

Countering Counterfeit Parts through Source Traceability

The aerospace industry supply chain faces a daunting challenge due to the widespread and growing problem of counterfeit parts. This problem has been exacerbated by the proliferation of the practice known as “source delegation” or “self-regulation”, which places the responsibility for supporting documentation solely in the hands of suppliers. Recent trends regarding the proliferation of counterfeit parts illustrate the inherent risks in not securing supply chain traceability.

In a recent document published by BAE concerning counterfeit parts (www.aerospac.com/counterfeit.pdf) it was stated that the suppliers “could not provide certificates of conformance or acquisition traceability provided by the original manufacturer and all previous distributors.” The paper also stated that “the original component manufacturer no longer had production records to support our investigations.” And in at least one case, original component manufacturer data contradicted the distributor’s test report data.

“The Impact of Uncertified Parts in Military Applications” (www.aerospac.com/psmc.ppt) presentation was also recently released by Rochester Electronics. This illustration states that “It’s about pedigree, of the part and the die that is in the part,” and “It’s about traceability back to the original manufacturer.” There have been several noteworthy incidents regarding falsified aerospace documentation involving altered documentation and resulting in jail time for the perpetrators.

Despite the inherent and demonstrated risks, the aerospace industry continues to allow suppliers to maintain sole responsibility for their own manufacturing records. Previously, inspection and record retention autonomy was reserved for larger, “2nd tier” suppliers, who are larger, more stable and fewer in number than the smaller sub-tiers. However, many of these 2nd tier suppliers have begun to allow 3rd and 4th tier suppliers (many of whom are very small) to maintain their own records. There are no standards in place to guarantee their future access.

This practice has diminished the likelihood that vital, unaltered documentation will be available from the domestic supply chain. However, the expansion of “globalization” imposes even greater risks regarding data accessibility.

It is recommended that the following steps be immediately taken to preserve the access to and the integrity of supply chain manufacturing documentation/data:

1. Employ an industry-wide supply chain documentation database for critical safety items.
2. Assure the Origin of all csi documentation through “electronic source certification.”
3. Guarantee “life of aircraft” access for all csi documentation.
4. Establish a standard for the retention and access of all csi documentation.

The FAA, in its “Challenge 2000” publication of 1996, identified the problem over ten years ago, but has failed to address it. DoD has recognized the need for enhanced traceability in its latest release of its Defense Acquisition Guidebook, chapter 5. The following link to DAG5, submitted to DoD by the undersigned, specifically addresses the issue: http://www.aerospac.com/aerospac_files/page715.htm.

Continued neglect of this trend impacts public safety, as well as national defense, and borders on gross negligence. A joint government-industry collaborative effort should be undertaken to preserve and protect supply chain manufacturing records, which are increasingly left solely in the hands of small, widely-distributed suppliers.

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