

OPERATING MANUAL (ANSI/CSA)

ARTICULATING BOOMS

MODELS SJ46AJ

158020AF-A January 2018

SKYJACK

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3.0 Operation

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

3.1 General

In order for this aerial platform to be in good working condition, it is important that the operator meets the necessary qualifications and follow the maintenance and inspection schedule referred to in this section.

3.1-1 Operator Qualifications

- Only trained and authorized personnel shall be permitted to operate an aerial platform.
- Safe use of this aerial platform 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 aerial platform.
- 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 aerial platform in the presence of a qualified person.

3.1-2 Operator's Responsibility for Maintenance

⚠ WARNING

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

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

- The operator must be sure that the aerial platform 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 aerial platform.

3.1-3 Maintenance and Inspection Schedule

- The inspection points covered in Table 4.7 indicate the areas of the aerial platform to be maintained or inspected and at what intervals the maintenance and inspections are to be performed.
- The actual operating environment of the aerial platform may affect the maintenance schedule.

⚠ WARNING

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

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 aerial platform. 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.

NOTE

Inspection scheduling requirements may vary. Owners must comply with local standards and regulations.

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3.8-9 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 2.6 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.

3.8-10 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.

3.8-11 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 4.2b 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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3.9 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.

3.9-1 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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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 aerial platform and jobsite.
- **TURN** main power disconnect switch "◯" off when leaving the aerial platform unattended. Remove the key to prevent unauthorized use of the aerial platform.
- **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 aerial platform .



- **AVOID** entanglement with ropes, cords or hoses.



- **AVOID** falling. Stay within the boundaries of the guardrails.



- **DO NOT** raise the aerial platform or operate elevated in windy or gusty conditions that exceed the limits specified in Section 4, Table 4.5.



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



- **DO NOT** elevate the aerial platform 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 aerial platform.



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



- **If operation in areas with holes or drop-offs is absolutely necessary,** elevated driving shall not be allowed. Position the aerial platform 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 aerial platform 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% (2WD & 4WD). Boom elevated driving must only be done on firm, level surfaces.



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