HELIICOPTER PASSENGER LINES DUE IN 1953

Plane Industry's Working Capital Held in Jeopardy

An operating loss of only four per cent on military orders could wipe out the working capital of 12 representative aircraft manufacturers, the National Credit Office recently reported.

Calling for a more efficient government aircraft procurement policy, the NCO also pointed out that the 12 companies which reported on their operations for the first half of 1952 "disclose a 77% sales increase but only a 30% gain in earnings. The ratio this year is 21%, on sales, after taxes, compared with 28% a year ago."

The low earnings are explained by a number of circumstances, the organization reported, which "combined to retard output, reduce productivity and consequently distort budget expectations."

The report said:

"The priority system did not always function smoothly—inevitably some components were delivered too late to be incorporated into the planes at the proper station in the assembly line. Installation at an improper time is always more costly. Delivery schedules were altered to accommodate design changes."

"Simultaneously a major re-employment program was in progress. The absorption into the factory organization of such an influx of trainees temporarily lowers productivity."

"Similarly, plant facilities were undergoing major alterations or additions. More space is required to build the present-day airplane because of its larger physical dimensions."

(See CAPITAL, page 2)

Airlift Plays Big Role In Building Thule Base

During construction of the strategic U.S. polar air base at Thule, Greenland, approximately 2,100 round trips were flown from the U.S. to supply workers and equipment.

More than 19,000 passengers, including 3,000 workers, were transported---and 12,500 tons of cargo. During over 65,000 hours of flying in one of the world's worst flying areas, only two minor aircraft accidents occurred.

Cost-Cutting Program Gives Nation One 'Free' Plane Out of Every Six

The American taxpayer gets one free fighter plane for every six aircraft produced by a major East Coast manufacturer, as a result of a continuing all-out drive to cut production costs on modern warplanes.

If cost-cutting methods had not been devised and put into effect, this manufacturer estimates that each plane would cost taxpayers 15 to 20 per cent more at today's prices.

The aircraft industry's cost-reduction effort is aimed at partially offsetting the nationwide price rise which has jumped the cost of all ingredients which go into modern planes. It already has saved the American taxpayer "millions of dollars," according to an Aircraft Industries Association survey.

These millions in savings, however, have been more than absorbed by an accelerated spiral in prices which are outside the aircraft manufacturers' control. For example, labor rates in the aircraft industry have risen 60% since the end of World War II, copper has gone up 75%, aluminum 25%, steel 64%, chemicals 55%, textiles 60%, building materials 97%, machine tools 85%.

(See INDUSTRY, page 3)
Lyndon Johnson's "Point 10"

By DaWitt C. Ramsey (Admiral, U.S.N., Ret.)
President, Aircraft Industries Association

Some three months ago, members of the Senate Preparedness Subcommittee urged that the American people be given a plan for achieving maximum long-range air preparedness at the lowest possible cost.

"We have long been aware," the committee's discerning report said, "of the many inadequacies in America's defensive position. These inadequacies are born of many factors. They can be traced to the too-hasty demobilization that followed World War II; the relative tardiness with which many of our leaders recognized the aggressive intentions of the Soviet Union; the national distaste for armaments in a period that can technically be called peace.

"But whatever the reasons, weaknesses undoubtedly exist. They are present — as a potential column of enemy strength — in the air, on the ground, in the seas."

This able group of senatorial leaders, headed by Sen. Lyndon Johnson of Texas, pointed out ways to preserve the aircraft industry's emergency capabilities. In "Point 10," the committee recommended that Congress be furnished with:

"...recommendations to maintain the aircraft industry in a healthy state in periods of peace as well as in periods of defense mobilization."

This request is not a new one; nor does it carry with it the stuff of which headlines are made.

Yet it shows a penetrating recognition of two of the basic long-range problems of military procurement: (1) the pattern of wasteful building and tear-down to which our defense establishment has, of necessity, been tailored in the past, and (2) the fact that a quick trans- fusion of big money cannot force a weakened industry into high production overnight.

One of the greatest wastes of tax dollars today — the loss of millions, perhaps billions, of dollars — stems from the military's lack of authority to undertake consistent, long-range programming. It is significant that, in the years between the end of World War II and the start of the Korean War, less than four per cent of Defense Department funds went for aircraft procurement. During these same years, almost half of military expenditures were for liquidation of World War II costs, dismantling and crippling the greatest military production machine in world history.

It has been conservatively estimated that America could have saved some $2 to $3 billion since Korea had year-by-year planning been supplanted by a long-range air power program.

Authoritative voices long have pointed to the tragic waste attendant in stop-go planning built on the sands of international political fluctuations. The Morrow Board of the 1920's, the Congressional Aviation Policy Board and the President's Air Policy Commission of the 1940's, the American Legion Policy statements of recent years — all have pointed to the tremendous savings to be derived from adoption of a sensible and consistent aircraft procurement program. A sound, privately-owned and operated, and competitive aircraft industry — capable of rapid expansion to meet national defense emergencies — has long been recognized as a cornerstone on which America's future security rests.

Detailed recommendations on this subject by the Munitions Board, and subsequent enactment of a legislative base for future planning, would be a positive step leading toward long-range economy and sustained preparedness in these critical — and costly — years of international tension.

Lyndon Johnson's "Point 10"
Mammoth Bomber’s Wings Must Be Able to ‘Flap’ Through 20-Foot Arc to Withstand Sonic Winds

A modern 600-mile-per-hour jet bomber must have wings that can "flap" through a 20-foot arc.

Unlike the flapping wings of a bird in flight, which serve to propel it through the air, the wings on this 92-ton goliath must be built with elasticity to withstand the battering and pounding of tremendous aerodynamic forces. Rigid wings, incapable of bending, would snap under the violent gusts and stresses of today’s flight speeds.

The problems faced by this plane’s manufacturer are typical of design complexity and high cost requirements faced by the aircraft industry during a period of revolutionary developments. The manufacturer had to devise a means of controlling extreme thinness of wing required for flight at high speeds, with enough elasticity to take bending without breaking from the fuse- together.

The problem was solved by creating a wing that can withstand deflections through an arc of more than 20 feet without structural failure!

This bomber projected in static wing tests (see photo) that it could take structural strains and stresses far greater than could ever be encountered in actual flight.

The photo shows the wing deflected upward more than 11 ft. in static test fixtures upward more than 11 feet at the tip. The phantom lines reveal normal position of the wing, and the downward deflection of six feet that occurred during the test.

The wing-tips described an arc of more than 20 feet in later overload tests.

Businesses Own More Transports Than U.S. Airlines

One of the most revolutionary transportation trends in recent history—except, of course, the introduction of jet travel—has gone virtually unnoticed by the American public.

Corporations—which in the past have relied largely on public transportation for executive travel—are turning to the use of company-owned aircraft in increasing numbers.

Multi-Engine Fleet

Today, U.S. corporations own an estimated 9,500 planes—of which some 1,700 are multi-engined. This constitutes a multi-engined corporation fleet larger than that operated by all U.S. scheduled airlines combined.

This business fleet flew a total of 2,966,000 hours last year, some 730,000 more hours than were flown by the domestic airlines during the same period, according to the Corporation Aircraft Owners Association.

The CAA itself reflects the rapid growth of corporate aircraft in the country. The association’s size has doubled every year for the past three years and now stands at approximately 200 member corporations.

Total of 18,000

These companies are not the only businesses which operate aircraft, however. About 18,000 civil aircraft in the U.S. today are owned by business and professional users, says the Civil Aeronautics Administration. With operating costs chargeable as business expenses, most of these companies are able to write off the initial cost of their planes in four to five years.

A fleet of business aircraft is considered a reservoir of emergency transportation potential in event of war. The company-owned planes not only would relieve the burden on public transportation facilities in time of war—but could be employed in emergency on civil defense and mobilization missions.

Manufacturer Cuts Costs By Shredding Blueprints

Old blueprints are saving tax dollars for major U.S. aircraft plants. Over 170 tons of discarded blueprints have been shredded into "hay" for packing shipments of close-tolerance metal parts. Ammonia in the blueprints neutralizes acid in the paper, making it ideal for packing parts subject to corrosion. An equivalent amount of specially-treated acid-free wrapping costs about $18,000.

Heavy Press Symposium

More than 1,500 aircraft industry executives are expected to converge on New York on December 2 for a major symposium on heavy presses—one of the latest developments in improving structural strength and reducing the weight of modern aircraft.

Industry Efforts Cut Tax Burden For Air Power

(Continued from page 1)

The industry has also been faced with the problem of building extremely larger and more complex aircraft in order to meet the ever-rising requirements of the military establishment and to meet the threat of Soviet technological advances.

In the face of these heightened requirements and the impact of inflation, the industry has embarked on an intensive internal economy program designed to hold the rise in costs to a minimum.

Outlines Industry Objective

The basic industry objective was outlined recently by a major helicopter manufacturer who introduced a plant-wide drive to cut five per cent of the time and materials used in building his product. "Every employee, taxpaying employee, our own. We do a lot of grumbling about taxes, and if we stop and think we will realize that every time we waste 15 minutes or damage some material it is money out of our own pockets."

Aiming at long-range economies, another aircraft executive pointed out: "The engineering and production know-how of the American aircraft industry is one of the nation's most valuable assets. But we must be given a chance to apply this know-how systematically and continuously—without the secularities generated by the ups-and-downs that the aircraft industry has been put through in the last six years. Then we'll be able to keep our air forces strong and at a price that is affordable to the American taxpayer."

Broad-Scale Drive

The cost-reduction drive extends from top management to the assembly line. In one plant alone, more than 1,100 experienced shop workers have served six months as "conservation committeemen." When the program started, rivets and other "hardware" swept up from the production floor and scrapped amounted to $22 per month for each employee. Today, the same figure is only $2.75.

Typical of other economies aimed at reducing the nation's power tax burden are the following:

• An advance in automatic welding at one company that saves at least $150,000 per year.
• Introduction of 150 plastic parts in a modern fighter, with a 65 per cent average saving in the cost of plastic parts over comparable metal parts.
• A new method of setting up jigs and fixtures that cuts major tooling costs by 30 per cent.

Seven-Per-Cent Score on this Quiz is Excellent. Sixty Per Cent is Good. Answers on Page 4.

1. A typical aircraft engine manufacturer's base labor rate increased 250 per cent from 1941 to 1951. Yet the manufacturer, through cost reduction efforts and production efficiency, was able to hold labor costs to an increase of: (a) less than 10 per cent; (b) less than 50 per cent; (c) less than 30 per cent.

2. In mid-1952, strength of the Chinese Air Force was estimated to be about 1,450 warplanes. Since that time, additional Soviet delivery of blueprints to the Chinese have swelled this number to: (a) 1,800; (b) 2,200; (c) 2,500.

3. Two years ago, production of two of the major USAF jet fighters averaged less than three per day. Now the combined production of these two fighter types is more than: (a) 4 days; (b) 13 days; per day; (c) 9 per day.

4. In spite of tremendously increased flight activity, the Air Force record during the first half of 1952 showed a constant improvement. For these six months, the major accident rate declined: (a) 2 per cent; (b) 5 per cent; (c) 9 per cent.

5. One of the newest aviation tales, built for high-speed jet aircraft, is capable of withstandings landings at a speed of: (a) 250 miles per hour; (b) 190 miles per hour; (c) 125 miles per hour.

6. The Civil Air Patrol operates the largest organized non-military mobile radio system in the United States. The network is composed of 9,500 stations, of which: (a) 1,000 are mobile; (b) 7,000 are mobile; (c) 4,000 are mobile.

7. In the first two years of the Korean War, United Nations Patrol flights covered a distance equal to: (a) 2,000 trips around the world; (b) 4,000 trips around the world; (c) 6,000 trips around the world.

8. Celebration of the 50th Anniversary of the Wright Brothers' successful flight at Kitty Hawk, N. C., will conclude a year-long national observance of the impact of aviation on the world's economic and social life. The Wright Brothers' historic flight took place on: (a) December 17, 1903; (b) July 4, 1902; (c) December 20, 1901.

9. One of the modern airplane types now in service on U.S. airlines consumes only 8.9 pounds of fuel per mile. Estimated fuel consumption for a jet transport of about the same size, despite its higher speed, is: (a) about 12.4 pounds per mile; (b) about 15.1 pounds of fuel per mile; (c) about 20.4 pounds of fuel per mile.

10. For every sweepwing Air Force jet shot down by Communist planes in Korea since July American pilots have destroyed: (a) 8 MIG-15's; (b) 10 MIG-15's; (c) 15 MIG-15's.
You're Twice as Safe in an Airliner As Riding in Your Family Automobile

It's at least twice as safe to fly on a scheduled airline today as it is to travel an equal distance in a family automobile. And latest safety statistics indicate that current airline safety records exceed those of the nation's railroads in 1951.

These tremendous advances in aviation safety have made air travel on U.S.-built transports one of the safest forms of public transportation.

Constant improvement in aircraft dependability has been attributed to improved flight qualities and handling characteristics of modern planes, new devices for poor-weather flying, new types of fire protection equipment, and emphasis on safety engineering by aircraft manufacturers.

New Safety Mark

During the 12-month period from October 1951 through September 1952, the U. S. domestic scheduled airlines registered the lowest fatality rate in airline history. For the one-year period, fatalities were 0.38 per 100 million passenger miles flown. This compares with 2.4 deaths per 100 million passenger miles in automobiles and 0.43 per 100 million passenger miles in trains during 1951 (latest year for which figures are available for these two forms of transportation).

While amassing this unprece-