MODELS | SJ 46AJ



Operating Manual

Articulating Boom Series (ANSI/CSA)

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SKYJACK

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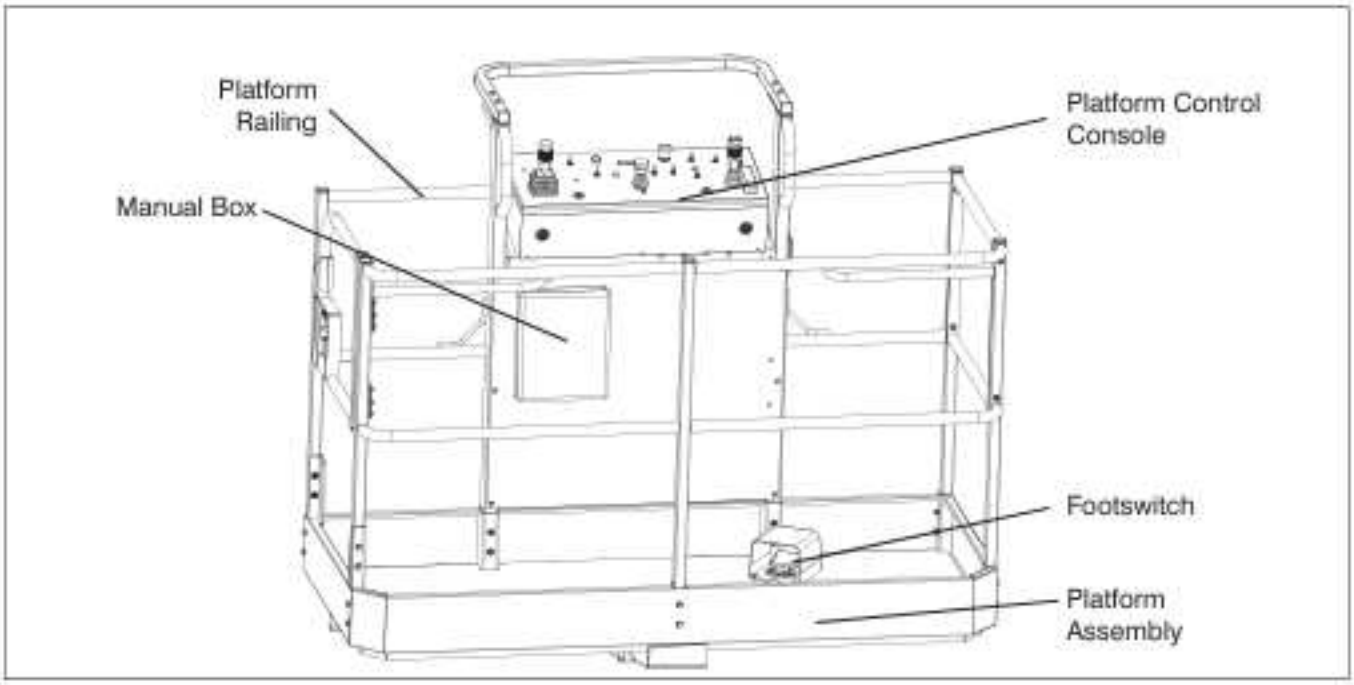
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2.8 Visual & Daily Maintenance Inspections

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 aerial platform until all malfunctions have been corrected.

WARNING

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

NOTE

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

2.8-1 Labels

Refer to the labels section in this manual and determine that all labels are in place and are legible.

2.8-2 Electrical

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

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

2.8-3 Limit Switches

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

2.8-4 Hydraulic

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

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
- underside of the turret
- underside of the base
- ground area under the aerial platform

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2.10-9 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 2.13 for the emergency lowering procedure.

NOTE
The emergency power unit has two-minute duty cycle.

CAUTION
Do not use emergency power unit continuously for more than two minutes.

2.10-10 To Activate Platform Control Console

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

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

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

4. Enter platform and close gate.
5. Attach body harness lanyards of each occupant to platform lanyard rings.
6. On platform control console, pull out "" emergency stop button.
7. Push and hold "" start position from start/on/off switch until engine starts.

WARNING
DO NOT over crank the starter. If engine fails to start after multiple attempts, consult "Troubleshooting Information," in the Service and Maintenance Manual.

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

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

WARNING
DO NOT drive or steer the aerial platform 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.

2.10-11 To Drive Forward or Reverse

WARNING
- When climbing high grades:
  - all booms must be fully stowed.
  - restrict platform capacity to 300 lb. (136 kg).

CAUTION
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. On platform control console, push and hold drive/steer controller in this direction "" to drive forward or "" to drive backward.
3. Release controller handle to stop.

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Table 2.2b Specifications and Features

MODEL				SJ 46AJ
Engine - Deutz	Engine Type			Deutz D2011L03i
	RPM Settings			1300 Low/1650/2000 High
	Gross Intermittent HP			48 hp (35.8 kW)
	Horsepower @ 2000 rpm (intermittent)			38.8 hp (28.9 kW)
	Fuel Type			Diesel
	Fuel Tank Capacity			17 gal. (64 L)
	Standard Oil Factory Fill	Ambient Temperature Limits	0°F to 115°F (- 18°C to +45°C)	SAE 15W-40 API CF/CG/CH-4
	Cold Lube Oil Option		- 20°F to 90°F (- 29°C to +32°C)	SAE 5W-30 API CF/CG/CH-4
	Arctic Lube Oil Option		- 40°F to 115°F (- 40°C to +45°C)	SAE 0W-40 API CF/CG/CH-4
	Apporved Alternates		-	See Engine Manual
	Lube Oil Sump Capacity			1.45 gal. (5.5 L)
Engine - GM	Engine Type			3.0L GM Dual Fuel
	RPM Settings			900 Low/1650/2000 High
	Gross Intermittent HP			70 hp (52.2 kW)
	Horsepower @ 2000 rpm (intermittent)			54.8 hp (40.8 kW)
	Fuel Type - Dual			Gasoline/Propane
	Fuel Tank Capacity			17 gal. (64 L)
	Standard Oil Factory Fill	Ambient Temperature Limits	- 40°F to 115°F (- 40°C to +45°C)	SAE 5W-30 API SL
	Apporved Alternates		-	See Engine Manual
	Lube Oil Capacity			1.19 gal. (4.5 L)
	Standard Coolant	Ambient Temperature Limits	- 20°F to 115°F (- 29°C to +45°C)	GM 50/50 Extended Life Coolant
	Arctic Coolant Option		- 40°F to 115°F (- 40°C to +45°C)	GM 60/40 Extended Life Coolant
	Coolant Capacity			3.0 gal. (11.4 L)
Hydraulic Oil	Recommended Oil	Type		Shell Tellus T46
		Operating and Oil Temperature Limits	Cold Start	Down to 11°F (-11°C)
			Ambient Operation	113°F (+45°C)
			Max. Oil Temp.	200°F(+93°C)
	Approved Alternates *(Note: Cold weather starting temperatures can be improved with Skyjack options. Please consult your nearest Skyjack service center.)*			Chevron Rykon MV
				Mobilfluid 424
				Esso Univis N46
	Hydraulic Tank Capacity			24 gal. (91 L)

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2.11 Refueling Procedure

This section provides the operator with the procedure on how to refuel the engine with regular fuel and install the propane cylinder.

IMPORTANT

Before using the aerial platform ensure there is enough fuel to finish the job.

⚠ WARNING

Follow all local and national regulations for propane handling.

⚠ WARNING

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

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

⚠ WARNING

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

2.11-1 Regular Fuel

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

Protection of Environment from Chemical Dangers

⚠ WARNING

Gasoline, diesel fuel, engine oil and hydraulic fluid are chemicals, which can contaminate the environment. If they are spilled during filling and reach the water, they can cause damage to the environment, e.g., death of fish. For such damage, the party responsible is liable! Therefore, gasoline, diesel fuel, engine oil or hydraulic fluid must not get into the sewage system, streams, rivers or other surface water. For that reason, immediately remove the dripped off or spilled gasoline, diesel fuel, engine oil or hydraulic fluid with appropriate means and dispose of these means according to the regulations.

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Table 2.6 Floor Loading Pressure

MODEL	Gross Aerial Platform Weight		Total Aerial Platform Load					
			Wheel		LCP		OUP	
	lb.	kg	lb.	kg	psi	kPa	psf	kPa
SJ 46AJ (Standard configuration)	15,230	6,908	7,775	3,527	108	745	219	10.5

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- Standard Configuration = 4WD + Oscillating Axle + 315/55 D20 Air Tires
- 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 val
- Foam tires option will add approximately 600 lb. (272 kg) to total aerial platform weight and 150 lb. (68 kg) to max wheel load. OUP will increase by 4% and LCP will increase by approx 11%.

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):

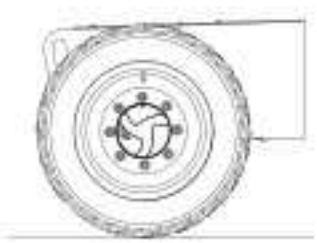
Foot Print Area = Tread Contact Area

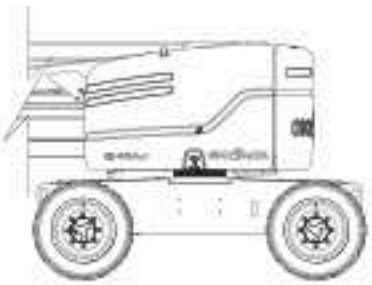
$$LCP = \frac{\text{Maximum Wheel Load}}{\text{Foot Print Area}}$$

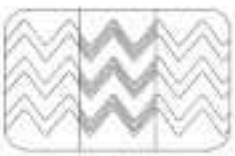
Overall Uniform Pressure (OUP):

Base Area = Length x Width

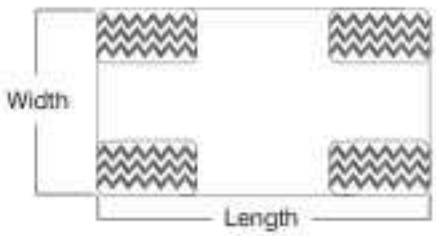
$$OUP = \frac{\text{Aerial Platform Weight + Capacity}}{\text{Base Area}}$$







Tread Contact Area



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 original Skyjack-approved type. Failure to operate with matched approved tires in good condition may result in death or serious injury.

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