ISOBUS Auxiliary Display Guide

016-0171-682 Rev. A   11/19   E31630

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RAVEN ISOBUS AUXILIARY DISPLAY

The Raven ISOBUS Auxiliary Display (P/N 063-0173-938) is designed to allow the operator to monitor the tank or bin filling operations, zero tank weights, and initiate catch test calibrations.

NOTE: Ensure the tank is empty before zeroing the tank weights.

While filling, the operator may view the tank weight in real time to gauge how much product is in the tank. This allows for filling to a predetermined weight. Each tank must be calibrated for the product type in the tank after filling.

SELECT THE ACTIVE ECU OR RCM

Some implements may be equipped with multiple Raven Rate Control Modules (RCMs). If the system consists of multiple RCMs, the operator will need to determine which RCM is assigned to which tank. The Raven ISOBUS Auxiliary Display recognizes RCMs by serial number.

NOTE: If the location of the RCM is uncertain, the serial number may be viewed from the in-cab UT.

VIEW RCM SERIAL NUMBER

1. Choose the RCM working set from the UT for the desired tank.
2. Select the Diagnostics button along the right edge of the page.
3. Select the System Information tab and then select the Hardware/Software option from the drop down list.
4. The Hardware Serial Number will be displayed.

FIGURE 1. System Information Page on UT

NOTE: For additional information on the RCM and diagnostics, refer to the Raven Rate Control Module (RCM) Operation manual.

TOGGLE RCM DISPLAY

1. Press the "esc" button to power on the Auxiliary Display.
2. Use the UP/DOWN or LEFT/RIGHT arrows to select the "Diagnostics" menu.
3. Press "ok" to enter the Display Information screen.
4. Press either button below NEXT ECU to toggle between RCMs.
5. Once the desired RCM is displayed, press the ESC button to return to the main menu.

NOTE: The Serial Number is physically found on the face of the RCM.

FIGURE 2. Display Information

READ AND ZERO TANK WEIGHT VIA TANK/BIN INFO FOR DRY PRODUCTS

1. Power on the Auxiliary Display by pressing the "esc" button on the front of the monitor.
2. Using the UP/DOWN or LEFT/RIGHT arrows to highlight the "Tank/Bin Info" menu.
3. Touch "ok" to enter the Tank/Bin Info screen.

FIGURE 3. Tank or Bin Information Menu

4. The weight of the previously selected product will be displayed.

5. To change the selected product press the LEFT/RIGHT arrows.

NOTE: The percentage on the left side will display the percentage of product in the tank based on the tank capacity. The tank capacity is set from the in-cab monitor.

FIGURE 4. Dry Product Quantity Readings

6. To zero out the product weight press the button directly below "ZERO". Then press "ok" to accept that the tank will be zeroed out. Press "CANCEL" to cancel the operation.

NOTE: Zero will only be available if scales are equipped on the machine. If there are no scales, read the calculated level based on what has been entered in the RCM for that product.

FIGURE 5. Zero Out Warning and Zeroed Out Product

7. Press the NEXT or PREV buttons to toggle screen view. The toggled view will display text only for the Capacity and Quantity for dry products.

FIGURE 6. Tank Capacity

READ AND EDIT TANK WEIGHT VIA TANK/BIN INFO FOR LIQUID PRODUCTS

1. Power on the Auxiliary Display by pressing the "esc" button on the front of the monitor.
2. Using the UP/DOWN or LEFT/RIGHT arrows to highlight the box "Tank/Bin Info" menu.
3. Touch "ok" to enter the Tank/Bin Info screen.

FIGURE 7. Tank or Bin Information Menu

4. The weight of the previously selected product will be displayed.
5. To change the selected product press the LEFT/RIGHT arrows.

NOTE: The percentage on the left side will display the percentage of product in the tank based on the tank capacity. The tank capacity is set from the in-cab monitor.

6. Press the NEXT or PREV buttons to toggle screen view. The toggled view will display text for Capacity, Quantity, Fill Volume, Sparge Press, and Flow Rate for liquid products.

FIGURE 8. Liquid Product Quantity and Flow Rate Readings

NOTE: The "FLOW RATE" reading indicates the rate of liquid product flowing into the tank.

7. On the Product Quantity screen for liquid products, press the "EDIT" button to change the percentage of the tank or hit "REFILL" to get back to 100%.

FIGURE 9. Edit Product Quantity for Liquid Product

READ AND ZERO TANK WEIGHT VIA SCALE

1. Power on the remote monitor by pressing the "esc" button on the front of the monitor.
2. Using the UP/DOWN or LEFT/RIGHT arrows highlight the box "Scales" box blue.
3. Touch "ok" to enter the Scales Info screen.

FIGURE 10. Scales Menu

4. The weight of the previously selected SCALE will be displayed.
5. To change the selected SCALE press the LEFT/RIGHT arrows.

FIGURE 11. Scale Weight

6. To zero out the product weight press the button directly below "ZERO". Then press "ok" to accept that the tank will be zeroed out. Press CANCEL to cancel the operation.

NOTE: The TARE button can be used when a single scale is monitoring multiple bins, and it is desired to monitor a specific load.

7. Press the NEXT or PREV buttons to toggle screen view. The toggled view will display the selected scale, scale weight and scale voltage.

FIGURE 12. Scale Selection, Weight, Voltage Menu

8. Press the "esc" button to return to the main menu.

RATE CALIBRATION FOR GRANULAR PRODUCTS

1. Power on the remote monitor by pressing the "esc" button on the front of the monitor.
2. Using the UP/DOWN or LEFT/RIGHT arrows highlight the box "Rate Calibration" blue.

FIGURE 13. Rate Calibration Menu

3. Press "ok" to enter the Rate Calibration screen.
4. The Calibration Information of the previously selected product will be displayed.
5. Press the LEFT/RIGHT arrows to change the selected product if necessary.

FIGURE 14. Select Product to Calibrate

6. The display will show what product is selected, the current calibration value, product type, and product density. The product density can be ignored.

7. Confirm the correct product will be calibrated and press either button below CALIBRATE.

8. A Warning will be displayed that indicates that product will be metered from the meters.

FIGURE 15. Calibration Warning

9. Press "ok" to continue or press the "esc" button to exit the calibration.

NOTE: Ensure the machine is ready to apply product.

10. After selecting "ok", the "Select Sections to Activate" page will be displayed.

11. Use the arrow keys to highlight the sections from which to dispense product for the catch test and then press "ok" to select the sections.

NOTE: A circle around the number will represent the selected section. After pressing the "ok" button, the section will highlight blue.

12. Press the "NEXT" button.

NOTE: Product will dispense when the "NEXT" button is pressed.

FIGURE 16. Sections to Activate

NOTE: The section selected must be turned on to press the "NEXT" button.

13. The Catch Test Summary page will be displayed. The test speed will default to 5 mph [approximately 8 km/h] which is a sufficient test speed for calibrating and will not need to be changed. Please review the Rate and Desired weight.

NOTE: Set the rate to the actual rate that will be applied in the field. The desired weight will be determined by either the size of the catch container or the estimated test time.

NOTE: For High Rate Products, a 5 gallon [approximately 19 L] container can hold roughly 20 lbs [approximately 9 kg] of product. If using a 5 gallon [approximately 19 L] container, a desired weight of 20 lbs [approximately 9 kg] can be used.

           For Low Rate Products, the estimated test time must be equal to or greater than 10 mins. If the test takes less than 10 mins, increase the Desired Weight in 1 lb [1 kg] increments.

14. To change the Rate or Desired Weight press the button below "EDIT" then use the UP or DOWN arrow buttons to highlight the value to be changed in black.

15. Once the value is highlighted black press the "ok" button to change the value.

FIGURE 17. Edit Catch Test Summary Options

16. Using the LEFT/RIGHT and UP/DOWN arrow enter a new value for the Rate or Desired weight.

17. When the desired value is entered press the "ok" button. The Catch Test Summary will be displayed with the new values. If the values are satisfactory continue by pressing the NEXT button.

NOTE: If the Estimated Test Time is less than 10 mins, the NEXT button will not appear. Adjust the calibration values accordingly.

FIGURE 18. Edit Catch Test Value

18. If no product has been measured though the meters, use the "PRIME" button to prime the meters, and repeat as necessary. Make sure the container is empty before proceeding to the next step.

FIGURE 19. Priming and Start Catch Test

19. Press the START button to begin metering product into the container. The Test will begin and display how far along the catch test is and it also displays the Meter RPM.

FIGURE 20. Test In Progress

20. If the product being expelled does not fit in the container, press the STOP button to stop the catch test then continue to the next step. Please note that the meter will shut off when the test reaches 100%.

21. After the meter has stopped, weigh the dispensed product.

NOTE: If using a digital scale please remember to zero out the weight of the container or weigh the container before the calibration so the weight of the container can be subtracted from the total weight.

22. Using the LEFT/RIGHT and UP/DOWN arrow enter the actual amount of product applied. When the desired value is entered press the "ok" button.

FIGURE 21. Enter Catch Weight

23. The Catch Test Results will be displayed. To accept the results press the "ok" button. To cancel the results press the "esc" button.

FIGURE 22. Catch Test Results

24. Repeat steps 5 through 22 to calibrate either the same product or a different product.
25. When the calibrations are complete press the "esc" button to return to the main menu.

TROUBLESHOOTING

MAIN MENU IS GRAYED OUT

If the main menu is grayed out, either the RCM(s) are off line or the Current ECU (RCM) is not selected. Ensure the desired RCM is selected.

1. Press the "esc" button on the front of the monitor to exit to the main menu.
2. The "Diagnostics" menu will be highlighted.
3. Press "ok" to enter the Diagnostics Info screen.
4. Press either button below "Next ECU" to toggle between RCMs.

NOTE: If the "CURRENT ECU SERIAL" displays "0" this means that a RCM is not selected.

5. Once the desired RCM is chosen, press the "esc" button to return to the main menu.

FIGURE 23. Diagnostics Menu

LED BLINKING RED

If the Raven ISOBUS Auxiliary Display screen is black and the LED light in the bottom, right hand corner is blinking red, the monitor did not boot up in sequence.

1. Turn Tractor OFF.
2. Turn Universal Terminal (UT) OFF.
3. Ensure that everything is powered down.
4. Check IBBC connector at the back of the Tractor.
5. Start Tractor.
6. Turn on Universal Terminal (UT).
7. Check Raven ISOBUS Auxiliary Display operation.
8. If problem still exists unplug and plug back in the Raven ISOBUS Auxiliary Display from the main harness and repeat steps 1 through 7.
9. If unsuccessful, contact your Raven Dealer.

LIMITED WARRANTY

WHAT DOES THIS WARRANTY COVER?

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Division product under normal use, maintenance, and service when used for intended purpose.

HOW LONG IS THE COVERAGE PERIOD?

Raven Applied Technology products are covered by this warranty for 12 months from the date of retail sale. In no case will the Limited Warranty period exceed 24 months from the date the product was issued by Raven Industries Applied Technology Division. This warranty coverage applies only to the original owner and is non-transferable.

HOW CAN I GET SERVICE?

Bring the defective part and proof of purchase to your Raven dealer. If the dealer approves the warranty claim, the dealer will process the claim and send it to Raven Industries for final approval. The freight cost to Raven Industries will be the customer's responsibility. The Return Materials Authorization (RMA) number must appear on the box and all documentation (including proof of purchase) must be included inside the box to be sent to Raven Industries.

WHAT WILL RAVEN INDUSTRIES DO?

Upon confirmation of the warranty claim, Raven Industries will (at our discretion) repair or replace the defective product and pay for the standard return freight, regardless of the inbound shipping method. Expedited freight is available at the customer's expense.

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WHAT IS NOT COVERED BY THIS WARRANTY?

Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit, labor, or other damages. The obligation of this warranty is in lieu of all other warranties, expressed or implied, and no person or organization is authorized to assume any liability for Raven Industries.

Damages caused by normal wear and tear, misuse, abuse, neglect, accident, or improper installation and maintenance are not covered by this warranty.

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EXTENDED WARRANTY

WHAT DOES THIS WARRANTY COVER?

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Division product under normal use, maintenance, and service when used for intended purpose.

DO I NEED TO REGISTER MY PRODUCT TO QUALIFY FOR THE EXTENDED WARRANTY?

Yes. Products/systems must be registered within 30 days of retail sale to receive coverage under the Extended Warranty. If the component does not have a serial tag, the kit it came in must be registered instead.

WHERE CAN I REGISTER MY PRODUCT FOR THE EXTENDED WARRANTY?

To register, go online to www.ravenhelp.com and select Product Registration.

HOW LONG IS THE EXTENDED WARRANTY COVERAGE PERIOD?

Raven Applied Technology products that have been registered online are covered for an additional 12 months beyond the Limited Warranty for a total coverage period of 24 months from the date of retail sale. In no case will the Extended Warranty period exceed 36 months from the date the product was issued by Raven Industries Applied Technology division. This Extended Warranty coverage applies only to the original owner and is non-transferable.

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HOW CAN I GET SERVICE?

Bring the defective part and proof of purchase to your Raven dealer. If the dealer approves the warranty claim, the dealer will process the claim and send it to Raven Industries for final approval. The freight cost to Raven Industries will be the customer's responsibility. The Return Materials Authorization (RMA) number must appear on the box and all documentation (including proof of purchase) must be included inside the box to be sent to Raven Industries. In addition, the words "Extended Warranty" must appear on the box and all documentation if the failure is between 12 and 24 months from the retail sale.

WHAT WILL RAVEN INDUSTRIES DO?

Upon confirmation of the product's registration for the Extended Warranty and the claim itself, Raven Industries will (at our discretion) repair or replace the defective product and pay for the standard return freight, regardless of the inbound shipping method. Expedited freight is available at the customer's expense.

WHAT IS NOT COVERED BY THE EXTENDED WARRANTY?

Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit, labor, or other damages. Cables, hoses, software enhancements, and remanufactured items are not covered by this Extended Warranty. The obligation of this warranty is in lieu of all other warranties, expressed or implied, and no person or organization is authorized to assume any liability for Raven Industries.

Damages caused by normal wear and tear, misuse, abuse, neglect, accident, or improper installation and maintenance are not covered by this warranty.

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