

**SUBJ:** DACOWITS RFI #8 - March QBM

**FROM:** U. S. Coast Guard Office of Aviation Forces (CG-711); Personnel Service Center, Personnel Service Division, Medical (PSC-PSD-MED); and Office of Health Services, Operational Medicine and Quality Improvement Division (CG-1121) Aviation Medicine.

**TO:** DACOWITS Committee

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

**WOMEN IN AVIATION (E&I)**

**In December 2018, the Committee received briefings on the status of women in aviation. During these briefings, concerns about the sizing of equipment as a barrier to women's service in aviation emerged.**

The Committee requests a **WRITTEN RESPONSE** from the Military addressing the following:

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**DACOWITS:**

- a. What actions have been take or will be taken to accommodate the physiological differences in women verses men since aviation positions have been opened to women? Pertaining to aircraft, flight gear, training, etc.
- b. What are the anthropomorphic measurement requirements for service as a pilot? Service as Air Crew? When were these requirements established?
- c. Approximately what percentage of Service members were disqualified from flight status based on these requirements? Provide breakdown by gender.
- d. What are the anthropomorphic measurement requirements for each aviation platform and why?
- e. What are the anthropomorphic measurements around which flight equipment is procured?
- f. What is the process to procure sizes of flight equipment not in a squadron's inventory? How long does the process take?
- g. What is the process to procure uniquely sized flight equipment not in standard issue?

**CG Response:**

**a. Answer provided by CG-711:**

The Aviation Life Support Equipment Technical Services Division (ALSE Tech) is a part of the Aviation Logistics Center (ALC), in Elizabeth City, NC. As aviation positions were opened to women, ALSE Tech and corresponding DoD offices worked with industry partners to ensure female sized flight suits and dry suit undergarments were developed for procurement and issuance.

In December 2016, CG-711 developed a requirement for the Office of Aeronautical Engineering, COMDT (CG-41) to upgrade and modernize Rescue Swimmer (RS) deployment ensembles (wet and dry suits). This requirement is partially satisfied as the wet suit portion is complete. ALSE Tech only requires certain key salient characteristics for procuring wet suits which allows for more "choice" by the end-user. As a result female Rescue Swimmers now have the option to order female-sized and fitted wet suits. The dry suit portion of this requirement is still in development.

ALSE Tech is fit testing 3 female aircrew dry suits this March (currently in production at Switlik) in Traverse City. These dry suits incorporate a "rainbow" zipper in the seat and a vertical in-flight relief zipper in the crotch. Following participant feedback and refinement these options will be added to the ADC Blanket Purchase Agreement (BPA). These items are now funded by ALC and centralized ordering will be available for all Coast Guard units.

ALSE Tech will solicit feedback from users on the effect the new female fit ADCs have on in-flight urination. This feedback will drive ALSE Tech's research efforts in the coming year as it pertains to "worn" options such as piddle packs, etc.

Additionally, the Coast Guard is testing a two-piece flight suit. This design's use in DoD services has shown improved facilitation of in-flight bladder relief for women. If approved, this new flight suit will be available for procurement and use.

Lastly, a representative from USCG ALSE team attended the 2019 female fitment seminar hosted by the USN in Langley, VA. As a result, the USCG developed several DoD contacts that will help ensure awareness of challenges and opportunities for female ALSE gear in the future.

**b. Answer provided by CG-112:**

The anthropomorphic measurement requirements were established by ALCGOFF 157/19 on 30 OCT 2019 for pilots. For other aircrew they remain unchanged since the Aviation Medicine manual (CIM 6410.3 (series)) creation with the only requirement being they shall not measure less than 60 inches tall. The current version of the AVMEDMAN (CIM 6410.3A)

was published on 4 Apr 2012 and is due for revision.

**c. Answer provided by CG-PSC-PSD-MED:**

The Coast Guard uses the Aeromedical Electronic Resource Office (AERO) owned by the United States Air Force to track aviation waivers and physicals. The following anthropometric waiver data is exclusively based on the AWRH3 code. According to AERO, 8 accession waivers (6/75% female and 2/25% male) for flight school applicants were submitted between 23 October 2013 and 16 January 2020. One female Coast Guard Academy cadet in 2020 was disqualified (12.5%). The waiver was not recommended for not meeting one anthropometric standard. Regardless of gender the same standards were applied to all applicants after passing a cockpit functional/fit test before waiver submission. Also, one anthropometric waiver for an initial aircrew male candidate in 2018 was recommended for not meeting the height standard.

**d. Answer provided by CG-112:**

There are no longer variations from aviation platforms as noted and explained by ALCGOFF 157/19. Current recommended measurements allow for required training while allowing participation in all USCG aircraft.

**e. Answer provided by CG-711:**

Aviation Life Support Equipment is procured based on industry (DoD, civilian, interagency) best practices. All equipment goes through a rigorous CG testing process to make sure it is compatible with the airframe, end user, and it meets mission requirements. Custom or less common sizes are procured as needed, but unit stocks are maintained based on historical need.

**f. Answer provided by CG-711:**

If an aircrew member of any gender requests a standard issue item that is not in inventory, the unit's supply personnel will order the item. If commercial distributors have the item in stock, it will usually arrive within one week and the requesting member will be notified. If a DOD unit with a higher priority places an order, the Coast Guard unit may have to wait for those requests will be filled first, resulting in a longer wait.

The Aviation Logistics Center, along with ALSE Tech, is currently working to develop an ALSE Product Line which will streamline this process even further. However, there is no estimated implementation date at this time.

**g. Answer provided by CG-711:**

The majority of personnel fit into standard sized gear. Most items can be ordered with custom sizing, especially dry suits and flight suits. However, custom ordered gear almost always has longer lead times. Due to the relatively small number of personnel at Coast

Guard Air Stations, inventory managers are usually very familiar with the personnel they serve and often know if one of their pilots or aircrew members need less common or custom-sized gear. Once the inventory manager is introduced to a member with non-standard sizing needs during that new member's initial check-in to the unit, the inventory manager then takes steps to order the aircrew member's unique sizes and can keep those less common sizes in stock.

ALCOAST COMMANDANT NOTICE

CANCEL DATE 08 MAY 2020

R 090803 MAY 19

FM COMDT COGARD WASHINGTON DC//CG-11//

TO ALCOAST

UNCLAS //N06410//

ACN 043/19

SUBJ: ANTHROPOMETRIC MEASUREMENTS AND WAIVER PROCEDURES FOR AVIATION CANDIDATES

- A. Coast Guard Aviation Medicine Manual, COMDTINST M6410.3 (series)
- B. Coast Guard Aeromedical Electronic Resource Office (AERO) Guide V2.0
- C. Coast Guard AERO Technical Bulletins (revised 1 Jan 2010)
- D. NAVAIR Manual, 3710.1 (series)

1. This ACN establishes updated policy regarding anthropometric measurements required of all aviation candidates.
2. This ACN also establishes policy concerning waivers of anthropometrics and single pipeline training.
3. Current Coast Guard anthropometrics were modified in 2013; 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 cockpit checks for Coast Guard aircraft for larger applicants. It also resulted in a small number of applicants each year who received orders to aviation training being returned to the Coast Guard because the applicant did not meet Navy anthropometrics for the training aircraft. Chief of Naval Air Training (CNTRA) does not waive anthropometric standards for training aircraft. They do not do functional cockpit checks.
4. Anthropometrics are determined by a measuring process at Naval Air Systems Command (NAVAIR) in Patuxent River, MD. Over time, these measurements have evolved to become very specific as the process has become computerized and increasingly sensitive. Height and weight, previously used as screening tools, are no longer required given the precision of the measurements. The only weight requirement remaining is for the T-6, based on the ejection seat. Historically, NAVAIR has completed anthropometrics on 2 Coast Guard aircraft: the HU-25 and the MH-65. All other Coast Guard aircraft have DOD equivalents with the exception of the HC-144 and HC-27.
5. Historically, the Coast Guard has avoided pipeline training in order to allow more flexibility regarding the ability to train aviators in different aircraft as dictated by the needs of the service. Waivers for single aircraft have been rare. Applicants who did not meet anthropometric standards were required to undergo cockpit safety checks in each aircraft and if the applicant was unable to reach all required instruments in Zone 1 while fully restrained in any aircraft, the member was disqualified for aviation training.
6. A new, single set of anthropometrics has been established based on the most restrictive measurements of all Coast Guard aircraft and the US Navy training aircraft. Given the accuracy of anthropometric measurements, there are no mandatory height measurements. There are weight requirements for training due to ejection seat requirements in the T-6; the minimum weight is 103 lbs. and the current maximum weight is 231 lbs. Total arm reach and crotch height are no longer required.

## USCG ANTHROPOMETRICS TABLE 1

| Buttock-Knee Length<br>(inches) | Sitting Height<br>(inches) | Sitting Eye Height<br>(inches) | Thumb Tip Reach<br>(inches) |
|---------------------------------|----------------------------|--------------------------------|-----------------------------|
| 21.0-26.9                       | 33.0-39.428.5 or Greater   | 28.5 or Greater                |                             |

7. A waiver process has been developed in the event that an individual does not meet all the anthropometric requirements. A flow chart will be included in future Aeromedical Policy Letters which can be accessed at:

<https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-Human-Resources-CG-1/Health-Safety-and-Work-Life-CG-11/Office-of-Health-Services-CG-112/Operational-Medicine-and-Quality-Improvement-Division/Aviation-Medicine/>. A waiver must be submitted and approved before a member can be selected for aviation training.

- a. If the applicant meets ALL Coast Guard requirements, the applicant may continue the physical process to determine medical qualification. If an applicant does not meet CG anthropometric requirements, the applicant must be measured to ensure standards for US Navy trainers (T-6, T-44 and TH-57) are met, as per REF (D).

## US NAVY ANTHROPOMETRICS TABLE 2

| AIRCRAFT | BUTTOCK-KNEE LENGTH | SITTING HEIGHT | SITTING EYE HEIGHT | THUMB TIP REACH |
|----------|---------------------|----------------|--------------------|-----------------|
| T-6 A/B  | 21.0-28.9           | 31.0-40.9      | 26 or Greater      | 26.5 or Greater |

|        |           |         |                 |                 |
|--------|-----------|---------|-----------------|-----------------|
| TH-57C | 21.0-27.9 | 32-39.4 | 27.5 or Greater | 27.5 or Greater |
| T-44A  | 21.0-28.4 | 32-40.9 | 27.5 or Greater | 28.5 or Greater |

b. If the applicant meets requirements for all US Navy trainers, the applicant may progress to cockpit safety check in all Coast Guard aircraft. If the applicant does not meet T-44 requirements, the applicant may progress to cockpit safety check in Coast Guard Rotary aircraft. If the applicant does not meet requirements for the T-6 or TH-57, the applicant is disqualified (DQ) from aviation training.

c. If the applicant is cleared to perform in all CG aircraft, a waiver for anthropometrics may be submitted to OPM.

d. If the applicant is cleared for some but not all CG aircraft, the applicant may submit a pipeline specific waiver for those aircraft cleared.

8. Delete Table 1-1 in REF (A) with the Table found in paragraph (6) of this ACN.

9. Delete portion of Table 5 in REF (B) with regard to Anthropometric Standards.

10. Delete ATB: Anthropometric Measurements and Standards from REF (C).

11. These changes will be incorporated into the next updates of REFs (A)-(C) which will be released within one year of this ACN.

12. POC: CAPT Kimberly Roman, Aviation Medical Standardization Officer, 251-441-5757, Kimberly.W.Roman@uscg.mil.

13. Released by CDR Jeremy R. Denning, Acting Director of Health, Safety and Work-Life.

14. Internet release is authorized.

R 30 OCT 19

BT

UNCLAS //N01500//

ALCGOFF 157/19

SUBJ: 2020 FLIGHT TRAINING SOLICITATION

A. AVIATION MEDICINE MANUAL, COMDTINST M6410.3A

B. ACN 043/19

C. PERFORMANCE, TRAINING AND EDUCATION MANUAL, COMDTINST M1500.10C

1. Active duty officers in the grades of ENS/LTJG may apply for the Coast Guard Flight Training Panel scheduled to convene 06 Jan 2020. Lieutenants may apply, but will not normally be primary candidates. Selection for this highly competitive program leads to designation as a Coast Guard Aviator with subsequent assignment to duty standing billets within Coast Guard aviation. Candidates selected by this panel will receive orders to report to flight training between 01 Apr 2020 and 01 Sep 2020. Please read this message in its entirety to ensure compliance with the application procedures.

2. Part I of the application is submitted via Direct Access. The deadline for the application submission is 29 Nov 2020. For flight training applications use the "My Panel Submissions" link located under "Tasks." In addition to the instructions listed in the OPM Reference Library, the following step by step directions are provided below:

a. Log in to Direct Access

b. In the "EMPLOYEE" box, click "Tasks"

c. Select "My Panel Submissions" (NOTE: DO NOT SELECT "PCS e-resume")

d. Select "Advanced Training" from the "Panel Source" drop down menu and click "GO"

e. When the search screen appears, enter the following:

AD/Res Ind: "Active Duty"

Bus unit: "Officer"

Job Code: 000097

f. Click "Search"

g. A list of Advanced Training programs will appear. Check the "Apply" box next to Flight School Panel (FLSFPN).

h. Click "Submit"

3. In addition to the DA application, Part 2 is a document submitted via email. Applicants are required to email the following documents in a clear single PDF to YN3 Adolfo F. Jimenez at Adolfo.F.Jimenez@uscg.mil:

a. ASTB results - all applicants must successfully complete the ASTB with the following minimum scores: Academic Qualification Rating (AQR) 4/ Pilot Flight Aptitude Rating (PFAR) 5.

b. College transcripts.

c. Flight training/FAA certifications on CG-4082: if applicable, all civilian flight training/FAA certifications must be documented on a CG-4082, signed by the Commanding Officer, to be considered.

d. Personal narrative with command endorsement: the narrative shall be a CG memorandum with a one-page endorsement from their Commanding Officers. Commanding Officers should include their opinion of the applicant's interests, ability, and potential value to CG aviation in the endorsement. Format and general guidelines for both the narrative and endorsement are provided on the CG Portal located at:

<https://cg.portal.uscg.mil/units/psc/opm2/SitePages/Aviation%20Assignments.aspx>

4. All required documentation is due 29 Nov 2019. All officers whose packages are received on or before 29 Nov 2019 will receive a confirmation email. Officers who do not receive an email should contact YN3 Adolfo Jimenez to determine the status of their applications. Packages must be complete and arrive on time to be considered.

5. IAW Ref A, a flight surgeon approved flight physical must be dated on or after 06 Jan 2019 and entered into the Aeromedical Electronic Resource Office (AERO) by 02 Dec 2019. Paper physicals will not be considered. All physical exams must have DD forms 2808 and 2807-1 completed. Any required medical waivers must be completed and approved by 30 Dec 2019.

6. Previously non-selected flight applicants need to submit new flight applications and copies of previously qualifying physical examinations dated after 06 Jan 2019.

7. A single set of anthropometrics has been established based on the most restrictive measurements of all Coast Guard aircraft and the US Navy training aircraft. Due to ejection seat limitations associated with the T-6 TEXAN training aircraft, all flight panel applicants must weigh between 103-231lbs. Anthropometric measurements for Coast Guard aircraft are below:

| Buttock-Knee Length<br>(inches) | Sitting Height<br>(inches) | Sitting Eye Height<br>(inches) | Thumb Tip Reach<br>(inches) |
|---------------------------------|----------------------------|--------------------------------|-----------------------------|
| 21.0-26.9                       | 33.0-39.4                  | 28.5 or Greater                | 28.5 or Greater             |

Additional information on how these are made can be found in Ref B.

8. Applicants should carefully examine the visual acuity standards for flight training in Ref A. Applicants who have undergone vision correction surgery must adhere to all requirements listed in Ref A, Chapter 1C, Section 12 for selection panel eligibility.

9. IAW Ref C the age limitation for Naval Flight Training is 31. Candidates must not turn 31 prior to reporting to flight training. This cannot be waived.

10. IAW Ref C, all applicants completing flight school as a result of this panel will incur eight years of obligated service in addition to any previous obligated service. Officers disenrolling prior to completion of flight training will incur one month obligated service for every month of training completed.

11. For questions regarding the flight school application process, please contact YN3 Jimenez at (202) 795-6451 or Adolfo.F.Jimenez@uscg.mil. For information about aviation career opportunities please contact CDR Jessica Davila at (202) 795-6461 or Jessica.S.Davila@uscg.mil.

12. CAPT M. T. Brown, PSC-OPM, sends.

13. Internet release authorized.