



[REDACTED]
Harrison, Ohio 45030
[REDACTED]

February, 24, 2017

Federal Aviation Administration
Flight Standards District Office
Mr. Andrew Porter
4358 Ferguson Drive
Cincinnati, Ohio 45245

Dear Andrew Porter,

This letter serves as a formal response to the remaining questions surrounding the investigation of PHI Bell 407- M250 C47 Diffuser Vane Assembly. In our investigation to determine root cause, it was found that the machinist went off the approved repair process without approval. Aero Propulsion has a three tier approval process requiring engineering, quality, and management to review and approve any fixture, tooling, drawing, or process before it is performed. Since this was not what was done, the primary root cause was the machinist's rogue actions.

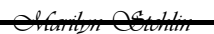
A secondary cause was determined as the inability to determine lack of braze through UT inspection. If you recall the UT inspection performed on this diffuser was determined as conforming. Visually, it was not possible for the inspectors to see what was done to this part, therefore with an acceptable dimensional and UT inspection, the part was deemed as airworthy.

An immediate corrective action was to inactivate the dimensional shim repair at Aero Propulsion Support. This repair has remained inactive to this day. We have also ensured that the three tier approval process is being performed for any and every process performed at Aero Propulsion and that all necessary personnel have been trained in this method.

Due to the method in which Mr. Dalton performed the repair of this diffuser, it would have been impossible for our quality team to identify this in the final dimensional inspection. Our safeguard would have been the braze flaw being identified during the UT inspection which it was not. As stated earlier, since the part passed dimensional and UT inspection requirements, it was certified as airworthy.

I hope this has offered some clarification and if there are further questions, please feel free to contact me.

Sincerely,



Quality/ Engineering Manager
Aero Propulsion Support, Inc.
Harrison, Ohio
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