DEPARTMENT OF THE NAVY
COMMANDING OFFICER
NAVAL AVIATION SCHOOLS COMMAND
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PENSACOLA, FLORIDA 32508-5221

NAVAVSCOLSCOMINST 3710.1B
N3B
30 JAN 2012

NAVAVSCOLSCOM INSTRUCTION 3710.1B

Subj: STUDENT ANTHROPOMETRIC AIRCRAFT COMPATIBILITY PROGRAM

Ref: (a) OPNAVINST 3710.37A
(b) NAVAIRINST 3710.9D
(c) OPNAVINST 3710.7T

Encl: (1) Typical U.S. Navy Aviation Training Pipelines

1. Purpose. To set forth policy and designate Naval Aviation Schools Command (NAVAVSCOLSCOM) responsibilities to ensure anthropometric compatibility when selecting prospective Naval Aviators; to include applicants, candidates, and designated student naval pilots and naval flight officers. This instruction and program exist to enhance safety in Naval Aviation. Proper execution of this program will enhance selection and pipeline assignment, aircrew safety, equipment safety, readiness and increase cost effectiveness of the Naval Aviation Enterprise. This instruction is a complete revision and should be viewed in its entirety.

2. Cancellation. NAVAVSCOLSCOMINST 3710.1A

3. Scope. This instruction applies to NAVAVSCOLSCOM personnel using anthropometric aircraft compatibility data for Aviation Preflight Indoctrination (API) students.

4. Background

a. Anthropometry is the science of measuring the human body, its parts, and functional capacities. A system of anthropometric measurements and coding has been developed to identify individual compatibility with current cockpit dimensions. This procedure will permit the future assignment of aircrew personnel with assurance that the potential for loss due to anthropometric incompatibility has been effectively reduced.

b. Restricting aircrew to a cockpit in which they are safely accommodated by anthropometric dimensions greatly mitigates potential incompatibility hazards during normal and emergency operations, specifically egress and/or ejection scenarios.

5. Policy. References (a) through (c) establish and provide details for the Anthropometric Accommodation in Naval Aircraft Program.

a. NAVAVSCOLSCOM shall support and comply with reference (a), and act for Chief of Naval Air Training (CNATRA) with regard to Preflight personnel. Specifically, NAVAVSCOLSCOM shall:

(1) Evaluate anthropometric accommodation potential and determine aircraft restrictions.

(2) Ensure a copy of the anthropometric compatibility report is placed in each individual's Aviation Training Jacket (ATJ) and Naval Aviation Training and Operations Procedures Standardization (NATOPS) Flight Personnel Training/Qualification Jacket.

(3) Ensure all API graduates are assigned within training pipelines where there are no anthropometric restrictions applied unless a waiver has been approved.

b. NAVAVSCOLSCOM Anthropometrics shall comply with reference (b). This reference states the technical recommendations for anthropometric accommodation and restriction in mapped crew stations; and includes certified/qualified aircrew nude body weight for specific aircraft. For updates and further guidance the Naval Air Systems Command (NAVAIR) Anthropometric Team shall be consulted.

c. Physical Standards and Waivers

(1) All student aviators shall meet published anthropometric and weight requirements prior to commencing API training per reference (b). Anthropometric measurements will be taken no more than twice during assignment to NAVAVSCOLSCOM. Waiver requests for anthropometric incompatibility of designated student naval aviators will be submitted from the individual requesting the waiver to BUPERS 43 via NAVAVSCOLSCOM and CNATRA. USMC personnel will submit waiver requests to Commandant of the Marine Corps, Headquarters Marine Corps, Aviation Manpower and Support Branch via NAVAVSCOLSCOM and Marine Aircraft Training Support Group 21. Other service branch students attached to NAVAVSCOLSCOM will route requests through their respective service waiver approval authority. Anthropometric waiver requests for non-aviation designated students or officer candidates are not authorized.

(2) Students may be afforded safe weight gain/loss training time to meet primary training aircraft weight requirements stated in reference (c). Personnel who remain outside of weight limits and/or body fat composition requirements shall not be transferred for follow-on flight duty, and may be recommended for attrition.

(3) All other U.S. Service aviation preflight students will provide the Primary Anthropometric Officer with any waivers for anthropometrics that have been granted by their parent service. The exchange of anthropometric data between services will ensure personnel ordered to the other Service for flight training meet the host Service requirements. Personnel who do

not meet anthropometric requirements for host service aircraft will be referred to the parent service for further disposition. The host service will retain ultimate authority concerning which personnel are authorized to perform flight duties on a particular aircraft.

(4) Foreign national students will be held to U.S. Navy anthropometric requirements unless otherwise directed. If standards are not achieved, the student shall be referred to their respective parent service for further action.

6. Assignment, Responsibilities and Procedures

(a) Primary Anthropometric Officer shall:

(1) Be responsible for managing the Naval Aviation Anthropometric Compatibility Assessment (NAACA) web based evaluation data base.

(2) Be knowledgeable on all aspects of aviation anthropometrics; history, published texts and research reports, cockpit mapping methods, human dimension measuring methods, and operational impacts with respect to anthropometric policies for the joint war-fighter.

(3) Educate student officers who require remedial physical fitness and proper diet instruction. Ensure all Body Composition Assessment measurements are conducted properly.

(4) Measure aircrew who require custom fitted flight gear. Assist in taking anthropometric measurements of student aviators in order to ascertain their ability to function in and operate naval aircraft.

(5) Review anthropometric restriction reports for accuracy and initial as reviewing officer. Provide support to outlying sites and ensure proper training and certification of the site's anthropometric personnel.

b. Anthropometric Measuring Technician shall:

(1) Act on behalf of the Primary Anthropometric Officer in his/her absence.

(2) Be responsible for implementing and updating the NAACA web based evaluation data base.

(3) Be knowledgeable about all aspects of aviation anthropometrics and operational impacts with respect to anthropometric policies for the joint war-fighter.

(4) Be responsible to take physical measurements of all student aviators in order to ascertain their ability to function

in and operate naval aircraft. Measurements will include standing height, functional arm reach, buttocks to knee measurement, and sitting height.

(5) Be required to record the individual anthropometric measurements into government provided data bases. The technician will produce routine reports, assist in the preparation and present briefings and provide metrics analysis to the on-site government chain of command in support of the Naval Anthropometric Program. The technician will also take Body Composition Assessment measurements and measure aviators who require custom fitted flight gear. The technician will be responsible for training and certifying Aviation Medical Technicians on the correct use of the anthropometer and subsequent logging of obtained measurements into the government data base.

c. Flight Management and Student Control shall:

(1) Be responsible for ensuring the anthropometric evaluation report is entered into the ATJ before the student classes up with API.

(2) Assign individuals to Training Air Wings or Squadrons where there is not an aircraft restriction or training pipeline restriction, per enclosure (1).

7. Equipment

a. An automated anthropometric compatibility and restriction evaluation computer program based upon current training pipelines, cockpit fit data from NAVAIR, and applied/inferred cockpit fit data to similar aircraft (i.e. within type and/or model from a mapped model/series) is required for the NAVAVSCOLSCOM Anthropometric Program.

b. An anthropometric set for dimensions listed in references (a) and (b) will be utilized to confirm the need for remeasurement of suspected anthropometric dimensions recorded in error.

8. Review. This instruction shall be reviewed annually and updated as required to reflect the dynamic nature of improved cockpit and human measuring technology, as well as OPNAV and BUMED policy changes.

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NAVAVSCOLSCOMINST 5215.4H
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Typical U.S. NAVAL AVIATION TRAINING PIPELINES

Shaded boxes denote non DON aircraft/locations.
Light colored aircraft denote replacements.
International Military Training pipelines may differ.

Pilot				
Jet	Multi-Engine	Rotary Wing	E2/C2	Tilt-Rotor
T34C/T6	T34C/T6	T34C/T6	T34C/T6	T34C/T6
T45	T44/TC12	TH57	T44/TC12	T44/TC12
			T45	TH57
FA18, EA6B, AV8	(K)C130, P3,P8,C12, C20, C26, UC35, C37, C40;	H60, H53, H46, H3, UH1, AH1;	E2, C2	MV22
F15, F16, F22, A10, USAF etc.	USCG HU25, VC-4;	USCG H65;		
	USAF etc.	USAF etc.		

Instructor Pilots (IPs) and Student Naval Aviators (SNAs) shall fit respective training and/or Fleet Replacement Squadron (FRS) pilot/copilot/navigator/Weapon System Officer (WSO) crew stations.

Navigator				
Strike-Fighter WSO	Strike ECMO	Navigator		E2
T6	T6	T6		T6
T39	T39			
T45	T45			
FA18B,F,D	EA6B	E6,	P3,P8	E2
F15E				

Strike-Fighter and Strike Instructor and Student Navigators shall fit right pilot/copilot seat for T39 aircraft.

Aeromedical Officers
T34C/T6
TH57
any fleet anthro fit

Student Naval Flight Surgeons (SNFS), Student Naval Aerospace Physiologists (SNAP), Student Naval Experimental Psychologists (SNAEP), and Student Naval Aerospace Optometrists (SNAOP) shall fit front cockpits for T34/T6, and each pilot or navigator crew station for all aircraft in which they may occupy to log special crew time.