

DI-04-0756

A



U.S. OFFICE OF SPECIAL COUNSEL

1730 M Street, N.W., Suite 300
Washington, D.C. 20036-4505

4-991

The Special Counsel

March 3, 2004

The Honorable James G. Roche
Secretary
U.S. Department of the Air Force
1670 Air Force Pentagon
Washington, DC 20330-1000

Re: OSC File Nos. DI-04-0756

Dear Mr. Secretary:

The U.S. Office of Special Counsel is authorized by law to receive disclosures of information from federal employees alleging violations of law, rule or regulation, gross mismanagement, gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety. 5 U.S.C. §§ 1213(a) and (b). As Special Counsel, if I find, on the basis of the information disclosed, that there is a substantial likelihood that one of these conditions exists, I am required to advise the appropriate agency head of my findings, and the agency head is required to conduct an investigation of the allegations and prepare a report. 5 U.S.C. § 1213(c) and (g).

For the reasons set forth below, I have concluded that there is a substantial likelihood that information provided to the Office of Special Counsel by Mark Taylor, an Aerospace Engineer at the Department of the Air Force, Warner Robins Air Logistics Center (WRALC), Robins Air Force Base, Georgia (AFB Robins), discloses a substantial and specific danger to public safety arising out of actions by employees at WRALC.

On February 10, 2004, Mr. Taylor advised OSC that he no longer wished to pursue this matter through OSC, and requested to withdraw his disclosure. By letter dated March 2, 2004, we acknowledged Mr. Taylor's withdrawal from this matter. However, with respect to allegations involving an imminent danger to public health or safety, I am authorized to refer the information to the agency head for an investigation and report, despite such withdrawal, and may release the identity of the discloser of the information for that purpose. 5 U.S.C. § 1213(h). Accordingly, I am referring this information to you for an investigation of the allegations described below and a report of your findings within 60 days of your receipt of this letter.

The Information Disclosed

As noted, the relevant information was provided to the Office of Special Counsel (OSC) by Mark Taylor, an Aerospace Engineer at WRALC. Mr. Taylor has more than 25 years of experience in aerospace engineering, and has been employed by WRALC for 7 years. In his position, he serves as a technical lead, and is responsible for reviewing and recommending the

The Honorable James G. Roche

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disposition of requests for maintenance and repairs to the C-5A Galaxy aircraft. Mr. Taylor alleges that his supervisors, Albert Lowas, Chief, C-5 Structural Engineering Branch, and Scott Vandersall, then-Chief, C-5 Airlift Directorate, approved a request for repair to a main engine component of a C-5A Galaxy aircraft which was improper and jeopardizes the flight safety of that aircraft.

Specifically, Mr. Taylor alleges that on March 11, 2003, field mechanics assigned to the C-5A Galaxy aircraft with tail number 70-0465 submitted a "107 Request" to deviate from the Technical Order to repair the aft engine mount spherical bearing for the main engine pylon. See 107 Request, Attachment 1. Mr. Jonathan Despiau, an Aerospace Engineer training under Mr. Taylor, received the request and presented it to Mr. Taylor for assistance in reviewing and recommending a disposition. In the request, the mechanics sought approval to "turn down" the bearing to reduce its diameter so that it would fit into the modified engine mount bearing hole. The request indicates that a bearing was previously turned down to fit this bearing hole, but it had developed corrosion and needed replacement. According to Mr. Taylor, the Technical Order for the bearing mount requires "rounding up" the bearing hole to fit the bearing, rather than turning or shaving down the bearing. However, the request indicates that the mechanics did not have the capability to round up the hole to fit the bearing, as specified.

Mr. Taylor has explained that this bearing serves as one of three points that hold the main engine to the pylon. He asserts that it is critical that the bearing fit properly, and that any deviation from a perfect sphere on the bearing increases the possibility of catastrophic failure of the part. He states that if the bearing were to fail, the engine would lose one third of its holding capacity, which could result in catastrophic failure of the aircraft.

Upon reviewing the Technical Order and drawings for the bearing, Mr. Taylor questioned whether turning down the bearing was appropriate or consistent with industry-wide standards. He contacted the WRALC Technological Industries Office (TI), which advised against turning down the bearing and stated that they would only recommend following the procedures specified in the Technical Order. In addition, under Mr. Taylor's supervision, Mr. Despiau contacted the manufacturer of the bearing, Southwest Products, Inc., to ascertain whether the manufacturer recommended turning down the bearing. Mr. Taylor states that an engineer for the manufacturer advised Mr. Despiau that they could not recommend turning down the bearing and would not warrant a bearing with such a modification, because it would decrease the strength of the part and there would be no way to ensure quality control.

According to Mr. Taylor, he advised Mr. Lowas that TI and the manufacturer warned against turning down the bearing, that a WRALC field team was available to perform the repair to the bearing hole in accordance with the Technical Order, and that he did not recommend approval of the request. However, Mr. Taylor alleges that on March 13, 2003, Mr. Lowas, under the supervision of Mr. Vandersall, approved the request, despite the warnings and without conducting any risk assessment. See Approval Memorandum, Attachment 2. Mr. Taylor states that a risk assessment was required in this instance, because the modification to the bearing involved a "safety in flight" issue on a primary structure of the aircraft.

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Mr. Taylor alleges that, upon approval of the request, the field mechanics performed the turn-down modification to the bearing. Subsequently, Mr. Taylor advised WRALC management of the circumstances surrounding the disposition of this request. However, he states that management failed to take steps to investigate or address the problem. Mr. Taylor has advised OSC that this aircraft is currently in service.

The Special Counsel's Findings

As noted above, if I find that there is a substantial likelihood that information disclosed to my office reveals a violation of law, rule or regulation, gross mismanagement, an abuse of authority or a substantial and specific danger to public health or safety, I am required to send that information to the appropriate agency head for an investigation and report. 5 U.S.C. § 1213. Based on the information disclosed by the whistleblower, I have concluded that there is a substantial likelihood that the whistleblower has disclosed a substantial and specific danger to public safety arising out of the actions of employees at WRALC.

Accordingly, I am referring this information to you for an investigation of the allegations described above and a report of your findings within 60 days of your receipt of this letter. By law, the report must be reviewed and signed by you personally. Should you delegate your authority to review and sign the report to the Inspector General, or any other official, the delegation must be specifically stated and must include the authority to take the actions necessary under 5 U.S.C. § 1213(d)(5). Without this information, the report may be found deficient. The requirements of the report are set forth at 5 U.S.C. § 1213(c) and (d). A summary of § 1213(d) is enclosed.

In the event it is not possible to report on the matter within the 60-day time limit, as the statute requires, you may request in writing an extension of time not to exceed 60 days. Please be advised that an extension of time will not be granted automatically, but only upon a showing of good cause. Accordingly, in the written request for an extension of time, please state specifically the reasons the additional time is needed. After making the determinations required by 5 U.S.C. § 1213(e)(2), copies of the report and any comments or recommendations by me will be sent to the President and the appropriate oversight committees in the Senate and House of Representatives. 5 U.S.C. § 1213(e)(3).

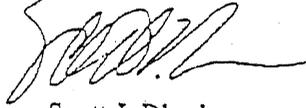
A copy of the report and any comments will be placed in a public file in accordance with 5 U.S.C. § 1219(a).

The Special Counsel

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Please refer to our file number in any correspondence on this matter. If you need further information, please contact Catherine A. McMullen, Chief, Disclosure Unit, at (202) 254-3604. I am also available for any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Bloch", with a long horizontal flourish extending to the right.

Scott J. Bloch

Enclosures

Enclosure

Requirements of 5 U.S.C. § 1213(d)

Any report required under subsection (c) shall be reviewed and signed by the head of the agency¹ and shall include:

- (1) a summary of the information with respect to which the investigation was initiated;
- (2) a description of the conduct of the investigation;
- (3) a summary of any evidence obtained from the investigation;
- (4) a listing of any violation or apparent violation of law, rule or regulation; and
- (5) a description of any action taken or planned as a result of the investigation, such as:
 - (A) changes in agency rules, regulations or practices;
 - (B) the restoration of any aggrieved employee;
 - (C) disciplinary action against any employee; and
 - (D) referral to the Attorney General of any evidence of criminal violation.

In addition, we are interested in learning of any dollar savings, or projected savings, and any management initiatives that may result from this review.

¹ Should you decide to delegate authority to another official to review and sign the report, your delegation must be specifically stated.



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

APR 09 2004

MEMORANDUM FOR HQ AFMC/DR

ATTN: COLONEL BECKY BEAMAN

FROM: AFMC/CC

SUBJECT: Commander Directed Investigation of the Allegations of Improper Repairs

1. Pursuant to my authority as a commander, a Commander Directed Investigation (CDI) is hereby convened. More specifically, this investigation will ascertain the facts concerning an allegation asserting a violation of law, rule or regulation, gross mismanagement, gross waste of funds, and substantial and specific danger to public health or safety. The allegation was made by Mr. Mark Taylor, an Aerospace Engineer, assigned to Warner Robins Air Logistics Center, Georgia. More specifically, the CDI will inquire into the following assertion:

"Mr. Albert Lowas, Chief, C-5 Structural Engineering Branch, and Mr. Scott Vandersall, then Chief, C-5 Airlift Division, approved the implementation of a deviation to established Technical Orders for repair to a main engine component of a C-5A by turning down an engine mount bearing which was improper and jeopardized the flight safety of that aircraft." [The term "turning down" means the bearing was made smaller, rather than making the hole, into which the bearing is mounted, bigger.]

2. This appointment letter is your authority to interview witnesses, take sworn testimony, and review all documents, files, and other matters relevant to your investigation, that are not otherwise privileged. You and other detailed members are relieved of all other duties until the CDI Report is completed. Should you determine there is a need for additional experts to serve as members of the CDI, coordinate with HQ AFMC/JA, which office is hereby delegated authority to appoint additional CDI advisors, as required.

3. Mr. Vincent A. Spanel, assigned to ASC/EN (787-3851), has been detailed to serve as a Technical Advisor to assist you in conducting the CDI.

4. IAW Air Force Instruction (AFI) 90-301, paragraph 1.23, this CDI is convened to gather, analyze and record relevant information about a matter of primary concern to command authorities. You will utilize AFI 90-301 for procedural and substantive guidance in completing your investigation and in compiling your investigative report.

5. Your report will include an Executive Summary and Summary of Facts. All witnesses, documents, records, and other evidence within the control of the Air Force, other than privileged information, will be made available to you. All witnesses who testify must do so under oath or

affirmation. Your report may be releasable to the public and therefore may not contain any privileged or Privacy Act protected information. Do not include recommendations for corrective or disciplinary action in your report. You and the other detailed CDI board members are prohibited from disclosing your findings, except to members of my staff, including HQ AFMC/JA, prior to my approval of the CDI report.

6. This matter started as a complaint lodged with the Office of Special Counsel (OSC) since it appeared to be viewed as a matter involving public safety. OSC sent the matter to AF/ILMY and that office in turn, tasked AFMC for action. AF/ILMY has a 30-day suspense tracking the matter. Thus, your investigation should begin as soon as possible and be completed NLT 26 Apr 04. Submit any request for extensions, additional advisors, or other matters concerning the CDI through HQ AFMC/JA. Submit your final report to HQ AFMC/JA for a legal review. That office will forward the completed report to me for review and approval.


GREGORY S. MARTIN
General, USAF
Commander

cc:

Colonel Becky Beaman (HQ AFMC/DR)
Mr. Vincent S. Spanel (ASC/ENFS)

DI-04-0756

B

Chronology of Events
concerning
OSC Case File Number DI-04-0756

Date	Event	Reference
11 Mar 03	107 Request #03-109 was submitted by Randy Thomas, Altus AFB, requesting approval to size down a bearing for use in a non-standard size engine mount. The 107 Request was assigned to Mr. Jonathan Despiau, Engineer, to research and recommend disposition.	- Tab A p6 (107 Request #03-109)
11 Mar 03	Mr. Despiau is a 2002 graduate of Polytechnic University in Puerto Rico, and professes to have no formal structures training. At the time when he received this task, Mr. Despiau had been working on C-5 aircraft for eight months, and he consulted with the man he called his "mentor," Mr. Taylor.	- Tab E (Despiau) Items 1-2
11 Mar 03	Mr. Taylor advised Mr. Despiau that the part in question is a primary structure.	- Tab E (Despiau) Item 2
12 Mar 03	Mr. Despiau contacted personnel at Altus AFB to request additional information regarding the proposed repair action. (According to the 107 Request comments record, he believed he spoke with Mr. Dennis Whardo.) Mr. Despiau reported that he was told that the personnel at Altus AFB had made this repair in this way many times in the past. Mr. Despiau reported that when he asked how the bearing was sized down, Mr. Whardo told him that they wedged the bearing into position and machined it down.	- Tab A pp 6-7 (107 Request #03-109) - Tab E (Despiau) Items 3-4
12-13 Mar 03	Mr. Despiau and Mr. Taylor went down to the Warner Robins Technical Industries Office, Bldg 169 at WR-ALC, to discuss the proposed repair with Mr. Walter Tanner, Master Machinist. Both Mr. Despiau and Mr. Taylor related that Mr. Tanner expressed concerns regarding difficulties adequately fixturing the part for successful machining, and recommended that the standard T.O. procedure be followed. Mr. Taylor also related that Mr. Tanner also expressed concerns that the resulting resized bearing would not meet the tight tolerances established for this part.	- Tab E (Despiau) Item 5 - Tab E (Taylor) Items 1b.-1c.
12-13 Mar 03	Mr. Despiau discussed the proposed repair and the advice given by Mr. Tanner with Mr. Vandersall and Mr. Lowas. Mr. Despiau related that they recommended he also contact Southwest Products, Inc, the vendor who manufactures the part, to get their recommendation.	- Tab E (Despiau) Item 6

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Date	Event	Reference
12-13 Mar 03	Mr. Despiau contacted Mr. Nicholas Nguyen, of Southwest Products, Inc. Mr. Despiau relates that Mr. Nguyen recommended following the T.O. procedure instead of sizing down the bearing, and that Mr. Nguyen said that sizing down the bearing would reduce the strength of the part. Mr. Despiau relates that Mr. Nguyen seemed to be most concerned about the quality control of the machining process. Mr. Despiau reported that when he asked if Southwest Products would make one part, to meet the need for this size item, Mr. Nguyen said he couldn't without drawings that had the dimensions desired for this unique part, which were not available.	- Tab E (Despiau) Item 7
12-13 Mar 03	Mr. Lowas reported that he had a conversation with someone at Altus AFB regarding this repair, and stated that he was told that Altus had appropriate tooling to use for machining the part. Mr. Lowas stated that he does not recall with whom he spoke, nor does he recall whether he placed the call or received it.	- Tab E (Lowas) p7
12-13 Mar 03	Mr. Despiau returned to Mr. Lowas to report the result of his conversation with Mr. Nguyen. At this point, Mr. Despiau says Mr. Lowas related that this repair had been done this way in the past, and WR was going to approve the request. Based on Mr. Lowas' guidance, Mr. Despiau stated that he returned to the 107 Request system and documented the results of the investigation to support authorizing the repair, based on it having been done a couple of times in the past. Mr. Despiau says he did not include the recommendations against authorizing the repair that he had received.	- Tab E (Despiau) Items 9-10
13 Mar 03	Mr. Lowas signed a memorandum approving the requested repair action.	- Tab A p8 (WR-ALC memo)
20 Mar 03	In a conversation, Mr. Taylor mentioned to Mr. Despiau that he was still concerned about whether the repair jeopardized safety of flight. Mr. Despiau documented his concerns regarding the repair, specifically stating that he did not agree with the disposition.	- Tab E (Despiau) Item 10 and p4
24 Mar 03	Mr. Taylor advised Mr. Vandersall, via e-mail, that he recommended against approving this request, and that deviation from the TO requirements was not warranted on this flight-critical item.	- Tab E (Taylor) Item 3 - Tab D, 03-109 info package p2
14 Apr 04	In response to a question during this CDI, Mr. Taylor stated that he has been unable to find any documentation reflecting an engineering analysis of the configuration resulting from this repair action indicating an assessment of the risks posed by the configuration.	- Tab E (Taylor) Item 1e.

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Date	Event	Reference
14 Apr 04	When asked to do so in support of this CDI, Mr. Whardo provided pictures of the fixture used by Altus AFB to size down the bearing.	- Tab E (Whardo) Item 4
15 Apr 04	When shown pictures of the Altus AFB fixture, Mr. Tanner stated that he believed it would be possible to properly hold the part for machining using such a fixture. Without actually examining the fixture first-hand, he said, he couldn't say for certain.	- Tab C p3
23 Apr 04	When asked whether he knew of the fixture when he approved the requested repair in March 2003, Mr. Lowas said he was aware of the fixture. When asked whether he would be surprised to hear that neither Mr. Taylor nor Mr. Despiau were aware of the fixture, Mr. Lowas said, "I'm trying to think how that would happen. Yes, that would surprise me.:"	- Tab E (Lowas) p15
14 May 04	Based on the information obtained in this CDI, a preliminary engineering assessment was performed, assessing the likelihood that the repair approved by the disposition of this 107 Report jeopardized safety of flight. Concerns about improper fixturing, possible reduction in strength of the part, and other concerns were examined.	- Tab C p3

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C

TECHNICAL REPORT
FOR
COMMANDER DIRECTED INVESTIGATION

OSC File Nos. DI-04-0756

14 May 2004

Vincent S. Spanel
Propulsion Structures Technical Expert
Structures Branch, Flight Systems Engineering Division
Engineering Directorate
Aeronautical Systems Center, WPAFB OH

CONFIGURATION:

The issue in question involves the rework of the aft engine mount assembly. The pylon structure (Fig 1, view H) has two different configurations. Early versions are made from 5Cr-Mo-V steel alloy. This material is considered an intermediate alloy steel but does not possess sufficient chromium to be considered a stainless steel. This configuration has suffered corrosion issues over the years. Later versions are made from IN718, a nickel alloy introduced to address the corrosion problem. The pylon mount structure has two cylindrical fittings, commonly referred to as "mickey mouse ears" that accept spherical bearings. These bearings are made up of three separate pieces, the race, retaining ring and spherical ball. The race and retaining ring are made from 17-4 PH steel which has high strength and good corrosion resistance. The ball is made from 440C steel. All three are considered stainless steel alloys.

DISTRESS & NORMAL REPAIR:

The typical distress noted in this area is corrosion of the pylon fitting (mickey mouse ears). This condition requires cleanup of the corrosion and refitting of the spherical bearing. As material is removed during the cleanup process the fitting inner diameter may become oversized relative to the installed spherical bearing outer diameter. Technical data identifies three additional part number bearings that have increasingly larger outer diameters to be "matched" to the pylon fitting diameter. When utilizing the largest sized part number bearing, the fitting ID is required to be machined to a matching oversized diameter (the first bearing is oversized .005 inches, the second bearing another .005 inches and the third bearing is oversized another .010 inches or .020 over the standard dimension).

When rework of the pylon fitting ID becomes necessary, special tooling is referenced by the technical orders. This tooling includes fixtures to maintain alignment of the bore and the cutting tool for material removal. Currently, WR-ALC appears to be the only facility having access to this tooling and is unavailable at the base level repair shops. Technical data is available to describe the process and limits for conducting this rework.

ALTERNATE PROCESS REQUEST:

Given the lack of access to this special tooling, when maintenance on the pylon mount was found to be necessary at the field unit (Altus AFB), an alternate procedure was requested via the "107 process". This is the review and approval cycle that the depot engineering uses to authorize waivers and deviations to existing technical data. The field request indicated that the spherical bearing required replacement due to corrosion on the ball. The field unit also indicated that the pylon fitting had been modified at some previous interval and had a dimension between the -107A and the -109A bearing part number sizes. They determined that a -109A (the largest size) bearing had been previously turned down to match the pylon fitting ID. Prior to proceeding, they requested engineering approval (the 107 form) to conduct a similar rework to another -109A spherical bearing in order to return the aircraft to service.

107 REVIEW ISSUES:

Depot engineers received the request on 11 March 2003 and discussed the viability with machinists at the WRALC Technological Industries Office. The concern expressed by the machinist was on how the part would be properly fixtured to allow accurate machining of the part. The engineer assigned the request reviewed this finding with his supervisors (Mr. Lowas and Vandersall) who recommended he contact the bearing vendor for a recommendation. He contacted an engineer at Southwest Products Inc. who expressed concerns about insuring the quality of the machining operation. The quality concern was made at a very general level without any particular issue, requirement or sensitive operation being mentioned. The depot engineer returned to his supervisor and discussed this additional information. Mr. Lowas listened to the issues presented but made a recommendation to allow the repair with some specific limitations on the rework. At the next programmed depot maintenance cycle, the pylon would be brought back into compliance with the normal technical data configuration. This process took place over a two day period from the initial 107 submittal to the WRALC memo authorizing the process.

CDI ASSESSMENT:

Several technical concerns arose during the 107 review process. The first concern identified with the proposed rework was that of proper fixturing of the spherical bearing. Altus personnel were contacted during the CDI and several photographs of the local tooling (Figures 2-9) used by their machinists were made available for technical review. The tooling pictures were reviewed with the same machinist who had originally been contacted and had expressed the concern over proper fixturing of the part. After reviewing the photos of the tooling and its use, the machinist's assessment was that it was a viable fixture and could be used to machine the part to the proper dimensions. There was an issue raised that the repair would reduce the strength of the part. Since the -109A part number is .020 inches larger in diameter than the smallest sized bearing (-103A), and only .0076 inches of material were to be removed on the diameter the resulting configuration is still .0124 inches larger and would be stronger from a dimensional standpoint than the standard bearing. Relative to the issue of insuring quality control, 17-4PH is recognized as a machinable alloy and with reasonable attention is well within a field unit's machine shop capability. Shop personnel from Altus were contacted and they indicated slow (less than 200 rpm) turning speeds were used to minimize any machining induced temperature concerns and that tolerances were maintained to within .0005 inches (concentricity requirements for the outer diameter on the Lockheed part drawing require .005 inches of total runout). No engineering or maintenance personnel contacted during the course of this investigation were aware of any spherical bearing failures or cracking events in the history of the C-5 program. Distress has been limited to corrosion in the mount fitting area. This failure mode (corrosion) would not be impacted by machining of the bearing versus machining the fitting. Our final technical assessment is that the temporary repair authorized by WRALC for turning down the bearing (107 Request #03-109) represents no measurable increased risk to the C-5 fleet or the public at large.

OTHER FINDINGS:

During the course of this investigation, it became evident that this repair was not likely a unique event. Claims by Altus that this occurred about once per year on their small fleet of C-5s (8 aircraft) along with the availability of specially designed tooling fixtures for machining the spherical bearing indicate that this was not an unusual situation even though no formal technical data existed to control the process. Claims by Altus personnel were made that this situation existed at other C-5 bases, especially since they had much larger number of aircraft at those bases. The engineer responsible for processing the 107 request in question stated that he was aware of at least two similar 107 requests in existence. The 107 historical records have been described as difficult to research and no attempt has been made to date to search those records to establish fleet configuration. No information is available to characterize the process used by those bases if and when the rework is performed and whether or not they have tooling with equivalent capability for machining the spherical bearing OD. A follow-up effort to conduct a survey of the C-5 fleet to establish the extent of this rework may be necessary. This information would baseline the fleet configuration for evaluation of future actions such as validation of this alternate rework for T.O. incorporation or acquisition of depot tooling to permit base level repairs in accordance with current T.O procedures

Vincent S. Spanel

Vincent S. Spanel
Propulsion Structures Technical Expert
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(937) 255-8515

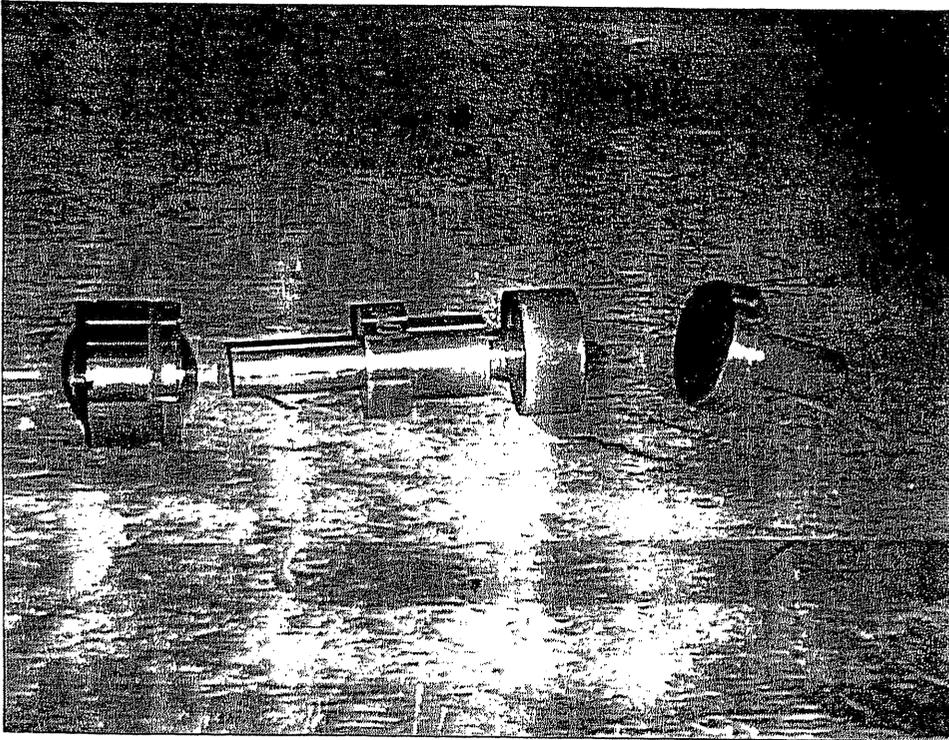


Figure 2

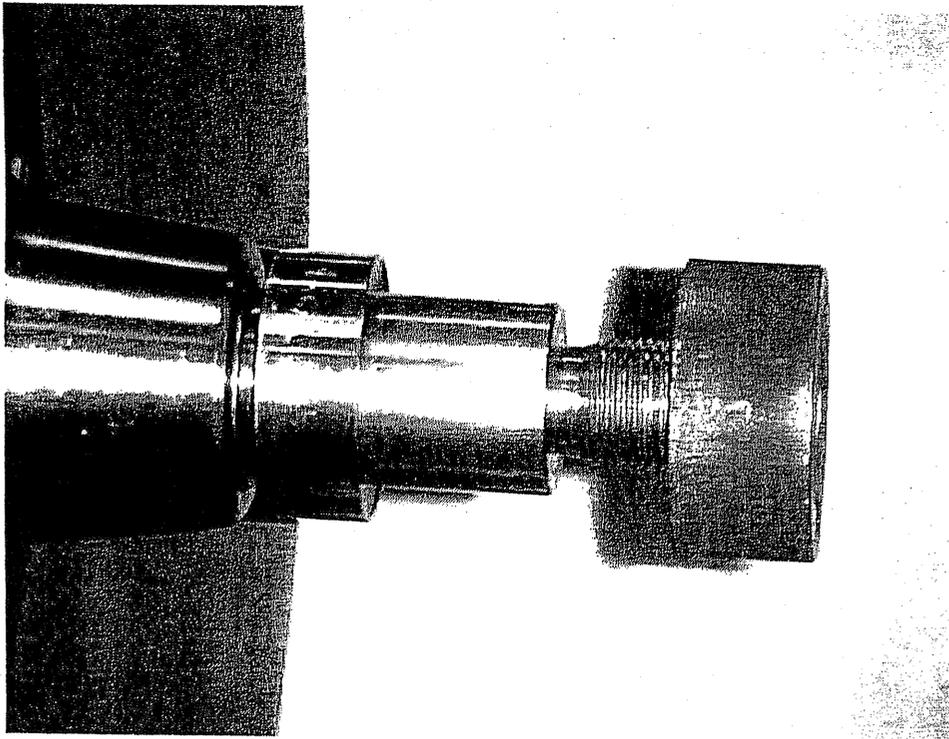


Figure 3

View showing fixture setup in lathe with no bearing

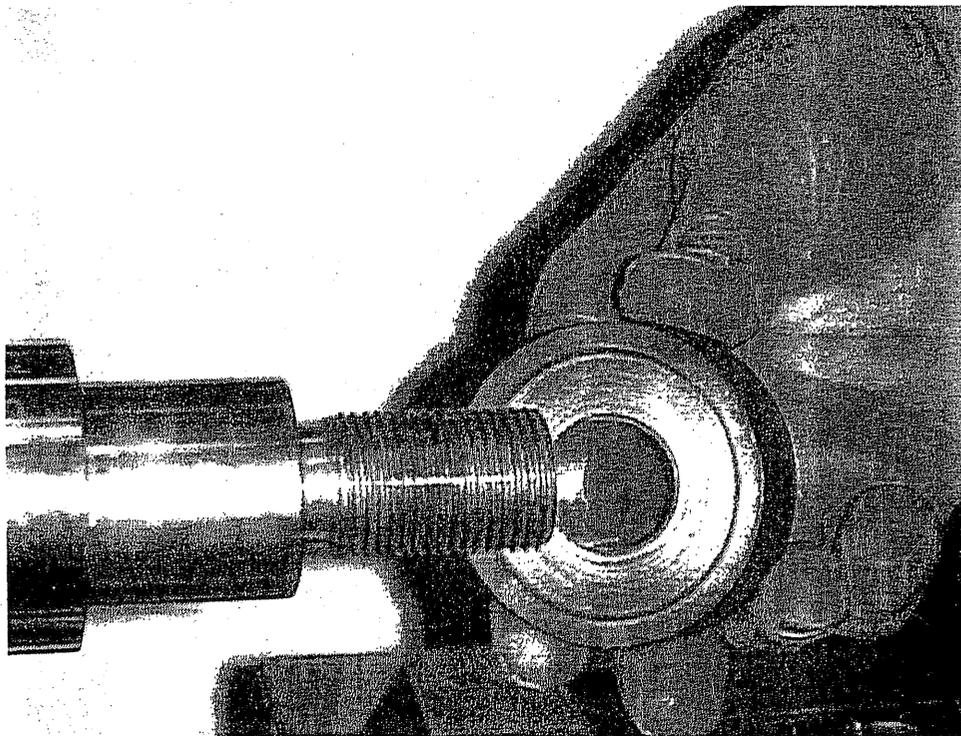


Figure 4
View showing the shoulder on the jam nut

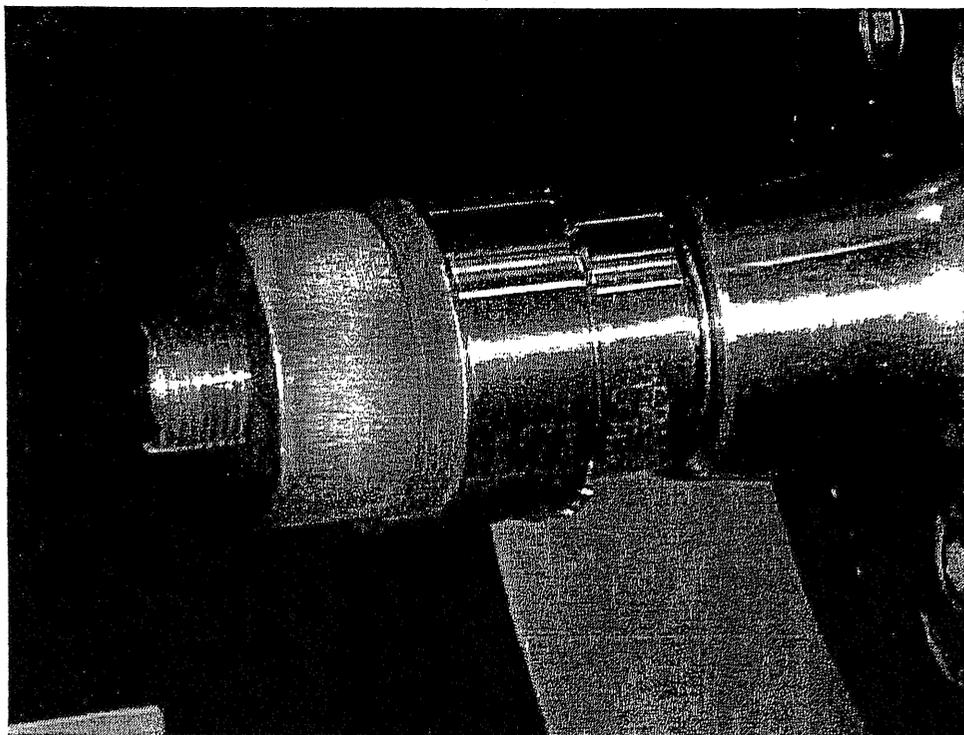


Figure 5
Bearing after being setup in the fixture, view 1

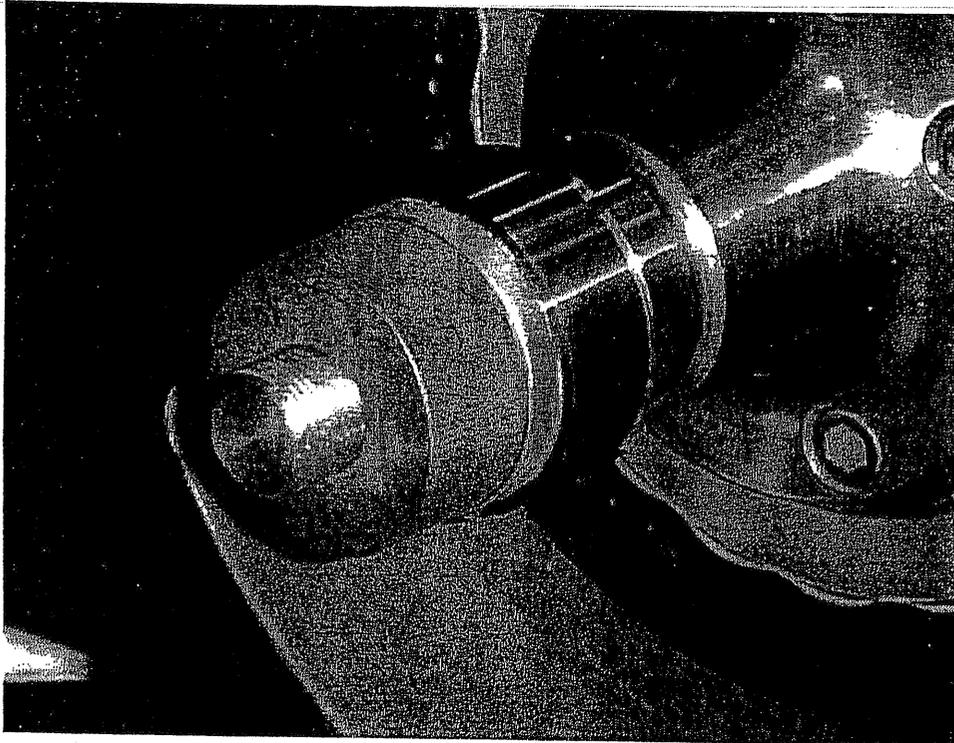


Figure 6
Bearing after being setup on the fixture, view 2

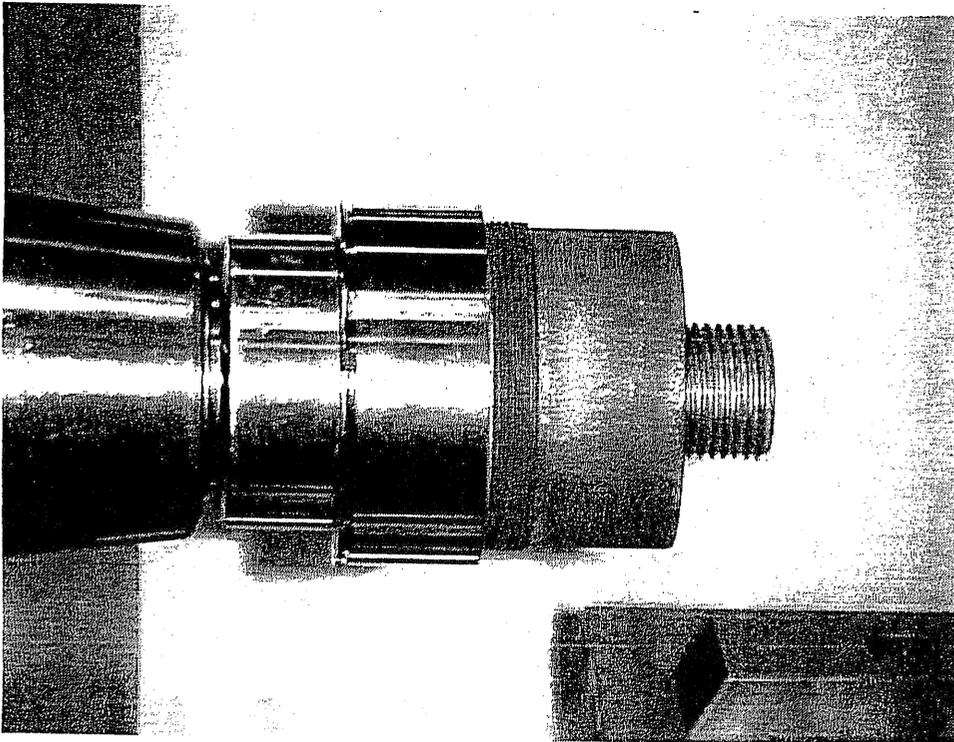


Figure 7
Bearing after being setup in the fixture, view 3

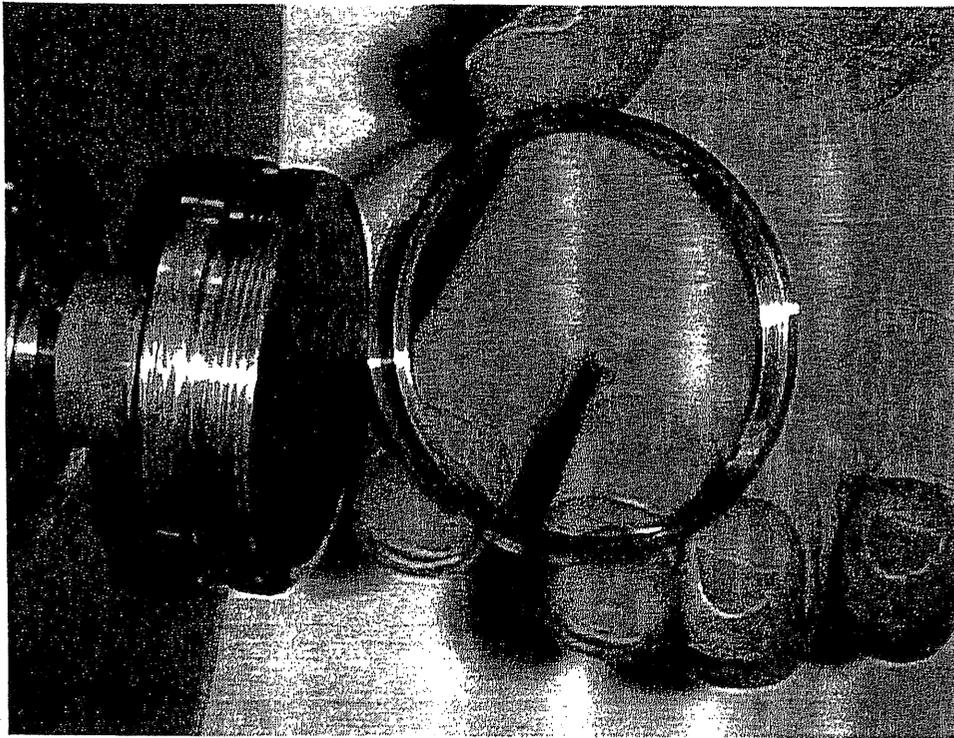


Figure 8

View showing the retaining ring before being screwed onto the fixture

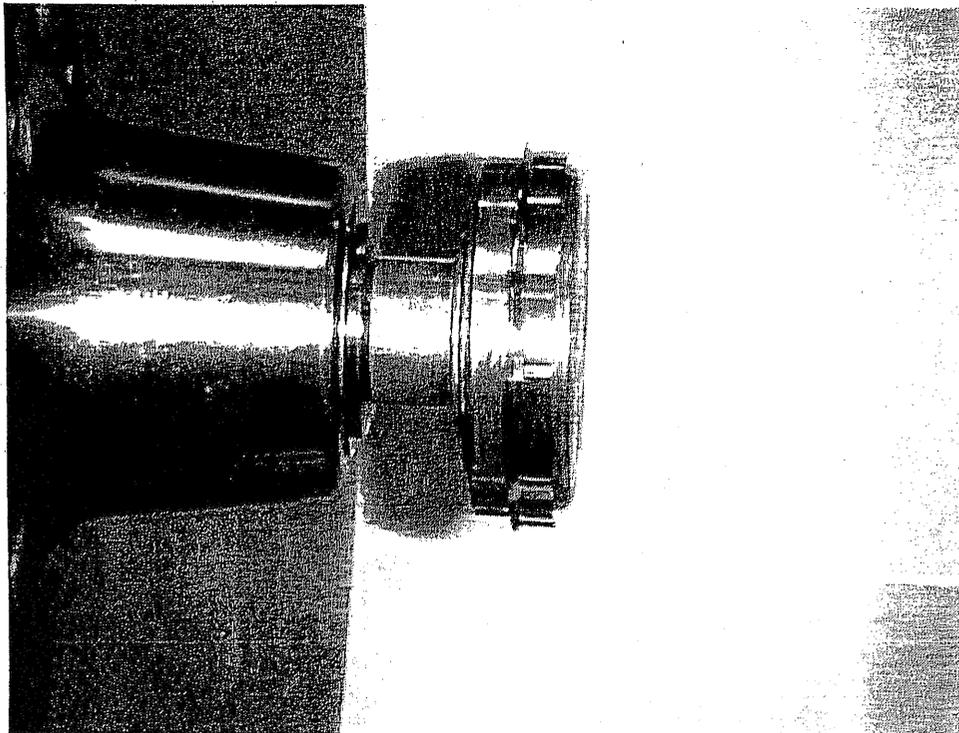


Figure 9

View showing the bearing retaining ring setup in the turning fixture

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D

Tab D: Complainant provided information

This Tab contains the following items, in the order listed:

- Witness List (for 107 Request numbers 03-109, 04-147 and 04-143)
- Information package concerning 107 Request #03-109
- Correspondence from Senator Saxby Chambliss to Complainant
- Privacy Act Release Form from Complainant to Sen. Chambliss
- DD Form 2655 with separate 2-page listing of corrective actions sought
- Complainant's AF Form 860B, completed 17 Nov 03; Complainant's civilian rating form, 01 Apr 02 – 31 Mar 03; Complainant's position description
- Complainant's request for lateral transfer and résumé
- Documentation on repairs made to aircraft 70-0459 (wing tip box assembly delamination)
- Four e-mails updating complainant's situation following the CDI interview

Witness List

Personnel Contacted for 107 # 03-109: Aft Engine Mount Spherical Bearing

- 1) Jonathan Despiau-Engineer-478-926-4349
- 2) Kevin Reid-Engineer-478-926-4349
- 3) Mark Taylor-Engineer-478-926-6778
- 4) Al Lowas-Engineer-478-926-9315
- 5) Scott Vandersall-Engineer-478-926-9315
- 6) Nicholas Nguyen-SouthWest Products-1-800-826-0729
- 7) Walter Tanner -Master Machinest-478-926-4629
- 8) Pylon Shop Repairs accomplished in BLDG 169-478-926-4410
- 9) Major Nelson_WR Safety Office-478-926-3337

Personnel Contacted for 107 # 04-147 and 04-143

- 1) Scott Vandersall-Engineer-478-926-9315
- 2) Thomas Lamb-Engineer-478-926-9365
- 3) Mark Taylor-Engineer-478-926-6778
- 4) Rodney Coulter-Engineer-478-926-4228
- 5) David Kelly-Engineer-478-926-4228
- 6) Bill Schweinberg-Engineer-478-926-4228

Taylor Mark M Civ WRALC/LAES

From: Taylor Mark M Civ WRALC/LAES
Sent: Monday, March 24, 2003 1:23 PM
Lowas Albert F Civ WRALC/LAES
Vandersall Scott Civ WRALC/LAE; Puckett Ben Civ WRALC/LAEO; Kelly David F Civ WRALC/LAES; Reid Kevin A Civ WRALC/LAES
Subject: Point Paper, Bearing P/N 4P94252-107A or -109A

NOTE: This point paper is the result of discussion between myself and Mr. Albert Lowas. The result will hopefully get the required tooling to field units and stop the practice of removing material from a bearing with Flight Safety Application.

Subject: The removal of material from Bearing P/N 4P94252-107A in lieu of performing the tasks outlined in T.O. 1C-5A-3, Section VI, Paragraph 6-17, Figure 6-9, Index 30, Flag Note 9.

Contents:

- 1) A form 107 (#03-109, from Dover) request was evaluated by this office on 3/13/03.
- 2) Upon investigation of this part it was discovered to be a steel bearing that has an interference fit in the mickey mouse ear of the main engine pylon. The engines and this part of the pylon area are Primary Structure.
- 3) T.I. was contacted about the proposed procedure to reduce the diameter of the bearing and they categorically, without hesitation, would not reduce the diameter of this bearing. They would only recommend the procedures as outlined in the Tech Order. The personnel and equipment are only available at WRAFB to do this task.
- 4) Southwest Products, the bearing manufacturer, was contacted by Mr. Despiau. They Did Not recommend, nor would they warrant a bearing that was turned down in this manner. They also stated they could not manufacture a bearing to any diameter except those approved by the OEM on P/N 4P94252-107A.
- 5) It was recommended to Mr. Lowas NOT to approve this 107 request. A field team was available to perform this task as needed from WRAFB. Mr Lowas chose to approve.

Conclusion:

My personal opinion that a field team should have been dispatched to perform this task. The application of this bearing is Flight Critical. Any deviation from the blueprint and T.O. requirements are not warranted in this application.

Mark Taylor
Aerospace Engineer
X4349

107 REQUEST # 03-109

REQUESTOR INFORMATION

Requestor: RANDY.THOMAS
Office Symbol: MAMP
Command: AETC
DSN: 866-7183
Date Requested: 3/11/2003 11:26:15 AM

Rank/Grade: CIV
E-Mail Address: RANDY.THOMAS@ALTUS.AF.MIL
Base: ALTUS
COMMERCIAL: 580-481-7183
Organization: 97MXOOS

DISCREPANCY INFORMATION

Engineering Division: STRUCTURES

Tail Number: 70-0465

Location of aircraft: AGGN

Discrepancy/Maintenance

Required: 1. DETAILED DESCRIPTION: THE MOUNT BEARING HOLE ON THE #1 ENGINE AFT O/B ENGINE MOUNT HAS BEEN MODIFIED IN THE PAST TO A SIZE THAT FALLS BETWEEN THE REQUIRED BEARING 4P94252-107A OR -109A BEARING. THE HOLE WAS OPENED TO AN IN-BETWEEN SIZE OF 2.5757 THEN A 109A BEARING WAS TURNED DOWN TO FIT THIS HOLE SIZE. THE MODIFIED BEARING HAS CORROSION IN THE AREA OF THE BALL AND NEEDS TO BE REPLACED. WE NEED APPROVAL TO TURN DOWN ANOTHER -109A BEARING TO FIT THIS HOLE. WE DO NOT HAVE THE CAPABILITIES TO OPEN THE HOLE TO THE NEXT SIZE BEARING. WE WILL BE TURNING DOWN A -109A BEARING WITH THE DIMENSION OF 2.5833" TO THE SIZE OF 2.5757" A TOTAL OF .0076" WILL BE REMOVED.

T.O.: 1C-5A-4-1

Figure: 64

Index: I40

Last ISO completion date: 03/01/2003

Name of Engineer contacted for assistance: SCOTT.VANDERSALL

[Click here to see list of engineers](#)

Priority ROUTINE

STATUS

HQ Authority: RODNEY.WATSON
Engineer Acceptance/Rejection: JONATHAN.DESPIAU
Engineer's Disposition: ALBERT.LOWAS

Date: 3/11/2003 11:30:18 AM

Date: 3/11/2003 3:44:18 PM

Disposition Date: 3/13/2003 1:20:07 PM

COMMENTS

JONATHAN.DESPIAU: I NEED TO KNOW THE MATERIAL OF FITTING, AFT MOUNT, OUTBOARD PYLON P/N: 4P53040-109A (THE ONE 3/12/2003 8:56:49 AM INSTALL ON THE AIRPLANE). ALSO, CAN YOU CHECK IF THERE IS ANY CORROSION ON ROUNDED

COMPLAINANT PROVIDED

SURFACE WHERE THE BEARING
WILL BE INSTALL.

(1). AFT MOUNT, OUTBOARD PYLON
FITTING HAS BEEN INSPECTED
(EDDY CURRENT) TREATED AND
COATED, NO CORROSION WHERE
BEARING WILL BE INSTALLED AT
THE ROUNDED SURFACE. (2) THE
FOLLOWING INFORMATION FROM

PERFECTO.RODRIGUES: PYLON MOUNT FITTING: PN P50004- 3/12/2003 6:46:18 PM
109B (STENCILED ON PYLON). PN
4P29118-121A (THIS NUMBER WAS
ON PYLON DATA PLATE). SN 0028
(STENCILED ON PYLON AND ON
THE DATA PLATE). MCO533A-??
(THERE IS NO DASH NUMBER FOR
THIS TO IDENTIFY MATERIAL).

JONATHAN.DESPICAU: PLEASE
CALL ME AT DSN 866-1519, I BEEN
TRYING TO CALL YOU FOR THE
LAST 30 MINUTES. SOMETHINGS
WRONG WITH THE DSN LINE. 3/13/2003 6:51:45 AM
PERFECTO.RODRIGUES:
THANKS PERFECTO RODRIGUES,
WS-11 DAF MANUFACTURING
FLIGHT CHIEF

JONATHAN.DESPICAU: I TALKED
TO DENNIES WARDO ALREADY. 3/13/2003 10:33:42 AM
THANK YOU.

ATTACHMENTS (0)

[Click here to Add/Delete/View attachments](#)

DISPOSITION

[Click here to see Disposition](#)

RESTRICTED TO MILITARY / GOVERNMENT AUDIENCE

[READ PRIVACY & SECURITY NOTICE](#)

WR-ALCILA

THIS SITE IS MAINTAINED BY:

KIRK BAY

WR-ALCILA

Phone: (478) 926-4039

DSN: 468-4039

COMPLAINANT PROVIDED



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS WARNER ROBINS AIR LOGISTICS
CENTER (AFMC)
ROBINS AFB GA 31098

3/13/2003

MEMORANDUM FOR: 97MXOOS/MAMP

FROM: WR-ALC/LAES

SUBJECT: C-5A S/N 70-0465, Aft Engine Mount Spherical Bearing, Pylon S/N 0028.

1. Per 107 Request #03-109 dated 11 Mar 03, Aft Engine Mount Spherical Bearing, P/N 4P94252-109A, requested approval to turn down bearing with the dimension of 2.5833" to the size of 2.5757".
2. This repair disposition is intended for this specific aircraft.
3. Approval is granted to turn down bearing with the dimension of 2.5833" to the size of 2.5757". The aircraft is consider unrestricted after the completion of this repair.
4. POC for this action is Randy Thomas and Dennis Whardo.
5. Flight Restriction: No fly restrictions apply.
6. Next PDM due 07 July 2005. When aircraft arrives at WR-ALC for PDM the part will be repaired in accordance to T.O. 1C-5A-3 Section VI. Paragraph 6-17, Figure 6-9, Index 30, Flag Note 9. Reference this disposition in any requests for PDM overflight.
7. Point of Contact for this project is Jonathan Despiau, WR-ALC/LAES, phone DSN 468-4349, email: jonathan.despiau@robins.af.mil.

ALBERT F. LOWAS, III
Chief, C-5 Structural Engineering Branch
C-5 System Program Office

Print

Disposition List

March 20, 2003

Subject: Disposition given on C-5A S/N 70-0465. Aft Engine Mount Spherical Bearing.
Pylon S/N 0028.

My supervisor on 3/13/2003 approved the disposition given on 107 Request #03-109. I never agree with this disposition and I always let him know every single detail found.

While working with this 107, I did the following things. First, notify Chief Engineer and Brand Chief Engineer of what was going on. Every single detailed was explained to them and we concluded that in order to take a final decision I had to call the company that manufactured the bearing (Southwest Product Inc.) Second, I called the people over Southwest Products Inc. I contacted Eng. Nicholas Nguyen (1-800-826-0729 Ext-215). I asked him if he recommended that the spherical bearing could be machined down. He said "no, because that will decrease the strength on the part". Third, I asked the engineer if Southwest Product Inc. could machined one bearing down for an special situation, his answer was "no". Third, I mentioned the procedure on the T.O. (T.O. 1C-5A-3, Section VI, Paragraph 6-17, Figure 6-9, Index 30, Flag Note 9) and he said that that repair was the one that shall be done. I always recommend sending a Team from WR/ALC to make the appropriate repair.

Finally, I put my name in the 107 as the point of contact because I worked the 107 but I do not agree and won't take responsibility on any problem that this repair may cause. Every single moment I talked to my supervisor and let him know every single detail I had found. I let the decision to him since his the one who signed. His decision was let the Base Station go with the inappropriate repair and that what I putted on the disposition.

ENGINEERING CHANGE ORDER / REQUEST

1. EGO NO 9360102	ECO PAGE OF 1	2. DWG TITLE BEARING, SPHERICAL - AFT ENGINE UPPER	3. DWG PGM NO 18897	4. DWG NO 4994452
5. TYPE OF ECO <input checked="" type="checkbox"/> ADVANCE <input type="checkbox"/> DEVIATION <input type="checkbox"/> CHANGE NOTICE <input type="checkbox"/> LIAISON <input checked="" type="checkbox"/> CHANGE REQUEST <input type="checkbox"/> INFORMATION	6. REASON(S) FOR CHANGE <input checked="" type="checkbox"/> ERROR CORRECTION DESIGN CHANGE DRAWING CLARIFICATION UPDATE DRAWING OTHER REMARKS	7. NEXT ASBY	8. USED ON C-5A/B	9. O/P R FROM NO 98750
10. DISPOSITION OF SPARES REWORK MODIFY SCRAP REPLAGE	11. DOCUMENTS AFFECTED: TO # / I/O # / SPEC / OTHER	12. ECO PREPARED / REQUESTED BY Lan Nish	13. EGR APPROVAL Lan Nish	14. CORROSION CONT MON 15. N O I
16. EGO PREPARED / REQUESTED BY Lan Nish	17. DWG CHANGED BY	18. CHANGE CHECKED BY	19. EGO RELEASER / USED BY Lan Nish	20. DESCRIPTION OF CHANGES (W.A.S. 18) / REMARKS

WAS: BAR - 24212-103 (ZONE TH, APPROVED SOURCES OF SUPPLY, ITEM IDENTIFICATION NO.)

IS: BAR - 24216

ACTION: W.A.S. 18 R = REWORK M = REPLACEMENT	QTY REQD PER DASH NO	SYM	HOMECLATURE	PCOM	IDENTIFYING NO	MATERIAL / SPECIFICATION	ZONE	FINO NO
PARTS LIST CHANGE(S)								

COMMITTEES:
AGRICULTURE

ARMED SERVICES

INTELLIGENCE

JUDICIARY

RULES

United States Senate

WASHINGTON, DC 20510-1007

WASHINGTON, DC 20510-1007
PHONE: (202) 224-3521

100 GALLERIA PARKWAY, STE. 1340
ATLANTA, GA 30339
PHONE: (770) 763-9090

6501 PEAKE ROAD, BLDG. 950
MACON, GA 31210
PHONE: (478) 476-0788

P.O. BOX 3217
MOULTRIE, GA 31776
PHONE: (229) 985-2112

TOLL FREE NUMBER
1 (800) 234-4206

March 26, 2004

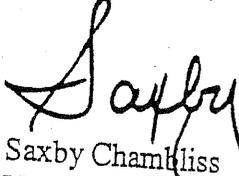
Mr. Mark Taylor
3735 Moody Road
Kathleen, Georgia 31047

Dear Mr. Taylor:

Thank you for sharing your need for assistance with me and my staff. I am forwarding you a copy of our Privacy Act Release form to be completed and returned so that we may be able to contact the Appropriate Federal Agency on your behalf.

Mr. Taylor, I can assure you we will do everything possible to help you resolve your case to your satisfaction. My office is always open to you on this or any other concern you might have. I am happy to be of assistance and hope we are able to help you.

Very truly yours,


Saxby Chambliss
United States Senator

SC:sh

SIR: ANY ASSISTANCE YOU CAN GIVE
WOULD BE APPRECIATED.

SINCERELY,


4/1/04

COMMITTEES:
AGRICULTURE

ARMED SERVICES

INTELLIGENCE

JUDICIARY

RULES

United States Senate

WASHINGTON, DC 20510-1007

Privacy Act Release Form

Return Form to:

Senator Saxby Chambliss
6501 Peake Road, Building 950, Macon, Georgia 31210
478-476-0788 / 800-234-4208 / 478-476-0735 (fax)

PLEASE PRINT:

NAME: MARK M. TAYLOR

ADDRESS: 3735 MOODY ROAD

CITY: KATHLEEN

HOME PHONE: 478-988-1031 STATE: GA. ZIP: 31047

MOBILE PHONE: _____ WORK PHONE: 478-926-6778

SOCIAL SECURITY NUMBER: _____ E-MAIL ADDRESS: marktaylor@daddy@aol.com

CSA OR CSF NUMBER/ OTHER ID NUMBER: _____ DATE OF BIRTH: 11/22/56

VA NUMBER: _____

NATURE OF PROBLEM: Please indicate the name of the federal agency or department involved; for example, Social Security Administration. Give a brief but complete statement regarding the nature of the problem and the assistance needed from this office. Attach copies of any additional pertinent documents. Use additional paper if necessary.

FEDERAL AGENCY OR DEPARTMENT: WARNER ROBINS ALC.

STATEMENT: I HAVE FILED THREE COMPLAINTS

1) EEOC = 9R1M04062 = BASES; AGE DISCRIMINATION

2) OFFICE OF SPECIAL COUNSEL

A) CASE # MA-04-0755 = PROHIBITED PERSONNEL PRACTICE

B) CASE # DT-04-0756 = SAFETY OF FLIGHT
POSSIBLE EMINENT DANGER TO PUBLIC.

NOTE: ALL CHARGES HAVE BEEN ACCEPTED AND
ARE UNDER CURRENT INVESTIGATION.

Pursuant to the requirements of the Privacy Act, PL 93-579, I hereby grant Senator Chambliss and his staff access to my records so that they may assist me with my case.

Signature: Mark M. Taylor

Date: 4/11/04

**COMPLAINT OF DISCRIMINATION IN THE
FEDERAL GOVERNMENT**

*(This form is subject to the Privacy Act of 1974 - see back)
(See back for instructions - Please type or print)*

FOR AGENCY USE

1. FULL NAME OF COMPLAINANT (Last, First, Middle Initial)
or, Mark M.

2. TELEPHONE NUMBER (Include Area Code)

3. ADDRESS (Street, City, State, and ZIP Code)
3735 Moody Road
Kathleen Ga.
31047

a. HOME
(478)988-1031
b. OFFICE
(478)926-6778

4. FEDERAL OFFICE YOU BELIEVE DISCRIMINATED AGAINST YOU
(Prepare a separate complaint form for each office which you believe discriminated against you.)

5. ARE YOU NOW WORKING FOR THE FEDERAL GOVERNMENT?
(If answer is "Yes" complete a, b, and c below.)
 YES NO

a. NAME OF OFFICE THAT YOU BELIEVE DISCRIMINATED AGAINST YOU
WR-ALC/LTESS

a. NAME OF AGENCY WHERE YOU WORK
Strategic Airlift Directorate

b. ADDRESS OF OFFICE (Street, City, State, and ZIP Code)
Warner Robins ALC
Engineering Branch (LTESS)
216 Ocmulgee Ct. 31098-1643

b. ADDRESS OF YOUR AGENCY (Street, City, State, and ZIP Code)
Warner Robins ALC
Engineering Branch (LTESS)
216 Ocmulgee Ct. 31098-1643

c. NAME AND TITLE OF PERSON(S) YOU BELIEVE DISCRIMINATED AGAINST YOU (If you know)
Mr. Scott Vandersall
GS-14 Supervisory Engineer

c. TITLE AND GRADE OF YOUR JOB
Aeospace Engineer
GS-0861-12

6. NAME AND ADDRESS (Street, City, State, and ZIP Code) OF YOUR REPRESENTATIVE (If any)
Office Of Special Counsel
Washington DC 20036-4505
1730 M. Street N.W. Suite 218

7. DATE ON WHICH MOST RECENT ALLEGED DISCRIMINATION TOOK PLACE (YYMMDD)

04/03/26

Ms. Colette Key and Ms. Jenniffer Pennington PHONE=202-254-3628

CHECK BELOW WHY YOU BELIEVE YOU WERE DISCRIMINATED AGAINST

a. RACE (If so, state your race)

b. COLOR (If so, state your color)

c. RELIGION (If so, state your religion)

d. NATIONAL ORIGIN (If so, state your national origin)

e. SEX (If so, state your sex)

f. AGE (If so, state your age) ¹ 48 YEARS OLD

g. HANDICAP (If so, state whether mental or physical)

h. SEXUAL HARASSMENT (If so, state your sex and the sex of the person you believe harassed you)

9. EXPLAIN IN SPECIFICS HOW YOU BELIEVE YOU WERE DISCRIMINATED AGAINST (treated differently from other employees or applicants) DUE TO YOUR RACE, COLOR, RELIGION, NATIONAL ORIGIN, SEX, AGE, OR HANDICAP (For each allegation, please state to the best of your knowledge, information and belief what incident occurred and when the incident occurred. If you need more space, continue on another sheet of paper.)

SEE SEPERATE SHEET

10. I HAVE DISCUSSED MY COMPLAINT WITH AN EQUAL EMPLOYMENT OPPORTUNITY COUNSELOR (See instructions)

YES NO

11. NAME OF COUNSELOR

Mr. Johnny Gonzalez

12. STATE CORRECTIVE ACTION YOU ARE SEEKING
SEE SEPERATE SHEET

13. SIGNATURE OF COMPLAINANT

14. DATE OF THIS COMPLAINT (YYMMDD)

¹ Complaints of discrimination because of age apply only to employees or applicants who were at least 40 years of age at the time the discriminatory action is alleged to have occurred.

PRIVACY ACT STATEMENT

AUTHORITY: Title VII, United States Code.

PRINCIPAL PURPOSE(S): To establish the case records and to assist in the processing of the complaint.

ROUTINE USE(S): Used when needed by EEO officials, hearing examiners, investigators and arbitrators, or by representatives of the Equal Employment Opportunity Commission, and the courts concerning the complaint and appeal.

DISCLOSURE: Disclosure is voluntary. If the individual does not furnish the information requested, there will be no adverse consequences. However, failure to furnish the information requested on the form may delay or impair processing of the complaint.

READ INSTRUCTIONS CAREFULLY

This form should be used only if you, as an applicant for Federal employment or a Federal employee, think you have been discriminated against due to race, color, religion, sex, national origin, age or handicap by a Federal agency and have presented the matter for informal resolution to an Equal Employment Opportunity Counselor within 45 calendar days of the date the incident occurred or, if a personnel action, within 45 calendar days of its effective date.

Your complaint must be filed within 15 calendar days of the date of your final interview with the Equal Employment Opportunity Counselor. If the matter has not been resolved to your satisfaction within 30 calendar days of your first interview with the Equal Employment Opportunity Counselor and the final counseling interview has not been completed within that time, you have the right to file a complaint at any time thereafter up to 15 days after the final interview.

These time limits may be extended if you show that you were not notified of the time limits and were not otherwise aware of them, or that you were prevented by circumstances beyond your control from submitting the matter within the time limits, or for other reasons considered sufficient by the agency.

If you need help in the preparation of your complaint, you may contact the Equal Employment Opportunity Counselor who provided you with your initial counseling, or you may secure help from a representative of your choice.

For complaints filed against the Immediate Office of the Secretary of Defense, the Joint Staff and all activities receiving administrative support from Washington Headquarters Services, the individuals designated to receive complaints are the Equal Employment Opportunity Officer or the Director, EEO, Office of the Secretary of Defense. Complaints generated within agencies outside the above designated activities must be filed with that agency's individual designated to receive complaints of discrimination, i.e., the Chief EEO Counselor.

You may have a representative of your own choosing at all stages of the processing of your complaints.

You will have an opportunity to talk with an investigator and present all the facts which you believe show discrimination. The investigator will not be under the jurisdiction of the head of that part of the agency in which the alleged discrimination took place.

After the investigation of your complaint has been completed, you will be furnished a copy of the Report of Investigation. You will be given an opportunity to request a hearing, which will be conducted by an Administrative Judge assigned by the Equal Employment Opportunity Commission (EEOC). The hearing will be held at a convenient time and place. At the hearing, you may present witnesses and other evidence on your behalf.

The final decision (in writing) will be made by the head of the agency or his or her designee. If a hearing is held on your complaint, the head of the agency or the designee will review the decision recommended by the Administrative Judge before making a final decision, and will furnish you with a transcript of the hearing, a copy of the findings, analysis, and recommended action of the Administrative Judge, along with the agency's final decision letter.

If you are not satisfied with the final agency decision, you have the right to appeal that decision within 30 calendar days after receipt to the Equal Employment Opportunity Commission, Office of Federal Operations, P.O. Box 19848, Washington, DC 20036.

If your complaint is based on *race, color, religion, sex, national origin or handicap*, you may file a civil action in an appropriate U.S. District Court within 90 days of receipt of the agency's decision or, if you elect to file an appeal with the Commission, you may still file a civil action in a Federal District Court within 90 days of the Commission's decision if you are dissatisfied with the decision.

If your complaint is based on *race, color, religion, sex, national origin or handicap*, you may file a civil action in an appropriate U.S. District Court if you have not received a final agency decision within 180 days of filing your complaint with the agency or if you have not received a final Commission decision within 180 days of filing your appeal with the Commission's Office of Federal Operations.

EEO Case Number 9R1M04062

NOTE: Related Cases filed with to the OFFICE OF SPECIAL COUNSEL #'s MA-04-0755 and DI-04-0756

CASE OUTLINE:

- 1) Why was my time of arrival and departure from work arbitrarily assigned (memo dated 1/14/04 @ 1517) by Mr. Vandersall from 0630-1500, when I specifically asked for consideration under the spirit of the "Friendly Family Leave Act" of 0600-1430, for I am the primary care giver for my children after school. Mr. Vandersall refuses to accommodate my problem. He ABUSED HIS AUTHORITY by arbitrarily selecting my report time..
- 2) Since being reassigned to Mr. Vandersall he has abused his authority concerning a suggestion # 2004-1324. The Evaluator approved the savings, but Mr. Vandersall ABUSED HIS AUTHORITY by intervening and rejecting a monetary award. Approval letter (1/12/04 @ 1236) from WRALC/XPM. Mr. Vandersall continues to interfere with the approval process, for on 3/25/04 Mr. Vandersall stated to me "This idea was not your original thought". I had resubmitted this suggestion for reconsideration and it was APPROVED by Mr. Vandersall's superior (Mr. Alford) and all evaluators to date: I believe Mr. Vandersall is deliberately interfering with this process
- 3) Mr. Vandersall called Mr. Lamb and myself into his office and said "He was watching me and me alone, I want you to check in and out with myself or Mr Lamb before and after my designated lunch period" I attempted to diffuse the situation and said "We are all adults here" He then said "Some of us are". I left rather than be confrontational. Memo to Agency on 1/22/04 @ 1445, subject: HOSTILE WORK ENVIRONMENT.
A) Since being assigned to Mr. Vandersall, Why am I and only I being required to take Annual Leave in 5.0 minute increments if I attend lunch when other employees, including Mr. Vandersall, who are not required to take annual leave if they attend. He is singling me out for ADVERSE TREATMENT.
- 4) Why was I excluded and humiliated by having to leave a general engineering meeting on 1/26/04 @ 1000 hours, for no reason whatsoever except EXCLUSION.
- 5) Mr. Vandersall submitted a Leave slip for an absence I was at work on that day (1/16/04). It has since been recorrected by personnel. Mr. Vandersall knew I was at work for I had email traffic from him the same day (1/16/04) I have no idea why this was done. This is a FRAUDULENT submittal
- 6) Mr. Vandersall, Mr. Gonzalez and myself entered into informal negotiations and signed an agreement on 10 Feb. 04. Not two days after this agreement was signed, I was notified by Mr. Gonzalez that the agreement would not be acceptable to Legal or Personnel. Upon the opening remarks I and Mr. Gonzalez asked Mr. Vandersall if he had the Authority to settle and sign for the Agency. He without hesitation said "YES". I cannot believe he was not informed of his limitations by the Agency prior to his attending this meeting. Mr. Vandersall FRAUDULENTLY represented himself and COERCED me into an agreement he had no authority to sign.

RESOLUTION:

- 1) Immediate Transfer out of the Strategic Airlift Directorate.
A) This transfer must be commensurate with my training and skill level, it must also be able to support my original request of duty hours from 0600-1430. IE: MA or EN. This can easily be done for all Engineers at WRAFB are now serviced by one directorate (EN).
- 2) Absolute and unhindered support of Suggestion Number 2004-1324. This is to include the monetary award, First year savings of \$332,893.00 Dollars per FY 04 thus enabling

COMPLAINANT PROVIDED

the submitter to be eligible for a \$9986.79 Dollar Award.IAW AFI 38-401,PARA 5.8.1.1,calculating the award at 3% of the first year savings

- 3) No reduction in my performance appraisal, if anything it should be raised due to my increase in communication and writing skills (see attached memos from other employees and Mr. Vandersall).
- 4) Mr. Vandersall is never to be in my Chain Of Command.

Mark M. Taylor

COMPLAINANT PROVIDED

CIVILIAN PROGRESS REVIEW WORKSHEET

PRIVACY ACT STATEMENT

Authority: 10 U.S.C. 8013 and Executive Order 9397.

Purpose: The social security number is needed to correctly identify the employee.

Routine Use: None

Disclosure is Voluntary: However, without it, it may affect the ability to accurately identify the employee and the records.

EMPLOYEE (Last Name, First, Middle Initial)	ORGANIZATION	DATE	PERIOD COVERED
Taylor, Mark	LTES	20031014	20030401 - 20030930

At least one progress review of the employee's performance against all the elements of the performance plan will take place during the appraisal period, normally at the midpoint. This worksheet will be used to further document this review, and may be filled out prior to and/or during the review with the employee. Use of this form is mandatory, and is meant to facilitate communication concerning performance. The process is intended for employee development and to help the individual. The employee should be made aware that the progress review is meant to provide feedback about his/her performance that may impact the rating of record at the end of the appraisal period. Do not forward the form to the personnel flight. It is filed with the AF Form 971, and a copy given to the employee.

Indicate by use of an "X" the employee's performance at this stage of the appraisal period. Place an "X" at the appropriate place on the arrowed line. Use the space provided for any comments (optional). Performance items not observed are not rated.

	needs significant improvement	needs little or no improvement	COMMENTS
1. PROGRESS ON PERFORMANCE PLAN ELEMENTS			
- Element 1	←————→	←————→	1E - Complies with Policy/Procedures/Regulations - Met 2E - Planning/Organizing/Accomplishing Workload - Met 3E - Technical Expertise - Met 4E - Technical Exhibits - Met 5E - Written Communication - Met 6E - Continuous Process Improvement - Met
- Element 2	←————→	←————→	
- Element 3	←————→	←————→	
- Element 4	←————→	←————→	
- Element 5	←————→	←————→	
- Element 6	←————→	←————→	
- Element 7	←————→	←————→	
- Element 8	←————→	←————→	
- Element 9	←————→	←————→	
- Element 10	←————→	←————→	
- Element 11	←————→	←————→	
- Element 12	←————→	←————→	
- Element 13	←————→	←————→	
- Element 14	←————→	←————→	
2. COOPERATION/RESPONSIVENESS			
- Skilled at working with individuals or groups	←————→	←————→	Mark is an enthusiastic follower and shows some very strong leadership skills. Sometimes overbearing in meetings or when working with individuals and groups.
- Is an enthusiastic follower	←————→	←————→	
- Is a skilled leader	←————→	←————→	
3. ORGANIZATIONAL SKILLS			
- Uses resources effectively	←————→	←————→	Uses resources effectively and cuts off future problems at the pass.
- Sees future problems and heads them off	←————→	←————→	
- Plans and schedules work effectively	←————→	←————→	
- Adapts well to new demands	←————→	←————→	
4. COMMUNICATION			
- Listens well	←————→	←————→	Good oral communicator but does not demonstrate good written communication skills.
- Effective in oral communication	←————→	←————→	
- Writes clearly	←————→	←————→	
5. DUTY PERFORMANCE			
- Work is of appropriate quality and quantity	←————→	←————→	Mark is very timely in his work and is of good quality.
- Work is timely	←————→	←————→	
6. THOROUGHNESS			
- Completes a job on his/her own	←————→	←————→	Mark is the master at completing his work and especially following up. He is persistent until the work is complete.
- Follows up when necessary	←————→	←————→	
ADDITIONAL ITEMS			
- Accomplishes required items as appropriate	←————→	←————→	Seems reluctant to perform at a higher level or in more challenging work within the SPO.

RATER (Supervisor's signature)

Scott P. Vandervell

EMPLOYEE (Signature Optional)

Mark M. Taylor

DATE (YYYYMMDD)

2 Oct 2003 / 11/17

CIVILIAN RATING OF RECORD

TAYLOR MARK M

(Please read Privacy Act Statement on reverse before completing this)

GS-12-09 \$66,961.00

EMPLOYEE (Last Name, First, Middle Initial)

Taylor, Mark M

ORGANIZATION

WR-ALC/LAE

PAY PLAN

GS

SERIES

0801

0000 WRA CE/JLAE/LAE

1 Apr 02 - 31 Mar 03

1 Jun 03

PERIOD FROM: 20020401 TO: 20030327

Formally contains one to seven critical elements.

Rate the critical element(s) in Part A by placing an "X" in the appropriate block(s). The overall performance rating is derived from the ratings of the critical elements. A rating of "Does not meet" on any critical element results in a determination that overall performance is unacceptable. An Unacceptable rating is the basis for initiating a performance improvement plan and requires proper documentation. Contact the Civilian Personnel Office for assistance.

Complete Part B, "Impact on Mission Accomplishment" for GS-14s and GS-15s (bullet format, limited to 9 lines). Optional to complete for others.

Complete Part C, "Award Justification" for those being recommended for an award (bullet format, limited to 9 lines).

PART A. Position Requirements. (Was the employee's performance Unacceptable or Acceptable on the Performance Plan's critical elements?)

	DOES NOT MEET	MEETS		DOES NOT MEET	MEETS
ELEMENT 1		X	ELEMENT 8		
ELEMENT 2		X	ELEMENT 9		
ELEMENT 3		X	ELEMENT 10		
ELEMENT 4		X	ELEMENT 11		
ELEMENT 5		X	ELEMENT 12		
ELEMENT 6		X	ELEMENT 13		
ELEMENT 7			ELEMENT 14		

OVERALL PERFORMANCE RATING
R

R - ACCEPTABLE: Rated "Meets Standards" on all critical elements.

N - UNACCEPTABLE: Rated "Does Not Meet Standards" on one or more critical elements.

PART B. Impact on Mission Accomplishment. (Mandatory completion required for GS-14s/15s.)

PART C. Award Justification. (Part B may serve as Part C award justification.)

Mr. Taylor exceeds at least half of his critical performance elements (1, 2, 3, and 6). Mr. Taylor is a highly technically knowledgeable aerospace engineer and easily adapts to both structural and mechanical aircraft issues. Mr. Taylor is highly dedicated, while on the job, to developing quick and correct engineering dispositions to discrepancies noted on C-5 aircraft at depot or in field locations. Mr. Taylor has provided mentoring to new engineers and has performed well as the acting supervisor when called upon. Mr. Taylor has developed statements of work to solve key known projects and has worked diligently to find funding for those projects. Mr. Taylor provides required technical data when requested in a timely fashion.

PART D. Performance Award.

AWARD (Enter "P" - Performance or "O" - OS)	AWARD PERCENTAGE OR AMOUNT (If P (cash), enter as a percentage, e.g., 1.5, or a dollar amount)	OTHER AWARD (For time-off awards, state number of hours)
P	\$502	

Justification for Time-Off Award (as applicable): I have considered fully the wage costs and productivity loss in granting this time-off award. The amount of time-off granted is commensurate with individual's contribution or accomplishment. I also considered the unit's workload and unit employees' leave projections and certify that the employee can schedule the time-off award in addition to other scheduled leave. I also considered other available forms of recognition in determining the amount of this time-off award. Note: Ensure the number of time-off award hours previously awarded to this employee this leave year plus this award does not exceed 80 hours.

PART E. Certification. (Certify by having rater, reviewer, award approving official (if required), and employee sign and date this form.)

R (Supervisor's signature and duty phone)	DATE (YYYYMMDD)
<i>[Signature]</i> DSN 468-7288	20030401
R (Reviewer's signature and duty phone)	DATE (YYYYMMDD)
<i>[Signature]</i> 6-9152	20030416
AWARDING OFFICIAL (If required, signature and duty phone)	DATE (YYYYMMDD)
<i>[Signature]</i> 664432	20030414
EMPLOYEE (Receipt acknowledged. Signature does not indicate agreement or disagreement.)	DATE (YYYYMMDD)
<i>[Signature]</i> T 9/2	20032403

ART F. Civilian Promotion Appraisal.

This appraisal is used for competitive inservice placement actions, including promotions, reassignments or demotions to positions with known growth potential, and other such instances. The ratings on this form are used as a sort factor in determining final rank order of employees having substantially equal knowledge, skills and abilities, when the number of candidates exceeds the number of employees who can be referred to the selecting authority for consideration.

APPRAISAL FACTORS - MANNER OF PERFORMANCE (Do not complete if employee is a GS-15)

Appraisal factors listed below represent work behaviors that can be observed in the context of the employee's current position and are considered predictive of performance at the next higher level. Based on your observations of the employee's performance, rate EVERY appraisal factor. Use the following scale in making the ratings. Place the number (1-9) in the block preceding the appraisal factor.

LOW RANGE	CENTRAL RANGE	HIGH RANGE
1. Very Poor	4. Slightly Below Fully Successful	7. Above Fully Successful
2. Far Below Fully Successful	5. Fully Successful	8. Far Above Fully Successful
3. Below Fully Successful	6. Slightly Above Fully Successful	9. Outstanding

9	1. WORK EFFORT:	<i>Exerts effort and shows initiative in starting, carrying out and completing tasks; spends time effectively performing work.</i>
9	2. ADAPTABILITY TO WORK:	<i>Picks up new ideas and procedures quickly; is easy to instruct; can adapt to the demands of new situations; understands and carries out oral or written instructions.</i>
9	3. PROBLEM SOLVING:	<i>Devises effective solutions to problems or identifies effective methods and procedures for accomplishing objectives.</i>
6	4. WORKING RELATIONSHIPS:	<i>Sensitive to the behavior of fellow workers, supervisors and subordinates; maintains effective working relationships with others.</i>
6	5. COMMUNICATION:	<i>Communicates clearly and effectively, whether orally or in writing.</i>
9	6. WORK PRODUCTIVITY:	<i>Productive during work time; completes his/her work projects, duties and tasks in a timely manner.</i>
9	7. SELF-SUFFICIENCY:	<i>Works independently with little need for additional supervision or help; follows through well; accomplishes all tasks required to complete a job on his/her own.</i>
9	8. SKILL IN WORK:	<i>Performs job-associated tasks well, whether they require physical, technical, professional, supervisory or managerial skills, is considered very skillful on the job.</i>
9	9. WORK MANAGEMENT:	<i>Effectively plans and organizes work; properly follows or implements management procedures, directives, regulations, or technical orders; ability to direct or evaluate or substitute for absent supervisor.</i>

PRIVACY ACT STATEMENT

Authority: 5 U.S.C. 552a and Executive Order 12958.

Purpose: The social security number is needed to correctly identify the employee.

Routine Use: This information may be disclosed to another agency if the employee transfers to another agency.

Disclosure is Voluntary: However, without it, it may affect the ability to accurately identify the employee and the records.

CONFIDENTIAL DOCUMENT

CIVILIAN PERSONNEL POSITION DESCRIPTION

1. NUMBER OF IA'S

2. POSITION NUMBER

04306

3. ORGANIZATION AFMC, WR-ALC, ROBINS AFB, GA C-5 MAINTENANCE DIRECTORATE LOGISTICS SUPPORT DIVISION RESOURCES CONTROL BRANCH ENGINEERING SECTION JLCLAE/LCLAE	4. POSITION TITLE GENERAL ENGINEER		
	5. CLASSIFICATION (23) GS-801-12	6. CLASSIFIED BY <i>Larry Hackey</i>	7. DATE 19 NOV 98

8. DUTIES AND RESPONSIBILITIES (Indicate time percentages, where required) (Questions concerning the classification of your position should be asked of your supervisor. You may see, upon request, classification standards and guides used in classifying your job. Appeal rights and procedures are explained in Federal Personnel Manual, Chapter 611, Subchapter 6 and AFR 40-512.)
OPT: Mechanical and Aerospace

A. SLC	B. Type Emp Supv	C. Tgt	D. CLC	E. Career Prgrn ID	F. EE Code	G. Key Psn Code	H. HOPR	I. Tng ID	J. Psn Mgmt Status Code
8	99	12	0057		N	--	LC-6	YY	W

I. INTRODUCTION:

The purpose this position is to provide professional expertise as an Aerospace Engineer (50%) and Mechanical Engineer (50%) to accomplish full range engineering integration of systems, subsystems and equipment for the C-5A/B weapon system to assure required operational design performance and compatibility is achieved and maintained.

II. DUTIES AND RESPONSIBILITIES:

1. Provide engineering management advice for direction and control of a total aircraft weapons system with emphasis on aeronautical and mechanical systems in order to achieve and maintain overall technical integrity and integration of that system, as related to design configuration, reliability, and performance.
2. Formulates plans and programs for development and maintenance of an engineering capability to support assigned weapons ms. Determines contract resources and facilities required to provide the weapons system manager with adequate engineering prt.
3. Acts as principle contract point, including support Item Managers and the System Management Office, on engineering matters pertaining to an signed system. Applies engineering actions to the systems so as to assure that such actions are compatible with the overall system program. Performs staff advisory and reviewing duties for coordinating the engineering effort with contractors and other DoD organizations, on an assigned system.
4. Plans and controls engineering projects and programs. Continuously evaluates progress; and brief management personnel as required. Integrates total engineering effort and evaluates relative priorities to determine sequence scheduling of projects/programs and work allocations on an assigned system. Maintains work flow data to meet deadlines and priorities. Review interim and final reports of project assignment to keep abreast of major technical steps accomplished. Takes action to expedite engineering projects/programs by making necessary arrangements for tests, or facilities required by engineering personnel.

GENERAL SKILL	1ST SKILL				2D SKILL				3D SKILL		
	%	SKILL	SHRED	SUB	%	SKILL	SHRED	SUB	SKILL	SHRED	SUB
M A Y	50	B P R A C S			2	5 C C C S T R			C C C F L V		

9. I certify that this is an accurate statement of the major duties and responsibilities of this position and its organizational relationships, and that the position is necessary to carry out government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds, and that false or misleading statements may constitute violations of such statutes or their implementing regulations.

11. POSITION SENSITIVITY	12. FLSA OVERTIME
<input type="checkbox"/> NONSENSITIVE	
<input checked="" type="checkbox"/> NONCRITICAL-SENSITIVE	<input checked="" type="checkbox"/> EXEMPT
<input type="checkbox"/> CRITICAL-SENSITIVE	<input type="checkbox"/> NON-EXEMPT

10. REAUDIT CERTIFICATION (Initials)	DATE
	10-7-98
SUPERVISOR	
CLASSIFIER	

5. Conducts special studies (staff studies) to improve the operating efficiency of the section and to provide management with long range planning factor. These studies include financial planning, project processing and control, and determination of manpower requirements in his area of engineering responsibility.

...y serve as a ^{project} engineer, directing one or more other engineers, and may occasionally provide if required, specialized engineering assistance accident to accident investigation boards by analyzing the aircraft mechanical and fluid systems failure phenomenon involved in aircraft accidents. Incumbent evaluates a pilot's observations in terms of aircraft performance on other than desirable flight characteristics. Will generally serve as team leader in assembly and analysis of physical data and then provide reports and expert testimony regarding the cause of system failure.

III. FACTORS:

FACTOR 1 - Knowledge Required by the Position Level 1-7; 1250 Points

Professional knowledge of mechanical engineering and aerospace engineering concepts, principles and practices applicable to the full range of systems and system components used in modern, high-performance aircraft. Incumbent must be able to apply experimental theory to solution of in-service revealed deficiencies. The incumbent must be a graduate of an accredited college with a degree in engineering or science discipline. Must have a specific knowledge of various engineering disciplines as they relate to airborne systems and equipment (i. e., mechanical, aeronautical, electromechanical) and of systems engineering associated with system integration. The professional engineering management interface of this position requires an engineer not only be skilled in the sciences, but also one who is able to reason and decide objectively, present ideas logically and forcefully, and have the ability to meet, converse and work harmoniously with engineers, managers, technicians, pilots, administrators and others.

FACTOR 2 - Supervisory Control Level 2-4; 450 Points

The supervisor sets overall objectives and resources available. The engineer has responsibility for planning, designing and carrying out studies, projects, programs, and other aerospace and mechanical engineering work independently and without need for technical guidance by the supervisor. The results of the engineer's work are evaluated for adequacy of results, correlation work of engineers in other fields, and conformance with administrative policies and procedures.

FACTOR 3 - Guidelines Level 3-4; 450 Points

Guidelines include AFSC Design Handbooks and Military Specifications, technical journals, and various manuals. These documents offer guidance of a very general nature and seldom offer a solution to any specific problem. The engineer must use initiative and imagination in developing new solutions to the problems presented by the weapons systems.

FACTOR 4 - Complexity Level 4-5; 325 Points

The assignments are complex and include diverse and design and development of repair or modifications requiring the understanding of all system performance requirements. The work requires constant correlation of information gleaned from many sources, such that seemingly unrelated bits of data are welded into a firm hypothesis which will withstand close scrutiny and question.

FACTOR 5 - Scope and Effect Level 5-4; 225 Points

The work involves the safety of USAF Property and the lives of aircrews. The system investigations and design efforts of the engineer will have an immediate and direct impact upon the performance, reliability, and safety of high performance aircraft.

FACTOR 6 - Person Contacts Level 6-3; 60 Points

Contracts are contractor's representatives, USAF upper operational and management levels, as well as with working levels of USAF maintenance and logistics activities.

FACTOR 7 - Purpose of Contacts Level 7-2; 50 Points

The purpose is to discuss design details of repair and modification to obtain agreement of course of action to be taken or occasionally to interrogate personnel during an investigation. In addition, the engineer must also, on occasion, provide briefings on design or on the results of investigation to USAF management at higher levels.

SUBJECT: Lateral Transfer

I, Mark M. Taylor, GS-0861-12, assigned to LTESS, am requesting a lateral transfer to MANPF. Time of transfer to be worked out between gaining and losing supervisors..

Gaining=Mr. Chris Barkley X5479

Losing=Mr. Scott Vandersall X9156

Employee=Mark Taylor X6778

Mark M. Taylor

PAS	QSGC	MX.TD	MFCN	NAME	GRADE	OGC	AFSC	S	REC	FAO	SAR	DUTY HOURS
FN82	JENFX	LEEE	03158691M	Vacant	GS-12	00830	062E3	H	00078070A	393000	8	Flex
FN82	JENFX	LEEV	00927221M	Vacant	GS-12	00830	062E3	H	00078070A	393000	8	Flex
FN82	JENFX	LKEW	03391931M	Vacant	GS-12	00830	062E3	H	00078202A	392045	8	Flex
FN82	JENFX	MANPF	01658141M	Vacant	GS-12	00830	062E3	H	00078211A	276000	8	0700-1545

CHIPS BARKLEY @ 2/19/04 = X 5479
 @ 0930

RESUME FOR MARK TAYLOR

Taylor, Mark, M.

3735 MOODY Road
KATHLEEN GA. 31047
HOME PHONE: 912-988-1031
WORK PHONE: 912-926-6778/DSN468
EMAIL: mark.taylor@robins.af.mil

SUMMARY of SKILLS: Aerospace Engineer, General Engineer, Mechanical Engineer and Propulsion Engineer. I have worked in Liaison Engineering, Flight Test, Design, Contracts, Management and Budget. I have Trained and Supervised Professional Engineers, Mechanics and Support Staff.

EXPERIENCE AND EMPLOYMENT HISTORY:

July 1998-Present; 40-50; hours per week; General Engineer/GS0861/0830-12/; Robins AFB; Warner Robins Ga. 31098; Joint Stars, C-5 Galaxy; Structural Engineer, Liaison Engineer; Mr. Scott Vandersall 912-926-9156 WR-ALC/LTESS

I am working as a Structural/Liaison Engineer on the C-5 Galaxy. I have also worked at Robins as a Structural Engineer on the Joint Stars Aircraft (Boeing 707-300 airframe).

My duty on Joint Stars was to keep Operational Aircraft Flying. This required repairing and issuing Engineering orders beyond Technical Order Limits to the 93RD Air Control Wing at ROBINS AFB. I wrote and evaluated Safety of Flight Messages, Evaluated and Implemented Suggestions. I was responsible for Supervising support staff in conjunction with the above tasks, this included Training, Clarity and Technical Content of work packages.

As a member of the C-5 Galaxy Team I am responsible for Evaluating Non-Conformances by way of Air Force form 202 and recommending sound Engineering repairs that can be accomplished safely, economically and can be accomplished with the personnel/equipment available. I also generate Engineering Change Proposals and interpret Engineering Drawings for Support Personnel. I advise Management on the swiftest, safest and most economical method to reach Productivity Goals, From an Engineering Perspective. I also have the Honor of Training all incoming Professional Engineers to the C-5 Galaxy Section. I perform the duties of Technical Lead Engineer for the Group. I am able to train and Supervise Professional Engineers in a way necessary to obtain the skills needed to work on their own with little or no supervision.

January 1996-June 1998; 50-60 hours per week; Liaison/Structural Engineer; BOEING-ST. LOUIS;

MS. Suzanne Charles; ST. LOUIS MO. 314-434-2336.

I was employed as a Structural Engineer working for Private Industry. I worked on C-17, F-15,

AV-8 and F-18 Aircraft. I was a member of the Structural/Liaison Engineering Team. My duties were to evaluate and dispose of Non-Conformances thru Engineering Disposition on new Production Aircraft. In order to fulfill this task I was required to pass a comprehensive written examination administered by BOEING. I was fully trained in the application of exotic materials (composites, titanium, boron). My actions and Department were solely answerable to Production and their Engineering needs.

December 1984-December 1996; 40-50 hours per week; Aerospace Engineer
GS0861/12; Army Aviation
and Troop Command, ST. LOUIS MO.; Structures and Systems Branch; MR.
Dick Mooy 314-931-6797.

I worked as a Structural Engineer on the AH-64, AH-1, UH-1, UH-60, CH-47, OH-58 and C-23 Aircraft. My primary function was as a Structural Engineer in the direct Maintenance and Support of Operational Aircraft. I was responsible for evaluating and determining corrective action necessary to maintain an acceptable Operational Readiness at Unit and Depot level.

I was responsible for initiating the Liaison Engineering positions at remote locations such as Korea, Saudi Arabia and Germany. My job was to evaluate Non-Conformances at these locations and recommend repairs that could be accomplished at the lowest level of Maintenance possible. I was co-located with these aircraft at remote sites, which helps in recommending repairs. During the Gulf War I was located in the forward theatre of operation working as the Primary Aircraft Engineer in Country. My job was to establish and maintain a depot operation in Country, this was necessary in order to keep Operational Aircraft in the Front of Battle. I established work-flow and repair procedures during this period that are standard operating procedures for future conflicts.

EDUCATION:

Bachelor of Science/Aerospace Engineering/ST. LOUIS UNIVERSITY/1984
Masters of Business Administration/WEBSTER UNIVERSITY/1990

LICENSES:

Material Review Board Certified (Private Industry)

AWARDS:

Civilian Service Medal for Duty in the Gulf War

MILITARY SERVICE:

USMC/1975-1980

Illegal Rework:

Per the documents enclosed an illegal rework has occurred on aircraft 70-0459. Request number 04-147. This part is primary structure and the only authorized repair is in accordance with T.O. 1C-5A-3, Section XI. Please notify the proper authorities.

Mark Taylor
2/6/04

Note : On a previous form 107 (04-143,2/4/04) I condemned a wing tip with similar damage.

Mr. Vandersall essentially put a TEMPORARY unproven repair on a Wing Tip of a C-5 Aircraft. This part is primary structure as listed in T.O. 1C-5A-3, Section 11. I stated to Mr. Vandersall that this should not be done for failure may cause the part to fail catastrophically, thus exposing the fuel tank resulting in massive fuel loss.

Mark Taylor
4/2/04

COMPLAINANT PROVIDED

Taylor Mark M Civ WRALC/LTES

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 7:08 AM
To: Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES
Subject: Request #04-147

Sir: An illegal rework has occurred on a 107 request form #04-147 on aircraft 70-0459. These are the chronological order of events.

- 1) I was assigned request # 04-147 on 2/5/03.
- 2) I reviewed the request and asked for additional information. IE=please identify all damage per T.O. 1C-5A-36.
- 3) I opened up the 107 request on 2/6/04 and read the repair was not accomplished IAW T.O. 1C-5A-3, Section 11 nor any Engineering authorized repair.
- 4) Part Number 4J20120-114A is listed as PRIMARY STRUCTURE per T.O. 1C-5A-3, Section 11, Figure 17.
- 5) The only alternative I will agree to at this time is.
 - A) Remove and replace P/N 4J201120-114A to blueprint specifications.
 - B) Repair IAW T.O. 1C-5A-3, Section XI.
- 6) I believe it is managements responsibility to inform the proper authorities of an illegal rework.

Mark Taylor
2/6/04
0705

2/6/2004

Taylor Mark M Civ WRALC/LTES

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 12:38 PM
To: Coulter Rodney Civ WRALC/ENFA
Cc: Schweinberg Bill Civ WRALC/ENFA
Subject: FW: 0459 wing box repair

From: Brill Darrel MSgt 60 EMS/MXMFB [mailto:darrel.brill@travis.af.mil]
Sent: Friday, February 06, 2004 10:38 AM
To: Vandersall Scott Civ WRALC/LTES; Taylor Mark M Civ WRALC/LTES; Lamb Thomas F Civ WRALC/LTES
Cc: Colson Richard B SMSgt 60 EMS/MXMF; Kirkbride Terry L SMSgt 349 EMS/LGMF; Villasenor Raymond Amn 60 EMS/MXMFB; Fox Michael MSgt 60 EMS/MXMFB; Lewis Gary A Civ 60 EMS/MXMFB
Subject: 0459 wing box repair

Good Morning Gentlemen, I would like to provide information regarding the right wing tip box assy. The initial delamination was approximately 8"X8". When the damage was removed it did not appear to have moisture and when the bond was attempted using film adhesive it blew to 24"X26". We have run the expanded area through extensive drying cycles. We have done supply inquiries and there are no assets available. We asked for a temporary repair using 9309 since we cannot afford to blow this component any further to the point that we would not be able to repair it and grounding the aircraft. We are coming quickly to a point where we need every available aircraft for upcoming wartime airlift operations. During a recent visit to Robins by two of our folks, they had extensive discussions on bonding procedures with Rodney Coulter. Part of these discussions was that they would authorize temporary repairs to structure using paste adhesives provided that the areas are aft of the engine inlets. Based on this information and in an effort to expedite repairs and prevent any delay in the isochronal inspection we pressed forward with bonding in the replacement honeycomb core using EA9309. This bond has taken successfully. We are currently waiting authorization to continue with repair actions. Again let me state that we feel that if we attempt to bond the skin with film adhesive that the damage will continue to grow to a point that we will not be able to repair. Please respond as quickly as possible as time is getting critical.

MSgt Darrel Brill
Aircraft Structural Maintenance Section Chief

4/14/2004

COMPLAINANT PROVIDED

Taylor Mark M Civ WRALC/LTES

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 9:42 AM
To: Coulter Rodney Civ WRALC/ENFA
Cc: Schweinberg Bill Civ WRALC/ENFA
Subject: FW: Request #04-147

fyi

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 9:40 AM
To: Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES; Colson Richard B SMSgt 60 EMS/MXMF
Subject: FW: Request #04-147

Sirs: Per telephone conversation with SMSGT Richard Colson on 2/6/04 at 0930 EST the following conversation took place:

- 1) I informed SMSGT Colson that this repair was not authorized. He agreed.
- 2) I informed SMSGT Colson that I would not agree to this repair, his alternative is to ask Mr. Vandersall or Mr. Lamb for relief for this non-conformance. He agreed.
- 3) SMSGT Colson said he would outline on a step by step basis the repair that is currently on A/C 70-0459. He would send this directly to Mr. Vandersall with a CC to myself and Mr. Lamb.
- 4) CONCLUSION: 107 Request 04-147 is being held in abatement by this office until further notice.

Mark Taylor

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 7:08 AM
To: Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES
Subject: Request #04-147

Sir: An illegal rework has occurred on a 107 request form #04-147 on aircraft 70-0459. These are the chronological order of events.

- 1) I was assigned request # 04-147 on 2/5/03.
- 2) I reviewed the request and asked for additional information. IE=please identify all damage per T.O. 1C-5A-36.
- 3) I opened up the 107 request on 2/6/04 and read the repair was not accomplished IAW T.O. 1C-5A-3, Section 11 nor any Engineering authorized repair.
- 4) Part Number 4J20120-114A is listed as PRIMARY STRUCTURE per T.O. 1C-5A-3, Section 11, Figure 17.
- 5) The only alternative I will agree to at this time is.
 - A) Remove and replace P/N 4J20120-114A to blueprint specifications.
 - B) Repair IAW T.O. 1C-5A-3, Section XI.
- 6) I believe it is managements responsibility to inform the proper authorities of an illegal rework.

Mark Taylor
2/6/04
0705

4/14/2004

COMPLAINANT PROVIDED

Taylor Mark M Civ WRALC/LTES

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 8:58 AM
To: Coulter Rodney Civ WRALC/ENFA
Cc: Schweinberg Bill Civ WRALC/ENFA
Subject: FW: Request #04-147

fyi

From: Taylor Mark M Civ WRALC/LTES
Sent: Friday, February 06, 2004 7:08 AM
To: Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES
Subject: Request #04-147

Sir: An illegal rework has occurred on a 107 request form #04-147 on aircraft 70-0459. These are the chronological order of events.

- 1) I was assigned request # 04-147 on 2/5/03.
- 2) I reviewed the request and asked for additional information. IE=please identify all damage per T.O. 1C-5A-36.
- 3) I opened up the 107 request on 2/6/04 and read the repair was not accomplished IAW T.O. 1C-5A-3, Section 11 nor any Engineering authorized repair.
- 4) Part Number 4J20120-114A is listed as PRIMARY STRUCTURE per T.O. 1C-5A-3, Section 11, Figure 17.
- 5) The only alternative I will agree to at this time is.
 - A) Remove and replace P/N 4J201120-114A to blueprint specifications.
 - B) Repair IAW T.O. 1C-5A-3, Section XI.
- 6) I believe it is managements responsibility to inform the proper authorities of an illegal rework.

Mark Taylor
2/6/04
0705

4/14/2004

CONSULTANT PROVIDED

Taylor Mark M Civ WRALC/LTES

From: Colson Richard B SMSgt 60 EMS/MXMF [Richard.Colson@travis.af.mil]
Sent: Friday, February 06, 2004 9:10 PM
To: Taylor Mark M Civ WRALC/LTES; Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES; Brill Darrel MSgt 60 EMS/MXMFB; Hollister.John@travis.af.mil
Subject: RE: Request #04-147

Sirs; what I agreed to was:

- 1) given the directions from Mr. Taylor for the -36 inspections then yes we did not comply with those requirements.
- 2) we (Travis) would provide a step-by-step repair method to Mr Vandersall and Mr Lamb.

We're behind a rock a hard place when it comes to having enough FMC C-5s to support Airlift Mission's for the Global War on Terror. Travis would never think to install a repair that would not restore the flight worthiness of the airframe. We have been given directions to perform bolt-through repairs on the wing boxes in the past to enable the aircraft to fly until such time as assets became available.

I hope this and MSgt Brill's detailed request gives you a better feel for what Travis is capable of doing and not give you the wrong impression of our "field-level" repairs.

V/r
SMSgt Richard B. Colson

-----Original Message-----

From: Taylor Mark M Civ WRALC/LTES
Sent: Fri 2/6/2004 8:39 AM
To: Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES; Colson Richard B SMSgt 60 EMS/MXMF
Subject: FW: Request #04-147

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- 4) CONCLUSION: 107 Request 04-147 is being held in abatement by this office until further notice.

Mark Taylor

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To: Lamb Thomas F Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES
Subject: Request #04-147

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- 1) I was assigned request # 04-147 on 2/5/03.

4/2/2004

- 2) I reviewed the request and asked for additional information. IE=please identify all damage per T.O. 1C-5A-36.
- 3) I opened up the 107 request on 2/6/04 and read the repair was not accomplished IAW T.O. 1C-5A-3, Section 11 nor any Engineering authorized repair.
- 4) Part Number 4J20120-114A is listed as PRIMARY STRUCTURE per T.O. 1C-5A-3, Section 11, Figure 17.
- 5) The only alternative I will agree to at this time is.
 - A) Remove and replace P/N 4J201120-114A to blueprint specifications.
 - B) Repair IAW T.O. 1C-5A-3, Section XI.
- 6) I believe it is managements responsibility to inform the proper authorities of an illegal rework.

Mark Taylor
2/6/04
0705

4/2/2004

CRIMINANT PROVINCE

Illegal Rework:

Per the documents enclosed an illegal rework has occurred on aircraft 70-0459. Request number 04-147. This part is primary structure and the only authorized repair is in accordance with T.O. 1C-5A-3, Section XI. Please notify the proper authorities.

Mark Taylor
2/6/04

COMPLAINANT PROVIDED

107 REQUEST # 04-147

REQUESTOR INFORMATION

Requestor: AL.HOCKERSMITH
Office Symbol: MXOOS
Command: AMC
DSN: 837-5570
Date Requested: 2/5/2004 11:05:04 AM

Rank/Grade: TSGT
E-Mail Address: AL.HOCKERSMITH@TRAVIS.AF.MIL
Base: TRAVIS
COMMERCIAL: 704-424-5540
Organization: 60MOS

DISCREPANCY INFORMATION

Engineering Division: STRUCTURES
Tail Number: 70-0459
Part Number: NONE
Serial Number: NONE
Discrepancy/Maintenance
Required: SEE ATTACHED
T.O.:
Figure:
Index:
Last ISO completion date:
Name of Engineer
contacted for assistance: NONE
Priority ROUTINE

Location of aircraft: TRAVIS

[Click here to see list of engineers](#)

STATUS

HQ Authority: JOHNSTON.EDWARD
Engineer: MARK.TAYLOR
Acceptance/Rejection:

Date: 2/5/2004 12:02:10 PM

Date: 2/5/2004 1:08:09 PM

COMMENTS

PLEASE IDENTIFY ALL DAMAGE USING THE
PRESCRIBED T.O.1C-5A-36. REMOVE ALL
MARK.TAYLOR: DISCREPANT DAMAGED HONEYCOMB.
RESUBMIT PICTURES WITH DAMAGED
REMOVAL. 2/5/2004 2:44:23 PM

I AM NOT CLEAR AS TO WHAT EXACTLY YOU
WANT INSPECTED AND WITH WHICH
PROCEDURE. ALL OF THE DAMAGED CORE HAS
DARREL.BRILL: BEEN REMOVED. THE BOND AREA HAS BEEN
DRIED AND REPLACEMENT CORE HAS BEEN
BONDED INPLACE USING EA9309. I HAVE
ATTACHED ADDITIONAL PICTURES. WE ARE ON
HOLD AWAITING FURTHER INSTRUCTIONS. 2/5/2004 7:32:07 PM

Comments:

ATTACHMENTS (7)

[Click here to Add/Delete/View attachments](#)

DISPOSITION

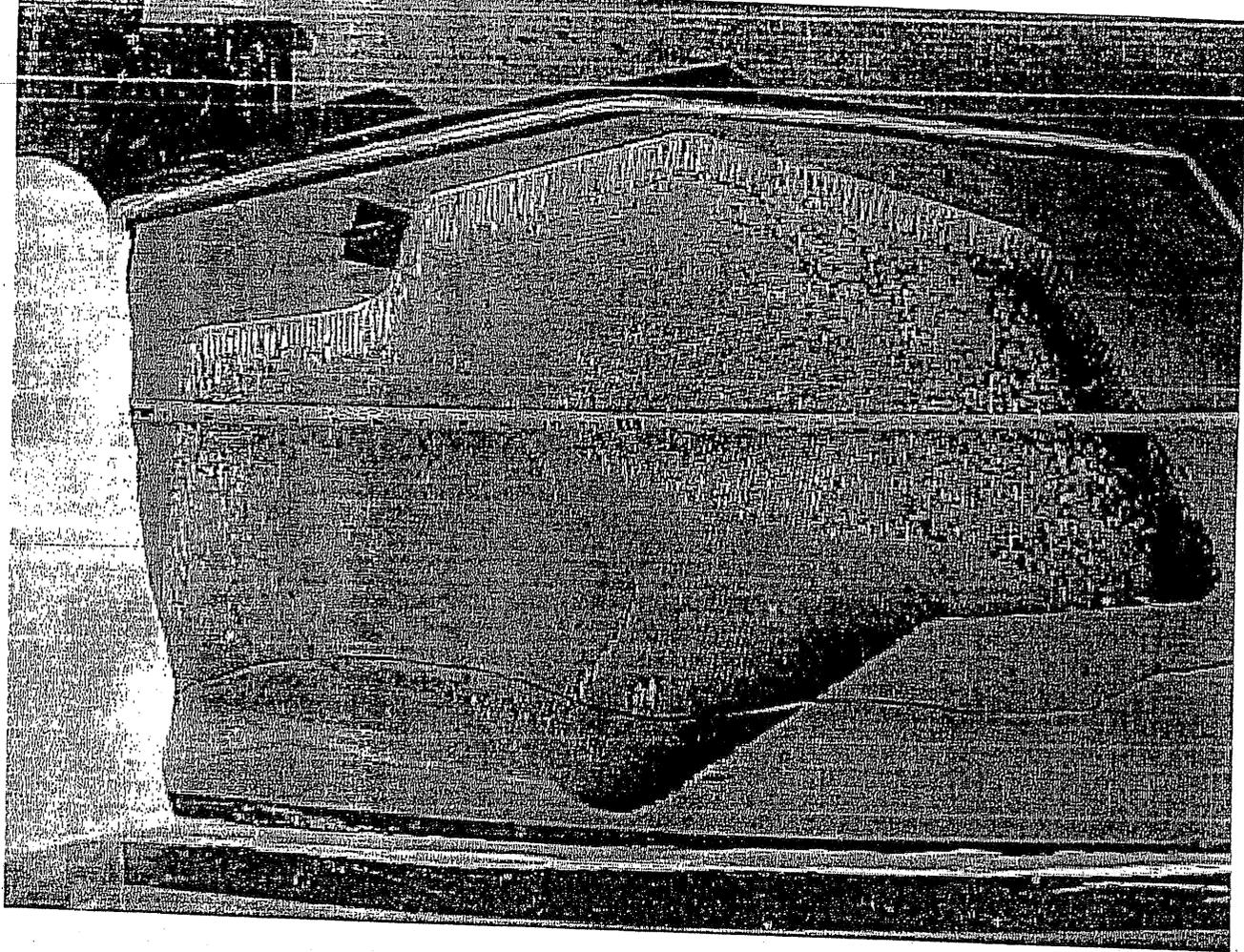
[Click here to see Disposition](#)

Submit

Reset

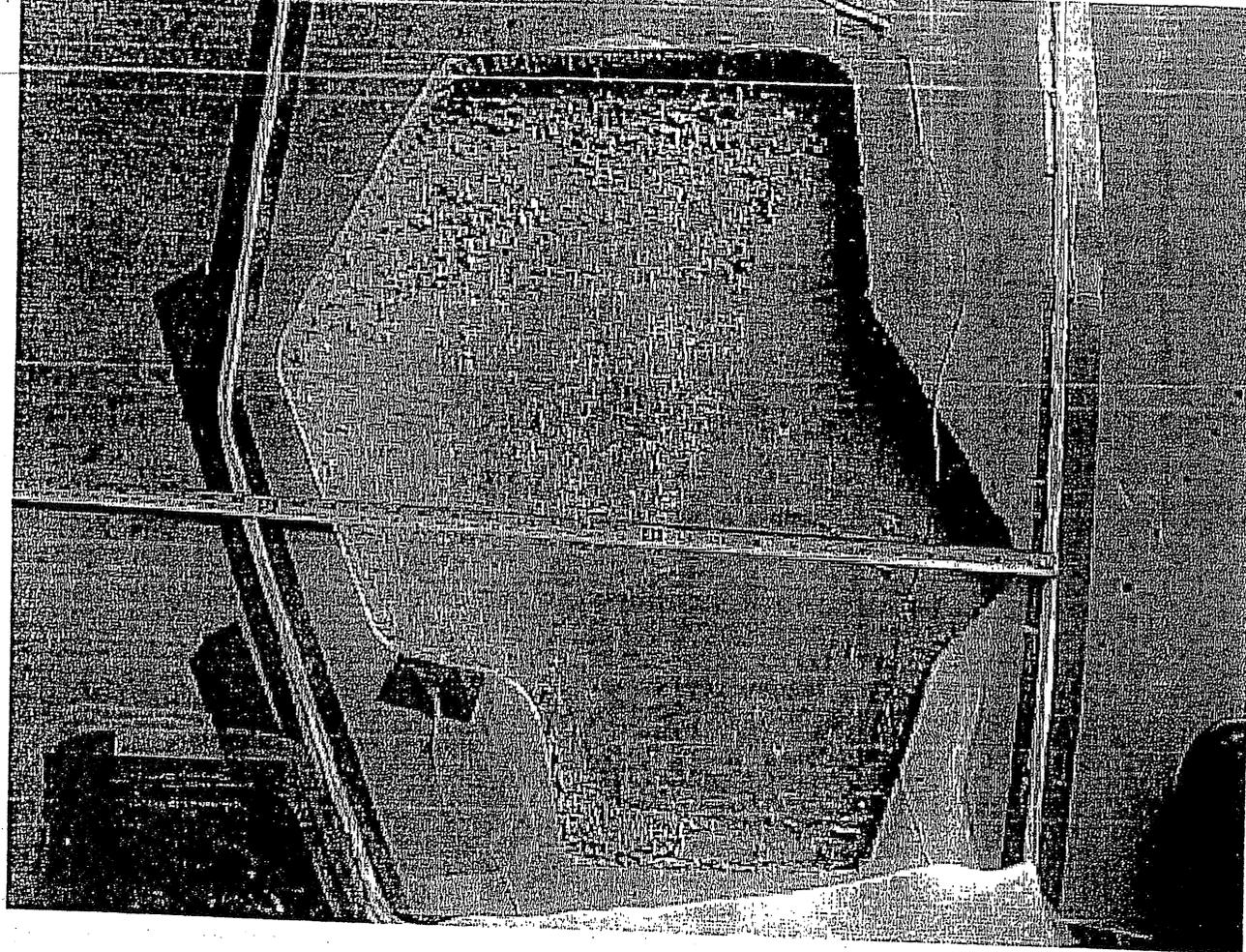
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This page maintained by [Kirk Bay](#), WR-ALC/LTCR, Comm: (478) 926-6118, DSN: 468-6118 email: wralc.lt.webmaster@robins.af.mil



<https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-077F.JPG>

2/6/2004
COMPLAINANT PROVIDED



[https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-079F\(1\).JPG](https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-079F(1).JPG)

2/6/2004
COMPLIANCE PROVIDED

NOTE: Please complete all the blocks (Use additional sheet(s) if necessary)

1. Nature of Assistance Request (Circle One): **Technical Assistance** / O&I Maintenance-Repair / Unprogrammed Depot Level Mx / Waiver

2. (Circle One) Aircraft (MDS): KC-10A C-5 C-17
Equipment (TMS): _____ Serial Number(s): **70-0459**

Date and Time Discovered **4 Feb 2004 0800**
4. When Discovered (i.e., BPO, thru-flt, NDI, in-flight, post flight, etc...) **Isochronal Inspection**

5. Detailed Description of Discrepancy/Damage/Problem and Exact Location (i.e., wing station, fuselage station, etc...)
During isochronal inspection the upper skin on the right wing tip torque box assembly was found to have a large delamination. Upon cutting open the skin and core removal, the interior the entire area was found to be extremely water soaked. The repair area is going through drying cycles but it will be impossible to extract sufficient water from the component to allow an adequate bond utilizing film adhesive.

6. Circle one
INBOARD OUTBOARD FORWARD AFT EXTERIOR INTERIOR OTHER LEFT RIGHT TOP BOTTOM
Remarks: **Right wing tip torque box assembly, see attached pictures**

7. Measurements: (i.e., length, width, horizontal, vertical. Spell out inches, feet):
26 inches X 24 inches

8. Job Control Number: **033C747**
9. Supply Requisition Number: **J384DK40354018**

10. Item Name: **Box Assy. Wing Tip**
11. NSN: **1560-00-195-7357**

12. Part Number: **4J20120-114A** TO: **1C-5A-4-1** Figure: **29** Index: **81A**

13. Detailed Description of Maint. Assistance Req (i.e. CFT, Wait for PDM, Engineering Disposition). Describe what you want done (Be Specific): **Request material substitution authorization to bond in replacement core, filler, and doubler using EA9309 paste adhesive and scrim cloth as a temporary repair until a replacement component issues from supply or until depot input. All other technical specifications will be adhered to IAW 1C-5A-3 chapter 11**

14. Next Scheduled Inspection:
13: Next PDM:

15. Estimated Time to Repair/Replace:
72 hours

16. What was done to attempt fix:

17. Who has been contacted (AFETS, CFT), when, and outcome (include verbal agreements, faxes, etc...)

18. Additional Comments:
Urgent Request

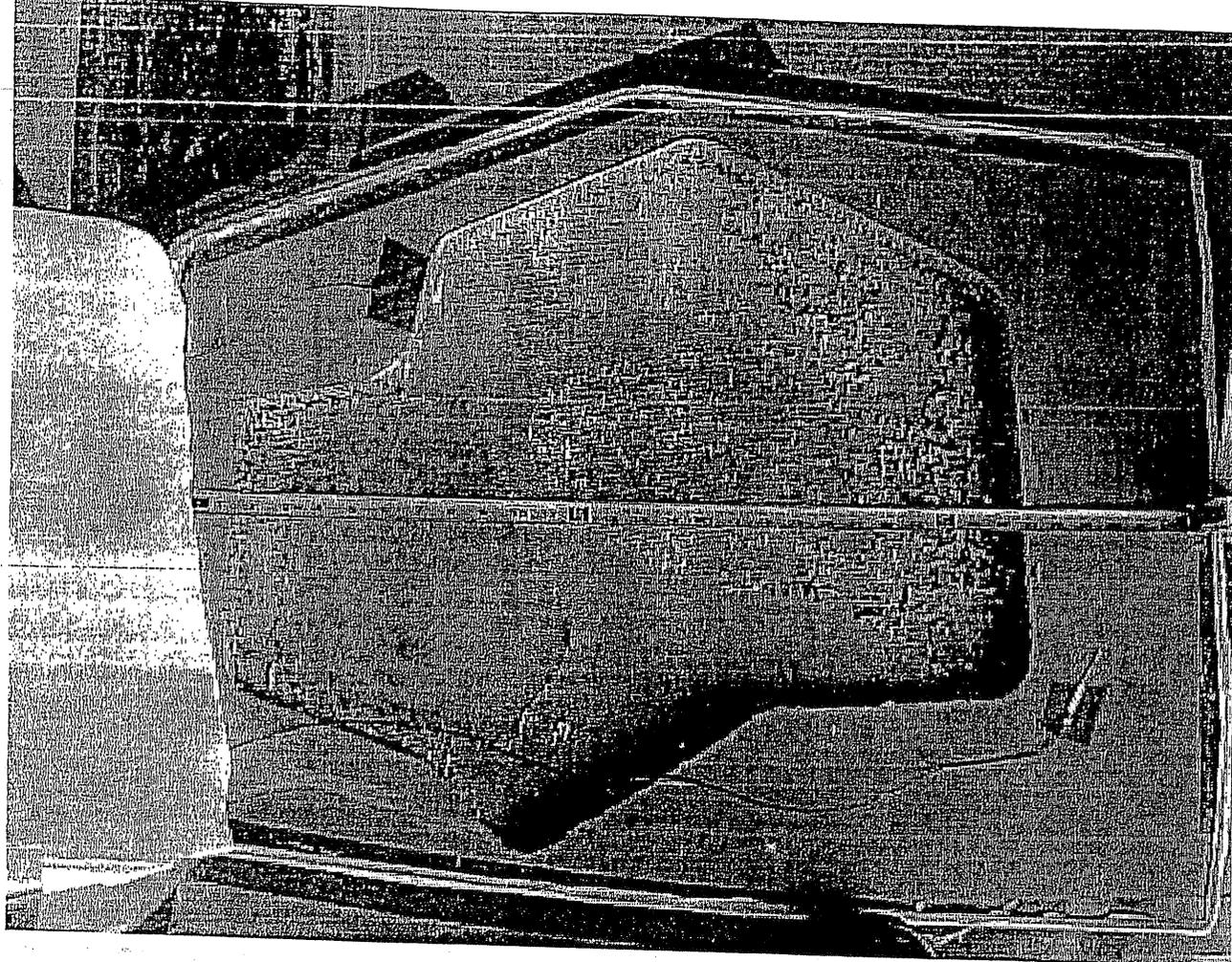
19. Requesting Unit POC (Name, Unit Address, Email Address, Phone/Fax number):
Darrel R. Brill, MSgt, 60EMS/MXMFB Travis AFB CA darrel.brill@travis.af.mil DSN 837-4169 FAX DSN 837-0909

20. Name and Signature of Maintenance Supervision
John Hollister, CMSgt, 60EMS/MXM

21. Quality Assurance Review (Name/DSN):
Kevin Gannaway, SSgt, 60MXG/QA

Maintenance Group Commander or (Designated Representative):
Donald T. McElroy, CMSgt, 60 MXG/MXM

Costs MUST BE ADDED



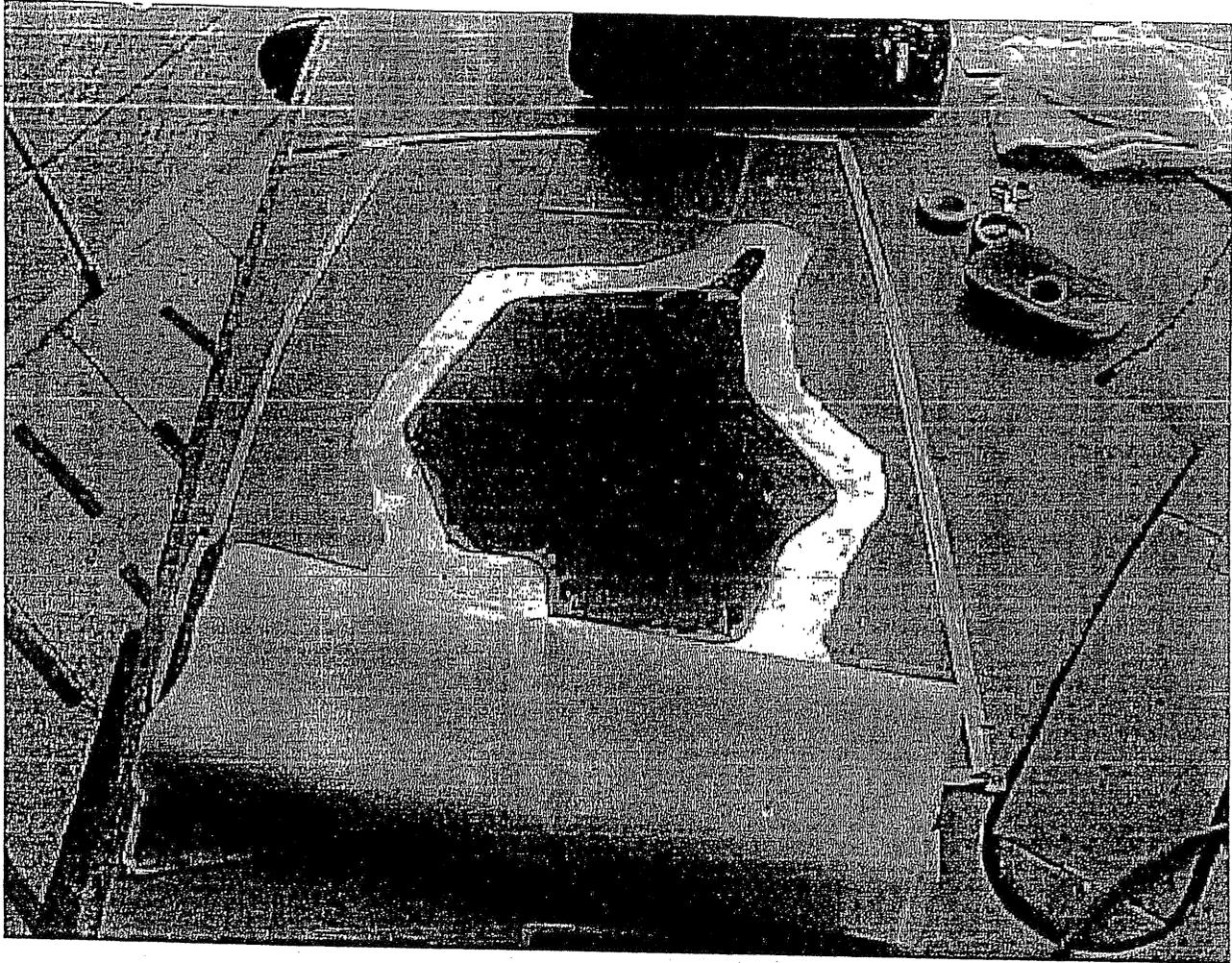
[https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-078F\(1\).JPG](https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-078F(1).JPG)

2/6/2004
C/M O/A W/A/T .000/1740



[https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-080F\(1\).JPG](https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-080F(1).JPG)

2/6/2004
COMPLAINANT PROVIDED





<https://ltwebsrv.robins.af.mil/data/c5/form107/MVC-082F.JPG>

2/6/2004

COMPLAINANT UNKNOWN



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS WARNER ROBINS AIR LOGISTICS
CENTER (AFMC)
ROBINS AFB GA 31098

2/9/2004

MEMORANDUM FOR: 60MOS/MXOOS

FROM: WR-ALC/LTES

SUBJECT: Right Wing Tip Delamination, C-5 70-0459, FSR 04-147

1. During a T.O. 1C-5A-3, Section 11 repair using film adhesive, the skin/core blew from an 8"x8" delamination to a 24"x26" delamination. Any further attempts to repair the wing tip utilizing a hot bond could jeopardize the unit's ability to repair it. Without any assets in supply, this could constitute a temporary grounding condition until the tip is replaced. PDM input date is scheduled for September 04. Unit requests to perform a cold bond repair with paste adhesive.
2. This disposition is for this aircraft only.
3. Cut away damaged skin/core utilizing a minimum 1" radius on all corners.
4. Dry the damaged area and surrounding areas as much as possible prior to bonding.
5. Prepare surfaces for bonding using the sulfuric acid etch procedure defined in T.O. 1C-5A-3, Section 11, Paragraph 11-43, Method 2.
6. Cut new PAA core with a density equal to or exceeding that what was removed to be level with the upper surface of the skin. When inserting the new core, bond the core to the lower face sheet with EA9309 paste adhesive using scrim cloth or glass microspheres to control the bond line thickness. Use Epocast 1843 for the core splice and follow the manufacturer's recommended procedures. Cure per manufacturer's procedures.
7. Manufacture repair doubler overlay from .020" 7075-T6 PAA skins large enough to have a minimum 2" overlap over all edges of the repaired core.
8. Bond overlay with EA9309 paste adhesive using scrim cloth or glass microspheres to control the bond line thickness. Cure per manufacturer's procedures.
9. Fay surface seal edges of repair with MIL-S-81733 sealant.
10. All corrosion prevention procedures are per T.O. 1C-5A-23 and Section 11 of T.O. 1C-5A-3.
11. Repair shall be coin tapped for delaminations at every HSC until depot

input or a replacement tip is obtained. Contact WR-ALC engineering as required for disposition instructions.

12. WR-ALC/LTES POC is Scott P. Vandersall, DSN 468-9156, or email scott.vandersall@robins.af.mil.



Russell Alford
Chief Engineer
Strategic Airlift Directorate
WR-ALC/LTE

Print

Disposition List

107 REQUEST # 04-143

REQUESTOR INFORMATION

Requestor: ALFONSO.DESTREZA Rank/Grade: E-5
Office Symbol: MXOOP E-Mail Address: ALFONSO.DESTREZA@DOVER.AF.MIL
Command: AMC Base: DOVER
DSN: 445-5454 COMMERCIAL: 302-677-5454
Date Requested: 2/4/2004 2:24:09 PM Organization: 436

DISCREPANCY INFORMATION

Engineering Division: STRUCTURES
Tail Number: 84-0059 Location of aircraft: DOVER AFB
Part Number: 4J20120-114A
Serial Number: NONE
Discrepancy/Maintenance 1. REQUEST TECHNICAL ASSISTANCE I.A.W. T.O. 00-25-107 ON AIRCRAFT
Required: 84059 RIGHT WING TIP BOX BEAM PART # 4J20120-114A T.O. 1C-5A-4-1 FIG
29 INDEX 29.

2. DURING ISO INSPECTION THE TOP SIDE FACE SHEET OF THE BOX BEAM WAS DISCOVERED TO HAVE DELAMS AND A 20 INCH CRACK COMING FROM ONE OF AN EXISTING REPAIR. AFTER THE SKIN WAS CUTOUT THE WATER WAS FULL TO THE TOP OF THE CORE IN ALL AREAS. X-RAYS REVEALED THAT MOST OF THE WATER IS IN THE OUTBOARD EDGE ALONG THE FULL LENGTH OF THE BOX BEAM; ABOUT 80 % HAS SOME INDICATION OF MOISTURE.

3. SIZE OF CUTOUT ARE 22" X 3 " AT V-1 BY EXISTING REPAIR OF 28" X 36" , AT V-7 CUTOUT IS 16 1/2 X 3". AT V-15,10 CUTOUT IS 7" X 3" , AT V-18,16 CUTOUT IS 5 1/2 X 3" . OTHER TWO AREAS IS A 3" CIRCLE CUTOUT. THE FORWARD EXISTING REPAIR IS 14 1/2" X 11" THAT HAS WATER WITH NO DELAMS.

4. THERE ARE NO WING TIP BOX BEAMS IN THE SUPPLY SYSTEM. REQUEST A TEMPORARY REPAIR OF SOL-GEL AND 9320 PASTE ADHESIVE AFTER CUTOUT AREA IS DRY. REPLACE BOX BEAM AT NEXT SCHEDULE MAINTENANCE WHEN ONE BECOMES AVAILABLE.

GREG LONG DAFC

436 EMS DOVER AFB

AIRCRAFT STRUCTURE MAINTENANCE

DSN 445-5766

FAX 445/(302-677-5755)

GREG.LONG@DOVER.AF.MIL

THIS IS AN EMERGENCY ACTION REQUEST. ALTERNATE POC IS DOVER AFB MOC @ DSN: 445-5436

T.O.:

Figure:

Index:

Last ISO completion date:

Name of Engineer contacted for assistance: NONE

Priority EMERGENCY

[Click here to see list of engineers](#)

STATUS

HQ Authority: JONATHAN.WAKELEY Date: 2/4/2004 2:38:20 PM
Engineer: MARK.TAYLOR
Acceptance/Rejection: MARK.TAYLOR Date: 2/4/2004 2:45:35 PM
Engineer's Disposition: THOMAS.LAMB Disposition Date: 2/5/2004 4:39:29 PM

COMMENTS

THIS PART IS LISTED IN T.O. 1C-5A-3, SECTION XI, AS PRIMARY STRUCTURE. REPAIR IAW T.O. 1C-5A-3, SECTION XI OR REMOVE AND REPLACE TO BLUEPRINT SPECIFICATIONS. 2/5/2004 9:14:27 AM
MARK.TAYLOR:

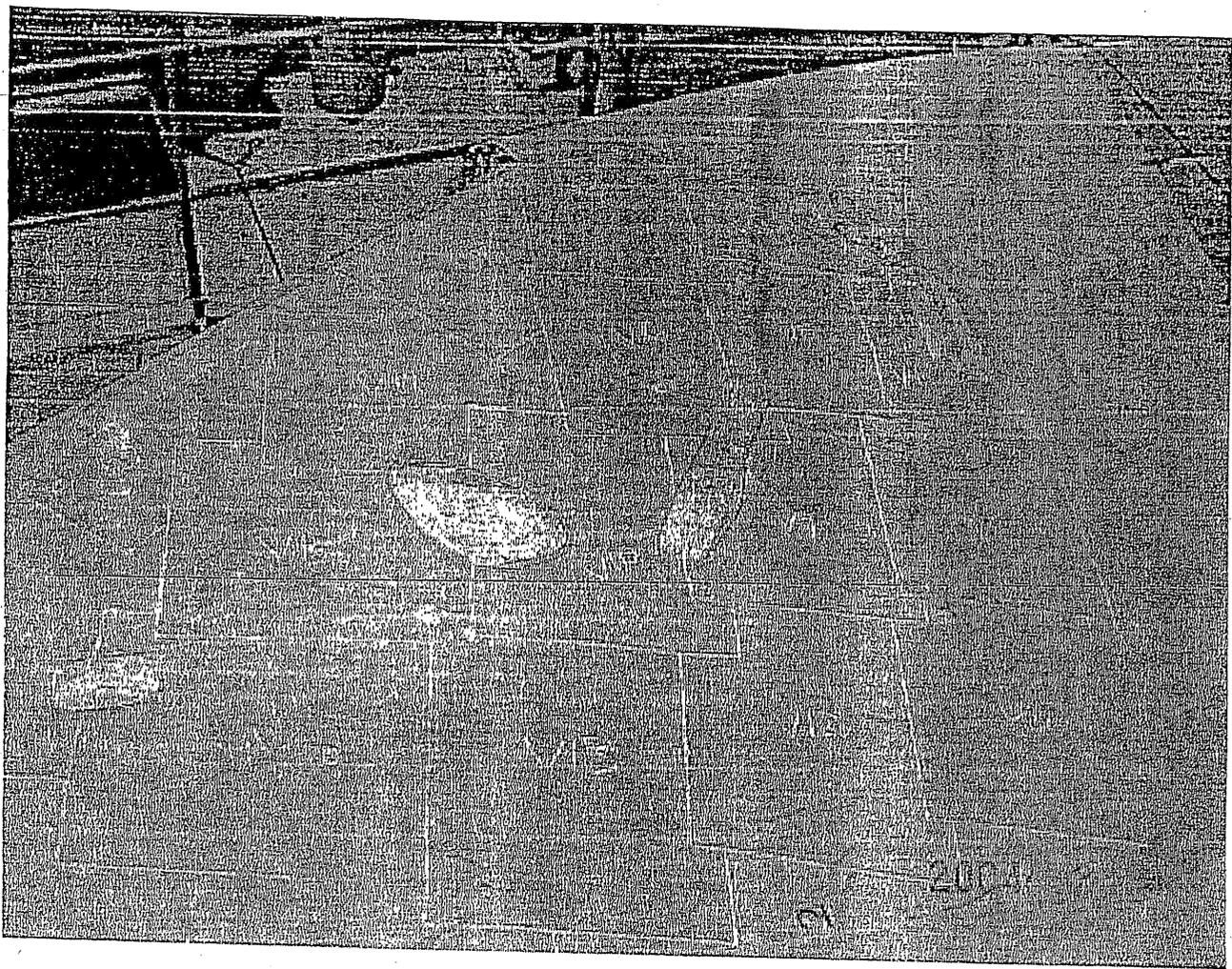
ATTACHMENTS (5)

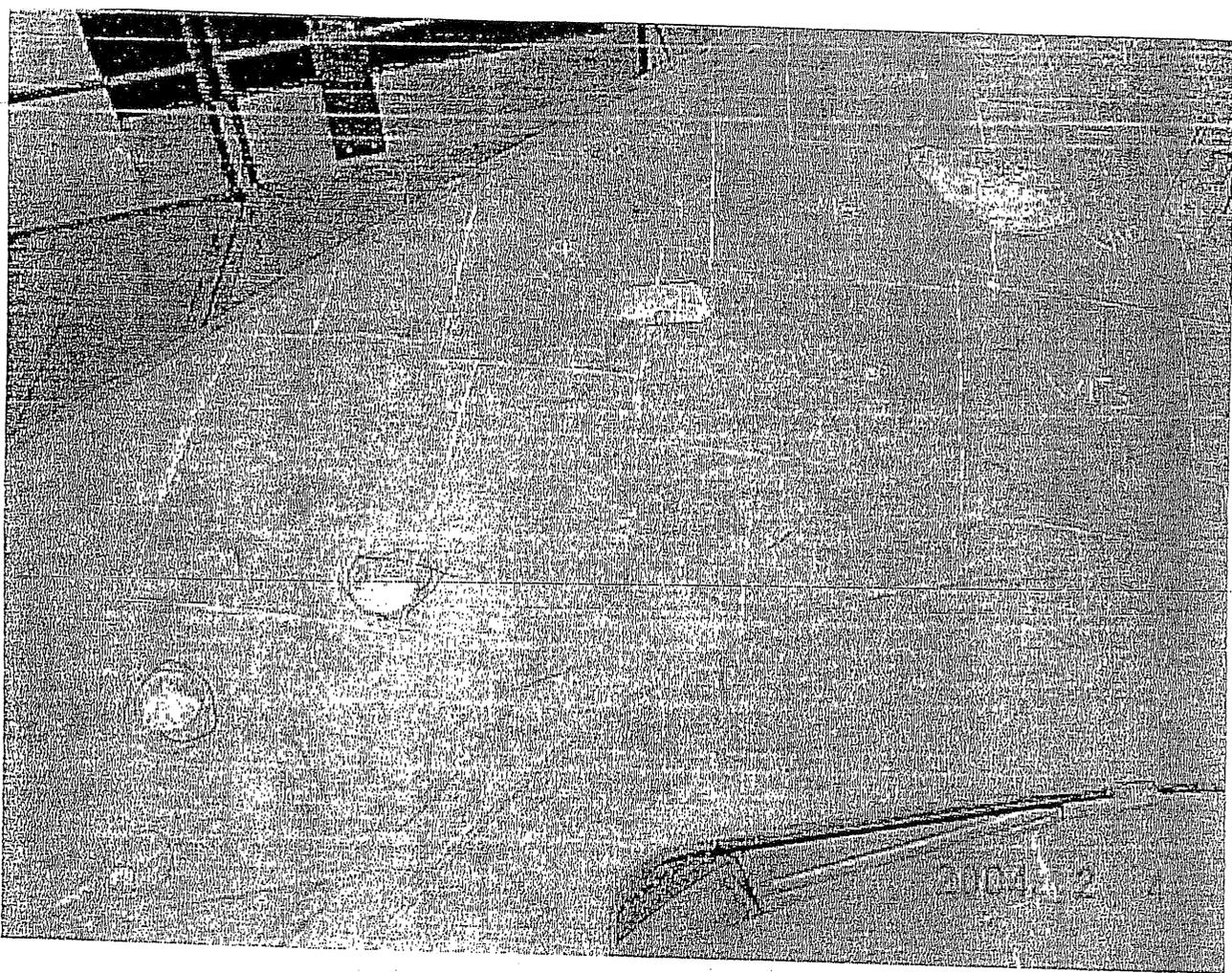
[Click here to Add/Delete/View attachments](#)

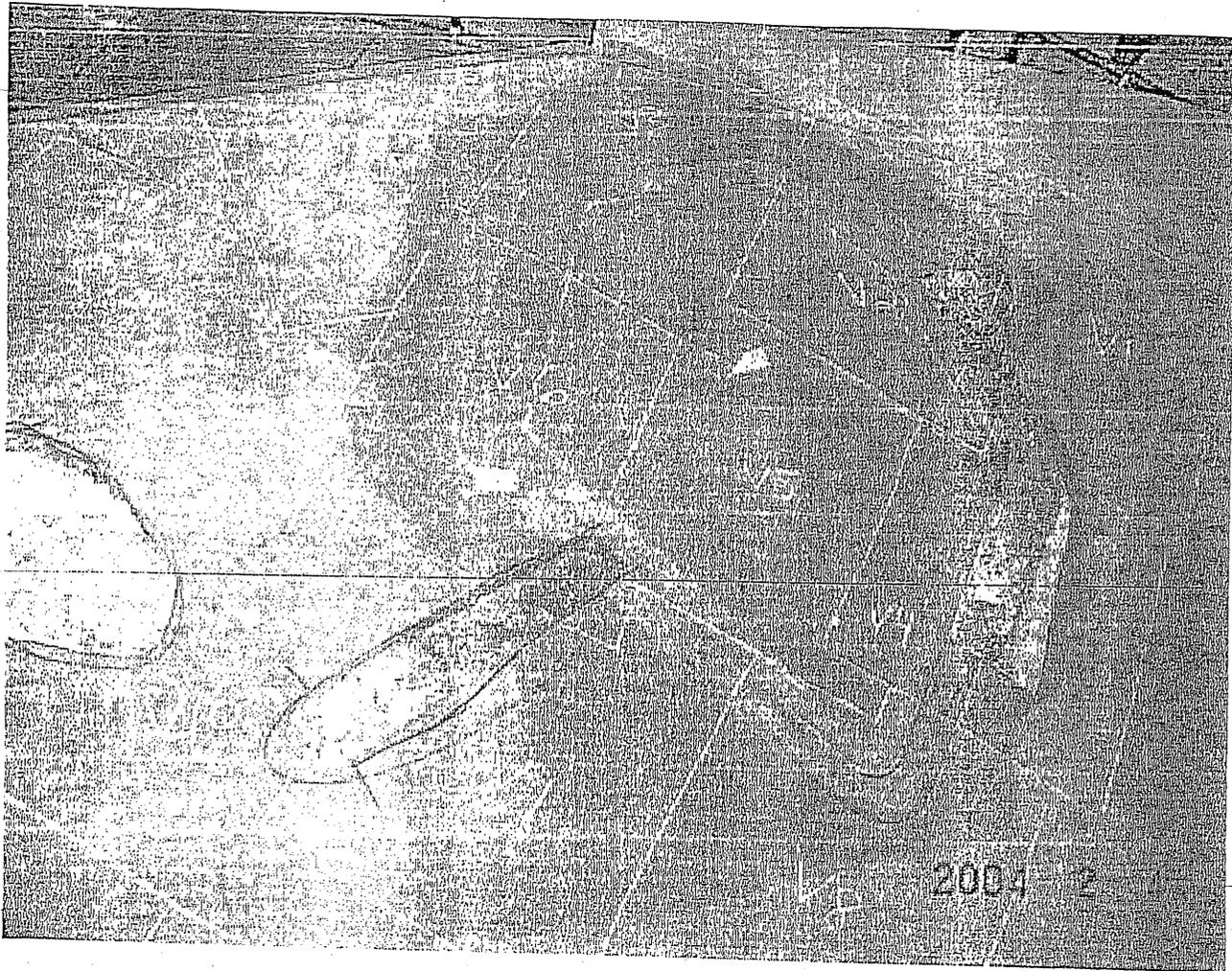
DISPOSITION

[Click here to see Disposition](#)

This page maintained by [Kirk Bay](#), WR-ALC/LTCR, Comm: (478) 926-6118, DSN: 468-6118 email: wralc.lt.webmaster@robins.af.mil









DEPARTMENT OF THE AIR FORCE
HEADQUARTERS WARNER ROBINS AIR LOGISTICS
CENTER (AFMC)
ROBINS AFB GA 31098

2/5/2004

MEMORANDUM FOR: 436/MXOOP

FROM: WR-ALC/LTES

SUBJECT: FSR # 04-143, Repair of Right Wing Tip Box Beam PART # 4J20120-114A on Aircraft 84-0059.

- 1) During ISO Inspection the top side face sheet had numerous delaminations and a 20 inch crack extending from an existing repair. After skin removal and X-Ray there is indication of fluid intrusion over 80% of the outboard edge along the full length of the box beam.
- 2) This part is Primary Structure as listed in T.O. 1C-5A-3, Section 11, Figure 17.
- 3) Permission is denied to repair this wing tip due to the extensive amount of the damage. This part cannot be repaired IAW T.O. 1C-5A-3, Section XI. Remove and replace Part # 4J20120 to blueprint specifications.
- 4) WR/ALC/LTES POC is Mark Taylor, DSN 468-6778. E-mail mark.taylor@robins.af.mil.

THOMAS LAMB
Chief, Structures Engineering Section
Strategic Airlift Directorate

Print

Disposition List

Beaman Becky L Col HQ AFMC/DR

From: Taylor Mark M Civ WRALC/LTES [Mark.Taylor@robins.af.mil]
Sent: Wednesday, April 21, 2004 8:13 AM
To: Beaman Becky L Col HQ AFMC/DR
Cc: Gonzalez Johnny A Civ WRALC/CCD
Subject: FW: 107 data base

Col/Sir

Due to the action of Mr. Vandersall, I am being "Shut Out" this data base access. I believe this is a "Prohibited Personnel Practice".

Mark Taylor

From: Slyfield Karen A Contr WRALC/LTES
Sent: Wednesday, April 21, 2004 7:56 AM
To: Taylor Mark M Civ WRALC/LTES
Cc: Vandersall Scott Civ WRALC/LTES
Subject: FW: 107 data base

Mark - Scott instructed me several weeks ago to make your 202 and 107 accounts inactive. Please let me know if you have any questions.

Karen

ARINC Karen Slyfield
WR-ALC/LTES (ARINC)
Robins AFB GA 31098
DSN 468-6857
COMM 478-926-6857

From: Bay Kirk G Contr WRALC/LTCR
Sent: Wednesday, April 21, 2004 7:47 AM
To: Slyfield Karen A Contr WRALC/LTES
Subject: FW: 107 data base

:(

From: Taylor Mark M Civ WRALC/LTES
Sent: Wednesday, April 21, 2004 7:30 AM
To: WRALC/LT Webmaster
Subject: 107 data base

Kirk, I cannot access 107 data base. Can you help.

Mark taylor

5/17/2004

Complaint 00000000

Beaman Becky L Col HQ AFMC/DR

From: MarkTaylorDaddy@aol.com
Sent: Wednesday, May 05, 2004 11:37 AM
Subject: Becky.Beaman@wpafb.af.mil
Re: FW: Office change

Col Beaman: I just recieved my annual performance appraisal from Mr. Vandersall. It was 12 points below my last appraisal. There was no explanation or counselling records. Mr Vandersall also stated " I am informing you FM has deleted your suggestion (award worth 9998.00 dollars) from the system". Rather thanbe confrontational I left. This was on 5/5/04 at 0945 hours.

Mark Taylor

Beaman Becky L Col HQ AFMC/DR

From: MarkTaylorDaddy@aol.com
Sent: Friday, May 07, 2004 6:25 PM
To: Becky.Beaman@wpafb.af.mil
Subject: my suggestion

Col: Please add this to your files for your final report to the General. I do not understand how I can be approved on the same suggestion with no monetary award, but total disapproval when the mention of a monetary award is authorized. When I attempted to inquire into this, all I got was Mr. Vandersall said no. Reference email from idea coordinator and final disapproval. This is a prohibited personnel practice.

NOTE: Suggestion 2004-1324 was approved with no monetary award; after attempted ADR (Which Mr. Vandersall and Mr. Alford agreed to Within Job Responsibility and Tangible savings withan award of 9998.00 dollars) Now 2004-1324 Reconsideration is Disapproved.

From: Roberts Cha H Civ WRALC/LTCR
To: Taylor Mark M Civ WRALC/MANPF
Cc: Davis Susan F Civ SWC/XIR

Subject: RE: Suggestion 2004-1324R
Sent: 4/27/2004 11:53 AM
Importance: Normal
Mark,

Last time I heard this and Mr. Vandersall will take care of with Ms. Enge awaiting the answer from Mr. Vandersall. Please check with Mr. Alford.

Thanks

-----Original Message-----

From: Taylor Mark M Civ WRALC/MANPF
Sent: Tuesday, April 27, 2004 11:39 AM
To: Roberts Cha H Civ WRALC/LTCR
Cc: Davis Susan F Civ SWC/XIR
Subject: FW: Suggestion 2004-1324R

From: IPDS [SMTP:idea@randolph.af.mil]
To: mark.taylor@robins.af.mil
Cc: linda.bridger@robins.af.mil; cha.roberts@robins.af.mil; ideas@robins.af.mil; ideas@robins.af.mil

Subject: Idea 2004-1324R, Disapproved Idea
Sent: 5/7/2004 12:34 PM
Importance: Normal
GS-12 MARK TAYLOR,

Thank you for your interest in improving our Air Force. Unfortunately, your idea 2004-1324R, Submission Title: Cancellation of TCTO 2063 could not be approved. if this is a group submission, please contact the co-submitters.

You may view the evaluations of your idea by doing the following:
the IPDS home page, click print/view the idea and follow the prompts.

You have ownership rights to your idea for one year after final action. During this time you may ask for reconsideration. Please refer to AFI 38-401 for

specific requirements that have to be met prior to submitting a reconsideration (one reconsideration per IDEA). NOTE: If this idea is a reconsideration, ownership is still 12 months from final action but no more reconsiderations allowed. For additional information, please contact your servicing Manpower office (AFRC bases, contact your DPC office). The URL to connect you to IPDS is <https://ideas.randolph.af.mil>.

If you are changing jobs, PCSing, or separating, please u

DI-04-0756

E

This is the statement of Mark M. Taylor, made on 14 April 2004 to Col Becky Beaman and Mr. Vincent Spanel, regarding the repair of C-5A S/N 70-0465, Aft Engine Mount Spherical Bearing, Pylon S/N 0028.

1. The 107 request (attached) was routed to a trainee working under me, Mr. Jonathan Despiau, to handle. I worked with Mr. Despiau, as he was a fairly new employee. The 107 requested permission to remove .0076" from an 109A bearing, changing its 2.5833" diameter to 2.5757". Mr. Despiau consulted with Nicholas Nguyen, of Southwest Products (the manufacturer of the bearing), and I consulted with Walter Tanner, Master Machinist, and the WR-ALC Technological Industries office, and decided to recommend against approval of the requested repair action for the following reasons:

- a. The T.O. for the bearing mount requires "rounding up" the aft outboard engine mount fitting hole to fit the bearing, rather than turning or shaving down the bearing. (Since the requestor stated they did not have the capability to round up the bearing hole, a depot team would have to be sent to accomplish this.)
 - b. The Warner-Robins Technical Industry Office was consulted regarding potential rework of the bearing. Mr. Tanner expressed concerns regarding difficulties adequately fixturing the part for successful machining of the bearing surface. He expressed concerns that resulting resizing would not meet the tight tolerances established for this part. He recommended the standard T.O. procedure be followed which required enlarging the pylon bearing mount hole to accept one of several different part number bearings (4 available sizes).
 - c. Nicholas Nguyen, Southwest Products, Inc. (the manufacturer of the bearing) was also contacted regarding the proposal to machine the bearing to a smaller diameter to fit the pylon bearing mount. The OEM expressed concerns about the process mainly centered around quality control issues that could effect material properties of the bearing and part dimensional conformance.
 - d. It is my assessment that reworking the bearing without being able to establish good quality control would result in an unevenly resized bearing, which would not fit evenly into the "mouse ear". In use, the bearing could begin to move with the action of the engine, resulting in cyclic loading to the mouse ear and uneven stresses that could cause the mount to fail from the inside out.
 - e. I have been able to find no documentation of an engineering analysis of this proposed configuration to indicate the risks it poses have been assessed. Until such an assessment is accomplished, this poses an unassessed risk to safety of flight. The mouse ear and bearing are primary aircraft structures, and modification of these items without appropriate risk assessments jeopardizes safety of flight.
2. Mr. Albert Lowas, the Branch Chief responsible for making disposition of this request, chose to approve the repair action (see attached memo).

MT, BB, WS

3. I elevated my concerns to Mr. Scott Vandersall, Mr. Lowas' boss. As far as I know, the repair was accomplished as authorized by Mr. Lowas and nothing was done to assess the risk to safety of flight.
4. I provided copies of my documentation and expressed my concerns to Major Nelson in the Warner Robins Safety Office. He never contacted me in response. As far as I know, nothing was done to look into my concerns.
5. I contacted the Office of Special Counsel, expressing my concerns, and provided them copies of my documentation.
6. The situation in my work environment deteriorated after I elevated my concerns.
 - a. Mr. Vandersall arbitrarily assigned me to work from 0630-1500 hrs daily, despite my request to be allowed to work 0600-1430 (I am the primary care giver for my children after school).
 - b. I submitted a suggestion (#2004-1324, which carried first year savings of \$332,893 (resulting in my being eligible for a \$9986.79 award)), which was approved by the Evaluator, but Mr. Vandersall intervened and rejected a monetary award. I resubmitted the proposal, and it was approved by Mr. Alford (Mr. Vandersall's superior) and all other evaluators to date - I believe Mr. Vandersall is still interfering with the process and denying me the monetary award. (On 3/25/04 Mr. Vandersall explained his position by saying "This idea was not your original thought.")
 - c. At one point, Mr. Vandersall called me and Mr. Lamb into his office and stated that he wanted me to check in with either himself or Mr. Lamb before and after lunch, and I would be charged annual leave in 5 minute increments. I am the only employee required to do so, and other employees do not take leave for attending the same luncheons.
 - d. I was told to leave a general engineering meeting on 1/26/04, at 1000, for no reason.
 - e. Mr. Vandersall submitted a leave slip for me for 1/16/04, but I was present at the time. This has been since corrected by personnel, but the slip should not have been submitted.
7. I filed an EEO complaint asserting that this treatment constituted age discrimination. At the recommendation of the EEO office, I agreed to Alternate Dispute Resolution (ADR) procedures to resolve the matter. We met - myself, Mr. Vandersall, and Mr. Gonzales, and reached a reasonable resolution that would:
 - Allow me to change jobs, moving to another office and out from under Mr. Vandersall's authority;
 - Require Mr Vandersall's support of suggestion number 2004-1324, and the accompanying monetary award; and
 - Ensure no reduction in my performance appraisal.

MT, SB, WJ

When asked if he was authorized to sign the agreement, Mr. Vandersall said he was. We all signed.

8. As a gesture of good faith, I withdrew my OSC complaint. However, I knew that OSC would continue to follow up the issue, because it was a safety of flight matter, so I was confident that the safety issue would be investigated and resolved.

9. Immediately after I withdrew my complaint, I was advised that the ADR resolution was not acceptable to either the base personnel or base legal folks. Nobody from the base has ever contacted me to renegotiate an ADR settlement.

10. I have been removed from my job and am no longer performing useful work appropriate for my skills and experience.

11. Another improper repair came to my attention – an authorization for cold bond repair with paste adhesive to the right wing tip of C-5 70-0459 (see attached 107 request, related e-mails, and resultant disposition.

12. I have contacted Senator Saxby Chambliss for assistance in resolving the situation, specifying EEO complaint 9RIM04062 and OSC cases #MA-04-0755 (prohibited personnel practices) and #DI-04-0756 (safety of flight).

13. My goal is to make sure that our Airmen are safe. I do not know why this plane has not been grounded until we can make sure that repair is safe to fly.

The following technical information amplifies on specific areas of my statement:

PROCESS:

- 107, Requests for Deviation, are typically generated by senior Sergeants at the filed units. These requests are forwarded to the local AMC Rep at WR-ALC for review and administration. The AMC Rep, after a quality check of the 107, forwards the request to the C-5 Chief Engineer, currently Mr. Russ Alford. Mr. Alford dispositions the requests to the appropriate branch based on the engineering disciplines required. The branch chief delegates each request to a responsible engineer within the branch. The responsible engineer makes a recommendation to approve or disapprove the proposed deviation. Official approval or disapproval is in the form of a memorandum to the requesting organization signed out by the engineering branch chief or the chief engineer.

PRECIDENT:

- I do not have information relative to how many aft engine mount bearings may have been modified outside of recommended T.O. procedures or how often field units have requested waivers/deviations for the mount bearing. I have no knowledge of engineering approval for the undersized bearing that was removed from tail number 70-465. However, to my knowledge, no fracture of mount bearings has occurred in field service.

MT, BB, VLL

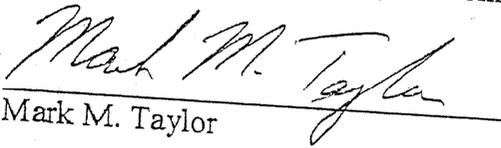
ANALYSIS:

- GE or Lockheed were not consulted on this 107 request. Although Lockheed is on a response contract to handle support requests, the turn-around on support requests are not typically timely enough for 107 requests.

RECOMMENDATION:

- I recommended that based on the identified issues, the existing T.O. procedure be followed and a depot field team be dispatched to execute the repair.

The above is a true, accurate, and complete accounting of my sworn testimony.


Mark M. Taylor

MT, BS, V/S

107 REQUEST # 03-109

REQUESTOR INFORMATION

Requestor: RANDY.THOMAS
 Office Symbol: MAMP
 Command: AETC
 DSN: 866-7183
 Date Requested: 3/11/2003 11:26:15 AM

Rank/Grade: CIV
 E-Mail Address: RANDY.THOMAS@ALTUS.AF.MIL
 Base: ALTUS
 COMMERCIAL: 580-481-7183
 Organization: 97MXOOS

DISCREPANCY INFORMATION

Engineering Division: STRUCTURES

Tail Number: 70-0465

Location of aircraft: AGGN

Discrepancy/Maintenance

Required: 1. DETAILED DESCRIPTION: THE MOUNT BEARING HOLE ON THE #1 ENGINE AFT O/B ENGINE MOUNT HAS BEEN MODIFIED IN THE PAST TO A SIZE THAT FALLS BETWEEN THE REQUIRED BEARING 4P94252-107A OR -109A BEARING. THE HOLE WAS OPENED TO AN IN-BETWEEN SIZE OF 2.5757 THEN A 109A BEARING WAS TURNED DOWN TO FIT THIS HOLE SIZE. THE MODIFIED BEARING HAS CORROSION IN THE AREA OF THE BALL AND NEEDS TO BE REPLACED. WE NEED APPROVAL TO TURN DOWN ANOTHER -109A BEARING TO FIT THIS HOLE. WE DO NOT HAVE THE CAPABILITIES TO OPEN THE HOLE TO THE NEXT SIZE BEARING. WE WILL BE TURNING DOWN A -109A BEARING WITH THE DIMENSION OF 2.5833" TO THE SIZE OF 2.5757" A TOTAL OF .0076" WILL BE REMOVED.

T.O.: 1C-5A-4-1

Figure: 64

Index: 140

Last ISO completion date: 03/01/2003

Name of Engineer contacted for assistance: SCOTT.VANDERSALL

[Click here to see list of engineers](#)

Priority ROUTINE

STATUS

HQ Authority: RODNEY.WATSON Date: 3/11/2003 11:30:18 AM
 Engineer: JONATHAN.DESPIAU Date: 3/11/2003 3:44:18 PM
 Acceptance/Rejection:
 Engineer's Disposition: ALBERT.LOWAS Disposition Date: 3/13/2003 1:20:07 PM

COMMENTS

JONATHAN.DESPIAU: I NEED TO KNOW THE MATERIAL OF FITTING, AFT MOUNT, OUTBOARD PYLON P/N: 4P53040-109A (THE ONE 3/12/2003 8:56:49 AM INSTALL ON THE AIRPLANE). ALSO, CAN YOU CHECK IF THERE IS ANY CORROSION ON ROUNDED

ret T, BB, VAD

SURFACE WHERE THE BEARING
WILL BE INSTALL.

(1). AFT MOUNT, OUTBOARD PYLON
FITTING HAS BEEN INSPECTED
(EDDY CURRENT) TREATED AND
COATED, NO CORROSION WHERE
BEARING WILL BE INSTALLED AT
THE ROUNDED SURFACE. (2) THE
FOLLOWING INFORMATION FROM
PERFECTO.RODRIGUES: PYLON MOUNT FITTING: PN P50004- 3/12/2003 6:46:18 PM
109B (STENCILED ON PYLON). PN
4P29118-121A (THIS NUMBER WAS
ON PYLON DATA PLATE). SN 0028
(STENCILED ON PYLON AND ON
THE DATA PLATE). MCO533A-??
(THERE IS NO DASH NUMBER FOR
THIS TO IDENTIFY MATERIAL).

JONATHAN.DESPICAU: PLEASE
CALL ME AT DSN 866-1519, I BEEN
TRYING TO CALL YOU FOR THE
PERFECTO.RODRIGUES: LAST 30 MINUTES.SOMETHINGS
WRONG WITH THE DSN LINE. 3/13/2003 6:51:45 AM
THANKS PERFECTO RODRIGUES,
WS-11 DAF MANUFACTURING
FLIGHT CHIEF

JONATHAN.DESPICAU: PERFECTO.RODRIGUES. I TALKED
TO DENNIES WARDO ALREADY. 3/13/2003 10:33:42 AM
THANK YOU.

ATTACHMENTS (0)

Click here to Add/Delete/View attachments

DISPOSITION

Click here to see Disposition

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS WARNER ROBINS AIR LOGISTICS
CENTER (AJMC)
ROBINS AFB GA 31098

3/13/2003

MEMORANDUM FOR: 97MXOOS/MAMP

FROM: WR-ALC/LAES

SUBJECT: C-5A S/N 70-0465, Aft Engine Mount Spherical Bearing, Pylon S/N 0028.

1. Per 107 Request #03-109 dated 11 Mar 03, Aft Engine Mount Spherical Bearing, P/N 4P94252-109A, requested approval to turn down bearing with the dimension of 2.5833" to the size of 2.5757".
2. This repair disposition is intended for this specific aircraft.
3. Approval is granted to turn down bearing with the dimension of 2.5833" to the size of 2.5757". The aircraft is consider unrestricted after the completion of this repair.
4. POC for this action is Randy Thomas and Dennis Whardo.
5. Flight Restriction: No fly restrictions apply.
6. Next PDM due 07 July 2005. When aircraft arrives at WR-ALC for PDM the part will be repaired in accordance to T.O. 1C-5A-3 Section VI. Paragraph 6-17, Figure 6-9, Index 30, Flag Note 9. Reference this disposition in any requests for PDM overflight.
7. Point of Contact for this project is Jonathan Despiau, WR-ALC/LAES, phone DSN 468-4349, email: jonathan.despiau@robins.af.mil.

ALBERT F. LOWAS, III
Chief, C-5 Structural Engineering Branch
C-5 System Program Office

Print
Disposition List

TBS / VAB

VERBATIM INTERVIEW
RECORDED ON 23 APRIL 2004

PERSONS PRESENT

Colonel Becky L. Beaman, Interviewer;
Mr. Vincent Spanel, Interviewer; and
Mr. Albert F. Lowas, III, Interviewee.

COL BEAMAN: My name is Colonel Becky Beaman. I also have with me Mr. Vincent SPANEL, and if could you please state your full name?

MR. LOWAS: My name is Albert Frank Lowas, III. I am at Air Command and Staff College, coming here TDY from the C-5 Engineering Branch.

COL BEAMAN: Thank you. I have been authorized by General Martin, the commander of Air Force Materiel Command, to check into some allegations that were made that you authorized a repair on a C-5, to the engine mount, that jeopardizes safety of flight. So, that's - the incident, it's a year ago March, that we're looking at this. Before we talk about it, I need to tell you that the purpose of this conversation is to figure out what happened.

MR. LOWAS: Uh-huh.

COL BEAMAN: Although you were initially named as a suspect, and we have some concerns about some of the things we've heard, we see nothing that makes us jump out of our seats and scream and run in circles. So, this is mostly just a conversation.

MR. LOWAS. All right.

COL BEAMAN: I do need to swear you in, to make sure that what we get on the recording is true testimony -

MR. LOWAS: I understand.

COL BEAMAN: So, if you could, please raise your right hand and repeat after - well, don't repeat after me. Do you swear that the testimony you are about to give shall be the truth, the whole truth, and nothing but the truth, so help you God?

MR. LOWAS: I do.

COL BEAMAN: Thank you. The time is -

MR. LOWAS: 1206.

COL BEAMAN: 1206 on Friday, the -

MR. LOWAS: -- Twenty-third of April.

COL BEAMAN: Thank you. I've lost my watch. This is way back, March a year ago, and I haven't given you any information before this interview, so that you could rack your brains and try to remember this, so it might -- (malfunction of tape recording) -- events as far as I know.

MR. LOWAS: Okay.

COL BEAMAN: This was a 107 that came in from Altus. And what they requested was since they had a bearing, they had been working on the bearing, and they wanted to -- instead of sizing up the hole to the next size, they wanted to size down the bearing, and they requested authorization to do this non-standard procedure. And this particular 107 was passed to Mr. Jonathan --

MR. LOWAS: Jonathan Despiau.

COL BEAMAN: Despiau to work, and he consulted with a number of people, and in total, after all the consultations and all the conversations, he believes he went back to both you and Mr. Vandersall and said, "Doesn't look like it's a recommended thing," and, as he relates it, you and Mr. Vandersall sent him to check with one more, one more person, one more guy, and when he came back with that, which was also a, "We don't recommend that repair be done that way," Jonathan says that he was told by you that, "We had authorized this before in the past, so we were going to authorize this one, so please write it up that way, in the 107," and eventually you signed a letter to authorize the repair. Does this refresh your memory?

MR. LOWAS: Oh, it refreshes my memory.

COL BEAMAN: Is it specific enough?

MR. LOWAS: Yeah, it refreshes my memory.

COL BEAMAN: Okay. Go back and tell the story your way.

MR. LOWAS: Okay. It refreshes my memory. The punch line of the story that I want to make sure I relate, so I don't get lost in the forest before getting there, is that about two to three weeks later --

COL BEAMAN: Uh-huh.

MR. LOWAS: -- The manufacturer was coming by for a standard grip-and-grin --

COL BEAMAN: Uh-huh.

MR. LOWAS: -- And the manufacturer says that he usually does not recommend people to do this, however, they know it's done all the time, and they know it's not a big deal.

COL BEAMAN: (Laughs). Now, the manufacturer? You're talking about --

MR. LOWAS: The manufacturer of the bearing.

COL BEAMAN: Of the bearing?

MR. LOWAS: Yes.

COL BEAMAN: Hmm. But I thought that was one of the people that you guys -- that Jonathan spoke with.

MR. LOWAS: That is correct --

COL BEAMAN: Ah.

MR. LOWAS: -- He -- it is one of the people we spoke with on the phone, and that's -- that is, in fact, what they told Scott Vandersall. Now --

COL BEAMAN: Okay.

MR. LOWAS: -- It was Scott Vandersall that told this to me --

COL BEAMAN: Okay.

MR. LOWAS: -- Afterwards --

COL BEAMAN: Afterwards?

MR. LOWAS: Afterwards, but they did come by for a grip-and-grin, that they, in talking to them, said yeah, they just -- they don't like to recommend it, just because they just don't like to recommend it, but they know people have been doing it, and it's really not a big deal.

COL BEAMAN: (Laughs)

MR. LOWAS: As I recall the incident, and I'll go back, a 107 did come in, and -- forgive me for getting in kind of a memory, but --

COL BEAMAN: That's where you ought to go.

MR. LOWAS: Okay. A 107 came in. It was a difficult 107 to figure out the answer to because on the one hand, we had a procedure that is definitely a procedure we do not want to make standard, but we had not put our foot down to make everybody have the tooling so that they could do the right procedure. The tooling to do the right procedure, would be to bore out the hole to a larger size, but I shouldn't say the right procedure -- the better procedure. We're in those shades of gray and how long is the -- is the judgment of the life right now. Okay?

COL BEAMAN: Okay.

MR. LOWAS: I asked Jonathan to take a look at it. Jonathan was a fairly new engineer at the time, an engineering trainee. He did, he talked to a few people. One of the key persons he talked to was Mr. Mark Thomas [sic], who as I understand is no longer at that office – I don't know where he has moved to – but he was one of the higher-time engineers at that office. Their recommendation was, you know, to ground the airplane and to send tooling out there for whatever it would take to do – to do the larger size hole. The problem with that – well, there were a few problems with that. It was, I mean, a perfectly fine suggestion; it was where we needed to go, and as I recall in the letter, we said something along the lines of "Last time this will ever be authorized." Thinking it over, though, given the pressure to keep airplanes from being grounded, I've been pretty well chewed out from a long way away about airplanes being grounded in the past –

COL BEAMAN: (Laughs)

MR. LOWAS: – It seemed that – by the way, as I recall, it was due in for PDM shortly also –

COL BEAMAN: Okay.

MR. LOWAS: It seemed that the best thing to do, the best compromise would be to temporarily go ahead and put in a smaller sized bearing, then essentially all that would be taken off that bearing would be the coating of the bearing. That – when the pylon got there, the 107 should have been researched – excuse me – when the pylon got to PDM with the airplane at PDM, the 107 should have been researched when the airplane got to PDM, because the process – we're trying to fix the process, but the process was when an airplane gets a PDM, you look at all the old 107's and see if there's any carry-over work that has to be done. The pylon got to PDM, it should have been oversized, and a new bearing put in.

COL BEAMAN: Uh-huh.

MR. LOWAS: The only concern that my staff specifically had about turning down a bearing, as opposed to increasing the size of the hole, was a concern about corrosion, because you would be taking the coating off.

COL BEAMAN: Uh-huh.

MR. LOWAS: Given that that was the only concern that they had, and there was no – they – that was the only concern that they had. Given that that was the only concern that they had, and that in my judgment, since this is "grease the bearing, stick it in the hole, the bearing expands again," there would really be no good way to get moisture in there for that corrosion to be a problem. It was just a best judgment call.

COL BEAMAN: Uh-huh.

MR. LOWAS: I asked them, "Hey, can you tell me - is there any difference in strength?" Well, really, nothing significant, because you're only taking off the coating, and that was kind of one of those supervisor-to-staff sort of questions, saying, "Okay, have you looked at it? I know - I know what I think from my experience as a supervisor; have you looked at it?" Yeah, nothing significant. So I made - I overruled their decision, and I said the right - the disposition for right now will be to go ahead, turn down the one bearing. As I recall, we put some - I asked them to put some quality-type remarks on there about how much it turned down, how the final tolerance should be, matching that sort of a tolerance to the original design tolerance, those sorts of issues, and signed it out. As I said, the punch line of the story was that when the contractor came around at the end - the contractor had told - not the contractor, the provider of that bearing - the manufacturer of that bearing had told Mr. Despiau the process that - they didn't recommend it -

COL BEAMAN: Uh-huh.

MR. LOWAS: But again, when they came around later on - and as I recall, I was out of the office at that time when they were doing the grip-and-grin - but when they talked to Mr. Vandersall they kind of privately said, "Yeah, generally not a big deal. You know, it's done all the time." Recommendation was that - in fact, as I recall it was Mr. Mark Thomas (sic) who was specifically concerned about this more than anything else. It was a - I'll tell you, it was a point of contention for him for about two or three months, that I had overridden that decision, and what I asked him to do - now, of course, I was getting to be a short-timer because I was coming here, but what I asked him to do was that - I agreed, long-term, the right process for all the airplanes would be to put in the bearings not turned down, because we don't want to have to put in bearings that we know we're just going to have to replace again when we get to PDM.

COL BEAMAN: Okay.

MR. LOWAS: "Mr. Thomas (sic), would you work on that; come up with a plan where we can tell people about the tooling that they need, get that on the" - okay, I've been out of the business for eight months - but "on the table of allotment for the bases -

COL BEAMAN: Uh-huh.

MR. LOWAS: -- And so that we no longer have to do this again."

COL BEAMAN: Uh-huh.

MR. LOWAS: The further proof I can provide from my opinion on that, which - I'd have to dig up a lot of E-mails and find the right ones and the right tones of the right ones - I was - I was very big when I was there in taking any 107 that we saw, that we saw as a standard repair, and putting it into the -3. Not many actually got there because the process is very long and drawn-out. The process of getting a 107 repair turned into a standard repair put into the -3 -

COL BEAMAN: Uh-huh.

MR. LOWAS: This is one that I specifically said, "We're not going to make this a -3 standard repair." This is not -- again, it was a judgment call at the time that we could handle -- it was a judgment call at the time that any fatigue or corrosion -- again, my -- I told you, I don't believe there's going to be a corrosion problem -- that any fatigue or corrosion would have been answered in PDM because there would not have been a significant time for that to build up, but because other airplanes -- you don't want other airplanes to have something like this put in a PDM, then you have a very long cycle between PDMs, whereas that particular plane had a short cycle. And, because you don't want to make a habit of creating problems for yourself in the future, better to --

COL BEAMAN: But corroding was the only process you were concerned about creating for yourself in the future?

MR. LOWAS: Corrosion was the key problem --

COL BEAMAN: Okay.

MR. LOWAS: In fact, I would say yes, corrosion was the only problem, because turning down the bearing -- because, essentially, we were just taking the coating off --

COL BEAMAN: Uh-huh.

MR. LOWAS: Cadmium plating was -- I didn't see the chance of the bearing cracking in that time.

COL BEAMAN: They showed me one of these bearings --

MR. LOWAS: Okay.

COL BEAMAN: Opportunity to get my hands dirty -- it was great -- and what I saw was essentially a right-circular cylinder --

MR. LOWAS: Yep.

COL BEAMAN: And inside was --

MR. SPANEL: I have -- I have it if you want --

COL BEAMAN: You have it with you? Great!

MR. SPANEL: Thought it might come in handy --

COL BEAMAN: Looks like you brought the visual display. Helps me to ask my questions.

MR. SPANEL: Although it does -- doesn't add to the burden of --

COL BEAMAN: Oh, your bag was so heavy --

MR. SPANEL: Well, it's a pretty heavy thing, yeah.

COL BEAMAN: I thought it was fascinating, I love big parts. I had a cam shaft replaced in my old Honda once, and I used that cam shaft as a -- as a visual aid for many classes.

MR. LOWAS: Uh-huh. By the way, just to ask the obvious question, is this the exact bearing?

COL BEAMAN: No.

MR. LOWAS: Okay. Yeah. I remember this bearing very well.

COL BEAMAN: Yeah, this was just to show us --

MR. LOWAS: Yeah.

COL BEAMAN: An example of --

MR. SPANEL: This is not the exact bearing --

COL BEAMAN: We were told it was a condemned --

MR. SPANEL: Yeah. Somebody got it out of --

COL BEAMAN: Out of throw-away. How would they hold it steady to mill down, because what you're milling down is the outside surface --

MR. LOWAS: Oh, exactly.

COL BEAMAN: Given that the outside moves, how do they hold that steady, so that they can mill that with any precision?

MR. LOWAS: What they had told us was that they had -- essentially, they, Altus, had come up with a jig --

COL BEAMAN: Uh-huh.

MR. LOWAS: -- That essentially keys in there (*gesturing with the part*).

COL BEAMAN: Which of the engineers told you this?

MR. LOWAS: This was -- this was Altus --

COL BEAMAN: Altus spoke to you?

MR. LOWAS: No. (unrecognizable). Now you're asking about a name that I can't give -

COL BEAMAN: (unrecognizable) -

MR. LOWAS: Yes, I --

COL BEAMAN: -- The person in your shop that you tasked was Jonathan -

MR. LOWAS: Jonathan, right.

COL BEAMAN: And then Mark worked with him, was also in your shop -

MR. LOWAS: Mark worked with him, yes.

COL BEAMAN: Did - was it one of them who spoke to the person at Altus and brought this to you, or was it Mr. Vandersall, or did you speak with someone at Altus? Do you remember?

MR. LOWAS: Wow, I would have to - wow. I remember that, quote, "the bases have some tooling", and Altus's specifically had some tooling. I remember that distinctly. I would really; I mean that - I believe I may have talked to Altus on this just because they may have called me directly with one of those "Hey, this is - this equipment, can you help us out?"

COL BEAMAN: Had you been in that job very long when this happened?

MR. LOWAS: If this was indeed March, practically I'd been on the job for two-and-a-half to three months.

COL BEAMAN: Okay. So you were new in that job?

MR. LOWAS: Yes.

COL BEAMAN: And you didn't stay there very long?

MR. LOWAS: No.

COL BEAMAN: You're up and coming; you're going to move up, do something else -
(Laughs) - talk on the -

MR. LOWAS: (unrecognizable, laughs) - I'm sorry.

COL BEAMAN: Thought maybe I'd inject a little levity here -

MR. LOWAS: You know, in fact, as I was coming here, my exact thought is, "This is like when I was a private pilot, learning to land -

COL BEAMAN: Uh-huh.

MR. LOWAS: -- I'm sure I've got the skills; I'm sure I know how to do this right -- but somehow the reward for landing is you just get to do it again.

COL BEAMAN: (Laughs) Good job. And you're still flying?

MR. LOWAS: Yeah, well, thus far, anyway.

COL BEAMAN: So far?

MR. LOWAS: Yeah.

COL BEAMAN: I discovered that whenever I flew cross-country at 2,500 feet I got lost. If I was higher than 2,500 feet, I didn't get lost.

MR. LOWAS: Ah --

COL BEAMAN: When I was at 2,500 feet AGL, I got lost, every time. I should know how to do this --

MR. LOWAS: Been there, done that, yes.

COL BEAMAN: So, why -- why were you so convinced that this should not be a -3 standard repair?

MR. LOWAS: Why was I so convinced this should not be a -3 standard repair? All I can give you is my experience as a aerospace structural engineer between a little bit of time with NASA, although it (unrecognizable), C-141's and AC-130's that -- making a peg a little smaller to fit a hole when it was already oversized anyway, so the basic design size was smaller, is an expedient that we could watch through repeating -- through normal processes, fix, if needed, in PDM, and go from there. I just was not happy with the experience -- were the numbers enough so to make it standard -- it was just a -- best I can give you is just a judgment call. Now, in fact, I'd also like to know the history of the 107's on that, because I'm sure that there were other 107's on that, that -- I want to say --

COL BEAMAN: This sort of repair?

MR. LOWAS: -- There were other 107's on that that date back to Jim Peel (sic) before I got there. Part of the reason -- and if that was the case, I -- okay, yeah, that's the best I can tell you is just -- if there was a problem

COL BEAMAN: You thought you'd catch it?

MR. LOWAS: Huh?

COL BEAMAN: You thought you'd catch it?

MR. LOWAS: Yeah.

COL BEAMAN: It wasn't something that would make -- it was a primary flying structure though, right? Isn't that --

MR. LOWAS: Oh yeah, anything that holds an engine on it is a primary flying structure --

COL BEAMAN: Yeah.

MR. LOWAS: And, it's certainly not a -- okay, I -- I'll stay at primary flying structure, because I don't remember the loads enough to call it fail-safe or safe-flight for anything like that --

COL BEAMAN: Okay.

MR. LOWAS: -- But the intervals that we had left, you know, the inspections that we would have, and then getting to PDM, I -- you know, I thought we'd catch it; and not only catch it, but set it into its better condition. I considered that a temporary repair, essentially; that we could do the primary repair at PDM.

COL BEAMAN: When we spoke to Jonathan and with Mark --

MR. LOWAS: Uh-huh.

COL BEAMAN: -- The primary concern they expressed to us was the ability to mill this down with some precision, the ability to mount this thing, it had to hold still while they shaved off a little bit --

MR. LOWAS: Uh-huh.

COL BEAMAN: -- and didn't get into the edges of the flare or anyplace, anything like that.

MR. LOWAS: They did express that to me --

COL BEAMAN: Uh-huh.

MR. LOWAS: -- In the same conversation was -- the tooling was brought up; whether I brought it up because Altus had told me or they brought it up because Altus had told them, I didn't -- I can't tell you, but that was one of the reasons why we specifically said on the disposition -- there were specific requirements for roughness and tolerance on the disposition --

COL BEAMAN: Okay.

MR. LOWAS: -- Which was one of those where I wasn't going to stand over their shoulders and tell them whether or not they had the right tooling, but if they couldn't come up with the right product at the end --

COL BEAMAN: -- They shouldn't use it.

MR. LOWAS: Yeah.

COL BEAMAN: Okay, that's a good thing.

MR. SPANEL: Do you -- do you know, and again, you know, you apparently were not on the job for a long time -- is there, you know, we've been talking about, you know, gee, does this -- would this qualify as a procedure that could make it into the -3? Do you know, as this came up, in either Jonathan or Mark's discussions with you, or any discussions you may have had with Altus before, after, or during this -- do you know of any, I'll say, procedure, that Altus or any of the bases have, that -- that says, "Well, gee, when we turn this down, we do have a -- we do have a process that we use and follow in terms of the tooling we use, the machining we use, the tolerances we go to, the speeds and feeds or anything -- is there a base-level procedure written against this, do you know?"

MR. LOWAS: I'm very aware that there are a lot of -- as an engineer --

MR. SPANEL: Uh-huh.

MR. LOWAS: On airplanes at SPO's, at engineering-type SPO's, Warner-Robins-type sustainment SPO's -- I'm very aware that there are processes that float around among bases that they all think have engineering approval --

MR. SPANEL: Uh-huh.

MR. LOWAS: -- That are nowhere close.

MR. SPANEL: Yeah.

MR. LOWAS: I cannot tell you with -- intelligently, whether I remember there being a process to go along with the tooling, or somebody had jury-rigged some tooling or not, and again, to go exactly on what you said -- all that I knew, whoever it was who told me, was that somebody had some "tooling." I couldn't tell you if that tooling was a two-by-four with a couple of nails in it; that was the reason for putting the tolerances on there --

COL BEAMAN: Okay.

MR. LOWAS: -- Which is, you know, "If you can't do it to -- this is temp repair, if you can't do it to a certain set of tolerances, you can't do it. Call us back. We'll have to do it with permanent -- with the right tooling, and do it properly."

COL BEAMAN: Uh-huh. You'd said you'd been chewed out from a long way away about keeping planes in the air --

MR. LOWAS: One of my early decisions on the C-5 had to do with the torque deck, which was a very long-standing problem with the C-5 -

COL BEAMAN: Uh-huh.

MR. LOWAS: There was one airplane at PDM that had a significant torque deck problem.

COL BEAMAN: What's a torque deck?

MR. LOWAS: A torque deck - I'll let you have this piece of paper.

COL BEAMAN: That's a good thing. We'll have to have you sign it and make it into an official record.

MR. LOWAS: (Laughs) This is very exaggerated -

COL BEAMAN: This is the tail?

MR. LOWAS: That's the tail.

COL BEAMAN: Okay.

MR. LOWAS: Very good. Aft loading ramp, the -

COL BEAMAN: Back door?

MR. LOWAS: Back door, essentially -

COL BEAMAN: Okay.

MR. LOWAS: -- In the tail. In this structure, the reason for the hump is essentially to make a torque tube that carries the load from the tail to the rest of the airplane -

COL BEAMAN: Okay.

MR. LOWAS: The lower part of that torque tube is what we call a torque deck -

COL BEAMAN: Okay.

MR. LOWAS: -- And the C-5 has got airplanes going all the time through Lockheed-Martin to get these things changed out, because it's a honeycomb structure that - if you so much as drop something like this on it, it will start to delaminate -

COL BEAMAN: Oh.

MR. LOWAS: -- And people walk back there all the time.

COL BEAMAN: Uh-huh.

MR. LOWAS: Okay? We had one in PDM that had a torque deck that was in terrible shape –

COL BEAMAN: Uh-huh.

MR. LOWAS: -- I made a decision, in the end, to get that into the PDM process – that into – direct from PDM into the Lockheed-Martin process. At the time, I was about the highest level – my level of supervision was the highest level of supervision at the C-5 SPO because everybody else was at – I want to say at St. Louis doing a, you know, SPO-type meeting with AMC.

COL BEAMAN: Okay.

MR. LOWAS: They heard through back channels I had made a decision based on a recommendation from my engineers at the –

COL BEAMAN: -- Which plane was that?

MR. LOWAS: Oh –

COL BEAMAN: Do you remember?

MR. LOWAS: I couldn't tell you which one it was –

COL BEAMAN: Okay.

MR. LOWAS: -- But, which –

COL BEAMAN: I'm just wondering if it was one of those that is about to run out and deliver things to Europe, or –

MR. LOWAS: Oh, no, no, no, no –

COL BEAMAN: Okay.

MR. LOWAS: -- But I had made a decision, "Hey, this, you know –

COL BEAMAN: Not supposed to do that.

MR. LOWAS: -- "needs to go to Lockheed and get the repairs, and it's really not particularly flight-worthy as is."

COL BEAMAN: Uh-huh.

MR. LOWAS: I mean, we could limp it up there as a one-time flight –

COL BEAMAN: Yeah.

MR. LOWAS: -- With the right restrictions. The next day I had phone calls from, I want to say it was my boss, Mr. Vandersall, who called me -- but I know for certain that it was Colonel Bruno that had heard about it, and said, "What's Al Lowas doing grounding airplanes? We leave him alone for, you know, just a few days and he's mucking up the works?" or something like that.

COL BEAMAN: Who's Colonel Bruno?

MR. LOWAS: Colonel Bruno is currently -- okay, Colonel Bruno, at the time, was the C-5 Systems Program Director.

COL BEAMAN: Okay. So he was the SPD at the time, and he was questioning your decision to ground that airplane until it had more stuff done on it?

MR. LOWAS: Yeah, and just --

COL BEAMAN: Okay.

MR. LOWAS: I probably gave chaff when I joked the first time -- I'll explain that -- and (unrecognizable) no need to go into examples right now.

COL BEAMAN: Okay. I'm just curious -- trying to get a feel for how much pressure that position is to tread on the risky side of the decision -- you honestly believe --

MR. LOWAS: The pressure?

COL BEAMAN: That -- so that particular plane was not sent on to Lockheed-Martin?

MR. LOWAS: Well, this one eventually was.

COL BEAMAN: Eventually, but it flew in between without --

MR. LOWAS: Yeah.

COL BEAMAN: -- The careful flight restrictions?

MR. LOWAS: As I recall, it got the flight restrictions and everything else --

COL BEAMAN: Okay.

MR. LOWAS: -- We eventually proved our case --

COL BEAMAN: Okay.

MR. LOWAS: -- But the initial was, you know, very --

COL BEAMAN: Okay.

MR. LOWAS: -- Very much concern about the number of airplanes flying.

COL BEAMAN: Okay.

MR. LOWAS: And --

COL BEAMAN: And that plane didn't fly until you were satisfied?

MR. LOWAS: As I recall, it did not fly --

COL BEAMAN: Okay. That's a good thing --

MR. LOWAS: Yeah.

COL BEAMAN: That's a good thing.

MR. LOWAS: Yeah.

COL BEAMAN: Would it surprise you to know that Jonathan and Mark are unaware of the fixtures at Altus?

MR. LOWAS: I'm trying to think about how that would happen. Yes, it would surprise me.

COL BEAMAN: Okay. We've gotten pictures of it, but we've not shown them to Jonathan and Mark.

MR. LOWAS: Okay.

COL BEAMAN: -- But their stories were fairly consistent that their big concern when they spoke to us, was the ability to hold it still and machine it, and they'd spoken to -- what was his name? -- Mr. Tanner --

MR. LOWAS: Tanner does --

COL BEAMAN: Is a machinist.

MR. LOWAS: A machinist at Altus, yeah --

COL BEAMAN: Not Altus --

MR. SPANEL: He's a machinist at Warner-Robins.

COL BEAMAN: At Warner-Robins.

MR. LOWAS: Okay.

COL BEAMAN: And we took him the part -

MR. LOWAS: I remember the name Tanner.

COL BEAMAN: -- We took him the part and we said, "What do you think about machining this?" and he said, "Well," - he immediately, he said, "I don't know how you'd hold it still." So we said - we showed him pictures of the fixture and said, "What do you think about this?" and he says "Oh," so it was the first time he'd seen it. So the last time he connected with the problem, the problem was one of the fixture and holding it in place, so he did get that, and both Jonathan and Mark, neither ONE of them mentioned it, and both of them expressed concerns about being able to machine it well.

MR. SPANEL: They didn't - they didn't have a good or clear understanding of Altus's tooling or fixturing -

COL BEAMAN: Okay.

MR. SPANEL: I think, from what I remember from Jonathan's discussion, he said that Altus had a way to -

COL BEAMAN: They said they had a way to -

MR. SPANEL: -- Chuck it up.

COL BEAMAN: Yeah, they had a way they could do that, they said, but they didn't know how -

MR. SPANEL: And - but they didn't understand whether that was a good process or a bad process.

COL BEAMAN: And when - and I guess the last visit - was the last place that Jonathan was sent, was that to Southwest?

MR. LOWAS: Yeah, it was to the vender.

COL BEAMAN: To the vender, to see if they'd make one.

MR. LOWAS: Yeah.

COL BEAMAN: Okay. Yeah -

MR. LOWAS: It would surprise me they didn't know about it, but I go back to – yes, they did (unrecognizable) always my fear was a recorded interview – yes, they did – Mark's primary concern, the last concern that I remember, was –

END OF SIDE ONE OF TAPE

COL BEAMAN: Okay, we're back on tape –

MR. LOWAS: Okay.

COL BEAMAN: I managed to turn the tape over.

MR. LOWAS: To restate what was probably in pieces before, yes, the biggest concern Mark Taylor had at the end was corrosion, which is why that stuck out in my mind, and because that was the biggest concern he had, and I didn't agree with him for – that that would be a problem, that's why – one of the reasons why I felt, "Okay, this might be good temporarily, we can watch it, it'll get to PDM before there's any chance of there being a corrosion problem," especially since this is freeze-fitting, or, you know, so tightly fit in there that I didn't see corrosion being an issue anyway.

COL BEAMAN: Okay.

MR. LOWAS: Comma (sic), the second thing would be – the second major concern that they had, and, you know, yes, I'll admit – the second major concern that they had was being able to turn that down exactly, and to me, that's – that is a philosophy of working with mechanics more than an engineering philosophy that defined requirements don't define how to do it.

COL BEAMAN: I don't understand.

MR. LOWAS: We would define the requirements – the end requirements – "Okay, if you're going to turn this down, you must have these tolerances." You must have these, you know – it must be right.

COL BEAMAN: Okay.

MR. LOWAS: You know, the issue of the tooling aside and, you know, I thought – I knew that they had it, I thought they had they, that Jonathan and Mark, knew that they had it, there was a concern – can the tooling do the right job?

COL BEAMAN: Do you have the authorization letter –

MR. LOWAS: -- To which the answer should have been, "If you can make these tolerances, great." And that would also highlight, if they had to ground the airplane so that the tooling were sent out, (A) it would not be Al Lowas showing up and saying ground the airplane –

COL BEAMAN: Yeah.

MR. LOWAS: (B) It would highlight the need to put the stuff on the, or the right tooling – the better tooling to bore out the hole on the airplane –

COL BEAMAN: Uh-huh.

MR. LOWAS: -- It would highlight the need to put that on a table of allotment, or at least come out with a rotatable set that we could send out to bases –

COL BEAMAN: Uh-huh.

MR. LOWAS: -- That was, yeah, the (*looking at the authorization letter*) – there should have been a comment on there about tolerances.

MR. SPANEL: I don't see one – It says how much you can turn it down from this dimension to this dimension, but there's nothing that references tolerances.

MR. LOWAS: Wow.

MR. SPANEL: But –

COL BEAMAN: That's okay, it was a year and a half ago, I'm not surprised we're remembering things a little different than they rolled out –

MR. SPANEL: Well, there may have been an intent to put them on there, and –

COL BEAMAN: Sure.

MR. SPANEL: -- then in making up the final draft –

COL BEAMAN: Sure.

MR. SPANEL: -- I can't comment on that. From – From your history knowledge of that – of that part, Al –

MR. LOWAS: Uh-huh.

MR. SPANEL: We've talked about a couple of –

MR. LOWAS: Uh-huh.

MR. SPANEL: -- What we'll call "potential concerns," corrosion and dimensionals –

MR. LOWAS: Uh-huh.

MR. SPANEL: Did this part – do you have a history – is there a history of this – of this part having corrosion issues?

MR. LOWAS: Uh –

MR. SPANEL: I mean, I –

MR. LOWAS: I know what you're – I think I know what you're asking –

MR. SPANEL: Uh-huh.

MR. LOWAS: At the time, I was unaware – at the time, I was aware that it was standard that we would have, you know, have to oversize the hole at PDM –

MR. SPANEL: Uh-huh.

MR. LOWAS: -- From experience with bearings, a lot of times when you have to oversize a hole at PDM, it's just because, well, you had to check the hole for the sake of checking the hole, and in the process of checking the hole, you would damage the hole by pulling the bearing out, so you end up having to oversize the hole.

MR. SPANEL: Uh-huh.

MR. LOWAS: At the time I made this decision –

MR. SPANEL: Uh-huh.

MR. LOWAS: -- And I can't say I know any different now, but I can – with my right hand up, at the time I made this decision, I had no knowledge of any history of – that would specifically make me concerned about corrosion on that part.

COL BEAMAN: Uh-huh. And I – I don't know that we know any differently at this point. I know that they, they have to routinely – as long as it's a steel member, that this is mounted in –

MR. LOWAS: Uh-huh.

COL BEAMAN: -- They have to – that would corrode –

MR. SPANEL: Yeah. From what –

COL BEAMAN: -- Because steel corrodes.

MR. SPANEL: From what we've been able to find out, it's – this is the part that corrodes, it's the actual pylon mount, that corrodes –

MR. LOWAS: Yeah –

MR. SPANEL: -- And that's sort of what we've been -- been able to find out.

MR. LOWAS: From that standpoint, there would be a --

MR. SPANEL: On the steel pylons. There's two -- two material pylons, steel and nickel --

MR. LOWAS: Okay.

MR. SPANEL: -- And the steel ones corrode --

MR. LOWAS: Uh-huh.

MR. SPANEL: -- And again, that's what evidently causes a lot of this work --

MR. LOWAS: Uh-huh.

MR. SPANEL: -- It's corrosion in these mount fittings, and that's why bearings come in and out, and the holes have to be reworked and everything, and the -- I guess the newer airplanes, and I don't know if (unrecognizable) the mod, but newer airplanes get Inconel seven-eighteen pylons -- seven-eighteen --

COL BEAMAN: Well, good.

MR. SPANEL: I checked, and -- and they don't have a problem --

MR. LOWAS: Okay.

MR. SPANEL: As I --

MR. LOWAS: I remember pylons being a focal point, I'm fairly certain that the pylon expert was -- would that have been Ken Reed? -- just a general pylon expert for PDM? Yeah, that would have been Ken Reed.

MR. SPANEL: Ah --

MR. LOWAS: But, I don't --

MR. SPANEL: From your -- you know, and again, you've made it clear that you viewed this as a temporary repair and would not -- (three people talking at once, *discussing the authorization letter*) -- it is in there, yes -- you know, that it was identified as a temporary repair, and it would be re-visited at the next depot maintenance, from -- from your perspective in terms of the use of these temporary repairs, you say, "Well, it's going to be coming in to depot maintenance, and it wouldn't have long enough time to corrode, if corrosion were to be an issue -- do you have a feel, can you convey, you know, "Gee, if it was five years to PDM, that might be an issue," but (X) -- you know, three weeks wouldn't be an issue? Did you -- do you remember why, you know, why

you felt the way – confident that, you know, the issues that were brought up to you, in terms of, again, we said, two – corrosion potential and dimensionals, and your point, your intention was, “Well, as long as they can meet the tolerances and the original requirement, however they do that, with whatever fixture they do have, and I’m – I understand – I think I understand what you’re saying, I’m not going to tell them which fixture to use, I’m going to tell them they need to meet the original, you know, run-outs and tolerances and everything else, if they can meet that, then that addressed – to your understanding, would have addressed the dimensional concern –

MR. LOWAS: Uh-huh.

MR. SPANEL: From a corrosion standpoint, it’s like, “Well, okay, we’re going to size it down, it’s not going to be out that long, that – that corrosion would be an issue – do you know what made you confident that that wasn’t going to be an issue, or it would be manageable?”

MR. LOWAS: Just from – again, the science of corrosion is not really much of a science –

MR. SPANEL: Uh-huh.

MR. LOWAS: The best I can give you is experience with other airplanes, and, I mean – I’ve gone outside the Air Force for experience with airplanes, I repair World War II airplanes some weekends –

MR. SPANEL: Uh-huh.

MR. LOWAS: From what I’ve seen of AC-130’s, C-141’s, P-51 – okay, P-51 was not at that time yet – T-6, C-45, SBD Dauntless (sic) –

MR. SPANEL: Uh-huh.

MR. LOWAS: -- The time that I expected for corrosion – I felt comfortable in about another half of a PDM cycle or two-thirds of a PDM cycle-ish – I wouldn’t make it a full PDM cycle.

MR. SPANEL: How long – I have no idea how long the PDM cycle –

MR. LOWAS: As I recall, the PDM cycles were five years for that airplane, yeah.

MR. SPANEL: Okay. All right, thanks.

COL BEAMAN: We always have these little questions that run around the edges. Do you have, organic to Warner-Robins, the ability to do any kind of an engineering analysis on the mount, because if – even if the tolerances aren’t in the letter –

MR. LOWAS: Uh-huh.

COL BEAMAN: -- Theoretically, I could have jammed it in my home vice and shaved off a little of it and said, "Yeah, it's good enough," and then put it on the plane, and it could have been out of whack just enough that it moved a little inside that mount - what -

MR. LOWAS: Go ahead.

COL BEAMAN: It didn't end up in the letter, at this point -

MR. LOWAS: Yeah, yeah, I agree with you -

COL BEAMAN: It's something you would be concerned about if you were reading that letter now -

MR. LOWAS: Right.

COL BEAMAN: In terms of what was documented at both the investigations, and your decision -

MR. LOWAS: Uh-huh.

COL BEAMAN: If another one of these comes in tomorrow -

MR. LOWAS: Uh-huh.

COL BEAMAN: -- And it goes to Jonathan -

MR. LOWAS: Uh-huh.

COL BEAMAN: -- What's he going to tell them? And -

MR. LOWAS: If another one of these comes in tomorrow and goes to Jonathan, I would - that gets to more I'm a man of my word than anything else, I told both Jonathan and Mark "We're going to start procedures to get rid of this. Mark, you know - Mark, you were the most concerned; Jonathan was a very new engineer at the time, Mark, you were the one who was most concerned, I need you to start working on that."

COL BEAMAN: Okay.

MR. LOWAS: That I - I mean, that - whatever happened to my requests I don't know because I was there for - let's see, that was March, April, May, June - basically June, I took off most of July to come here -

COL BEAMAN: Okay.

MR. LOWAS: -- So I was there for about three months -

COL BEAMAN: Okay.

MR. LOWAS: -- And, you know, I don't recall any of those coming up again.

COL BEAMAN: If Mark were to be working on that project, who's the supervisor that he'd have to be securing approval of to proceed?

MR. LOWAS: His current supervisor, to my understanding, after the branches were combined, is -- to my current understanding -- is Scott Vandersall --

COL BEAMAN: Okay.

MR. LOWAS: -- Because as I was leaving -- as I was leaving, the C-5 and C-141 branches for structural engineering, mechanical engineering, and electrical engineering combined within themselves, so --

COL BEAMAN: Oh.

MR. LOWAS: C-5 structures is now C-5 and C-141 structures --

COL BEAMAN: Oh.

MR. LOWAS: -- With a little bit of responsibility for C-17 structures too, although they're pretty much on their own.

COL BEAMAN: Okay.

MR. LOWAS: Same with mechanical, same with electrical. It is my understanding that Scott Vandersall took over that position; that the supervisory position for the new -- I guess you could say "superstructures branch" became a GS-14 position --

COL BEAMAN: Uh-huh.

MR. LOWAS: -- And then, it was my understanding that Scott Vandersall lateralled into that, although I'd almost be happier if you could tell me, because I think I report to that branch and I've got some outstanding travel vouchers --

COL BEAMAN: (Laughs) And you'd like to be paid?

MR. LOWAS: Yes.

COL BEAMAN: Before the credit card company gets you?

MR. LOWAS: I've already had to pay them out of hide.

COL BEAMAN: Oh, okay. Okay. From what I can tell, it would be Mr. Vandersall at this time. We have not spoken to him.

MR. LOWAS: Okay.

COL BEAMAN: I was just curious, if you had left that thought planted in Mark's head, who he was supposed to be working that with. Let's see, what else? Anything else?

MR. LOWAS: And I know that Scott [Vandersall] knew about the problem and how concerned Mark was with the problem because that specifically came up a year ago right now when he was doing my evaluation -

COL BEAMAN: Uh-huh

MR. LOWAS: He said "Al, I think you made the right decision on the bearing, but you went about it the wrong way, because Mark is still upset."

COL BEAMAN: Uh-huh.

MR. LOWAS: And he used that to justify my score in morale as -

COL BEAMAN: Not the best of morale-builders?

MR. LOWAS: No. I had a short time, I mean, it -

COL BEAMAN: Yeah -

MR. LOWAS: -- If he wants -

COL BEAMAN: -- You to fix the world. While you were there, was Mark doing his job, was he there on time, was he -

MR. LOWAS: Mark - Mark did his job when I was around him -

COL BEAMAN: Okay.

MR. LOWAS: I had heard reports, primarily from Scott -

COL BEAMAN: Uh-huh.

MR. LOWAS: -- That when Mark felt he didn't have anything to do, he would put his feet up and - and doze, you know -

COL BEAMAN: Oh.

MR. LOWAS: And I tried to catch him at it, I tried to just watch his output, to find out, and I just –

COL BEAMAN: You never caught him?

MR. LOWAS: -- Was never able to confirm–

COL BEAMAN: Okay.

MR. LOWAS: -- You know, that it was – I will admit that there's a lot about leadership that I'm learning at ACSC that I wish I knew when I –

COL BEAMAN: We always learn these things after we're supervisors.

MR. LOWAS: Yeah, well, although I will say, one of the things I was upset about was not getting the supervisory course that I was supposed to get.

COL BEAMAN: Okay.

MR. LOWAS: That kept getting pushed off, and then they finally said, "Well, you'll get enough experience with that when you're at ACSC, so don't worry about it."

COL BEAMAN: But you don't really get – you get leadership training, but you really don't get supervisory training, and that's different.

MR. LOWAS: Exactly.

COL BEAMAN: So you still need that?

MR. LOWAS: Yeah.

COL BEAMAN: This is not part of our – you still need that.

MR. LOWAS: Yeah.

COL BEAMAN: Beat them up.

MR. LOWAS: Okay.

COL BEAMAN: How long had you been at Wright – at Warner-Robbins altogether?

MR. LOWAS: Oh, altogether?

COL BEAMAN: You were doing something else before?

MR. LOWAS: I was a student trainee at NASA co-op when I was in college –

COL BEAMAN: Okay, co-op. Co-op student, so you like spent the summer working for the government kind of deal?

MR. LOWAS: Because I had no idea what I was going to get.

COL BEAMAN: Do you have your resume?

MR. LOWAS: I have my resume.

COL BEAMAN: Do you mind if I make this part of the record?

MR. LOWAS: Okay.

COL BEAMAN: Okay, just so I can see this. Recommended staff, C-5 structures, AC-130, IPT as a 12. Warner-Robins, Robins, Robins, Huntsville, C-141 structures, command surgeon office.

MR. LOWAS: Yeah. All the way back in '91, I was an Air Force brat, and was at Headquarters, USAFE for, you know, a summer hire.

COL BEAMAN: Oh, that's cool.

MR. LOWAS. Yeah. It was cool. It was kind of cool.

COL BEAMAN: Yeah. Okay.

MR. LOWAS: Test tubes. Do you have those?

COL BEAMAN: It's kind of cool.

MR. LOWAS: As I recall, they -- right after they swore us in or right before, they also made us sign a statement that said, "I understand I'm not even making minimum wage and that's acceptable."

COL BEAMAN: Really?

MR. SPANEL: That's awful.

COL BEAMAN: Oh, dear. Okay, so we have covered the concerns that various and sundry people had about this.

MR. LOWAS: But --

COL BEAMAN: Oh, I know --

MR. LOWAS: Just for curiosity --

COL BEAMAN: Yeah.

MR. LOWAS: And we'll make it after the interview just so not to confuse anybody, for my general knowledge, as an engineer, I'd really like to know what happened.

COL BEAMAN: Oh. We'll tell you while we're doing --

MR. LOWAS: Yeah.

COL BEAMAN: -- this, and kind of -- the jury is still out on what we think of it. We're still looking at a couple things, but we haven't jumped up with our hair on fire --

MR. LOWAS: Yeah.

COL BEAMAN: -- and said, "Ground the fleet."

MR. LOWAS: Yeah.

COL BEAMAN: So, we're not horribly concerned. When we were talking about what was documented about the assessment, we talked about what you think Jonathan would do.

MR. LOWAS: Uh-huh.

COL BEAMAN: But what do you think is written down? At the time, I understand that they were recording the 202s, but not the 107s? There was a back file on 202s but no back file on the 107s?

MR. LOWAS: Okay.

COL BEAMAN: And they started electronically back filing the 107s, probably after you had left?

MR. LOWAS: The electronic filing system actually had started when I was there, but it had only been in place for I would say a few months, maybe if --

COL BEAMAN: So, if you were to look something up in 2001, you have no where to go?

MR. LOWAS: Right.

COL BEAMAN: Okay. So you had no way of determining whether there had been a bunch of these every year.

MR. LOWAS: There were places where things were hidden.

COL BEAMAN: Uh-huh.

MR. LOWAS: Jim Peel was a contractor engineer that had been there for many years. And if you happen to know where he stashed his old files before he left, you can find some of what he did. And often times, what we would do is if there was a database, a Microsoft Excel database, on the central server, with 107 numbers, titles and who did it -- where the base was --

COL BEAMAN: Uh-huh.

MR. LOWAS: It sounds like the most awful way to have configuration control, but sometimes we would have to go down there, find a title that we thought was right, call the base and say, "Do you have a copy of this 107? We don't."

COL BEAMAN: How long did you have to disposition the 107s? It seemed to be a very time intensive --

MR. LOWAS: It is. It is very time intensive. There was an in-house standard that I just -- I can't tell you -- I -- I don't remember. I mean it was something that was a metric that was tracked every week, but having been here for ten months, I --

COL BEAMAN: Don't know if there's still a metric -- okay.

MR. LOWAS: Oh, I --

COL BEAMAN: They're probably still tracking it.

MR. LOWAS: They're probably still tracking it.

COL BEAMAN: Okay.

MR. LOWAS: But it was -- it had to do with -- and this is one of those that if I wasn't on tape, I'd say, "Don't quote me on it." It had to do with in the hour's time frame for a first answer if it was urgent. If it was a little more than a routine but not urgent, then the day's timeframe but no longer than a week. The routine was, I think, no more than a week.

COL BEAMAN: Okay.

MR. LOWAS: But, yeah, I don't remember it all.

COL BEAMAN: That's okay. I got the impression, since from what I saw on the 107, it was dated March 12th then the disposition was like the 14th. It looked like all this happened very quickly.

MR. LOWAS: Oh, yes.

COL BEAMAN: And so the notion of that torque deck being something that you decided while everybody was at the meeting that it made much more sense to me given that they come, they go, then you got two days kind of a time period.

MR. LOWAS: Right.

COL BEAMAN: It fits consistently, so I was kind of curious. What I saw that was written down and the final answer on this item on this repair does not seem to mention the concerns of the engineers at all. It does not seem to capture how those were resolved.

MR. LOWAS: Correct.

COL BEAMAN: And I was wondering if that's kind of normal for the way things are?

MR. LOWAS: That was normal for that office, but that was something that -- that actually was a management and leadership learning experience for me. I saw that as something that needed to be fixed, very much needed to be fixed. I pushed to have a -- in fact, I called it an Engineering Notes page added to our on-line system.

COL BEAMAN: Uh-huh.

MR. LOWAS: Something that Engineers could access -- why I made the decision, what the factors were in the decision, what the calculations were. And I pushed and I pushed for it, and my -- again, that was a leadership learning experience where in some ways I pushed for it so much that my own staff thought I was crazy. In some ways I pushed for it so much that Scott said, "Why are you running around with your hair on fire for?" And in some ways, I just didn't have the resources to push for it at all anyway because I didn't control the contract that made that web page.

COL BEAMAN: Okay.

MR. LOWAS: I had even on a home web page maker thing that I really didn't know how to use. I even came up with a sample of okay, this is kind of what I like to look at and this is why.

COL BEAMAN: Uh-huh.

MR. LOWAS: It never happened while I was there. Yes, I was concerned that we were making decisions with the best knowledge that we had in a very short time without a lot of historical knowledge to go back to.

COL BEAMAN: Uh-huh.

MR. LOWAS: That was a general concern.

COL BEAMAN: And you'd like the next guy to not have that problem.

MR. LOWAS: Yeah, yeah.

COL BEAMAN: Okay.

MR. SPANEL: Yeah, that was one of the questions that I had asked the folks was, you know, gee, when these come in, do you have the ability to go back and say, you know, okay, the first thing he asked was, "Have you ever done this before?" You know, you know, is there a correct way to go back and research that? And that's what we got out of the discussion. Well, if it was a 202 --

MR. LOWAS: Uh-huh.

MR. SPANEL: it was much easier to --

MR. LOWAS: Yeah.

MR. SPANEL: Yeah, it was much easier than it was --

MR. LOWAS: Yes.

MR. SPANEL -- than the 107s --

MR. LOWAS: Uh-huh.

MR. SPANEL: Which were the external requests and --

MR. LOWAS: Yeah.

MR. SPANEL: So, this, of course, is one of the issues, and it's really -- I believe, unless you tell me otherwise, it's -- we're we have this -- we have this 107 --

MR. LOWAS: Uh-huh.

MR. SPANEL: -- that we're supposed to, you know, answer to. The obvious question would be, "Boy, how many times have we done this? Have any of them been done with five years left on a PDM? Who knows which ones it's been done to? Are any of those being tracked in any special fashion? Just kind of, is there any advantage to that?"

MR. LOWAS: And we can track similar things and maybe we could start asking for sustaining engineering dollars to start coming up with long-term fixes. Yes. Could you have, you know, come down and advised me on that when I was trying to tell everybody what was going -- Yeah, that was -- that was exactly the concern. It's that corporate memory -- a lot of corporate memory down there is... bearing. I think somebody worked on this bearing.

(Unintelligible due to all parties speaking simultaneously.)

MR. SPANEL: We've all been there.

COL BEAMAN: Oh, yeah. I seem to remember that part. Yeah, and it'll happen again. Was it your impression that your work area was staffed at about the right level?

MR. LOWAS: I was in the process, as all this was happening, of trying to optimize the staffing that I had. Were we staffed at the right level? It's the same thing I tell the people when people ask me, you know, "What good is a civil service depot versus a contractor depot?" And my answer is, "To the level that the Air Force wants to pay for sustaining engineering and maintenance of its aircraft, all you can get is what you're paying for right now. It's civil service depot." From what I know about trying to -- it would be just for a raw comparison, my office was staffed consistent with other offices with the same responsibilities at a depot. From what I know about personally trying to get a designated engineering representative licensed with the FAA, which is what I've been trying for five years off and on, at DER -- would have a whole lot more checks, and it would probably even have to do an FEA on the whole thing just to come up with a disposition. Just two different philosophies of how to maintain airplanes. I think that, you know, we had what we had. We were trying to make the best with what we could do with it. We could always use more resources, and more people and more computer programs.

COL BEAMAN: If you were a pilot and not an engineer, would you fly planes with confidence in their safety coming out of the depot processes that you've seen?

MR. LOWAS: You know I know some people at some depots that -- oh, excuse me. I know some people at Warner-Robins who have said no. Frankly, personally, I've seen some pretty weird stuff, inside and outside the Air Force. And with the state of airplanes right now, especially with 1970s airplanes that have big margins of safety, the system's based upon as many checks in the system as possible. I've also got friends on the F-22 production lines who are telling me about how small the margins are on them, and we would have to rework at our process before we start looking at something like that.

COL BEAMAN: Do the C-17s have the same margins of safety that other older planes have?

MR. LOWAS: I cannot talk intelligently to that.

COL BEAMAN: Okay. Other questions?

MR. SPANEL: One last question, a technical question, whether you can answer or not. You talked about the machining of the bearing --

MR. LOWAS: Uh-huh.

MR. SPANEL: And again, this was only just a few mils --

MR. LOWAS: Uh-huh.

MR. SPANEL: -- that they were asking for, and you talked about a coating.

MR. LOWAS: Again, as I recall and as I recall when I said it, there was a cad plating so it wouldn't coat anything on that.

MR. SPANEL: Okay.

MR. LOWAS: And essentially, the thickness of the plating would be in the few mils, which is same --

MR. SPANEL: Okay.

MR. LOWAS: -- that they were requesting.

MR. SPANEL: Okay, so you think it's --

MR. LOWAS: And, you know, you can pull out a document right now and it can be completely other than what I said, but to the best of my knowledge --

MR. SPANEL: I -- I just ask of what I know. I didn't know of any coating or plating, so I probably need to go and find out if there is one.

MR. LOWAS: Yeah.

COL BEAMAN: Yeah, we understand that we're catching you cold. We didn't give you a chance to go back and look at notes. So, the reasonable remembering thing here is not a big concern. We're looking into this situation because the Air Force received a tip --

MR. LOWAS: Uh-huh.

COL BEAMAN: -- that this particular repair was unsafe, and the trail led to you as the guy who signed the letter that's attached to the disposition. And so, we are just trying to find out whether we think the flight, the repair is safe.

MR. LOWAS: Right.

COL BEAMAN: Really, the scope of the investigation is whether this repair is safe, and we're talking to a lot of people --

MR. LOWAS: Uh-huh.

COL BEAMAN: -- and trying to figure it out. And we're kind of doing this kind of on the same basis that you approved it. It's like, well, we could go back and do all the little analyses of all the little stressors and all the dynamic loads of the engine and the wing and everything else, or we can say the delta between what it was before you did that little milling down than what you have once you've done the milling down is so small that you don't -- it's in that big margin. So,

that's where our investigation is at this point. So, you were named as a suspect because you were that decision-maker.

MR. LOWAS: Right.

COL BEAMAN: But we understand making decisions based on the information you had on hand. Is there anything else we really need to know?

MR. SPANEL: I've got my questions answered.

COL BEAMAN: Okay. And I have my questions answered. There are a couple things I need to cover with you as we kind of close this interview out. If you are in any way distressed about this interview and where this leaves you, if you are concerned, if you're upset, we can find you somebody to talk to. Do be careful about who you talk to because some conversations are privileged and some are not. So, if you seek a lawyer, that conversation would be privileged. If you seek to see a counselor or some other person within the military structure or your supervisor, that would not be a privileged conversation. But we don't want to let you out of here if you're feeling distressed without making provisions for that. So, you're fine?

MR. LOWAS: I'm fine.

COL BEAMAN: Okay.

MR. LOWAS: I'm fine. I have full confidence that I made the best decision with the information I had available, and yeah, in fact, I'd kind of like to join my seminar. When you type this up, just give me and call, and I'll tell them --

COL BEAMAN: That's okay. Since we're tape recording it, we're not going to type it up.

MR. LOWAS: Okay.

COL BEAMAN: So, we're just going to go with that recorded.

MR. LOWAS: Okay.

COL BEAMAN: That's kind of why I was glad to see a recorder.

MR. LOWAS: Yeah, okay.

COL BEAMAN: We can just do that. And now about this investigation, my report will be submitted to General Martin, the Commander of Air Force Materiel Command, and he will use it for his purposes. He will forward it to higher authorities as requested.

MR. LOWAS: Okay.

COL BEAMAN: You are not supposed to talk to people about what we talked about in here --

MR. LOWAS: Got it.

COL BEAMAN: Unless you want to talk to your supervisor about it or -- or a lawyer.

MR. LOWAS: Yeah, okay.

COL BEAMAN: If you need to seek some assistance there. If anyone presses you for information about that, please give me a call. You can probably find me through Sergeant Wicks here --

MR. LOWAS: Okay.

COL BEAMAN: -- in the legal office, but I don't think anyone will be pushing you on that.

MR. LOWAS: Just because there's a -- the way that this came down was that my entire seminar is going to ask me how this CDI had come, you know, worked out, because as you saw the e-mail went to everybody in the seminar. I'm assuming it would be acceptable to say it was a professional engineering question.

COL BEAMAN: That would be certainly sufficient. If your seminar leader wants to know --

MR. LOWAS: Yeah, yeah.

COL BEAMAN: And he knows you're a suspect.

MR. LOWAS: Yeah, yeah. After that --

COL BEAMAN: And what I said to him, and I think you were on that e-mail, was that I expected this period of time to be the only time we needed.

MR. LOWAS: Okay.

COL BEAMAN: And if anybody thinks differently, they'll get back to you.

MR. LOWAS: Okay.

COL BEAMAN: I don't know of any reason why that would happen. But generally speaking, I don't know if you'll hear the results of this or not.

MR. LOWAS: Okay.

COL BEAMAN: It is what it is.

MR. LOWAS: And --

COL BEAMAN: If you call the Air Force Materiel Command legal office --

MR. LOWAS: Yeah.

COL BEAMAN: You might be able to find out after it's all done.

MR. LOWAS: Yeah. I know what you mean. I'm sure the tape's run out. But my primary concern --

COL BEAMAN: It's still running.

MR. LOWAS: -- is to be the best engineer I can be for the Air Force, so this will be a learning process for me too -- what was --

COL BEAMAN: Great.

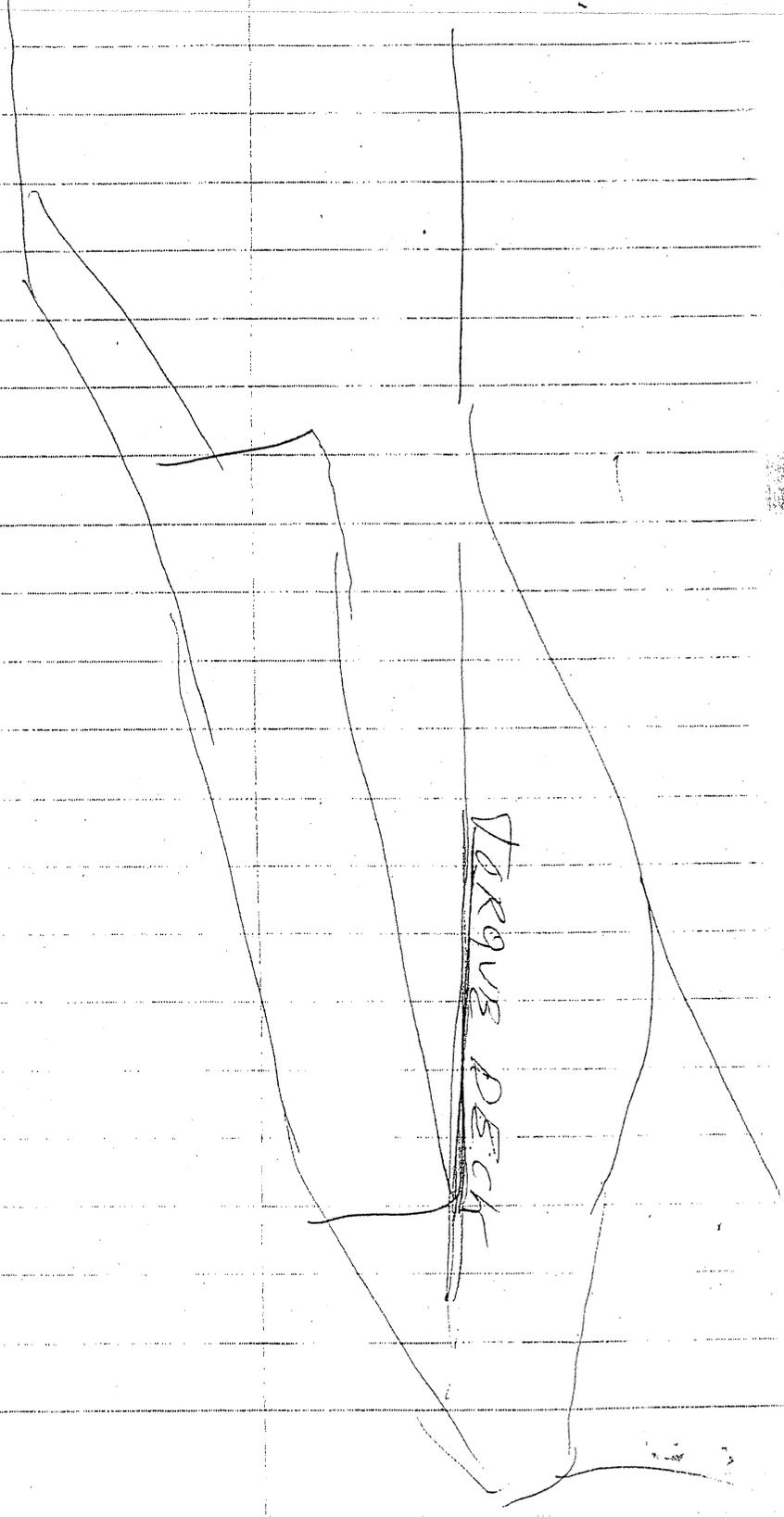
MR. LOWAS: -- what was finally decided.

COL BEAMAN: Okay. That concludes the interview.

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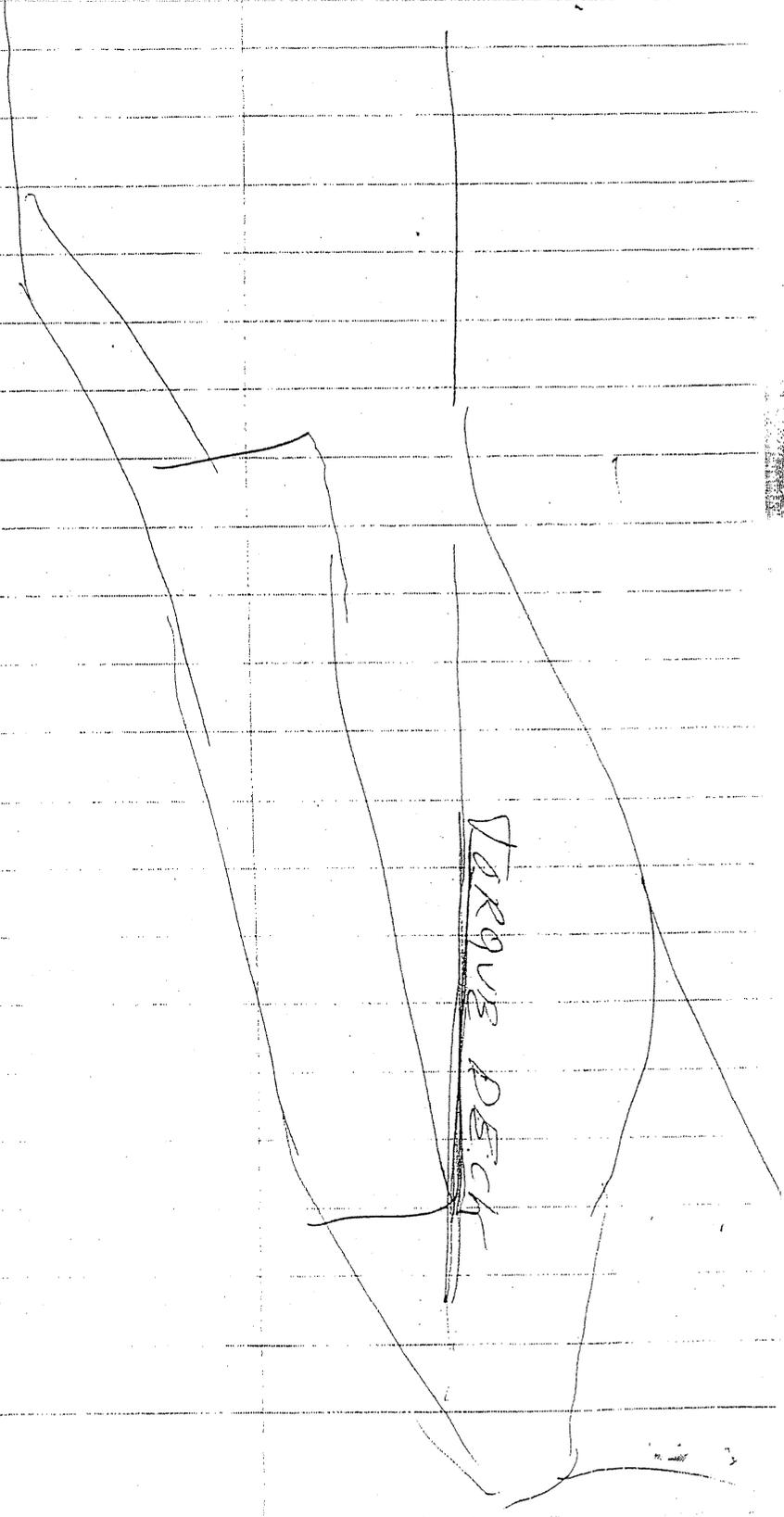
~~TORQUE DECK~~



15/1/14

Willis Howard

TORQUE DISC



ALBERT F. LOWAS, III

Student, Air Command and Staff College

Desired Position: Engineering or related management/program management or strategic planning position dealing with the acquisition, maintenance, and deployment of aerospace power at HQ USAF, MAJCOM, or Joint HQ

Air Command and Staff College (GS-13): 2003-04

Maxwell AFB, Alabama

Student, In Residence: One of 14 civilians in a class of 600. In addition to regular course work, I am completing for publication a research report concerning the use of Unmanned Aerial Vehicles in Counter Insurgency. I will graduate on 7 June 2004.

C-5 Structures Engineering Branch (GS-13): 2002-03

USAF/WR-ALC/LAES, Robins AFB, Georgia

Branch Chief (Aerospace Engineer): I directed the day-to-day efforts of 18 engineers responsible for all engineering decisions concerning C-5 structural repairs, modifications, sustaining engineering, and spares acquisitions. I lead the development of a proactive quality review method for the largest ever (\$500M) purchase of C-5 structural spares, which minimized schedule slips and saved approximately \$30M in component scrap, rework, and testing. At my direction, my staff developed a unique spares acquisition method to produce new low-maintenance structural components at a lower per unit cost by involving Government engineers early in the acquisition process. Under my direction, my staff developed new inspection techniques to manage urgent and controversial skin stress corrosion cracking that facilitated a find-fix solution to the problem avoiding \$5M per aircraft in corrective modifications.

AC-130H Integrated Product Team (GS-12): 1999-2002

USAF/WR-ALC/LUGE, Robins AFB, Georgia

Aerospace Engineer: I executed all AC-130H structural, mechanical, and performance issues. I lead a program that developed a new pitot-static system for the AC-130H Fire Control system, which saves \$1M per year in maintenance costs. I directed a contractor team for the AC-130H IR Suppressor overhaul and reengineering effort, which extended its life by 10 years and reduced its maintenance by 25%. I lead the redesign and replacement of the Emergency Life Saving Instant Escape device. I developed and lead the gun system tester program that reduced system checkout time by 90%. For each project, I developed technical requirements based upon warfighter performance needs, authored statements of work, and evaluated vendor-proposed responses to these technical requirements for feasibility, completeness, and cost. I designed repairs for all unique AC-130H structural, propulsion, hydraulic, and mechanical repair requests from both depot and field-level maintenance. I lead the maintainability team for the Enhanced Infrared Suppressor Source Selection. I co-lead the team that developed the SOF Requirements and Budgetary Cost Information processes.

Aircraft Battle Damage Repair Engineer: I was a deployable civilian ABDR engineer for H-53, H-60, and C-130 aircraft. My duties were to design repairs in the field to facilitate quickly returning damaged aircraft to service in combat situations.

Robins Aero Club: 2001

78th MSG/SV, Robins AFB, Georgia

Private Pilot, Advanced & Instrument Ground Instructor: I taught Private Pilot Ground School as a ground instructor.

C-141 Structural Engineering Group (GS-11): 1996-99

USAF/WR-ALC/LJLEA, Robins AFB, Georgia

Aerospace Engineer: I analyzed, investigated trends, and developed repairs for C-141 structural damage for both depot and field-level maintenance. I lead an effort to acquire new Non Destructive Inspection equipment for the fuselage skins, which included technical requirements development, market research, source selection, and fielding the system—this saved 10,000 man-hours annually in Depot Maintenance. I uncovered a systemic manufacturing flaw, determined the source and extent of the flawed material, designed a fix to the flawed material and saved over \$500k in material costs—while also avoiding fleet grounding. I authored new inspection techniques, established new stocking levels, examined the structural integrity, and generated new repair techniques for the cargo ramp, saving 8 cannibalization actions per year. I assisted in establishing the C-141 Functional Systems Integrity Program.

Aerospace Systems Branch, Systems Analysis and Integration Lab (GS-5): 1993-96 *NASA/MSFC, Huntsville, Alabama*

Systems Engineer: I worked on the Space Station (SSF), Crystal Growth Furnace (CGF), Tethered Satellite System, Gravity Probe-B, and AXAF-I. I participated in Preliminary and Critical Design Reviews for SSF, AXAF-I, and CGF. I participated in the SSF redesign as the berthing systems specialist. I was responsible for Failure Modes and Effects Analyses for many of these programs.

Command Surgeon Office, HQ USAFE (GS-2): 1990

HQ USAFE/SGAA, Ramstein AFB, Germany

Administrative Assistant: I assisted with office automation, communications, and the Desert Shield mobilization process.

OTHER QUALIFICATIONS

Degrees: MS, Aerospace Engineering, Georgia Tech, 1998 (3.78); BS, Aerospace Engineering, Virginia Tech, 1996 (3.49)

APDP Training: ACQ101; LOG101; SYS229. I will graduate ACSC with Acquisitions Level II Certification.

Volunteer Work: Commemorative Air Force (5 years of Aircraft Maintenance, 2 years as Safety Officer); Civil Air Patrol

Recent USAF Professional Awards and Recognition:

C-5 Structures Engineering Branch: Certificate of Appreciation, January 2003

AC-130H Integrated Product Team: Superior Rating with Performance Award, May 2002; Time Off Award, April 2002; SOF Commando Award, 1st Qtr 2002; Performance Award, August 2001; Engineering Team of the Quarter, 1st Qtr 2001

C-141 Structural Engineering Group: Certificate of Appreciation, August 1999; Performance Award, August 1997

This is the statement of Jonathan Depiau, , made on 14 April 2004 to Col Becky Beaman and Mr. Vincent Spanel, regarding the repair of C-5A S/N 70-0465, Aft Engine Mount Spherical Bearing, Pylon S/N 0028.

1. I graduated from Polytechnic University in Puerto Rico in July 2002, and had been working here on C-5 aircraft for eight months when this 107 request came in – I have no formal structures training, so this request was in an area new to me.
2. I discussed this 107 with my “mentor,” Mark Taylor. He has a lot of experience in these things. It was Mark who brought to my attention the fact that this is a primary structure, and he helped me get in touch with some of the people I talked to during my investigation.
3. The first thing I did was try to get hold of the people who made the request to get more information, because there is always more information than is in the 107 request. When I had trouble reaching the POC, Randy Thomas, by phone, I started putting messages in the 107 to get someone to work with me. Eventually I reached someone, and got the information I was looking for.
4. When I spoke with the people who made the request, I was told that they had done this repair in this way many times in the past. I asked them to describe how they sized down the bearing, and they told me they wedged it into a stationary position and just machined it down. (The part has flanges on it (see attached sketch) – I’m not sure how they managed to mill down the middle of the part without also milling down the flanges, (circled in the sketch).
5. Mark Taylor and I went down to Bldg 169, to see the mechanics who work on the aircraft, here (WR Technical Industries Office?) and discuss what they thought of the proposed repair. They strongly advised against sizing down the bearing, due to concerns about being able to properly fixture the bearing.
6. I discussed what I had learned so far with Mr. Lowas and Mr. Vandersall. They recommended that I contact Southwest Products Inc. to get their recommendation.
7. I spoke with Mr. Nicholas Nguyen, from Southwest Products, Inc., and he said that he recommended following the T.O. procedure instead of sizing down the part. He said that sizing down the bearing would reduce the strength of the part. He seemed to be most concerned about the quality control of the machining process. I asked him if Southwest would make one part, to meet the need for this size item, and he said that he couldn’t without drawings that had the dimensions that we wanted for this part (which we don’t have).
8. I believe the existing T.O. procedures have been reviewed by engineers to determine that they are OK to use– they have been validated. Sizing down the bearing has not been reviewed in that way. (I don’t think we have the capability to do an analysis like that here at WR right now.) The procedure is documented in 1-C-58-3, section 6, paragraph 6-17 and figure 6-9.
9. I went back to Mr. Lowas, and I provided him with all the recommendations that I had supporting refusing permission to do the repair as requested. He told me that this repair had been

JD / BB / VA

done this way in the past, and we were going to approve the request. I have only seen one or two other 107s connected with this kind of repair (if I'm remembering correctly, this one is the third).

10. I went back to the 107 request, and documented the results of the investigation to support authorizing the repair based on the fact that it had been done a couple of times in the past, based on Mr. Lowas' guidance. I did not include the recommendations I had received against authorizing the repair. When I later learned that Mr. Mark Taylor was planning to elevate his concerns to Mr. Vandersall, I documented my concerns independently in case it was needed (see attached statement, March 20, 2003).

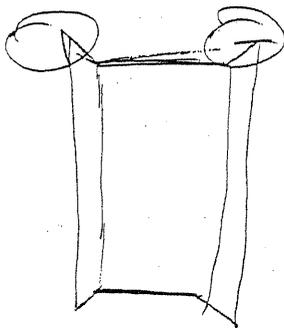
11. Normally, the results of the investigating engineer are sent back through the 107 system, and to the branch chief for disposition. Because I discussed the matter with Mr. Lowas, I didn't put the information into the system. I was new, at the time – if this was happening today, I would put my own recommendation and all the supporting facts into the system, if I was going to sign my name to it.

12. From my conversation with other engineers, another issue is how the base would control the temperature of the material in the machining process they describe – the material can get hot enough that it changes the material properties. It also might be necessary to passivate the part after machining it, and that wasn't mentioned as part of the procedure.

The above is a true, accurate, and complete accounting of my sworn testimony.


Jonathan Depiau

JD / BB / 28



JD, BB, 24

ATTACHMENT TO DESPINA STATEMENT
P2/2
March 20, 2003

Subject: Disposition given on C-5A S/N 70-0465. Aft Engine Mount Spherical Bearing.
Pylon S/N 0028.

My supervisor on 3/13/2003 approved the disposition given on 107 Request #03-109. I never agree with this disposition and I always let him know every single detail found.

While working with this 107, I did the following things. First, notify Chief Engineer and Brand Chief Engineer of what was going on. Every single detail was explained to them and we concluded that in order to take a final decision I had to call the company that manufactured the bearing (Southwest Product Inc.) Second, I called the people over Southwest Products Inc. I contacted Eng. Nicholas Nguyen (1-800-826-0729 Ext-215). I asked him if he recommended that the spherical bearing could be machined down. He said "no, because that will decrease the strength on the part". Third, I asked the engineer if Southwest Product Inc. could machined one bearing down for an special situation, his answer was "no". Third, I mentioned the procedure on the T.O. (T.O. 1C-5A-3, Section VI, Paragraph 6-17, Figure 6-9, Index 30, Flag Note 9) and he said that that repair was the one that shall be done. I always recommend sending a Team from WR/ALC to make the appropriate repair.

Finally, I put my name in the 107 as the point of contact because I worked the 107 but I do not agree and won't take responsibility on any problem that this repair may cause. Every single moment I talked to my supervisor and let him know every single detail I had found. I let the decision to him since his the one who signed. His decision was let the Base Station go with the inappropriate repair and that what I putted on the disposition.

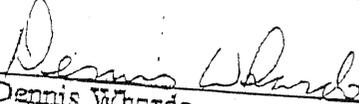

April 14, 2004

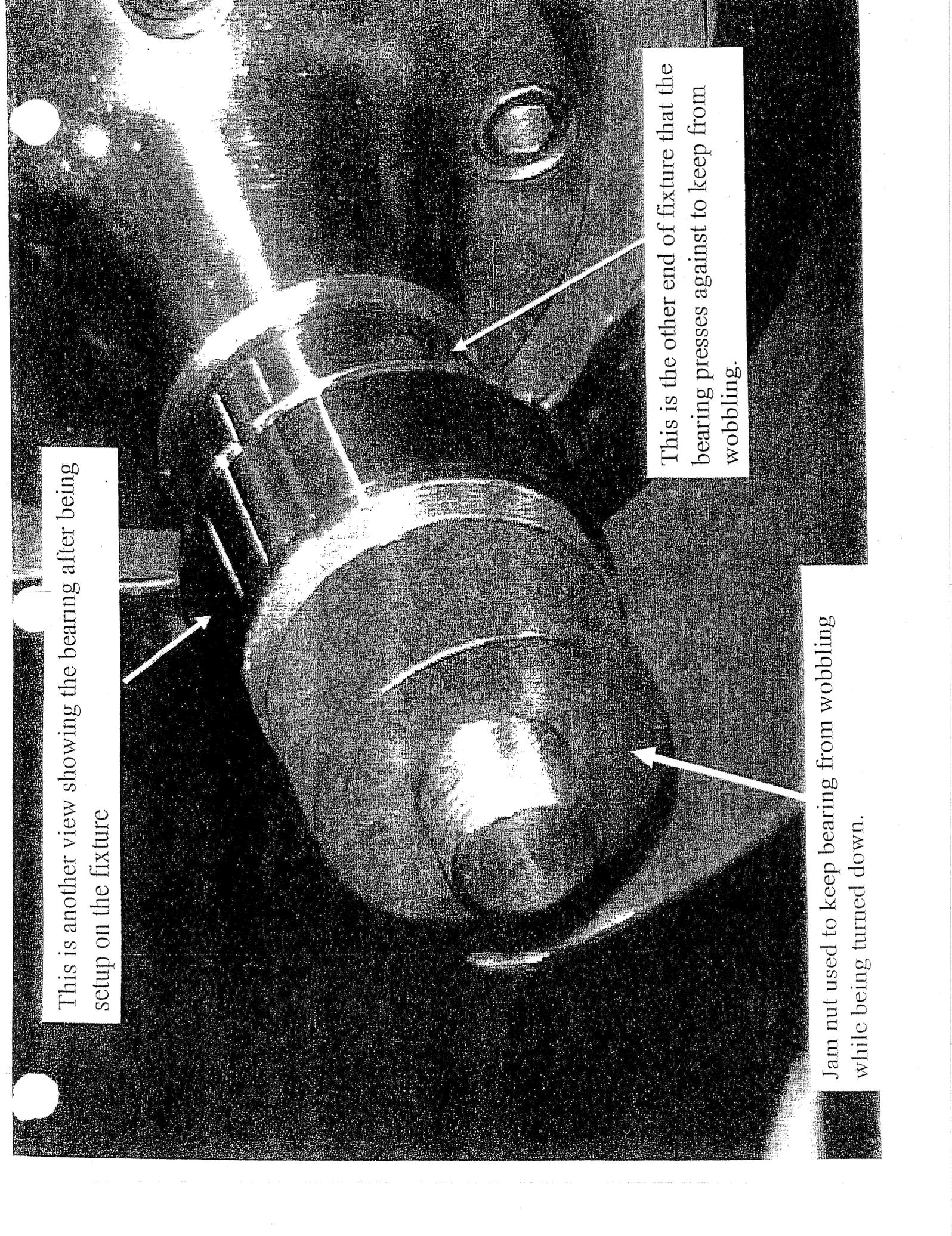
TA, BK, JL

This is the statement of Dennis Whardo, made on 14 April 2004 to Col Becky Beaman and Mr. Vincent Spanel, regarding the repair of C-5A S/N 70-0465, Aft Engine Mount Spherical Bearing, Pylon S/N 0028.

1. The request we submitted was one of a series of similar repairs that we have done periodically for the 7 years I have worked here at Altus. These might happen as often as once a year for us (we only have eight C-5s) - I'm not sure, I'm just guessing. But this was not the first time we've asked permission to do exactly this repair.
2. I've been told that others are doing the same repair without going through engineers. I'm a stickler, and if we deviate from the T.O. I get the chief engineer to sign off on it.
3. If approval is given, we machine down the bearing to fit the hole. The tools required to do the procedure in the T.O. (sizing up the hole to fit the bearing) are authorized, but authorized tooling fixtures as called for in the T.O are unavailable to us here at the base. I have never tried to order one, myself, but I have been told there are only one or two of them in existence.
4. We have a fixture that we use to mount the bearing in order to properly size it down. I don't know where the fixture came from - it was here when I got here, I don't think it has a part number and it isn't mentioned in the technical data. But the fixture is exactly tailored to hold the bearing in place on the lathe. (See attached pictures) I assume other bases have a similar fixture (I have not asked any bases directly). We use a micrometer to check our work and make sure that we have the right size when we're done.
5. If you wanted to know which tail numbers have sized-down engine mount bearings, you might be able to look through each aircraft's maintenance history and find that information. I'm not sure. Seems like a crew chief might or might not log that information - I've never looked for it.
6. Generally, the pylon mounting fitting corrodes. I've never seen a cracked pylon or bearing. Sometimes the spherical bearing may not freely rotate... If a bearing did crack, or even break into pieces, it wouldn't be a problem because everything is trapped there.
7. (When asked if it made sense for a change to be processed to the T.O. authorizing this approach as an approved alternative to sizing up the hole): Well, it makes sense to me to change the T.O. Seems like that is something the engineers ought to do - then we wouldn't have to ask each time for authorization to do this.

The above is a true, accurate, and complete accounting of my sworn testimony.


Dennis Whardo

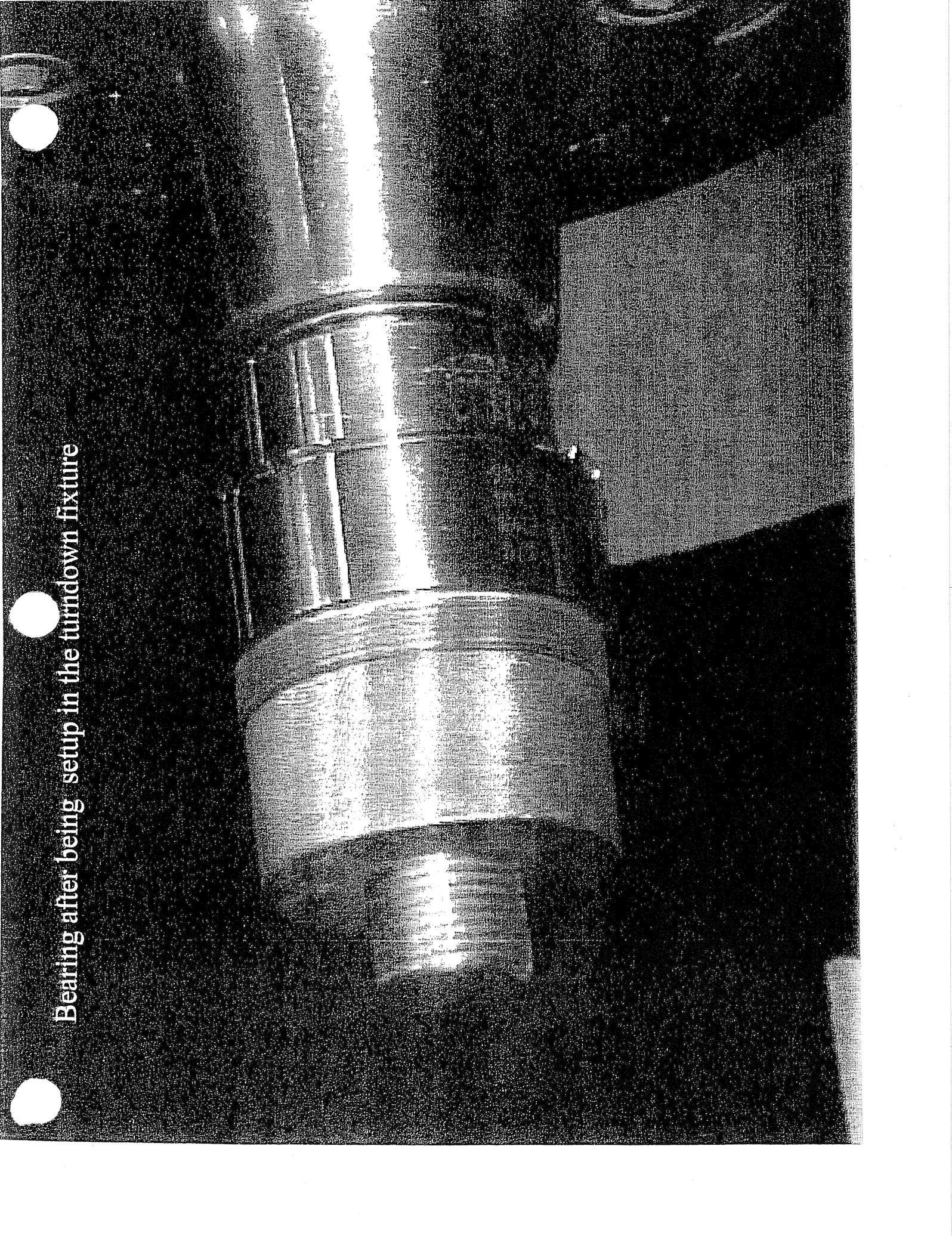


This is another view showing the bearing after being setup on the fixture

This is the other end of fixture that the bearing presses against to keep from wobbling.

Jam nut used to keep bearing from wobbling while being turned down.

Bearing after being setup in the turndown fixture



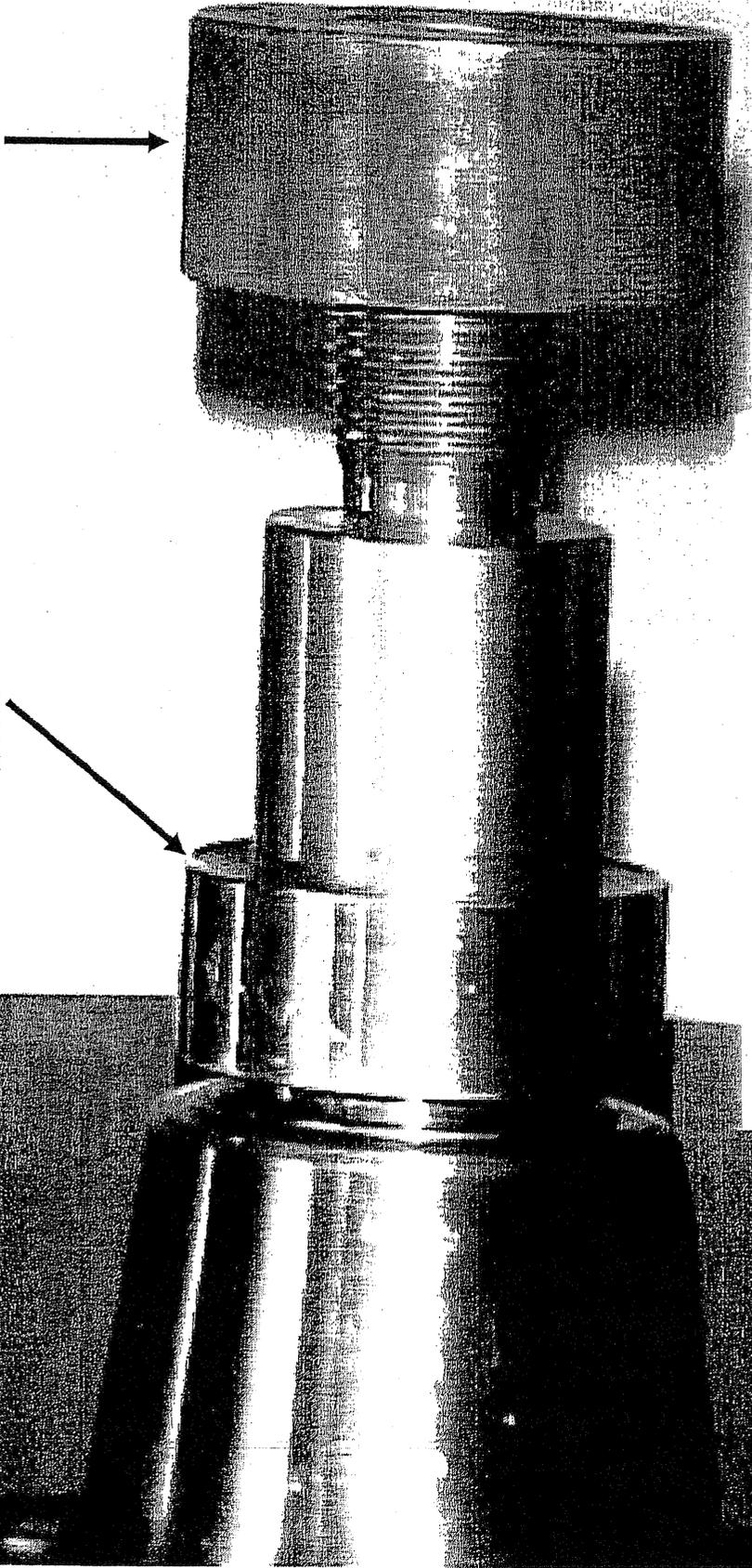
View showing the bearing setup in the turning fixture.



View showing fixture setup in lathe with no bearing

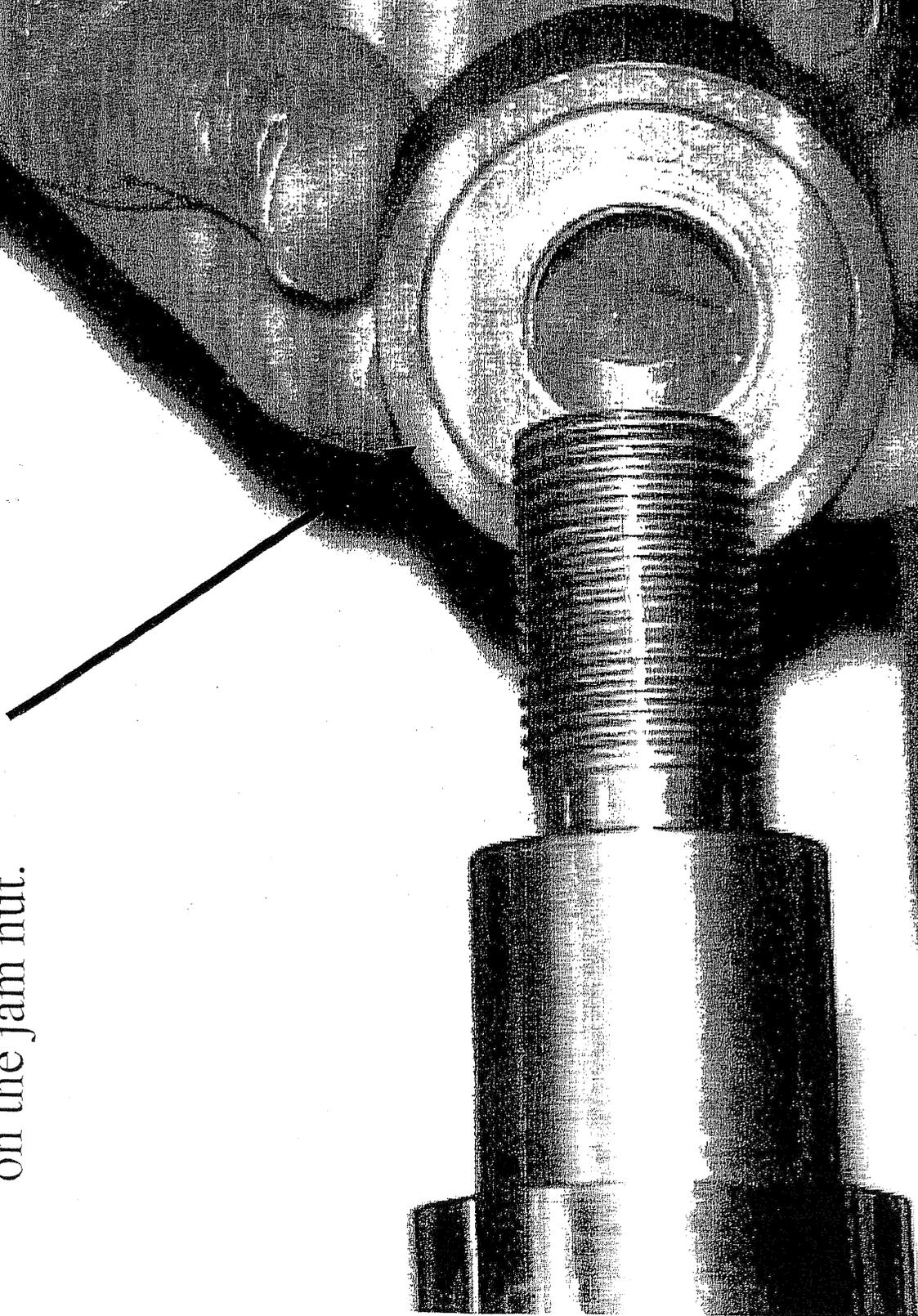
Jam Nut

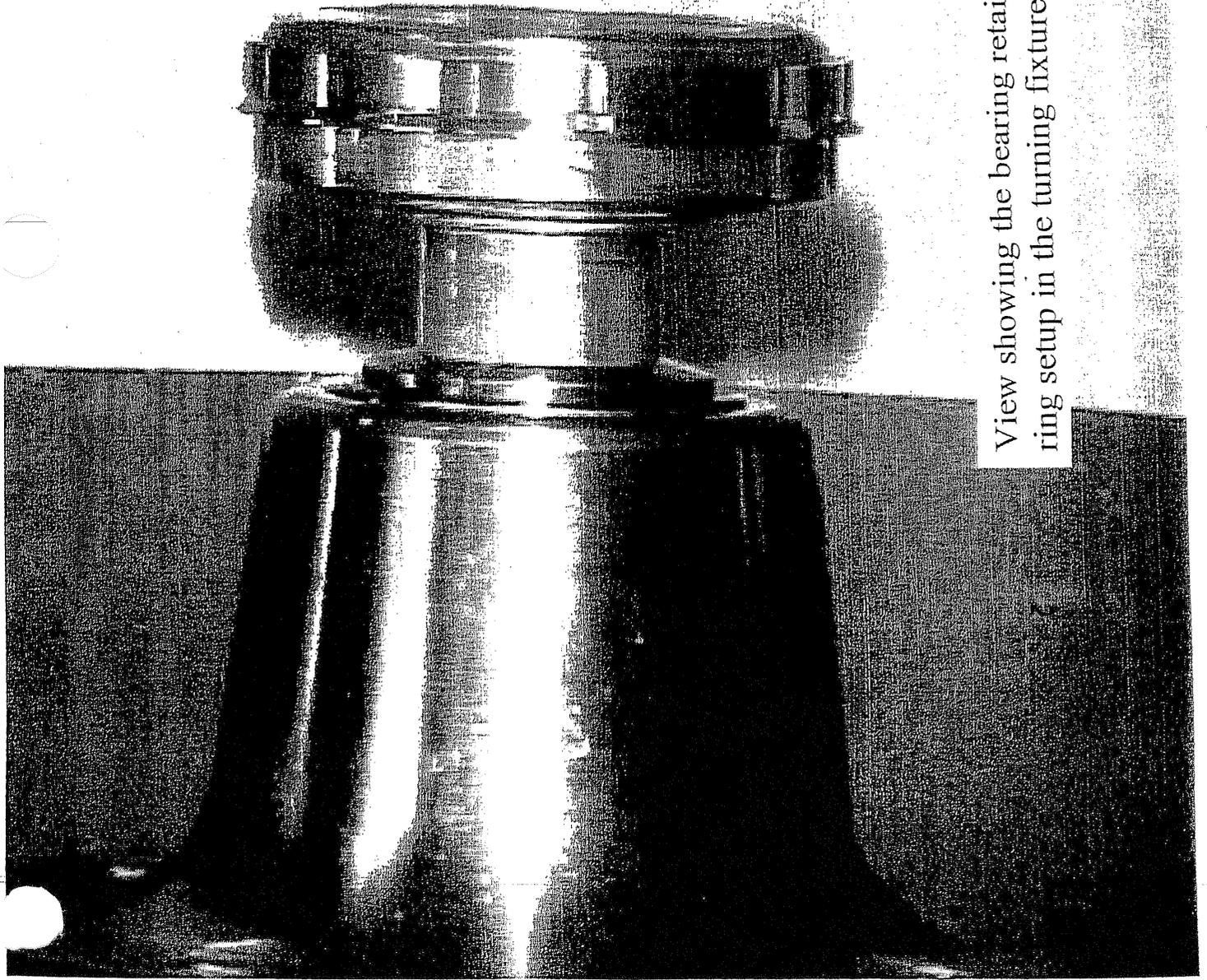
Shoulder



NOTE: Recessed shoulder that allows clearance for the ball end of bearing so the shoulder pinches against the bearing outer race to keep it from wobbling. The jam nut is also recessed.

View showing the shoulder
on the jam nut.





View showing the bearing retaining ring setup in the turning fixture.



View showing the retaining ring before being screwed onto the fixture.

Jam Nut

Bearing retainer

Turning fixture

Bearing

Bearing retainer turning fixture

