

DOCKET NO. **SA- 516**

EXHIBIT NO. **12-C**

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C**

**Test Report
Number: 03-RPT-0031
Underwater Acoustic Locator Beacon (CVR)
Dukane Corporation**

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TEST REPORT
NUMBER: 03-RPT-0031
DATE: January 07, 1997

TEST REPORT
UNDERWATER ACOUSTIC BEACON
N15F210B 15996

Dukane Corporation
Seacom Division
2900 Dukane Drive
St. Charles IL 60174


Prepared By:

Ken Jones



Approved By:

Ken D. Neltner



TEST REPORT

LOCATION:

Dukane Corporation
Seacom Division
St. Charles IL

TEST CONDUCTED BY:

Ken Jones
Avionics Technician
Seacom Division

EQUIPMENT TESTED:

N15F210B Acoustic Beacon
S/N 15996

REASON FOR TEST:

Beacon S/N 15996 manufactured May 21, 1979 returned for analysis by Mr. Cash of the NTSB for post test-crash testing. Trans World Airlines ULB.

CONDITION UPON RECEIPT:

Received ULB installed on the mounting kit assembly. Beacon received intact. Cover plate on the mounting kit assembly is bent outward, mounting kit assembly has some nicks on the bottom front of the assembly. ULB is wedged inside the mounting kit assembly, there is some black plastic wedged in between the ULB & mounting kit assembly. ULB has a small nick on the outside of the case assembly.

OPERATING PARAMETERS AS RECEIVED:

The ULB was placed in the temperature chamber overnight @ zero degrees C. A tank test was performed with the following results:

Frequency	48.3kHz
Pulse Width	6.0msec output varied as the ULB was tested.
Pulse Time	660msec
Average Radial Output	412 dynes/cm sq rms
Axial Total	98.3%
Axial 1 Power Average	611.4 dynes/cm sq rms
Axial 2 Power Average	601.2 dynes/cm sq rms

VISUAL INSPECTION (INTERNAL):

The Battery installed on this unit was a DATASONICS, P/N B362-04016A. There was an extra battery cushion inside the ULB.

Performed the following test on the ULB:

- Actual Battery Voltage - 9.47 Vdc measured.
- Actual Ion - 60 mA, Ioff - 0.2 uA
- Ring Sweep - OK (52.182 Khz)
- Measured the Ring Capacitance - 1970 pF (Nominal 4800 pF).
- Measured X-Former secondary L - 2.47 mH
- Measured outside trim Capacitor - 687 pF (Marked as 680 pF).

Pulled the Module from the ULB. The Inside Ring inspection showed no signs of cracks or delamination of the Ring Tab. Placed the Ring assembly in the Temperature chamber @ zero degrees C for 16 hours. Measured the Ring Capacitance - 590 pF.

CONCLUSION:

By the above test results, it appears as if the ring is pulling away from the ring tab. This would cause a high output frequency. Aging can be a factor that can cause this separation of the ring. The age of this ULB was 17 Years old.