

Congress of the United States
Washington, DC 20510

10 July 2012

The Honorable Michael B. Donley
Secretary of the Air Force
1000 Defense Pentagon
Washington, DC 20301

Dear Mr. Secretary:

We write today to express our appreciation for efforts to address the health and safety of U.S. Air Force F-22 Raptor pilots. Recent restrictions on F-22 flight operations, and the expedited installation of a backup oxygen system, should increase the confidence of our pilots in the wake of problems related to F-22 life support systems.

We fully share your ultimate goal of returning the F-22 to full 100% mission readiness. We appreciate USAF Major General Edward Bolton's letter and email early last month responding to several of our questions, and we further appreciate the two briefings provided so far by USAF Major General Charles Lyon, who is leading the F-22 task force.

However, based on the information provided by USAF and other, more recent, developments, we continue to have concerns about efforts to isolate and correct the cause(s) of the hypoxia and hypoxia-like incidents experienced by F-22 pilots.

According to published reports and information shared directly with our offices, we understand there was a hypoxia-related in-flight emergency declared by an F-22 pilot incident on July 6th at Joint Base Pearl Harbor Hickam, HI, a "restricted airflow" incident in late June involving an F-22 pilot at Joint Base Langley-Eustis, VA, and a May 31st mishap at Tyndall Air Force Base, FL in which an F-22 reportedly impacted the runway without extending its landing gear.

Based on these and other recent developments, we would appreciate your timely response to the following additional questions:

1. A July 2nd story in The New York Times disclosing the recent incident at Langley cited a cumulative total of 36 hypoxic incidents, with 21 reportedly classified as unexplained, and attributed this information to USAF. Those numbers appear to include additional incidents that were not disclosed in our June 12th USAF briefing.
 - We request that you provide all relevant information on the cumulative number of F-22 hypoxia and hypoxia-related incidents, both explained and unexplained, on the

ground and in the air. We further request that this data be conveyed as a rate per 100,000 flight hours, compared to similar rates for other USAF aircraft.

2. We are encouraged by the mitigation measures implemented on May 15th at the direction of the U.S. Secretary of Defense, and we are pleased to learn that your recent collaborations with NASA and the Naval Experimental Dive Unit have helped to isolate potential issues with F-22 pilot survival gear, including the upper pressure vest. However, this news of potential deficiencies in pilot survival gear raises additional questions:
 - Did USAF test these critical flight survival systems before requiring pilots to wear the upper pressure vest? If so, what were the results of that initial testing, and why does the system appear to be failing now?
 - During the 18-24 months that F-22 pilots repeatedly reported oxygen-deprivation concerns, when did USAF first examine the vests and/or its related oxygen hoses and connections?
 - Did USAF look at this specific equipment during the 2011 grounding and safety stand-down? If not, why not, and if so, what were the results?
 - Based on these preliminary findings, will a new equipment inspection regimen now be implemented by USAF? Which specific components will be inspected, and how often?
 - Will these deficiencies require the redesign and/or procurement of additional safety equipment? Which specific components are included? Will this procurement process be sole-sourced or competitively bid?
3. We have been informed by USAF officials that the onboard oxygen generation system (OBOGS) may not provide enough oxygen for pilots operating at higher altitudes while sustaining powerful G-forces.
 - Is the Air Force "Root Cause Group" testing this potential design deficiency?
 - Will the panel use the latest data from the Air Standardization Coordinating Committee, which apparently has concluded that the quantity of oxygen required for pilots to perform full F-22 operations may, in fact, be greater than what is supplied under the current OBOGS configuration?
4. Finally, on June 5th, USAF awarded a \$19 million contract to Lockheed Martin for an automatic backup oxygen supply (A-BOS) for the F-22, to be installed by the end of 2013. Was this \$19 million F-22 contract sole-sourced, or was it awarded after soliciting competitive bids?

We appreciate the recent advances that have been made toward a resolution of the F-22 Raptor issues, and we again thank you for your continued leadership. We would ask that you provide us with a follow-up briefing on these issues within 30 days or sooner so that we might continue to work with you to ensure that the F-22 remains a vital component of the USAF mission.

Sincerely,



Mark R. Warner
U.S. Senator
Virginia



Adam Kinzinger
Member of Congress
Eleventh District of Illinois