Hybrid Inspection and Assembly Process Related Challenges

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When it comes to inspection and failure analysis, we often refer to Performance specifications in MIL-PRF-38534 and visual inspection criteria defined in MIL-STD-883 TM2017. Conformance and failure criteria depends upon which level the hybrid assembly was built to and often times with custom and commercial grade hybrids this can be a challenge. Understanding how the sub-assembly is utilized at the system level and what the deployed environmental requirements are, aids in interpreting how well the hybrid will perform in the intended environment. We will review several examples design assembly and process non-conformances which resulted in hybrid and next higher assembly failures and how these issues were addressed.