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Report No. DODIG-2013-040

January 31, 2013

Inspector General

United States
Department of Defense



Critical Information Needed to Determine the Cost and Availability of G222 Spare Parts

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Acronyms

AAF	Afghan Air Force
AFPEO	Air Force Program Executive Officer
ANSF	Afghan National Security Forces
DMSMS	Diminishing Manufacturing Sources and Material Shortages
EDA	Electronic Data Access
FAR	Federal Acquisition Regulation
FPDS-NG	Federal Procurement Data System-Next Generation
NATC-A	NATO Air Training Command-Afghanistan
NTM-A/CSTC-A	NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan
PMO	Program Management Office
SAF/AQ	Assistant Secretary of the Air Force (Acquisition)

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INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

January 31, 2013

MEMORANDUM FOR COMMANDING GENERAL, NATO TRAINING MISSION-
AFGHANISTAN/COMBINED SECURITY TRANSITION
COMMAND-AFGHANISTAN
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL
MANAGEMENT AND COMPTROLLER)

SUBJECT: Critical Information Needed To Determine the Cost and Availability of G222
Spare Parts (Report No. DODIG-2013-040)

We are providing this report for review and comment. This report addresses two contracts in which the DoD has obligated about \$486.1 million on G222 aircraft that support the Afghan Air Force. The report highlights that NATO Training Mission – Afghanistan/Combined Security Transition Command – Afghanistan and G222 Program Management Office officials have not effectively managed the G222 program and have not determined the cost or availability of spare parts to sustain the aircraft. As a result, NATO Training Mission – Afghanistan/Combined Security Transition Command – Afghanistan and G222 Program Management Office officials may spend about \$200 million in Afghanistan Security Forces Funds on spare parts for an aircraft that may not be sustainable.

After draft report issuance, the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, notified the contractor that when the G222 follow-on sustainment support contract expires in March 2013, no action will be taken to issue a new delivery order, ending the G222 program. According to the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, if the program had continued through March 2022, as originally planned, it would have required \$830 million, in addition to the about \$200 million identified in the report, in sustainment costs, to include a significant amount for spare parts.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Comments from the Senior Military Assistant, Office of the Assistant Secretary of the Air Force (Acquisition), provided on behalf of the Assistant Secretary, were responsive and we do not require additional comments. Comments provided by Commander, NATO Air Training Command – Afghanistan, on behalf of the Commanding General, NATO Training Mission – Afghanistan/Combined Security Transition Command – Afghanistan were not responsive. However, due to actions taken since draft report issuance, no further comments on the final report are required. Comments provided by the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, were not responsive. We revised Recommendation 2 because of actions that occurred since draft report issuance to further clarify the nature of the actions needed before the obligation of funds for spare parts. In response to the final report, we


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request that the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, provide comments on revised Recommendation 2 by March 4, 2013. If you disagree with the potential monetary benefits, specify the amount at issue.

Please provide comments that conform to the requirements of DoD Directive 7650.3. Comments provided to the report must be marked and portion-marked, as appropriate, in accordance with DoD Manual 5200.01. If possible, send a portable document format (.pdf) file containing your comments to audclev@dodig.mil. Copies of your comments must have the actual signature of the authorizing official for your organization. We are unable to accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9077 (DSN 664-9077).


Jacqueline L. Wicecarver
Assistant Inspector General
Acquisition and Contract Management

cc:

Assistant Secretary of the Air Force (Acquisition)
Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management
Center

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Results in Brief: Critical Information Needed To Determine the Cost and Availability of G222 Spare Parts

What We Did

We evaluated two contracts, as well as acquisition planning and program documentation, to determine whether the cost and availability of G222 spare parts will allow for continued sustainability of the aircraft. G222 Program Management Office (PMO) officials have obligated about \$486.1 million on two G222 contracts, which includes \$60.5 million for spare parts.

What We Found

G222 PMO officials have not determined the cost or availability of G222 spare parts. This occurred because NATO Training Mission–Afghanistan/Combined Security Transition Command – Afghanistan (NTM-A/CSTC-A) and G222 PMO officials did not effectively manage the G222 program. Specifically, NTM-A/CSTC-A and G222 PMO officials have not agreed on a course of action for the G222, and G222 PMO officials have not prepared a sustainment plan that considers cost.

As a result, NTM-A/CSTC-A and G222 PMO officials may spend about \$200 million in Afghanistan Security Forces Funds on spare parts for an aircraft that does not meet operational requirements, may be cost prohibitive to fly, and for which several critical spare parts to sustain the G222 are unavailable. This amount would be in addition to the \$486.1 million that G222 PMO officials have already obligated for the program on two contracts. In addition, the aircraft flew only

234.2 of the required 4,500 hours from January through September 2012.

In an August 28, 2012, memorandum to NTM-A/CSTC-A and Air Force Life Cycle Management Center officials, we suggested they delay the procurement of spare parts until they determined whether to replace or use the G222 in a limited capacity, the service life of the G222, the impact of diminishing manufacturing sources, and the estimated sustainment costs. NTM-A/CSTC-A and Air Force Life Cycle Management Center officials agreed with our suggestions except for preparing a sustainment plan before obligating funds for the procurement of spare parts.

In December 2012, after draft report issuance, the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, notified the contractor that they would not take action to issue a new delivery order when the G222 follow-on sustainment support contract expires in March 2013. The Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, also indicated the Afghan Air Force would use an alternate aircraft to meet the long-term medium airlift requirement. According to the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, if the program had continued through March 2022, as originally planned, it would have required \$830 million, in addition to the about \$200 million identified in the report, in

sustainment costs, to include a significant amount for spare parts.

What We Recommend

We recommend that the Commanding General, NTM-A/CSTC-A, and the Assistant Secretary of the Air Force (Acquisition) determine whether to continue to use the G222. In addition, the Commanding General, NTM-A/CSTC-A must develop a long-term strategy if the G222 will continue to be used to meet the Afghan Air Force medium airlift requirement.

Because of actions taken by the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, after draft report issuance, we acknowledge that a sustainment plan is no longer necessary for the G222 program. Therefore, we have revised Recommendation 2 to recommend that the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, direct G222 PMO officials not to obligate any additional funds related to the about \$200 million in Afghanistan Security Forces Funds, and not to expend funds previously obligated for spare parts until exhausting all available spare parts inventory, cannibalizing spare parts from other G222 aircraft, and when feasible, continuing the practice of using other aircraft to meet the medium airlift capability. G222 PMO officials should also develop an executable disposal plan for the G222 and determine whether any spare parts are needed to support the disposal plan.

Management Comments and Our Response

Comments provided by Commander, NATO Air Training Command-Afghanistan, on behalf of

the Commanding General, NTM-A/CSTC-A were not responsive. However, because of actions taken since draft report issuance, no further comments on the final report are required.

Comments provided by the Senior Military Assistant, Office of the Assistant Secretary of the Air Force (Acquisition), provided on behalf of the Assistant Secretary, were responsive and no additional comments are required.

Comments provided by the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center, were not responsive. Therefore, we request additional comments be provided on the revised recommendation as specified in the recommendations table on the next page.

Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Commanding General, NATO Training Mission – Afghanistan/Combined Security Transition Command – Afghanistan		1.a, 1.b
Assistant Secretary of the Air Force (Acquisition)		1.a
Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center	2	

Please provide comments by March 4, 2013.

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Introduction

Objective

Our objective was to determine whether the cost and availability of spare parts for the C-27A/G222¹ aircraft (G222) will allow for continued sustainability of the aircraft for the Afghan Air Force (AAF). See Appendix A for a discussion of the scope and methodology and prior coverage related to the objective.

Background on Afghanistan Security Forces Funds

Congress created the Afghanistan Security Forces Fund in FY 2005 as an emergency supplemental appropriation for equipment and services to support the Afghan National Security Forces (ANSF). From FY 2005 through FY 2012, Congress appropriated about \$50.9 billion to the Afghanistan Security Forces Fund. The U.S. Government uses pseudo-foreign military sales cases to procure items and services such as the G222 to support the ANSF through this fund. Foreign military sales cases for purchasing items with Afghanistan Security Forces Funds are “pseudo” because the U.S. Government is not selling the items to a foreign customer but, instead, to the DoD, who provides those items to the ANSF.

G222 Program History

NATO Training Mission – Afghanistan/Combined Security Transition Command – Afghanistan (NTM-A/CSTC-A) is the lead United States agency responsible for development of the ANSF. NTM-A/CSTC-A directs all United States efforts to organize, train, and equip Afghan security forces. Specifically, NTM-A/CSTC-A uses pseudo-foreign military sales procedures to obtain assistance for the ANSF. In May 2007, NTM-A/CSTC-A sent a memorandum of request to the Air Force Security Assistance and Cooperation Directorate to acquire a medium airlift aircraft for the AAF.² The medium airlift aircraft was required to perform missions in a high altitude/high temperature environment and to address three requirements: presidential airlift, medical evacuation, and project combat capability. In October 2007, NTM-A/CSTC-A requested the acquisition of the G222 to perform these missions and as requested, the G222 Program Management Office (PMO) awarded a contract to Alenia North America. The G222 PMO is aligned under the Air Force Life Cycle Management Center, located at Warner Robins Air Force Base, Georgia, and the Program Executive Office for Air Force Mobility Programs. The Program Executive Office for Air Force Mobility is under the command of the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ). G222

¹ The C-27A model is modified from the G222 airframe manufactured by Alenia Aermacchi in Naples, Italy. The U.S. Air Force used the C-27A and AAF use the G222. Therefore, the report will refer to the aircraft as the G222.

² One of the components of the ANSF is the Afghan National Army. The AAF, formerly the Afghan National Army Air Corps, is a branch of the Afghan National Army.

PMO officials have obligated about \$486.1 million on two G222 contracts for the ANSF, including (b) (4) for spare parts.

G222 Contracts Awarded

In September 2008, the U.S. Air Force awarded the initial contract FA8504-08-C-0007 to Alenia North America, Inc. with a not-to-exceed value of \$287 million for the refurbishment of 18 G222. Alenia North America is the prime contractor and is responsible for program management and execution. Alenia Aermacchi, a subcontractor for the G222 program, is refurbishing and modernizing the G222.

In 2010, G222 PMO officials exercised the option for 2 additional aircraft resulting in a total of 20 aircraft. The contract also included requirements for contractor logistics support services and an initial delivery of spare parts. L-3 Systems Field Support (L-3) was the subcontractor who initially provided contractor logistics support in Afghanistan. DynCorp International replaced L-3 in March 2012. As of October 2012, about (b) (4) has been obligated on the initial contract. This amount included funds for the initial acquisition, maintenance, and spare parts.

~~(FOUO)~~ In March 2012, G222 PMO officials awarded a follow-on contractor logistics support contract FA8553-12-D-0001 to Alenia North America. According to contract documentation, the contract's anticipated total value ranges between \$372 million and \$429 million for 2 years. Of the \$429 million, the estimated cost for spare parts could be as high as (b) (4). As of October 2012, about (b) (4) has been obligated on this contract. This amount included funds for contractor logistics support and spare parts.

Sustainment and G222 Spare Parts Contract Requirements

Sustainment involves the supportability of systems and their subsequent life cycle³ product support. Sustainment also involves spare parts management, benefits of which include enhancing the interchangeability, reliability, and availability of spare parts and minimizing impacts of diminishing manufacturing sources. The G222 contracts include spare parts requirements for the logistic support contractor to provide an adequate range and level of aircraft spare parts, aircraft engines, avionics spare parts, support equipment, and technical data to achieve the required availability of the aircraft. The G222 PMO officials required the contractor to maintain a supply of spare parts before the arrival of the first aircraft in Afghanistan. Spare parts include, but are not limited to, such items as engines and engine components, propellers, propeller gearboxes, global positioning systems, and aviation life support equipment.

Status of G222 Program

~~(FOUO)~~ In December 2011, the NATO Air Training Command – Afghanistan (NATC-A)/438th Air Wing Commander grounded the G222 because of contractor

³ Life cycle is the period of time from initial item acquisition through its disposal.

logistics support deficiencies and poor maintenance procedures. As of September 2012, ~~(FOUO)~~ 2 aircraft were being refurbished, 2 aircraft had been accepted in Italy, and 16 refurbished aircraft were in Kabul, Afghanistan. Of the 16 aircraft in Kabul, 9 were authorized to fly, 1 was pending approval to fly, and 6 had been cannibalized to provide spare parts for the remaining aircraft in preparation for when the G222 fleet can return to a flyable status. According to a G222 PMO official, although nine aircraft were authorized to fly, the number of aircraft able to fly on any given day varied from zero to three because of problems associated with maintenance and spare parts. From January through September 2012, the available G222 flew only 234.2 hours even though the contract requirement was to fly a total of 4,500 hours or 500 hours per month. To meet the medium airlift capability, NTM-A/CSTC-A officials stated they used other aircraft.

Review of Internal Controls

DoD Instruction 5010.40, "Managers' Internal Control Program (MICP) Procedures," July 29, 2010, requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified internal control weaknesses associated with G222 program management. Specifically, NTM-A/CSTC-A and G222 PMO officials have not agreed on a course of action for the future use of the G222 and have not prepared a sustainment plan that considered cost. We also identified program management weaknesses related to the medium airlift long-term strategy, estimated service life of the aircraft, diminishing manufacturing sources, and reliable consumption data. NTM-A/CSTC-A and G222 PMO officials' planned actions to obtain and update this information should address these four weaknesses. We will provide a copy of the report to the senior official responsible for internal controls in the Departments of the Army and Air Force.



Source: DoD Office of Inspector General, Special Plans and Operations

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Finding. Continued Sustainability of the G222 for the Afghan Air Force Is Questionable

G222 PMO officials have not determined the cost or availability of spare parts for the G222 to allow for the continued sustainability of the aircraft for the AAF. This occurred because NTM-A/CSTC-A and G222 PMO officials did not effectively manage the G222 program. Specifically, NTM-A/CSTC-A and G222 PMO officials have not agreed on a course of action for the future use of the G222. Additionally, G222 PMO officials have not prepared a G222 sustainment plan that considers cost. As a result, NTM-A/CSTC-A and G222 PMO officials may spend about \$200 million in Afghanistan Security Forces Funds on spare parts for an aircraft that may not be sustainable. This amount would be in addition to the \$486.1 million that G222 PMO officials have already obligated for the program on two contracts. Without agreeing to a course of action for the G222, DoD officials could unnecessarily expend funds to maintain an aircraft that does not meet operational requirements, may be cost prohibitive to fly, and for which several critical spare parts to sustain the G222 are unavailable. In addition, the aircraft flew only 234.2 of the required 4,500 hours from January through September 2012.

On August 28, 2012, we issued a memorandum suggesting that the Commanding General, NTM-A/CSTC-A, in coordination with G222 PMO officials, delay the procurement of spare parts until NTM-A/CSTC-A determines whether to replace or use the G222 in a limited capacity. In addition, we suggested that G222 PMO officials determine the service life of the G222, determine the impact of diminishing manufacturing sources and material shortages (DMSMS), estimate sustainment costs, and verify updates to the consumption and data model. NTM-A/CSTC-A and the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center (AFPEO for Mobility) agreed with the suggested actions except the AFPEO for Mobility did not believe a sustainment plan was required before G222 PMO officials obligated additional funds for spare parts. See Appendix B for a copy of the memorandum and associated responses.

G222 Program Management Responsibilities

NTM-A/CSTC-A developed the operational requirements for the medium airlift aircraft. Requirements developed included identifying operational needs, attributes of the system, and key performance parameters. NTM-A/CSTC-A requested the acquisition of the G222 to fulfill an urgent and compelling need to perform medium airlift missions in Afghanistan. NTM-A/CSTC-A planned for the G222 to fill a requirements gap until the identification of a long-term AAF medium airlift solution.

The G222 PMO manages the G222 program. G222 PMO officials are responsible for implementing and managing program requirements over the life cycle of the program, to include sustainment. Program and contracting officials must comply with the Federal

Acquisition Regulation (FAR) when procuring the G222 and associated spare parts. According to FAR Part 7, "Acquisition Planning," G222 contracting and program officials must prepare an acquisition plan that addresses potential problems that may affect the acquisition and establish a cost estimate for the planned acquisition through the acquisition life cycle, to include sustainment. G222 PMO officials should also follow defense acquisition best practices by complying with DoD Directive 5000.01, "The Defense Acquisition System," dated November 20, 2007, and DoD Instruction 5000.02, "Operation of the Defense Acquisition System," dated December 8, 2008, which require program offices to prepare an acquisition strategy, to include the life cycle sustainment plan. In addition, according to the Defense Acquisition Guidebook, effective program management should include continuous reviews of performance, cost, and sustainment.

Lack of Agreement on Future Use of G222

G222 does not meet performance requirements related to the availability of spare parts.

~~(FOUO)~~ G222 PMO officials have not determined the cost or availability of spare parts for the G222 because NTM-A/CSTC-A and G222 PMO officials have not agreed on the future course of action for the G222. NTM-A/CSTC-A officials stated that the G222 does not meet operational requirements. In addition, NTM-A/CSTC-A and G222 PMO officials agreed that the G222 does not meet performance requirements related to the availability of spare parts, aircraft availability, aircraft delivery schedule, and maintenance quality. According to G222 PMO officials,

The aircraft continues to perform poorly, requiring extensive maintenance and an ever-expanding quantity of supplies, and yet is still failing to meet availability numbers essential for mission success. ...the contractor's past performance does not give confidence that they will be able to reach the contractual requirements and then sustain that effort into the foreseeable future.

Despite the lack of a decision on the future use of the G222, G222 PMO officials issued a modification to definitize⁴ letter contract FA8553-12-D-0001 and delivery order 0002 on September 29, 2012. This modification increased contract obligations by about (b) (4) and included about (b) (4) for spare parts. According to G222 PMO officials, these funds would have expired on September 30, 2012, and G222 PMO officials committed these funds when they awarded the letter contract in March 2012. G222 PMO officials stated that if they did not obligate these funds, they would not be able to meet program requirements if NTM-A/CSTC-A chose to continue to use the G222.

⁴ "Definitize" means to reach a final determination on a contract to include elements such as cost, duration, or scope.

~~(FOUO)~~ Before the obligation of the ^{(b) (4)} G222 PMO officials issued a cure notice⁵ on August 15, 2012, to Alenia North America for contract FA8553-12-D-0001. The cure notice included two instances in which the contractor failed to provide spare parts and meet aircraft availability performance requirements. G222 PMO officials stated they were not satisfied with Alenia North America's responses and issued a show cause notice⁶ on October 15, 2012. A G222 PMO official stated their office could terminate the contract as early as November 2012 if NTM-A/CSTC-A agrees. G222 PMO officials also recognized the potential to continue the program until expiration of the delivery order in March 2013. NTM-A/CSTC-A officials provided conflicting answers on the development of their medium airlift strategy. For example, in September 2012, NTM-A/CSTC-A determined they would replace the G222 and were evaluating the strategy for the AAF medium airlift requirement. Later, they stated they would evaluate the AAF medium airlift capability in 2013 along with a review of future ANSF requirements. NTM-A/CSTC-A, in coordination with the SAF/AQ, must decide whether to continue to use the G222. If NTM-A/CSTC-A and the SAF/AQ officials decide to continue to use the G222, then NTM-A/CSTC-A must develop a long-term strategy for how the G222 will meet the AAF medium airlift requirement.

Determination of G222 Sustainment Costs

~~(FOUO)~~ G222 PMO officials have not determined the cost of spare parts for the G222 because they did not prepare a sustainment plan at the time of original contract award in September 2008 that would have calculated life cycle costs for the G222 program. In February 2008, G222 PMO officials estimated spare parts costs to be ^{(b) (4)}; however, this estimate was only for the length of the original contract, which was 3 years. During these 3 years, ^{(b) (4)} was obligated for spare parts. FAR Part 7 requires program and contracting officials to establish a cost estimate to include sustainment costs for the life cycle of a program. G222 PMO officials agreed that identifying life cycle sustainment costs before contract award would have been prudent. However, G222 PMO officials stated that the requirement to consider sustainment costs was no longer necessary because NTM-A/CSTC-A directed the PMO to procure the G222.

G222 PMO officials stated that they could not identify the cost to sustain the G222.

Even though the G222 PMO officials procured the G222 in September 2008, they stated in June 2012 that they could not identify the cost to sustain the G222 because critical information, such as diminishing manufacturing sources, consumption data, and pricing for some spare parts, was unknown. G222 PMO officials will need this information, along with an updated service life assessment, to develop a sustainment plan that NTM-A/CSTC-A and

⁵ A cure notice is a written notice provided to the contractor specifying contract failures that are endangering the performance of a contract. DoD provides the notice when considering terminating a contract for default and will specify the number of days the contractor has to cure the contract failures.

⁶ Contracting officers issue a show cause notice when insufficient time remains in the delivery schedule to cure the problem or the contractor failed to act on the cure notice. The show cause notice informs the contractor of a potential contract termination.

G222 PMO officials can use to make informed decisions and effectively manage the program if NTM-A/CSTC-A and G222 PMO officials decide to continue to use the G222.

~~(FOUO)~~ In response to the August 28, 2012, DoDIG memorandum, the AFPEO for Mobility acknowledged great value in completing a sustainment plan and agreed to prepare one; however, the AFPEO for Mobility stated a sustainment plan was not necessary before the obligation of funds for spare parts. Although NTM-A/CSTC-A plans to replace the G222, a sustainment plan is still necessary to determine whether the G222 is affordable to use in any capacity. G222 PMO officials should not obligate any additional funds and not expend previously obligated funds to procure spare parts until they prepare a sustainment plan that considers costs for the G222 program. The sustainment plan should address NTM-A/CSTC-A's decision and concerns on the future use of the G222.

Management Responses Since DoDIG Memorandum

In response to the August 28, 2012, DoDIG memorandum, NTM-A/CSTC-A and AFPEO for Mobility agreed to delay the procurement of spare parts until NTM-A/CSTC-A evaluated the long-term medium airlift strategy and G222 PMO officials determined the service life of the G222, determined the impact of DMSMS, and verified updates to the consumption and data model. NTM-A/CSTC-A and AFPEO for Mobility provided the following responses to the suggested actions identified in the memorandum:

- NTM-A/CSTC-A has not identified a long-term strategy for the AAF medium airlift requirement. NTM-A/CSTC-A officials stated that current problems with spare parts are a growing concern. They have considered the longevity of the G222 and determined that the G222 should be replaced. In addition, they will evaluate the AAF medium airlift capability in 2013. The AFPEO for Mobility stated that an Analysis of Alternatives should be conducted to determine whether the G222 should be retained or replaced.
- G222 PMO officials have determined the service life of the G222 in Afghanistan since the issuance of the memorandum. The AFPEO for Mobility stated that G222 PMO officials developed a modified assessment based on the Aircraft Service Life Report and additional responses provided by Alenia North America. G222 PMO officials stated that the current service life assessment was based on theoretical data and would be updated as they collect actual flight data. We commend G222 PMO officials for developing a service life assessment and their plan to update this assessment with actual flight data.
- ~~(FOUO)~~ G222 PMO officials have not identified all G222 spare parts with DMSMS problems, which impact the G222's ability to fly. According to G222 PMO officials, as of October 2012, about 500 spare parts potentially had DMSMS problems. The AFPEO for Mobility stated Alenia North America provided a DMSMS report

indicating the status of DMSMS issues including the number of obsolete parts for the G222. However, the report did not provide sufficient detail to allow G222 PMO officials to analyze the overall impact of DMSMS. The G222 PMO officials stated that they would continue to work with Alenia North America and anticipated that by December 1, 2012, G222 PMO officials would have data to make informed spare parts procurement decisions.

- ~~(FOUO)~~ G222 PMO officials indicated that they do not have reliable spare parts consumption data for the G222 operating in Afghanistan; therefore, they can neither identify critical parts nor determine how long the aircraft can be sustained. The AFPEO for Mobility stated that of the nine aircraft authorized to fly, any number may be unable to fly each day because of awaiting a part. Alenia North America notified G222 PMO officials that the consumption data model has been updated with Afghanistan specific data. G222 PMO officials planned to review and validate the consumption data model in November 2012.

NTM-A/CSTC-A and AFPEO for Mobility's planned actions will assist in determining the cost and availability of spare parts. Based on NTM-A/CSTC-A and AFPEO for Mobility's comments and planned actions, we consider these to be responsive and additional comments are not required unless management would like to provide updated information.

Conclusion

NTM-A/CSTC-A and G222 PMO officials have stated that the G222 does not meet performance requirements and are considering replacing the aircraft. In addition, NTM-A/CSTC-A stated that the G222 does not meet operational requirements. From January through September 2012, the available G222 flew only 234.2 hours even though the contract required flying a total of 4,500 hours or 500 hours per month. Because of the inability of the G222 to meet operational requirements, NTM-A/CSTC-A had to use alternative aircraft to accomplish medium airlift mission needs. NTM-A/CSTC-A and G222 PMO officials must determine if using the G222 in any capacity is an affordable interim solution for the DoD and the AAF. Although G222 PMO officials have already obligated \$486.1 million on two contracts for the program, officials could needlessly expend about \$200 million in Afghanistan Security Forces Funds on unnecessary spare parts for an aircraft that the AAF may not use in the future.

Recommendations, Management Comments, and Our Response

Revised Recommendation

As a result of G222 PMO officials' actions that occurred after the issuance of the draft report, we revised Recommendation 2 to further clarify the nature of the actions needed before the obligation of funds for spare parts.

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1. We recommend that the Commanding General, NATO Training Mission – Afghanistan/Combined Security Transition Command – Afghanistan:

a. Determine, in conjunction with the Assistant Secretary of the Air Force (Acquisition), whether to continue the use of the G222 to meet the Afghan Air Force medium airlift requirement.

b. Develop a long-term strategy stating how the G222 will meet the Afghan Air Force medium airlift requirement if the decision is made to continue to use the G222.

Commanding General, NATO Training Mission – Afghanistan/ Combined Security Transition Command – Afghanistan Comments

The Commander, NATC-A, who responded on behalf of the Commanding General, NTM-A/CSTC-A, neither agreed nor disagreed with the recommendations. However, the Commander, NATC-A, requested that the recommendations be redirected to the G222 PMO and stated that the G222 PMO in conjunction with the Secretary of the Air Force, International Affairs and Defense Security Cooperation Agency, were currently evaluating the recommendations.

Our Response

Comments from the Commander were not responsive. However, NATC-A provided a memorandum, signed by the AFPEO for Mobility on December 18, 2012, notifying the contractor that G222 PMO officials will not issue a new delivery order on contract number FA8553-12-D-0001 after the current delivery order expires on March 28, 2013. The memorandum stated that the aircraft and contract performance limitations have caused the U.S. Government to pursue a replacement aircraft at a more rapid pace and that per Deputy Secretary of Defense Guidance, the U.S. Air Force is now planning a C-130H program as the long-term medium airlift platform for the AAF. Based on the AFPEO for Mobility actions, our expectation is that the AAF will no longer use the G222 to meet medium airlift requirements after March 2013. According to the AFPEO for Mobility, had the G222 program continued through March 2022, as originally planned, it would have required an additional ^{(b) (4)} in Afghanistan Security Forces funds for sustainment costs, to include a significant amount for spare parts. The ^{(b) (4)} in savings would be in addition to the about \$200 million previously identified in the report.

The actions taken by the AFPEO for Mobility met the intent of the recommendations. Therefore, additional comments from the Commanding General, NTM-A/CSTC-A are not required.

Assistant Secretary of the Air Force (Acquisition) Comments

The Senior Military Assistant, Office of the Assistant Secretary of the Air Force (Acquisition), who responded on behalf of the Assistant Secretary, agreed with the

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recommendation and with the AFPEO for Mobility's decision to not issue a new delivery order on contract number FA8553-12-D-0001 after the current delivery order expires on March 28, 2013. He also stated that the AFPEO for Mobility will take prudent actions to sustain flying operations out of Kabul and that some of these actions will require the expenditure of previously obligated funds. SAF/AQ supports the AFPEO for Mobility Directorate's actions taken to prevent any additional procurement of G222 spare parts.

Our Response

The Assistant Secretary of the Air Force (Acquisition) comments were responsive and the actions met the intent of the recommendation. No further comments are required.

~~(FOUO)~~ **2. We recommend that the Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center direct G222 Program Management Office officials not obligate any additional funds related to the \$218 million in Afghanistan Security Forces Funds identified in the FY 2012 acquisition plan, and not expend funds previously obligated to purchase G222 spare parts until exhausting all available spare parts inventory, cannibalizing spare parts from other G222 aircraft, and when feasible, continuing the practice of using other aircraft to meet the medium airlift capability. G222 Program Management Office officials should also develop an executable disposal plan for the G222 and determine if any spare parts are needed to support the disposal plan.**

Program Executive Officer for Air Force Mobility Programs, Air Force Life Cycle Management Center Comments

The AFPEO for Mobility did not agree with the recommendation. The AFPEO for Mobility stated that until a decision is made to halt flying operations in support of overseas contingency operations in Afghanistan, halting the expenditure of funds already obligated to sustain the existing G222 fleet would be imprudent. The AFPEO for Mobility indicated that if G222 PMO officials were to follow the recommendation, the G222 fleet would be immediately grounded due to the inability to procure necessary parts for daily missions, and halting the expenditure of funds would inhibit the U.S. Government's commitment to NATO's training mission in Afghanistan. However, the AFPEO for Mobility stated that the Mobility Directorate will procure only parts that will fill existing holes on the aircraft and will comply with the recommendation to the extent that G222 aircraft will not be rendered non-mission capable due to the lack of spare parts.

Our Response

The AFPEO for Mobility comments were not responsive. The AFPEO for Mobility indicated that obligated funds are necessary to procure essential spare parts that keep the aircraft flying. We recognize that a lack of spare parts could negatively impact the ability to meet the AAF mission in Afghanistan. However, we disagree that halting the expenditure of funds already obligated to sustain the existing G222 fleet would result in grounding the aircraft or inhibit the U.S. Government's commitment to NATO's training mission in Afghanistan. As identified in the report, the G222 cannot meet performance

or operational requirements, nor can the contractor provide spare parts necessary to meet these requirements. In addition, the number of aircraft able to fly on any given day varies from zero to three, and the AAF must use other aircraft to meet the medium airlift capability. In a November 20, 2012, memorandum to SAF/AQ, the AFPEO for Mobility recommended, based on NATC-A verbal guidance that a letter be issued to the contractor to immediately stop flying operations in Afghanistan. In addition, in a December 18, 2012, memorandum to the contractor, the AFPEO for Mobility stated that the current delivery order will expire on March 28, 2013, and G222 PMO officials will not extend or award a new delivery order beyond that date. The memorandum also stated that the aircraft and contract performance limitations have caused the U.S. Government to pursue a replacement aircraft at a more rapid pace and that per Deputy Secretary of Defense guidance, the U.S. Air Force is now planning a C-130H program as the long-term medium airlift platform for the AAF.

Although the Mobility Directorate plans to procure only parts that will fill existing needs on the aircraft, we are concerned that not all the spare parts needed are currently available. As a result, aircraft may still be non-mission capable despite the procurement of additional parts. The G222 PMO officials should not obligate additional funds or expend funds previously obligated for spare parts to sustain the G222. However, we revised our recommendation to require G222 PMO officials to take all reasonable steps to minimize the expenditure of previously obligated funds for spare parts. These steps should include exhausting all available spare parts inventory, cannibalizing spare parts from other G222 aircraft, and when feasible, continuing the practice of using other aircraft to meet the medium airlift capability. In addition, G222 PMO officials need to develop a plan for the disposition of the G222 aircraft and determine whether any spare parts are needed to support the disposal plan. Therefore, we request that the AFPEO for Mobility provide additional comments on this revised recommendation in response to the final report.

Appendix A. Scope and Methodology

We conducted this performance audit from May 2012 through November 2012 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

The audit team focused our review on spare parts procured on contract FA8504-08-C-0007 and spare parts G222 PMO officials' plan to procure on contract FA8553-12-D-0001.

- G222 contracting officials awarded contract FA8504-08-C-0007 on September 29, 2008, for the refurbishment of 18 G222s, with an option to purchase an additional 2 aircraft and an initial delivery of spare parts. The contract was valued at about \$287 million. As of October 2012, spare parts obligations for this contract total about (b) (4).
- (FOUO) G222 contracting officials awarded follow-on contract FA8553-12-D-0001 on March 9, 2012, for contractor logistics support and spare parts. In the contract's acquisition plan, PMO officials estimated the cost of future spare parts acquisitions at about (b) (4) over the next 2 years with the potential to cost an additional (b) (4) over the following 8 years. The majority of spare parts procurements would occur within the first 2 years. As of October 2012, spare parts obligations for this contract totaled about (b) (4).

To accomplish the audit objective, we met with the following offices and reviewed the following data:

- We contacted officials from the following offices to understand their roles and responsibilities with regards to spare parts acquisitions for the G222:
 - Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics,
 - Office of the Under Secretary of Defense (Comptroller),
 - U.S. Central Command,
 - U.S. Air Forces Central,
 - U.S. Forces-Afghanistan,
 - NTM-A/CSTC-A,
 - Defense Contract Management Agency,
 - Office of the Under Secretary of the Air Force, International Affairs,
 - Air Force Security Assistance and Cooperation Directorate,
 - Air Force Security Assistance Training Squadron, and
 - G222 PMO

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- We reviewed applicable regulations including the FAR, DoD Directive 5000.01, “The Defense Acquisition System,” DoD Instruction 5000.02, “Operation of the Defense Acquisition System,” and the Defense Acquisition Guidebook.
- We reviewed spare parts obligations and expenditures data obtained from the G222 PMO to determine whether costs for spare parts were accurately estimated and future costs for spare parts were known.
- We reviewed acquisition planning documentation to assess whether G222 PMO officials considered the available sources of supply for the life of the G222 program and life cycle sustainment costs. Additionally, we analyzed documentation related to the contractor’s performance in providing and delivering spare parts.
- We reviewed DMSMS lists and G222 daily status reports to assess whether spare parts availability was affected by the lack of adequate manufacturing sources for the G222 and whether the lack of available spare parts were keeping the aircraft on the ground. We compared this information to the medium airlift performance requirements for aircraft availability rates.
- We reviewed the service life estimates for the G222 and compared them to the contract requirements.
- We reviewed information related to spare parts consumption to assess whether G222 PMO officials could identify the spare parts needed to sustain the G222 program.

Use of Computer-Processed Data

We relied on computer-processed data from the Federal Procurement Data System-Next Generation (FPDS-NG) and the Electronic Data Access (EDA) system. The FPDS-NG collects procurement data. The EDA system stores contracts, contract orders, and contract modifications. We used FPDS-NG to determine contracts awarded for the G222 program. We used the information from the FPDS-NG and the EDA system to obtain contract, order, and modification documentation related to the G222 acquisition. We compared the contracts, orders, and modifications obtained from the EDA system to the contracts, orders, and modifications in the G222 contract files and verified that the documentation we obtained from the EDA system was accurate. We used the contract file documentation to determine contractor and oversight requirements for spare parts. As a result of our analysis, we determined that the data within the FPDS-NG and EDA system were sufficiently reliable for the purpose of our review.

We received spare parts data from OPUS10. OPUS10 is a consumption and data model that provides data on logistics support for spare part allocations. Alenia North America used OPUS10 supply data to develop the G222 initial spare parts planned for

procurement on contract FA8504-08-C-0007. According to statements from Alenia North America and G222 PMO officials, the usage data produced by the OPUS10 consumption and data model was unreliable, as discussed in Appendix B. We did not use the initial spare parts list produced by the system as the basis for our findings or conclusions, and the reliability of the data did not affect our review.

We received Excel spreadsheets on aircraft availability from Daily Status Reports. We used Daily Status Report data to determine the number of aircraft available to fly at a specific point in time. To verify the reliability of the information, we compared the information in the Daily Status Reports to statements made by G222 PMO and NTM-A/CSTC-A officials. As a result of our analysis, we determined that the information was sufficiently reliable for the purpose of our review.

We received contractor performance data from the Contractor Performance Assessment Reporting System. The Contractor Performance Assessment Reporting System is a DoD Web-enabled application for collection of contractor past performance information. We used the Contractor Performance Assessment Reporting System to determine when officials identified a lack of spare parts and the effect on the G222 program. To verify the reliability of the information, we compared it with other available supporting documents, including the Air Force Central Command, Command Directed Investigation, and the ANSF Airpower Requirements Review to determine data consistency and reasonableness. We also compared the information in the Contractor Performance Assessment Reporting System to statements made by G222 PMO officials, Air Force Security Assistance Center officials, and NTM-A/CSTC-A officials. As a result of our analysis, we determined that the information was sufficiently reliable for the purpose of our review.

Prior Coverage

During the last 5 years, the Department of Defense Inspector General (DoD IG) and the Air Force Audit Agency have issued a total of three reports discussing topics related to spare parts and program acquisition management. Unrestricted DoD IG reports can be accessed at <http://www.dodig.mil/audit/reports>. Air Force Audit Agency reports can be accessed from .mil domains over the Internet at <https://afkm.wpafb.af.mil/ASPs/CoP/OpenCoP.asp?Filter=OO-AD-01-41> by those with Common Access Cards.

DoD IG

Report No. DODIG-2012-141, “Assessment of U.S. Government and Coalition Plans to Train, Equip, and Field the Afghan Air Force,” September 28, 2012

Report No. DODIG-2012-036, “DoD Needs to Improve Accountability and Identify Costs and Requirements for Non-Standard Rotary Wing Aircraft,” January 5, 2012

Air Force Audit Agency

Report No. F2008-0007-FC3000, "CV-22 Acquisition and System Support Management," August 11, 2008

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Appendix B. DoDIG Memorandum For Action and NTM-A/ CSTC-A and U.S. Air Force Responses



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

August 28, 2012

MEMORANDUM FOR COMMANDING GENERAL, NATO TRAINING MISSION-
AFGHANISTAN/COMBINED SECURITY TRANSITION
COMMAND-AFGHANISTAN
PROGRAM EXECUTIVE OFFICER FOR AIR FORCE MOBILITY
PROGRAMS, AIR FORCE LIFE CYCLE MANAGEMENT
CENTER

SUBJECT: Concerns Regarding the Procurement of G222 Spare Parts for Contract
FA8553-12-D-0001

We are providing this memorandum for your attention and suggested action before completing Project No. D2012-D000AT-0170.000, "Audit of the Availability of Spare Parts for the C-27A/G222." We are concerned that G222 program office officials at the Warner Robins Air Logistics Center (WR-ALC) plan to obligate approximately \$130 million for the procurement of spare parts as early as September 2012 for contract FA8553-12-D-0001. DoD officials could unnecessarily expend funds to maintain an aircraft that:

- does not meet operational requirements,
- does not have adequate spare parts available, and
- requires spare parts that could be cost prohibitive.

Before obligating funds for the procurement of spare parts, NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan (NTM-A/CSTC-A) and G222 program office officials must have critical data to accurately determine the spare parts needed to sustain the G222 aircraft. NTM-A/CSTC-A must document a long-term strategy for the AAF medium airlift requirement. G222 program office officials must document the:

- estimated service life of the G222 in Afghanistan,
- number of parts affected by diminishing manufacturing sources and material shortages (DMSMS),
- consumption rate of spare parts, and
- program sustainment plan to include cost.

To effectively manage the G222 program, we suggest that the Commander, NTM-A/CSTC-A, in coordination with G222 program office officials, delay the procurement of spare parts until NTM-A/CSTC-A determines whether the G222 should be replaced or used in a limited capacity. G222 program office officials should determine the impact of the Airframe Structural Life Usage Assessment and DMSMS study on the cost and availability of spare parts. In addition, in order to estimate the sustainment costs and spare parts requirements, G222 program office officials must verify that the contractor has updated the consumption model to reflect operating conditions in Afghanistan.

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Background

In 2007, NTM-A/CSTC-A requested that a medium lift aircraft be acquired for the AAF to perform missions in a high altitude/high temperature environment. The AAF needed the aircraft to address three requirements: presidential airlift, medical evacuation, and project combat capability. NTM-A/CSTC-A purchased the G222 to perform these missions.

NTM-A/CSTC-A decided to refurbish the G222, which was no longer in production. According to G222 program office officials, the only G222 aircraft in-service are the 16 AAF aircraft currently located in Kabul, Afghanistan.

WR-ALC awarded contract FA8504-08-C-0007 on September 29, 2008, to Alenia North America with a not-to-exceed value of \$287 million for the refurbishment of 18 G222 aircraft. In 2010, G222 program office officials exercised the option for 2 additional aircraft resulting in a total of 20 aircraft. The contract also included contractor logistics support services and an initial delivery of spare parts. As of June 15, 2012, 16 aircraft have been delivered to Afghanistan. However, 14 of the 16 G222s in Kabul, Afghanistan, are grounded because of the lack of critical spare parts. In fact, of the 16 G222s delivered, 6 have been cannibalized to provide spare parts for the remaining aircraft in preparation for when the fleet can return to a flyable status.

~~(FOUO)~~ Even though Alenia North America failed to deliver the spare parts initially ordered in 2008, on June 28, 2012, G222 program office officials stated that they planned to obligate approximately \$130 million for the procurement of spare parts for the follow-on contract, FA8553-12-D-0001. Officials further stated that the funds needed to be obligated before December 2012 because Alenia North America would only certify pricing on an annual basis. On August 22, 2012, G222 program office officials stated that they hoped to obligate the funds as soon as the pricing was established and agreed upon.

Long-Term Strategy for the G222 Has Not Been Identified

NTM-A/CSTC-A has not identified a long-term strategy for the AAF medium airlift requirement. On October 30, 2007, NTM-A/CSTC-A issued an update to "Memorandum of Request (MOR 07-E1A-204B) for CONUS Purchase of Medium Airlift Aircraft for the Afghan National Army Air Corps," stating that they had an "urgent and compelling requirement for an interim Medium Airlift Platform." NTM-A/CSTC-A requested that 18 G222 aircraft be procured to meet the medium airlift mission and fill a critical gap until a long-term solution could be implemented. G222 program office officials indicated that no long-term or alternative solutions have been identified as of August 2012. NTM-A/CSTC-A officials stated that while an AAF medium airlift requirement still exists, the G222 cannot meet the performance characteristics required for medium airlift and is currently being used only for training purposes. Additionally, both the May 2012 DoD IG Draft Report, "Assessment of U.S. Government and Coalition Efforts to Train, Equip, and Field the Afghan Air Force," (Project No. D2011-D00SPO-0243.000) and the Air Force Central Command, Command Directed Investigation (AFCENT CDI) identified serious concerns related to spare parts and maintenance of the G222 in Afghanistan that have impacted the aircraft's ability to meet the medium airlift requirements. NTM-A/CSTC-A must develop a long-term strategy that considers the G222's inability to meet the operational requirements of a medium airlift aircraft for the AAF. The strategy should consider the current performance limitations of the G222 and determine whether the aircraft

should be used in a limited capacity, if at all. Until NTM-A/CSTC-A decides how to use the G222, program office officials should not obligate additional funds to procure spare parts for an aircraft that does not currently meet performance requirements and is unable to meet all the needs of the AAF.

Estimated Service Life of the G222 Has Not Been Determined

~~(FOUO)~~ G222 program office officials have not determined the service life of the G222 in Afghanistan. The statement of work for contract FA8504-08-C-0007, dated September 17, 2008, stated that the residual service life for the G222 was 10 years or 10,000 flight hours after refurbishment. The service life is based on typical use by the Italian Air Force. However, a 2010 WR-ALC analysis indicated that several of the aircraft had significantly less than 10,000 flight hours remaining at the time of their acceptance. In addition, the July 2011 WR-ALC Program Management Review stated that the G222 had an average service life expectancy of approximately 7 years and that the fleet might not meet the operational requirement for life expectancy of 10 years. This review included a U.S. Government analysis indicating potential grounding of the aircraft at approximately 6 years. Despite indications that the G222 would not meet service life requirements as early as 2010, it was not until September 2011 that a contract modification required Alenia North America to provide an Airframe Structural Life Usage Assessment Study by June 2012. In August 2012, Alenia North America provided a portion of the study; however, the detailed study is still not complete. G222 program office officials cannot accurately determine the amount of spare parts needed to sustain the aircraft until an accurate estimate of the G222 service life in Afghanistan is known.

Spare Parts Not Available Due to Diminishing Manufacturing Sources and Material Shortages

~~(FOUO)~~ G222 program office officials have not identified all G222 spare parts with DMSMS. Air Force officials first realized there was a problem with the availability of spare parts in September 2009 when Alenia North America did not provide the initial delivery of spare parts as required by the 2008 contract. Despite knowing about the spare parts issues in September 2009, program officials did not require Alenia North America to provide a DMSMS study until September 2011. In January 2012, Alenia North America preliminarily identified 25 spare parts that had DMSMS issues, but as of August 2012, the list contained approximately 61 spare parts known to have DMSMS issues. According to the AFCENT CDI, Alenia North America has failed to deliver 74 of the initial spare parts purchased in 2008, including 17 spare parts that are required to allow multiple aircraft to return to flight status. Air Force Security Assistance officials stated that there is a concern that those parts are unavailable due to DMSMS issues. Alenia North America was required to provide the DMSMS study in June 2012, but as of August 2012 it has not been completed. G222 program office officials cannot determine whether critical spare parts will be available to sustain the G222 to meet its current or future operational requirements until Alenia North America completes the DMSMS report. G222 program office officials could expend approximately \$130 million for spare parts that are not needed because other critical spare parts may be unavailable.

Reliable G222 Spare Parts Consumption Data is Not Available

~~(FOUO)~~ G222 program office officials indicated that they do not have reliable spare parts consumption data for the G222 aircraft operating in Afghanistan; therefore, they can neither identify critical parts nor determine how long the aircraft can be sustained. Alenia North America used a consumption and data model to identify the spare parts needed to fully support the G222 fleet for 3 years. The model was based on G222s used by the Italian Air Force and flown in environmental conditions that were different from the conditions in Afghanistan. As a result, according to a May 2012 WR-ALC briefing, more than 90 percent of the spare parts initially purchased have not been used. Additionally, some spare parts were consumed at a greater rate than anticipated, but were not purchased. Therefore, 14 of the 16 aircraft in Afghanistan are currently grounded because of a lack of critical spare parts. G222 program office officials still cannot confirm that Alenia North America has updated the model to adequately account for the G222's current operating environment despite becoming aware of this issue in November 2009.

In addition, multiple aircraft groundings due to maintenance and spare parts availability issues have resulted in a significant reduction in flying hours. NTM-A/CSTC-A officials stated that, at the current reduction in flying time, it may take 6 to 8 years to get to reliable consumption data. However, the planned period of performance for contract FA8553-12-D-0001 is only for 2 years, which would preclude the program's ability to collect the necessary data within the timeframe of the contract. As a result, G222 program office officials cannot identify which parts are critical which could result in expending up to \$130 million on spare parts that do not result in the aircraft being returned to a flyable status.

Determination of G222 Sustainment Cost

G222 program office officials have not determined the sustainment costs for the G222. Our review of acquisition planning documents and statements made by G222 program office officials determined that sustainment costs were not considered at the time of contract award despite NTM-A/CSTC-A's "Memorandum of Request for CONUS Purchase of Airlift Capabilities for the Afghan National Army Air Corps (07-E1A-204)," issued on May 5, 2007, which required that the program office consider sustainment costs in the acquisition decision. Specifically, G222 program office officials did not calculate the life cycle costs for the G222 program. Alenia North America stated that supply chain and long-term sustainment were not included as part of the original contract in September 2008. G222 program office officials stated that they still cannot identify the cost to sustain the G222 because variables such as the consumption rate, pricing, and supply sources for spare parts are unknown. As a result, DoD officials could unnecessarily expend funds for spare parts to maintain an aircraft that may be unsustainable.

Suggested Actions

We suggest that the Commander, NTM-A/CSTC-A, delay the upcoming 2012 procurement of spare parts until the following actions occur:

- NTM-A/CSTC-A develops a long-term strategy for the medium airlift requirement for the AAF and determines whether the G222 should be replaced or used in a limited capacity. The strategy should consider that the G222 is no longer in production, the number of parts that are DMSMS or there is no source of supply, the increasing cost and long lead times for purchasing parts for a discontinued aircraft, and the airframe estimated service life;
- G222 program office officials determine the impact of the Airframe Structural Life Usage Assessment and DMSMS studies on the cost and availability of spare parts;
- G222 program office officials require and verify that the contractor has updated the consumption and data model with variables related to the operating conditions in Afghanistan in order to better identify the spare parts needed; and
- G222 program office officials develop estimated life cycle costs using the results of the studies and the long-term strategy for the medium airlift requirement.

We are performing this audit in accordance with generally accepted government auditing standards and are providing these interim results so you may start appropriate corrective actions. We will provide additional details in a forthcoming audit report, which will include any corrective actions taken. Therefore, we request that you notify us of all corrective actions you take or have taken to address the suggested actions by September 12, 2012.

Please direct questions to [REDACTED] at [REDACTED], (DSN [REDACTED]), [REDACTED], or [REDACTED].

Jacqueline L. Wicecarver
Jacqueline L. Wicecarver
Assistant Inspector General
Acquisition and Contract Management



REPLY TO
ATTENTION OF
NTM-A/CSTC-A-COS

HEADQUARTERS
NATO TRAINING MISSION - AFGHANISTAN
COMBINED SECURITY TRANSITION COMMAND - AFGHANISTAN
KABUL, AFGHANISTAN
APO AE 09356

MEMORANDUM THRU United States Forces - Afghanistan (CJIG), APO AE 09356
United States Central Command (CCIG), MacDill AFB, FL 33621

FOR: Office of the Department of Defense Inspector General (DoD IG)
4800 Mark Center Drive
Alexandria, Virginia 22330

SUBJECT: NTM-A/CSTC-A Response to DoD IG Memorandum of Action on "Concerns Regarding the Procurement of G222 Spare Parts for Contract FA8553-12-D-0001" (DoD IG Project No: D2012-D000AT-0170.000)

REFERENCE: Memorandum of Action, dated 28 Aug 2012, Department of Defense Inspector General, (DoD IG).

1. The purpose of this memorandum is to provide the NTM-A/CSTC-A response on the DoD IG suggestions in the Memorandum for Action on Concerns Regarding the Procurement of G222 Spare Parts for Contract FA8553-12-D-0001.
2. Point of contact for this action is [REDACTED] at DSN [REDACTED], or via e-mail at [REDACTED].



COL, US Army
Chief of Staff

NTM-A/CSTC-A MEMO FOR ACTION RESPONSE

“Concerns Regarding the Procurement of G222 Spare Parts for Contract FA8553-12-D-0001”
(Project No. D2012-D000AT-0170.000)

Suggested Action, Page 5

Commander, NTM-A/CSTC-A, delay the upcoming 2012 procurement of spare parts until the following actions occur:

- NTM-A/CSTC-A develops a long-term strategy for the medium airlift requirement for the AAF and determines whether the G222/C-27A should be replaced or used in a limited capacity. The strategy should consider that the G222 is no longer in production, the number of parts that are DMSMS or there is no source of supply, the increasing cost and long lead times for purchasing parts for a discontinued aircraft, and the airframe estimated service life;

NTM-A/CSTC-A response: Concur with comments

NTM-A/CSTC-A is evaluating a long-term strategy for medium airlift requirement for the AAF. The original plan for G222 in the AAF was as a 10-year bridge until a more permanent solution can be developed/fielded. The normal competitive source selection acquisition process has begun. We've drafted COAs for the acquisition strategy for the next platform. The next step is to refine the requirement documents and then it will be turned over to the acquisitions process and foreign military sales.

NTM-A/CSTC-A has considered the longevity of the G222, and has determined that it should be replaced. Current issues with supply/parts are a growing concern. The command is diligently working with the program office to find short-term resolutions, until the acquisition process can deliver the next generation medium airlift platform to the AAF.

APPROVED BY:
[REDACTED]
Col, USAF, NATC-A
Chief of Staff

PREPARED BY:
[REDACTED]
Lt Col, USAF, NATC-A
Director, J-5, DSN [REDACTED]



DEPARTMENT OF THE AIR FORCE
AIR FORCE LIFE CYCLE MANAGEMENT CENTER
WRIGHT-PATTERSON AIR FORCE BASE OHIO

26 September 2012

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

FROM: AFLCMC/WL

SUBJECT: Response to DoD IG's Memorandum, dated 28 August 2012, "Concerns Regarding the Procurement of G222 Spare Parts for Contract FA8553-12-D-0001"

- ~~(FOUO)~~ 1. The Air Force Program Executive Officer (AFPEO) for Mobility concurs with your recommendations contained in the subject memo regarding your Project Number D2012-D000AT-0170.000, Audit of the Availability of Spare Parts for the C-27A/G222.
- ~~(FOUO)~~ 2. Specifically, AFPEO for Mobility concurs that before we obligate additional funds for the procurement of spare parts, we must have critical data to accurately determine the spare parts needed to sustain the G222 aircraft. Specifically, we agree there is a need to document the following critical inputs before obligating additional funds for spare parts:
- a. User's (represented by NTM-A/CSTC-A) long-term strategy for medium airlift capability for the Afghanistan Air Force (AAF);
 - b. Estimated service life of the G222 in Afghanistan;
 - c. Number of parts affected by Diminishing Manufacturing Sources and Material Shortages (DMSMS) and impact on fleet availability; and,
 - d. Consumption rate of spare parts.
- ~~(FOUO)~~ 3. AFPEO for Mobility also concurs there is great value in completing a program sustainment plan for the G222 program, to include cost data, and is pursuing completion of this document. However, we do not believe this is required before we obligate additional funds for the procurement of spare parts. A program decision was made in 2008 to procure the G222 to meet the AAF medium airlift requirement and funds have already been budgeted to sustain the program through at least FY2017. The life-cycle sustainment plan and updated costs will appropriately inform decision-makers on the future of the G222 program, but are not essential to make immediate decisions on current parts procurements. The information summarized in the previous paragraph provides sufficient insights to make educated procurement decisions to ensure the wise investment of precious fiscal resources.

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4. The following summarizes the status and plan to compile the requisite information necessary to resume G222 spare parts procurements.

a. User's long-term strategy. The NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan (NTM-A/CSTC-A) provided a written response to this query 19 Sep 12 (see attached).

~~(FOUO)~~ b. G222 aircraft service life. The prime contractor delivered an Aircraft Service Life Report dated 30 Jul 12. The report provided their engineering assessment of the projected service life for the Afghanistan G222 fleet (some details discussed in paragraph 5d, below). The program office utilized this report to develop a modified assessment to impact our spares procurement decisions. Armed with this information, we are now in compliance with the DoD IG Audit Team's recommendation.

~~(FOUO)~~ c. DMSMS impact. The prime contractor delivered a DMSMS Report dated 10 Sep 12. This report provides an expanded view of the current DMSMS status on the G222 program. Out of 511 repairable parts reviewed, 115 have been identified as potentially obsolete within the next 5 years. Out of 3,098 expendable parts reviewed, 71 have been identified as potentially obsolete within the next 2 years. The report provides recommended solutions for 9 of these items, and an additional 30 engineering change proposals are already in work to handle DMSMS issues. Unfortunately, this report fails to provide the level of fidelity required to analyze the DMSMS impact on the procurement of non-obsolete spares. The program office will continue to work with the prime contractor to develop the required data fidelity in order to make an informed spares procurement decision based on identified DMSMS issues. We anticipate having this information prior to 1 Dec 12.

~~(FOUO)~~ d. Consumption data. The prime contractor notified the program office that they have recently updated their supply chain model with consumption data from the Italian Air Force, plus Afghanistan-specific data since the inception of the current G222 program in 2008. This added data lends greater credibility to the model, and should assist in making wiser spares procurement decisions. We have yet to see this added data to validate its usefulness. We anticipate completing a review and assessing its value by 1 Nov 12.

5. In addition to the above details regarding your recommendations, AFPEO for Mobility submits the following information as clarification to the items addressed in your letter. This is offered as a follow-up to the telecom held on 6 Sep 12.

~~(FOUO)~~ a. Section title: "Background" (page 2 para 1; restated on page 4): "However, 14 of the 16 G222s in Kabul, Afghanistan, are grounded because of the lack of critical spare parts."

- Currently, 9 of the 16 aircraft at Kabul have completed the "Return to Fly" checklist required from the March 2012 fleet stand-down. Therefore, 7 of the 16 aircraft are still "grounded" pending completion of this checklist. Of the 9 aircraft authorized to fly, any number may be unable to fly each day due to awaiting a part. It would be a snapshot in time, as it would be for any USAF flying unit. It is simply untrue to claim that 14 of the 16 are "grounded" due to lack of parts. Instead, a more generalized statement can be made that "due to the lack of critical spare parts, the contractor is unable to provide sufficient mission capable aircraft each day to meet contractual requirements."

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~~(FOUO)~~ b. Section title "Background" (page 2, para 3): "Even though Alenia North America failed to deliver the spare parts initially ordered in 2008...."

Page 18

- The initial spares lay-in order has been 99.9% delivered. The overarching statement used in the memo implies a much worse statistical delivery rate. The program office has placed many more orders since 2008 for spare parts, and not all of those have been delivered. Perhaps that is what you are referring to. If so, the current language is inaccurate and misleading.

~~(FOUO)~~ c. Section title: "Long-Term Strategy..." (page 2, para 4): "NTM-A/CSTC-A officials stated that while an AAF medium airlift requirement still exists, the G222 cannot meet the performance characteristics required for medium airlift and is currently being used only for training purposes."

Page 18

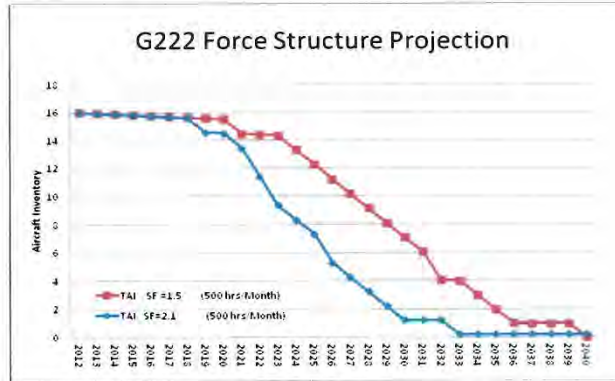
- This statement is untrue. The program office has recently been in Kabul, Afghanistan, and they maintain daily direct dialogue with NTM-A/CSTC-A leadership. The G222 continues to conduct airlift missions beyond just training missions. The concern is with its availability (typically 1-2 aircraft available each day, with 1 or both of them ground aborting due to maintenance issues) and its performance in the high altitudes and hot temperatures (forcing missions to go early in the morning during the summer months). These limitations are of great concern and force other aircraft to sometimes perform the mission that the G222 should be performing, but it has not been relegated to only conducting training missions. The statement in this memo is simply untrue.

~~(FOUO)~~ d. Section title: "Estimated Service Life..." (page 3, para 1): "G222 program officials cannot accurately determine the amount of spare parts needed to sustain the aircraft until an accurate estimate of the G222 service life in Afghanistan is known."

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- Not sure this belongs with the service life estimate. The airframe service life is driven by the flying hour program and mission profile/mix. This provides an estimated force structure available to support the mission over time. The structural health assessment is to determine the appropriate severity factor required to convert "flying hours" into "equivalent flying hours" and project remaining airframe structural service life. Severity factors are not constant values, changing as mission profiles/mix change to accommodate training, tactics and technique requirements. In the case of the G222, flight data will be recorded and severity factors updated annually. Based on the initial mission mix/profiles and theoretical fatigue analysis performed by Alenia Aermacchi, the PMO estimates the AAF severity factor (SF) to be in the range of 1.5-2.1.

Based on these initial estimates, and assuming an average of 500 flying hours executed per month and the maximum number of operational G222 aircraft is 16 (4 cannibalization aircraft), the G222 Force Structure is shown below.



If an aircraft reaches its "service life" (20,000 hours design life for G222), it may not necessarily be grounded. An aircraft can have its service life extended via the use of additional structural inspections. In the case of the G222, which is a small fleet with a fairly short life expectancy (10 years/10,000 flying hours, based on its refurbished condition), spare parts requirements will be dominated by non-structural/system (props, engines, comm/nav, landing gear, and utility system) spare requirements/demand rates.

~~(FOUO)~~ e. Section title: "Reliable G222 Spare Parts Consumption..." (page 4, para 1): "Therefore, 14 of 16 aircraft in Afghanistan are currently grounded because of a lack of critical spare parts."

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- This is a restatement from the Background section and still is unfair to call 14 grounded due to lack of spare parts. As the aircraft are going through the regeneration checklist this is driving at least 7 to be grounded until completion of the checklist, which is being driven by maintenance and not sparing issues.

f. Section title: "Determination of G222 Sustainment Cost" (Page 4, para 3): Opening sentence of last paragraph.

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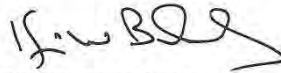
~~(FOUO)~~ - Unfair characterization of the facts. On page 2 of this memo, you refer to an October 2007 MOR that required the program office to procure 18 G222s. Yet here you reference an earlier, obsolete MOR that had yet to identify the platform solution by name. Once the 30 October 2007 MOR was issued, the program office was no longer under obligation to "consider sustainment costs in the acquisition decision." The decision had been made by the User to pursue a directed source, with no request for sustainment costs to be considered.

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6. As stated earlier, we concur with your conclusions and recommendations, and they match the path we have already been taking in our communications with the User, represented by NATC-A (under NTM-A/CSTC-A). The program office is proactively pushing the dialogue within the User community to determine the future of the G222 program, and the method(s) to meet the AAF medium airlift requirement. We have no intention to obligate additional Afghanistan Security Force Funds (ASFF) for spare parts, beyond those necessary to secure Aircraft on the

Ground (AOG) parts to meet immediate mission needs, without a firm consensus on the way forward.

7. My POC for this subject is [REDACTED] Chief of the Tactical Airlift Foreign Military Sales Branch at Robins AFB, GA. You can reach [REDACTED] at DSN [REDACTED] commercial [REDACTED] or via e-mail at [REDACTED]



KEVIN W. BUCKLEY
Program Executive Officer for Mobility

Attachment:
NTM-A/CSTC-A Response

~~FOR OFFICIAL USE ONLY~~

NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan Comments



REPLY TO
ATTENTION OF
NTM-A/CSTC-A

HEADQUARTERS
NATO TRAINING MISSION - AFGHANISTAN
COMBINED SECURITY TRANSITION COMMAND - AFGHANISTAN
KABUL, AFGHANISTAN
APO AE 09356

8 Dec 12

MEMORANDUM THRU United States Forces - Afghanistan (CJIG), APO AE 09356
United States Central Command (CCIG), MacDill AFB, FL 33621

FOR: Office of the Department of Defense – Inspector General, 4800 Mark Center Drive,
Alexandria, VA 22350-1500

SUBJECT: NTM-A/CSTC-A Response to the Draft Report “Critical Information Needed to Determine
the Cost and Availability of G222 Spare Parts” (D2012-D000AT-0170.000)

REFERENCE: Draft Report, dated 28 Nov 2012, Department of Defense Inspector General.

1. The purpose of this memorandum is to recommend a change to the assigned action office to one more appropriate to answer these questions.
2. NATC-A has reviewed recommendation 1a and 1b of the draft report and request these comments be reassigned to the G-222 PMO.
3. Point of contact for this action is [REDACTED] at DSN [REDACTED] or via e-mail at [REDACTED]


STEVEN M. SHEPRO
Brig Gen, USAF
NATC-A Commander

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DRAFT REPORT

“Critical Information Needed to Determine the Cost and Availability of G222 Spare Parts” (D2012-D000AT-0170.000)

NTM-A/CSTC-A

GENERAL COMMENTS ON THE DRAFT REPORT

Recommendation 1, Page 8, states:

We recommend that the Commanding General, NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan:

a. Recommendation 1.a:

Determine, in conjunction with the Assistant Secretary of the Air Force (Acquisition), whether to continue the use of the G222 to meet the Afghan Air Force medium airlift requirement.

b. NTM-A/CSTC-A response to Recommendation 1.a:

G-222 PMO in conjunction with SAF/IA and DSCA are currently evaluating these recommendations.

c. Recommendation 1.b:

Develop a long-term strategy stating how the G222 will meet the Afghan Air Force medium airlift requirement if the decision is made to continue to use the G222.

d. NTM-A/CSTC-A response to Recommendation 1.b:

G-222 PMO in conjunction with SAF/IA and DSCA are currently evaluating these recommendations.

APPROVED BY:
STEVEN M. SHEPRO
Brig Gen, USAF
NATC-A Commander

PREPARED BY:
██████████
Maj, USAF
NATC-A J8, DSN ██████████

Department of the Air Force Comments

Final Report
Reference



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

16 JAN 2013

Col James Lovell
Senior Military Assistant, SAF/AQ
1060 Air Force
Pentagon, Washington DC 20330

██████████
Program Director, Acquisition and Contract Management
Office of the DoD Inspector General
4800 Mark Center Drive,
Alexandria, VA 22350-1500


Dear ██████████

The Secretary of the Air Force (Acquisition) concurs with the Air Force Program Executive Officer for Mobility, ██████████ regarding the 20 December 2012 memorandum in response to the DoD IG's Report (Project No. D2012-D000AT-0170.000).

Specifically related to Recommendation 1, we concur with the Air Force Life Cycle Management Center (AFLCMC) decision to discontinue delivery order on the G222 follow-on sustainment support contract (FA8553-12-D-0001) after the current order expires on 28 March 2013. The United States Government will work with Alenia Aermacchi North America to ensure a smooth ramp down of operations under the contract. As we execute our drawdown plan, there are prudent actions that we need to take in order to sustain flying operations out of Kabul. Some of these actions will absolutely require us to spend previously obligated funds for a short while longer; as it is unacceptable to walk away from the United States Government's commitment to NATO's mission in Afghanistan. The Secretary of the Air Force (Acquisition) supports the Mobility Directorate's actions taken to prevent any additional procurement of G222 parts. Therefore the Mobility Directorate will comply with Recommendation 2, but only to the extent that G222 aircraft in Afghanistan will not be rendered non-mission capable during the drawdown process.

Our POC for this subject is ██████████, Air Force Program Executive Officer for Mobility at Robins AFB, GA. You can reach ██████████ at DSN ██████████ commercial ██████████; or via email at ██████████

Sincerely


JAMES E. LOVELL, Col, USAF
Senior Military Assistant
SAF/AQ
060/SAF/AQ
16 Jan 13

Revised
Recommendation 2



DEPARTMENT OF THE AIR FORCE
AIR FORCE LIFE CYCLE MANAGEMENT CENTER
WRIGHT-PATTERSON AIR FORCE BASE OHIO

20 December 2012

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL
4800 MARK CENTER DRIVE
ALEXANDRIA, VA 22350-1500

FROM: AFLCMC/WL
2590 Loop Road West
Wright-Patterson AFB OH 45433

SUBJECT: Response to DoD IG's Report (Project No. D2012-D000AT-0170.000),
dated 28 November 2012, "Critical Information Needed to Determine the
Cost and Availability of G222 Spare Parts"

1. The Mobility Directorate has reviewed the subject report and offers this response to the report's contents and its specific recommendations.
2. The Mobility Directorate takes exception to Recommendation 2, which states in part, "G222 PMO officials should not obligate any additional funds and not expend previously obligated funds to procure spare parts until they prepare a sustainment plan that considers costs for the G222 program." Until a decision is made to halt flying operations in support of overseas contingency operations in Afghanistan, it would be imprudent to halt the expenditure of funds already obligated to sustain the existing G222 fleet operating out of Kabul, Afghanistan. If the G222 program office was to follow the DoD IG's recommendation, we would immediately ground the G222 fleet due to an inability to procure necessary parts to generate aircraft for daily missions. This is unacceptable if we are to meet the United States Government's commitment to NATO's mission in Afghanistan. However, the Mobility Directorate has taken action to prevent any additional procurement of spare parts that are only destined for shelves – we are only procuring parts that will fill existing holes on aircraft. Therefore, the Mobility Directorate will comply with Recommendation 2 but only to the extent that G222 aircraft in Afghanistan will not be rendered non-mission capable due to lack of spare parts.
3. My POC for this subject is [REDACTED], Chief of the Tactical Airlift Foreign Military Sales Branch at Robins AFB, GA. You can reach [REDACTED] at DSN [REDACTED] commercial [REDACTED] or via e-mail at [REDACTED].

Revised
Recommendation 2

KEVIN W. BUCKLEY
Air Force Program Executive Officer for Mobility

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Inspector General
Department of Defense

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