



RECORD OF E-MAIL CORRESPONDENCE

**James M. Bledsoe
Air Safety Investigator
Western Pacific Region**

**Date: 1/20/2022
Person Contacted: Brannon Mayer, Cirrus
NTSB Accident Number: WPR21LA145, Marana AZ**

Narrative:

The following is a synopsis of the information provided by Mr. Brannon Mayer, in an e-mail correspondence. He stated:

We just started to draft that report.

The Executive Summary will highlight all the research done between Cirrus/Hanley/Autoliv and document the testing and data used to identify the initial “Lot” and then the later “Batch” that is being replaced in the field.

Although it may take a while, you will get a copy for sure.

We will finetune these numbers and correct any data points, but for now here’s a quick review on this issue with reference to the accident squib and the Lot of squibs/Batch of B1 it came from.

1. The accident squib “Lot” included 100 squibs that were manufactured by Hanley and shipped to Vulcan.
 - a. Vulcan ships 75 rockets/squibs to Cirrus at a time so the remaining 25 were in another shipment
 - b. Thus, the initial “bookends” included 150 squibs (two rocket/squib shipments of 75 each)
 - c. The 150 was eventually trimmed down (randomly selected) to 25 for ease of sampling the field
 - d. The 25 was dropped to 23 as two of them were in Europe...this just simplified things further.
2. We released a SB to retrieve/sample the 23 from the field.

- a. We obtained X-Rays/CT's and conducting electrical testing of the 23 and comparing the "visual" composition (or appearance) of the B1 in the imaging.
 - b. We then decided to capture a larger sample size from our service center network
 - i. We wanted a sample of 30 each from the field (Old/Mid/new aged squibs) (90 at first, but later increased to 120)
3. Testing of this Old/Mid/New sample group revealed a slight degradation in the B1 with respect to age.
 - a. The testing showed that the bridge wire would fire but the B1 would take much longer (in milliseconds) to ignite
 - b. Additionally, CT's of this larger group revealed "visual" similarities (or appearance) of the B1 noted in the first 23
 - i. We identified that the "visual" (appearance) of the Lot (100) had extended into the whole "Batch" of the B1 (the mixture used to produce several lots...identified as F1, F2, F3, F4 and F5)
4. This is known as the "Batch of B1."
 - a. This Batch produced 2,400+ squibs, most of which went to the US Army, only 500 squibs were earmarked/shipped to Vulcan/Cirrus.
 - i. 24 were LAT's (tested at Hanley and not shipped)
 - ii. 2 were LAT's (tested at Vulcan and not shipped)
 - iii. 34 SF50 (Jet squibs also tested at Vulcan during development and not shipped)
 - iv. 12 SR2X squibs were tested by Cirrus
 - v. This left 428 that were shipped to the field (please note that some of these were already replaced in the earlier sampling)
5. The Latest SB (see attached SB2X-95-27R2) to replace these 428+/- squibs from the Batch of B1, was released on Jun 9, 2021, with R2 released n Dec 10, 2021.

////NOTHING FOLLOWS////