3 OPERATION

The Model 4527A Articulating Boom Lift is equipped with multiple operator control stations. Equipment power and outrigger controls are located at ground level. Boom lift and rotation controls are located at ground level and on the work platform.

Before attempting boom lift operation, Operators should:

❑   Obtain, read and obey all safety precautions as indicated by manufacturer's recommendations and all federal, state and local regulations.

❑   Become familiar with the location and use of all controls.

❑   Verify that there are no overhead obstructions or live power sources in the work area that could interfere with the safe operation of the boom lift.

❑   Position the boom lift on a firm and level surface.

❑   Unhitch equipment trailer from the tow vehicle.

GROUND CONTROL STATION

The ground control station is used to operate outriggers and control boom motion. To access the ground control station, open the control panel access cover found on the turntable. Turn the key switch to the ground controls setting.
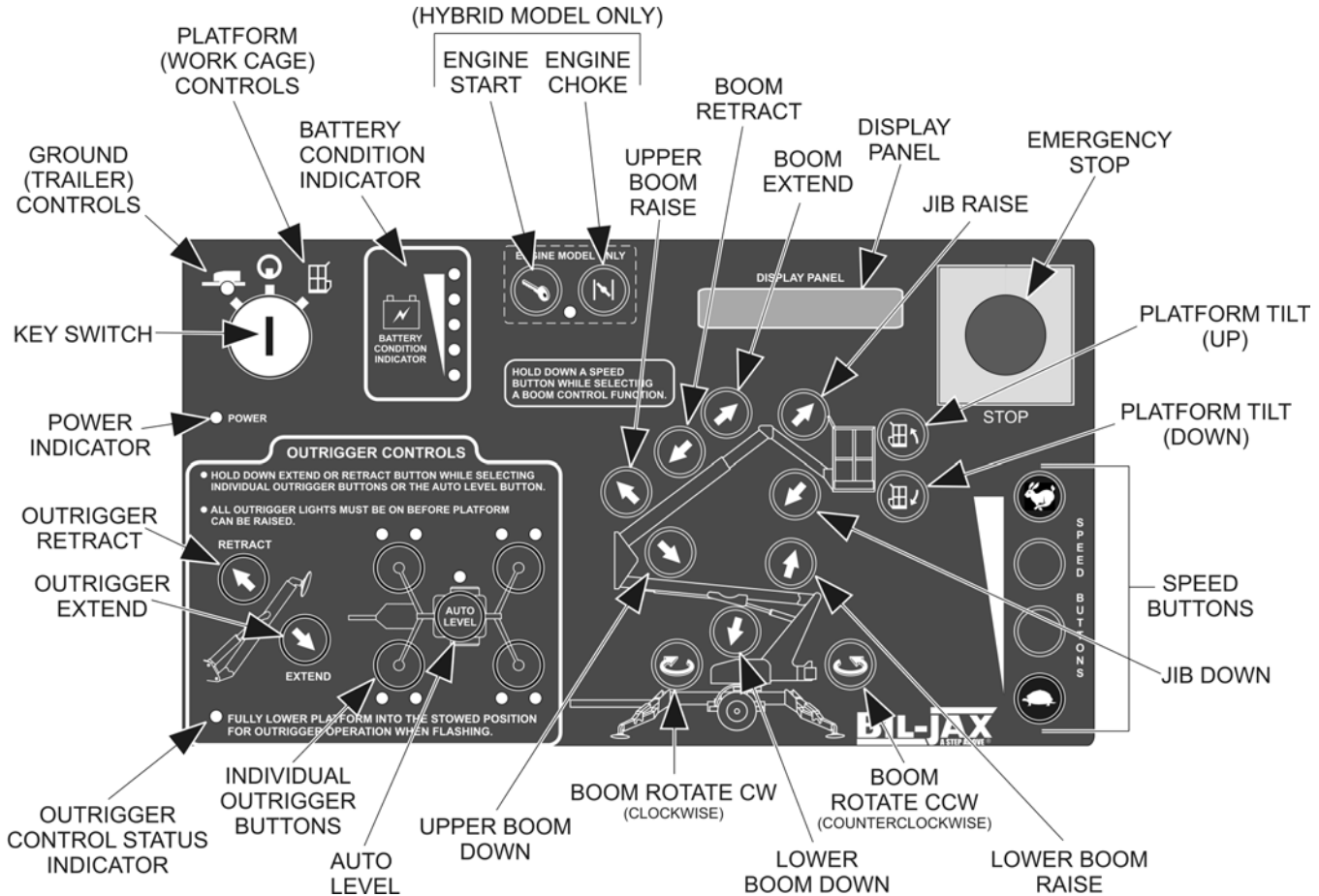

Figure 3-1. Ground Control Station.

The ground control station includes the following controls and Indicators. Refer to Figure 3-1 for control locations.

Key Switch

Turning the key switch to the PLATFORM (WORK CAGE) icon selects operation from the platform. Turning the key switch to the GROUND (TRAILER) icon selects operation from the ground control panel. The center (power off) position interrupts all electric and hydraulic power operations except emergency lowering. Removing the key protects against operation by unauthorized persons. The key may be removed with the key switch in any selected position.

Battery Condition Indicator

Indicator LEDs light up to indicate the level of charge remaining in the batteries. A lighted green LED indicates an adequate charge level. Lighted yellow LEDs indicate the need for charging soon. A lighted red LED warns that the battery charge level is low; boom operations should be halted until the batteries are recharged.

Engine Start and Choke (Hybrid Model only)

Start a cold engine by pressing the Engine START button while pressing and holding the CHOKE button. To start/restart a warm engine, press the START button only.

Display Panel

The DISPLAY PANEL is a lighted text window that displays the present operating status or an existing error condition when the key switch is on.

Emergency Stop Button

When pushed in, the emergency STOP button disconnects electrical power to the ground and platform control stations. The emergency STOP pushbutton should only be pressed to immediately stop all boom motion. To resume control, pull out the emergency STOP button.

Boom Extend/Retract Buttons

Pressing and holding a desired SPEED button and the BOOM EXTEND button at the same time extends the telescopic boom. Pressing and holding a desired SPEED button and the BOOM RETRACT button at the same time retracts the boom. Boom motion continues until the buttons are released or until the boom reaches a hard stop or a safe travel limit.

Boom Raise/Down Buttons

Pressing and holding a desired SPEED button and the LOWER BOOM RAISE or the UPPER BOOM RAISE button at the same time will raise the selected boom. Pressing a desired SPEED button and the LOWER BOOM DOWN or UPPER BOOM DOWN button at the same time will lower the selected boom. Boom motion continues until the buttons are released or until each boom reaches a hard stop or a safe travel limit.

Jib Raise/Down Buttons

Pressing and holding a desired SPEED button and the JIB RAISE button at the same time will raise the jib boom. Pressing a desired SPEED button and the JIB DOWN button at the same time will lower the jib boom. Boom motion continues until the buttons are released or until the jib boom reaches a hard stop or a safe travel limit.

Boom Rotation CW/CCW Buttons

Pressing and holding a desired SPEED button and the BOOM ROTATION CW (clockwise) or CCW (counterclockwise) button at the same time enables the boom to rotate in the direction selected. The boom will rotate through 700 degrees until the buttons are released or the stop is reached.

Speed Buttons

The SPEED buttons along the lower right side of the control panel must be pressed and held while selecting a boom function. Four speeds are available to control the positioning of the boom lift.

Outrigger Controls

For automatic outrigger extension/retraction: Select EXTEND or RETRACT outrigger button and the AUTO LEVEL button at the same time. To manually extend or retract the outriggers: Select EXTEND or RETRACT outrigger button and one of the OUTRIGGER buttons at the same time. The outrigger indicator LEDs light up when the outriggers are properly deployed and the boom weight is on the outriggers. Each of the outer outrigger LEDs indicates load is on the outrigger footpad. Each of the inner outrigger LEDs, when flashing, indicate that side is low and needs to be further raised for leveling. The Auto Level LED lights up and a buzzer sounds when the boom is level.

Platform Tilt Buttons

Press and hold any SPEED button and the desired PLATFORM TILT button at the same time to level the work platform (levels the platform only, not the boom lift).

PLATFORM CONTROL STATION

The platform control station is used to control boom motion. To access the platform control station, turn the key switch at the ground control station to the platform controls setting and enter the work cage.
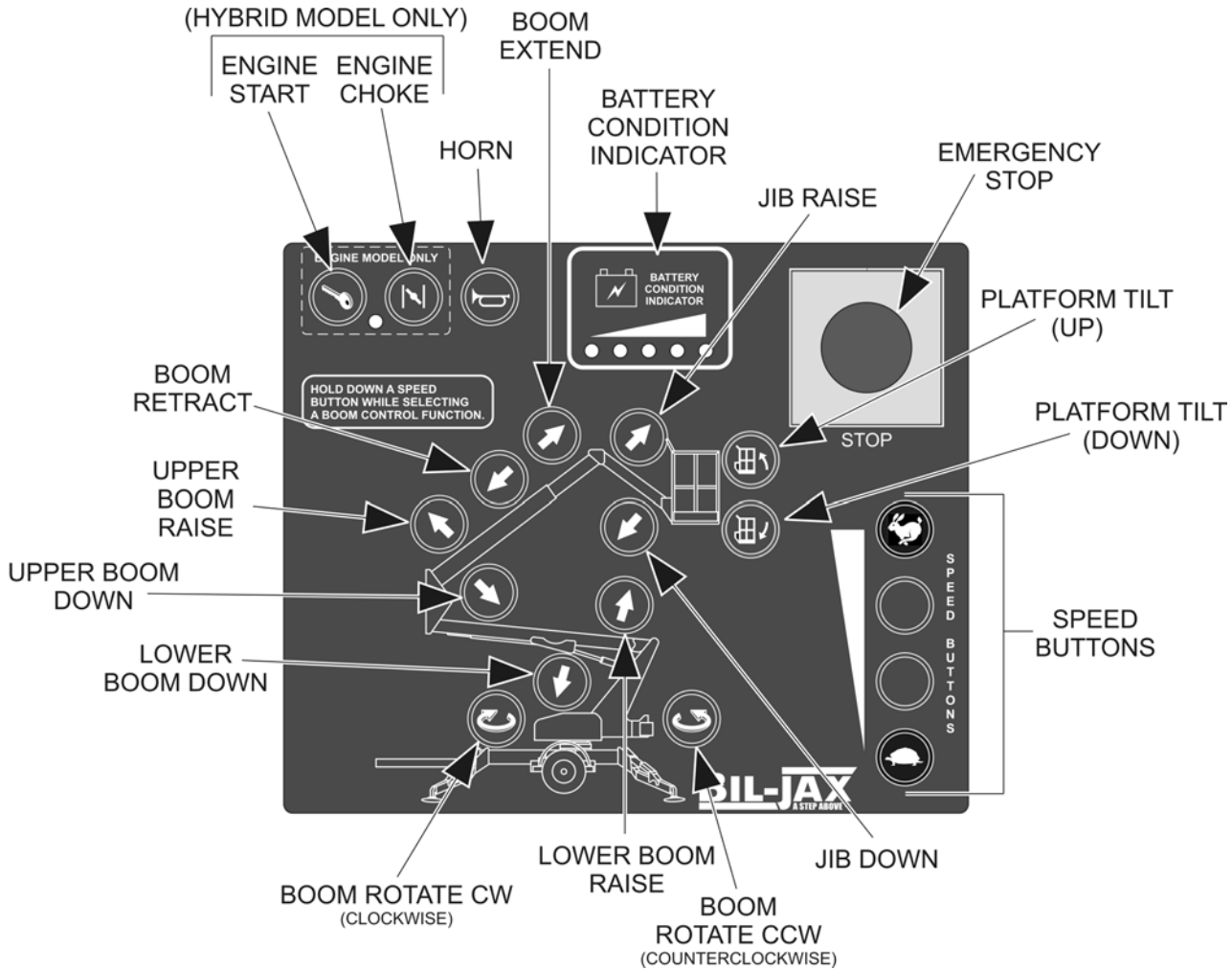

Figure 3-2. Platform Control Station

The platform control station includes the following controls and Indicators. Refer to Figure 3-2 for control locations.

Engine Start and Choke (Hybrid Model only)

Start a cold engine by pressing the CHOKE button, then press the engine START button to start the engine. To start/restart a warm engine, press the START button only.

Horn Button

Pressing the button will sound the horn. Use the HORN button to warn personnel in the area of a falling object hazard, impending boom motions, or the need for assistance.

Battery Condition Indicator

Indicator LEDs light up to indicate the level of charge remaining in the batteries. A lighted green LED indicates a good charge level. Lighted yellow LEDs indicate the need for charging soon. A lighted red LED warns that the battery charge level is low; boom operations should be halted until the batteries are recharged.

Emergency Stop Button

When pushed in, the emergency STOP button disconnects electrical power to the ground and platform control stations. The emergency STOP pushbutton should only be pressed to immediately stop all boom motion. To resume control, pull out the emergency STOP button.

Speed Buttons

The SPEED buttons along the lower right side of the control panel must be pressed and held while selecting boom functions. Four speeds are available to control the positioning of the boom lift.

Boom Rotation CW/CCW Buttons

Pressing and holding a desired SPEED button and the BOOM ROTATION CW or CCW button at the same time enables the boom to rotate in the direction selected. The boom will rotate through 700 degrees until the buttons are released or the stop is reached.

Boom Raise/Down Buttons

Pressing and holding a desired SPEED button and the LOWER BOOM RAISE or UPPER BOOM RAISE button at the same time will raise the selected boom. Pressing a desired SPEED button and the LOWER BOOM DOWN or UPPER BOOM DOWN button at the same time will lower the selected boom. Boom motion continues until the buttons are released or until each boom reaches a hard stop or a safe travel limit.

Boom Extend/Retract Buttons

Pressing and holding a desired SPEED button and the BOOM EXTEND button at the same time extends the telescopic boom. Pressing and holding a desired SPEED button and the BOOM RETRACT button at the same time retracts the boom. Boom motion continues until the buttons are released or until the boom reaches a hard stop or a safe travel limit.

Jib Raise/Down Buttons

Pressing and holding a desired SPEED button and the JIB RAISE button at the same time will raise the jib boom. Pressing a desired SPEED button and the JIB DOWN button at the same time will lower the jib boom. Boom motion continues until the buttons are released or until the jib boom reaches a hard stop or a safe travel limit.

Platform Tilt Buttons

Press and hold any SPEED button and the desired PLATFORM TILT button at the same time to level the work platform (levels the platform only, not the boom lift).

115 volt Outlet

The 115 Volt AC outlet is provided for running electrical power tools from the work platform. A connecting power cord must be plugged into a suitable power source. The power plug is located on the trailer frame, in front of the accessory equipment stowage plate. The outlet is rated for a 15-ampere load. Do not overload the accessory power circuit.

NORMAL OPERATING PROCEDURE

Perform the following procedures to operate the Bil-Jax Model 4527A Articulating Boom Lift.

❑ Read and obey all safety precautions and operating instructions, as well as all applicable portions of ANSI A92.2, reprinted in Section 6.

❑ Position the boom lift at the work area. Make sure the boom lift is on a firm and level surface and there are no potential hazards such as overhead obstructions or electrically charged conductors. Do not operate the boom lift if such hazards exist.

❑ Inspect the boom lift for damaged or worn parts. Repair or replace parts as necessary. Never operate a damaged boom lift.

❑ Apply the boom lift parking brake or chock the wheels.

❑ Lower the tongue jack and unhitch the boom lift from the tow vehicle.

⚠ WARNING

Failing to unhitch the boom lift before operation may lead to damage to equipment or tow vehicle and makes the boom lift unstable, which can cause personnel injury or death.

❑ Turn the key switch on the ground control station to operate ground controls. If power does not come on, make sure both emergency STOP buttons (ground and platform) are pulled out and the main power disconnect is plugged in.

❑ The control microprocessor will perform self-diagnostics to test the operating system. After several seconds, the DISPLAY PANEL window will read:

<div align="center">

**BIL – JAX
A STEP ABOVE**

</div>

❑ Verify that the control status indicator LED is lit. If the control status indicator LED is not lit or is flashing, the outrigger buttons will not work. A flashing control status LED indicates that one or more of the booms is raised and needs to be stowed. Refer to Figure 3-1 and Figure 3-3.

❑ Extend the outriggers manually or using the AUTO LEVEL button. When the boom is leveled properly, a buzzer will sound and two LEDs at each OUTRIGGER button and the LED at the AUTO LEVEL button will be lit.

Auto Level: Press and hold the EXTEND and AUTO LEVEL buttons at the same time.

Manual Level: Extend the two outriggers closest to the trailer coupler first. Lower each

pair of outriggers by pressing the EXTEND button and the two appropriate OUTRIGGER buttons at the same time.
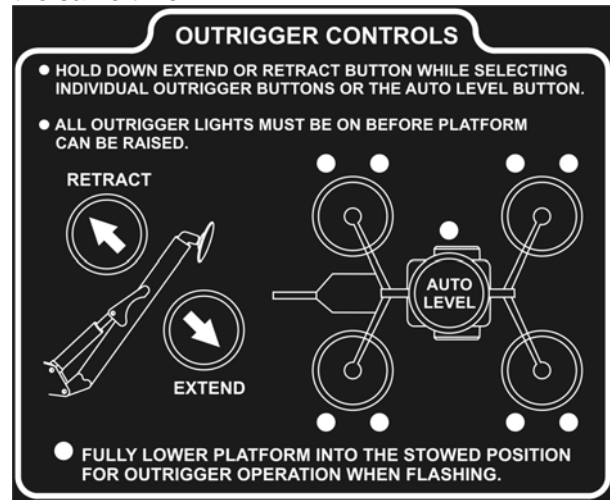

Figure 3-3. Outrigger Controls

NOTE: **The safety interlock system prevents all boom operations if the boom is not level or if one or more outriggers are not supporting the vehicle load.**

NOTE: **The Range of Motion Diagrams at the ground and platform control stations display the range of platform motion (safe operating zone) facing away from the trailer tongue. Verify that the operating zone is clear of obstructions through 700° of turntable rotation.**

❑ Verify that the auto level indicator LED is lit. If the auto level indicator is not lit, the boom may not be level.

❑ On both the upper and lower booms, pull the latch release on the boom travel latch, raise the latch handle and swing the latch U-bolt down. Refer to figure 3-4.
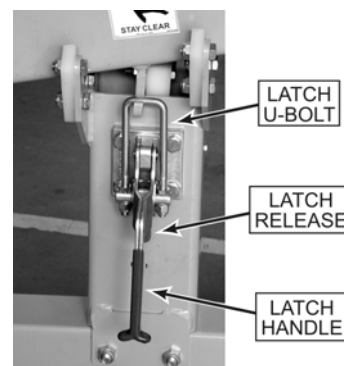

Figure 3-4. Boom Travel Latch

❑ Use the ground control panel to operate the boom lift functions. Raise, lower, extend and rotate the booms by pressing and holding the desired SPEED and function buttons at the same time. Become familiar with the location and function of all controls. Learn to smoothly start and stop all boom motions.

❑ Fully lower both booms onto the boom rest to position the platform for boarding. Turn the key switch to the platform control position.

❑ Raise the safety bar and enter the work platform. Put on the safety harness and attach the lanyard to the Fall Protection Attachment Point on the side of the platform support beam.

❑ Use the platform control panel to operate the boom lift functions. Raise, lower, extend and rotate the booms by pressing the desired SPEED and function buttons at the same time. Become familiar with the location and function of all controls. Learn to smoothly start and stop all boom motions.

❑ Should the platform become tilted out of the normal vertical axis, press and hold the desired SPEED button and one of the PLATFORM TILT buttons at the same time to adjust.

❑ Monitor the Battery Condition Indicator during operation and charge the batteries as necessary.

❑ Always fully retract, rotate and lower the booms to their stowed positions before exiting the platform.

❑ When all boom lift operations are complete, fully retract the telescoping boom extension. Center booms over the boom rest and fully lower all booms until seated in the stowed position for transport. Safety switches prevent outrigger retraction until all booms are completely lowered and stowed for transport.

❑ Unfasten the safety harness and exit platform.

❑ Engage the upper and lower boom travel latches.

❑ Turn the key switch to the ground controls position.

❑ Press and hold the outrigger RETRACT button and the AUTO LEVEL button until all outriggers are fully retracted to their upright positions. Inspect the area beneath lift and trailer for obstructions before retracting outriggers.

❑ Turn the key switch to the OFF position and remove key.