Fitness check of a DL2 sensor

SENSOR Serial number: …………………………………….. ZZZ-07007 serial number: ……………………………

Vessel name: ……………………………………. Type (DL2SG, DL2ST, DL2SW, DL2SE, DL2SDR): ………………………

Superoffice SKIPPER ID number: …………………….. Rambase CDV number: ………………………………..

To check if the sensor is working there are 3 tests to perform.

1. **Self test on the DL2 electronic unit.**

In Config -> Diagnostics, press self test. Once the results are in place , press the Skipper icon next to the sensor test. 

Take a picture of the results.

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| --- | --- |
|  | Fail    Failed communication to or from sensor |
| Pass    Communication to and from sensor OK |

If not passed, press ‘Hide Self-test’ and check if there is any data on the live sensor left hand column.

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|  | If not working -.- |

move to test 2

1. **Live sensor test**

Check if there are any messages being received from the sensor.

Using a volt meter check the voltages on the sensor connector J3 pin 5 and 6 ,

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| --- | --- | --- |
| Pin numbers (expected result) | Result |  |
| 5,6 (21+V) |  |
| 2,4 (1.6-2.5V pulsing only on startup |  |
| 1,3 2-3V (pulsing at 2 Hz) |  |

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| If you have an NMEA reader, try this on pins 1/3 look for PSKPDAT messages |

1. Remove the plug from the JB unit and measure the resistance on the pairs (Measure Resistance)

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| --- | --- | --- | --- | --- |
| Pin number | Cable colours  old sensor | Cable colours  New sensor (feb:22) | Expected result | Result |
| 5,6 - Power to Sensor | Green, (brown/green) | Red, Black | Approx 14k - 15k |  |
| 2,4 - Rx from Sensor | Green, (Blue/green) | Blue, White/blue | >10Mohm |  |
| 1,3 – Tx to Sensor | Violet, (Blue/violet) | Brown, White/brown | 120-125 ohm |  |

1. Live sensor test at junction box (Measure Voltage) same as test 2

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| --- | --- | --- | --- |
| Cable colours  old sensor | Cable colours  New sensor (feb:22) | Expected | Result |
| Green, (brown/green) | Red, Black | 20+ V |  |
| Green, (Blue/green) | Blue, White/blue | 2-3V pulsing |  |
| Violet, (Blue/violet) | Brown, White/brown | 3V (pulsing only on startup |  |

Diagram

Description automatically generated

1. Inspection of the sensor

If possible, lift the sensor from its valve and inspect the front face for growth, damage or deformity.

Take a picture of the front of the transducer.

When the sensor is working it may be possible to see a faint LED on the side at the bottom and top of the sensor.