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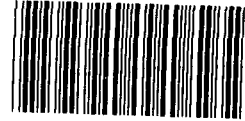
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B-205328

November 3, 1981

The Honorable Joseph P. Addabbo
Chairman, Subcommittee on Defense
Committee on Appropriations
House of Representatives



116960

Dear Mr. Chairman:

Subject: Reallocation of T-43 Aircraft Within the
Air Force (PLRD-82-17)

In response to your March 19, 1981, request, we have reviewed the need for the Air Force to transfer T-43 aircraft from the Air National Guard to the Air Training Command to meet increased navigator training requirements.

Specifically, you asked us to assess the accuracy of the Air Force's data supporting the transfer of aircraft and to evaluate (1) the Air Force's request for more navigators, (2) the use of T-43 aircraft by the Air Force Academy, and (3) the possibility of obtaining better aircraft utilization from both the Air Training Command and the Air National Guard.

We limited our study to reviewing the Air Force's process of projecting fiscal year 1982-87 navigator requirements and training rates and method of converting these rates into the number of T-43 aircraft needed for navigator training. We also evaluated statistics on the utilization of T-43 aircraft at Mather Air Force Base, California; Andrews Air Force Base, Maryland; and Buckley Air National Guard Base, Colorado.

As agreed with your Office, we did not question the validity of individual aircraft crew ratios, the navigator training curriculum, or the necessity of having rated navigators in technical, staff/supervision, and support positions. Also, we did not assess the reliability of the computer systems and models the Air Force used in projecting navigator inventories and requirements.

It should be noted, however, that some of the factors used in computing navigator requirements have been addressed in previous GAO and Defense Audit Service reports. These include the Air Force and Navy pilot and navigator training rates (FPCD-75-151, Apr. 11, 1975), "The Air Force Can Reduce Its Stated Requirements For Strategic Airlift Crews" (LCD-79-411, Sept. 19, 1979), "The Services Can Further Refine Management of Flying Hour Programs" (LCD-79-401,

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Mar. 27, 1979), and a Defense Audit Service report entitled, "Interim Report on the Review of Aviator Requirements, Inventories and Training Rates" (No. 932, Aug. 8, 1978).

HIGHLIGHTS

Our study shows that the data provided by the Air Force is reasonably accurate, assuming that all the factors used in compiling the data are valid. In summary, we found that:

- The Air Force needs to train more navigators to eliminate a shortfall of rated navigators. To provide the projected training, the Air Training Command needs two additional T-43 aircraft in fiscal year 1982. However, by slightly increasing flying hours during a 3-month period, the Air Force will need only one additional aircraft in fiscal year 1983.
- The Air Force Academy uses the two T-43 aircraft operated by the Guard at Buckley Air National Guard Base for its airmanship program. This program provides Air Force cadets with practical aviation experience in a flight environment. However, it appears that these aircraft are not flown under optimal operating conditions. To achieve better utilization, the Guard and the Academy are considering the feasibility of increasing flying time, increasing aircraft seating capacity, and eliminating deadhead flights between Buckley and the Academy.
- The T-43 aircraft used by the Air Training Command at Mather were underutilized because DOD directed a temporary reduction in the number of students to be trained as navigators. From July 1979 through June 1981, each aircraft was flown an average of 790 hours a year. However, to meet increased navigator training requirements, projected through 1986, the Air Force plans to fly an aircraft an average of 1,035 hours a year. 1/
- The T-43s assigned to the Guard at Andrews Air Force Base have been operated in the performance of authorized missions but have generally flown with about half their seating capacity unused.

These matters are discussed in more detail below.

1/Computed at 90 hours a month for 11-1/2 months, with 2 weeks off for Christmas vacation.

PROJECTED REQUIREMENTS FOR TRANSFER OF
ADDITIONAL AIRCRAFT MAY BE OVERSTATED

The information provided to the Subcommittee by the Air Force in support of the initial transfer of two aircraft from the Air National Guard at Andrews Air Force Base to the Air Training Command's navigator training facility at Mather Air Force Base is reasonably accurate, but Mather's projected aircraft requirements for fiscal year 1983 may be overstated.

Air Force records support a fiscal year requirement for two additional T-43 aircraft at Mather Air Force Base. This requirement was filled by the transfer of two T-43s from Andrews Air Force Base to Mather in September 1981.

The Air Force also has projected a fiscal year 1983 requirement, which will require two more T-43s to be transferred from Andrews to Mather in the fall of 1982. We found that the Air Force's computations of Mather Air Force Base's future T-43 requirements are reasonable and accurate, with two exceptions:

- The resource ratio used by the Air Training Command in projecting Mather's T-43 requirements incorrectly reflected a student load of 9 instead of 11 on low-level training flights. Adjusting the ratio to give effect to the actual number of students on these flights lowers the total T-43 requirements by 0.1 aircraft.
- Projected T-43 requirements during the 21-month period of programmed depot maintenance beginning in January 1983 include essentially duplicative planning factors in the form of a backup aircraft authorization (0.8 aircraft) and a programmed depot maintenance allowance (1.0 aircraft). We discussed this matter with Air Training Command and Mather officials, who agreed that the 0.8 backup aircraft was not needed during the programmed depot maintenance cycle.

According to our adjusted calculations, the total T-43 requirements at Mather will increase to a high of 16.1 aircraft in the third quarter of fiscal year 1983 and will decrease to less than 16 aircraft thereafter. (See enc. I.) Since the peak T-43 requirement only slightly exceeds 16 aircraft for a 3-month period, a slight increase in flying time for these aircraft during this period could avoid the transfer of a 17th aircraft to Mather from the Air National Guard.

NEED FOR MORE NAVIGATORS

The Air Force plan to train more navigators is designed to eliminate the deficit of rated navigators which exists in staff/supervision and support positions. This deficit will continue to increase if more navigators are not trained during the next 6 years.

Reduced navigator training rates and substantial navigator losses during the past several years have resulted in a shortfall in the Air Force's inventory of trained navigators in relation to its computed navigator requirements. The planned increases in annual navigator training rates over the next 6 years will eliminate this shortfall. As indicated above, all the shortfall is in staff/supervision and support positions which the Air Force has earmarked to be filled by rated navigators. Because of time constraints, we could not determine whether all these positions need to be filled by trained navigators.

AIRCRAFT USE BY AIR TRAINING COMMAND

The 13 T-43 aircraft operated by the Air Training Command at Mather have been mainly utilized in carrying out the Command's navigator training mission. Although the Command has set a goal of 1,035 flying hours a year for each of these aircraft, they have not been flown that much because the approved student load has not required it. From July 1979 through June 1981, the actual average flying time for each of the T-43s at Mather was about 790 hours a year. To meet its increased navigator training requirements, the Command plans to fly each of its T-43s an average of 1,035 hours a year.

Aircraft requirements at Mather could increase substantially if a proposal to change the undergraduate navigator training curriculum, now under consideration by the Air Training Command, is adopted. This proposal would increase the flying time in the navigator training program from 68 hours to 100 hours to give students more flying experience.

AIRCRAFT USE BY THE AIR FORCE ACADEMY
AND THE AIR NATIONAL GUARD

Although the six T-43s operated by the Air National Guard have been used to perform authorized missions, they have not been fully utilized. The utilization of these aircraft, including the Air Force Academy's use of the two T-43s at Buckley Air National Guard Base, is discussed below.

Academy and Guard use of aircraft
at Buckley Air National Guard Base

The two T-43s operated by the Guard at Buckley Air National Guard Base have been used mostly to support the Air Force Academy's airmanship program. This mission, according to a panel of Air Force officers convened to consider T-43 reallocation issues, has a lower priority than the training mission at Mather but a higher priority than the Guard's team travel mission at Andrews Air Force Base.

The airmanship program is designed to provide Air Force cadets with practical aviation experience in a flight environment. Under this program, all cadets are required to complete at least one flying course prior to graduation. The navigator training part of the program includes navigator indoctrination courses for all nonpilot-qualified cadets. The two T-43s at Buckley are used for all in-flight instruction in these courses.

Although the Buckley T-43s have been appropriately used in performing authorized missions, they have not been flown as much as Buckley personnel estimate that they could be flown under optimal operating conditions. These aircraft do not carry as many passengers on team travel flights as might be possible with more seats and they are routinely flown without duty passengers between Buckley and Colorado Springs, at substantial cost, to pick up and return Academy cadets taking part in airmanship training flights. The current status of each of these matters is as follows.

- The feasibility of increasing aircraft flying time, while not yet thoroughly evaluated, is being considered by Buckley Air National Guard Base and Air Force Academy officials.
- Buckley officials have submitted a proposal for increasing aircraft seating capacity to the National Guard Bureau. A feasibility study of this proposal is being held in abeyance by the National Guard Bureau pending completion of a review of the T-43 program.
- Academy officials are considering changing the way cadets in the airmanship program are picked up and returned and plan to perform a pilot test of busing cadets between the Academy and Buckley in the near future. Neither Buckley nor the Academy have studied the feasibility of moving the aircraft and crews from Buckley to Colorado Springs as an alternative.

Use of aircraft operated by the Guard
at Andrews Air Force Base

The primary mission of the four T-43s operated by the Air National Guard at Andrews Air Force Base has been to provide military airlift support for Air Force staff and management team travel. This mission was considered by the Air Force panel as having a low priority in relation to both the Air Training Command's navigator training mission at Mather and the Air Force Academy's training mission at Buckley.

Aircraft at Andrews have been appropriately utilized in the performance of authorized missions, including Military Airlift Command-directed Air Force staff and management team travel (i.e., Air Force special staff, Inspector General teams, and standardization and evaluation teams) and Guard official business and training. However, our analysis shows that, on the average, each of these aircraft generally has carried only about 32 duty passengers on passenger carrying sorties, compared with a passenger seating capacity of 64 for each aircraft.

CONCLUSIONS

Based on our limited review, we believe the Air Training Command needs two additional aircraft in fiscal year 1982 and one in fiscal year 1983 to meet its projected training load. The projected training load does not support a need for a fourth aircraft.

However, to the extent that such factors as aircrew ratios, training curriculum, and the need for trained navigators in technical, staff/supervision, and support positions may be invalid, the need for increased navigator training could be questionable.


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As requested, we did not obtain written Air Force comments on the matters discussed in this report. We did, however, discuss the information gathered with Air Force officials. The comments of these officials essentially were limited to explanations of methods used to project future navigator and aircraft requirements and discussions of alternative approaches to aircraft utilization.

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As arranged with your Office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time, we will send copies to the Secretary of the Air Force and other interested parties and make copies available to others upon request.

Sincerely yours,

A handwritten signature in cursive script that reads "Donald J. Horan".

Donald J. Horan
Director

Enclosure

MATHER AIR FORCE BASE
PROJECTED QUARTERLY T-43 AIRCRAFT REQUIREMENTS
FISCAL YEARS 1982-1984

	Fiscal year 1982				Fiscal year 1983				Fiscal year 1984			
	1stQtr	2ndQtr	3rdQtr	4thQtr	1stQtr	2ndQtr	3rdQtr	4thQtr	1stQtr	2ndQtr	3rdQtr	4thQtr
AIR FORCE REQUIREMENTS:												
Undergraduate navigator training	7.9	8.6	8.9	8.5	9.2	10.1	10.3	9.8	9.8	9.8	9.5	9.5
Interservice under-graduate navigator training and Marine Aerial Navigation School	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Advance navigation	1.1	1.2	1.4	1.4	1.3	1.3	1.5	1.6	1.5	1.5	1.5	1.4
Pilot training	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Backup aircraft	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
Programed depot maintenance	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-	-	-
Total	13.2	15.0	15.5	15.1	15.7	16.6	17.0	16.6	15.5	15.5	15.2	15.2
LESS GAO ADJUSTMENTS:												
Resource ratio correction	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
Backup aircraft	-	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-	-	-	-
Adjusted total	13.1	14.1	14.6	14.2	14.8	15.7	16.1	15.7	15.4	15.4	15.1	15.1