



**W2180 LOAD & ANGLE INDICATOR**  
**Operating Manual**  
(Version OPW2180 V2.0)

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**1. General Description of the indicator system**

The Wylie systems W2180 Load and Angle Indicator system fitted to your crane has been designed to provide the crane operator with the information on load and angle. In addition, the system provides limits on load and angle.

The indicator functions by automatically monitoring the load applied to the crane and continuously comparing this load with the load limit given by the operator. The display unit of the indicator system provides continuous information relating to crane loading and warns the operator when he is approaching or exceeding the limit on angle and load set by the operator with the Limit Button.

## 2. Operating procedure

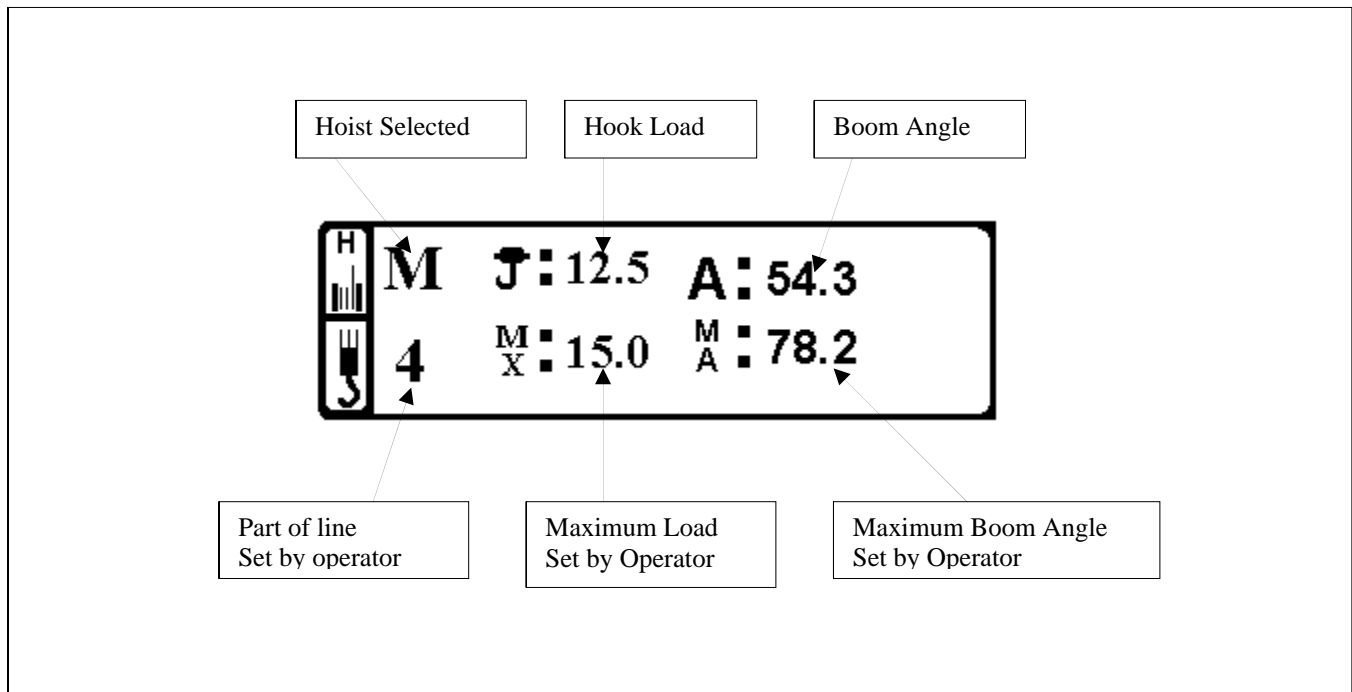
### 2.1- Power On

Switch the electrical supply «ON» (i.e. crane key switch) to the indicator.

The indicator will perform a 'self test', during which time an introduction message will be displayed, after which the W2180 goes into its normal operating mode.

### 2.2 - Operation

During normal use of the crane, the display will present information to the crane operator as shown in the following drawing.



The top row of the display window shows Selected Hoist, Hook Load and Boom Angle. The bottom row shows the Parts of line selected, the maximum Load and the maximum Boom Angle set by the operator.

## 2.3 - Warning Lamps

Symbol	Function
<b>ATB</b>	This light is illuminated when a two-block condition exists. This may inhibit hoist operation if a lock out system is fitted.
<b>LIMITS</b>	This light will display an Out of Limit condition when it is detected by the system. These conditions occur depending on the High Angle Limit and Maximum Load set by the operator. In the case of Angle, the light indicator will illuminate with an audible alarm when the actual Angle reaches the angle limit. In the case of Load, the indicator will flash with an audible alarm when the load is between 85% and 99% of the set Load Limit. This light will illuminate with an audible alarm when the load exceeds 100% of the set Load Limit.

## 2.4 - Keyboard description

Each button on the keyboard has a double function. The top row of the button shows main functions and the bottom row shows secondary functions. The secondary functions are only used in the Limit Mode.

Key	Name	Description
<b>1</b>	<b>Limit</b>	Enter in Limit mode for editing variable limits.
	<b>Esc</b>	Quit Limit Mode.
<b>2</b>	<b>Hoist</b>	Pressing this button toggles to the next hoist.
	^	In Limit mode this button will increase the value of the limit variable that is being edited.
<b>3</b>	<b>Bypass</b>	Pressing this button bypasses the lockout momentarily.
	<b>Enter</b>	This button confirms the limit variable value set and toggles to the next variable or exits Limit Mode.
<b>4</b>	<b>Parts</b>	Pressing this button toggles to the next number of parts of line for the selected hoist.
	∨	In Limit mode this button will decrease the value of the limit variable that is being edited.

## **2.5 - Limit setting**

By pressing this button the operator can access to the limit setting. The operator will be able to change limits on high angle and maximum load.

To access the limits, press the LIMITS button (#1). The maximum load limit will start to blink. Increasing the value of load limit is made by pressing button #2 and decreasing by pressing button #4. During editing, when you hold down any set button, the first digit (0.1 increment) will begin to change, after a while the second digit (1.0 increment) will change and finally the third digit (10.0 increment) will start to change.

As described above to change to High Angle Limit just press button Enter (#3) then adjust it like previously see. To exit press button ESC (#1) , or press button Enter (#3) once more.

When the displayed maximum load is limited by the Hoist Rope. The message «rope» will appear beside the maximum load set by operator. Increasing the parts of line will extinguish this message.

## **2.6 - Hoist selection**

This button allows the operator to select the hoist used. The operator can see the hoist selected on the top left of the display. «M» stands for main hoist, «A» stands for auxiliary hoist. When pressing the HOIST button, the system selects the next hoist. Only the hoist programmed will appear on the display. For example, if a crane has a main hoist and an auxiliary hoist, pressing the Hoist button will switch from M to A and from A to M. Note if a crane has only a main hoist, pressing Hoist button will have no effect.

## **2.7 - Parts of line selection**

The part of line set for the selected hoists are shown on the lower left corner of the display screen. To change, simply press the PARTS button (#4). The number of parts of lines will increase until the maximum number available on the crane is reached and then return to one, two, three, etc.

The number displayed is automatically set. There is no need to press other buttons. Note, if the hoist is changed, the number of parts of lines will also change.

## **2.8 - Internal Relay and Bypass**

The internal relay is activated only when a two-block condition occurs. If a lockout or an external alarm is installed, it can be bypassed by pressing the BYPASS button (#3). This is momentary and the bypass will work only while the operator presses the button.

## **2.9 – System Failure**

When the system detects a failure caused by the sensors, this means that the sensor is either faulty, out of the operating parameters or not properly connected. The system will indicate this fault by displaying an «E» beside the value given by the faulty sensor.