



SECRETARY OF THE AIR FORCE
WASHINGTON

JUL 18 2018

The Honorable Charles E. Grassley
Chairman
Committee on the Judiciary
United States Senate
Washington, DC 20510-6275

Dear Mr. Chairman:

In addition to the response you received from Mr. Glenn A Fine, Principal Deputy Inspector General, I am responding to provide further context on sustainment costs related to the C-5 aircraft and additional Air Force-specific concerns raised in your June 6, 2018 letter.

You are right to be concerned about sustaining aging fleets of aircraft, and I'm thankful to have your support in addressing this problem. The average age of our C-5 fleet is 39.6 years and it uses approximately 70,000 different parts. Lockheed Martin stopped building the C-5 in 2001 and many part suppliers have either stopped producing certain parts or may have gone out of business.

Here is how we see it: it is simply irresponsible to spend thousands of dollars on manufactured parts when we have the technology available to produce them ourselves. Using agile manufacturing (3D printing, cold spray, digital modeling, etc.), the Air Force is now capable of producing over 300 aircraft parts at a fraction of the cost identified by industry. We have begun 3-D printing at lower cost the C-5 part you mentioned to reduce that cost to taxpayers by more than 95 percent.

Advanced manufacturing is a significant priority for all of the Services as part of a broader strategy to reform acquisition and drive down cost. The Rapid Sustainment Initiative, included in the FY19 Senate Defense Appropriations Bill, will continue to advance the efforts of all the Services in this regard. We very much appreciate your support of this initiative. While 3-D printing of parts is one promising way to reduce the cost of maintaining aircraft, there are others that we are also pursuing, including techniques that repair the worn surface of metals so that parts do not have to be replaced.

We think there are opportunities to get better value for taxpayer dollars and we would be happy to come brief you on some of the efforts we have underway to do so. Thank you for taking an interest in this. It is very important work.

Sincerely,

Heather Wilson

Attachment:
Responses to C-5 Concerns

Response to Senator Grassley 6 June 2018 Letter

Q3: Is the Air Force actually paying \$10,000 for this item?

A3: The Air Force thinks that this is way too high to pay for this structural panel cover. The part is necessary to protect the structural integrity of the aircraft from corrosion damage in the latrine area, and its numerous compound curvatures, but it is not all that complex. The Air Force has decided to 3-D print this part at a manufacturing cost of approximately \$300.

Q4: Provide a breakdown of the cost for the whole [C-5] commode.

A4: The C-5 program office will begin installing a new lavatory system across the fleet in late 2018. The entire C-5 lavatory system, which includes not just the commode but all electrical, mechanical and plumbing required to allow the system to function while in flight, costs approximately \$115,000.

Q5: Could the OIG please provide supporting documentation that verifies the cost of the C-5 toilet seat lid?

A5: The figure below shows the cost if the Air Force were to buy the part and have it manufactured in a traditional way. We thought that it was too expensive, so the Air Force is printing it at a total manufacturing cost of \$300.

The screenshot shows the TLS-S Asset Inventory Information system. At the top, there is a search bar and navigation links for Menu and Alerts. Below the header, the page is titled "Asset Inventory Information" and "Search by NSN/NIN". The main section is "General Information" and contains the following data:

NSN / NIN: 012283513	Source of Supply: SMS	Manager Review Code:
Filter by DoDAAC: ALL	ERRC / ERRCD: NXB3	Unit of Issue: EA
Item Name: COVER,ACCESS	Budget Code: 9	Standard Price: 13982.5
Part Number: Multiple	Cage Code: Multiple	Acquisition Advice Code: J
BOSS Code: 11803	ILUD Item: No	

Q6: Given the production line issues cited by Dr. Roper, why not shift this work to a commercial manufacturer, where it could be produced to Air Force specifications at a reasonable price?

A6: The high cost part is currently produced by a commercial manufacturer. After the original equipment manufacturer stopped producing the part in 2001, primarily because of low demand for the item, several new vendors were identified. However, the low and unpredictable demand for this item has made procurement much more costly. Specifically, new vendors need to develop a 3D model from our 2D drawings, develop tooling, and buy minimum quantities of raw materials to make only one or two items. Instead, the Air Force will use 3-D printing to produce this part at a cost of approximately \$300. We are currently manufacturing over 300 parts this way and our goal is to use this process as much as possible as the technology continues to advance in order to keep cost low.