SUBJ: DACOWITS RFI 6 – June 2020 QBM

FROM: Office of Aviation Forces (CG-711)

TO: DACOWITS

THRU: Office of Diversity & Inclusion (CG-127)

WOMEN IN AVIATION

The Committee requests a **written response** from the **Military Services** on guidance or policies that address how new aircraft procurement accommodates the widest range of Service members, to include:
a. Does this guidance or policy consider anthropometric factors to ensure aircraft designs accommodate smaller female measurements?
b. What aircraft (by type and function) currently are not in accordance with these policies?
c. What are the current limitations associated with having some types of aircraft (e.g., trainers) that do not meet policy requirements?
d. Are there accommodations that have been/can be made to legacy aircraft in the current inventory that are not in accordance with the policy to better accommodate the widest range of Service members? If so, what are those accommodations? If not, why not?

The Committee requests a **WRITTEN RESPONSE** from the Military Services to include Reserves.

CG Response:

a. Does this guidance or policy consider anthropometric factors to ensure aircraft designs accommodate smaller female measurements?

The Coast Guard's current policy for aircraft acquisition, set forth in Operational Requirements Documents (ORD), ensures aircraft designs accommodate smaller female measurements. The ORD documents direct each aircraft to conform to these anthropometric standards:

"The [aircraft] shall be designed for operation and maintenance by personnel ranging anthropometrically from the 5th percentile of females to the 95th percentile of males as defined in DoD-HDBK-743 (Anthropometry of U.S. Military Personnel)."

Current Coast Guard aircraft inventories may not conform to these new standards since they were acquired prior to the publishing of the updated ORD. However, any changes to the current inventory's cockpits or flight decks will conform to the DoD-HDBK-743 standard and this standard, or a similar requirement, will apply to any future acquisitions.

b. What aircraft (by type and function) currently are not in accordance with these policies?

Operational Aircraft:

Currently, the MH-65E is the only known aircraft that does not comply with the policy contained in the ORD. The MH-65E will be primarily used for Search and Rescue and Law Enforcement.

The MH-65D is currently being upgraded to the MH-65E. In the last year, the Coast Guard conducted a human performance design analysis of the MH-65D's instrument panel upgrade. During a sit and reach test, the measurement for one of the multifunctional display (MDF) buttons failed for both the 5% female and 95% male test.

However, the Coast Guard identified an alternate way of displaying the selected information using a switch on the collective and this will be highlighted during the transition training. The alternate way of displaying the information will mitigate any risk that the instrument panel upgrade limits the pool of potential aircraft pilots.

The Coast Guard is not aware of any other aircraft or operational configurations that do not meet the 5% female to 95% male anthropometric policy. The most recent traditional acquisition was the C-144 medium-range fixed-wing aircraft in 2006. The aircraft meets the required anthropometric standards despite not being specifically designed to the 5% female-95% male standard. , if does comply with FAR Part 25, which requires design minimums to accommodate people between the heights 5'2" and 6' 1.5".

Training Aircraft:

The Coast Guard does not have its own flight school; student aviators attend the Navy's flight training program in Pensacola, FL. At this time, the Coast Guard does not have the necessary information to know whether Navy training aircraft complies with DoD-HDBK-743 or a similar standard that meets the anthropometric standards.

In 2013 Coast Guard anthropometrics were modified; a shift that unintentionally moved away from US Navy anthropometric measurements, in particular, the measurements required to meet standards for US Navy training aircraft. The results of this shift included an increased number of requests for functional cockpit checks in Coast Guard aircraft for larger applicants. It also resulted in at least three cases of applicants who received orders for aviation training who were returned to the Coast Guard because the applicant did not meet Navy anthropometric standards for the training aircraft. In 2019 the CG updated its measurements to more closely align with Navy training standards. The CG does conduct aircraft checks for applicants who meet Navy training measurements but not CG minimums.

c. What are the current limitations associated with having some types of aircraft (e.g., trainers) that do not meet policy requirements?

There are currently no limitations associated with the MH-65E's failure to meet policy requirements because, as discussed in response to RFI (b) above, there is an alternative method for displaying the information using the button on the collective.

Using the Navy's training pipeline requires the Coast Guard to comply with Navy anthropometric standards. If the Navy aircraft standards are more restrictive than the 5% female to 95% male standard, some potential Coast Guard aviators would be unable to pursue training. The Navy Chief of Naval Air Training (CNTRA) does not waive anthropometric standards for training aircraft and does not conduct functional cockpit checks. According to CG records, since October 2013, 9 waivers were requested for Coast Guard trainees, 8 from student naval aviators: 6/F (75%) and 2/M (25%), and one male aircrew applicant. Of the 8 personnel requesting aviator training waivers, 7 conducted "aircraft checks" where they demonstrated the ability to sit in the aircraft and reach/control all required inputs, and all received waivers. One prospective female pilot did not conduct the aircraft check, and was therefore not granted a waiver.

d. Are there accommodations that have been/can be made to legacy aircraft in the current inventory that are not in accordance with the policy to better accommodate the widest range of Service members? If so, what are those accommodations? If not, why not?

The Coast Guard is not aware of any particular legacy aircraft with a systemic issue that limits the opportunity for flight training and a subsequent career in aviation. Accordingly, the Coast Guard has not needed to make any post-production modifications to its aircraft to accommodate more service members.