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7 ACCESS TO THE HOIST CONDITION MONITORING UNIT

7.1 General Description of Service Mode

For RADF13 systems, there is a special “Service Mode” of operation for maintenance and set up of the Hoist Condition Monitoring Unit via radio.

This unit is connected to the receiver RAD-RF by a serial data communication CL20mA.

When in Service mode, the transmitter RAD-TF is able to act as a data console for the Hoist Condition Monitoring Unit, sending commands and receiving information, using the radio link and the appropriate software in the transmitter RAD-TF and in the receiver RAD-RF.

During the Service Mode of operation, due to the amount of data being sent in the reverse link, the amount of frames per second in reverse mode is increased such that the feedback in the display is fast enough. The movements of the crane in this mode of operation are inhibited, this is, there are no movement orders being sent by the transmitter or acknowledged by the receiver. The Stop relays are activated.



It could be too slow to enter in service mode by the receiver if the transmitter and the receiver are in different channels. Whenever possible, avoid the scanning of radio channels.

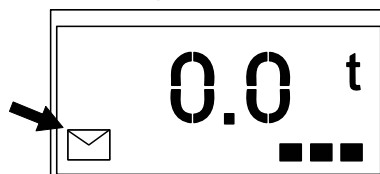
7.2 Entering the Service mode.

To access the Hoist Condition Monitoring Unit mode follow the sequence:



1. Install a charged battery in the transmitter.
2. Move close to the receiver.
3. Turn on the key-switch.
4. Push down STOP pushbutton (If it was in UP position.)
5. Pull up STOP pushbutton.
6. Press Pushbutton UP in second speed, and then, START. The system enters in Service Mode.

While the system is in service mode the “envelope” icon in the display will be switched ON.



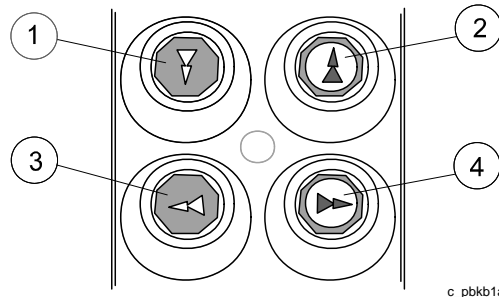
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7.3 Keys for moving within the Menu.

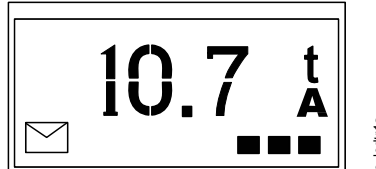
The keys for moving within the menu are the following:



1. Button that simulates the **Down** Key (Down button)
2. Button that simulates the **Up** Key (Up button)
3. Button that simulates the **Esc** Key (Left button)
4. Button that simulates the **Enter** Key (Right button)

7.4 Switching from Tared Load to Actual Load.

The actual load is shown in the display unit as the Tared Load, but an “A” is shown below the “t” in the bottom right hand side of the display unit. In order to switch from Tared Load to actual load, this is performed by pressing UP and/or DOWN. Pressing ENTER, the password is requested.



7.5 Resetting the Tared Load.

Pressing the ESC button for several seconds performs the reset of the Tared Load.

7.6 Exiting Service mode.

There are two ways of exiting this mode.

Pressing the STOP button

(The transmitter will be switched OFF and the receiver will switch to standby mode). If the system is switched ON again and the system was switched OFF in a menu within the service mode, when receiving the new frames in normal operation, first of all the following message may appear: “EXITING SERVICE MODE”. The receiver will send as many Escape messages as needed to return to the load message.

Pressing the START button for 3 seconds

The transmitter will switch from Service Mode to Standard mode of operation while the receiver will go to Standard mode passing through the Standby status. The STOP relays are deactivated and activated again. If you exit service mode within a menu in the Hoist Condition Monitoring Unit, the system will exit to the Load status. This may take several seconds where the message “EXITING SERVICE MODE” will be ON.



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7.7 Messages originated in the receiver.

There are three possible messages that may appear apart from the messages originated by the Hoist Condition Monitoring Unit. These are:

“EXITING SERVICE MODE”

This message is originated when the Hoist Condition Monitoring Unit is in Service mode within the menus and the transmitter is in Normal mode of operation. This message will appear prior to show the Load or Fault messages while exiting the Service mode. The receiver will send the Hoist Condition Monitoring Unit as many Escape messages as needed to return to Normal mode.

“RECEIVER FAULT”

This message will appear whenever the receiver RADF13 is not able to open the current loop communications channel. There will be a problem in the receiver.

“CURRENT LOOP NOT AVAILABLE / FAULT”

This message will appear whenever the receiver RADF13 is not able to read any data frame from the Hoist Condition Monitoring Unit. This message can be seen when switching the unit to display mode or by unplugging Hoist Condition Monitoring Unit from the receiver. There is an error in the connection between both systems.

If the transmitter does not receive a valid frame from the receiver within 2.5 seconds, the display will erase the data being displayed. This means that there is faulty link between transmitter and receiver.