

DOCUMENT RESUME

04927 - [B0195089]

[Opportunity for the Department of Defense To Save \$1.6 Million on Contracts for Aircraft Logistics Support]. ESAD-78-68; B-169217. January 18, 1978. 3 pp. + enclosure (6 pp.).

Report to Secretary, Department of Defense; by Richard W. Gutmann, Director, Procurement and Systems Acquisition Div.

Issue Area: Federal Procurement of Goods and Services (1900); Facilities and Material Management: Federal Transportation of Things (704); Military Preparedness Plans: Logistic Support Planning for Major Equipment (801).

Contact: Procurement and Systems Acquisition Div.

Budget Function: National Defense (050); National Defense: Department of Defense - Procurement & Contracts (058).

Organization Concerned: Department of the Air Force.

There is an opportunity to save about \$1.6 million annually on logistics support contracts for the Air Force's commercially designed Boeing 737 and McDonnell Douglas DC-9 aircraft. Savings of about \$640,000 annually have already been achieved on two contracts, but significant additional savings are possible. Findings/Conclusions: The Air Force operates and maintains commercially designed Boeing 737 and McDonnell Douglas DC-9 aircraft and plans to purchase McDonnell Douglas DC-10 aircraft. Logistics support for the present fleet is provided through contracts with the aircraft manufacturers. In proposing the additional purchases, the Air Force testified that it was also considering obtaining the necessary logistics support for the new aircraft by contract. Review of the present logistics support contracts revealed costly provisions which should be avoided in future contracts. One support provision which exceeds demonstrated needs and normal commercial practice provides for payment of incentive fees for maintaining spare parts support at a much higher level than aircraft usage warrants. The second provides for three full-time field service representatives as technical advisors at each aircraft station--a support level far in excess of normal commercial practice. The recurring cost of these two provisions was about \$2.3 million in fiscal year 1976 for the five contracts examined. Recommendations: The Secretary of the Air Force should remove the spare parts support incentive fee from remaining contracts as soon as possible and should reevaluate the need for the continued use of technical representatives before renewing this provision in the remaining contracts. (SC)



UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

PROCUREMENT AND SYSTEMS
ACQUISITION DIVISION

18 JAN 1978

B-169217

The Honorable
The Secretary of Defense

Dear Mr. Secretary:

We believe there is an opportunity to save about \$1.6 million annually on logistics support contracts for the Air Force's commercially designed Boeing 737 and McDonnell Douglas DC-9 aircraft. Savings of about \$640,000 annually have already been achieved on two contracts, but significant additional savings are possible. (See enc., p. 2.) We are also concerned with future logistics support contract negotiations and information to be furnished to the Congress in regard to the procurement of any additional commercially designed aircraft.

The Air Force operates and maintains commercially designed Boeing 737 and McDonnell Douglas DC-9 aircraft and plans to purchase McDonnell Douglas DC-10 aircraft. Logistics support for the present fleet is provided through contracts with the aircraft manufacturers. In proposing the additional purchases, the Air Force testified that it was also considering obtaining the necessary logistics support for the new aircraft by contract. We reviewed the present logistic support contracts and noted costly provisions which should be avoided in future contracts. Our findings and observations are summarized below and discussed in more detail in the enclosure.

COSTLY PROVISIONS

The maintenance and supply support contracts for the commercially designed DC-9 and B-737 aircraft contain two support provisions which exceed demonstrated needs and normal commercial practice. The first provides for payment of incentive fees for maintaining spare parts support at a much higher level than aircraft usage warrants. The second provides for three full-time field service representatives as technical advisors at each aircraft station--a support level far in excess of normal commercial practice. The recurring cost of these two provisions was about \$2.3 million in fiscal year 1976 for the five contracts we examined.

PSAD-78-68
(950332)

The contracts provide an incentive payment on the basis of the contractor's degree of success in immediately providing parts whenever needed. We question the need for this incentive because the reliability of the aircraft is well established, parts are commercially available, and actual usage of the aircraft is very low. We discussed this situation with Air Force officials, and in the September 1977 renewal negotiations, the Air Force eliminated the incentive fees from two of the five contracts, saving about \$640,000 annually. The remaining three contracts, however, scheduled for renewal in fiscal years 1978 and 1979, still contain the incentive provisions that could amount to about \$900,000 annually.

The contract provision for technical advisors was originally intended as a temporary training and advisory program. However, after 6 to 8 years, the Air Force still believes technical advisors are needed. The Air Force retains three technical advisors at each of five bases. Commercial airlines, however, have no more than one advisor each for their entire fleets.

About \$1.6 million can be saved annually by eliminating the remaining incentive fees and conforming more closely to commercial practices for technical representatives. Any future contracts for maintenance and supply support of commercially designed aircraft, we believe, should follow normal commercial practice unless it is clearly demonstrated that a different approach or a higher support level is needed.

We recommend that the Secretary of the Air Force

--remove the spare parts support incentive fee from remaining contracts as soon as possible and

--reevaluate the need for the continued use of technical representatives before renewing this provision in the remaining contracts.

- - - -

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Senate Committees on Appropriations with the agency's first

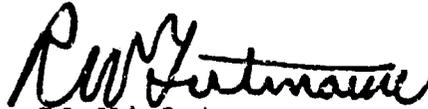
B-169217

request for appropriations made more than 60 days after the date of this report.

We would appreciate being informed of actions taken or planned on our recommendation and would be pleased to discuss these matters with you or your representatives.

We are sending copies of this report today to the House Committee on Government Operations and the Senate Committee on Governmental Affairs; the House and Senate Committees on Appropriations and Armed Services; the Acting Director, Office of Management and Budget; and the Secretary of the Air Force.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "R. W. Gutmann".

R. W. Gutmann
Director

Enclosure

AIR FORCE SUPPLY SUPPORT CONTRACTS FOR
COMMERCIALLY DESIGNED AIRCRAFT

COMMERCIALLY DESIGNED AIRCRAFT

As shown below the Air Force has a fleet of 42 commercially designed DC-9 and B-737 aircraft for noncombatant missions. The Air Force operates three DC-9s (military VC-9Cs) out of Andrews Air Force Base to provide "on call" executive transport for high Government officials and visiting foreign dignitaries. Twenty DC-9s (military C-9As) are based at three other locations for transporting medical patients. Two of the C-9As are currently being used to transport high-level officials in Europe. The Air Force also has 19 B-737s (military T-43As) located at Mather Air Force Base, California, for Undergraduate Navigator Training.

<u>Base</u>	<u>Type aircraft</u>	<u>Quantity</u>
Scott Air Force Base, Illinois	DC-9 (C-9A)	12
Andrews Air Force Base, Maryland	DC-9 (VC-9C)	3
Clark Air Base, Philippines	DC-9 (C-9A)	3
Rhein-Main Air Base, Germany	DC-9 (C-9A)	5
Mather Air Force Base, California	B-737 (T-43A)	<u>19</u>
Total		<u>42</u>

These aircraft were delivered to the United States Air Force (USAF) with Federal Aviation Agency (FAA) production, type, and airworthiness certifications. The USAF has directed retention of the FAA-type certifications to the maximum extent possible. Programmed depot maintenance and configuration control is maintained through use of FAA-approved Service Bulletins and Airworthiness Directives and other FAA-approved sources. Logistics support is provided by the contractor. Air Force maintenance, accomplished by the using commands, is limited to a "remove-and-replace" concept.

Purchase of commercially designed aircraft enables the Air Force to benefit from the lengthy and costly design and development work performed by the manufacturers in providing aircraft to the commercial airlines. Maintenance problems are first experienced by commercial users, and the aircrafts' reliability and endurance is established. For example, over 300 DC-9s were in commercial use before the Air Force purchased the C-9A, the military counterpart. Thus, problems

that develop in the earlier use of the aircraft by commercial airlines are generally solved before the aircraft are added to the Air Force fleet. Bulletins, directives, technical and maintenance data, and other approved sources regarding repair and modifications are readily available because the aircraft are covered by FAA certifications.

CONTRACT SUPPORT

The Air Force has contracted with the original aircraft manufacturers for supply support of the C-9A, VC-9C, and T-43A aircraft, including provisioning, procurement, and stockage of all common and peculiar spare parts/components for the aircraft, aircraft systems, engines, and peculiar Aerospace Ground Equipment.

We found two provisions in the supply support contracts that are inconsistent with demonstrated needs and normal commercial practice:

1. The Air Force is awarding incentive fees for spare parts to be made available far in excess of needs.
2. The Air Force is contracting for the services of three full-time manufacturer field service representatives and technical advisors at each aircraft station. This level of support greatly exceeds normal commercial practice.

On the five contracts we examined, the recurring cost of these two provisions was about \$2.3 million in fiscal year 1976.

Costs of Technical Representatives and Incentive Fee--Fiscal Year 1976

<u>Air Force Base</u>	<u>Type of aircraft</u>	<u>Cost of technical representatives</u>	<u>Incentive fee paid</u>	<u>Total cost per location</u>	<u>Potential savings</u>
Scott, Illinois Clark,	C-9A	\$117,837	\$ 320,000	\$ 437,837	\$ 437,837
Philippines Rhein-Main, Germany	C-9A	146,667	a/ 320,000	466,667	146,667
Mather, Cali- fornia	C-9A	149,333	a/ 320,000	469,333	149,333
Andrews, Mary- land	T-43A	135,879	250,000	385,879	385,879
	VC-9C	<u>193,435</u>	<u>324,000</u>	<u>517,435</u>	<u>517,435</u>
Total		<u>\$743,151</u>	<u>\$1,534,000</u>	<u>\$2,277,151</u>	<u>\$1,637,151</u>

a/The incentive fees were deleted from the Clark and Rhein-Main contracts in March and July 1977, respectively.

Incentive fees for spare parts availability

The contractors operate a supply facility at each of the five bases. Incorporated into the contracts is a reward/penalty incentive for spare parts availability. 1/

An aircraft is Not Operationally Ready due to Supply (NORS) when repair work is delayed because needed parts are not available. Delay time is recorded as NORS hours determined from a standard formula. The contractors earn incentive fees if the NORS rates are less than or equal to the following:

- 5 percent for the C-9A aeromedical aircraft.
- 2 percent for the VC-9Cs at Andrews Air Force Base.
- 2 percent for the T-43As at Mather Air Force Base.

If the aircraft accumulate more than the stated percent of NORS, then the contractor is assessed a penalty. No penalties have been assessed, and the incentive award has been as much as \$1.5 million in a single year.

Why the incentives are not needed

The Air Force uses these profit incentives to obtain an operational rate of 80 percent for the C-9As and 90 percent for the T-43As. Aircraft utilization, we found, is only 7.8 to 16.4 percent as shown below. It appears, therefore, that the Air Force is paying large sums of money for an unnecessary level of support.

Aircraft Utilization
Fiscal Year 1976

<u>Air Force Base</u>	<u>Aircraft Number</u>	<u>Aircraft Type</u>	<u>Hours possessed</u>	<u>Flying hours</u>	<u>Flying utilization rate (percent)</u>
Scott, Illinois	12	C-9A	96,982	15,925	16.4
Andrews, Maryland	3	VC-9C	25,123	1,974	7.9
Clark, Philippines	4	C-9A	34,845	4,348	12.5
Rhein-Main, Germany	4	C-9A	37,705	4,892	13.0
Mather, California	19	T-43A	166,896	12,941	7.8

1/The incentive fee provision was deleted from the Clark and Rhein-Main contracts in March and July 1977, respectively.

As early as 1972, San Antonio Air Logistics Center questioned the Military Airlift Command about the necessity of the NORS incentive fees. The command strongly recommended keeping the incentive fees and no action was taken. We discussed the situation with San Antonio Air Logistics Center procurement officials and questioned the need for these incentive fees. As a result, when two of the five contracts were renegotiated in September 1977, the incentive fees were omitted for an estimated annual savings of \$640,000. The incentive fee continues in the remaining three contracts and could amount to as much as \$900,000 annually.

Full-time manufacturer's field
service representatives

Since the inception of these supply support contracts, the Air Force has procured the services of field service representatives for its commercially designed aircraft. Originally, this procurement was intended as temporary to

"elevate the technical skills and abilities of Government personnel responsible for the operation and maintenance of the above equipment/systems to the level of self-sufficiency."

The field representatives were intended to provide technical guidance in evaluation of field problems, on-the-job training and classroom instruction, and assistance in trouble shooting.

McDonnell Douglas field service representatives were hired for the C-9A program in fiscal year 1969, and the requirement was projected to last 24 months until self-sufficiency was obtained. Boeing representatives were hired for the T-43 program in 1971 with phase-out planned in 13 months.

The Air Force has continued to hire the field service representatives each year. Furthermore, the manufacturer's representatives do not provide training to Government personnel as originally intended. Instead, the field service representatives serve mainly as advisors and trouble shooters. The training functions were taken over by Government employees who provide classroom and on-the-job training in aircraft maintenance for both military and civilian trainees.

In fiscal year 1977 the Air Force contracted for three field service representatives at each of the five bases involved, as shown on the next page.

<u>Location</u>	<u>Number of technical representatives</u>	<u>Number of aircraft supported</u>	<u>Contract cost FY 1977</u>	<u>Type of aircraft</u>
Scott Air Force Base, Illinois	3	12	\$126,752	DC-9 (C-9A)
Andrews Air Force Base, Maryland	3	3	183,004	DC-9 (VC-9A)
Clark Air Base, Philippines	3	3	155,218	DC-9 (C-9A)
Rhein-Main Air Base, Germany	3	5	160,502	DC-9 (C-9A)
Mather Air Force Base, California	<u>3</u>	<u>19</u>	<u>125,496</u>	B-737 (T-43A)
Total	<u>15</u>	<u>42</u>	<u>\$750,972</u>	

The operating commands believe there is a continuing need for contractor field representatives because the constant turnover of military mechanics makes development of self-sufficiency difficult. Further, the representatives provide trouble shooting and technical advice which is not available in the Air Force. However, the ratio of technical representatives to airplanes serviced (see table above) is not in line with commercial practices.

Commercial airline usage of manufacturer's field service representatives

We contacted four commercial airlines which fly either the McDonnell Douglas DC-9 or the Boeing 737 and found that commercial usage of manufacturer representatives is varied. Some airlines use a full-time representative assigned solely to their airline. In major geographical areas some airlines share the same representatives. One airline did not have or share a field service representative.

None of the airlines contacted had more than one manufacturer field service representative assigned to it. The Air Force, however, has three contractor representatives assigned to each of its five aircraft home bases. At two bases (see table above) this equates to one manufacturer representative per airplane. In comparison, one major airline has one manufacturer representative for its 54 DC-9 aircraft and all of its DC-8s and DC-10s. The Air Force has a total of 12 manufacturer representatives for its 23 DC-9 aircraft. Some of the airlines deal directly with the manufacturer's home office in addition to or instead of a field representative when a problem arises. Help and advice is received from the

manufacturer's home office in the form of telephone calls, telegraphic messages, and short visits to the airlines.

An assistant vice president of one airline told us these services are provided free as a normal business practice. When told about the number and cost of the contractor representatives used by the Air Force, this official said he thought the Air Force was being "buffaloed."

It is our opinion that future contract provisions for field service representatives should be more in line with normal commercial practice unless need for a higher support level can be clearly demonstrated.