



SMARTCELL[®] DIGITAL LOAD CELLS Digital Load Cell Diagnostics

ON-SCREEN DIAGNOSTIC MENU

LIVE LOAD CELL WEIGHTS

LOAD CELL WEIGHTS	
1.	54.9
2.	26.5
3.	25.9
4.	67.3
PREVIOUS NEXT EXIT	

MINIMUM AND MAXIMUM WEIGHTS (This can be zeroed as needed)

MAXIMUM / MINIMUM WEIGHTS	
1.	0.0 / -1.2
2.	0.0 / -1.0
3.	0.5 / -0.1
4.	1.4 / 0.0
PREVIOUS NEXT EXIT	

DEADLOAD SHIFT

DEADLOAD SHIFT		* = CHECK LOAD CELL
1.	1.6	
2.	19.7	
3.	-1.2	*
4.	-2.3	*
PREVIOUS NEXT EXIT		

This shows the live shift from the original calibrated deadload. An asterisk (*) indicates that the deadload shift has been exceeded. Scale must empty for this to be valid.

SOFTWARE VERSION OF CELL

LOAD CELL SOFTWARE VERSIONS	
1.	1.0.7
2.	1.0.7
3.	1.0.8
4.	1.0.7
PREVIOUS NEXT EXIT	

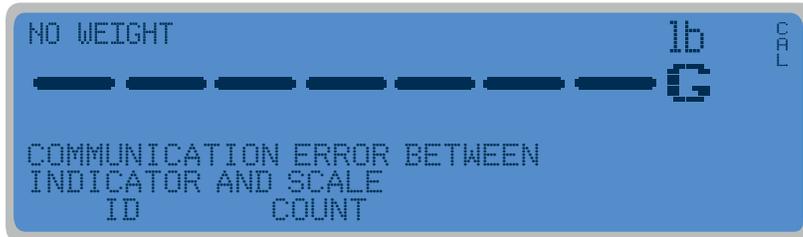
The controller's version number is displayed upon startup of the indicator.



Cardinal Scale's 225D Navigator indicator provides onscreen diagnostics for Cardinal digital load cells enabling scale technicians to see real-time errors such as unresponsive load cells, damaged analog sections, invalid set-up parameters, and it can also assist with board replacements.

ON-SCREEN DIAGNOSTIC ALERTS

COMMUNICATION ERROR BETWEEN INDICATOR AND SCALE

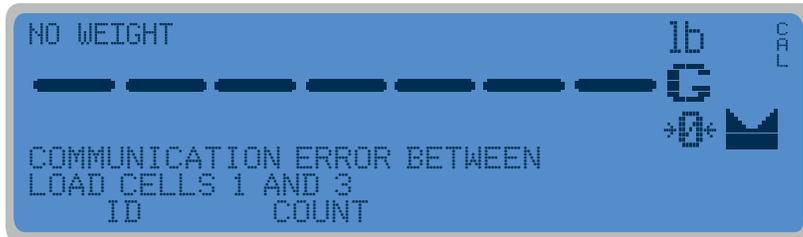


PROBABLE CAUSE: The homerun cable is damaged or disconnected.

ITEMS TO CHECK:

- Check that cable is connected correctly.
- Check cable for damage.
- Use caution on the amount of insulation stripped for connector. Center wires could short. Must be shorter than the center connector.
- Check connector for random strands of wire.
- Verify that connector is clear of debris.

COMMUNICATION ERROR BETWEEN LOAD CELLS



PROBABLE CAUSE: There is a loss of communication between load cells.

ITEMS TO CHECK:

- Check that cable is connected correctly.
- Check cable for damage.
- Verify that connector is clear of debris.
- Check load cell COM ports on both load cells.

LOAD CELL NOT RESPONDING



PROBABLE CAUSE: The indicator cannot detect the exact communication problem with the unresponsive load cell.

ITEMS TO CHECK:

- Check that cable is connected correctly.
- Check cable for damage.
- Verify that connector is clear of debris.
- Potentially dead load cell.

LOAD CELL DAMAGED

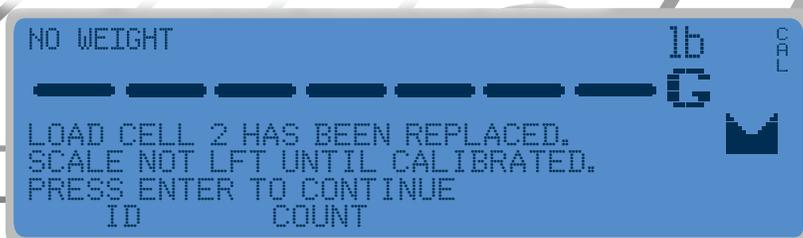


PROBABLE CAUSE: There is irreparable internal damage to the load cell.

ITEMS TO CHECK:

- Replace load cell.

LOAD CELL HAS BEEN REPLACED



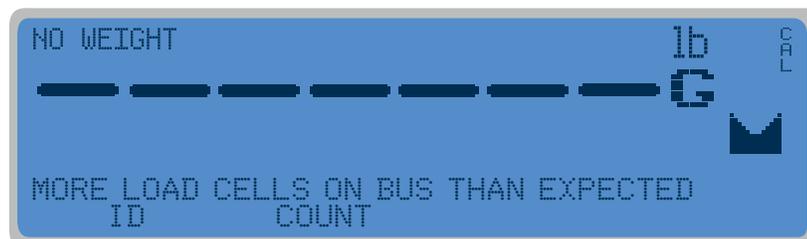
PROBABLE CAUSE: A load cell has been replaced.

ITEMS TO CHECK:

- Replaced load cells are automatically detected as long as only one load cell was replaced. Once a load cell has been replaced, the 225 will auto detect the new load cell and display the message that the scale is not Legal-For-Trade and will need to be calibrated.

ON-SCREEN DIAGNOSTIC ALERTS

MORE LOAD CELLS ON BUS THAN EXPECTED



PROBABLE CAUSE: There are more load cells than expected connected to the indicator. For example, the indicator number of load cells is set to 8 but the controller detects there are actually 12 load cells.

ITEMS TO CHECK:

- Confirm and configure the number of load cells the scale should have.

LOAD CELL HAS NO ADDRESS

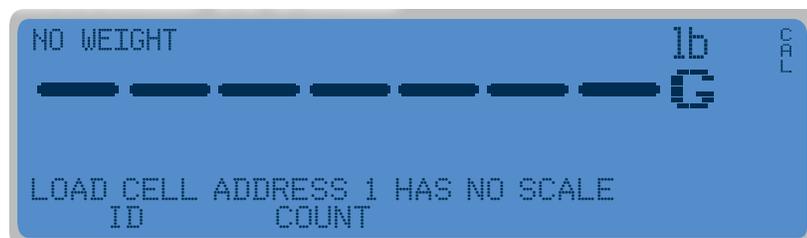


PROBABLE CAUSE: A load cell is responding but it is not addressed in the system.

ITEMS TO CHECK:

- Go to the addressing menu and assign the load cell ID to an address.

LOAD CELL ADDRESS NOT ASSIGNED TO SCALE

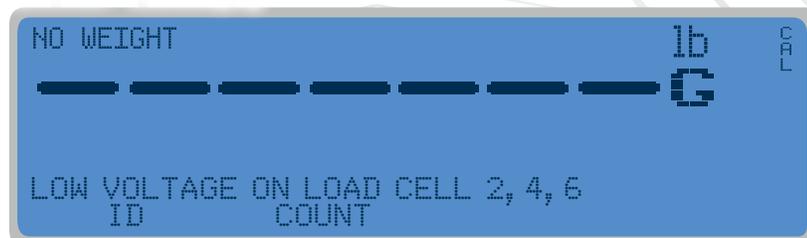


PROBABLE CAUSE: A load cell has not been assigned to a scale.

ITEMS TO CHECK:

- Go to addressing menu and assign a scale to the load cell.

LOW VOLTAGE DETECTED ON LOAD CELL(S)

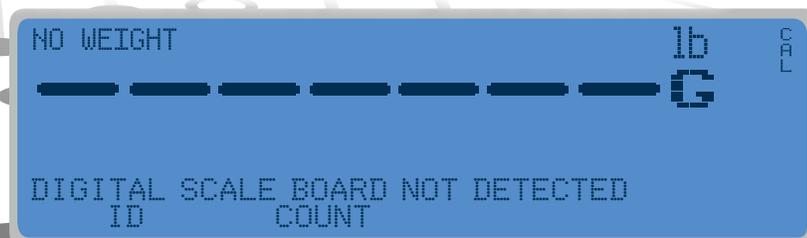


PROBABLE CAUSE: Low power on a load cell. Load cells at the end of the CAN daisy-chain are most susceptible to low voltage errors because of voltage drop along the cable.

ITEMS TO CHECK:

- Too many load cells on the chain.
- Check that cable is connected correctly.
- Check cable for damage.
- Verify that connector is clear of debris.
- Check 225D indicator power supply.

DIGITAL SCALE BOARD NOT DETECTED



PROBABLE CAUSE: The indicator cannot communicate with the option card or the option card is not responding.

ITEMS TO CHECK:

- Check that the card is seated properly and fastened correctly.
- Check that card is seated on the correct row of pins.
- Potential of failed card if occurs after installation and in-service.

HARDWARE DIAGNOSTICS

OPTION CARD REPLACEMENT

If an option card is replaced, the 225D will boot up to this screen:

```

          DLC
        BY CARDINAL
      Revision 0. 1. 04
NEW CARD FOUND!
WAS DIGITAL SCALE CARD REPLACED? NO
YES                                     NO
    
```

The 225D indicator will check whether the option card has been replaced in order to reconfigure the new option card to the existing scale.

If the user selects YES, then the 225D mainboard will upload the scale configuration to the controller and the indicator will immediately be able to make weight again.

MAIN PCB REPLACEMENT

If a 225D main board is replaced the 225D will boot up to this screen:

```

          DLC
        BY CARDINAL
      Revision 0. 1. 04
NEW CARD FOUND!
WAS MAINBOARD REPLACED? NO
YES                                     NO
    
```

The system will also check whether the 225D's main board has been replaced, so the scale configuration can be downloaded from the controller to the main board.

If the user selects YES, then the scale configuration will be downloaded from the controller to the mainboard. Scale configuration includes number of cells, all cell IDs, and individual cell trim. Indicator parameters will need to be entered manually (Interval, Decimal Point Position, Zero Tracking, Filtering, Print Settings, Serial Settings).

NOTE: A dead load calibration will need to be performed (does not require test weights).

225
NAVIGATOR



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