March 19, 2012

Notice of Escape

Customer: The Boeing Company
Addressed To: Boeing Procurement
Model: 1C1000-1C-2090, Part Number 1-002-0102-2090, Boeing SCD S282T004-30
Serial #'s: CJ008170 - CJ008228, CJ008230 – CJ008254 (83 Units Total)

Complaint:
It has been discovered that units stated above have not received the complete cycles of E.S.S. (Environmental Stress Screening) testing as required by the ATP. The ATP requires 3 complete cycles and it has been determined that of those 3 cycles, only 1 was accomplished properly. The correct procedure exposes the unit to temperature swings of -40º c and +71º c. In some tests it was determined that the unit was only exposed to approximately half the required temperatures (-25ºc and +35ºc) in 2 of the 3 cycles.

AI² initial findings:
During a product review with Boeing Supplier Quality Representative, Robert Gambale, it was observed that the E.S.S. chamber had been erratic and not performing as expected. Further investigation had showed that on February 2, 2012 the controller that controls the E.S.S. Chamber was replaced with a new model. The Thermotron 4800 Controller which was being used was obsolete and no longer supported. A Tidal Engineering "Synergy Series" controller was procured and installed in its place. It was believed that this would work with the existing program and that no software change was necessary.

A thorough validation of the change was not accomplished and the result was inconsistent testing being performed.

A review of the 626 units produced in 2011showed that 10 had in-process E.S.S. failures (1.5%).

Corrective Action:
The software program that allows the computer to communicate with the E.S.S. Chamber has been modified to correct the error and has been run 50 times to ensure the non conformity no longer exists. Because the units had passed at least 1 correct E.S.S. cycle, Avionic Instruments does not believe these units are at risk of failure. They will be monitored closely in the field, and if returned for any reason will be tested 100% to the correct parameters.

A copy of this Escape has been sent to the FAA (MIDO 45) as well as posted on our company website (www.avionicinstruments.com) for operators and carriers information.