



The Air Force Logistics Command

DURING the fiscal year ending June 30, the Air Force Logistics Command (AFLC) faced no dramatic test of the magnitude of the Cuban crisis of 1962. However, the command accomplished its enormous task of providing logistics management for an increased population of aircraft and missiles. And it did the job with fewer resources.

A logistics highlight was the arrival in June 1964 of the first A-1E Douglas Skyraiders in South Vietnam, after a joint Air Force-Navy modification and overhaul program. Some 3,200 spare parts and items of support equipment for A-1Es were assembled at AFLC's Sacramento Air Materiel Area and sent to Vietnam well ahead of the aircraft. This demonstration of AFLC's ability to keep Air Force weapon systems at go brought a special message of praise for an outstanding job from Maj. Gen. Joseph H. Moore, Commander of the 2d Air Division in South Vietnam.

The single-engine A-1Es had been used in the Korean War. In September 1963, the Air Force initiated action to modify them to replace T-28 aircraft in Vietnam. The modification involved extensive engineering and complete overhaul.

At the higher end of the weapons spectrum, AFLC was deeply involved in updating programs for Atlas and Titan II missile systems as part of the Air Force's continuous effort to find ways to shorten reaction time and increase the range of the ICBM force, while at the same time improving accuracy and providing greater targeting flexibility.

In June the Air Force observed the tenth anniversary of its missile and space program. Commenting on the program's first decade, Gen. Mark E. Bradley, Jr., Commander of AFLC, said:

"Many do not realize that this program—in terms of technology, weapons, vehicles, and sites—involved the greatest effort in research, development, manufacturing, construction, and logistics management in the world's history.

"To that enormous effort many members of AFLC gave dedicated service, devoting their knowledge, talent, and energy without stint. To them—as we commemorate a decade of remarkable progress in mis-



Gen. Mark E. Bradley, Jr., who was graduated from West Point in 1930 and won his wings in 1931, was named AFLC Commander in 1962. A veteran test pilot and materiel and procurement specialist, he has held a number of operational posts, including that of Vice Commander in Chief, USAF. He was DCS/Systems and Logistics, Hq. USAF, before his AFLC assignment.

sile and space development—I extend my heartiest congratulations.

"However, we can by no means rest on our laurels. What we have done and learned in the program's first ten years is merely a forerunner of the great tasks that lie ahead in space logistics management. We should look forward eagerly to the challenge posed by our expanding responsibilities in the space age."

AFLC—with its mission of keeping aerospace weapon systems ready to go at any time and all the time—is managed from headquarters at Wright-Patterson AFB, Ohio. General Bradley, its Commander since July 1, 1962, has served in the logistics field continuously since 1937. Lt. Gen. Kenneth B. Hobson is Vice Commander.

Most operational functions of AFLC are carried out by nine industrial-type installations known as Air Materiel Areas (AMAs). The largest two of these employ more than 20,000 persons each.

Each AMA has prime responsibility for worldwide logistics management of weapon systems assigned to it. San Antonio AMA, for instance, is the System Support Manager for SAC's supersonic bomber, the B-58. Whenever a B-58 needs a replacement part—no matter where it might be—it calls upon San Antonio and gets immediate service by airlift. If in need of overhaul, the B-58 homes to San Antonio's maintenance shops. Ogden AMA in Utah has the same responsi-

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bilities for the Minuteman missile, as has San Bernardino AMA in California for the Titan and Atlas missiles.

AFLC's 2704th Aircraft and Disposition Group at Davis-Monthan AFB, Ariz., stores surplus and obsolete USAF aircraft. At a cost of only \$6 million a year, this operation reclaims about \$360 million worth of usable parts and materials annually.

AFLC manages nearly 2,000,000 different active items, mostly technical items needed for weapon systems. They are subject to random demands from 15,000 organizations and units around the world. Approximately 23,000,000 demands a year are processed.

AFLC personnel has constantly decreased in number, although the workload has been increasing in size and complexity. The nearly 2,000,000 items now managed compares with 930,000 managed in 1955. Yet, command personnel, civilian and military (about ten

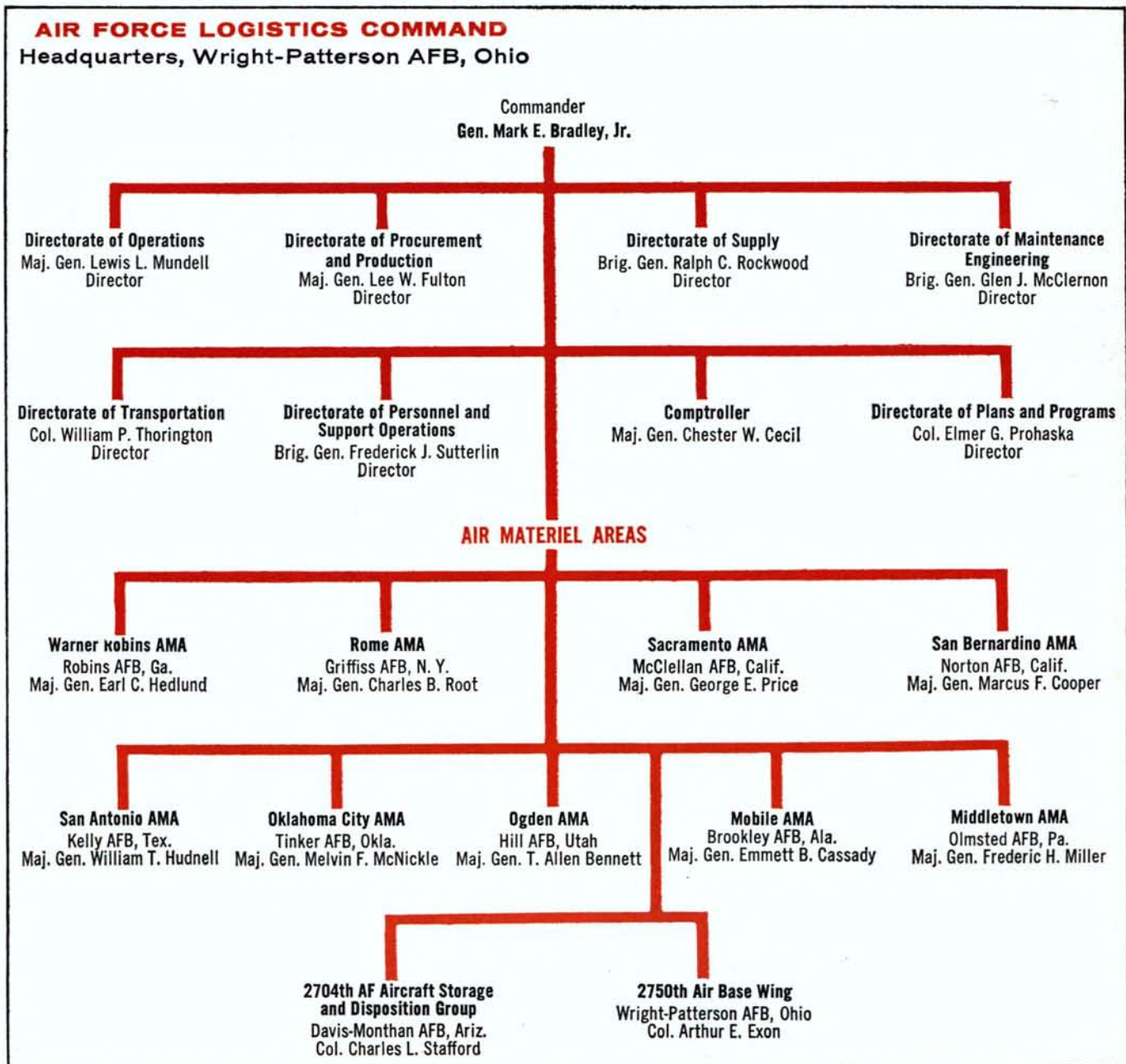
percent military), reached a peak in 1956 of 225,000 and is down to some 142,000, a reduction of more than 80,000.

To keep weapon systems ready to go, AFLC must store, transport, and maintain the aircraft, missiles, and equipment used by the Air Force anywhere in the world. It must also purchase a large quantity of spare parts and miscellaneous equipment.

Thus, the four main activities of AFLC are: *procurement, supply, maintenance, and transportation.*

● Procurement, done mainly by the nine Air Materiel Areas, is mostly for spare parts for all weapons. This includes determining requirements and budgeting and funding for initial spares included in contracts for new weapon systems awarded by the Air Force Systems Command (AFSC). Of the \$3 billion spent annually by AFLC for procurement, replenishment

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Logistics Command provides worldwide Air Force weapon systems support through its network of Weapon System Logistics Officers, supplied by AFLC's Weapon System managers operation. Above, a Sacramento, Calif., AMA WSLO talks over supply-maintenance problems with F-100 crew.

spares amount to roughly \$1 billion. The rest is for modification procurement, data procurement from contractors, missile procurement, armament, motor vehicles, ground-support equipment, and local procurement.

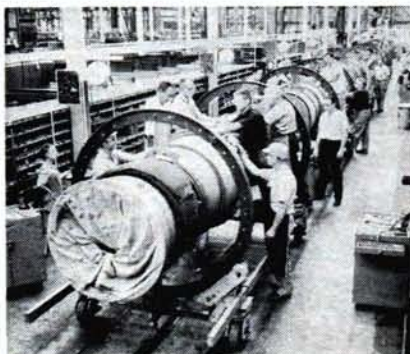
- Supply activities center on the nearly 2,000,000 different items used by the Air Force. All of these items must be cataloged, and most of them are stocked at AMA depots. Supply also computes requirements of spare parts for future Air Force needs. This function has been called the "backbone of logistics."

- Maintenance accounts for the work of 100,000 persons, about half of whom are off-base contract personnel, and sees to it that all materiel is capable of performing its intended function. Data is constantly collected to improve performance and reduce costs. The AMAs modify and overhaul materiel (such as whole aircraft and engines) that is beyond maintenance capabilities of using organizations. The basic philosophy is to minimize the need for maintenance through improved reliability and to provide top performance at the least cost of resources.

- Transportation manages LOGAIR, an around-the-clock airlift whose fleet of ninety-four cargo aircraft, making 213 departures daily, supplies eighty-three domestic air bases and ties in with MATS's five aerial ports for overseas airlift. AFLC also develops systems and procedures for worldwide movement of Air Force materiel and passengers; sets transportation policies in support of missiles, space weapons, and satellite systems; and technically directs all Air Force packaging and materials-handling activities.

Although the total number of aircraft and missiles followed a downward trend from 1955 through 1962,

Oklahoma City, Okla., AMA is the largest jet-engine overhaul center in the world. An average of 12 engines comes off the AFLC assembly line every workday. Right, J57 engines get workup.



the number of different types increased steadily. This increased AFLC workloads in many areas. In 1963 the number of types continued to increase and the total aircraft-missile population started upward.

In 1962, aircraft-missile population was 14,500, representing 212 types; as of October 31, 1963, it was 15,852, representing 235 types. In 1964 the aircraft-missile population increased to 18,400 and the number of types increased to 276.

The most significant barometer of the effectiveness of logistics support is the NORS rate, which stands for "Not Operationally Ready, Supply." An aerospace vehicle is NORS when it cannot perform its mission due to lack of parts.

The aircraft NORS condition has shown a marked improvement since 1957 when the average rate was a little more than thirteen percent. As of December 31, 1963, the average NORS rate for the calendar year was 4.4 percent. By May 1964 the rate was down to 4.1 percent and has remained about the same.

The missiles NORS rate has declined since 1961 when it was nearly four percent. For the second half of 1963 it averaged 3.2 percent. The rate in May 1964 was 1.6 percent.

One of the most important accomplishments of AFLC in supporting the combat forces has been a steady reduction in pipeline time, which represents the elapsed time between receipt of a requisition and arrival of the shipment at the requesting base.

In the continental US, during the first quarter of 1962 the average pipeline time for routine requisitions was twenty-four days, as compared with nearly forty-five days in 1950; for priority requisitions it was ten days as compared with more than twenty days in 1950. It is estimated that since 1962 the average for routine requisitions has decreased to twenty days and for priority requisitions to seven days. Overseas pipeline time is longer but has shown a threefold reduction since 1950.

Significant reductions have been made in AFLC's spare-parts inventory through the years, and the trend is continuing. In 1955 the spares inventory, worldwide, was valued at \$17.2 billion; the figure now is \$12.2 billion.

Due to the huge increase in existing weapon systems during recent years, the number of different active items cataloged grew at an alarming rate. An item-reduction program was started in 1962, and for the first time more items were deleted than were added. At the end of 1962 the total of active inventory items was 2,060,000.

Continuation of the reduction program resulted in a decrease of inventory items to 1,841,000 as of September 30, 1963. The total was further reduced to 1,813,000 by the end of May 1964.

In the procurement field, an important AFLC objective is to reduce the use of cost-plus-fixed-fee contracts, which contain no built-in incentives to reduce costs. The goal for FY '64 was to reduce use of CPFF to no more than 10.4 percent of procurement dollars. As of January 1, 1964, the CPFF percentage was 5.8;

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by April 1964, the figure had been reduced to four percent.

Steps also have been taken for better control of letter contracts which authorize contractors to begin work before definitive contracts can be negotiated. They should be restricted to emergency or unusual situations. From July 1, 1962, to April 30, 1963, the number of letter contracts issued was 332. In the period from July 1, 1963, to April 30, 1964, only 114 letter contracts were issued.

AFLC is continuing to push for competitive procurement, but also considers other factors than lowest bid price, such as maintainability, ultimate cost to the government, and reliability. The theme is, "Competition when it makes sense." The program for "Competition with Confidence," in which industry helps to decide the type of procurement, is proving effective.

During the first six months of this year, AFLC organic and contract activities performed maintenance or modification work on 5,825 aircraft. This sizable workload was handled despite extreme budgetary and manpower limitations. Resourceful planning, production-control techniques, and other maintenance management measures enabled the command to meet 99.4 percent of its aircraft maintenance schedule.

A favorable trend has developed over the past few years in the length of down-time of aircraft undergoing depot-level maintenance. The average down-time has dropped from ninety-nine days in 1959 to about sixty-four days in the first half of 1964.

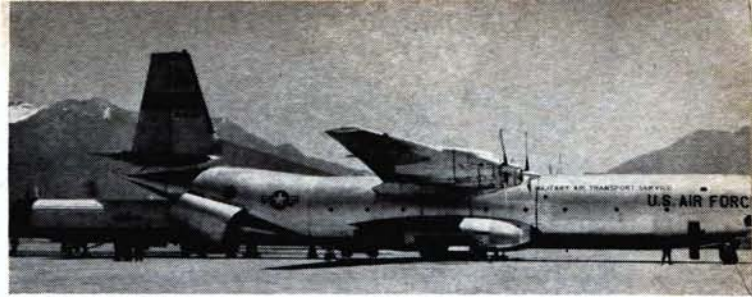
It would take much more space than is available to describe the many ways AFLC is striving to improve its job performance from the standpoints of effectiveness, efficiency, and economy. A few highlights can be touched upon.

Cost reduction has been given added impetus by President Johnson's drive for thrift in government. It has long been a way of life in AFLC. The Defense Department and Air Force Cost Reduction Program has been implemented in AFLC as Project Gold Rush. For fiscal year 1964, Gold Rush savings were estimated at \$1.448 billion. This was about twenty-three percent above the command's goal.

AFLC's Suggestion Program has been a valuable tool for management improvement. Since 1961, employee participation has increased from twenty-six to thirty-four percent. In 1963, out of 48,901 suggestions received, 10,226 were adopted, and savings realized amounted to \$34,107,450.

Management has given full support to the program and from all indications AFLC will lead all other commands in participation and dollar benefits. AFLC is credited with about three-fourths of the total Air Force suggestion program. During FY '64 (with fourth-quarter figures estimated) more than 51,000 suggestions were submitted compared with 44,933 in FY '63. Dollar benefits amounted to \$34 million.

The use of electronic data-processing equipment (EDPE) was pioneered in the Air Force and the Defense Department by AFLC, which is the largest user of business-type EDPE in the world. During 1963, the number of electronic computers used by AFLC in-



A Minuteman ICBM, snug in special container, is loaded onto MATS C-133 transport at Hill AFB, Utah. AFLC's Ogden, Utah, AMA has systems-support management mission for Minuteman as well as transportation management responsibility. Rail, motor-vehicle transport are used, too.

creased from seventy-three to ninety-four, and the command now uses more than 100. A special center devoted entirely to data systems is located at Wright-Patterson AFB, Ohio.

An extensive computer conversion program, now under way, will help to standardize data-processing operations throughout AFLC. It will bring a great improvement in data collection, transmission, and management and, eventually, a considerable savings in the operation of the various logistics data systems.

Skills of people working with computers must be continually upgraded; the machines' output can be no better than what is put into them. This is just one facet of AFLC's training and retraining effort. People who determine requirements for spare parts have been given special training which has produced substantial savings.

In the maintenance area, one-tenth of the work force has to be retrained each year. AFLC has found that retraining skilled employees for space-age jobs is more effective and less costly than teaching needed skills to new employees.

We have just crossed the threshold of the space age. Many projects which now appear fantastic will be realities of the future. Obviously, these projects will require logistics management. AFLC is already preparing for such advanced space tasks.

It can be expected that—during the next decade— involvement with space programs will be a dominant function of AFLC. Most of the early activity will be on the ground but, during the period, logistics activity in space support will be evolving rapidly. This activity might include on-board maintenance of spacecraft and orbiting space stations and—in the more distant future—lunar and planetary bases.

While constantly searching for better and more economical ways of doing its job, AFLC does not lose sight of its objective and the only reason for its existence—keeping Air Force weapon systems *ready to go*.

AFLC has the logistics experts—military and civilian—the facilities, systems, and equipment needed to get the job done with highest effectiveness at lowest cost. It intends to preserve and expand its capabilities in the years ahead and thus play its full part in defense of the country and the cause of freedom.

"The American people," General Bradley has said, "can have confidence in the armed forces now in being to deter war—or to win if war is forced upon us. But we cannot be satisfied or complacent—we cannot ignore the need for constant improvement. History shows that new weapons do not long remain invulnerable. In a dangerous and quickly changing world, we can never afford to be the second best."—END