

Failure of STW value on DL850 270kHz

Symptom:

The speed log continuously or occasionally loses STW when normal sailing or alongside.

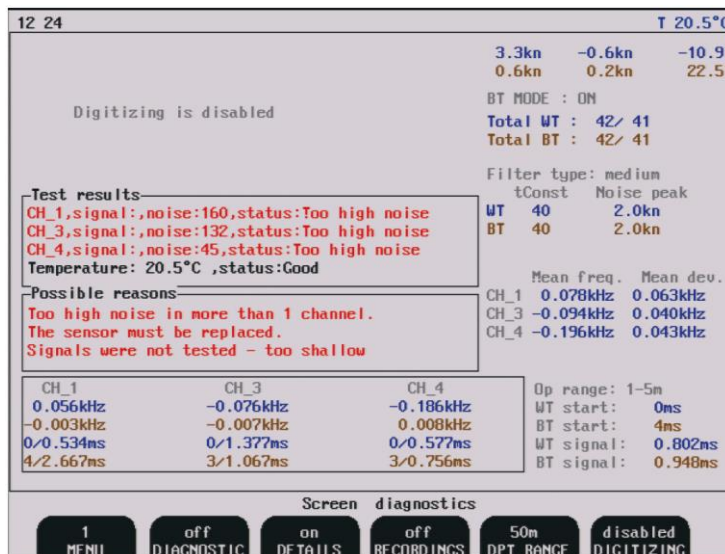
Possible cause:

One or more of the 3 acoustic beams is noisy due to internal oscillation in the sensor.

How to diagnose 1:

Effectuated sensors will have periods where a high frequency oscillation is present on one or more receiver channels. When this happens a signal of around 10MHz can be measured (with a scope) on the effected receiver channel on connector J503 in the transceiver cabinet DL850T27-SB.

- Install software 4.04.01 or later
- Run diagnostic test on screen diagnostics when the failure is occurring
- Check the test results for error 'Too high noise'



How to diagnose 2:

By “recordings” in “Screen diagnostics”. This recording will store the received signals to the internal “compact flash memory card”. At a time of error press “recordings” to on. Make the recording for about 1 - 2 hours. Then set back to”recordings off”

Open Display unit door. Switch off main power.



Take out Compact Flash (CF) memory card. Insert it into a PC CF card reader.

Goto folder DL_REC

<input checked="" type="checkbox"/>	DL_REC	30/01/2017 20:49	File folder	
<input type="checkbox"/>	040303.850	04/08/2008 02:57	850 File	194 KB
<input type="checkbox"/>	BOOTLOAD	04/08/2008 02:57	Application	9 KB
<input type="checkbox"/>	HIMEM.SYS	04/08/2008 02:56	System file	33 KB
<input type="checkbox"/>	SMARTDRV	04/08/2008 02:56	Application	44 KB
<input type="checkbox"/>	STARTUP	04/08/2008 02:56	Application	182 KB

In this folder copy the recorded file with todays date

Send by mail to support@skipper.no together with a photo of “Screen status” and “Screen diagnostics”.

How to fix :

The reason for the oscillation is the design of electronics inside the sensor. The oscillation most often is triggered by external factors like:

- shortening of the cable
- Water intrusion into the cable (May happen during sensor replacement by diver)
- Other instability

Improvement of sensor electronics are made in the sensors serial numbers from 181132. So this will probably only happen to sensors serial number <181132.

If 'Too high noise' on 2 or 3 channels, or if the noise moves from channel to channel -The sensor must be replaced with a sensor with SN >181132 (manufactured November 2018 or later)

If repeatable tests are showing only one channel failing it is possible to temporarily use only 2 channels for speed log measurements. See Appendix 5 “Beam filter” in the operation manual for sw ver 4.04.01 or higher for procedure.