

# AIR AMERICA LOG

VOL IV NO. 5

KADENA, OKINAWA

1970

## MESSAGE FROM MANAGEMENT

### AIR AMERICA'S COMPANY IMAGE

There have been an increasing number of instances recently in the press, intra-company memoranda, etc. wherein Air America, Inc. has been referred to as an "airline". This term (and the term "air carrier") in common international usage refers to a common carrier by air authorized by its government to provide services to the public generally, usually over fixed routes. Hence the term is inaccurate as applied to Air America since the termination of the Company's Scheduled Air Services Ryukyus operations on 30 June, 1967.

Since that time AAM's principal activities have been a contractor performing airlift, maintenance and general support contracts, many of them with various agencies of the United States Government in the Far East and some with other governments in the Far East. The performance of our airlift contracts with U.S. Government agencies, for example, is not typical of airline operations since, basically, the authorization therefor is not granted to Air America, Inc. as a company but to the U.S. Government by the host governments.

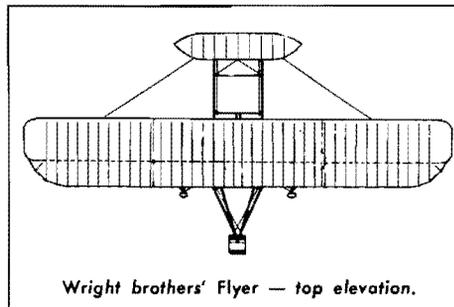
To describe AAM's current activities as an "airline" also involves a political liability in that those not completely informed may look upon the Company as an infringer upon the domestic air rights customarily reserved for the host countries' citizens. Similarly, common carrier operations between countries are governed by bilateral exchanges between interested governments, and Air America is not the beneficiary of any such exchange. Efforts should be made to correct any erroneous impressions in these areas at any time they may arise.

In certain of its transport activities Air America is classified for U.S. Federal Aviation Agency and Civil Aeronautics Board purposes as a "large commercial operator" under Part 121 of the Federal Aviation Regulations; other aspects of its operations fall under Part 91, governing "general aviation". Since the terminology may not be familiar to the average layman, however, it would seem preferable, in ordinary situations, to describe Air America as an aviation company, or, if important to convey its transport capability, as a contract air carrier.

## AIR HISTORY (Item 17)

**NOTE:** Because Item 17 concerns the Wright brothers' (and man's) first powered flight, we are giving that historic event front page treatment. We hope we have unearthed some facts about the Wright Flyer and its builders which were not known to you up to now — ED.

17 December 1903. Man's first sustained, controlled flight in a powered airplane was made by Orville Wright on the morning of 17 December, 1903 (following an unsuccessful attempt by Wilbur Wright on 14 December). Orville's first flight covered 120 feet in 12 seconds. The Flyer was launched from a monorail and landed on its pair of skids. Two more short flights were made with the brothers alternating as pilots. Then, at noon, Wilbur made the last and longest flight of the day by winging 852 feet in 59 seconds.



Wright brothers' Flyer — top elevation.

The science of aviation was born. Here are some interesting facts about the Wright brothers, their Flyer and its engine.

- The brothers designed and built their own wind tunnel in which they systematically tested many air foil sections. (A bicycle was also used for the same purpose).

- They designed, built and flew several gliders before constructing their first Flyer.

- The Flyer was a single-engine, braced-wing, unstaggered biplane with a span of 40 ft. 4 in. (Reason for the four inches is that the Flyer's pilot had to be located on the craft's center-line for proper control, forcing the Wright brothers to locate the engine off-center; they chose the right side of the plane. Since weight of the powerplant was in the 200 lb. range, the brothers added four inches to the 20 ft. span of the right wing to provide additional lift for the engine).

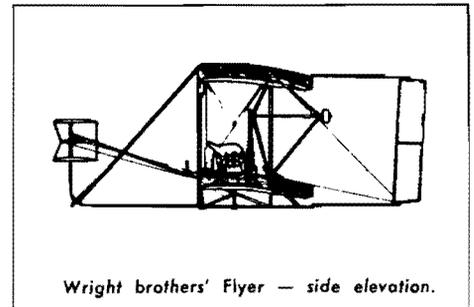
- Other Flyer specifications: wing chord — 6 ft. 6 in.; gap — 6 ft. 2 in.; length overall — 21 ft. 1 in.; height overall — 8 ft. 0 in.

- Flyer's weights: weight empty — 605 lbs.; weight loaded — 750 lb.; wing loading — 1.47 lb/sq.ft.

- Flyer's instrumentation: anemometer head and gauge; stop-watch.

- Flyer's flight controls: pitch was controlled by forward-placed biplane elevators actuated through a shaft attached to a wooden lever which was moved fore or aft by the pilot's left hand. Roll was achieved by warping both upper and lower wing tips and yaw was produced through dual, rear, boom-mounted rudders. Roll and yaw were induced by movement of the pilot's torso while he lay prone on his stomach.

The Wright brothers also designed and built (with the able assistance of a skilled machinist) the four-cylinder, water-cooled, 16 hp. engine which powered the Flyer. Ignition was by low-tension magneto with make-and-break spark. Fuel feed (constant stream)



Wright brothers' Flyer — side elevation.

was by gravity; fuel was vaporized by running it over a large, heated surface of the engine's water jacket.

The powerplant drove two geared 8 ft. 6 in. diameter propellers into which the Wright brothers put some remarkable and original research in designing the blades. The propellers, made of three laminations of spruce, were driven by tube-encased bicycle chains; the drive to the left propeller was crossed for counter-rotation.

Take-off procedure: the Flyer's two skids rested on a six-foot plank carried transversely by a launching trolley made up of two adapted bicycle wheel hubs mounted fore-and-aft on a wooden block. A third hub was attached to a forward cross-piece to prevent the Flyer from nosing over on the 60 ft. long launching monorail. During take-off the Flyer's wing was steadied manually.

Wilbur Wright lived into the modern air age; he died in 1948.



## THE VIENTIANE VIEW

### Vientiane Operations

Mr. Tom, Y. S. Chung, Senior Weather Forecaster/VTE standing besides a weather map of the Far East which is covered with accurately-drawn isobars.



### Vientiane Clinic

Miss Southary Saryroob, Lao Staff Nurse (left) and Miss Benchang Luong-Aram Thai Staff Nurse (right) pose prettily in the AAM clinic at VTE.



### Vientiane Traffic

Air Freight Dispatchers sit on the floor of an AAM C-46 folding rice pallet static lines between rice drops to two separate Drop Zones. They are (l. to r.): Messrs. Chanthadara, Phoumo and Khamkheng.



## AAM PRESENTS VW TO LAO DCA

In response to a request made of Air America by the Lao Director of Civil Aviation, His Royal Highness Prince Tiao Sisouphanouvong, Air America's Base Manager at Vientiane, Mr. James A. Cunningham, Jr., recently presented to the Civil Aviation Directorate a 1960 Volkswagen microbus for their official use.

The microbus, one of AAM's fleet used for crew pick-ups and local Company business, had been earmarked for survey because of its age and condition. However,



BM/VTE (center) hands keys of reconstructed microbus to His Royal Highness Prince Tiao Sisouphanouvong, Lao DCA. Mr. Luther E. Martin, SGM/VTE is at right.



Lao DCA shakes hands with BM/VTE while SGM/VTE looks on.



The Lao DCA's rebuilt microbus (right) beside a standard AAM Volkswagen.

with the permission of President Hugh L. Grundy, the vehicle was completely rehabilitated in Air America's Shops at Vientiane and emerged looking "like new" after nearly two months of work.

Because of budgetary considerations, the Civil Aviation Directorate was unable to obtain badly needed in-town transportation and turned to Air America for assistance.

The project was accomplished largely in training exercises of Lao trainees under the supervision of Mr. Luther E. Martin, SGM/VTE, and Mr. Jack A. Pearsall, MTS/VTE.

Air America presented the microbus to the Lao DCA at the Directorate's garage in downtown Vientiane.



## TNN MAKES TRAINING AIDS FOR S. E. ASIA

by: T. P. Chao, SGEU/TNN\*

Training aids are vital to successfully teaching the operation of such complex mechanisms as gas turbine engines or helicopters, for example. Among the most useful training aids are movable cutaways of actual mechanisms and operational mock-ups of a particular type of system or aircraft.

The Technical Training Division at Air Asia's Main Maintenance Base in Tainan, Taiwan, has undertaken the task of making movable cutaways and operational mock-ups both for its own use and for use at Air America Bases in Southeast Asia.

A cutaway recently completed at TTD is the AiResearch Model TPE 331 turboprop engine shown on the right. (The engine is used to power the Porter PC-6C and the Polpar.) The work was accomplished by 13 members of a Lao Line Service Class which recently received a year's instruction at the Technical Training Division. This particular cutaway TPE 331 was shipped to S. E. Asia.

Among movable cutaways of sophisticated aircraft mechanisms made by students of various International Line Service Mechanic Classes and Quality Control Trainee Classes at TTD are: three AiResearch TPE 331 turboprop engines; one Avco Lycoming T5311A shaft turbine engine (used in our Bell 204Bs); one Avco Lycoming GO-480 piston engine (used in our Helio Couriers); and a controllable pitch propeller assembly.

The most ambitious operational mock-up produced to date by Technical Training Division students is one of a Bell 204B helicopter at Udorn which includes the cutaway T53 engine mentioned above. This mock-up includes such features as a functional transmission, main rotor with operational collective pitch control (cyclic pitch control will be added later), and tail rotor with directional control.

Other operational mock-ups produced by TTD students include a second controllable pitch propeller assembly, a retractable landing gear assembly, an instrument panel, and two general aircraft lighting systems which (continued on p. 5)

\* Supervisor-General Education Unit/Tainan

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### Photo Captions:

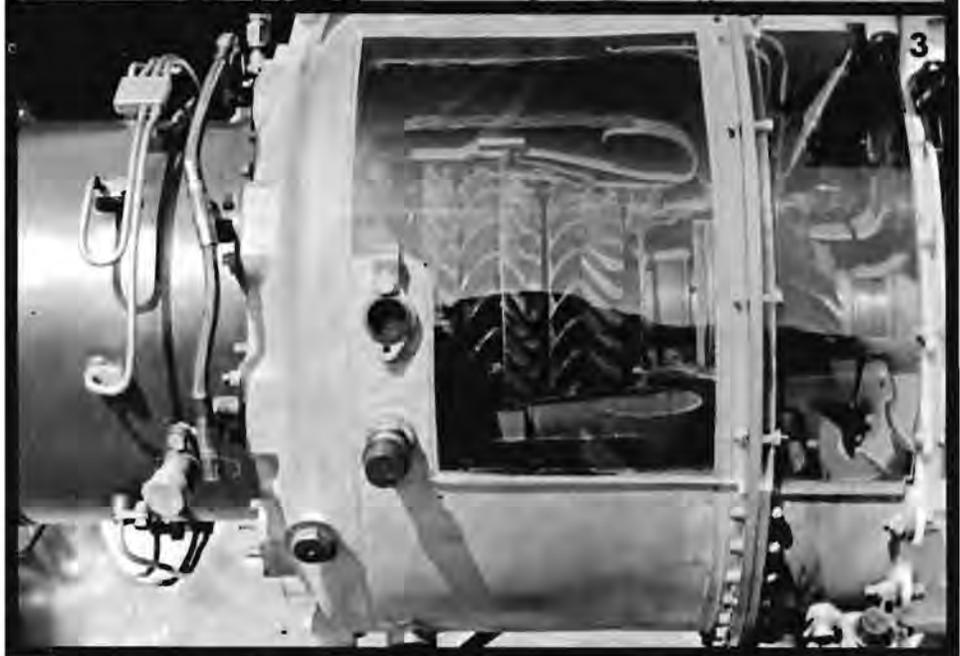
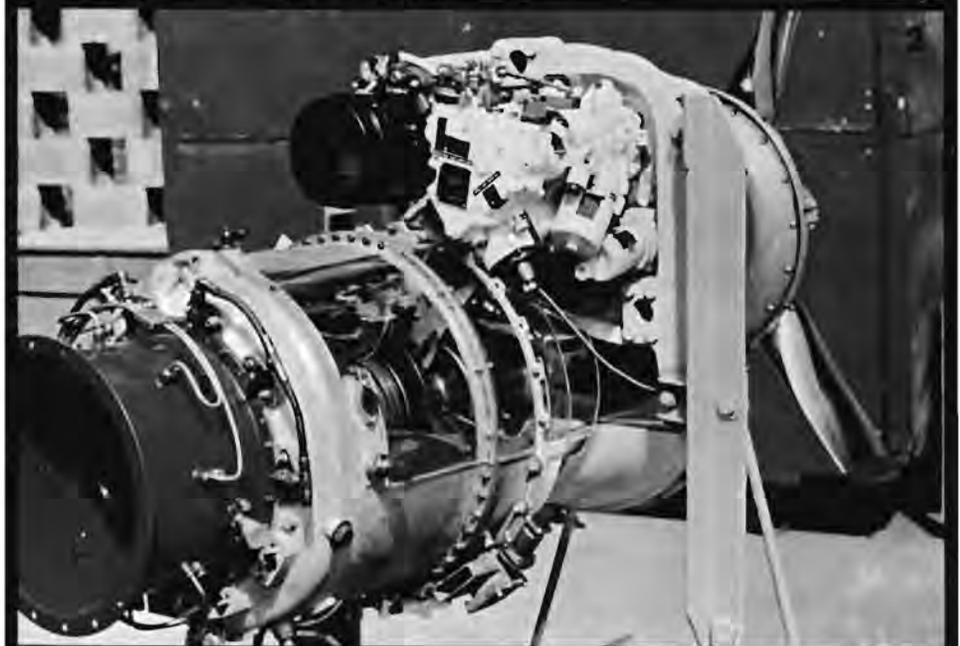
1. Lao Line Service Mechanic Class students who made the AiResearch TPE 331 cutaway around which they are clustered.

Front row (l. to r.): Mour Song, Viengluang Khomphone, Phouthovongs Phouang, Choumasone Amisa, Soudochan Samrane, Thongphanh Prayounh.

Rear row (l. to r.): J. H. Chang — OJT Instructor, Sivasorn Khampha, Mekdarasouk Thongvanh, Mantakoul Boungnalith, Sirivong Bounphene, Kittirath Damdouone, Bayrasy Lay, T. H. Harper — the late Director of Technical Training Division, Thao Pany.

2. Overall view of the AiResearch TPE 331 turboprop engine cutaway made at Tainan seen from three quarters rear.

3. Close-up of the turbine section (center) and exhaust duct (left) of the TPE 331 engine.





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AAM/SGN Auxiliary Fire Fighting Trainees (morning section). Standing (l. to r.): Fire Chief A. D. Munoz; Timekeeper/Clerk I N.N. Tuan; RMD Mechanic N. V. Tam; Storekeeper III H.V. Oai; RMD Mechanic A.R. Gamboa; RMD Mechanic R.C. Romero; GMD Electrician D.V. Duong; Storekeeper III A. Idres; Fireman Osman; Fire Leadman V.B. Kim; Fireman L.V. Dai; RMD Mechanic Leadman T.V. Hanh; TTD Instructor D.H. Chung. Seated (l. to r.): Fireman T.C. Vien; GMD Painter T.V. Lam; GMD Typewriter Repairman H.C. Phong; RMD Mechanic J.P. Chen; RMD Mechanic C.C. Wu; Fireman T.V. Vinh.



SGN FIREFIGHTERS TAKE TRAINING

by: R.L. Leonard, CSY/SGN

Recently, Chief/Fire Brigade/Saigon A. D. Munoz conducted a Basic Fire Fighting Course for Company Auxiliary Fire Fighting Teams. Classes were held in two sessions by the Technical Training Department and met two hours each session for six consecutive days. The training program took place at Air America's Saigon Base located at Tan Son Nhut Airport.

Some 37 Air America employees from various departments registered to take the course which consisted of classroom lectures, training films and practical field exercises. Subjects taken up on this course dealt with: The Chemistry of Fire, Classification of Fires, Fire Hazards, What to Do in Case of Fire, and First Aid Fire Extinguishers.

Classroom lectures were conducted by the Fire Chief and translated into Vietnamese by Mechanic Leadman T. V. Hanh. Training films were shown to the class by instructor D.H. Chung of the Technical Training Department who also helped in the preparation of the examination papers.

The cooperation of all Department Heads and the Technical Training Department made this training program a big success.

Pix by: Mr. H. J. Kohler, STT/SGN



GMD Electrician N.V. Duong is demonstrating the use of a 15 lb. carbon dioxide extinguisher on Class "B" (flamable liquids) fire. (CO<sub>2</sub> is relatively ineffective in the open).



RMD Mechanic A.R. Gamboa using a 20 lbs. dry chemical extinguisher in putting out gasoline fire.



## CAN THO STATION CELEBRATES 1ST YEAR

by: **Boyd D. Mesecher, MTS/SVN**

Earlier this year our Can Tho Station, in the southern Delta region of South Vietnam, celebrated its first anniversary.

Here is the story: early in 1969, John Carter, Supervisor Regional Maintenance Department, Saigon, and a crew of maintenance and supply personnel from Saigon arrived at Can Tho with a minimum of supplies and equipment to set up an aircraft maintenance operation there. The objective in establishing this facility at Can Tho was to provide our customers — U. S. Embassy and CORDS (Combined Operations for Revolutionary Development Support) — with improved service at lower cost by keeping AAM aircraft in Can Tho for longer periods of time and by having the facilities and manpower to keep them airworthy while at Can Tho.

Through the efforts of Mr. Carter and his maintenance and supply people, and with the exceptional cooperation and assistance of the Chief, Air Operations/CORDS and his personnel, the original objectives set for Air America's operation at Can Tho were suc-



Can Tho First Anniversary party in progress. Standing, left is Frank Coner, Captain/PC-6C/SGN; standing at table is Mr. E.V. Valebia, Mech. 1/c; seated far right is Ted Mauldin, Captain/PC-6C/SGN.

cessfully met for the entire first year. Through the efforts and teamwork of all personnel involved, the Can Tho operation has been developed and expanded to provide these facilities: a supply room equipped with adequate storage space and parts racks in lieu of the original Conex box; provisions for storing and protecting Company tools and employee tool boxes and aircraft handling and maintenance equipment to meet the requirements of overnight service checks.

Early this year, a first anniversary party was held at the Can Tho facility; it exemplified the excellent cooperative and group spirit among all individuals at the Can Tho Station: Embassy, CORDS and Air America personnel alike. At the party, excellent food and refreshments were served to the gratification of all concerned. Judging from the photos at the right, the feast was made up of such tongue-tingling items as roast suckling pig and Schlitz beer.



This pix of the First Anniversary party at Can Tho shows the groaning board laden with what appears to be a pig's head with an apple in his mouth (background), bowls of rice and vegetables, a can of Schlitz beer and a Cola-type drink. Smiling around the board are (l. to r.): Mr. A.L. Christian (CORDS); and AAM personnel Mr. P.B. Duco, Mech. 2/c; Mr. E.T. Rabonzo, Mech. 1/c; Mr. M.C. Velasco, Mech. 2/c; Mr. M.T. Cordella, Storekeeper 1/c; Mr. M.A. Nicolas, Mech. 1/c; Mr. E.V. Valebia, Mech. 1/c.



Sitting beneath a king-size "Welcome" sign, Air America's Mr. P.B. Duco, Mech. 2/c, appears to be successfully and skillfully wielding a sizeable meat cleaver as he slices succulent suckling pig whose head appears at the right side of the groaning board which is also laden with a large pot of green vegetables plus several cans of Schlitz beer.



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**"FIND A WAY YOU CAN—NOT A REASON YOU CANNOT"**

## AIR AMERICA MEDICAL MEMO

### VITAMINS & YOUR HEALTH (Part II)

Courtesy: Medical Department

It is surprising how many people fall for the fallacy that the more a good thing is applied, the better will be the results.

While the consequences of such well-meaning improvising are often harmful, usually only the individual himself suffers. It is much more disturbing when large segments of the population are caught in a web of good intentions.

For example, vitamin D is essential to the skeletal development of children; a child who fails to get sufficient amounts will contract rickets. But massive overdoses can be harmful, even though it can be tolerated in doses many times the normal need.

And this is where our good intentions are implicated. In an effort to increase sales appeal, many milk, bread, and multivitamin producers add vitamin D to their products. If a child who consumes these products also plays in the sunlight, eats fish, or takes cod-liver oil (the richest natural sources of this nutrient), he gets even more—perhaps too much more vitamin D.

Nor are children alone vulnerable. Since vitamin D enhances the calcium-retention tendencies of the body, overdoses of vitamin D may contribute to arteriosclerosis by promoting calcification of the arteries.

The National Research Council recommends the following daily amounts of exogenous vitamin D: infants under one year—400-800 IU (International Units); children up to 20 years—400 IU. The requirement for adults is not known, but with normal exposure to sunlight adequate amounts of vitamin D probably are formed in the skin.

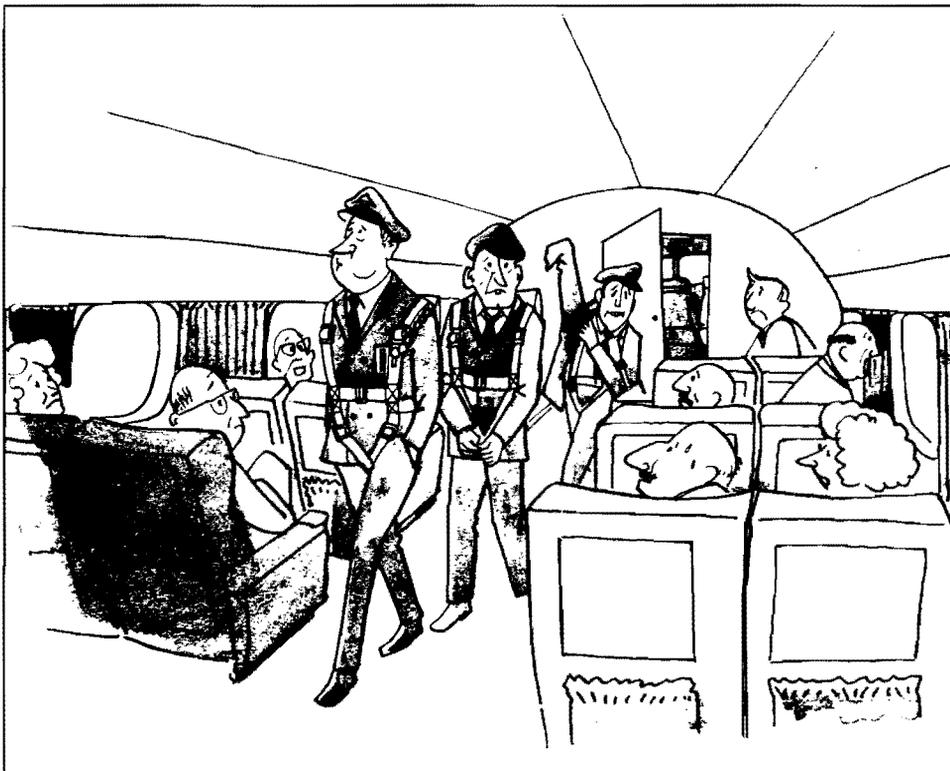
Vitamin C is another nutrient around which much misunderstanding has arisen. For example, there is no scientific corroboration of the claim that vitamin C (ascorbic acid) will prevent the common cold. But neither is there conclusive evidence that it doesn't help.

When all the scientific light has been shed on this vitamin, we may well find it to be a factor in the prevention of respiratory infections. There is also hope that research will one day show us how it can be used in the fight against coronary heart disease.

Most of us eat a diet high in vitamin C, but there are pollutants in our lives which nullify its effects. Research indicates that the smoke from one cigarette could neutralize the vitamin C in a medium-size orange. And it can be rendered useless by many food preservatives and the smog-choked air we breathe.

For all our knowledge, there is still an enormous amount of work to be done in vitamin research. Indeed, we have hardly turned back the surface. But if there are unyielding mysteries beyond that surface, there are unlimited possibilities too.

(Continued from AAM LOG VOL. IV, No. 4)



Drawing courtesy: Lloyd Coleman, son of Ben F. Coleman, Captain C-123K/VTE.

## AIR AMERICA LOG

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### EDITOR'S EDEN

(or: shortie squibs from here & there)

#### FLYING MIRROR

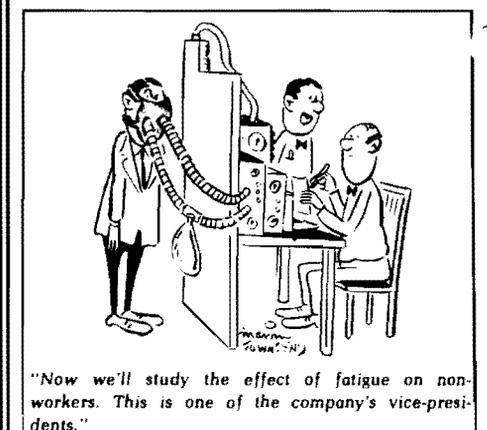
When a shiny Air America Helio Courier lands at one of the many remote STOL sites in up-country Laos, often as not the local tribespeople will cluster around the plane to use the bright fuselage sides as a giant mirror and look at their reflections with great curiosity while gurgling happy sounds.

Courtesy: C. Bartlett, Helio Captain/VTE

#### DO-X FACTS

When the huge Dornier DO-X flying boat first took to the air in 1929, it was powered by twelve Siemens-built Bristol Jupiter air-cooled, radial engines, mounted in six tandem pairs, which gave the craft (wingspan—157 ft. 5 in., all-up weight—123,460 lb.) a service ceiling of 1,377 ft. (420 m.)

When the air-cooled engines were replaced by water-cooled Curtiss Conqueror engines, (the rear air-cooled, pusher powerplants were running too hot) the service ceiling was increased to 1,640 ft. (500 m.)



"Now we'll study the effect of fatigue on non-workers. This is one of the company's vice-presidents."

#### GUIDELINES

The six most important words in our language are: "I admit I made a mistake." The five most important: "You did a good job." The four most important: "What is your opinion?" The three most important: "If you please." The two most important: "Thank you." The one most important word: "We." And the least important word? "I!"

— Anonymous.