

AA150 TROUBLESHOOTING

The AutoAnchor is not faulty if these messages display. The diagnostics help with troubleshooting the sensor and wiring. These messages display briefly during operation and/or power up. A beep will sound and after 3 seconds the message will be cleared. **The count will not be accurate until the cause of the error is fixed. After the windlass is retrieved and the error is fixed reset the AA150 by holding down one of the buttons to zero the display.**

Use the table below to help identify a problem and provide a possible solution. If you cannot resolve the problem, contact your supplier for further information.

Problem	Possible Solution																				
Sn 1 Appears during operation. The AA150 does not count and does not display a sensor pulse.	No signal from the sensor to the AA150. Either there is no magnet, the gap between the magnet and sensor is too big or the sensor signal is out of tune because of testing during installation. Try resetting the AA150 by running the windlass up and down for 10-15 seconds. If the message still appears check the magnet and the gap and alignment between the magnet and sensor. Check sensor wiring and installation and check for damage to the sensor and magnet. When fixed reset the AA150 as above. For manual reset, clear the counter to zero twice. To clear to zero press and hold any key. The AA150 will beep and clear within 4 seconds. rE will be displayed during the second clearing indicating the reset is okay.																				
	<table border="0"> <thead> <tr> <th></th> <th colspan="2">Bottom Fit All-Chain Windlasses</th> <th colspan="2">Top Fit Rope/Chain Windlasses</th> </tr> </thead> <tbody> <tr> <td>Magnet 6mm x 4mm</td> <td>Min 3mm</td> <td>Max 30mm</td> <td colspan="2">N/A</td> </tr> <tr> <td>Magnet 8mm x 6mm</td> <td>Min 3mm</td> <td>Max 44mm</td> <td>Min 30mm</td> <td>Max 44mm</td> </tr> <tr> <td>Magnet 10mm x 8mm</td> <td>Min 3mm</td> <td>Max 50mm</td> <td>Min 35mm</td> <td>Max 50mm</td> </tr> </tbody> </table> If using a reed switch sensor, the gap must be between a minimum of 3mm and a maximum of 5mm. Note: If the installation uses a black all-chain sensor (Part No: 9008) the gap must be between a minimum of 3mm and a maximum of 8mm and the south pole of the magnet must face the sensor.		Bottom Fit All-Chain Windlasses		Top Fit Rope/Chain Windlasses		Magnet 6mm x 4mm	Min 3mm	Max 30mm	N/A		Magnet 8mm x 6mm	Min 3mm	Max 44mm	Min 30mm	Max 44mm	Magnet 10mm x 8mm	Min 3mm	Max 50mm	Min 35mm	Max 50mm
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Sn 2 (Rope/Chain Only) Appears during operation. The AA150 will count and will display a sensor pulse. The count will not be accurate.	Sensor is too close to the magnet. Ensure the gap between the magnet and sensor is no less than 35 mm for a 10mm x 8 mm magnet and 30mm for an 8mm x 6 mm magnet). The count will not be accurate until the problem is fixed. Fix the installation and reset the counter to zero.																				
Sn 3 (Rope/Chain Only) Appears during retrieval when using a rope/chain rode. The AA150 will count and will display a sensor pulse. The count will not be accurate.	The AA150 has failed to detect the change from rope to chain or there has been excessive rope slippage. Complete retrieval and then reset the counter to zero. This message may also display if the chain is the wrong size for the chainwheel.																				
Sn 4 Appears during AA150 power up. AA150 will not count but it will display a sensor pulse.	The orange wire to the Up solenoid is not connected. Fix the wire connection and reset the counter to zero.																				
Ld (Rope/Chain Only) Appears during AA150 power up. The AA150 will count and will display a sensor pulse. The count will not be accurate.	The load sensor wires are not connected to the motor. Fix the connection and reset the counter to zero.																				
AA150 counts when the windlass is not turning or counts erratically displaying a large number eg 888.	The sensor could be damaged, incorrect cable may be fitted, or the AA150 may have been subject to external interference - RF or electrical. Check that the sensor cable is not damaged and that the cable fitted is as specified in the instructions. Check for external interference on the boat eg damaged or loose RF cables or aerials or other instruments that may not be working correctly or have been damaged by electrical interference including lightning.																				
The count pauses during retrieval.	This is not a fault. The rode is changing from rope to chain.																				

AA500C TROUBLESHOOTING

ELECTRONIC DIAGNOSTICS

Definitions SOL = Solenoid, SENS = Sensor, BATT = Battery

The AutoAnchor 500C has built in diagnostics to help with troubleshooting. The diagnostics help identify problems with the battery, the solenoid, the sensor and windlass rotation. The diagnostics appear briefly when the AutoAnchor 500C is first switched on. If you have a problem, check for the diagnostic messages by switching the AutoAnchor 500C off and then on again.

Use the table below to help identify a problem and provide a possible solution. If you cannot resolve the problem, contact your supplier for further information.

Problem	Possible Solution
1. AutoAnchor 500C will not turn on.	Check battery is connected and has correct polarity. Check battery has sufficient voltage. See page 13 and note 3 below. Check fuses are working.
2. AutoAnchor 500C does not operate the windlass either up or down.	Check Calibration Item 3 is not set to zero. Check the "Chain to be Released" is not set to zero (Refer to page 10). Check if the safety lock is on. Check battery has sufficient voltage. See page 13 and also note 3 below.
3. AutoAnchor 500C will not operate the windlass and the LCD shows BATT when the UP or DOWN buttons are pressed.	Battery low - check the voltage output. (See the notes on page 13). If the battery is fully charged check the wiring - for loose connections and check the cable size. The cable from the battery to the console unit and/or the solenoids may not be heavy enough. See the Cable Specifications on page 15.
4. AutoAnchor 500C turns itself off.	Battery has dropped below 6 volts. Check battery connections and charge. See also note 3 above.
5. The windlass operates for a short period and then stops. The AutoAnchor 500C may turn off.	The solenoids could be exceeding the maximum 2.6 Amps. The AutoAnchor 500C is designed to turn off if this occurs. Contact your supplier for further information. Also see note 3 above.
6. Solenoids click on and off when the UP or DOWN buttons are pressed but the windlass does not operate.	Either the yellow (down) and orange (up) solenoid wires are shorted together or the AutoAnchor 500C has a poor ground connection. Check the wiring and ensure the solenoid wires are separated.
7. Screen shows SOL.	Solenoids are not connected. Check wiring to solenoids or control box.
8. AutoAnchor 500C will not count or shows SENS and the windlass stops during automatic operation. Note: When the sensor is operating correctly the sensor (feet/metres) indicator flashes every time the magnet passes the sensor.	The sensor is not working properly. Check the calibration settings are correct. Check if the sensor is disconnected or damaged. Check wiring from console to sensor for loose connections and check that it is the correct specified cable.(See below). Check the magnet and sensor are aligned and the gap between them is correct. (See Installation Instructions). Check the magnet is not corroded. Check the magnet is installed with the white(south) end facing the sensor.
9. AutoAnchor 500C counts when the windlass is not turning or counts too much per revolution or displays an unusually large number.	The sensor may be damaged or the sensor cable is not the specified type. See the Cable Specifications below.
10. AutoAnchor 500C does not stop exactly at the preset point.	This is not a fault - Stopping is accurate to +1 chainwheel revolution. The chainwheel may run on slightly with momentum.
11. The windlass stops before the length of chain specified is deployed.	This will occur during automatic operation if you try to release more chain than is on board. Check the setting for chain on board. (Calibration Item 3).
12. AutoAnchor 500C display shows "Error"	The Up or Down button has pressure on it at the time the the unit is turned on. Clear the pressure from the button. Then turn the unit off. Turn it on again to operate normally.

AA550&AA560 Troubleshooting

ELECTRONIC DIAGNOSTICS

Definitions SoL = Solenoid, SEN = Sensor, Lo Pr = Low Power

The AA550 is not faulty if these messages are displayed. The diagnostics help identify problems with installation, the battery, the solenoid and the sensor and windlass rotation. Some of the messages appear when you try to operate the AA550 but others only appear briefly when the AA550 is turned on. Always check for the diagnostic messages by switching the AA550 off and then on again. Use the table below to help identify a problem and provide a possible solution. If you cannot resolve the problem, contact your supplier for further information.

SEN and LoAd messages: When these messages are displayed the AA550 will operate the windlass up and down manually but the Auto function will not work and the count will not be accurate.

Message/Problem	Possible Solution
<p>1. LoAd Displayed briefly when the AA550 is turned on and when it is operated manually. The Auto function does not work.</p>	<p>The load sensor wires are not connected to the motor. Use the AA550 manually and check the load wire connections. If using an all-chain rode check that the AA550 is calibrated correctly for all-chain. When fixed reset the AA550 to zero. The anchor must be docked. To reset to zero - press and hold the ON/OFF button. Release when the display shows 0.0. The count will not be correct until the problem is fixed.</p>
<p>2. LoC Displayed when a button is pressed. The AA550 will not operate.</p>	<p>The safety lock is on. Hold down the Mode button to release the safety lock and then operate as normal.</p>
<p>3. Lo Pr + a number Displayed when the Up or Down button is pressed. The AA550 will not operate the windlass.</p>	<p>Low power to the AA550. To check the voltage received by the AA550, turn the AA550 off, and press and hold the Down button. The voltage will display on the LCD. Check the battery voltage output. Check wiring for loose connections. Check the cable size. If the cable is the wrong size there may be voltage drop between the battery and the AA550. See the cable specifications on page 2 and the minimum voltages on page 7.</p>
<p>4. OFF Displayed when attempting to use the Auto function.</p>	<p>No setting has been entered for the rode to be released so the Auto function cannot operate. Enter a length of rode for release and the system will operate normally. (Refer page 10 Operation Manual).</p>
<p>5. SEN Displayed when attempting to use the Auto function.</p>	<p>Use the AA550 up and down manually and check for the specific sensor error. SEN1 - SEN5. Refer to the notes 6-10 below.</p>
<p>6. SEN 1 Displayed briefly when the AA550 is turned on and when it is operated manually. Auto does not work. No sensor pulse.</p>	<p>The sensor wires are disconnected or the red and black sensor wires are shorted together. AA550 will operate the windlass up and down but there will be no count displayed on the LCD. Check sensor wiring and installation. When fixed reset the AA550 to zero twice. The anchor must be docked. To reset to zero - press and hold the ON/OFF button. Release when the display shows 0.0.</p>
<p>7. SEN 2 Displayed briefly when the AA550 is turned on and when it is operated manually. Auto does not work. No sensor pulse.</p>	<p>The black sensor wire is shorted to ground. AA550 will operate the windlass up and down but there will be no count displayed on the LCD. Check sensor wiring and installation. When fixed reset the AA550 to zero twice. The anchor must be docked. To reset to zero - press and hold the ON/OFF button. Release when the display shows 0.0.</p>
<p>8. SEN 3 Displayed when the AA550 is operated manually. Auto does not work. No sensor pulse.</p>	<p>No signal from the sensor to the AA550. Either there is no magnet, the gap between the magnet and sensor is too big or the sensor signal is out of tune because of testing during installation. AA550 will operate the windlass up and down but there will be no count displayed on the LCD. Try resetting the AA550 by running the windlass up and down for 10-15 seconds. If the message still appears check the magnet and the gap and alignment between the magnet and sensor. Check sensor wiring and installation and check for damage to the sensor and magnet. When fixed reset the AA550 as above. To reset manually the anchor must be docked and the AA550 reset to zero twice. To reset to zero - press and hold the ON/OFF button. Release when the display shows 0.0.</p>

<p>9. SEN 4 Displayed when the AA550 is operated manually. The sensor indicator does pulse. Auto does not work.</p>	<p>The sensor is too close if running rope/chain or the windlass has been run without rode. AA550 will operate the windlass up and down but the count will not be accurate. Try resetting the AA550 by running the windlass up and down for 10-15 seconds. If the message still appears make sure you have the correct calibration setting for the windlass and rode. Check the magnet and sensor are aligned, the sensor is in the correct quartile and the gap between the sensor and magnet is correct. Check for loose wiring from the sensor to the AA550. When fixed reset the AA550 as above. To reset manually, the anchor must be docked and the AA550 reset to zero twice. To reset to zero - press and hold the ON/OFF button. Release when the display shows 0.0. the display shows 0.0.</p>
<p>10. SEN 5 Displayed during retrieval. The sensor indicator does pulse. Auto does not work.</p>	<p>The AA550 has not detected the change from rope to chain. Use Manual Up to complete retrieval. The count displayed will not be accurate. Check for rope slippage and that the rope and chain are the correct size for the chainwheel. Check that the sensor is in the correct quartile. When fixed reset the AA550 to zero. The anchor must be docked. To reset to zero - press and hold the ON/OFF button. Release when the display shows 0.0.</p>
<p>11. SoL oL Displayed when the Up or Down button is pressed. The windlass may operate for a short period and then stop.</p>	<p>The solenoids could be exceeding the maximum 4 Amps or a solenoid wire is shorted to ground. The AA550 is designed to turn the solenoids off if these events occur. Check the solenoids and the wiring and fix as necessary.</p>
<p>12. SoL uP or SoL dn Displayed briefly when the AA550 is turned on. The AA550 will not operate the windlass.</p>	<p>SoL uP - The Up (orange) wire is not connected to the solenoid. SoL dn - The Down (yellow) wire is not connected to the solenoid. These messages also appear if the up or down button is pressed on the AA550 when the windlass is already in operation using a deck switch. Diodes or interlock devices between the AA550 and the solenoid will also cause these messages. The AA550 has internal diode protection. External diodes will cause the system to fail.</p>
<p>13. AA550 will not turn on or turns off.</p>	<p>Check battery connections, polarity and voltage. The voltage to the AA550 can be checked by turning it off and holding the Down button. The voltage is displayed on the LCD. See page 7 for minimum voltages. Check fuses and wiring and for the Lo Pr diagnostic message. Refer note 3 above.</p>
<p>14. AA550 will not operate the windlass.</p>	<p>Check if the safety lock is on - the LCD will display LoC. Refer note 2 above. Check voltages at the battery and the AA550. The LCD will display Lo Pr. Refer note 3 above. Check wiring for loose connections to the solenoids. The LCD will display SoL Up or SoL dn if the wires are disconnected. Refer note 12 above. Check that the windlass is not already in operation using the deck switch or remote control. Check the total rode on board (Calibration 3 - Operation Manual Pg 4) is not set to OFF.</p>
<p>15. AA550 will operate the windlass manually but Auto function does not work</p>	<p>Check the rode to be released is not set to zero. The LCD will display OFF. See note 4 above. Use the AA550 manually and check for specific diagnostic messages SEN or LoAd (See notes 1 and 5-10 above).</p>
<p>16. Windlass rotates down when the Up button is pressed and up when the Down button is pressed.</p>	<p>The motor or solenoid wiring is reversed. Change the wiring and check the direction of the windlass rotation.</p>
<p>17. The windlass does not stop exactly at the preset point.</p>	<p>This is not a fault. Stopping is accurate to +1 chainwheel revolution. The chainwheel may run on slightly with momentum.</p>
<p>18. AA550 counts when the windlass is not turning or counts erratically displaying a large number eg 8888.</p>	<p>The sensor could be damaged, incorrect cable may be fitted, or the AA550 may have been subject to external interference - RF or electrical. Check that the sensor cable is not damaged and that the cable fitted is Beldon 9501 or equivalent, 2 core, tinned, copper, screened, as specified in the instructions. Check for external interference on the boat eg damaged or loose RF cables or aerials or other instruments that may not be working correctly or have been damaged by electrical interference including lightning.</p>
<p>19. AA550 beeps when it is turned off or locked.</p>	<p>Anchor rode is running through the windlass. Check if the windlass is being operated using the deck switches or a remote control. If not, check the windlass and anchor is secured.</p>
<p>20. The count pauses during retrieval.</p>	<p>If the sensor indicator is pulsing this is not a fault. The rode is changing from rope to chain.</p>