

Service Manual



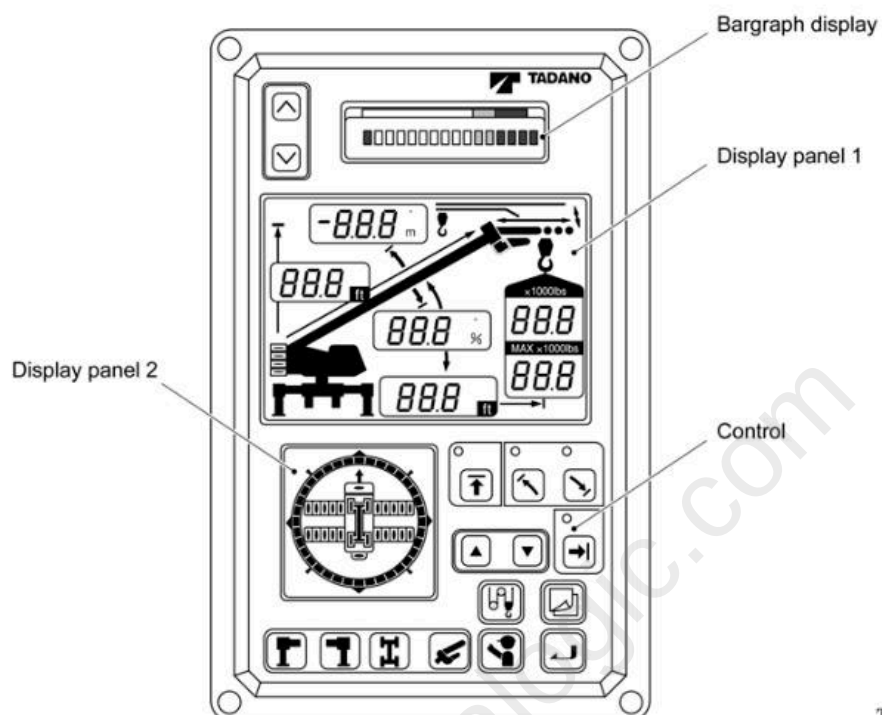
01

Load Moment Indicator

Model **AML-LIIE**

Functions of and How to Use User Mode (TT-300XL-1)

Names and Functions of AML Main Unit Parts



T29147E

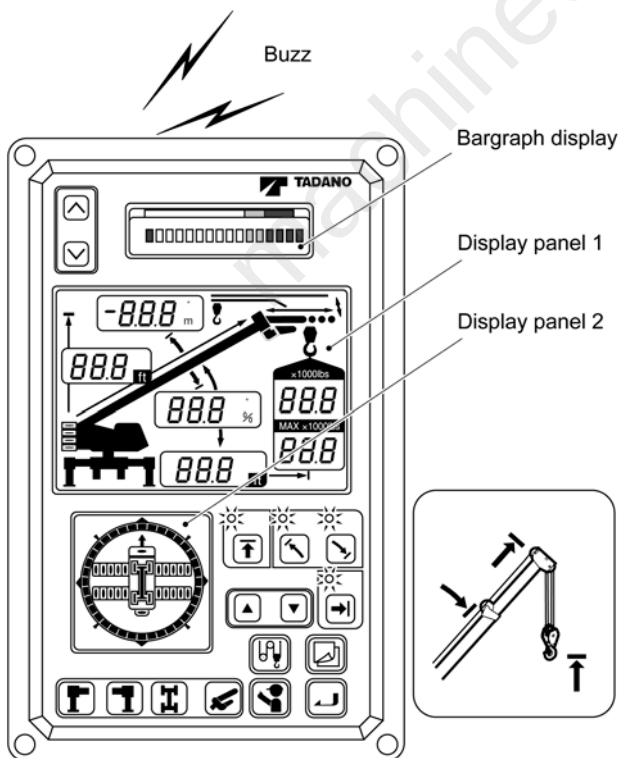
AML Pre-operational Inspection

⚠ WARNING

⚠ Operating the crane with a malfunctioning AML could cause the crane to overturn or be damaged. Be sure to perform the pre-operational inspection on the AML system and start the crane only after ensuring that the system is operating properly.

Before starting operation, check that the AML works in good condition, as follows:

1. Press the check key and make sure that the AML is in the following conditions:
 - Moment display.....All segments light up.
 - Display panel (1 and 2)
 - All segments light up.
 - Working range restriction indicator lamp
 - All four lamps light up.
 - Alarm buzzer.....Sounds continuously.
 - Movement toward critical sides
 - Automatically halted



T29160E

2. Press either the register key, display alteration key or check key to return the display to the normal condition.

3. Make sure that the display on the display panels conforms to the actual crane conditions.

(1) Boom length

(2) Boom angle

(3) Jib angle.....shown while jib lift is selected

(4) Actual load...With no load on hook, make sure that an approximate mass of the hook block is shown

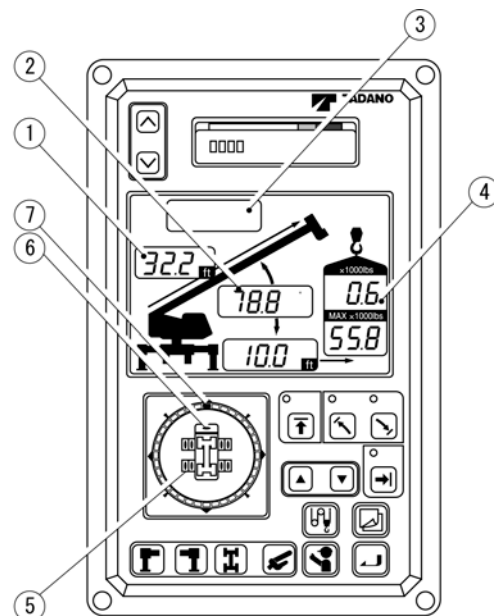
[NOTICE]

◆ The actual load is not shown correctly if the lift status is not registered correctly.

(5) Outrigger state symbol

(6) Front jack symbol

(7) Boom position indicator



T29161

7.4 Load Radius Adjustment

[NOTICE]

◆ For the conditions and adjustment value of the load radius adjustment, refer to the load radius adjustment item in the “Adjustment Value Table”.

◆ Set the crane as follows:

- (1) Outriggers mode: Fully extended
- (2) Lift mode: Boom lift (Stow jib and single top)
- (3) Boom length: Fully extended
- (4) Actual status and registered status of number of parts of line: Standard number of parts of line when main boom is fully extended
- (5) Hook block: Refer to “Adjustment Value Table”. (Stow auxiliary hook block.)
- (6) Load radius: After lifting rated lifting capacity of load radius adjustment condition, set actual load radius to meet load radius adjustment condition (load radius) by boom lowering operation. (Cancel AML stop function when overload hinders boom lowering.)
- (7) Refer to “Adjustment Value Table” according to the crane model, there might be a condition besides above.

1. Select the main menu [• Adjust ↓] in the adjustment mode, and press the register key to select the menu.
2. Press the scroll-down key until the load radius adjustment display [: Adj. work rad ↓] appears. Then, press the register key to select the menu.
3. Press the increase or decrease key so that the load radius adjustment display [Rad. 1s] becomes the load radius adjustment value. Press the register key for that registration.
4. Press the display alteration key to exit the menu.

7.5 Moment Span Fine Adjustment

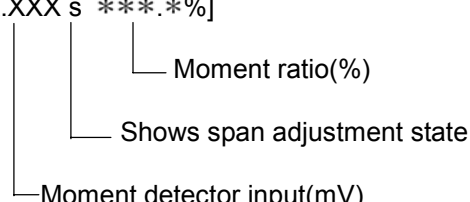
[NOTICE]

◆ For the conditions and adjustment value of the moment span fine adjustment, refer to the moment span fine adjustment item in the “Adjustment Value Table”.

◆ Set the crane as follows:

- (1) Outriggers mode: Fully extended
- (2) Lift mode: Boom lift (Stow jib and single top)
- (3) Boom length: Fully extended

- (4) Boom angle: Lower boom until the boom angle display corresponds to condition of span fine adjustment.
- (5) Hook block position: Hoisted down until it almost touches ground surface or vehicle structure.
- (6) Actual status and registered status of number of parts of line: Standard number of parts of line when main boom is fully extended.
- (7) Hook block: Refer to “Adjustment Value Table”. (Stow auxiliary hook block.)
- (8) Refer to “Adjustment Value Table” according to the crane model, there might be a condition besides above.

1. Select the main menu [• Adjust ↓] in the adjustment mode, and press the register key to select the menu.
2. When [: Adjust L&A ↓] is displayed, press the scroll-down key until the display [:Adjust MMT] appears. Press the register key to select the menu.
3. Press the scroll-down key until the moment span adjustment display appears.
Moment span adjustment display:
Display [X.XXX s ***. *%]

4. Using the increase or decrease key, adjust the indicated value so that it becomes the span fine adjustment value. Then, press the register key to save the adjusted value.

The actual load value less than 1 klbs is shown as follows:

0.00 to 0.99 klbs: “000” to “099”
-0.99 to -0.01 klbs: “-99” to “-01”

5. Proceed to “7.6 Moment Zero-point Recheck”.

3. The display

[-----•-----]

appears. Press any key other than the display alteration key, and the corresponding portion of display changes from “-” to “○” while you are pressing the key. Press the display alteration key to exit the menu.

9. Display Check

The segments of LCD panels and LEDs of the AML indicator repeat to go on and off.

1. Select the main menu [• Maintenance ↓] in the maintenance mode, and press the register key to select the menu.
2. Press the scroll-up or scroll-down key until the display [:Display check ↓] appears, and then press the register key to select the menu.
3. The segments of LCD panels and LEDs of the AML indicator repeat to go on and off. Press the display alteration key to exit the menu and return to the ordinary display state.

10. Error Data Display

Error data registered in the AML are displayed on the moment indicator and display panel 1.

1. Select the main menu [• Maintenance ↓] in the maintenance mode, and press the register key to select the menu.
2. Press the scroll-up or scroll-down key until the display [:Disp. err data ↓] appears, and then press the register key to select the menu.
3. The error codes are displayed on the moment indicator and display panel. Press the display alteration key to exit the menu and return to the ordinary display state.

(1)The moment indicator displays the time when error occurred.

Display example:

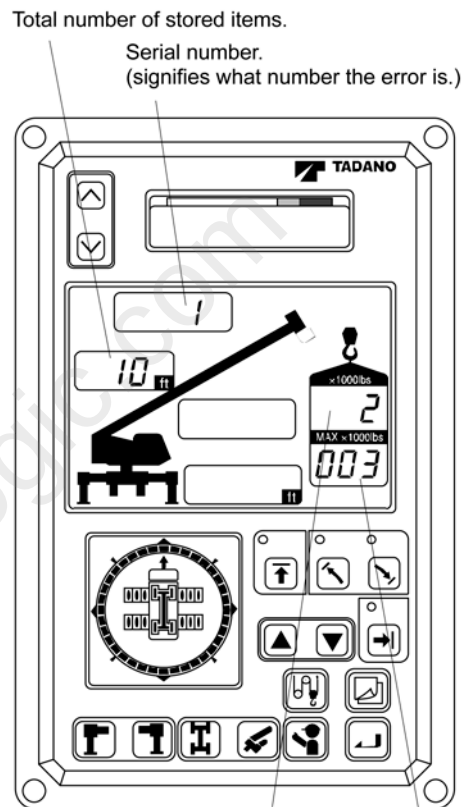
[96. 01. 23 12:35 ↓]

(2)When the scroll-down key, the time display changes to the error code display.

Display example:

[Error:2003 ↓]

- (3)The mark “↓” on the error code display shows the another errors exist.
Press the scroll-down key to display the next error code.



If "C" mark is seen here, this is the living error.
Error code. This example shows the error code 2003.

IW301-0311E09

11. Erasing the Error Data

Use this menu to erase the registered error data information.

1. Select the main menu [• Maintenance ↓] in the maintenance mode, and press the register key to select the menu.
2. Press the scroll-up or scroll-down key until the display [:Erase err data ↓] appears, and then press the register key to select the menu.
3. When the message [Erase OK?] appears, press the register key.
4. When the message [Done] is displayed, the error data is now erased. Press the display alteration key to exit the menu.

Error Message

Message	Description
Warning : 0075	Spring lock state has changed
Situation:	Spring lock state has changed. (Only for models with spring lock state detection)
Cause:	Spring lock released unintentionally. Spring lock has been released by mistake.
Action:	Set spring lock again.
Message	Description
Warning : 0077	Altered front or rear jack state
Situation:	The actual front or rear jack state has changed from the registered one. (Only for models with spring lock state detection)
Cause:	Front or rear jack has operated. Defective detector. The AML itself is defective. (Analog board is defective)
Action:	Return the front or rear jack to the original condition. Check the detector using "Di check" function on "Maintenance" menu.
Message	Description
Warning : 0078	Altered counterweight state (refer to 0041)
Message	Description
Warning : 0081	Elevation motion slowing down
Situation:	* This error code is applicable only to models with the slow elevation stop function. The boom elevation slow stop function is activated, slowing down boom elevation motion.
Cause:	The boom has been elevated close to a stop angle (100% stop, restriction limit stop, stroke end stop, or rear stability stop), and the elevation slow stop function has been activated, and the elevation speed is reduced. (The error code is displayed only when the boom is being elevated)
Action:	Stop operating the boom. Operate the boom in the opposite direction, whether it is rising or lowering. Cancel the boom angle limit restriction function. Move the boom to the non-critical side.
Message	Description
Warning : 0082	Swing motion slowing down
Situation:	* This error code is applicable only to models with the slow swing stop function. The slow swing stop function is activated, slowing down boom swing motion.
Cause:	The boom has swung close to a stop angle (either 100% stop or range limit stop) and the slow swing stop function has been activated, and swing speed is reduced. (The error code is displayed only when the boom is being swung to the left or right)
Action:	Stop the swing operation. Swing away from the limit. Retract or raise the boom so that the lifting capacity will not be exceeded. Cancel the swing limit restriction function.

Full Version Available

Tadano AML-LIIE Load Moment Indicator Service Manual

Tadano AML-LIIE load moment indicator service manual, with system diagrams, signals, adjustment and maintenance procedures. Instant PDF download.

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