
OPERATING MANUAL (ANSI/CSA)

# ARTICULATING BOOMS

## MODEL SJ63AJ

159186AD-A August 2014

SKYJACK

## Safety Precautions

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

### Fall Protection

All occupants of this aerial platform must wear personal fall protection equipment.

As per the ANSI A92.5-2006 standard, “Principal fall protection is provided by the guardrail system. The user shall direct and monitor the operator to ensure that all components of the guardrail system are in place. The user shall direct and monitor the occupants of the work platform to ensure that they wear a personal fall arrest system to protect against the potential effects of ejection or a fall restraint system to prevent a free fall.”

Fall restraint and fall arrest systems are defined within the ANSI A92.5 Manual of Responsibilities shipped with this aerial platform.

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.

CSA B354.4-02 requires the use of a fall arrest system, therefore Canadian users must use personal fall arrest protection as opposed to fall restraint.

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 aerial platform.

**WARNING**

**Entering and exiting the aerial platform should only be done using the three points of contact.**

- **Use only equipped access openings.**
- **Enter and exit only when the aerial platform 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 aerial platform 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 aerial platform or the ground at all times during entering and exiting.

**WARNING**

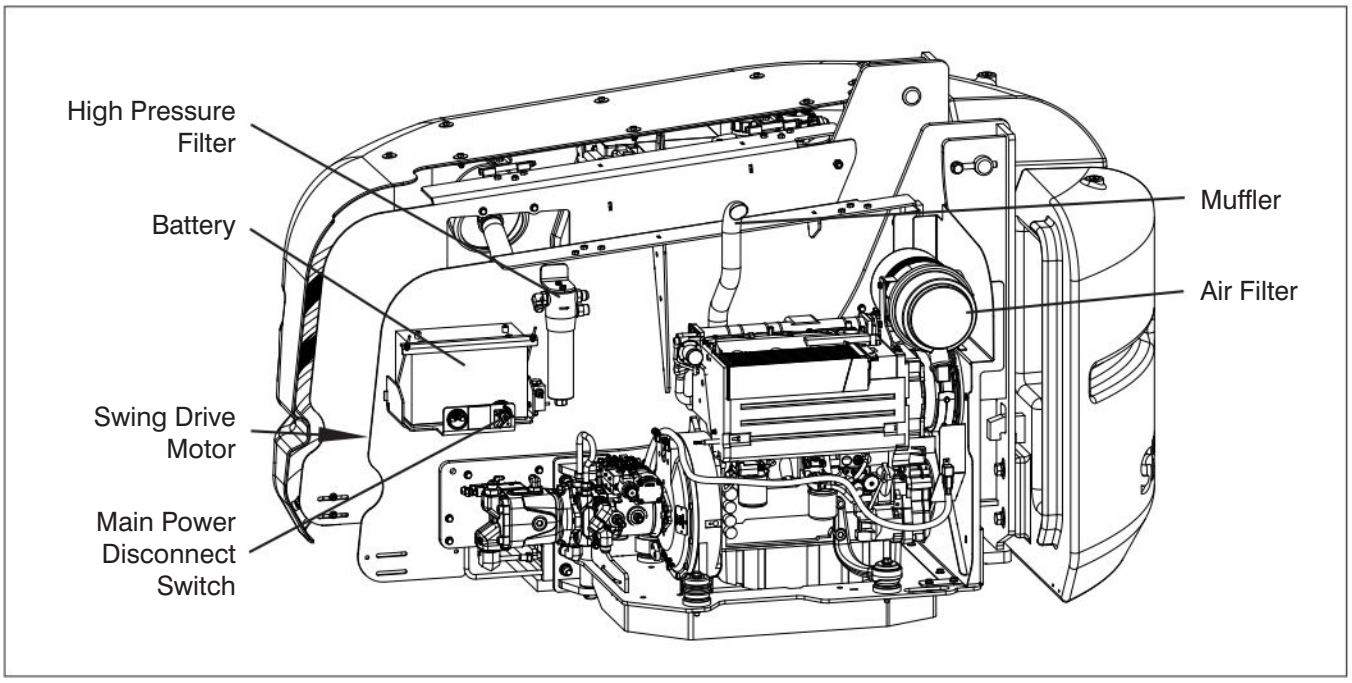
**An operator should not use any aerial platform that:**

- **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 aerial platform, to identify potential hazards in your work area.
- Be aware of moving equipment in the area. Take appropriate actions to avoid collision.




### 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 "◯" 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.

- **Battery**
  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**

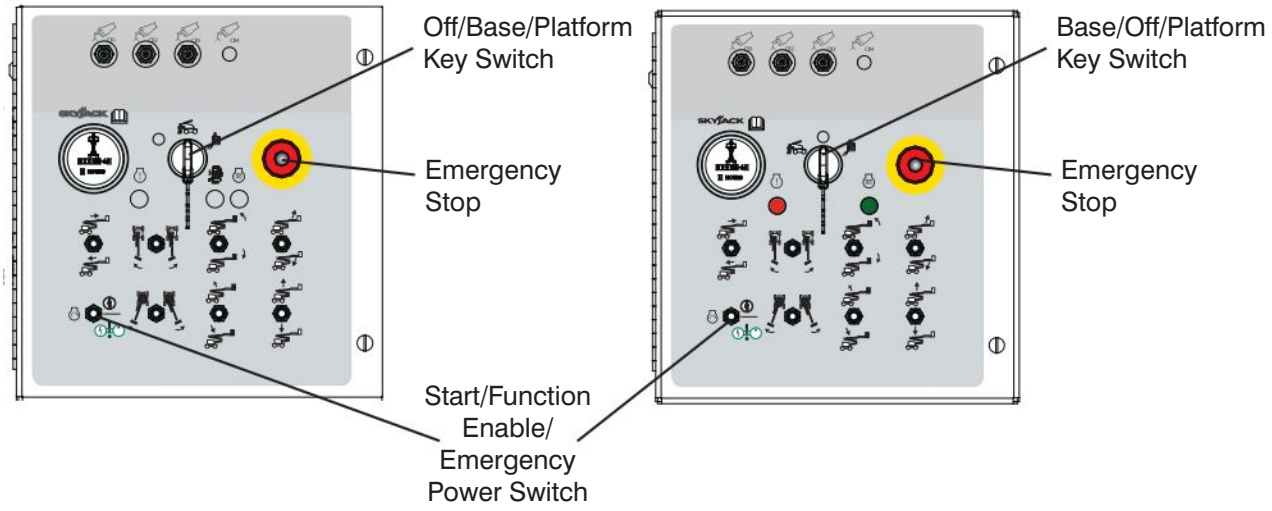
**Battery acid is extremely corrosive - Wear proper eye and facial protection as well as appropriate protective clothing. If contact occurs, immediately flush with cold water and seek medical attention.**

1. Check battery cases for damage.
2. Clean battery terminals and cable ends thoroughly with a terminal cleaning tool or wire brush.
3. Ensure all battery connections are tight.
4. If applicable, check battery fluid level. If plates are not covered by at least 1/2" (13 mm) 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 aerial platform.**

**Base Control Console**




**NOTE**

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

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

**NOTE**

The emergency power unit has a three-minute duty cycle.

- **Test Off/Base/Platform (Base/Off/Platform) Switch**

1. Ensure both "" emergency stop buttons are pulled out.
   **Result:** Glow plug light should turn on and turn off after a slight delay.
2. Start engine.
3. On base control console, turn off/base/platform (base/off/platform) key switch to "" off position.
   **Result:** Engine should shut down and aerial platform functions should not operate.
4. On base control console, turn off/base/platform (base/off/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.
6. On platform control console, select "" on position from engine enable switch.

## 2.5 Winching and Towing Procedure

This section provides the operator with procedure about winching and towing and on how to manually release brakes.

**WARNING**

**Ensure boom is in stowed position before winching or towing. Sudden motion could cause aerial platform to become unstable. Death or serious injury could result.**

**WARNING**

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

**WARNING**

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

**WARNING**

**Do not winch or tow aerial platform on grade steeper than 45%.**

**WARNING**

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

1. Before winching or towing aerial platform, fully retract, lower and position boom over rear drive wheels in line with direction of travel.

2. Manually release brakes using the following steps:

**NOTE**

Brakes must be manually disengaged for winching or towing.

**WARNING**

**Do not manually disengage brakes if aerial platform is on a slope.**

a) Ensure aerial platform is on level ground. Chock or block wheels to keep aerial platform from rolling.

b) Turn main power disconnect switch to "◯" off position.

**CAUTION**

**Do not use hydraulic power with brake disengaged.**

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

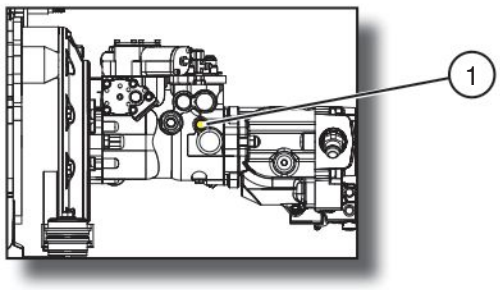



*Figure 2-7. Drive Bypass Valve*

**CAUTION**

**Do not release brakes before disengaging drive motor!**

d) Push in black brake valve plunger (item 2).

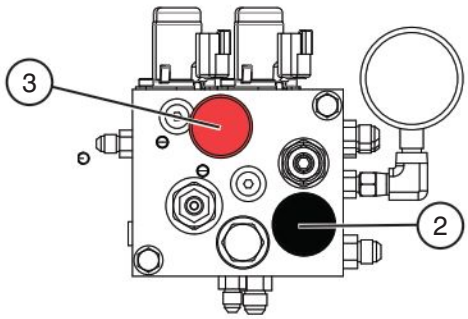



*Figure 2-8. Brake Manifold*

e) Actuate red hand pump (item 3) slowly by moving knob in and out until firm resistance is felt or until 300 psi/21 bar shows on the gauge (if equipped). Brake is now released.

## 3.7 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 aerial platform 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 aerial platform is put into service.

**IMPORTANT**

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

The operator should make a copy of the Operator's Checklist (see Table 4.8) 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 aerial platform is damaged or any unauthorized variation from factory-delivered condition is discovered, aerial platform must be tagged and removed from service.**

Repairs to the aerial platform may only be made by a qualified service technician. After repairs are completed, the operator must perform visual and daily maintenance inspections & function tests again.

Scheduled maintenance inspections shall only be performed by qualified service technician (see Table 4.7).

### 3. Cold Weather Hydraulic System Warm Up

**WARNING**

**Caution must be exercised when operating aerial platform in cold temperature. Cold temperature can affect the performance of the aerial platform. Braking response and other functions may delay.**

**CAUTION**

**Ensure hydraulic oil throughout system is warmed before operating aerial platform in low temperatures. Failure to heed this warning can lead to unexpected movements, product damage, death or serious injury.**

**Boom Functions:**

**WARNING**

**Be aware of overhead obstructions or other possible hazards around the aerial platform when lifting.**

- Run engine at low throttle.
- Raise, lower, extend and retract boom slowly several times until boom functions are at acceptable operating performance.

**Drive Functions:**

**WARNING**

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

- Run engine (if applicable) in low throttle.
- Drive aerial platform forward and backward slowly several times until braking response is in safe operating performance.

### 3.10-2 Locking the Turret

1. Ensure that turret is positioned so that turret transportation lock tube (item 1 - Figure 3-5) is aligned into one of two turret locking points in the turret rotation lock plate.

2. Pull out turret lock retaining pin (item 2 - Figure 3-5). Lower turret lock into locked position and reinsert turret lock retaining pin.

### 3.10-3 Lifting

**NOTE**

When it becomes necessary to lift aerial platform, it is very important that lifting devices are attached only to designated lifting points (refer to Figure 3-6).

**WARNING**

**Use chains of ample load capacity sufficient to withstand aerial platform weight.**

1. Place boom in stowed position centered between drive wheels. Lock turret using turret transportation locking pin (refer to Section 3.10-2) into the transport point (refer to Figure 3-5).

2. Turn main power disconnect switch to "◯" off position.

3. Remove all loose items from aerial platform.

4. Properly adjust rigging to prevent damage to aerial platform and so aerial platform remains level.

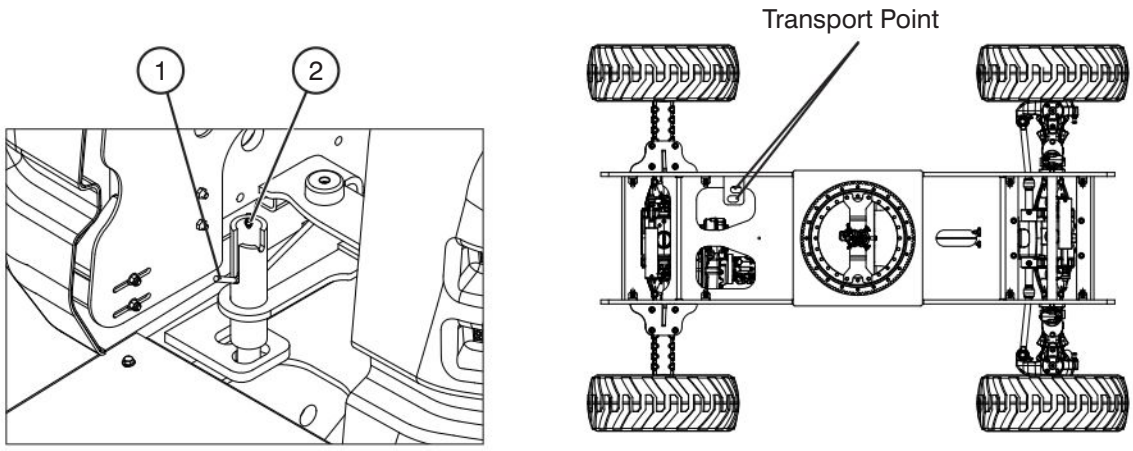



*Figure 3-5. Turret Transportation Lock & Locking Points*

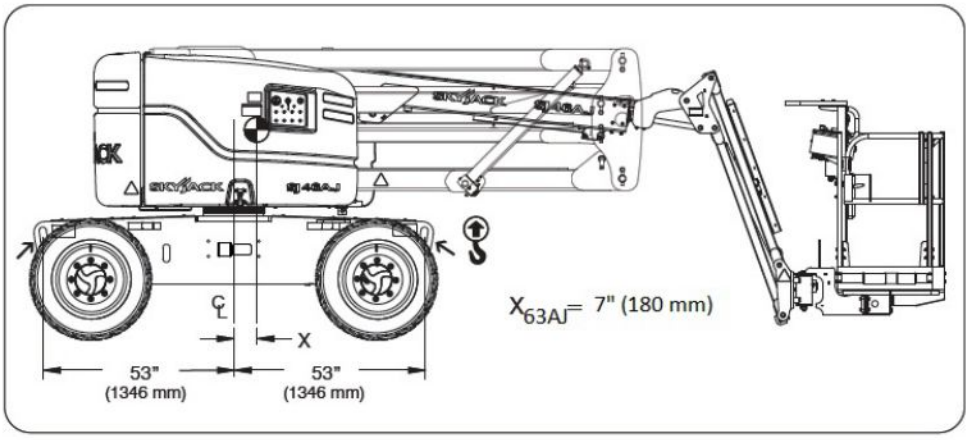



*Figure 3-6. Lifting Points*

*NOTE: Center of gravity varies with different options.*

## General Maintenance

Before attempting any repair work, disconnect battery by turning main power disconnect switch to "◯" off position. Preventive maintenance is the easiest and least expensive type of maintenance.

## Table 4.7 Maintenance and Inspection Schedule

| Frequency | Daily | 3 months or 150 hours | Yearly |
|---|---|---|---|
| **Visual and Daily Maintenance Inspections** | | | |
| **Labels** | A | | |
| **Electrical** | A | | |
| **Limit Switches** | A | | |
| **Hydraulic** | A | | |
| **Engine Compartment** | | | |
| Main Power Disconnect Switch | A | | |
| Battery | A | | |
| High Pressure Filter | A | | |
| Hydraulic Pumps | A | | |
| Muffler and Exhaust | A | | |
| Engine Pivot Tray | A | | |
| Engine Oil Level | A | | |
| Engine Air Filter | A | | |
| Fuel Leaks | A | | |
| **Control Compartment** | | | |
| Base Control Console | A | | |
| Hydraulic Tank | A | | |
| Hydraulic Oil | A | B*† | |
| Brake and Main Manifolds | A | | |
| Emergency Power Unit | A | | |
| Fuel Tank | A | | |
| Fuel Leaks | A | | |
| **Base** | | | |
| Turret Transportation Lock | A | | |
| Drive Axle | A | | |
| Oscillating Cylinder Assembly | A | | |
| Steer Cylinder Assembly | A | | |
| Tie Rod | A | | |
| Wheel/Tire Assembly | A | | |
| **Manuals** | A | | |
| **Platform Assembly** | A | | |
| **Platform Control Console** | A | | |
| **Rotary Actuator** | A | | |
| **Jib** | A | | |
| **Boom** | | | |
| Cylinders | A | | |
| Wear Pads | A | | |
| Hoses | A | | |
| Power Track | A | B*† | |
| **Special Options** | | | |
| Battery Warmer/Hydraulic Oil Heater (If Equipped) | A | | |
| Work Light (If Equipped) | A | | |
| Flashing Amber Light (If Equipped) | A | | |
| **Function Tests** | | | |
| **Test Main Power Disconnect Switch** | A | | |
| **Base Control Console** | | | |
| Test Base Emergency Stop Light | A | | |
| Test Base Emergency Stop | A | | |
| Test Function Enable Switch & All Boom Functions | A | | |
| Test Platform Self-leveling | A | | |
| Test Emergency Power | A | | |
| Test Base/Off/Platform Switch | A | | |
| **Platform Control Console** | | | |
| Test Platform Emergency Stop Light | A | | |
| Test Platform Emergency Stop | A | | |
| Test Footswitch | A | | |
| Test Engine Enable Switch | A | | |
| Test Steering | A | B*† | |
| Test Driving Function | A | | |
| Test Driving Speed | A | | |
| Test Emergency Power | A | | |
| Test Horn | A | | |
| Test Brakes | A | | |
| Test Manual Platform Leveling | A | | |
| Test Differential Lock Switch | A | | |
| Test Oscillating Axles | A | | |
| **Optional Equipment/Attachments** | | | |
| Test Work Light (If Equipped) | A | | |
| Test All Motion Alarm (If Equipped) | A | | |
| Test Flashing Amber Light (If Equipped) | A | | |
| Test Hydraulic Generator (If Equipped) | A | | |

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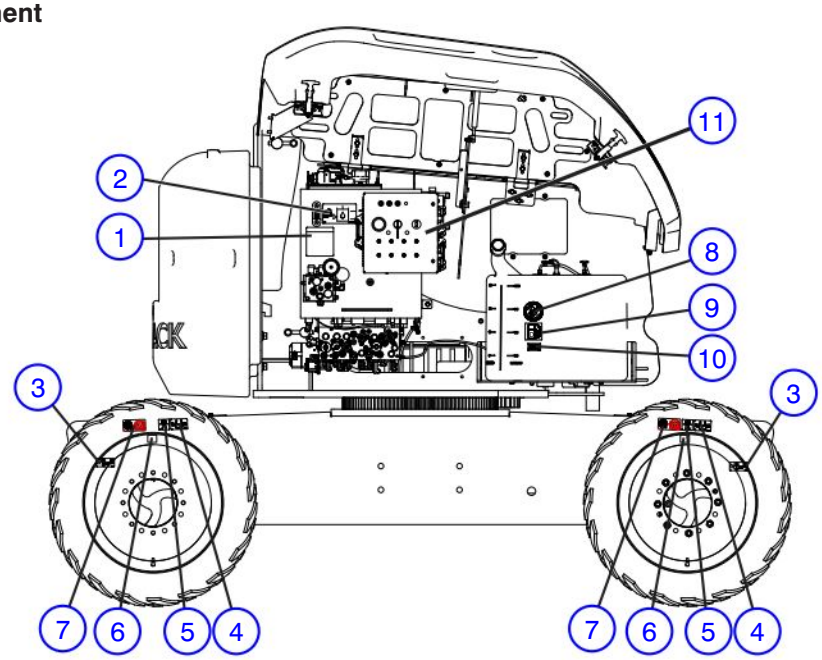
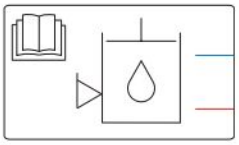
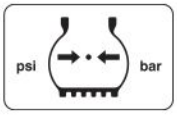
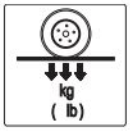
**A** - Perform Visual and Daily Maintenance Inspections & Functions Test. Refer to Section 2.3 and Section 2.4 of this manual.
**B** - Perform Scheduled Maintenance Inspection. Refer to Service & Maintenance manual.
*** -** Maintenance must be performed only by trained and competent personnel who are familiar with mechanical procedures.
**† -** Refer to Skyjack's website @ www.skyjack.com for latest service bulletins prior to performing quarterly or yearly inspection.

**WARNING**

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

**Control Compartment**




| No. | Label Pictorial | Description |
|---|---|---|
| 2 |  | **Hydraulic Oil Level**<br>Indicates minimum/maximum oil level. |
| 3 |  | **Lift and Tie Down Points**<br>Only use these points for lifting or tying down. |
| 4 |   | **Tire Pressure***<br>Indicates rated tire pressure.<br>*Tire pressure will vary, may not be as shown.<br><br>**Foam-filled Tire (If Equipped)**<br>Indicates foam-filled tire. |
| 5 |  | **Wheel Load***<br>Indicates rated wheel load.<br>*Wheel load will vary over different aerial platforms. |