



Log Number: NDT-TS-2020-003

Issue Date: 24-April-2020

Title: Non Destructive Inspection (NDI) - Notice of Escapement (NoE) Reduction

Reason: Information Sharing

SME / Contact: David Cohn

Please share this tip sheet with your suppliers.

In February 2020, Boeing executive leadership sponsored a team to investigate NoEs related to nondestructive inspection (NDI). The team analyzed NoEs from BCA, BDS, BGS, as well customer Suspect Discrepancy Reports (SDR), over the last three years. The data shows missed/incorrect penetrant inspection accounts for approximately 60% of the NOEs as follows:

- Missing NDI requirements in supplier planning
 - Missing NDI requirements in supplier planning based on material changes or alternate materials
 - Missing NDI requirements in supplier planning based on misinterpretation of BAC5300-2
- Missing pre-penetrant etch requirements in supplier / sub-tier / processor planning
- Planning penetrant requirements in the wrong manufacturing sequence (e.g. prior to shotpeen)
- Failing to flow down NDI requirements to sub-tiers/processors
- Flowing down unclear NDI requirements to sub-tiers/processors

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What can I do to eliminate NDI nonconformances and NoE's?

- Ensure that NDI requirements are identified and consumed in supplier planning and purchasing documentation
 - Identify NDI inspection requirements for specific product types (e.g. fasteners, tube assemblies, weld assemblies, formed parts, etc.)
 - Understand pre-penetrant etch requirements
 - Understand correct sequence in the manufacturing process to conduct penetrant inspection
 - Make sure NDI requirements (including pre-penetrant etch, as applicable), are clearly and correctly consumed into supplier planning
- Ensure D1-4426 flowdown requirements are included in procurement processes
 - Review D1-4426 User Instructions section 5.1.2.1 and 7.3.1 for contract flowdown and section 7.3.3 for incorporation of engineering requirements
 - Understand D1-4426 Appendix D Purchase Order flowdown requirements and require all necessary information and relevant technical data (such as aircraft model, material condition, and pre/post processing requirements) to be included on purchase orders
 - Use Appendix D Purchase Order flowdown requirements as a checklist tool (attached) to ensure all requirements are included on purchase orders



**D1-4426 Appendix
D**

It is critical to have robust requirements review, planning and procurement processes in place to ensure NDI requirements are captured, implemented into supplier planning, and contractually flowed to sub-tier suppliers and processors.

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