



Autopilot Disconnect – Events

Background

- Events of AP Disconnect reported by some Operators.

Root Cause Analysis

- **Vibrations** confirmed as the first potential contributor factor to the events:
 - ✓ Many field occurrences have been fixed by improving the vibration levels of AHRS, with local solutions or BT139-414 implementation.
 - ✓ Aircraft maintenance deemed important in minimizing events:
 - ✓ Passive Vibration Masses tuning to minimize 5/Rev vibration
 - ✓ AHRS alignment

- **AFCS Software response in specific conditions:**

1. asynchronous sampling in case of vibrations
2. asynchronous sampling in specific aircraft abrupt maneuvers combined with some extreme external conditions
3. single AP disconnect due to momentary loss (one or two frames) of Avionic Standard Communication Bus data validity