and steer directional sensing Diesel engine Engine anti-restart protection Four-wheel drive Glow plug heaters Load sensing system Manual brake release Operator horn Oscillating axle (steer) Platform controls Tri-entry drop bar Rear entry spring hinged gate Spring-applied hydraulically released brake Variable speed drive and function controls Dual capacity rating OPTIONAL EQUIPMENT 3500W hydraulic generator Air line to platform Air line to platform Air line to platform Air line to platform Catalytic Muffler Catalytic Muffler Catalytic Muffler Foam-filled non-marking tires Pipe rack Hazardous environment kit Control box cover Auxiliary top rail Lifting lugs SGM	MODEL	SJ 86T
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0.91 m x 1.83 m platform ✓ All function motion alarm ✓ Catalytic Muffler ✓ Cold weather start kit (diesel) ✓ Glazier Package ✓ Flashing amber light ✓ Oil cooler (included with generators) ✓ Platform work light ✓ Foam-filled non-marking tires ✓ Diesel scrubber ✓ Pipe rack ✓ Hazardous environment kit ✓ Control box cover ✓ Auxiliary top rail ✓ Lifting lugs ✓ SGM ✓	Receptacle outlet cable on platform	✓
0.91 m x 1.83 m platform ✓ All function motion alarm ✓ Catalytic Muffler ✓ Cold weather start kit (diesel) ✓ Glazier Package ✓ Flashing amber light ✓ Oil cooler (included with generators) ✓ Platform work light ✓ Foam-filled non-marking tires ✓ Diesel scrubber ✓ Pipe rack ✓ Hazardous environment kit ✓ Control box cover ✓ Auxiliary top rail ✓ Lifting lugs ✓ SGM ✓	Air line to platform	✓
Catalytic Muffler Cold weather start kit (diesel) Glazier Package Flashing amber light Oil cooler (included with generators) Platform work light Foam-filled non-marking tires Diesel scrubber Pipe rack Hazardous environment kit Control box cover Auxiliary top rail Lifting lugs SGM		✓
Cold weather start kit (diesel) Glazier Package Flashing amber light Oil cooler (included with generators) Platform work light Foam-filled non-marking tires Diesel scrubber Pipe rack Hazardous environment kit Control box cover Auxiliary top rail Lifting lugs SGM		✓
Cold weather start kit (diesel) Glazier Package Flashing amber light Oil cooler (included with generators) Platform work light Foam-filled non-marking tires Diesel scrubber Pipe rack Hazardous environment kit Control box cover Auxiliary top rail Lifting lugs SGM	Catalytic Muffler	✓
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Auxiliary top rail Lifting lugs ✓ SGM		✓
Lifting lugs ✓ SGM		✓
SGM ✓		✓
		✓
SGF I ✓	SGE	✓

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NOTE: Only manufacturer-approved options are to be utilized.

Tables Section 4

Table 4.2a Specifications and Features

	МС	DDEL	SJ 86T
Ę.		tform length (outside)	1.83 m / 2.44 m
Platform Size		atform depth (outside)	0.91 m
<u> </u>	Total pla	Working	28.04 m
<u>.</u>	DI	atform elevated	
Height	FI	Drive	26.21 m
l [∓] ⊦		Stowed	driveable at all heights
_		Slowed	3 m
Length	Ove	rall with platform	12.95 m
Width	O	utside std. tires	2.49 m
Weight	Weight ((with foam-filled tires)	17,550 kg
	Platforr	m rotation	170 degrees
	Horizoi	ntal reach	23.41 m
	Whe	elbase	3.35 m
	Turret	rotation	360 degrees continuous
	Turret	tailswing	1.52 m
Gra	adeability (to	que equivalent to)	45%
Who	ole-body vibra	tion on the platform	0.4 m/sec ²
Gre	ound clearand	ce between wheels	0.34 m
ning ius	Inside	AMD	6.20 m
Turning Radius	Outside	4WD	7.20 m
	Systen	n voltage	12 V DC
ery		Туре	Lead Acid
Battery	Cold	cranking amperes	800 A
	ľ	Main boom up	90 seconds (approx.)
	M	ain boom down	90 seconds (approx.)
nes	FI	y boom extend	60 seconds (approx.)
g Tir	Fly boom retract		60 seconds (approx.)
Operating Times	Jib up		20 seconds (approx.)
Ope	Jib down		17 seconds (approx.)
	Turret rota	ate - 360° (fully stowed)	130 seconds (approx.)
	Plat	form rotate - 180°	10 seconds (approx.)
Driving Speeds	Drive Spe	eed (maximum-stowed)	4.83 km/h

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Section 4 Tables

Table 4.2b Specifications and Features

		MODEL		SJ 86T
	Engine Type		Deutz TD2.9	
		Fuel Typ	e	Diesel
		Fuel Tank Ca	pacity	170.3 L
ы	Standard Oil Factory Fill		- 18°C to +45°C (0°F to 115°F)	SAE 15W-40 API CF/CG/CH-4
Engine - Deutz	Cold Lube Oil Option	Ambient Temperature	- 29°C to +32°C (- 20°F to 90°F)	SAE 5W-30 API CF/CG/CH-4
Engin	Arctic Lube Oil Option	Limits	- 40°C to +45°C (- 40°F to 115°F)	SAE 0W-40 API CF/CG/CH-4
	Approved Alternates			See Engine Manual
		Lube Oil Sump	Capacity	9 L
	Radiator Capacity Radiator Fluid Type			13 L
				DELO ELC 50/50
			Туре	Shell Tellus T46
_	Recommended Oil	Operating and Oil	Ambient Operation	+45°C (113°F)
lic Oi		Temperature Limits	Max. Oil Temp.	+93°C (200°F)
Hydraulic Oil			eratures can be improved	HVLP T46 (Summer)
-	with Skyjack options. Please consult your nearest Skyjack service center.)		HVLP T42 (Winter)	
	Tank Capacity			223.3 L
	Sound Pressure Level (ISO 3744)			80dB(A)
_	Guaranteed S	112dB		

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Tables Section 4

Table 4.3 Owner's Annual Inspection Record

Model Number: Serial Number:										
*		20	20	20	20	20	20	20	20	20
**	184	SK Y JACK					·			

1001AB

This decal is located on the control compartment cowling. It must be completed after an annual inspection has been completed. Do not use the aerial platform if an inspection has not been recorded in the last 6 months.

	Pictorial	Description
*		Inspection Date
**	† P /	Inspector Signature

Table 4.4 Tire/Wheel Specifications

	SJ 86T
Tire Size	Outrigger R4 18-625
THE SIZE	0.48 m x 1.05 m
Туре	Foam-filled
Tire Ply Rating	16
Wheel Nuts Torque	373 Nm

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Table 4.5 Maximum Platform Capacities

	SJ 86T
	340 kg/
Total Capacity	227 kg
	3 Persons/
	2 Persons
Maximum Wind	12.5 m/s
Maximum Side Force	400 N
Tilt Cutout Setting	5 degrees x 5 degrees

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Section 4 Tables

Table 4.6 Floor Loading Pressure

MODEL	Gross Aerial	Tot	al Aerial Platform L	oad
	Platform Weight	Wheel	LCP	OUP
	kg	kg	kPa	kPa
SJ 86T	17,890	8,100	1,210	16.0

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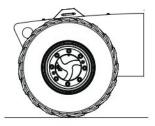
- Gross Aerial Platform Weight = Weight + platform capacity
- LCP Locally Concentrated Pressure is a measure of how hard the aerial platform tire tread presses on the area in direct contact with the floor. The floor covering (tile, carpet, etc.) must be able to withstand more than the indicated values above.
- OUP Overall Uniform Pressure is a measure of the average load the aerial platform 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 aerial platform weight and 79.4 kg (175 lb.) to max. wheel load.

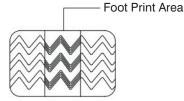
NOTE:

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.

Locally Concentrated Pressure (LCP):

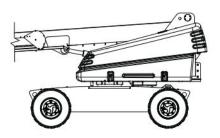
Foot Print Area identified by test.

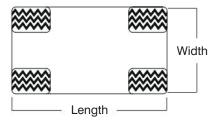




Overall Uniform Pressure (OUP):

Base Area = Length x Width







Intermixing tires of different types or using tires of types other than those originally supplied with this equipment can adversely affect stability. Therefore, replace tires only with the exact Skyjack-approved type. Failure to operate with matched approved tires in good condition may result in death or serious injury.

Tables Section 4

Table 4.7 Operator's Daily Inspection Checklist



Serial Number:	
Model:	
Hourmeter Reading:	Operator's Name (Printed):
Date:	
Гime:	Operator's Signature:
Each item shall be inspected using the appropriate section of as each item is inspected, check the appropriate box.	of the Skyjack operating manual.
P - PASS	
F - FAIL	

	N/A	P	F	R
Visual and Daily Maintenance Inspect	ions			
Labels				
Electrical				
Limit Switches				
Hydraulic				
Engine Compartment				
Main Power Disconnect Switch				
Batteries				
Hydraulic Pumps				
Muffler and Exhaust				
Engine Pivot Tray				
Engine Oil Level				
Engine Air Filter				
Fuel Leaks				
Control Compartment				
Base Control Console	i			
Hydraulic Tank				
Hydraulic Oil	i			
Hydraulic Return Filter	i			
High Pressure Filter				
Brake and Main Manifolds				
Emergency Power Unit				
Fuel Tank	i			
Fuel Leaks	i			
Base				
Turret Transportation Lock	i			
Drive Axle				
Tie Rod	i			
Oscillating Cylinder Assembly	i			
Wheel/Tire Assembly	i			
Swing Drive Motor	i			
Steer Cylinder Assembly	i			
Turret Rotation Gear				
Rotary Manifold				
Manuals				
Platform Assembly				
Platform Control Console				
Rotary Actuator				
Load Cell				

	N/A	Р	F	R
Jib				
Boom				
Cylinders				
Wear Pads				
Hoses				
E-Chain				
Cables				
Optional Equipment/Attachments				
Hydraulic Generator (If Equipped)				
Work Light (If Equipped)				
Flashing Amber Light (If Equipped)				
Glazier Tray (If Equipped)				
Function Tests				
Test Main Power Disconnect Switch				
Base Control Console				
Test Emergency Stop				
Test Start/Function Enable/Emergency Power Switch &				
All Boom Functions				
Test Platform Self-leveling				
Test Platform Capacity Zone Indicator Lights				
Test Emergency Power				
Test Off/Base/Platform Switch				
Platform Control Console				
Test Load Sensing System				
Test Footswitch				
Test Platform Capacity Zone Indicator Lights				
Test Engine Start/On/Off Switch				
Test Emergency Stop				
Test Manual Platform Leveling				
Test Steering				
Test Driving Function				
Test Driving Speed				
Test Emergency Power				
Test Horn				
Test Brakes				
Test Differential Lock Switch				
Test Secondary Guarding Electrical (SGE) (If Equipped)				
Test Oscillating Axles				
Test Cables				

R - REPAIRED

NOTE

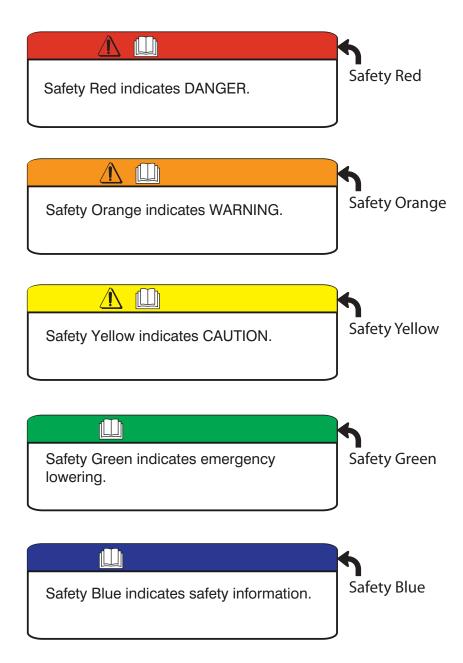
The owner's annual inspection decal must be completed after an annual inspection has been completed.

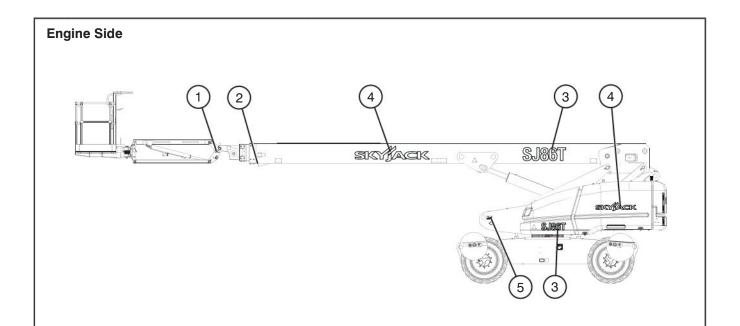


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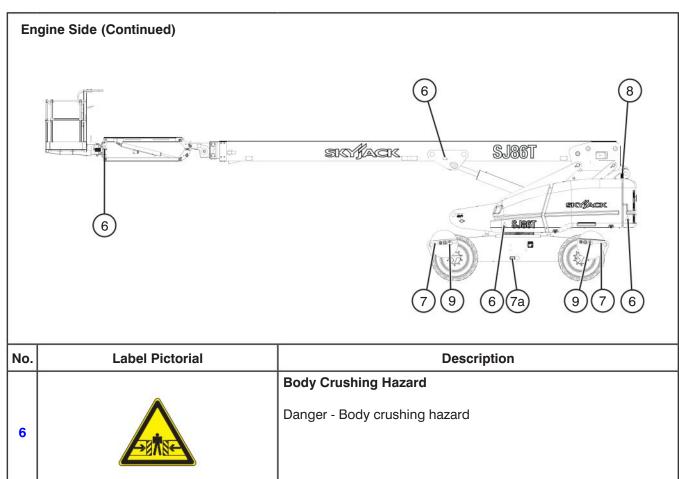
Labels

Label Legend

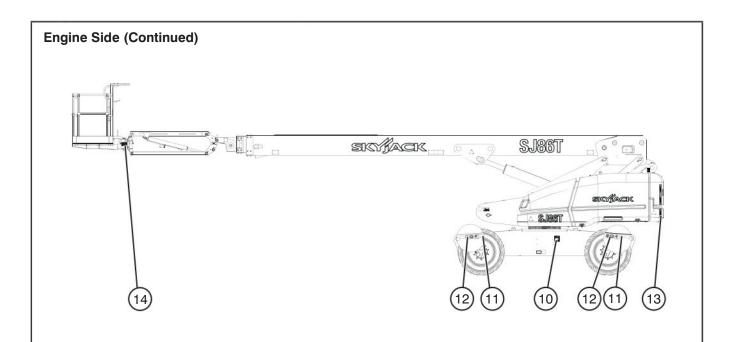




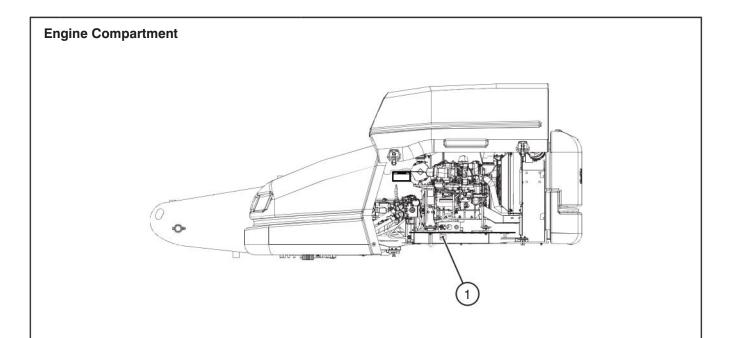
No.	Label Pictorial	Description
1		Crushing Hazard Danger - Crushing hazard
2		Warning - Do Not Alter Do not alter or disable limit switches or other safety devices.
3	SJ86T	Model Number* Product Identifier *Model number will vary, may not be as shown.
4	SKYJACK	Skyjack Logo Skyjack
5		Lift Points Optional lifting points required. Only use these points for lifting.



		Body Crushing Hazard
6	A THE REPORT OF THE PARTY OF TH	Danger - Body crushing hazard
		Tie Down Points
7	161	Only use these points for tying down.
		Tie Down Points (If equipped)
7a		Only use these points for tying down.
		Lift Points
8	3	Only use these points for lifting.
		Wheel Load*
9	### kg (lb)	Indicates rated wheel load. *Wheel load will vary over different MEWPs.

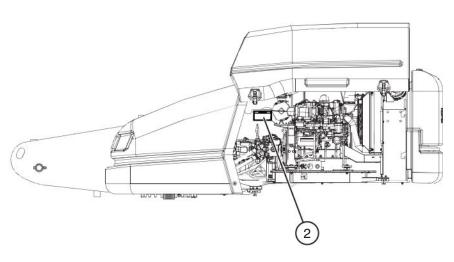


No.	Label Pictorial	Description
10	dB	Sound Power Level Guaranteed maximum sound power level
11		Foam-filled Tire Indicates foam-filled tire.
12		Wheel Specifications Refer to manual for wheel type, offset, pressure and torque.
13		Caution Tape Stripe Caution stripe
14		Tie Down Points Only use these points for tying down.

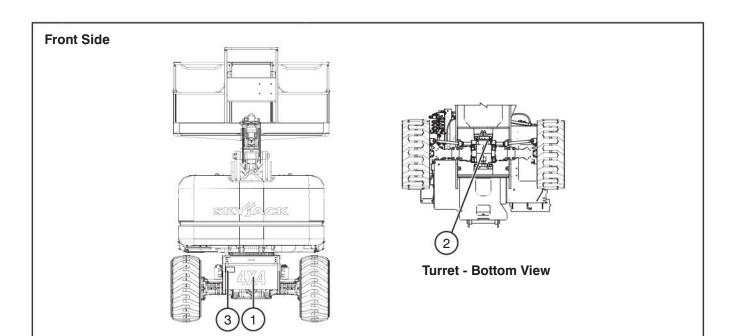


No.	Label Pictorial	Description
1		Main Power Disconnect Main power disconnect lever

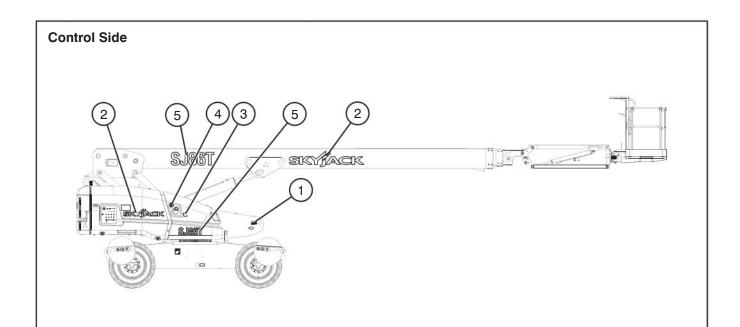




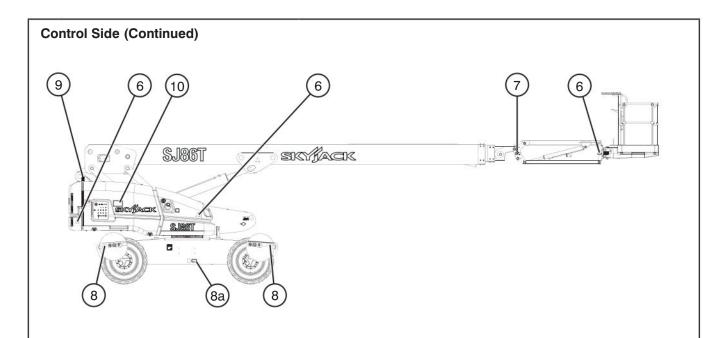
No.	Label Pictorial	Description
2	A Compared to the control of the con	Winching/Towing/Pushing Procedure Refer to Operating manual. 1. Block or chock wheels to prevent MEWP from rolling. 2. Turn main power disconnect switch to off position. At engine side: 3. Locate bypass valve (marked with yellow colour) on inboard side of drive pump. 4. Rotate bypass valve flat using pliers or 1/4" (7mm) wrench by 90 degrees (clockwise). At hydraulic tank side: 5. 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 2.5 Winching & Towing Procedure. 8. A) Remove blocks from wheels. B) Push/tow/winch to desired location. 9. Block or chock wheels to prevent MEWP from rolling. At hydraulic tank side: 10. Reset brake by pulling out black knob. At engine side: 11. 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.
		Before operation, ensure all blocks are removed from



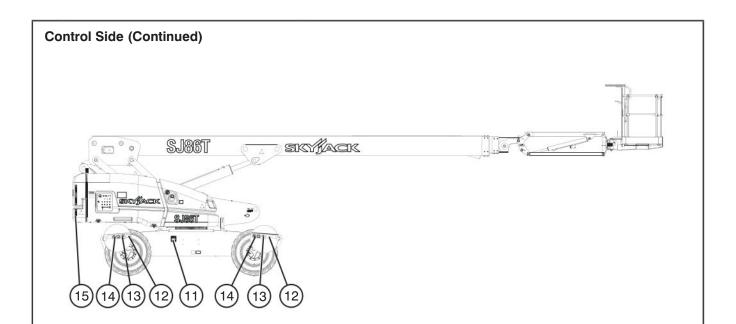
No.	Label Pictorial	Description
1	4,74	4x4 (If Equipped) Product identifier - 4 wheel drive
2		Warning - Do Not Alter Do not alter or disable limit switches or other safety devices.
3	This MCP man expansion of the Studenty address to in National Regulators Countries on Figs this about This (SCI) Made is extracted. Supplementary and reservation of the Studenty address to Countries. Made is serviced. Made is serviced.	Serial Plate* Product identification and specifications *Serial plate will vary, may not be as shown.



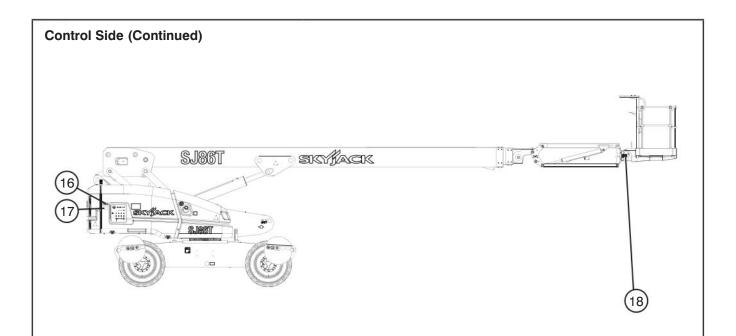
No.	Label Pictorial	Description
1		Lift Points Optional lifting points required. Only use these points for lifting.
2	SKYJACK	Skyjack Logo Skyjack
3	Ultra low sufur fuel only. Dissell, EN 590, ASTM D975	Diesel Use ultra low sulfur fuel only.
4		No Smoking Do not smoke near this location.
5	SJ86T	Model Number* Product Identifier *Model number will vary, may not be as shown.



No.	Label Pictorial	Description
6	THE REPORT OF THE PARTY OF THE	Body Crushing Hazard Danger - Body crushing hazard
7		Crushing Hazard Danger - Crushing hazard
8	SICYTOCIC	Tie Down Points Only use these points for tying down.
8a		Tie Down Points (If equipped) Only use these points for tying down.
9	3	Lift Points Only use these points for lifting.
10	Chance and implements in the Special Special State I state of the Special State I state of the Special State I state of the Special State I st	EWPA Clearance Requirements Clearance requirements for operating non-insulated mobile plant, including elevating work platforms near power lines.

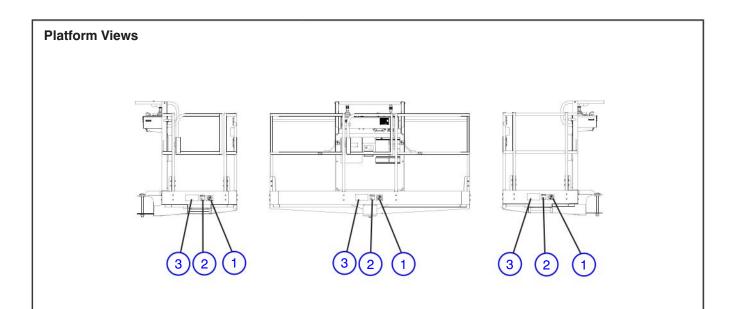


No.	Label Pictorial	Description
11	dB	Sound Power Level Guaranteed maximum sound power level
12		Foam-filled Tire Indicates foam-filled tire.
13	**** kg (b)	Wheel Load* Indicates rated wheel load. *Wheel load will vary over different MEWPs.
14		Wheel Specifications Refer to manual for wheel type, offset, pressure and torque.
15		Caution Tape Stripe Caution stripe



No.	Label Pictorial	Description
16	Model S.N	Annual Inspection Ensure that work platform has received annual inspection prior to operation.
17		Emergency Lowering Procedure Refer to Operating manual. 1. A) Ensure engine is off. B) 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. 4. Activate desired boom function to lower platform.
18		Tie Down Points Only use these points for tying down.

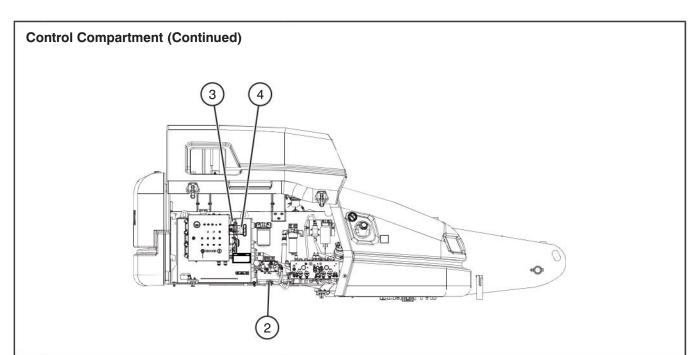
Labels



No.	Label Pictorial	Description
1		No Jewelry Caution - Do not wear jewelry.
2		Operator's Daily Inspection Refer to the Operating manual. Perform visual inspection and function tests at the beginning of each shift. Refer to Table 4.7 Operator's Daily Inspection Checklist.
3	N (lb) N (lb) N (lb) N (lb)	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.

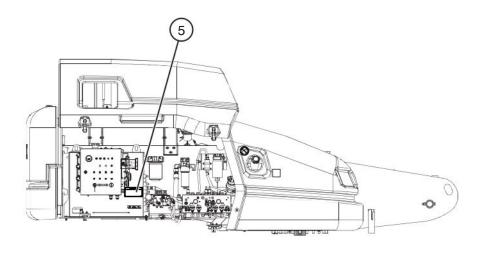
Control Compartment

No.	Label Pictorial	Description
1		Base Control Console Push "" breaker back in to reset. Select and hold "" to enable error blink code for engine control unit (ECU). Read "" operating manual. Select "" to rotate platform to the left or "" to rotate to the right. Select "" to move jib up or "o" to move jib down. Select "" to rotate turret to the left or "" to rotate to the right. Select "" to rotate turret to the left or "" to rotate to the right. Select "" to raise main boom or "o" to lower main boom. Select "" to extend fly boom or "o" to retract fly boom. Select "" to enable platform control console or "" to enable platform control console. Push "o" emergency stop to stop engine and disable controls. Push and hold "o" to start engine. Push and hold "o" to enable base control functions. With engine off, push and hold "o" to enable the emergency power unit for "o" emergency descent. Do not operate emergency power unit if platform capacity is exceeded "o" ""."

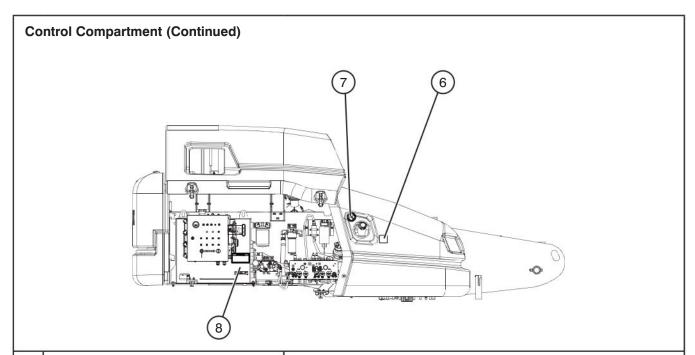


No.	Label Pictorial	Description	
2		Grease Points Maintenance Refer to service and maintenance manual "fully" for lubricating MEWP.	
3		Hydraulic Oil Replace hydraulic fluid with Shell Tellus T46 or approved alternate (see Table 4.2b). (Note: Cold weather starting temperatures can be improved with Skyjack options. Please consult your nearest Skyjack service center.)	
4		Hydraulic Oil Level Indicates minimum/maximum oil level.	

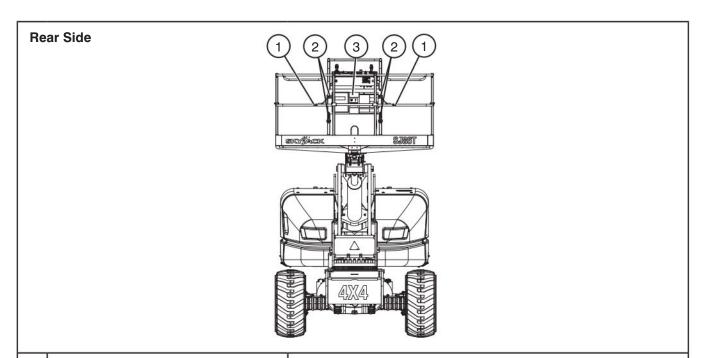
Control Compartment (Continued)



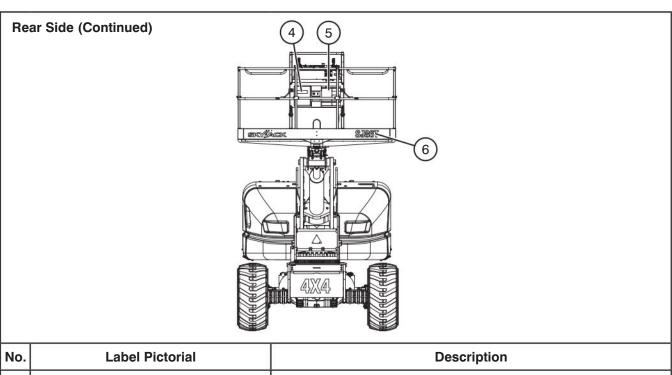
No.	No. Label Pictorial Description	
No.	Label Pictorial	Winching/Towing/Pushing Procedure Refer to Operating manual. 1. Block or chock wheels to prevent MEWP from rolling. 2. Turn main power disconnect switch to off position. At engine side: 3. Locate bypass valve (marked with yellow colour) on inboard side of drive pump. 4. Rotate bypass valve flat using pliers or 1/4" (7mm) wrench by 90 degrees (clockwise). At hydraulic tank side: 5. 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 2.5 Winching & Towing Procedure. 8. A) Remove blocks from wheels. B) Push/tow/winch to desired location.
		B) Push/tow/winch to desired location. 9. Block or chock wheels to prevent MEWP from rolling. At hydraulic tank side: 10. Reset brake by pulling out black knob. At engine side: 11. Close bypass valve by rotating 90 degrees
		(counterclockwise) to normal condition (flat is parallel to shaft axis).
		Before operation, ensure all blocks are removed from wheels.



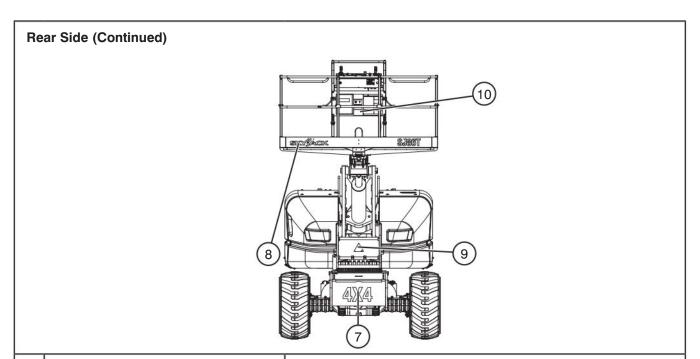
No.	Label Pictorial	Description	
6	Uttra low sulfur fuel only. Diesel, EN 590, ASTM D975	Diesel Use ultra low sulfur fuel only.	
7		No Smoking Do not smoke near this location.	
8	O AC	Connect AC Supply Connect AC supply here.	



No.	Label Pictorial	Description			
1		Warning - No Step No step warning			
2	× 1	Fall Protection Anchorage Anchor safety belt/harness tethers here. Rated for one (1) person per anchorage.			
3	N (lb) N (lb)	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.			

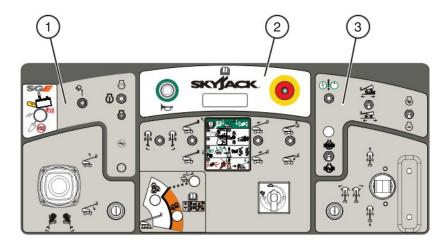


No.	Label Pictorial	Description		
4		Manual Box Indicates location of operating manual.		
5	A □ S S S S S S S S S S S S S S S S S S	Hazard Identification Refer to Section 1: Safety Rules. Read and understand outlined risks associated with this work platform prior to operation.		
6	SJ86T	Model Number* Product Identifier *Model number will vary, may not be as shown.		



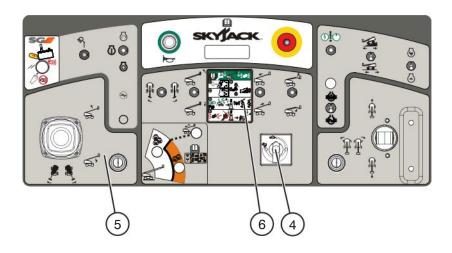
No.	Label Pictorial	Description			
7	4,24	4x4 (If Equipped) Product identifier - 4 wheel drive			
8	8 SKYJACK Skyjack				
Body Crushing Hazard Danger - Body crushing hazard					
10	Characters the physical control of the Opporting New Provided Holds: Print including (Control of the Print Control	EWPA Clearance Requirements Clearance requirements for operating non-insulated mobile plant, including elevating work platforms near power lines.			

Platform Control Console



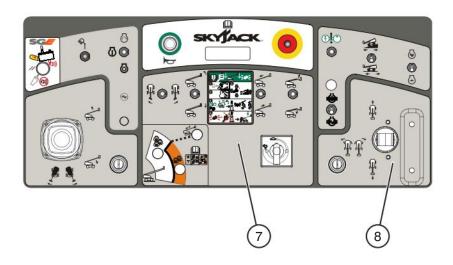
No.	Label Pictorial	Description	
1	SGE Reset (If Equipped)/Work Light (If Equipped)/State Engine/Generator (If Equipped) Select to reset SGE (if equipped). Select to enable work light (if equipped). Push and hold "o" to start engine and then return to position or select "o" to turn engine off. Select "o" to turn hydraulic generator on or "o" to turn		
2	SKYÍACK O	Emergency Stop/Horn Select ">" to sound horn. Read operating manual " ". Push " emergency stop to stop engine and disable controls.	
3		Engine Controls/Emergency Power Unit Select "** To enable emergency power unit. Select "** To enable emergen	

Platform Control Console Continued

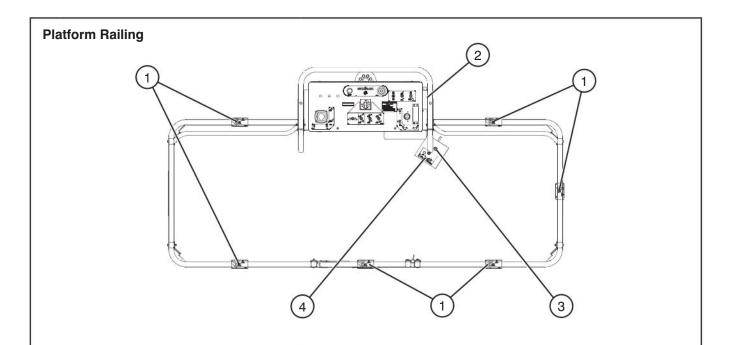


No.	Label Pictorial	Description		
4	i	Boom Speed Adjuster Dial Adjust dial to vary speed of fly boom extension/retraction, jib raising/ lowering and platform rotation movements		
5		Push and hold controller in this direction " to rotate turret to the left or " to rotate turret to the right. Push and hold the controller in this direction " to raise main boom or " to lower main boom.		
6		Emergency Lowering Procedure Refer to Operating manual. 1. Ensure engine is off. 2. Pull out "" emergency stop button. 3. Select "" on position from engine start/on/off switch and depress and hold footswitch. 4. Select "" from emergency power unit switch and activate desired boom function to lower platform. 5. If the platform is overloaded, emergency lowering is only available from the base controls.		

Platform Control Console (Continued)

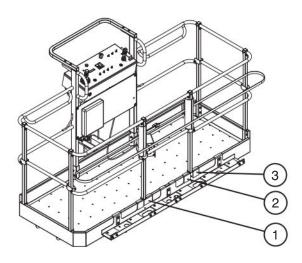


No.	Label Pictorial	Description	
7		Select "" to rotate platform to the left or "" to the right. Select "" to tilt platform up or "" to tilt platform down. Select "" to extend fly boom or "" to retract fly boom. Select "" to move jib up or "" to move jib down.	
8		Push and hold controller in this direction "I" to drive forward or "I" to drive backward. Push and hold controller in this direction "I" to steer left or "I" to steer right.	



No.	Label Pictorial	Description		
1		Crushing Hazard Danger - Crushing hazard		
2	O A AC	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.		

Optional Equipment/Attachments



No.	Label Pictorial	Description	
1	Passed coadite options derivate the capacity of the acret glatters. Most run adventible band dimensions are if it in it. It is in the capacity of the acret glatters. Most run adventible band dimensions are if it is in it. It is in the capacity of the acret glatters and passed on the capacity of the ca	Panel Cradle Capacity - Dual Load (Glazier Kit) Refer to Operating manual. Panel cradle option derates the capacity of the aerial platform. Do not use with any other platform option/attachment. This label overrides all rated work loads of this aerial platform.	
2	Use crity on lated models SJ40T	Panel Cradle Capacity (Glazier Kit) Indicates rated capacity of panel cradle.	
3	NO =	Panel Option Weight (Glazier Kit) Refer to Operating manual. Indicates rated weight of panel cradle.	

