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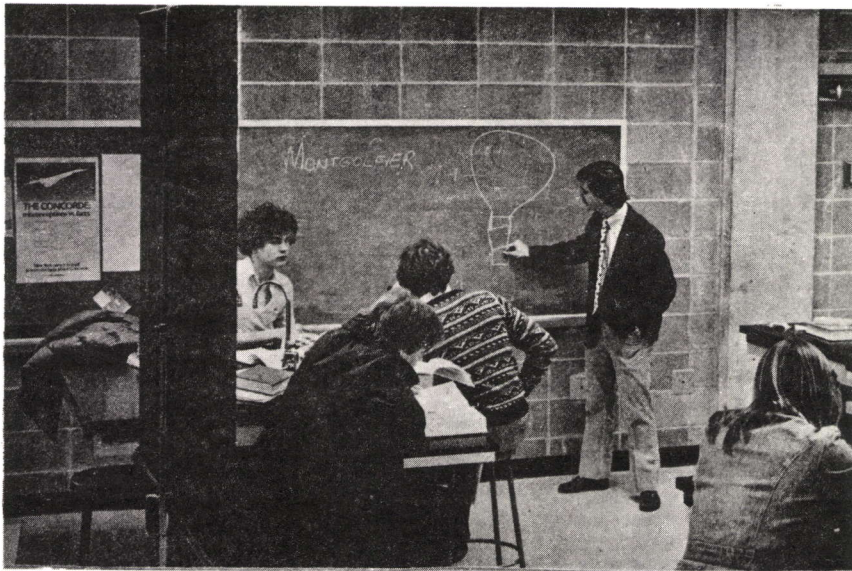
# South Carolina Aeronautics Commission Aviation Newsletter

No. 2

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## AVIATION IN THE SCHOOLS



Robert Sumwalt and Students

Dreher High School in Columbia, S.C. is one of a growing number of high schools in the country that will be offering an Aviation/Aerospace Fundamental Course. This course presents an overview of the field of Aviation and Aerospace and the Career Opportunities that this exciting field has to offer. The student will receive instruction in each of the following areas: Aircraft Systems, Air Traffic Control, Navigation, Aviation History, Weight & Balance and Aircraft Performance, Meteorology, Federal Aviation Regulations, Rocket Fundamentals, and Physiology of Flight. In addition to this, there will be many guest speakers

and three planned field trips. Students who are interested in flying will be given an introduction flying lesson. Upon successful completion of the course, each student will receive ½ Science Credit.

Robert Sumwalt, a Junior at the University of South Carolina proposed the course to Dreher High School. Sumwalt feels that high school education in Aviation/Aerospace should be established for one primary reason "To inform the student of what is available to him in the Aviation and Aerospace Industry."

## AVIATION SAFETY RECORD

Secretary of Transportation William T. Coleman, Jr., congratulated the nation's airlines, their pilots and the Federal Aviation Administration for establishing an aviation safety record in 1976.

In terms of the number of passengers carried, a recordbreaking total of about 220 million, it was the safest year in aviation's 50-year history, Secretary Coleman said.

Forty-five persons died last year in accidents involving U.S. commercial airliners, the lowest total in more than 20 years. In 1975, 124 persons were killed in U.S. airline crashes and in 1974 there were 464 fatalities.

Of the 45 persons killed in 1976, 38 died in a crash April 27 at Harry S. Truman International Airport on St. Thomas in the Virgin Islands. Secretary Coleman said he has approved on September 30 an expenditure of more than \$50 million to lengthen the airport's runway, remove a hill beyond the runway and for other airport improvements. Of the funds, \$37 million will be an FAA grant and the remainder will come from the Virgin Islands.

Secretary Coleman also praised the general aviation (nonairline) industry for an improved safety record in 1976. The number of persons killed in business and private flying accidents was 1,188, a decline from the total of 1,280 in 1975.

The reduction occurred even though in the past 10 years the number of persons who use general aviation has increased 50 percent, Secretary Coleman said.

The improvements in commercial and general aviation safety have occurred within tight federal budget restrictions, the Secretary noted. Despite restraints on federal spending, President Ford's fiscal

year 1976 budget did not stint on funds to increase the number of air traffic controllers and make other air safety improvements.

The safety record set last year by the aviation community vindicates President Ford's increased expenditure in this area, Secretary Coleman said.

Secretary Coleman met with President Ford yesterday morning and the President praised FAA Administrator John L. McLucas, the FAA and the aviation industry for this outstanding safety record.

## FLORENCE TOWER

The Federal Aviation Administration will extend Airport Traffic Control Service at Florence City/County Airport, Florence, South Carolina, on January 30, 1977. Hours of operation will be from 0730 local time until 2230 local time daily.

During the hours of tower operation, all arriving aircraft shall contact Florence Tower prior to entering the airport traffic area. All departing aircraft shall contact Florence ground control prior to taxi.

	VHF	UHF
Tower Frequency	125.1	379.8
Ground Control	121.9	379.8

When the Florence Tower is not in operation, airport advisory service is provided by Florence Flight Service Station of frequency 125.1.

## INSTRUCTOR CLINICS

AGS, Inc., of Atlanta, Ga., has now begun its nationwide program in Flight Instructor Refresher Clinics. The January and February schedule includes:

January 21 - 23, 1977:	Jackson, Mississippi
February 11 - 13, 1977:	Greensboro, North Carolina
February 19 - 21, 1977:	Indianapolis, Indiana

### S.C. WING CIVIL AIR PATROL

A new Civil Air Patrol Squadron, Edgefield County Composite in Johnston headed by Maj. Sanders, a retired Air Force officer, has the only Squadron in the United States with 100% helicopters available for Search & Rescue. They have 2 Hughes and 1 Hiller, according to Maj. Sanders there are 37 members, approximately 20 of whom are pilots and most rated as helicopter and fixed wing pilots.

Wing Commander Col. Doug Abercrombie will make himself available to any town in S.C. who would like to know more about the feasibility of having an airport at that town and what it can do for the community. One of the first things a plant seeking additional locations is the availability of an airport to accommodate the growing use of aircraft for transportation. This and many other factors would be points of discussion, he says.

S.C. Wing is one of the few Wings, if not the only Wing in the U.S., to be approved for four new Cessna Skyhawks for 1977. At a recent Wing Conference held at the Quality Inn in Columbia, Col. Abercrombie laid out goals for this year. One of the major projects is to upgrade all aircraft to newer types. Tail draggers, for example, will eventually be replaced with Cessna 150's. In addition, the Wing is scheduled to receive a Cessna 310 sometime this year. Another theme at the Conference, high on the priority list of things to accomplish in 1977. is recruitment and retention. Two thousand cadet and senior members is the goal. Each member - one new recruitment, at least.

### MECHANICS REFRESHER CLINIC

On March 5-6, 1977, the AOPA Air Safety Foundation and the Federal Aviation Administration,

together with the South Carolina Aeronautics Commission, will sponsor an Aviation Mechanics Refresher Clinic. This program will be held in Columbia, South Carolina, at the Quality Inn, I-20 at Broad River Rd.

Here's your opportunity to participate in a two-day workshop seminar designed to update your skills and knowledge in the field of general aviation maintenance, repair and servicing requirements, and recommendations originating from government and industry.

This concentrated two-day program benefits you by establishing a vital link between you, the manufacturer and the FAA, through more reliable communications and up-to-the-minute news on new requirements and recommendations both from government and industry. The Aviation Mechanics Refresher Course fills the "communications gap" by bringing together government, industry and the A&P mechanic; by bringing you all available current information. The Course is conducted in a relaxed, informal atmosphere with ample opportunity for you to ask questions and get the answers to you specific maintenance and repair problems.

You're invited to attend and bring along any on-the-job trainees in your operation, and anyone else concerned with general aviation maintenance. The tuition fee is \$35.00 per person. This low fee does not include transportation to or from the clinic site, meals, accommodations or personal expenses. These items and the tuition are, however, tax deductible as legitimate business expenses for those who make their living in general aviation maintenance.

Write - The Aviation Mechanics Refresher Clinic, AOPA, 7315 Winconsin Avenue, Washington, D.C. 20014 or call 800-638-0853 Toll Free!

## FAA NOTES

### MOUNTAIN FLYING

The dangers of mountain flying are not high on the priority list for southeastern pilots, but with today's high-speed, long-range airplanes, a trip out West, perhaps near or over the Rocky Mountains, is not an uncommon occurrence. And, many of the same hazards of the "Rockies" are found in our own Appalachians.

Experienced pilots know that downdrafts on the "lee" side of a mountain are almost always present a very real danger. When strong winds are blowing, downdrafts can be so powerful that an airplane is unable to maintain sufficient altitude. Mountain-experienced pilots advise turning away when you get caught in a strong downdraft. The best policy, of course, is to stay away from the mountainside in the first place.

Before flying across a range of mountain, always check the height of the mountain peaks on aeronautical charts, and plan to allow plenty of altitude between yourself and the mountains. The best plan is to fly across on the airways at or above the Minimum En Route Altitude shown on the Radio Facility Charts.

When you visit an airport in mountainous terrain, be sure to check aircraft landing, takeoff, and climb performance, before you go. It's a good idea to check with knowledgeable local pilots when you get there, and follow their advice before proceeding further.

### FROST COSTS

A number of the incidents that occur each winter are directly attributable to persons in the aviation

community disregarding the effects of frost on the flight characteristics of airfoil surfaces and the performance of aircraft. There are also instances in which the dangers of frost are fully respected, but no consideration is given to the hazards associated with removing it improperly. As a result, this also causes a number of incidents each year.

The presence of frost on wing, tail surfaces, etc., cannot be dealt with lightly. Safe operation depends upon its removal, not an evaluation of what effect it will have on the performance of the aircraft. Too often, these effects are not completely understood until the aircraft has either gone down the runway too far to abort safely, or the landing gear is already being retracted. At this point, the facts become of little value without the necessary airspeed, altitude, and adequate control to return to the starting line undamaged.

Unlike the presence of frost, the hazards that can develop via the removal of frost are more numerous and not so readily detectable. Fortunately, however, there is a common root to these hazards: the materials and procedures used to do the job. Even water can become a problem, especially in near freezing temperatures, if it does not completely drain off the aircraft and out of its systems and balanced control surfaces.

### FUEL CONTAMINATION INSPECTION

Numerous practices, procedures, and methods of inspecting the fuel system for contaminants have been followed. In more recent years, several different types of quick drain devices have been installed to assure sampling and ease of accomplishment.

Many times the drained fuel is not carefully examined, neither is the amount drained sufficient to remove all contaminants.

Draining fuel into transparent containers, rather than on the ground, is considered to be a good practice; but even then, a considerable amount must be drained and examined to insure that all contaminated fuel has been removed. The amount of fuel to be drained cannot be specified as storage and climatic conditions will cause a variance.

### SUN BLINDNESS

Several accidents have been contributed to pilots loss of visual reference due to landing approaches or taking off in the sun. There are potential hazards associated with sun blindness and pilots are reminded they have the option to request a more favorable runway when visual difficulties are experienced. Naturally, wind and surface conditions should be considered before committing themselves to an alternate runway.

### MAINTENANCE

Recently a light twin aircraft was landed with the landing gear retracted. This gear system used an electric motor driving the extension/retraction mechanism through a gearbox. The landing gear motor malfunctioned when the pilot attempted to lower the gear. The circuit breaker "popped", but was reset several times until the gear motor was burned out.

This system does not provide a means to declutch the motor from the gearbox. Emergency extension is achieved by turning the gear box with a mechanical hand crank. The motor must also turn mechanically. The motor commutator was burned so

badly that melted solder and copper jammed the motor, preventing it being turned.

Maintenance personnel are reminded of the necessity for inspecting landing gear systems thoroughly during inspections. Actuating motors should be examined for condition of brushes, commutator, brush spring tension, cleanliness, etc.

Manufacturer's recommendations should be closely followed. A cursory retraction of the gear during an inspection is not enough; closely detailed inspection of the entire system assures its airworthiness.

Similarly, the correct emergency procedures are important when normal systems malfunction. When an electrical circuit protector pops and opens the circuit, there usually is a reason for it. Continued attempts to reset an open breaker only increase the possibility of additional system damage and fire.

### MAJOR HALL HONORED



PETE HALL and JOHN CURETON

Major Joseph R. Hall, Jr. was presented a certificate designating him an Accident Prevention Counselor at a wing commanders call at the Quality Inn

in Columbia on January 16, 1977. John B. Cureton, FAA Chief of the Columbia General Aviation District Office made the presentation.

Major Hall is the Air Force Liaison Officer for the South Carolina Wing of the Civil Air Patrol. He has served in this position for the past three years. Prior to his present assignment he was Standard Evaluation Pilot for the Rescue Wing at Elgin Air Force Base, Florida.

#### AIRPLANE SERVICE

Airplane Service Company at Cameron, S.C. has been appointed the Cessna Ag Aircraft Dealer for South Carolina. Airplane Service is owned and operated by Bob McNeil and his sons, Steve and Ken. Bob has operated in South Carolina for the past 20 years and will now offer a complete line of Cessna Agriculture Aircraft, parts and service.

John Barbeiri is the chief mechanic for the company. He is a designated AI and has 13 years experience in the ag aircraft field. In addition to the ag aircraft, Airplane Service will offer complete General Aviation Maintenance and Flight Instruction. They operate 2 Cessna 150's and a Piper Arrow.

McNeil Field is located 3 miles from Cameron on the 300 degree radial of the Vance VOR. The runway is 3000 feet long and has lights on request. The phone number is 823-2300 and 823-2047.

#### BREAKFAST CLUB NEWS

On January 2, thirty-two aircraft flew into the Grand Strand Airport and 83 members were present for Breakfast.

The second meeting of the month was at the Aiken Airport on January 16. One-hundred thirty-five

members were present for this meeting and 40 aircraft were counted. The January 30th meeting is scheduled for Johns Island at Aero Aviation.

Meeting for February and March are listed below:

February 13,	-	Greenwood
February 27,	-	Bennettsville
March 13,	-	Open
March 27,	-	Dillon

Attendances has been excellent at recent meetings. Make plans to attend.

#### NOAA WEATHER RADIO

For the first time, almost every citizen in our state will be within listening range of a National Weather Service radio station that will provide the latest weather observations, weather forecasts, and storm warnings at any time of the day or night, 24 hours a day, seven days a week.

With the recent addition of four new stations, South Carolina now has six such stations, giving near-total coverage.

South Carolina is one of the first states in the union to have statewide coverage of continuous Weather Radio broadcasts. This service is the result of a fine working relationship between the South Carolina Educational TV Commission, which installed and is maintaining the necessary equipment, and the National Weather Service, which provided the equipment and supplies the weather observations and forecasts.

Frequencies for these weather broadcasts are 162.40 megahertz, 162.475 megahertz, or 162.55 megahertz, depending on which of the six Weather Radio transmitters you're trying to receive.

SAFETY AWARENESS



Cpt. Christie, John McMahon, Gary Burlenson

Two safety officers from the 437th Military Airlift Wing, Charleston AFB, made personal visits to many local members of the South Carolina aviation community last month, offering information to increase aviation safety.

Captain Jon C. Christie, wing flying safety officer, and John J. McMahon, Jr., chief of ground safety, spent many hours visiting local flying clubs, fixed base operators, local airfield managers, and the Federal Aviation Administration general aviation district office kicking off the flying safety awareness program.

“Our goal is the reduction of the potential for mid-air aircraft accidents,” said Captain Christie, “through the mutual exchange of information. By acquainting the local aviation community with our

local flying areas, training routes and flight activities and learning their activities, the chances of reaching our goal are greatly increased.”

This program, which includes flying into civilian airports throughout the state, is now an annual event for the 437th MAW safety officials. It begun with a message from Air Force Safety, Norton AFB, California, in April 1975, stressing the fact that most Air Force bases are located in areas with high volumes of civil aviation traffic.

Some Air Force bases have complete controlled airspace, called terminal control areas (TCA). Although maximum usage of air traffic control is an established Air Force requirement, flying in weather that permits usage of visual flight rules (VFR) requires constant use of the “see and avoid” concept of collision prevention. Air Force operations mostly comply with instrument flight rules (IFR) for flight planning and clearances. Simply flying by IFR will not guarantee operation free of conflict with aircraft flying by VFR. In addition to highlighting the “see and avoid” and “right of way” rules, both civilian and military pilots operating within a TCA must be advised of each other’s flight activities to prevent mid-air collisions.

Captain Christie added, “By providing a packet of information sheets, maps, phone numbers, and posters to all local FBOs and GADOs, not only do the base and local aviation community members benefit, flyers entering our area can be aware of the heavy traffic here, and can safely continue their journey knowing what’s ahead.

For additional information please contact Captain John C. Christie or John J. McMahon, 437th Military Airlift Wing, Charleston, AFB.

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### AG SCHOOL & CONVENTION

The South Carolina Agricultural Aviation Association has scheduled its Annual Convention for February 7, 8, and 9 at the Holiday Inn on I-95 at Florence, S.C.

The AG Convention, which is usually the largest aviation meeting to be held in the State, promises to be even bigger and better this year. Plans are being completed for a large AG aircraft display at the Timmonsville Airport and a complete industry exhibit in the Florentine Room. The Program will begin with registration and a get acquainted party on February 7. On February 8, the business and industry session will run from 9 a.m. until 5 p.m.

Ferrel Higbee of the National Association will be present at the business session. Dave Wright will be

the featured speaker at the Banquet on Tuesday night.

On February 9, Dr. Ben Kissam of Clemson University, will conduct the annual agricultural pilots pesticide school. This will be a refresher course with special emphasis on recent changes in the laws and new developments in plant pest control. All pilots, planning to work in South Carolina, should make a special effort to attend this program.

SCAAA President, Billy Lynam, has extended an invitation to everyone having an interest in agricultural Aviation to attend this annual meeting. Door prizes will be awarded at each meeting and a Color T.V. Set will be given to a lucky member of the Association.

### NAV AIDS

John Hamilton, Director of the South Carolina Aeronautics Commission has announced that funds are available for the installation of Nav Aids on local airports. These include lights, rotating beacons and NDB's and are installed on a 50 - 50 basis with local community paying 50% of the cost. For further information contact Mr. Hamilton at the S.C. Aeronautics Commission., P. O. Box 1769, Columbia, South Carolina. 29202.