i3500 DISPLAY BOX OVERVIEW

WARNING LIGHTS

INTERNAL BUZZER

GRAPHICAL DISPLAY

OPERATING BUTTONS
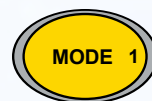
OPERATING BUTTONS PRESENTATION

MODE BUTTON : Shows system's modes. Press this button to choose one of these operating modes:
- Normal mode
- Limits Setting or Range Limiting mode
- System Set Up mode
- Diagnostic mode
- Calibration mode (password protected).

HOIST / SCROLL UP BUTTON : Shows hoist menu for selection of the hoist currently in use. Also used to scroll up in menus or increase editable values.

PARTS / SCROLL DOWN BUTTON : Shows parts of line (falls) menu for selection of the number of parts currently in use. Also used to scroll down in menus or decrease modifiable values.

SELECT BUTTON : Used to select a highlighted item in a menu. In normal mode, use this button to select the information displayed in one of the pull down menus.

ESCAPE BUTTON : Used to close a menu or cancel the modification of a value. Push it several times to return to normal mode.

HELP BUTTON : This button will show the problem source when a fault is detected by the system. Push it to see a description of the problem.

OPERATING BUTTONS PRESENTATION

DUTY 7

DUTY BUTTON : Shows the menu for the selection of the duty by number or by crane configuration. Press this button to enable the selection of crane parameters like the boom length, the head type, and the counterweight.

INFO 8

INFO BUTTON : Shows all the information regarding the current crane configuration. Push it a second time to access the operating system's information screen and a third time to see the data logger screen (option)..

BYPASS / RIG 9

BYPASS / RIGGING BUTTON : Press and hold this button to momentarily override a lock-out (15 sec. max). Also used to enter the rigging mode if the boom angle is under the boom angle for rigging set in calibration.

TARE 10

TARE BUTTON : Toggles the load display between the actual load and the tare load.
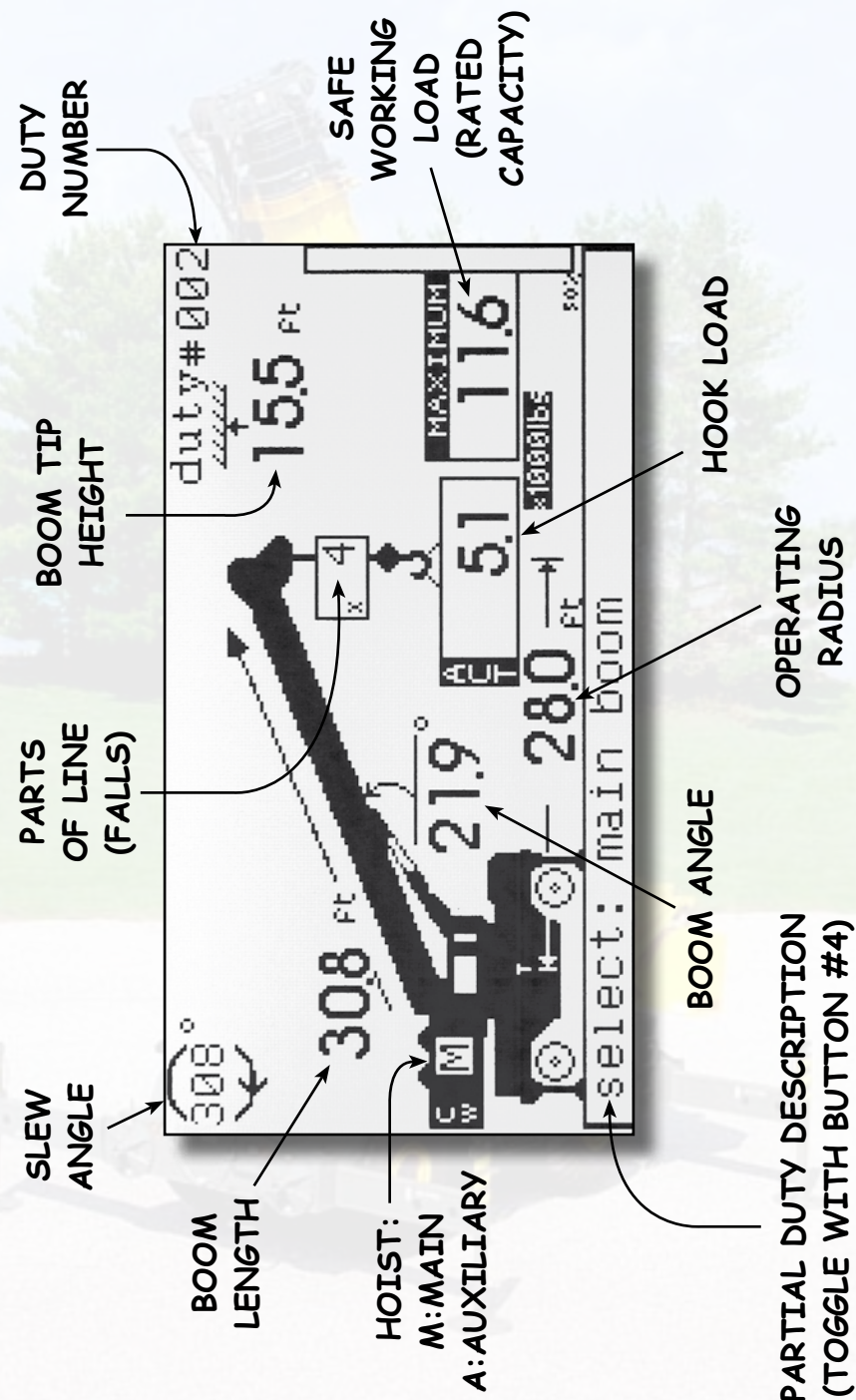

BYPASS / RIG 9

+

TARE 10

At any time during normal working, press buttons #9 and #10 simultaneously to check the operation of the warnings without the need to lift a load.

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i3500 NORMAL MODE DISPLAY

- DUTY NUMBER
- SAFE WORKING LOAD (RATED CAPACITY)
- BOOM TIP HEIGHT
- HOOK LOAD
- PARTS OF LINE (FALLS)
- OPERATING RADIUS
- BOOM ANGLE
- SLEW ANGLE
- BOOM LENGTH
- HOIST: M:MAIN A:AUXILIARY
- PARTIAL DUTY DESCRIPTION (TOGGLE WITH BUTTON #4)

Display values: duty#002, 15.5 ft, MAXIMUM 11.6, 1000lbs, 4, 3, 51, 28.0 ft, 21.9, 308 ft, 308°, select: main boom
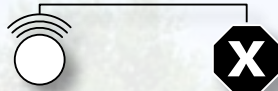
WARNING LIGHTS AND INDICATORS

Approach Warning (Yellow Light)
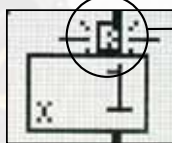
Overload Warning (Red Light)

Motion Cut (Red Light)

Preset Limit(s) Reached

Two-Block Condition Detected

Rated Capacity Limited by the Hoist Rope

The approach warning light blinks when the load on the hook is between 85% and 99.9% of the rated capacity. This is accompanied by an audible warning device that is fitted inside the display unit. This light (yellow in color) will also flash on and off if you are approaching within 5 units (feet, meters or degrees) of a predetermined limit (set in the limits setting mode).

Operate with caution! The crane is working near its maximum operating capacity.

The overload warning light (red in color) illuminates at or above 100% of the rated capacity. This light will also turn on if you are reaching a predetermined limit (set in the limits setting mode).

DANGER **Danger! The crane's maximum capacity has been reached or exceeded.**

The motion cut warning light (red in color) illuminates at or above 100.1% of the rated capacity. This is usually associated with, for example, booming down, telescoping out or hoisting up. The exact operation is specific to the crane model.

DANGER **Danger! The crane has exceeded safe operational ratings and is now in an unsafe condition. Hoist up, telescope out and boom down functions will be stopped if a motion cut solenoid is connected to the system.**
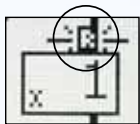
The Rope Limit indicator appears just above the number of parts of line on the i3500 lcd screen. This indicates that the maximum load is limited by rated strength and the number of parts of line of the hoist rope. Increasing the number of falls (parts of line) reeved and set on the display is normally required to alleviate a rope limit.

The Two-Block condition indicator appears near the crane boom tip on the i3500 lcd screen when such a condition is detected by the system. This may block the hoist function, depending on crane model and/or on options fitted on the machine.

This indicator appears on the top-left corner of the i3500 lcd screen as soon as at least one preset limt is active on the system. This is not a warning! It is just there to remind you that an angle, radius or height limit has been set in the limits setting mode.
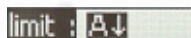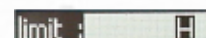
This indicator appears on the screen when a preset minimum angle limit has been reached or is about to be reached. If you are approaching within 5 degrees of a predetermined minimum angle limit, this indicator will appear on the screen, the approach warning light will blink and the internal buzzer will sound on and off. If you have reached a predetermined minimum angle limit, the overload warning light will operate and the buzzer will sound continuously.
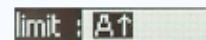
This indicator appears on the screen when a preset maximum angle limit has been reached or is about to be reached. If you are approaching within 5 degrees of a predetermined maximum angle limit, this indicator will appear on the screen, the approach warning light will blink and the internal buzzer will sound on and off. If you have reached a predetermined maximum angle limit, the overload warning light will operate and the buzzer will sound continuously.
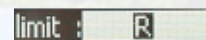
This indicator appears on the screen when a preset maximum radius limit has been reached or is about to be reached. If you are approaching within 2 units (feet or meters) of a predetermined maximum radius limit, this indicator will appear on the screen, the approach warning light will blink and the internal buzzer will sound on and off. If you have reached a predetermined maximum radius limit, the overload warning light will operate and the buzzer will sound continuously.

This indicator appears on the screen when a preset maximum height limit has been reached or is about to be reached. If you are approaching within 2 units (feet or meters) of a predetermined maximum height limit, this indicator will appear on the screen, the approach warning light will blink and the internal buzzer will sound on and off. If you have reached a predetermined maximum height limit, the overload warning light will operate and the buzzer will sound continuously.

POWER ON

Switch on the electrical supply (ie. crane key switch) to the i3500 system. The indicator now performs a «self test» during which time (approximately 10 seconds) the audible alarm will sound, the approach, overload and motion cut lights will illuminate and the display will show the Wylie's logo on the screen. Subsequently, the indicator goes in the normal operating mode as shown in page 4 "i3500 normal mode display" of this manual, the normal mode displays the hook load, the rated capacity, the radius, the boom angle, the hoist used, the parts of line, etc.

SYSTEM CONFIGURATION

In order to have the proper rated capacity and radius, the system must be configured properly. Failure to configure the system properly can cause the crane to break or tip and result in injury or death. Failure to configure properly may also cause a zero capacity if no chart is found to match the configuration set by the operator.

The operator must verify the crane configurations for each available hoist every time he/she enters the crane and every time the crane is rigged. Each hoist has its own configuration set-up in memory. Simply by changing the hoist from main to auxiliary, the configuration and number of parts of line will change. Therefore, the operator must select each hoist and verify the configurations and number of parts of line.

The system configuration is done with the following three buttons:

HOIST 2 — **Used for hoist selection**

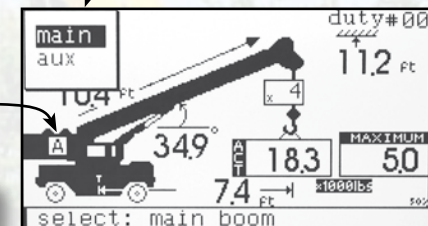**PARTS 3** — **Used for parts of line selection**

DUTY 7 — **Used for selection of other important parameters such as: Jib Selection, Boomlength, head type, outriggers etc.**

HOIST SELECTION

HOIST 2 This button allows the operator to select the hoist used. The operator can see the hoist selected on the i3000 screen near the boom base on the crane drawing.

Hoist Selection Menu

main
aux

duty#004
11.2 ft
x 4
34.9°
18.3
MAXIMUM 5.0
7.4 ft
x1000lbs
select: main boom
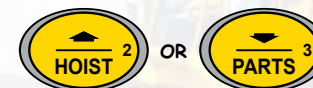
M = Main Hoist
A = Auxiliary Hoist
1 = Whip 1
2 = Whip 2

To change the hoist selection:

1- Push the HOIST button (#2) to display the hoist selection menu.

HOIST 2

2- Scroll up or down with buttons #2 and #3 to highlight the desired hoist.

HOIST 2 OR **PARTS 3**

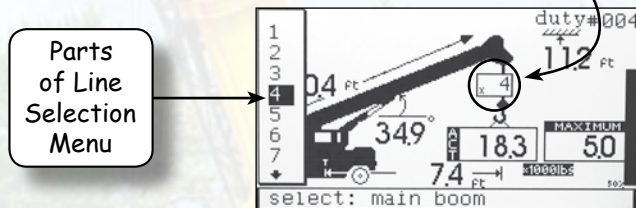3- Push button #4 to confirm your choice.

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ℹ The number of parts of line, the boom selection and the crane configuration are associated with each hoist. Therefore, by changing to a different hoist, all associated settings for the hoist are changed automatically.

PARTS OF LINE SELECTION

This button allows the operator to select the number of parts of line used. The operator can see the current number of parts selected just above the hook on the on the i3000 screen.
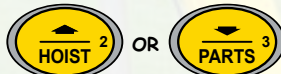
Parts of Line Selection Menu

To change the parts of line selection:

1- Push the PARTS button (#3) to display the parts of line selection menu.

2- Scroll up or down with buttons #2 and #3 to highlight the desired number of parts of line.

OR

3- Push button #4 to confirm your choice.

ADDITIONAL PARAMETERS SELECTION

In order to complete the system configuration process, you must press the DUTY button where crane parameter choices will be listed. These parameters need to be verified and, if needed, adjusted.

Main/Jib Selection

Use this menu to change the boom configuration each time the crane is rigged.

Duty Number

Here you can input to the system a specific duty number. For instance, if you know that the duty number 57 represents your crane rigged with a 100 feet boomlength, outriggers extended and with a 40 feet jib @ 10°, it could be more convenient to input the number 57 instead of having to choose the correct parameters individually. Look up the crane duty number to be used on the i3500 duty list. The i3500 duty list is a plasticated sheet of paper and it must be stored in the operator's cab for duty selection purpose. The currently selected duty number is displayed in the upper left part of the display.

Outrigger/Tire Selection

Use this menu to set the current working configuration of the machine. Example: Crawlers extended, outriggers retracted, on tire, pick and carry etc.

Counterweight Selection

Make sure that the counterweight selection in this menu represents the current counterweight fitted on the crane.
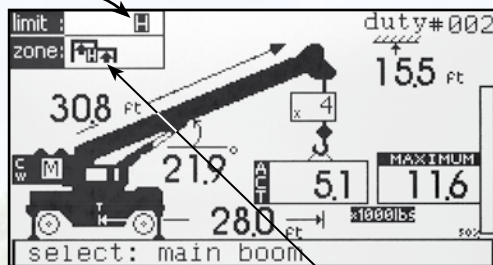
Deduct Erected/Stowed

If there is a jib rigged on the crane but you are currently lifting over the main boom, you must apply a rated capacity deduction. Just choose in this menu the jib currently fitted on the crane and the system will apply the appropriate deduction.

SYSTEM TEST

1. Push buttons 9+10 simultaneously to check the operation of the display, the audible and visual alarms and the relays (digital outputs). Some systems will run this test automatically but others will offer a test menu, if you see a menu continue as follows:
2. Scroll up or down with buttons 2 or 3 to select the function to test.
3. Push button 4 to run the desired test. If the «button test» function is selected, press a button to see it's corresponding number appear on the screen. To exit the «button test» do not press any buttons and the system will return to the test menu automatically.
4. Push button 5 to exit the test menu.

RANGE LIMITING OPTION


```
limit :      [H]              duty#002
zone: [▣▣]                       15.5 ft
30.8 ft
                              x  4
            21.9°            ┌─────┐ MAXIMUM
               ACT  5.1        11.6
            28.0 ft    ×1000lbs     50%
select: main boom
```

Shows which limit is reached:

[R] RADIUS

[H] HEIGHT

[W] WALL

Shows which zone is programmed:

⏬ limit high (roof)

[▣▣] variable limit height

[▣▣] variable limit radius

|↔| free zone (two walls)

RANGE LIMITING WARNINGS:

APPROACH WARNING OF THE LIMIT   **LIMIT REACHED**   **CUT-OFF CONDITION**

Accessing the range limiting mode:

1-Push the Mode button (#1) to display the mode menu.

MODE 1

2- Scroll down with button #3 once to highlight the range limiting option.

PARTS 3

3-Push button #4 to enter the range limiting menu.


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LIMIT HIGH

1- Access the range limiting mode (see bottom of page 13).

2- «limit high» is highlighted by default. Push button #4 to confirm your choice.

3- Boom up to the desired boom tip height limit.

4- Push button #4 to confirm the maximum boom tip height position. As you release button #4, an 8 second countdown will allow you to boom down before your programmed height limit becomes active.

5- The display will automatically return to the normal mode.

RESTRICTED AREA
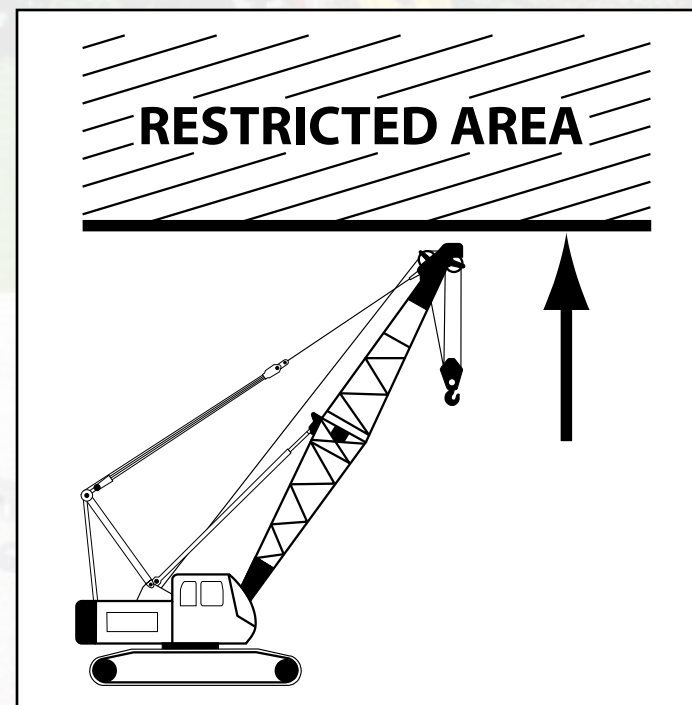
FREE ZONE

1- Access the range limiting mode (see bottom of page 13).

2- Use the down (#3) button to highlight «free zone» and push button #4 to confirm your choice.

3- Rotate the crane to the first limit position (first wall).

4- Push button #4 to confirm that this will be the position of the first wall.

5- Rotate the crane to the second limit position (second wall).

6- Push button #4 to confirm. This will be the position of the second wall. As you release button #4, an 8 second countdown will allow you to rotate the crane between the two walls before your programmed free zone limit becomes active.

7- The display will automatically return to the normal mode.
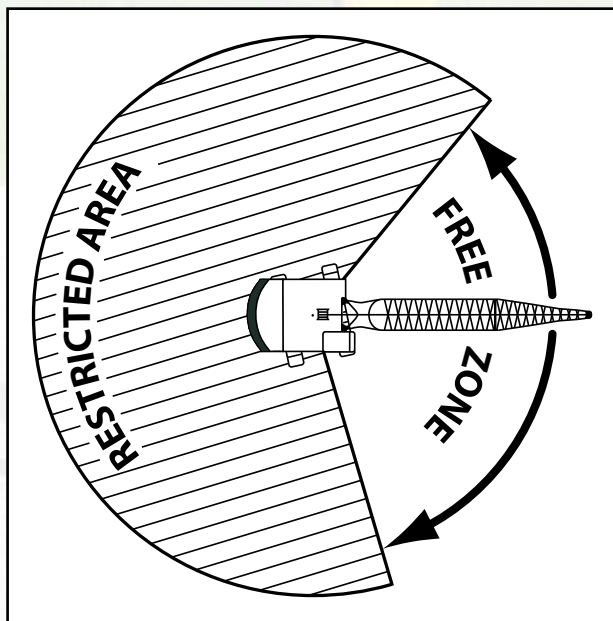
VARIABLE LIMIT HEIGHT

1- Access the range limiting mode (see bottom of page 13).

2- Use the down (#3) button to highlight «variab.limit height».

3- Push button #4 to confirm your choice.

4- Rotate the crane to the first limit position (first wall).

5- Push button #4 to confirm that this will be the position of the first wall.

6- Rotate the crane toward the second limit position (second wall) with the boom tip always at the maximum height permitted by the surrounding environment.

7- Push button #4 to confirm the position of the second wall. As you release button #4, an 8 second countdown will allow you to return between the two walls and boom down below the height limit before your programmed variable height limit becomes active.

8- The display will automatically return to the normal mode.
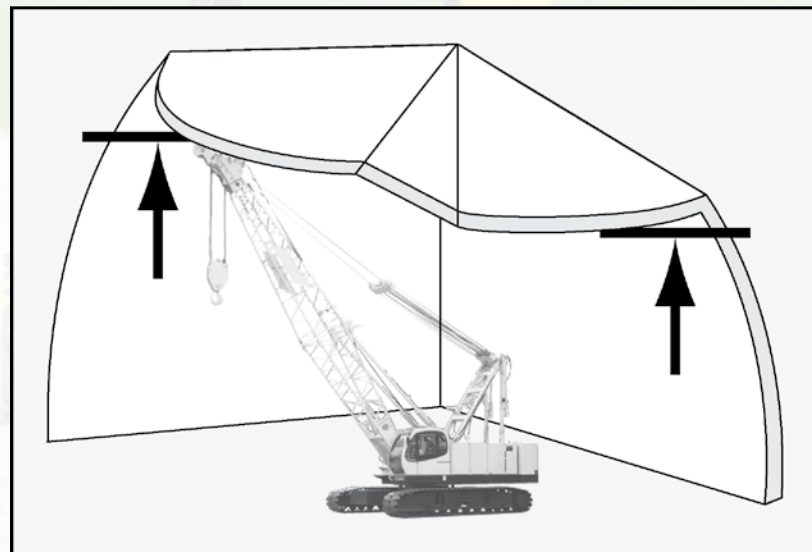
VARIABLE LIMIT RADIUS

1- Access the range limiting mode (see bottom of page 13).
2- Use the down (#3) button to highlight «variab.limit radius».
3- Push button #4 to confirm your choice.
4- Rotate the crane to the first limit position (first wall).
5- Push button #4 to confirm that this will be the position of the first wall.
6- Rotate the crane toward the second limit position (second wall) with the boom tip always at the maximum radius permitted by the surrounding environment.
7- Push button #4 to confirm the position of the second wall. As you release button #4, an 8 second countdown will allow you to return between the two walls and boom up within the allowed radius limit before your programmed variable radius limit becomes active.
8- The display will automatically return to the normal mode.