

The Flying Peace Corps Operates Out Of Dayton

Dayton, Ohio, home of the Wright brothers and the first airplane, has yet another distinction to add to its aviation honors. It is the home of nine very special, single-engine planes called "The Flying Peace Corps."

Aviation

The May issue of "The Wonderful World of Ohio" magazine tells the story of "The Flying Peace Corps"—the pilots and volunteer workers who travel the skyways over Africa to carry food, medicine, and patients to and from isolated desert and jungle outposts.

The Corps, or United Mission Air Training and Transport (UMATT) is headquartered at 300 College Park Ave. in Dayton. It is a group of volunteer workers founded four years ago by Mike Stimac, once a high school mathematics and science teacher in Cleveland and Puerto Rico.

Since UMATT's founding, more than 3000 persons have been flown more than 500,000 miles across East Africa. The group's aerologues tell of some of the missions the volunteers have flown: A quick trip to a hospital with a tribal chief dying of post-operative complications, supply runs with cargoes such as badly needed hospital supplies, food for children with bloated stomachs.

PEOPLE IN big cities who look up and see the brownish backwash coming from jet airliner exhausts on takeoff and landing have a right to know this:

That haze they see creates only 1% of the air pollution plaguing so many large U. S. communities.

Most of the other 99% is from automobile exhausts, industry, rubbish fires, brush or forest blazes.

This is the conclusion of more than one government agency. The Federal Aviation Administration has conducted an investigation to find out how great a culprit exhaust fumes are. So has the National Center for Air Pollution Control, Taft Engineering Center, Public Health Service, Cincinnati. So has the aerospace industry.

Nevertheless, FAA officials say that "even though this percentage is very low,

our agency is starting a \$250,000, three-year program designed to keep air around airports clean.

"The program will encourage the aerospace industry to co-operate with the FAA and other government agencies in devising cleaner jet engines."

The Washington, D. C., area, where the Dulles and International Airports serve the metropolitan district with one of the most traffic-laden airline schedules in the country, was used by the National Center for its investigation of commercial aviation's contribution to smog.

THE CENTER'S November, 1967, report, FAA says, confirmed earlier reports that "aircraft are responsible for only 1% of total air pollution . . ."

FAA has an explanation for this and at the same time concedes that the

dirty-appearing fumes flowing from jet engine exhausts create a "symbol" of air pollution in the public mind.

"The combustion process in a jet engine is much more efficient than that in any other fuel-burning engine," the FAA says in a statement prepared for Copley News Service.

"More than 99% of a jet engine's exhaust consists of invisible, nonpollutant gaseous products, such as carbon dioxide, water vapor, oxygen, nitrogen and excess air—all normal atmosphere constituents," the statement explains.

"The remaining 1% consists of visible particles and invisible gaseous products. The latter include small traces of unburned hydrocarbons, carbon monoxide and nitrogen oxide. Only about 1/2% of the weight of fuel consumed by a jet engine is exhausted in the

form of particles, such as carbon and organic compounds, or what is simply called exhaust smoke."

JET ENGINE exhaust fumes, because they are emitted at higher altitudes and often against a clear sky, attract more public attention than, for example, the exhaust from autos, the FAA points out.

"The public," FAA says, "sees these smoke trails as a symbol of air pollution which is justified only to the extent that they represent a minor nuisance in the over-all (smog) problem."

"The FAA and the aircraft industry are agreed that this symbol and association must be eliminated or substantially reduced."

Thus FFA and airplane builders have joined to urge engine manufacturers to "take immediate action to eliminate all such visible (air pollution) emissions." The military services have been putting up some money in the same research field.

The results already have been encouraging, FAA says.

"Combustors have been developed for current-type engines that have a re-lax-smoke-free emission," the agency points out. But they aren't ready for production yet, the agency adds "regretfully."

Fuel additives have been used in an attempt to cut jet engine smoke, but they either are too expensive or tend to form deposits on critical engine parts, endangering flight safety. Nevertheless, they still are being studied.

But FAA, if it were asked, would have to concede that a 1% air pollution factor is no great problem at a time when the sonic boom is bringing it a headache and the people on the ground are getting earaches.

GENERAL ELECTRIC'S J-85 turbojet engine has been unveiled in its newest role as the powerplant for the U. S. Air Force/Lockheed XV-4B Hummingbird II. This direct lift/diverted thrust VTOL aircraft was publicly shown at roll-out ceremonies conducted at the Lockheed-Georgia Co. in Marietta, Ga.

The XV-4B utilizes six Y-J-85-19 engines, four direct lift engines mounted vertically in the fuselage center section and two forward thrusting, horizontally mounted engines in wing root nacelles. Additional

vertical thrust is gained by diverting the exhaust of the horizontal engines downward in the hover and transitional modes. During horizontal flight the vertical engines are shut down.

Edward Woll, vice president of General Electric's Military Engine Division noted that the J-85's installed in the XV-4B aircraft are similar to other engines in the J-85 family which power 19 different aircraft with an accumulated flight time of four million hours.

Woll said the basic J-85 engine consists of an eight stage compressor, annular combustor and two stage gas generator turbine. The only difference between the powerplants for the XV-4B and other J-85's are modifications to the oil system and changes in turbine materials for vertical operation.

In addition to the XV-4B, non-afterburning

J-85 turbojets power the direct lift North American Rockwell FS-001 "Hoverbuggy" and a turbofan derivative, the CF-700, powers the Bell-NASA Lunar Landing Training Vehicle. Extensive direct lift research with J-85's has also been conducted at the NASA Ames Test Facility.

Other experimental J-85-powered VTOL systems include the GE-Ryan XV-5A lift fan and the Bell-NASA X-14 deflected thrust aircraft.

The J-85 powers several subsonic fixed-wing aircraft including the Cessna A-37-A and A-37-B counter-insurgency warfare aircraft, the Canadair CL-41-A and the SAAB 105-XT trainers.

Used for boost application, the J-85 powers the Fairchild-Hiller C-119-K and C-123-K transports and as an air-breathing missile powerplant the J-85 powers the McDonnell-Douglas ADM-20.

A FLIGHT BREAKFAST will be held at the Raleigh County Memorial Airport, Beckley, W. Va., June 16 from 7:30 a. m. until 1 p. m. Lunch will be available. Rain date will be June 23.

The flight breakfast will be sponsored by the New River Flying Club and all are welcomed and invited to bring their families.

Prizes will be given for the earliest arrival, best landing, worst landing, and those from the farthest

point, and oldest airplane. Beckley VOR 117.7 mc "Monitored by Charleston." Beckley Unicom 123.8 mc for wind and possible traffic.

See parachute jumping, Benson Gyro-Copter and Pitts Special and new airplane display.

THE FLYING NEUTRONS flying club will sponsor its annual fly-in at Cincinnati, Inc. (Blue Ash) Airport today from 10 a. m. until 5 p. m.

There will be three pilot proficiency events: Spot landing, taxing and a 30-minute cross country. Trophies and prizes will be awarded. Entry fee is \$2. It is open to members and non-members.



Amusin Illusion

It appears the passengers in the cable car are getting an unusual ride for their money. Actually, the giraffe has nothing to do with the skyride, he just guards the entrance to the Kiddie Land portion of Cedar Point Amusement Park near Sandusky, Ohio. The illusion is created by the angle the photographer took when he snapped the picture. (UPI Photo).

Weather Post Going Up 300 Miles At Sea

NEWPORT, Oreg. (AP) — A weather station will be towed 300 miles out to sea this week and fastened to a peak that soars nearly 12,000 feet above the ocean floor.

Cobb Seamount, a towering underwater mountain, comes to within 100 feet of the surface due west of the Columbia River's mouth. The weather station to be anchored to the mountain's top is a steel cylinder whose upper end will stick into the air and send telegraphic weather reports back to land.

"It's a technological gamble," said a representative of Oregon State University's Marine Science Center. "But we think it will work."

Oregon State's oceanography research ship Cayuse will tow the cylinder to Cobb Seamount. The cylinder, called Totem II, is 180 feet long and 3 1/2 feet in diameter. The bottom is fitted with a steel spike 3 1/2 feet long. The top is fitted with weather recording instruments and an automatic transmitter.

The president of Brazil, Arthur da Costa e Silva, whose present term runs to 1971, is the 22nd man to hold that office.

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