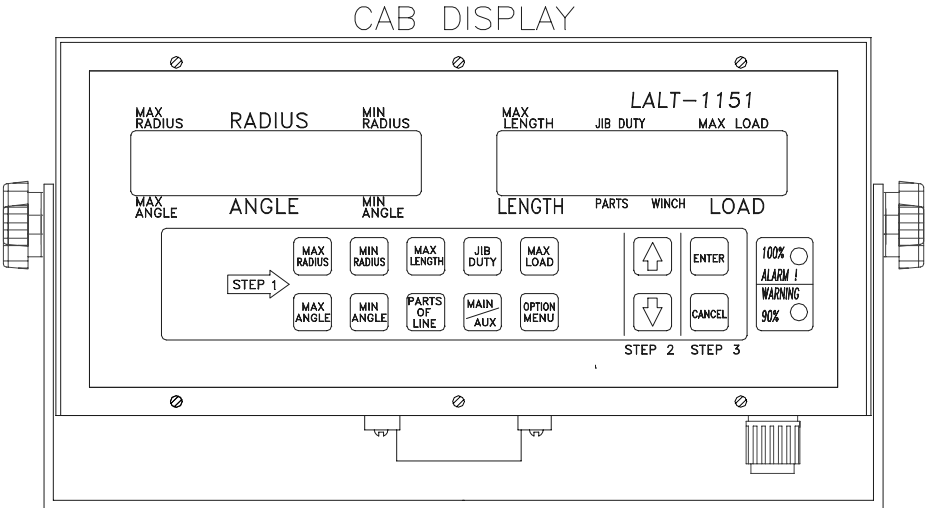


LALT™ -1151 SYSTEM for HYDRAULIC CRANES



OPERATOR'S MANUAL



WARNING

The LALT™ 1151 System for hydraulic cranes is designed to aid fully trained and experienced crane operators in safe crane operation. This System may not be used as a substitute for the usual safety practices and precautions required for the safe setup and operation of cranes.

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THE LALT™ -1151 SYSTEM FOR HYDRAULIC CRANES

The LALT™ -1151 System for hydraulic cranes provides a visual and audible warning system with automatic as well as operator-settable alarms designed to alert the operator to an approaching overload and/or a “Two-Block” condition during crane operation. The LALT™ -1151 Display Console provides the crane operator with a continuous, digital display of load, boom angle, boom length, and load radius as well as operator-settable limits for each.

REQUIREMENTS PRIOR TO SETUP

Accurate Calibration

Refer to the LALT™ -1151 SYSTEM for HYDRAULIC CRANES - Calibration Manual.

Configuration Data

- WINCH IN USE - MAIN/AUX.
- PARTS-OF-LINE reeved for each winch.
- MAXIMUM ALLOWABLE **LOAD** for each winch.

1 SYSTEM SETUP

Correct crane configuration data must be entered before the LALT™ System is used. For initial setup, complete all of the items (A-F) below. Thereafter, update appropriate items to match crane configuration changes.

A. REMOVING OLD LIMITS (Initial Setup Only)

Removes **all** previously set boom motion limits.

1. Press **OPTION MENU**.

OPTION
MENU

The display reads: "SET RIGGING MODE."

2. Press the **▲** arrow once.

The display reads: "CLEAR ALL LIMITS."

3. Press **ENTER**. All existing limits on *motion* are deleted.

B. SELECTING THE MAIN OR AUX. WINCH

1. Press **MAIN/AUX**. The letter "**M**" will alternate with the letter "**A**" under "WINCH" on the display.

MAIN
AUX

a) If the letter **M** is displayed, "PARTS-OF-LINE" and "MAXIMUM LOAD" are displayed for the **main hook**.

b) If the letter **A** is displayed, "PARTS-OF-LINE" and "MAXIMUM LOAD" are displayed for the **aux. hook**.

C. SETTING PARTS OF LINE

Main Winch

1. Press **MAIN/AUX**. Select **M** on the display.

PARTS
OF
LINE

2. Press **PARTS-OF-LINE**.

3. Press the **▲** and **▼** arrows to set **MAIN PARTS-OF-LINE**.

4. Press **ENTER**.

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Aux Winch

**PARTS
OF
LINE**

1. Press **MAIN/AUX**. Select **A** on the display.
2. Press **PARTS-OF-LINE**.
3. Press the **↑** and **↓** arrows to set **AUX. PARTS-OF-LINE**.
4. Press **ENTER**.

D. SETTING THE MAXIMUM LOAD

Main Winch

**MAX
LOAD**

1. Press **MAIN/AUX**. Select **M** on the display.
2. Press **MAX LOAD**.
3. Press the **↑** and **↓** arrows* to set **MAXIMUM MAIN HOOK LOAD**.
4. Press **ENTER**.

Aux Winch

**MAX
LOAD**

1. Press **MAIN/AUX**. Select **A** on the display.
2. Press **MAX LOAD**.
3. Press the **↑** and **↓** arrows to set **MAXIMUM AUX. HOOK LOAD**.
4. Press **ENTER**.

E. SETTING JIB DIMENSIONS (skip if no jib is installed)

**JIB
DUTY**

1. Press **JIB DUTY**. The display reads: "SET JIB LENGTH."
2. Press the **↑** and **↓** arrows to set **JIB LENGTH** (Fig.1, page 6).
3. Press **ENTER**. The display reads: "SET JIB OFFSET."
4. Press the **↑** and **↓** arrows to set **JIB OFFSET ANGLE**.
5. Press **ENTER**. The display reads: "SELECT JIB WINCH."

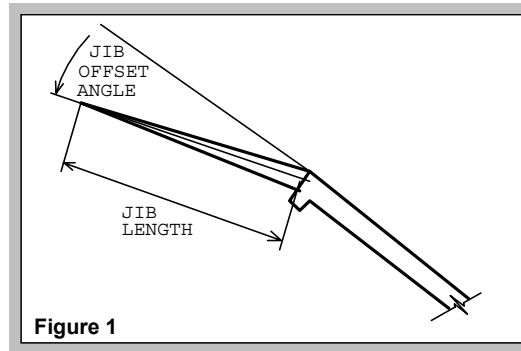
* The longer an **↑** or **↓** arrow is pressed, the faster the displayed numbers will change. When the arrow key is released, the flashing digit will be the digit that will change the next time an **↑** or **↓** arrow is pressed.

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6. Press **MAIN/AUX** to select **JIB WINCH**.
7. Press **ENTER**.
8. Press **MAIN/AUX** to select the **CORRECT WINCH** for lifting off the jib point. (The jib is selected when "**YES**" appears below the words "**JIB DUTY**." The displayed radius will increase to indicate the **JIB POINT RADIUS**.)

F. REMOVING A JIB

1. Press **MAIN/AUX** to select the current winch for lifting off the jib point.
2. Press **JIB DUTY**. (The word "**YES**," indicating the presence of a jib, will disappear and the **RADIUS** will revert to the main boom point radius.)
3. Press **MAIN/AUX** to select the correct winch for lifting off the main boom point.



2 SYSTEM OPERATION

A. NORMAL DATA DISPLAYS

- **RADIUS** for Main or Jib
- Boom **ANGLE**
- Boom **LENGTH**
- **JIB DUTY** ("YES" or "NO")
- **PARTS-of-LINE** for selected Winch

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- **WINCH** Selection ("M" = Main & "A" = **AUX**)
- **MAX LOAD** limit setting for selected Winch
- **HOOK LOAD** for selected Winch

B. ALARM AND LIMIT FUNCTIONS*

- Warning Messages
- Yellow 90% Warning Light
- Intermittent Horn
- Red 100% Warning Light
- Continuous Horn
- Motion Cut Signal to activate crane motion limiting valves

*A complete table of Alarm and Limit functions can be found on the inside back cover of this manual.

C. ALARM TESTS

Press and hold **ENTER** for 6 seconds when **not** in any function or menu. All alarms will activate.

D. CANCEL ALARMS

When not in any menu or performing any System function:

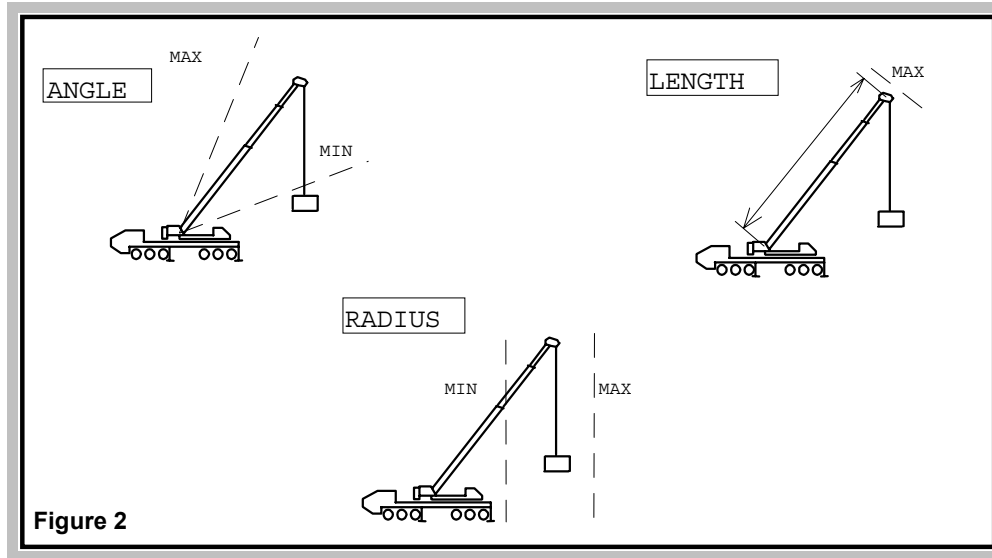
1. Press **CANCEL** to silence alarms.
2. Hold down **CANCEL** for 6 seconds to bypass motion cut relays.
3. Press **CANCEL** to restore normal alarm functions.

NOTE: If a new alarm condition occurs while alarms are deactivated, the System will automatically restore normal alarm functions.

E. OPERATOR SETTABLE LIMITS

MAXIMUM LOAD and the **LIMITS**, shown in Figure 2 on the following page, can be set by the operator.

Settable Boom Motion Limits



LIMIT SELECTION KEYS



1. SETTING LIMITS

There are two alternate procedures for setting boom motion limits.

Procedure One

1. Press any **LIMIT SELECTION KEY**.
2. Press **↑** and **↓** arrows to set desired limit.

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3. Press **ENTER**.

Procedure Two

1. Move boom to desired limit position
(actual angle, length, and radius will be displayed).
2. Press the appropriate **LIMIT SELECTION KEY**.
3. Press **CANCEL** to clear an old value.
4. Press the appropriate **LIMIT SELECTION KEY**.
5. Press **ENTER**. Alarms will activate.
6. Press **CANCEL** to silence alarms.
7. Move boom out of limits position.

2. REMOVING INDIVIDUAL SET LIMITS

1. Press a **LIMIT SELECTION KEY**.
2. Press **CANCEL**.

3 OTHER FUNCTIONS

Access selections in the **OPTION MENU** by pressing the **OPTION MENU** key first and then using the **↑** and **↓** arrows to scroll through the Options. Once the desired selection appears, press **ENTER** to start the routine.

OPTION MENU

A. RIGGING MODE

This mode completely disables all alarms, warnings, and motion cut signals for rigging or transporting the crane around the job site.

1. Press **OPTION MENU**. The display reads: "SET RIGGING MODE."
2. Press **ENTER**. The display reads: "RIGGING MODE! ALARMS DISABLED."

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3. Press **CANCEL** to exit **RIGGING MODE**.

B. CLEAR ALL LIMITS

This mode removes all operator-settable boom motion limits.

1. Press **OPTION MENU**. The display reads: "SET RIGGING MODE."
2. Press the **↑** arrow once. The display reads: "CLEAR ALL LIMITS."
3. Press **ENTER**. All **LIMITS** except **MAXIMUM LOAD** will be replaced by "- - - -."

C. DISPLAY INPUTS

This Mode is a diagnostic tool that shows unprocessed data input from the sensors to the display. A sensor problem can be isolated by looking at this information.

1. Press **OPTION MENU**. The display reads: "RIGGING MODE."
2. Press **↑** arrow twice. The display reads: "DISPLAY INPUTS."
3. Press **ENTER**. The first input group is displayed.
4. Press **ENTER**. The second input group is displayed.
5. Press **ENTER** to exit the routine.

D. CALIBRATION MODE

DO NOT ENTER CALIBRATION MODE. Calibration is discussed in the Calibration Manual.

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4 TABLE OF SYSTEM ALARM FUNCTIONS

Settable limits for angle, length, and radius are not connected to the motion cut system.

Questions should be directed to the Service Department at the number below.

SYSTEM ALARM FUNCTIONS						
Alarm Condition	Alarm Level	Yellow Light	Red Light	Warning Horn	Display Flashes	Motion Cut
Two-Block	—	—	ON	continuous	!!WARNING!! TWO BLOCK	active
MAX Linepull	90%	ON	—	intermittent	!PULL!	—
	100%	ON	ON	continuous	!!WARNING!! MAX(mn/aux) LINEPULL	active
MAX Load	90%	ON	—	intermittent	!!!	—
	100%	ON	ON	continuous	!!WARNING!! OVERLOAD (MAIN/AUX)	active
MAX Radius	90%	ON	—	intermittent	!!!	—
	100%	ON	ON	continuous	!!WARNING!!	active
MIN Radius	90%	ON	—	intermittent	!!!	—
	100%	ON	ON	continuous	!!WARNING!! MIN RADIUS	—
MAX & MIN Angle	90%	ON	—	intermittent	!!!	—
	100%	ON	ON	continuous	!!WARNING!! (MAX/MIN) ANGLE	—
MAX Length	90%	ON	—	intermittent	!!!	—
	100%	ON	ON	continuous	!!WARNING!! MAX LENGTH	—



1918 East Glenwood Place
Santa Ana, CA 92705
Telephone: (714) 259-9702
Fax: (714) 259-7626