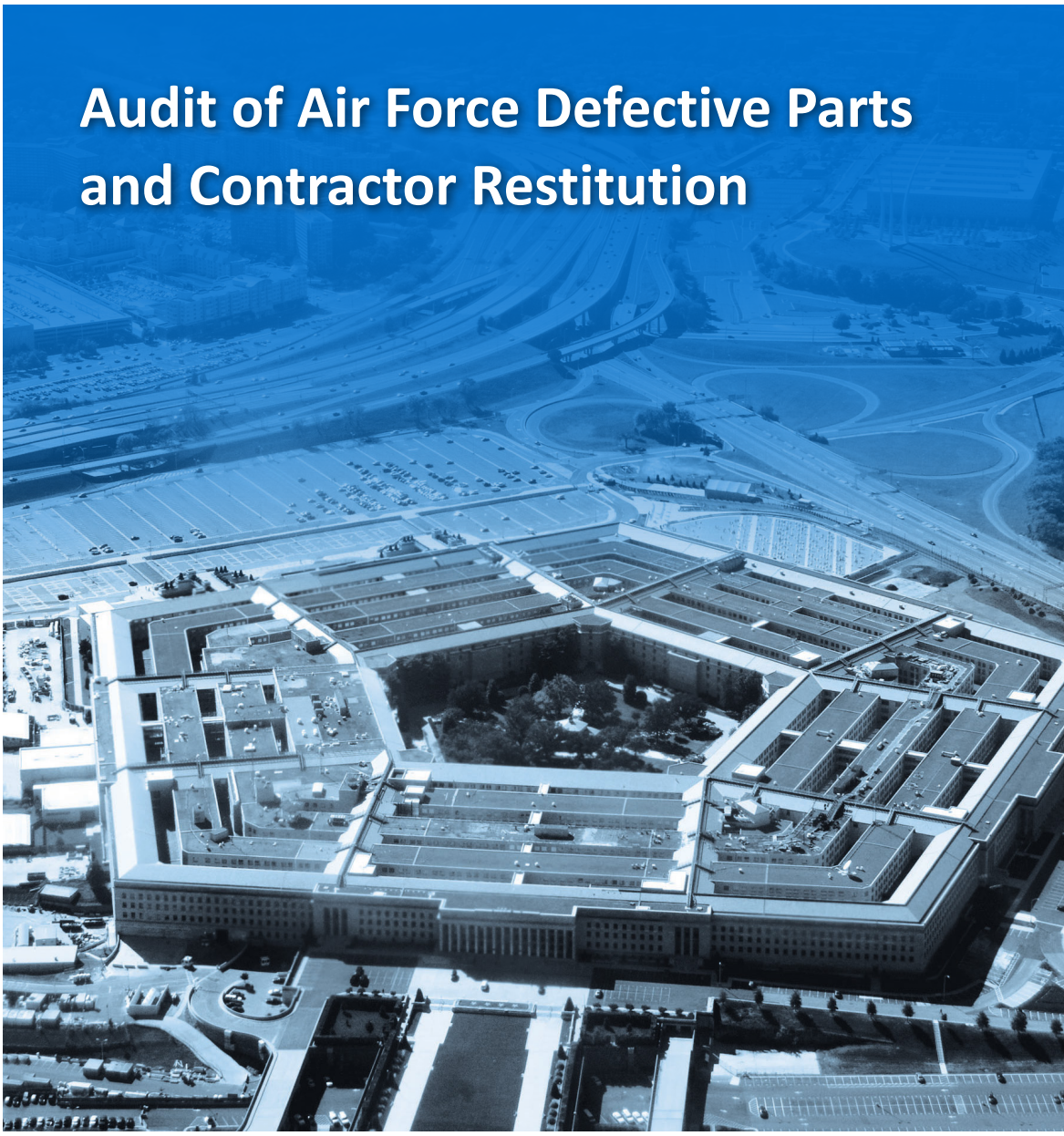
Report No. DODIG-2024-123

INSPECTOR GENERAL

U.S. Department of Defense

AUGUST 27, 2024

Audit of Air Force Defective Parts and Contractor Restitution



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INSPECTOR GENERAL
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Results in Brief

Audit of Air Force Defective Parts and Contractor Restitution

August 27, 2024

Objective

The objective of this audit was to determine whether the Air Force had effective controls and procedures to identify and remove from the DoD supply chain defective spare parts provided by contractors and to obtain restitution from the contractors that provided the defective parts.

We used nonstatistical methods and reviewed 22 stock numbers with 265 defective parts associated with 15 weapon systems and end items. This included 19 stock numbers with 262 defective parts that required restitution. In addition, we used nonstatistical methods and reviewed 40 stock numbers with 45 defective parts associated with a C-130J Super Hercules aircraft contract.

Findings

Air Force deficiency reporting personnel identified and removed defective parts from the DoD supply chain and generally obtained restitution. Specifically, Air Force deficiency personnel obtained restitution for 185 defective parts valued at $19.4 million. However, it took an average of 81 days to provide evidence of the contractor restitution. Air Force deficiency reporting personnel were unable to provide evidence of contractor restitution for 77 defective parts, valued at approximately $500,000, associated with 6 weapon systems and end items. These conditions occurred because the Air Force lacked adequate guidance and controls over the contractor restitution portion of its deficiency reporting process.

Findings (cont'd)

As a result, Air Force deficiency personnel did not always obtain restitution and hold contractors accountable for providing defective parts. These shortcomings can negatively impact Air Force supply operations if the Air Force must purchase replacement parts or repair defective parts to maintain readiness.

Additionally, the Air Force did not seek restitution for 45 defective C-130J Super Hercules aircraft parts valued at $5.9 million. This occurred because Air Force deficiency reporting personnel did not enforce contract warranty terms for defective C-130J aircraft parts. Specifically, Air Force deficiency reporting personnel lacked oversight and did not:

- establish a process to track the disposition of defective parts,
- establish and communicate a warranty plan, or
- fully understand or receive training on how to comply with the contract warranty requirements.

As a result, the Air Force was unable to recover $3 million for defective parts and paid approximately $200,000 to repair defective parts under warranty.

Recommendations

We recommend that the Commander, Air Force Materiel Command:

- conduct a review of six stock numbers reviewed in this audit for which Air Force personnel could not provide evidence of full restitution and take appropriate action;
- update Air Force deficiency reporting guidance to provide details on the process for obtaining restitution from contractors and maintaining a supporting audit trail;
- develop and implement controls and oversight to ensure tracking of contractor restitution;

Recommendations (cont'd)

- require C-130J aircraft deficiency reporting personnel to establish a process to track defective C-130J aircraft parts, establish and communicate warranty guidance, and obtain associated training; and
- conduct a review of all major Air Force weapon system programs and ensure compliance with Air Force warranty guidance.

Management Comments and Our Response

The Air Force Materiel Command Executive Director, responding for the Commander, Air Force Materiel Command, agreed or partially agreed with the recommendations and described their planned actions. The comments addressed our recommendations; therefore, the recommendations are resolved and will remain open. We will close the recommendations once we verify that the information provided and actions taken by management fully address the recommendations. Please see the Recommendations Table on the next page for the status of recommendations.

Recommendations Table

Management	Recommendations Unresolved	Recommendations Resolved	Recommendations Closed
Commander, Air Force Materiel Command	None	A.1.a, A.1.b, A.1.c, B.1.a, B.1.b, B.1.c, B.1.d	None

Note: The following categories are used to describe agency management's comments to individual recommendations.

- **Unresolved** – Management has not agreed to implement the recommendation or has not proposed actions that will address the recommendation.
- **Resolved** – Management agreed to implement the recommendation or has proposed actions that will address the underlying finding that generated the recommendation.
- **Closed** – The DoD OIG verified that the agreed upon corrective actions were implemented.


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OFFICE OF INSPECTOR GENERAL
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August 27, 2024

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
AND SUSTAINMENT
AUDITOR GENERAL, DEPARTMENT OF THE AIR FORCE

SUBJECT: Audit of Air Force Defective Parts and Contractor Restitution
(Report No. DODIG-2024-123)

This final report provides the results of the DoD Office of Inspector General's audit. We previously provided copies of the draft report and requested written comments on the recommendations. We considered management's comments on the draft report when preparing the final report. These comments are included in the report.

The Air Force Materiel Command Executive Director agreed to address all the recommendations presented in the report; therefore, we consider the recommendations resolved and open. We will close the recommendations when you provide us documentation showing that all agreed-upon actions to implement the recommendations are completed. Therefore, please provide us within 90 days your response concerning specific actions in process or completed on the recommendations. Send your response to either followup@dodig.mil if unclassified or rfunet@dodig.smil.mil if classified SECRET.

If you have any questions, please contact me at [redacted].

FOR THE INSPECTOR GENERAL:

Carmen J. Malone
Assistant Inspector General for Audit
Acquisition, Contract, and Sustainment


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Contents

Contents (cont'd)

Introduction

Objective

The objective of this audit was to determine whether the Air Force had effective controls and procedures to identify and remove from the DoD supply chain defective spare parts (parts) provided by contractors and to obtain restitution from the contractors that provided the defective parts. See Appendix A for our scope and methodology.

Background

Air Force maintenance organizations perform maintenance on Air Force weapon systems, such as combat or cargo aircraft. To perform the necessary work, Air Force maintenance organizations order parts from the DoD supply chain. For Air Force-managed items, Air Force contracting personnel purchase the parts from contractors. In cases where contractors provide defective parts, Air Force personnel generally use the DoD's process for reporting and resolving product quality deficiencies.

DoD Product Quality Deficiency Reporting Guidance

The DoD Joint Service Regulation implements DoD policy for reporting of inter-Service product quality deficiency data.[1] According to its purpose statement, the DoD Joint Service Regulation "[e]stablishes policy, assigns responsibility and implements procedures for a standard DoD Product Quality Deficiency Reporting method to identify, report, and resolve conditions affecting the warfighter." The DoD Joint Service Regulation specifies that Product Quality Deficiency Reports (PQDRs) provide feedback on the quality of parts issued through the DoD supply chain. DoD customers submit PQDRs when new or newly reworked government-owned parts are determined not to fulfill their expected purpose, operation, or service. The DoD Joint Service Regulation also specifies that DoD Components will investigate PQDRs to determine the cause of the deficiency.

The DoD Joint Service Regulation specifies that corrective actions for PQDRs include those actions taken to correct the defective parts reported and all other defective parts supplied. The corrective actions include alert notifications, segregation, screening, and disposition of the defective product, as well as all actions that can impact restitution for the defective parts. For contractor-caused defects, the contracting officer should seek cost-free repair, replacement, or reimbursement for the defective parts.

[1] DoD Joint Service Regulation: DLA Regulation 4155.24/Army Regulation 702-7/Secretary of the Navy Instruction 4855.21/Air Force Instruction 21-115/Defense Contract Management Agency DCMA-INST-1102, "Product Quality Deficiency Report Program (Inter-Service Product Quality Deficiency Report)," August 1, 2022, Incorporating Change 4.

DoD Policy to Obtain Contractor Restitution

DoD acquisition policy states that if nonconforming parts are discovered after acceptance, the defect appears to be the fault of the contractor, any warranty has expired, and there are no other contractual remedies, the contracting officer:

- must notify the contractor in writing of the nonconforming parts;
- must request that the contractor repair or replace the parts; and
- may accept consideration (payment) if offered.[2]

Air Force Product Quality Deficiency Guidance and Reporting

Air Force Materiel Command (AFMC) Headquarters is the Air Force deficiency reporting program process owner and is responsible for the issuance of Air Force deficiency reporting policy. Air Force organizations use PQDRs to report product defects that result from deficiencies in design, workmanship, specifications, material, or other nonconforming conditions. Air Force organizations document Air Force PQDR processing and resolution results in the Joint Deficiency Reporting System (JDRS). AFMC Headquarters issued deficiency reporting guidance to support the DoD Joint Service Regulation and is responsible for coordinating the guidance between Air Staff, using commands, and AFMC Centers.[3]

The Air Force deficiency reporting process primarily focuses on the following roles.

- **Originator**—an Air Force user (customer), such as an Air Force maintenance group, that discovers the defective part and initiates the PQDR. In some cases, the originator provides the defective part (an exhibit) for Government or contractor investigation.
- **Screening Point**—a designated Air Force activity, such as an Air Force Lifecycle Management Center organization, that reviews the PQDR submitted by the originator for validity, accuracy, and completeness of required information and identifies and transmits the PQDR to the proper Air Force Action Point.
- **Action Point**—a designated Air Force activity, such as an Air Force Weapon System Program Office, that is responsible for managing the PQDR investigation.[4]
    - As part of the PQDR investigation, Action Point personnel are responsible for determining whether the contractor provided additional defective parts on the same contract. This involves screening Air Force inventories and alerting other DoD customers

[2] Defense Federal Acquisition Regulation Supplement Part 246, "Quality Assurance," Subpart 246.4, "Government Contract Quality Assurance," Section 246.407, "Nonconforming Supplies or Services."

[3] Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022.

[4] This audit focused on PQDRs that had an Air Force Screening Point and Action Point identified in JDRS.

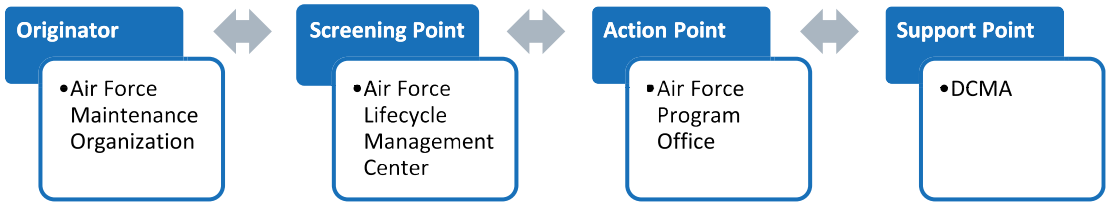
who may have received the defective parts to ensure that the defective parts are removed from the DoD supply chain. Air Force personnel should perform stock screenings when they determine that the defective parts identified on the PQDR are not an isolated incident and there is potential that a contractor may have provided additional defective parts.

  - Action Points also have warranty manager responsibilities, which require them to confirm the existence of any warranty on an item and ensure that they consider any contractual warranty provisions.

- **Support Point**—a designated DoD organization, such as the Defense Contract Management Agency (DCMA), that assists the Action Point in the PQDR investigation upon request.[5]

Figure 1 identifies examples of the DoD organizations that fulfilled the roles above for the PQDRs reviewed during this audit.

Figure 1. Examples of DoD Organizations Involved in Processing Air Force PQDRs



Source: The DoD OIG.

Air Force Defective Parts Reviewed

We used nonstatistical methods and reviewed 22 stock numbers with 265 defective parts associated with 15 weapon systems and end items.[6] This included 19 stock numbers with 262 defective parts that required restitution. In addition, we used nonstatistical methods and reviewed 40 stock numbers with 45 defective parts specifically associated with a C-130J Super Hercules aircraft contract. We reviewed the 40 stock numbers because of concerns we identified with Air Force deficiency reporting personnel not enforcing warranty terms for defective C-130J aircraft parts associated with one of our initial sampled stock numbers. Therefore, we selected 39 additional stock numbers associated with the same contract.[7]

[5] The DCMA provides contract administration services for the DoD, other Federal organizations, and international partners and is involved in the acquisition process from pre-award to sustainment.

[6] A stock number (technically referred to as a National Item Identification Number) is a 9-digit numeric code that DoD organizations use to manage inventory items. We summarized our results by stock number. However, there can be one or more defective parts reported for each stock number. See Appendix C for a list of the 15 weapon systems and end items and the number of associated defective parts.

[7] See Appendix A for details on our sampling methodology.

Finding A

The Air Force Identified and Removed Defective Parts and Generally Obtained Restitution but Did Not Maintain Audit Trails

Air Force deficiency reporting personnel identified and removed defective parts from the DoD supply chain and generally obtained restitution. Specifically, Air Force deficiency personnel obtained restitution for 185 defective parts valued at $19.4 million. However, it took an average of 81 days to provide evidence of the contractor restitution. Air Force deficiency reporting personnel were unable to provide evidence of contractor restitution for 77 defective parts valued at approximately $500,000, resulting in questioned costs. These conditions occurred because the Air Force lacked adequate guidance and controls over the contractor restitution portion of its deficiency reporting process.

As a result, the Air Force missed opportunities to hold contractors accountable and obtain restitution for defective parts. These shortcomings can negatively impact Air Force supply operations if the Air Force must purchase replacement parts or repair defective parts to maintain readiness.[8]

Air Force Deficiency Reporting Personnel Identified and Removed Defective Parts from the DoD Supply Chain

Air Force deficiency reporting personnel removed defective parts from the DoD supply chain. Specifically, for 21 of 22 sampled stock numbers, Air Force deficiency reporting personnel either performed stock screenings and identified additional defective parts or had a valid reason for not performing stock screenings. For one stock number, sufficient information was not available to determine whether Air Force deficiency reporting personnel should have performed a stock screening.

Air Force deficiency reporting guidance specifies that when the investigation indicates that the defect is not isolated and may exist in a significant number of parts, the Action Point will recommend that the Inventory Management Specialist place the assets in suspended condition pending final investigation and analysis. The guidance further specifies that the Action Point or Inventory Management Specialist will notify all command supply functions of the defect and direct a stock screening for suspect parts as appropriate.

[8] See Finding B for examples in which the Air Force did not hold a contractor accountable and paid to repair defective parts under warranty.

Air Force deficiency reporting personnel generally followed Air Force deficiency reporting guidance. For example, Air Force customers identified a defect in the transparency canopy (transparency), which is the glass covering the pilot's head on the F-16C Fighting Falcon aircraft.[9] Figure 2 shows the F-16C Fighting Falcon aircraft.

Figure 2. F-16C Fighting Falcon Aircraft
Source: The U.S. Air Force.

Specifically, a haze condition affected the vision clarity of the transparency and obscured the pilot's view. The PQDR investigation results showed that the contractor was responsible for the defective parts and determined that fluctuating humidity conditions at the contractor's coating room at the time the contractor applied the exterior surface coating caused the haze condition. As a result, the Air Force Program Office issued a worldwide stock screening notification at all base supply points to keep personnel from installing defective transparencies on aircraft. The stock screening notification instructed the bases to place the transparencies in a suspended condition, submit a PQDR referencing the hazing issue, and ship the transparencies back to the contractor for rework. The stock screening resulted in the removal of 113 defective transparencies, categorized as aviation critical safety items, from the DoD supply chain.[10]

[9] The F-16 Fighting Falcon aircraft is a compact, single-engine, multirole fighter aircraft with high maneuverability and performance.

[10] An aviation critical safety item is any part, assembly, or equipment for an aircraft or aviation weapon system that, if it fails, malfunctions, or is absent, could cause catastrophic or critical failure, resulting in serious damage to the aircraft or weapon system, personal injury, loss of life, or unintentional engine shutdown that jeopardizes safety.

Because Air Force deficiency reporting personnel followed Air Force deficiency reporting guidance and removed defective parts from the DoD supply chain, we did not make any associated recommendations in this report.

Air Force Deficiency Reporting Personnel Did Not Maintain a Supporting Audit Trail to Document the Receipt of Contractor Restitution

Air Force deficiency reporting personnel ultimately provided sufficient evidence that contractors provided restitution for 185 defective parts, valued at $19.4 million. However, Air Force personnel took an average of 81 days to provide the evidence, primarily because they had to reach out within the Air Force or to other DoD agencies and contractors to obtain it.[11]

For our sampled stock numbers, we sent detailed data requests to Air Force deficiency reporting personnel and requested evidence that contractors provided restitution (repaired parts, replacement parts, or monetary reimbursement) for defective parts.[12] Restitution evidence generally consisted of Government acceptance or receiving reports or similar documentation showing that the contractor provided repaired or replacement parts. This information was generally not readily available to Air Force deficiency reporting personnel, and they often had to obtain the evidence from other Air Force organizations, the Defense Logistics Agency (DLA), the DCMA, and contractors.[13] Air Force deficiency reporting personnel initially provided insufficient evidence, such as email correspondence, JDRS data, or other system screenshots, so we had to make multiple requests until Air Force deficiency reporting personnel provided sufficient evidence of contractor restitution or they ultimately were unable to provide sufficient evidence.

For example, Air Force customers identified a defect in a primary flap, which is a component of the exhaust nozzle on the B-1B Lancer aircraft turbofan engine.[14] The PQDRs indicated that the defect would not allow the customer to install the primary flap. Figure 3 shows the B-1B Lancer aircraft.

[11] The average number of days includes the time involved in the audit team making multiple requests and in reviewing responses from Air Force personnel that included insufficient evidence of contractor restitution, which resulted in the need for additional data requests and time to review the responses.

[12] For all sampled stock numbers requiring restitution, it was in the form of either repaired or replacement parts.

[13] The DLA is a combat logistics support agency that manages the end-to-end global defense supply chain for the Military Services. At some bases, the DLA operates Distribution Depots that receive and store parts for the Air Force.

[14] The B-1B Lancer aircraft is a long-range, multi-role heavy bomber.

Figure 3. B-1B Lancer Aircraft
Source: The U.S. Air Force.

The PQDR investigation results showed that the contractor was responsible for the defective parts and as corrective action the contractor would repair or replace the defective parts at no cost to the Government. We sent our initial data request to Air Force deficiency reporting personnel on May 11, 2023, requesting evidence of contractor restitution. Air Force deficiency reporting personnel provided an initial response on May 24, 2023. The response stated that the contractor repaired the parts at no cost to the Government but did not include any supporting evidence. In response to our follow-up questions, Air Force deficiency reporting personnel provided email correspondence between the Air Force and the contractor regarding prior shipment of the replacement parts. We requested additional evidence to show receipt of the replacement parts. After multiple follow-up requests, Air Force deficiency reporting personnel informed us that they had reached out to DLA and Air Force supply personnel but were unable to obtain the requested documentation. Air Force deficiency reporting personnel then reached out to DCMA personnel and the contractor. On September 27, 2023, 139 days after our initial data request, Air Force deficiency reporting personnel ultimately provided a receiving report to show that the contractor provided full restitution, valued at $1 million, for 47 defective primary flaps.

Air Force Deficiency Reporting Personnel Did Not Always Provide Evidence of Contractor Restitution for Defective Parts

Air Force deficiency reporting personnel did not provide evidence of contractor restitution for 77 defective parts valued at approximately $500,000. For example, Air Force customers identified a defect in a fuel tube, which is a component of the F-16C Fighting Falcon aircraft F-100 engine. Figure 4 shows the F-100 engine.

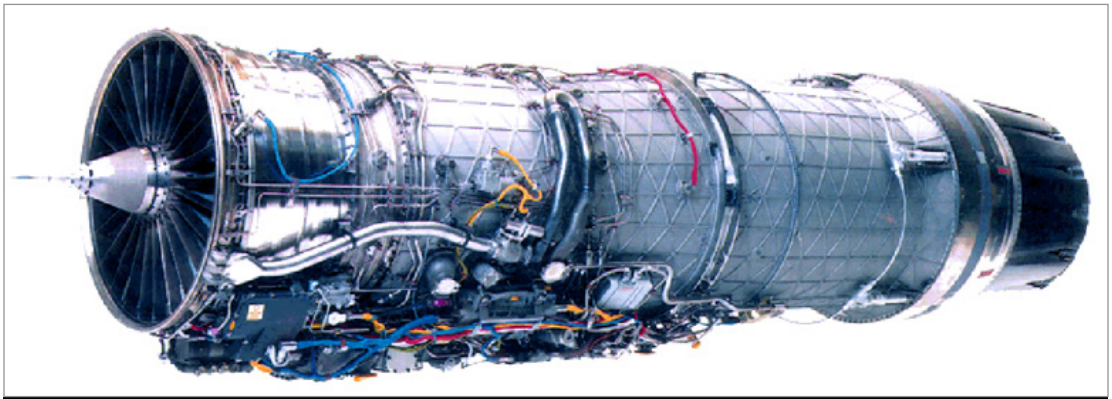


Figure 4. F-100 Engine
Source: The U.S. Air Force.

Specifically, the PQDR indicated that the defect could lead to fuel leakage and cause other engine parts to fail. The PQDR investigation results showed that the contractor was responsible for the defective parts and as corrective action the contractor would repair or replace the defective fuel tubes at no cost to the Government. The Air Force Program Office issued a time compliance technical order that required the inspection of all fuel tubes and replacement of any that failed inspection.[15] The time compliance technical order instructed Air Force customers to create a PQDR for all fuel tubes that failed inspection and to ship the fuel tubes to the contractor for replacement. The results of the time compliance technical order showed that 30 fuel tubes failed inspection. However, in response to our inquiries, Air Force deficiency reporting personnel were unable to provide sufficient evidence that the Air Force received restitution for the 30 defective fuel tubes, valued at approximately $57,000. Table 1 shows details on the six stock numbers with unsupported contractor restitution.

[15] Time compliance technical orders are intended to expedite the accomplishment of retrofit changes to end articles, items, or parts within specific periods and reduce the probability of accidents or unreliability of systems or equipment due to noncompliance.

Table 1. Weapon System or End Item, Item Description, Stock Number, Number of Defective Parts, and Dollar Value of Six Stock Numbers with Unsupported Contractor Restitution

Weapon System or End Item	Item Description and Stock Number	No. of Defective Parts Lacking Restitution	Dollar Value of Unsupported Contractor Restitution
F-16C Fighting Falcon	Transparency, Canopy 1560014622040	14	$237,930
B809E A/M 32A-112 Generator	B809E A/M 32A-112 Generator 6115015953479	2	100,880
F-22 Raptor	1st Stage Stator 2840014872999	25	61,750
F-16C Fighting Falcon	No. 2 Augmentor Fuel Tube 4710013080945	30	56,885
B-1B Lancer	Armature-Rotor, Generator 6115011787723	1	13,515
FZU-63/B Bomb Fuze Initiator	FZU-63/B Bomb Fuze Initiator 1325015722166	5	3,498
Total		**77**	**$474,458**

Source: The DoD OIG.

Because of the lack of contractor restitution evidence, the AFMC Commander should conduct a review of the six stock numbers identified in this audit for which Air Force personnel could not provide evidence of full restitution. If the review determines that the contractor did not provide restitution and the Air Force can still pursue restitution under contract terms, the AFMC Commander should require the applicable Air Force contracting officer to pursue the $500,000 in restitution from the contractor that provided defective parts.

The Air Force Lacked Adequate Guidance and Controls Over the Contractor Restitution Portion of its Deficiency Reporting Process

Air Force deficiency reporting guidance did not address the process of tracking and obtaining contractor restitution for defective parts. The guidance did not address the key roles and responsibilities for obtaining contractor restitution and did not include involving the responsible contracting officer in the process as specified in the Defense Federal Acquisition Regulation Supplement and the DoD Joint Service Regulation. AFMC deficiency reporting officials acknowledged that the Air Force deficiency reporting guidance did not adequately address the contractor restitution portion of the deficiency reporting process. One official explained that guidance focuses on the

investigation portion of the deficiency reporting process, identifying the cause of defective parts, and mitigating risks. The insufficient guidance contributed to the Air Force being unable to support approximately $500,000 in contractor restitution for defective parts and requiring an average of 81 days to provide supporting evidence to the audit team for the contractor restitution it obtained.

Because Air Force deficiency reporting guidance did not address contractor restitution, the AFMC Commander should update Air Force deficiency reporting guidance to provide details on the process for tracking and obtaining restitution from contractors that provide defective parts. The guidance should identify key roles and responsibilities and require the involvement of the responsible contracting officer in the process. The guidance should also require personnel to preserve an audit trail to support the receipt of restitution and specify the type of documentation needed. Upon completion of the updates, the AFMC Commander should establish a program to provide recurring training to Air Force deficiency reporting personnel and monitor compliance with the requirement.

Before this audit, we conducted DoD-wide research on the process for reporting product quality deficiencies and found that some DoD organizations developed a process for tracking contractor restitution for defective parts. For example, deficiency reporting officials at the Army Aviation and Missile Command informed us that once Army personnel complete the PQDR investigation, they suspend the PQDR and do not close it until the Army obtains restitution from the contractor for the defective parts.[16] In contrast, the Air Force closes its PQDRs upon completion of the PQDR investigation. An Air Force deficiency reporting official also suggested that keeping the PQDR open until receipt of full contractor restitution would help improve the process.

Because Air Force deficiency reporting personnel did not have a methodology to track outstanding contractor restitution, the AFMC Commander should develop and implement controls and oversight mechanisms to ensure tracking of contractor restitution from the completion of the PQDR investigation through the receipt of restitution.

[16] We did not audit the adequacy of these processes during our research, but the processes at least appeared to provide a method to track the status of restitution until receipt.

Conclusion

Air Force deficiency reporting personnel followed Air Force deficiency reporting guidance and removed defective parts from the DoD supply chain and generally obtained contractor restitution. However, the Air Force did not recover approximately $500,000 in restitution for defective parts, resulting in questioned costs, and could not readily support restitution received for defective parts, valued at $19.4 million. As a result, the Air Force missed opportunities to hold contractors accountable and obtain restitution for defective parts. These shortcomings can negatively impact Air Force supply operations if the Air Force must purchase replacement parts or repair defective parts to maintain readiness.

Recommendations, Management Comments, and Our Response

Recommendation A.1

We recommend that the Commander, Air Force Materiel Command:

a. Conduct a review of six stock numbers reviewed by this audit for which Air Force personnel could not provide evidence of full restitution. If the review determines that the contractor did not provide restitution and the Air Force can still pursue restitution under the contract terms, require the applicable Air Force contracting officer to pursue restitution for the $500,000 from the contractor that provided defective parts. Also, comment on the $500,000 in questioned costs related to defective parts for which the Air Force was unable to provide evidence of contractor restitution. If the Commander disagrees with the questioned costs, identify the amount and the reason.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, agreed with the recommendation, stating that the appropriate program offices will be directed to review the six stock numbers and applicable deficiency reports in which contractor restitution did not previously occur. If restitution can be obtained, the Department of the Air Force will ensure the contracting officers pursue restitution. The Executive Director stated that should the AFMC disagree with the questionable costs, it will identify the amount and the reason. The estimated completion date is February 1, 2025.

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation:

- once we verify that the appropriate program offices
  - reviewed the six stock numbers and applicable deficiency reports in which contractor restitution did not previously occur and
  - obtained restitution, if applicable, and
- when the AFMC comments on the $500,000 in questionable costs.

b. Update Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022, to provide details on the process for obtaining restitution from contractors that provide defective parts. The guidance should identify key roles and responsibilities and require the involvement of the responsible contracting officer in the process. The guidance should also require personnel to preserve an audit trail to support the receipt of restitution and specify the type of documentation needed. Upon completion of the updates, establish a program to provide recurring training to Air Force deficiency reporting personnel and monitor compliance with the requirement.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, partially agreed with the recommendation, stating that while they acknowledge the need for policy updates and changes, the scope of the recommendation is beyond deficiency reporting guidance in Air Force Technical Order 00-35D-54. The AFMC, in coordination with the Assistant Secretary of the Air Force (Acquisition, Technology and Logistics) (SAF/AQ) will conduct a thorough review that includes other functional areas and publications that have equity in contractor restitution processes. Upon completion of that review, the AFMC will update policies accordingly to ensure functional roles are clearly identified and that restitution processes include artifacts that substantiate an audit trail. The Executive Director stated that these policy updates, combined with implementation of management oversight in Recommendation A.1.c, will be disseminated broadly throughout the deficiency reporting community and its support functionals, negating a need for recurring training. The estimated completion date is February 1, 2025, for functional area policy review, and August 1, 2025, for publication of individual policy updates.

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we verify that the AFMC updated policies to ensure functional roles are clearly identified and that restitution processes include artifacts that substantiate an audit trail and that the AFMC disseminated the updates broadly throughout the deficiency reporting community and its support functionals.

c. Develop and implement controls and oversight to ensure tracking of contractor restitution from the completion of the investigation of the report on deficiencies in product quality through the receipt of restitution.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, agreed with the recommendation, stating that upon implementation of the policy updates generated from Recommendation A.1.b, the AFMC and SAF/AQ will incorporate contractor restitution oversight into Management Internal Control Toolset Self-Assessment Checklists for the Inspection System of the Department of the Air Force; this will ensure compliance to overarching contractor restitution policies. The estimated completion date is October 1, 2025.[17]

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we verify that the AFMC and SAF/AQ incorporated contractor restitution oversight into Management Internal Control Toolset Self-Assessment Checklists for the Inspection System of the Department of the Air Force to ensure compliance with overarching contractor restitution policies.

[17] Department of the Air Force Instruction 90-302, "The Inspection System of the Department of the Air Force," March 15, 2023. Management Internal Control Toolset is a Department of the Air Force tool that supplements a Unit Commander's and Director's Self-Assessment Program. A Management Internal Control Toolset Self-Assessment Checklist is a checklist that contains a list of compliance requirements for a specified publication or policy. Unit Commanders and Directors use the Management Internal Control Toolset to document organizational compliance.

Finding B

The Air Force Did Not Seek Restitution for Defective C-130J Super Hercules Aircraft Parts

The Air Force did not seek restitution for 45 defective C-130J aircraft parts valued at $5.9 million. This occurred because Air Force deficiency reporting personnel did not enforce contract warranty terms for defective C-130J aircraft parts. Specifically, Air Force deficiency reporting personnel lacked oversight over defective C-130J aircraft parts under warranty and did not:

- establish a process to track the disposition of defective parts to ensure that the contractor repaired or replaced the parts at no cost to the Government under contractual warranty terms;
- follow Air Force deficiency reporting guidance to establish a warranty plan and communicate warranty guidance to ensure that all customers shipped defective parts to the responsible contractor; or
- receive training on or fully understand how to comply with the contract warranty requirements.

As a result, the Air Force was unable to recover $3 million for defective parts, and paid approximately $200,000 to repair defective parts under warranty, resulting in questioned costs.

Air Force Warranty Guidance and Requirements

Air Force deficiency reporting guidance addresses how Air Force deficiency reporting personnel should process defective parts under warranty.[18] In addition the Air Force included warranty requirements for Air Force and contractor personnel in the C-130J aircraft contract.

Air Force Warranty Guidance for Defective Parts

Air Force deficiency reporting guidance specifies that PQDRs include the reporting of failures that occur on warranted parts within the contract warranty period. Action Points should confirm with applicable program management or designated warranty manager personnel whether identified defective parts are within a contract warranty period. Because warranty procedures are unique to individual programs and systems, Air Force deficiency reporting guidance specifies that the warranty manager, in conjunction with the program manager, will establish

[18] Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022.

a warranty plan and communicate it to the appropriate user communities. The Air Force deficiency reporting guidance generally requires personnel to process deficiencies on warrantied parts according to the individual item warranty plan. Generally, after identifying deficiencies in warrantied parts, personnel should send the defective parts (exhibits) back to the manufacturer. Because the warranty manager is to establish predetermined disposition instructions for routine warranty failures as part of the warranty plan, personnel should be able to ship the warrantied materiel without unnecessarily holding the asset pending Action Point shipping instructions.

C-130J Aircraft Contract Warranty Terms

As part of the current C-130J aircraft contract, Government personnel accept delivery of completed C-130J aircraft. After identifying a defective accessory, equipment, or part, Government personnel must notify the contractor in writing. The notification should include a description of the defect and must be completed within 30 days of the defect's discovery. In general, the warranty for the C-130J aircraft parts was 12 months after aircraft acceptance or before the aircraft had 1,000 hours of flight time. The contractor is responsible for the repair, rework, or replacement of the defective item so it will be free of defects. The warranties apply to:

- items manufactured by the contractor,
- items purchased by the contractor and manufactured to the contractor's detail design and specifications, and
- items purchased by the contractor but not manufactured to the contractor's detail design and specifications, where the subcontractor is the sole source of supply for the items.

As part of the warranty terms, Government personnel must also deliver the defective item to the contractor's facility or a place agreeable to the Government and the contractor.

The Air Force Did Not Seek Restitution for Defective C-130J Super Hercules Parts

The Air Force did not seek restitution for 45 defective C-130J aircraft parts valued at $5.9 million. Between September 2023 and January 2024, Air Force deficiency reporting personnel provided limited evidence showing the disposition of the 45 defective parts for the 40 stock numbers. For example, Air Force customers identified a defect in a receiver transmitter processor, which is a component of the color weather radar system used on the C-130J aircraft. The PQDR investigation

results showed that the contractor was responsible for the defective parts and as corrective action the contractor would repair or replace the defective parts under warranty at no cost to the Government. We met with Air Force deficiency reporting personnel in August 2023 to discuss whether the Air Force obtained restitution for the defective parts. Air Force deficiency reporting personnel informed us that the defective parts were associated with newly delivered C-130J aircraft and that all parts on the aircraft are under warranty for 1 year after the Government accepts the aircraft. Air Force deficiency reporting personnel stated that two defective parts, valued at $1.4 million, were not shipped back to the contractor. Instead, the Air Force paid approximately $60,000 to repair the defective parts. Air Force deficiency reporting personnel explained that they did not fully understand the warranty process and did not instruct the PQDR originators to ship the defective parts back to the contractor. Figure 5 shows the C-130J Super Hercules aircraft.

Figure 5. C-130J Super Hercules Aircraft
Source: The U.S. Air Force.

Table 2 provides the status of the defective parts as of January 2024.

Table 2. Disposition of 45 Defective C-130J Parts Under Warranty

Disposition Category	No. of Stock Numbers	No. of Defective Parts	Dollar Value of Defective Parts	Cost to Repair
Air Force Paid to Repair Defective Parts	3	6	$2,874,221	$187,449
Disposition of Defective Parts Unknown	22	24	2,486,957	0
Defective Parts Shipped to Contractor*	9	9	462,236	0
Defective Parts Likely Disposed Of	6	6	74,018	0
Total	**40**	**45**	**$5,897,432**	**$187,449**

* Air Force deficiency reporting personnel did not provide evidence to show that the contractor repaired, replaced, or returned these defective parts under warranty.

Source: The DoD OIG.

Air Force Deficiency Reporting Personnel Did Not Enforce Contract Warranty Terms and Lacked Oversight Over Defective Parts

Air Force deficiency reporting personnel did not enforce contract warranty terms for defective C-130J aircraft parts and lacked oversight over defective C-130J aircraft parts under warranty. Specifically, Air Force deficiency reporting personnel did not establish a process to track the disposition of defective C-130J parts reported on PQDRs. In addition, Air Force deficiency reporting personnel did not establish and communicate a warranty plan and did not receive training on or fully understand how to comply with the contract warranty requirements.

We met with Air Force deficiency reporting personnel in October 2023 to obtain the status of our request for evidence of contractor restitution for all 45 defective parts. Air Force deficiency reporting personnel stated that they were still working to determine the disposition of the defective parts. Air Force deficiency reporting personnel explained that they had difficulties determining the disposition of the specific defective parts in question because the Air Force supply system does not track most parts by serial number. Between October 2023 and January 2024, Air Force deficiency reporting personnel had to reach out to multiple Air Force organizations and contractors to try to determine the disposition of the defective parts. Air Force deficiency reporting personnel needed to take these actions because they did not establish a process to track the disposition of defective C-130J parts.

Air Force deficiency reporting personnel informed us that they met with contractor personnel in November 2023 to gain a better understanding of the C-130J warranty process. Air Force deficiency reporting personnel then developed a checklist in January 2024 for reporting deficiencies with C-130J items under warranty and provided us a copy of the checklist.

Because of item tracking shortfalls, the Air Force was unable to recover $3 million for defective parts, and paid approximately $200,000 to repair defective parts under warranty, resulting in questioned costs. The AFMC Commander should require C-130J aircraft deficiency reporting personnel to establish a process to track defective C-130J aircraft parts to ensure that the parts are shipped to the contractor and repaired or replaced under warranty. Also, the AFMC Commander should comment on the $3.2 million in questioned costs. If the Commander disagrees with the questioned costs, the Commander should identify the amount and the reason.

We also asked deficiency reporting personnel to provide a copy of the warranty guidance or plan for the applicable C-130J contract. Air Force deficiency reporting personnel initially provided a copy of an internal deficiency reporting guidance document and then a copy of the warranty clause in the contract and subsequently informed us that they did not have any other type of warranty guidance or plan.[19]

Because of a lack of warranty guidance or plan, the AFMC Commander should require C-130J aircraft deficiency reporting personnel to develop warranty guidance and communicate the guidance among the appropriate using communities in accordance with Air Force deficiency reporting guidance.

We asked Air Force deficiency reporting personnel whether they had received any recent training on the Air Force deficiency reporting process. Air Force deficiency reporting personnel stated that they received training on JDRS usage and other limited briefings on deficiency reporting but had not received training specifically targeted to a warranty process.

Because Air Force deficiency reporting personnel lack a full understanding of the warranty process, the AFMC Commander should establish a program to provide recurring training to Air Force deficiency reporting personnel on the warranty requirements for defective parts outlined in Air Force deficiency deporting guidance.

[19] 657 AESS EN 06-008, "C-130J Deficiency Reporting Process," October 4, 2006.

Overall, Air Force deficiency reporting personnel did not track the disposition of defective C-130J parts reported on PQDRs. In addition, Air Force deficiency reporting personnel did not establish and communicate a warranty plan and did not fully understand or receive training on how to comply with the contract warranty requirements. Because these deficiencies existed with the C-130J program, we have concerns that similar deficiencies may exist with other major Air Force weapon system programs.

We recommend that the AFMC Commander conduct a review of other Air Force major weapon system programs receiving new deliveries with contract warranty terms similar to the C-130J aircraft contract to determine whether Air Force deficiency reporting personnel are following Air Force deficiency reporting guidance for defective parts under warranty. If the review identifies the same conditions identified by this audit, the Commander should require Air Force deficiency reporting personnel to establish and implement a corrective action plan.

The Air Force Was Unable to Obtain Restitution and Paid to Repair Defective Parts Under Warranty

Because Air Force deficiency reporting personnel did not enforce contract warranty terms, the Air Force was unable to recover $3 million for defective parts and the Air Force paid approximately $200,000 to repair defective parts under warranty.[20]

We asked Air Force personnel if they requested restitution for the defective parts. Based on our inquiries, Air Force deficiency reporting personnel met with contractor personnel and coordinated with the contracting officer for the C-130J aircraft contract regarding the problems we identified. The contracting officer did not pursue restitution because Air Force deficiency reporting personnel did not provide sufficient evidence for the contracting officer to determine that the Government followed the proper steps in the contract warranty clause. Specifically, Air Force deficiency reporting personnel did not provide the contracting officer enough information to determine whether the following occurred.

- Did the Government notify the contractor in writing of the defect or nonconformance within 30 days of discovering the issue, and before 12 months or 1,000 flying hours after acceptance?
- If the Government gave proper notice, did it state the particulars necessary to notify the contractor of the nature of the asserted defect or non-conformance?
- Did the Government ship the part, at its expense to the contractor's facility or another mutually agreed-upon place for repair?

[20] Because there was no evidence that the contractor repaired or replaced the defective parts, valued at $3 million, under warranty, the PQDR originators likely would have needed to order replacement items from supply.

Without this evidence, the contracting officer was unable to determine that the contractor did not fulfill its obligation and liability.

Therefore, the contracting officer did not have enough information to support the submittal of a valid restitution or consideration request under the contract warranty clause. Air Force deficiency reporting personnel did not provide sufficient evidence to show that they met the required contract warranty requirements necessary to obtain restitution for the defective C-130J aircraft parts.

Conclusion

Air Force deficiency reporting personnel confirmed deficiencies for 45 defective parts supporting the C-130J program that were under warranty and did not enforce contract warranty terms for the defective aircraft parts. As a result, the Air Force is unable to recover $3 million for defective parts and paid approximately $200,000 to repair defective parts, resulting in questioned costs.[21]

Recommendations, Management Comments, and Our Response

Recommendation B.1

We recommend that the Commander, Air Force Materiel Command:

a. Require C-130J aircraft deficiency reporting personnel to establish a process to track defective C-130J aircraft parts to ensure that the parts are shipped to the contractor and repaired or replaced under warranty. Also, comment on the $3 million in questioned costs related to defective parts the Air Force was unable to recover and $200,000 in questioned costs the Air Force incurred to repair defective parts under warranty. If the Commander disagrees with the questioned costs, identify the amount and the reason.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, agreed with the recommendation, stating that the AFMC will require the C-130J program to establish a process to track defective C-130J aircraft parts and ensure the contractor repairs or replaces them when covered by a warranty. Additionally, the AFMC will investigate the $3 million in questionable costs related to defective parts the Air Force was unable to recover and $200,000 in questioned costs the Air Force

[21] The Air Force did not seek restitution for 39 C-130J Super Hercules defective parts, valued at $3,023,211 (rounded to $3 million) as shown in the Table 2 (rows 2-4).

incurred to repair defective parts under warranty and will provide comment. Should the AFMC disagree with the questionable costs, it will identify the amount and the reason. The estimated completion date is February 1, 2025.

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we verify that the AFMC required the C-130J program to establish a process to track defective C-130J aircraft parts and ensure the contractor repairs or replaces them when covered by a warranty and when the AFMC comments on the $3.2 million in questionable costs.

b. Require C-130J aircraft deficiency reporting personnel to develop warranty guidance and communicate the guidance among the appropriate using communities in accordance with Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, agreed with the recommendation, stating that the AFMC will require the C-130J program to develop warranty guidance and communicate the guidance among the appropriate communities in accordance with Technical Order 00-35D-54. The estimated completion date is February 1, 2025.

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we verify that the AFMC required the C-130J program to develop warranty guidance and communicate the guidance among the appropriate communities in accordance with Technical Order 00-35D-54.

c. Provide recurring training to Air Force deficiency reporting personnel on the warranty requirements for defective parts outlined in Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, partially agreed with the recommendation, stating that rather than providing "recurring training," the AFMC will generate correspondence to enhance awareness and has already taken measures to increase management oversight to ensure compliance. The AFMC will publish a Deficiency Reporting, Investigation, and Resolution Items of Interest that will be dispersed to the 4,000 active users of the JDRS and release an Information Only Task Management Tool tasker to all program managers and chief engineers.[22] The Items of Interest and Task Management Tool tasker will summarize warranty requirements and reiterate that program offices are required to develop warranty procedures that are uniquely tailored to their individual contracts and programs. The February 15, 2024, revision to Technical Order 00-35D-54 incorporated additional guidance to increase awareness and compliance to program office warranty plans and procedures. These requirements were published to the Deficiency Reporting, Investigation, and Resolution Management Internal Control Toolset Self-Assessment Checklists on July 1, 2024. The estimated completion date is December 1, 2024, for the Items of Interest and Task Management Tool tasker release.

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. AFMC personnel provided us the February 15, 2024, revision to Technical Order 00-35D-54 and the July 1, 2024, published requirements to the Deficiency Reporting, Investigation, and Resolution Management Internal Control Toolset Self-Assessment Checklists. We will close the recommendation once we verify that the AFMC published a Deficiency Reporting, Investigation, and Resolution Items of Interest and disbursed it to active JDRS users. We will also verify that the AFMC released to all program managers and chief engineers an Information Only Deficiency Reporting, Investigation, and Resolution tasker that summarized warranty requirements and reiterated that program offices are required to develop warranty procedures that are uniquely tailored to their individual contracts and programs.

[22] A Deficiency Reporting, Investigation, and Resolution Items of Interest is a publication that that contains newsworthy information pertaining to Deficiency Reporting, Investigation, and Resolution.

d. Conduct a review of other major Air Force weapon system programs receiving new deliveries with contract warranty terms similar to the C-130J aircraft contract and ensure that the responsible deficiency reporting personnel are following Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022, for defective parts under warranty. If the review identifies the same conditions identified by this audit, require Air Force deficiency reporting personnel to establish and implement a corrective action plan.

Air Force Materiel Command Executive Director Comments

The AFMC Executive Director, responding for the AFMC Commander, partially agreed with the recommendation, stating that the AFMC, in coordination with the SAF/AQ will direct a warranty process review of all major Air Force weapon system programs receiving new deliveries with warranty clauses, not just those with warranty terms similar to the C-130J aircraft contract. A Task Management Tool tasker will be sent to applicable program managers directing a review and assessment of warranty procedures in accordance with Technical Order 00-35D-54. Program managers will be required to submit a corrective action plan if their warranty procedures do not adequately hold contractors accountable to contract warranty clauses. The estimated completion date is August 1, 2025.

Our Response

Comments from the AFMC Executive Director addressed the specifics of the recommendation; therefore, the recommendation is resolved but will remain open. We will close the recommendation once we verify that the AFMC, in coordination with the SAF/AQ, directed a warranty process review of all major Air Force weapon system programs receiving new deliveries with warranty clauses, not just those with warranty terms similar to the C-130J aircraft contract. We will also verify that the AFMC sent a Task Management Tool tasker to applicable program managers directing a review and assessment of warranty procedures in accordance with Technical Order 00-35D-54 and that program managers submitted a corrective action plan if their warranty procedures did not adequately hold contractors accountable to contract warranty clauses.

Appendix A

Scope and Methodology

We conducted this performance audit from April 2023 through June 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We reviewed the following criteria.

- Defense Federal Acquisition Regulation Supplement Part 246, "Quality Assurance," Section 246.4, "Government Contract Quality Assurance," Clause 246.407, "Nonconforming Supplies or Services"
- DoD Joint Service Regulation: DLA Regulation 4155.24/Army Regulation 702-7/Secretary of the Navy Instruction 4855.21/Air Force Instruction 21-115/Defense Contract Management Agency DCMA-INST-1102, "Product Quality Deficiency Report Program (Inter-Service Product Quality Deficiency Report)," August 1, 2022, Incorporating Change 4
- Air Force Technical Order 00-35D-54, "USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)," August 15, 2022

We interviewed and conducted data calls with officials from the following DoD organizations to determine whether the Air Force had effective controls and procedures to identify and remove from the DoD supply chain defective parts provided by contractors and to obtain restitution from the contractors that provided the defective parts.

- AFMC
- DLA
- DCMA
- Naval Air Systems Command (JDRS Program Office)

We obtained and analyzed a data file of JDRS-processed Air Force PQDRs closed between October 1, 2018, and June 30, 2022. We filtered the data file to include only PQDRs that identified an Air Force organization as both the Screening Point and the Action Point. In addition, we filtered the data file to include only PQDRs identified in JDRS as contractor noncompliance, and the corrective action identified that the contractor was responsible to provide restitution. This resulted in 674 PQDRs, valued at $127.4 million, associated with 323 unique stock numbers.

From the universe of 323 unique stock numbers, we used nonstatistical methods and sampled 23 stock numbers with one or more PQDRs. For the 23 stock numbers, we reviewed 267 defective parts valued at $31.2 million.[23] We summarized 22 of the sampled stock numbers in Finding A, which included 262 parts associated with 19 stock numbers that required restitution. The 22 sampled stock numbers also included 3 stock numbers with 3 defective parts that did not require restitution. For these items, Air Force deficiency personnel provided evidence that the Air Force did not require contractor restitution, so we did not include them in our restitution summary results.[24] However, we included them in our review of the 22 items to determine whether Air Force deficiency reporting personnel identified and removed defective parts from the DoD supply chain.

Our initial sample of 23 stock numbers also included one stock number used on the C-130J aircraft. For that stock number, we identified that Air Force deficiency reporting personnel did not return two defective parts to the contractor for repair or replacement according to the contract warranty terms.[25] We reviewed JDRS data and identified PQDRs with 43 defective parts, valued at $4.5 million, associated with 39 additional stock numbers that were part of the same C-130J contract. Therefore, we summarized all 40 stock numbers in Finding B. We interviewed and conducted data calls with Air Force deficiency reporting personnel to determine whether the Air Force obtained the appropriate restitution for defective parts associated with the 40 stock numbers. Because we used nonstatistical methods, our samples cannot be projected to a population or any subpopulation of Air Force PQDRs.

Internal Control Assessment and Compliance

We assessed internal controls and compliance with laws and regulations necessary to satisfy the audit objective. In particular, we assessed whether the Air Force had effective controls and procedures to identify and remove from the DoD supply chain defective parts provided by contractors and to obtain restitution from the contractors that provided the defective parts. However, because we limited our review to these internal control components and underlying principles, it may not have disclosed all internal control deficiencies that may have existed at the time of this audit.

[23] We found the dollar values in JDRS to be unreliable, so for our sampled stock numbers we used the item value from the contract the DoD used to purchase it. If the contract value was not available, we used the item value from the Air Force Item Management Control System (D043), which is an information technology system that is the central repository of Federal and Air Force logistics data for Air Force-used supply items.

[24] These items included stock numbers with contractor-managed inventory and a stock number for which the PQDR investigation incorrectly determined that the contractor was responsible for the defective part.

[25] The Air Force paid to repair the defective parts for this stock number.

Use of Computer-Processed Data

We used computer-processed data extracted from the U.S. Navy-hosted JDRS. From Air Force deficiency reporting personnel, we obtained a data file that contained a universe of JDRS-processed PQDRs closed between October 1, 2018, and June 30, 2022. We used the file to select a nonstatistical sample of stock numbers with defective parts for which the PQDR investigation found the contractor to be at fault and the contractor agreed to provide restitution. To test the reliability of the data, we interviewed Air Force deficiency reporting personnel and reviewed supporting data. We determined that, with the exception of the dollar values, the JDRS data were sufficiently reliable for sampling and reviewing selected PQDRs and determining whether Air Force personnel had effective controls and procedures to identify and remove from the DoD supply chain defective parts provided by contractors and to obtain restitution from the contractors that provided the defective parts.

Prior Coverage

No prior coverage has been conducted on Air Force defective parts and contractor restitution during the last 5 years.

Appendix B

Summary of Potential Monetary Benefits

Recommendations	Type of Benefit	Amount of Benefit
A.1.a	Questioned Costs – Recoverable.	$500,000 in unsupported contractor restitution for defective parts
B.1.a	Questioned Costs – Non-Recoverable.	$3 million in defective parts under warranty not repaired or replaced by a contractor and $200,000 in costs the Air Force incurred to repair defective parts under warranty

*Potential monetary benefits are funds put to better use or questioned costs.

Source: The DoD OIG.

The Inspector General Act of 1978, as amended, defines questioned costs as costs that auditors question because of alleged violation of a provision of law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds. Questioned costs might also be costs not supported by adequate documentation at the time of audit, or unnecessary or unreasonable fund expenditures for an intended purpose.

Appendix C

Weapon Systems and End Items Reviewed in Finding A and Number of Defective Parts

Weapon System or End Item	No. of Defective Parts
F-16C Fighting Falcon	149
B-1B Lancer	49
F-22 Raptor	25
C-17A Globemaster III	14
B-2A Spirit	8
FZU-63-B Bomb Fuze Initiator	6
B809E A/M 32A-112 Generator	3
MOD 7 / AODS Destruct System	2
B61-12 Bomb	2
C-130 Hercules	2
KC-135R Stratotanker	1
E-8C Joint Stars	1
E-3C Sentry	1
F-15E Strike Eagle	1
HH-60G Pave Hawk	1
Total	**265**

Source: The DoD OIG.

Management Comments

Air Force Materiel Command

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE MATERIEL COMMAND
WRIGHT-PATTERSON AIR FORCE BASE OHIO

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

FROM: AFMC/CA
4375 Chidlaw Road
Wright-Patterson AFB OH 45433-5001

SUBJECT: Department of the Air Force Response to DoD Office of Inspector General Draft Report, "Audit of Air Force Defective Parts and Contractor Restitution" (Project No. D2023-D000AX-0112)

1. This is the Department of the Air Force response to the DoDIG Draft Report, "Audit of Air Force Defective Parts and Contractor Restitution" (Project No. D2023-D000AX-0112). The DAF concurs with the intent of the report and welcomes the opportunity to improve our policies and procedures for obtaining restitution from contractors that provide defective parts.

2. HQ AFMC in coordination with SAF/AQ will correct issues identified in this report, and develop and implement a corrective action plan outlined in the following recommendations:

a. RECOMMENDATION A.1.a: The DODIG recommends that the Commander, Air Force Materiel Command conduct a review of six stock numbers reviewed by this audit for which Air Force personnel could not provide evidence of full restitution. If the review determines that the contractor did not provide restitution and the Air Force can still pursue restitution under the contract terms, require the applicable Air Force contracting officer to pursue restitution for the $0.5 million from the contractor that provided defective parts. Also, comment on the $0.5 million in questioned costs related to defective parts for which the Air Force was unable to provide evidence of contractor restitution. If the Commander disagrees with the questioned costs, identify the amount and the reason.

(1) DAF RESPONSE: Concur with recommendation. Appropriate Program offices will be directed to review and provide comment on the six stock numbers and applicable deficiency reports in which contractor restitution did not previously occur. If restitution can be obtained, the DAF will ensure the contracting officers pursue restitution. Should AFMC disagree with the $0.5 million in questioned costs, we will identify the amount and the reason. (ECD: 1 Feb 2025)

b. RECOMMENDATION A.1.b: The DODIG recommends that the Commander, Air Force Materiel Command update Air Force Technical Manual TO 00-35D-54, "*USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)*," August 15, 2022, to provide details on the process for obtaining restitution from contractors that provide defective parts. The guidance should identify key roles and responsibilities and require the involvement of the responsible contracting officer in the process. The guidance should also require personnel to preserve an audit trail to support the receipt of restitution and specify the type of documentation needed. Upon completion of the updates, establish a program to provide recurring training to Air Force deficiency reporting personnel and monitor compliance with the requirement.

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Air Force Materiel Command (cont'd)

(1) DAF RESPONSE: Partially concur with recommendation. While we acknowledge the need for policy updates and changes, the scope of the recommendation is beyond Deficiency Reporting guidance in Air Force Technical Order 00-35D-54. AFMC, in coordination with SAF/AQ will conduct a thorough review that includes other functional areas and publications that have equity in contractor restitution processes. Upon completion of that review, we will update policies accordingly to ensure functional roles are clearly identified and that restitution processes include artifacts that substantiate an audit trail. These policy updates, combined with implementation of management oversight in Recommendation A.1.c, will be disseminated broadly throughout the deficiency reporting community and its support functionals, negating a need for recurring training. (ECD:1 Feb 2025 for functional area policy review and 1 Aug 2025 for publication of individual policy updates)

c. RECOMMENDATION A.1.c: The DODIG recommends that the Commander, Air Force Materiel Command develop and implement controls and oversight to ensure tracking of contractor restitution from the completion of the investigation of the report on deficiencies in product quality through the receipt of restitution.

(1) DAF RESPONSE: Concur with recommendation. Upon implementation of the policy updates generated from Recommendation A.1.b, AFMC and SAF/AQ will incorporate contractor restitution oversight into Management Internal Control Toolset (MICT) Self-Assessment Checklists (SACs) for The Inspection System of the Department of the Air Force (DAFI 90-302, *The Inspection System of the Department of the Air Force*); this will ensure compliance to overarching contractor restitution policies. (ECD: 1 Oct 2025)

d. RECOMMENDATION B.1.a: The DODIG recommends that the Commander, Air Force Materiel Command require C-130J aircraft deficiency reporting personnel to establish a process to track defective C-130J aircraft parts to ensure that the parts are shipped to the contractor and repaired or replaced under warranty. Also, comment on the $3 million in questioned costs related to defective parts the Air Force was unable to recover and $0.2 million in questioned costs the Air Force incurred to repair defective parts under warranty. If the Commander disagrees with the questioned costs, identify the amount and the reason.

(1) DAF RESPONSE: Concur with recommendation. AFMC will require the C-130J Program to establish a process to track defective C-130J aircraft parts and ensure the contractor repairs or replaces them when covered by a warranty. Additionally, AFMC will investigate the $3 million in questionable costs related to defective parts the Air Force was unable to recover and $0.2 million in questioned costs the Air Force incurred to repair defective parts under warranty and will provide comment. Should AFMC disagree with the questionable costs, we will identify the amount and the reason. (ECD: 1 Feb 2025)

e. RECOMMENDATION B.1.b: The DODIG recommends that the Commander, Air Force Materiel Command require C-130J aircraft deficiency reporting personnel to develop warranty guidance and communicate the guidance among the appropriate using communities in accordance with Air Force Technical Manual TO 00-35D-54, "U*SAF Deficiency Reporting, Investigation, and Resolution (DRI&R)*," August 15, 2022.

(1) DAF RESPONSE: Concur with recommendation. AFMC will require the C-130J Program to develop warranty guidance and communicate the guidance among the appropriate communities in accordance with Technical Order 00-35D-54. (ECD: 1 Feb 2025)

f. RECOMMENDATION B.1.c: The DODIG recommends that the Commander, Air Force Materiel Command provide recurring training to Air Force deficiency reporting personnel on the warranty

Air Force Materiel Command (cont'd)

requirements for defective parts outlined in Air Force Technical Manual TO 00-35D-54, "*USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)*," August 15, 2022.

(1) DAF RESPONSE: Partially concur with recommendation. Rather than providing "recurring training", AFMC will generate correspondence to enhance awareness and have already taken measures to increase management oversight to ensure compliance. We will publish a DRI&R Items of Interest (IOI) that will be dispersed to the 4K active users of the Joint Deficiency Reporting System (JDRS) and release an Information Only TMT tasker to all Program Managers and Chief Engineers. The IOI and TMT tasker will summarize warranty requirements and reiterate that Program Offices are required to develop warranty procedures that are uniquely tailored to their individual contracts and programs. The 15 Feb 2024 revision to Technical Order 00-35D-54 incorporated additional guidance to increase awareness and compliance to Program Office warranty plans and procedures. These requirements were published to the DRI&R MICT SACs on 1 July 2024. (ECD: 1 Dec 2024 for the IOI and TMT tasker release)

g. RECOMMENDATION B.1.d: The DODIG recommends that the Commander, Air Force Materiel Command Conduct a review of other major Air Force weapon system programs receiving new deliveries with contract warranty terms similar to the C-130J aircraft contract and ensure that the responsible deficiency reporting personnel are following Air Force Technical Manual TO 00-35D-54, "*USAF Deficiency Reporting, Investigation, and Resolution (DRI&R)*," August 15, 2022, for defective parts under warranty. If the review identifies the same conditions identified by this audit, require Air Force deficiency reporting personnel to establish and implement a corrective action plan.

(1) DAF RESPONSE: Partially concur with recommendation. AFMC, in coordination with SAF/AQ will direct a warranty process review of all major Air Force weapon system programs receiving new deliveries with warranty clauses, not just those with warranty terms similar to the C-130J aircraft contract. A TMT tasker will be sent to applicable Program Managers directing a review and assessment of warranty procedures per Technical Order 00-35D-54. Program Managers will be required to submit a corrective action plan if their warranty procedures do not adequately hold contractors accountable to contract warranty clauses. (ECD: 1 Aug 2025)

3. 3. The AFMC points of contact are [redacted]

ESTEP.LORNA.B.[redacted] Digitally signed by ESTEP.LORNA.B.[redacted] Date: 2024.07.22 16:13:16 -04'00'

LORNA B. ESTEP, SES
Executive Director

Acronyms and Abbreviations

AFMC	Air Force Materiel Command
DCMA	Defense Contract Management Agency
DLA	Defense Logistics Agency
JDRS	Joint Deficiency Reporting System
PQDR	Product Quality Deficiency Report
SAF/AQ	Assistant Secretary of the Air Force for Acquisition, Technology and Logistics

Whistleblower Protection
U.S. Department of Defense

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