Lockheed
Aeronautical Systems Company
A Division of Lockheed Corporation
Marietta, Georgia 30063

In reply refer to:
SE 811-94

08 September 94

National Transportation Safety Board (NTSB)
Los Angeles Field Office
1515 W. 190th St,. Suite 555
Gardena, CA 90428

Subject: **LASC SUPPORT OF C-130A MAJOR MISHAP INVESTIGATION**

Reference: NTSB IIC Requests/Action Items for LASC, dated 8/12/94

Dear Mr. Crispin:

We have reviewed your referenced request for technical assistance and offer the following information and suggestions to help you get the data and assistance you need for the investigation. The C-130A background information, Attachment 1, should help you understand the airplane's history. Attachment 2 contains our detailed response to each of the requests you made.

The Hercules Program assures optimum safety of its products and services with immediate response to all issues affecting our operators and equipment. However the full responsibility for the C-130A is with Warner Robins Air Logistics Center (WR-ALC). Since 1986, when it became known that USAF C-130A aircraft were being turned over to foreign military, and domestic and foreign civil operators, we have not been party to changes, modifications, improvements, and/or retrofits incorporated in any of the C-130A airplanes. This necessarily limits, and in some cases precludes, our comment on or critique of current configurations.

LASC documented our concerns about the adequacy of maintenance programs for the C-130A and the airplane's airworthiness in earlier correspondence with both the Federal Aviation Administration and WR-ALC. Those concerns, particularly the necessity for a periodic depot level inspection program, are still valid.

The system program manager at WR-ALC should be able to address your questions and concerns about the C-130A. We will continue to support your investigation as much as we can within the limitations of our existing information on the airplane. Please call me or the safety investigators with whom you have been working if we can help you further.

Sincerely,

LOCKHEED AERONAUTICAL SYSTEMS COMPANY

[redacted]

H. L. Burnette
Director - Hercules Programs

HLB/LOM/HL:pac

Attachments (2)

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Attachment (2)
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LASC RESPONSES TO SPECIFIC

NTSB IIC REQUESTS, 8/12/94

Request 1: Provide the NTSB IIC a copy of the "Hercules Bleed Air Duct Fault Hazard Analysis", LG92SER0004, Rev. A, February 1993.

Response 1: This report applies to the C-130E and C-130H models only. We do not know if WR-ALC has any similar information about the C-130A, but they would be the best source of data concerning this and any system on the airplane.

Request 2: Provide the NTSB a report of any Hercules Product Safety Board oversight actions resulting from this mishap.

Response 2: Product and System Safety Engineering presented the mishap information, including NTSB requests for assistance, to the PSB on 26 Aug 94. The board's only interim recommendation was to consider removing the C-130A auxiliary tanks from the airplanes not using them for additional fuel capacity. LASC will report further follow-up action to the NTSB as it occurs.

Request 3: Provide a copy of specifications and criteria used in the original design of the C-130A which address lightning protection.

Response 3: LASC is searching historical files for the requested information and will advise; however, WR-ALC is the best source for this and all configuration/modification information on the airplane.

Request 4: Conduct an independent engineering review of the FAA-approved C-130A aircraft inspection and maintenance plan currently used by the operator.

Response 4: In general, LASC would not agree with any plan that did not include required periodic depot level (PDM) structural integrity inspections and maintenance. Although we have the technical expertise to review this kind of document, we hesitate to attempt such an evaluation without the necessary data on airplane configuration, maintenance history, and current usage. Were we to get this information, we still would be able to render only an opinion, since our support experience with the airplane is not current.

Request 5: Review and comment on the technical and safety risks of the USAF TCTO installation of the center wing auxiliary tank system in the C-130A airplane.

Response 5: Without the complete engineering information described above, LASC hesitates to assess the risks associated with the modification. We concur with the general observations of the LASC technical assistance team members at the site and recommend you ask WR-ALC to provide the requested assessment.

Request 6: Review available data to determine whether the C-130A could be using a fuel tank boost pump and housing similar to the one involved in a C-141B fuel tank fire mishap.

Response 6: LASC will review and advise. However, we suggest you consult WR-ALC on this issue, since they are responsible for USAF engineering on both the C-130A and C-141B airplanes.

Attachment (1)
SE 811-94

LASC SUPPORT OF C-130A AIRCRAFT

BACKGROUND INFORMATION

In January 1987, LASC published an internal product support policy statement, anticipating requests for support of former USAF C-130A airplanes being placed in service by foreign military operators. The policy addressed spares support, technical support, maintenance training, flight training, technical data, engineering support, modifications, and depot maintenance. The essence of the policy was that the company's ability to support airplane systems was limited to those "standard" systems designed by Lockheed or whose design had been approved by Lockheed engineering. Support of "nonstandard" systems such as USAF or customer peculiar systems installed after delivery or without Lockheed engineering approval would be the responsibility of WR-ALC.

Since the policy began, LASC has reviewed it several times, the only change being an expansion of the policy to apply it to domestic C-130A commercial operators as well. There has been a series of correspondence and meetings since October 1989 concerning the critical issue of a credible standard maintenance program plan for this venerable airplane. Of paramount concern were the problems of continued airworthiness and a way to determine structural integrity. In August of 1993 Lockheed, at the request of WR-ALC, supported a meeting at the FAA in Washington. The purpose of this meeting was to discuss C-130A airworthiness with some of the C-130A civil operators. The position taken by WR-ALC, with which Lockheed Engineering concurred, was that a Periodic Depot Maintenance (PDM) plan be adopted using present USAF Technical Order (T.O.) procedures and time intervals, or establish a single maintenance/airworthiness commercial plan which would, with approval by the FAA, be required to maintain aircraft airworthiness. Since then Lockheed has not been involved in or supported the generation of any airworthiness plan other than provide the Lockheed maintenance plan outline used by Lockheed for FAA certified aircraft (L-100). We have both formally taken the position that, in concert with other criteria, any C-130A maintenance program must include periodic depot maintenance structural integrity inspections; otherwise, the airplane should not be considered airworthy.

Supporting documents from which we summarized this information are in the files at both the LASC Product and System Safety Engineering and LASC Airworthiness offices.