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Palmetto AVIATION

VOLUME 36, NUMBER 7

Published by the S.C. Aeronautics Commission

July, 1985



JIM HAMILTON

Jim Hamilton appointed to Aeronautics Commission

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STATE DOCUMENTS

Jim Hamilton, a longtime Columbia aircraft dealer, has been appointed by Gov. Dick Riley to a four-year term on the Aeronautics Commission.

Hamilton is president of Midlands Aviation, an aircraft sales and service company which has been based at Columbia's Owens Airport for the past 22 years.

Hamilton is a former Army aviator and paratrooper. He holds a number of FAA ratings including flight instructor-airplanes and instruments; Commercial single and multi engine land, instruments; single engine sea; rotorcraft and ground instructor.

He was the founder of the Jamil Shrine Temple Flying Fezzes and is an honorary life member of the Hejaz and Omar Shrine Temples.

Hamilton was instrumental in getting Owens--Columbia's original in-town airport--upgraded with a new

terminal, hangars and a new longer runway.

Commenting on his appointment, Hamilton said, "I would hope that I could contribute something to aviation safety and progress in South Carolina."

He is married and has five children and two grandchildren.

The Aeronautics Commission consists of seven members, one from each of the state's Congressional Districts and one at-large member. The Commission was established by the legislature in 1935 to foster air commerce and to cooperate in the establishment and development of airports. It is also responsible for aircraft registration and exercises general supervision over aeronautical facilities in the state.

The Commission director, John Hamilton, is not related to Jim Hamilton.

FAA tightens rules on alcohol, drug use

by Henry M. Burwell*

Effective April 17, 1985, the FAA enacted stricter rules governing the use of alcohol and drugs before flight by crew members of a civil aircraft. The amended rules establish that a crew member shall be considered to be under the influence of alcohol if that person has a blood alcohol level of .04% by weight. This standard is considerably stricter than that followed by motor vehicle acts which establish a standard of .1% by weight. The regulation still contains the basic prohibitions against any crew member of performing his

duties on a civil aircraft within eight hours after consumption of any alcoholic beverage, while under the influence of alcohol, or while being affected in any way contrary to safety by the use of any drug (Section 91.11). Crew members found violating this standard will be subject to civil penalties of \$1,000 per offense and possible suspension or revocation of their license (Sections 61.15, 63.12 and 65.12). Furthermore, to help the FAA enforce this standard, there are regulations which require a crew member to release the results of tests administered when a person is suspected of a violation. Failure to authorize such release may result in the suspension or revoca-

tion of the crew member's certification (Sections 61.16, 63.12a and 91.11).

At this time the FAA is proposing a rule which would establish implied consent for alcohol testing. The proposed rule would establish that if a crew member refuses to submit to alcohol testing when requested by law enforcement officers, then they may be subjected to a possible loss or a temporary suspension of their license. Comments on this proposed rule must be received on or before July 16, 1985 (50 F.R. 15381).

*Mr. Burwell is a partner in the Greenville office in the law firm of Barringer, Allen, Pinnix and Burwell.



PALMETTO AVIATION is an official publication of the South Carolina Aeronautics Commission. It is designed to inform members of the aviation community, and others interested in aviation, of local developments in aviation and aviation facilities and to keep readers abreast of national and international trends in aviation.

The Aeronautics Commission is a state agency created in 1935 by the S.C. General Assembly to foster and promote air commerce within the state.

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Conway-Horry to receive Airport Improvement grant

The U.S. Department of Transportation has awarded a \$1.4 million grant to the North American Institute of Aviation in Conway.

The money will be used to rehabilitate the runway, expand the apron, extend the taxiway and improve the lighting at the Conway-Horry County Airport.

Airport Director Robert

Pasqualicchio said the grant would be a major benefit for the airport.

"There is a great deal of activity at that airport," he said. "It will be an invitation for industry that may be considering coming to the area."

Pasqualicchio said the project should begin within a few months and would take about a year to complete.

Landing directory for Seaplanes published

The Seaplane Pilots Association (SPA) has compiled the first complete guide to places where seaplanes may operate. The new 1985 SPA Seaplane Landing Directory contains current state-by-state regulations affecting seaplane operations. Local and federal rules are also listed.

"Many different agencies have rules regarding seaplane landings, and some areas are off-limits to motorized vehicles," said SPA President David Quam, who founded the organization 12 years ago to counter unnecessary restrictions. "The much-needed guide will let our members know which lakes they can use and what the rules are."

The Directory contains a complete list of seaplane bases, and additional

landing and refueling spots that are not on the list of licensed bases. A series of maps show cross-country refueling routes, which will be especially helpful to seaplane pilots whose airplanes do not have amphibious capability.

The Directory is available to members of the Seaplane Pilots Association for \$6.00, plus \$1.00 for postage and handling. Non-members may purchase the Directory for \$15.00, plus the postage and handling charge. Membership in the Association, which is administered by Aircraft Owners and Pilots Association, is \$25.00 a year. Write to Seaplane Pilots Association, 421 Aviation Way, Frederick, Maryland 21701; telephone (301) 695-2083.

Columbia FAA Office supervised by Winston Salem

The FAA has acknowledged that the Columbia Flight Standards District Office (FSDO) has been placed under different management effective July 1.

Formerly, the Columbia FSDO was under the supervision of the Atlanta office. Now, it will be under the Winston Salem, N.C. office, an FAA spokesman said.

"It shouldn't be any different than it has been since last December," FAA public affairs officer Jack Barker said. "Instead of reporting to Doug Moore in Atlanta, the office will just report up there."

Barker said the switch was made to lighten the management load on the Atlanta office. He said the Atlanta office has responsibility for the Birmingham office and the Jacksonville office as well as a large air carrier office.

"The one up in North Carolina is not quite as busy," he said.

The Winston Salem supervisor will be Larry Youngren, he said.

Barker said he did not know if the Columbia office would ever have an on-site manager again. The Columbia office was put under the supervision of the Atlanta office after manager John Cureton retired last December.

Majority of accidents occur during landing

By **TONEY B. GOBLE**
Accident Prevention Specialist
Columbia FAA FSDO

During 1979 through 1984, 212 aircraft accidents occurred in South Carolina. Over half (51 percent) of these accidents occurred during the landing phase of flight. About half (48 percent) occurred during personal pleasure flights. Certificated commercial pilots topped the list with 43 percent of the accidents. Private pilots followed with 38 percent.

Almost all of these accidents were preventable. In fact, more than half of the landing accidents involved retractable gear aircraft. In almost every case, the pilot failed to use proper procedures for the normal or abnormal operation of the landing gear.

The following procedures, if followed, will help keep you out of our statistics.

* Always use a written check list and a mental checklist such as "GUMPS."

* Always use every means possible to confirm that the landing gear is really extended and locked in the down position.

* If distracted while performing the landing checklist, start over and do it again; even if it means going around the pattern one more time.

* After landing, wait until you slow to taxi speed or, better yet, clear the runway and stop prior to retracting the flaps.

* But, most important of all, keep your mind on what you are doing during the landing phase of flight. Avoid distraction.

Instructors Seminar set

An Aviation Safety Education Seminar for flight instructors will be held Tuesday, July 23 from 7 to 9 p.m. at the York Technical College near Rock Hill.

Toney Goble, FAA accident prevention specialist, will discuss aviation safety and the new practical flight test standards. Pete Medlin of the Charlotte ATC tower, will talk about air traffic control services and procedures. There will be open discussion afterwards.

The seminar is sponsored by Carowings Flight Service at Bryant Field. Refreshments, courtesy of the sponsor, will be provided.

Attendance at this seminar will satisfy one of the requirements of the pilot proficiency award program.

Beaufort FBO open for business

Robert B. McKay is open for business at Beaufort County Airport.

McKay, who runs the FBO there, is ready to help get you parked, top off your tanks or help with any problem you may have. He offers tie downs, a lighted parking lot and 100 LL fuel.

He is open from 7:30 am to 4:30 pm Monday through Friday and 10 am till 2 pm on Saturday and Sunday. Unicom is 122.9.

A nice feature at the airport is an outdoor telephone you can use even if you don't have a quarter.

Refresher course set

The AOPA Air Safety Foundation will present a Flight Instructor Refresher Course in Columbia, Oct. 4-6.

A Pinch Hitter ground school course will be held Oct. 6.

To register or obtain more information, call toll free 800/638-3101.

Lawyer-Pilots to meet

The Lawyer-Pilots Bar Association semiannual meeting will be held Aug. 14-18 at the Doubletree Hotel, Monterey, CA.

For more information, contact David E. Prewitt, Suite 1225, 1411 Walnut St., Philadelphia, PA 19102 or call 215/557-9998.

Breakfast Club



There will be a special weekend meeting of the Breakfast Club on Sept. 15 at Jekyll Island, Ga. Breakfast will be at Villas-by-the-Sea Resort Hotel Restaurant on Sunday, Sept. 15. But members will arrive Friday or Saturday for a weekend holiday.

Villas--including kitchen, bath and bedrooms--are \$50 to \$90 a night depending on size and location. For those who would like to attend, call 1-800-841-6262 for reservations.

The schedule for the remainder of the year is as follows:

- July 14** House Movers Field, Batesburg
- July 28** Daniel Field, Augusta, Ga.
- Aug. 11** Orangeburg Municipal, Orangeburg
- Aug. 25** Grand Strand Airport, N. Myrtle Beach (Don's Pancake House is host)
- Sept. 8** Georgetown Airport, Georgetown
- Sept. 15** Jekyll Island, Ga. (special weekend meeting)
- Sept. 22** Holly Hill Airport, Holly Hill
- Oct. 6** Newberry Municipal Airport, Newberry
- Oct. 11-13** Woodward Field, Camden (EAA fly-in)
- Oct. 20** Orangeburg Municipal, Orangeburg (annual meeting and election of officers)
- Nov. 3** Summerville Airport, Summerville
- Nov. 17** Laurens County, Laurens
- Dec. 1** Walterboro Municipal, Walterboro
- Dec. 15** Lancaster County, Lancaster

Breakfast club members normally arrive between 9 and 9:30 a.m. Breakfast starts at 10 and is usually over by 11 a.m.

Exhaust Gas Temperature

Paying close attention to this item will help

By Bill Holecek

Okay folks, this month we will discuss E.G.T. This has been a very cloudy term with a lot of pilots in the operation of their engines.

First of all, EGT stands for Exhaust Gas Temperature and it applies to all engines including turbines and jets. In our discussion we will talk only about the piston engine and EGT in its simplest, single-probe form.

Prior to the advent of the EGT gauge system, we had only a "by guess and by God" system of leaning our engines. I well remember some sage advice from an instructor to watch the airspeed, the tachometer and the cylinder head temperature gauge--if we had one. He also said when my butt felt roughness I was too lean and to enrich the mixture until it felt smooth! This was real "high technology" in the forties and fifties!

Oh yes, some of the affluent twin owners had a "hi tech" system then called an exhaust gas analyzer. This system was as reliable as the weather! Enough of this nonsense!

The EGT gauge system is simple and essentially the same as your cylinder head temperature system. It consists of a probe (in the exhaust system), a harness or leads, and a gauge. The gauge usually is not marked in degrees but does have reference markings which you can monitor as you fly or as you adjust the mixture.

EGT or CHT?

This is a good time to explain the difference between EGT and CHT (Cylinder Head Temperature). The EGT system is primarily a means of fuel management while the CHT is a means of monitoring temperatures that can destroy your engine if not watched. The CHT has its probe directly into the (supposedly) hottest cylinder head which was determined by (supposedly) flight test certification. We have found conflicting opinions, but more of this later.

Let's go to basics. The throttle controls air, nothing else. This is not

understood by many pilots. The mixture control, controls fuel! This misunderstanding also applies to a lot of mechanics.

In the early days of flying, when you were above 2000 to 5000 feet this was not a problem affecting engine performance. In the forties or fifties light aircraft such as the J-3s, the Aeroncas and Luscombes had their mixture controls safety wired in the rich position and no control in the cockpit. As the state of the art of cross country flying and use of aircraft in business flying increased, there was more importance placed on fuel efficiency and performance.

How do we control fuel mixture? This was a vague area of operation. Again, airspeed, tachometer and your butt. We were getting engines and aircraft which were giving us better performance but they lacked precise engine operation instructions as to fuel mixture control.

SIMPLE SYSTEM

Along came a guy named Al Hundere who said we could control mixture in our engines by a simple system of watching our exhaust temperatures. I remember when he came to Charleston and demonstrated his EGT system which had been installed in a Cessna 172 or 170. He sold me with his demonstration. Since that time, I have believed the EGT is more important than the CHT system. With proper cockpit management, you can avoid damaging cylinder head temperatures through fuel mixture control with an EGT system.

We were supposed to put the EGT probe in the exhaust outlet of the cylinder which had the CHT probe. This was supposedly the hottest cylinder according to the manufacturer's certification tests. These tests were made under high power or take-off power settings where temperature variations between cylinders would show clearly. This cylinder did not necessarily show the highest temperature in cruise conditions.

It is not unusual to see a 100 to 150 degree difference between cylinders, particularly in a float car-



Bill Holecek

"We were also told by various engine manufacturers not to lean our engines below 5,000 feet and not to mess around blindly with our mixture controls! This was ingrained so hard into a lot of pilots that even today I find a bunch of them still operating under this condition even though they have very good CHT and EGT instrument systems in their aircraft."

buretor system. This system, because of fuel distribution through the intake system, shows more pronounced differences than the fuel injection or pressure carburetor systems.

After reviewing the above, we now have a probe in the exhaust system which is supposedly the hottest side of the engine. If the probe and installation are correct, we can monitor temperatures in flight.

DENSITY ALTITUDE

Here in the southeast we do not have problems with density altitude as others do out west. So, in South Carolina you do not have to be as concerned with mixture control monitoring when you take off.

I remember a pilot who called me from somewhere in Colorado. He had a Cessna 310 with a fuel injection system and he had flown from Columbia to Colorado without any trouble. After a pleasant week of skiing, he wanted to come home.

Well, everybody was loaded up, the preflight done and good byes said.

The engine start was good, but the

keep your engine clean and running smooth

runup was sorry!

The engines were rough and did not develop power. What was wrong? After everyone disembarked he spent a couple of hundred bucks checking mags, plugs, fuel injection, ect. (The local mechanics enjoyed this). Without any help, he decided to call me. After a lengthy discussion I found out he was at an air strip that had a field elevation of 5,000 feet plus! I told him he had to take off in a leaned-out mixture condition. He found this hard to believe!

To bring this story to a close, he found the courage to lean out on take off and happily came home--poorer but wiser. He, unfortunately, was taught under the old school that too lean a mixture will destroy your engine, so richer has got to be better, right!!

We were also told by various engine manufacturers not to lean our engines below 5000 feet and not to mess around blindly with our mixture controls! This was ingrained so hard into a lot of pilots that even today I find a bunch of them still operating under this condition even though they have very good CHT and EGT instrument systems in their aircraft.

LEAN IS CLEAN

They also cuss and blame the fuel companies, engine manufacturers and spark plug companies for problems of excessive lead spark plug fouling every 20 to 30 hours. You must have high enough cylinder combustion temperatures to disperse or scavenge the lead in the fuel. Proper mixture control will help this immeasurably.

In a basic single probe EGT system, I recommend you start leaning the mixture between 2,000 and 3,000 feet after take off. Don't lean too much. Use your instruments and the feel of your engine as a guide. Keep doing this until you establish your cruise altitude. When you reach cruise, set up your power requirements according to your power chart for altitude, temperature, RPM and manifold pressure. After everything has settled down, go to your EGT system.

Start leaning SLOWLY while observing the EGT gauge. Too many operators rush this. The EGT needle will start to climb. Slowly lean until it reaches a PEAK or plateau. You must be observant and watch when the needle starts to DROP or REVERSE. When this happens, STOP leaning. You might even experience roughness at this time or slightly before this happens. Now SLOWLY reverse the procedure and start enriching the mixture, paying attention to the needle. You will observe that it will go back to peak. Continue enriching until the needle falls back to the first mark on the gauge below peak. This should be about 25 DEGREES on the RICH SIDE of peak temperature. This is based on a 65 percent power cruise condition.

There are some who advocate flying a peak temperature and some who say 50 to 75 degrees on the rich side is proper. I am not one of these unless I can be convinced that there will be no problems later. If you operate above 65 percent power, then I advocate enriching from 50 to 100 degrees below peak EGT.

WATCH THE GAUGE

When you reach your destination and begin descent, observe your EGT gauge. You will note that it will start to climb back to peak as you descend. As it does, start enriching the mixture. Somewhere between 4,000 and 2,000 feet it should be in the full rich position.

We have only discussed the single-probe EGT system, which is a very good means of mixture control. But like everything else in our industry, we want better or more precise engine operation. If one cylinder or exhaust system probe is good, maybe the placement of a probe in every cylinder will be better. All the cylinders could be monitored and the hottest under the prevailing flight conditions could be determined without guesswork.

We are talking about a system of EGT temperature control for each individual cylinder in our aircraft, be it

single or twin operation. The all-cylinder exhaust probe system does get COMPLICATED and requires some study on your part as to what you are seeing. In a simple sense, this really is an ENGINE ANALYZER which can show you problems with your engine in flight.

For example, say you are in cruise flight and detect a slight difference in sound or feeling. You monitor each individual cylinder and find the number 3 cylinder on the right engine about 100 degrees higher than what you are familiar with.

When you get to your destination, you have a mechanic pull the no. 3 cylinder plugs to check them and take a compression reading. The usual problem is a fouled plug or bad ignition lead. The compression test tells you if you have a bad exhaust valve. This system has done the trouble shooting and saved you the expense of a mechanic to find the problem.

ALL-CYLINDER SYSTEM

I would like to say that the all-cylinder EGT system is very good with some exceptions: First, if you don't study or familiarize yourself with what you are doing and seeing, it's useless. Second, the system installation must be done correctly or there will be errors in its operation. Last, the system requires proper maintenance and is expensive to replace.

After all the above, I recommend the purchase of the single probe system. When you are comfortable with this, then give thought to the all-cylinder system.

There are many brands available, but in the past 20 to 25 years I have advocated the Alcor system with no regrets. Alcor has a complete library of literature which is available to you for study through your FBO or dealer. There is no charge for this.

If there are any questions I can answer or help I can give, please feel free to contact me. Wishing you the best in smooth flying engine operation.

Zollars named Hawthorne VP



Thomas Zollars

Thomas Zollars, general manager of Hawthorne Aviation, has been elected as a member of the board and vice president of the Corporation.

He was also elected to the board and vice president of Hawthorne Airport Services, Inc., a subsidiary company which holds the contract for operation of the International Terminal at the Charleston International Airport.

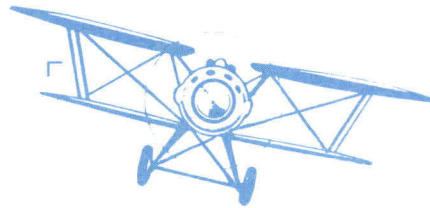
Zollars is originally from Ft. Wayne, Indiana. He graduated from Purdue University with a bachelor of science degree in Aviation technology. He served in the U.S. Air Force from 1965 to 1975. He joined Hawthorne in 1977.

FAA appoints test examiner for Greer area

Robert E. Rumsey has been appointed written test examiner for the Greer area by the Columbia Flight Standards District Office, FAA. Thomas J. Conway, Mrs. Doris A. Rumsey, and Mrs. Joyce M. Wade have also been approved to act as his representatives.

Tests will be administered each Wednesday and Sunday at Stevens Beech Aero Club in Greer between 9:00 a.m. and 4:30 p.m., by appointment. Tests may also be administered on other days by appointment only. Call Mr. Rumsey or one of his representatives for an appointment at 879-6000.

Mr. Rumsey is authorized to administer FAA written tests for all airman certificates and/or ratings.



Cub Club newsletter provides rebuilding tips

Do you own a vintage Piper Cub; perhaps a J-2 or J-3 or even a later PA 14 or 18 model? If you are involved in a restoration project with any of the Cub models, the Cub Club is an organization that talks your language.

The club is an international organization begun in early 1984 to preserve and promote the restoration, maintenance and use of Cubs, models E-2, J-2, J-3, J-4, J-5, L-4, PA-11, 12, 14 and or PA-18.

Club organizers John B. Bergeson and Rick Duckworth said the club has nearly 2,000 members and recently mailed its eighth newsletter which is published every two months.

"The main emphasis of the newsletter is to provide information about the restoration and

maintenance of the Piper aircraft as well as historical information and some basic 'hangar flying.' "

"A 'for sale and wanted' section is also included in the newsletter. We also help through individual correspondence. If we don't know the answer, we can often direct our members to someone who does," they said.

The club also holds fly-ins and meetings at major aviation events, furnishes paperwork for modifications and provides a computerized mailing list of other members by geographical area.

Annual dues are \$10 in the U.S. and Canada. For more information, write the Cub Club, P.O. Box 2002, Mt. Pleasant, MI.

Suber named Outstanding CAP cadet

Cadet 1Lt Jack C. Suber, a member of the Columbia Composite Squadron, has been selected as "Outstanding Cadet for 1984-85" by the South Carolina State Air Force Association.

Suber was presented a plaque by state association president James Catington at the quarterly meeting, last month, of the Columbia Chapter.

In the Columbia Squadron, Suber holds the present position of Public Relations and Special Activities Officer. This position includes presenting the Civil Air Patrol Story to various organizations and schools.

Among Jack's favorite CAP activities have been participating in the Pararescue Orientation Course at George Washington National Forest, Va.; Summer Encampment at Shaw AFB and the Aerospace Education trip to the Lockheed Plant at Marietta, Ga.

Suber recently completed his freshman year at the University of South Carolina where he is majoring in Political Science. Upon graduation, Jack would like to enter the Air Force and become a fighter pilot.

Suber is the son of Martin G. and Magda E. Suber of Columbia.



CAP Cadet 1Lt Jack C. Suber describes some of his activities as a cadet in the Civil Air Patrol to a meeting of the Columbia Chapter of the Air Force Association after he was presented a plaque for the "Outstanding CAP Cadet, 1984-85."

CAP News



South Carolina Civil Air Patrol members claim their luggage on returning from a very event-filled Aerospace Education field trip to the Lockheed Aircraft plant at Marietta, GA.



Darlington chosen best CAP squadron

The Darlington Composite Squadron of the Civil Air Patrol received the "Best Overall Squadron, 1985" Award for South Carolina from the South Carolina Air Force Association.

Morgan S. Tyler, Jr., South East Region Vice-President, presented this award to Darlington's Squadron Commander, Major Howell Jeffords, CAP, at an AFA Convention held April 13, 1985, at Shaw AFB, SC.

Later that day the Darlington Composite Squadron hosted a presentation ceremony and barbeque in honor of their members. This event was held at the Dovesville Airport which is the host location for the Darlington CAP Squadron.

Presenting the award for this ceremony was the South Carolina Liaison Officer, LTC Roger Rucker, USAF.

Among the squadron's other accomplishments this year was the receipt of the "South Carolina Safety Squadron of the Year Award."



Lockheed field trip will be long remembered

by 2Lt. Delores Rucker CAP
S.C. Wing CAP Public Affairs Officer

Have you ever had a perfect trip? How well do you remember it? Forty-three South Carolina CAP cadets and seniors, the SC Liaison Officer, LTC Roger Rucker, and the bus driver have many little things that will remind them of their trip to the Lockheed Plant, Marietta, GA, April 4-6, 1985.

Approximately one hour into the trip the bus had a blow out. The crippled bus continued on to an exit where help was called and then proceeded one more exit for help and a new tire. McDonald's served the evening meal in fine fashion and then on the road again to Marietta for billeting at Dobbins AFB.

Friday morning saw the dispensary at the Naval Facility where one of the cadets was treated for an allergic reaction. Breakfast at Shoney's followed with their management opening a side room so the group could be seated together.

Then onto Lockheed. After two sets of directions the bus arrived at the scheduled destination. The group was escorted into a plush conference room for a briefing about Lockheed, the upcoming tour, and for two films: "How Strong the Wind" and "30 Years of the C-130." After the briefing three groups were formed for the tour.

Lockheed provided tour guides for each group. They were Dick Mackel,

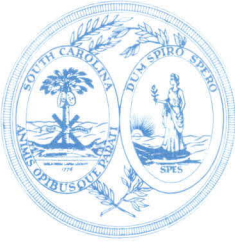
Paul Carpenter, Bill Are, and Major Rick Fehrenbach. The tour included the assembly line of the C-130 production, the C-5B first and second aircraft, the C-5A wing modification aircraft, a walk over a C-5A and an inside tour of the C-5A. The groups had lunch in the Lockheed cafeteria.

On departure from the Lockheed compound a stop was made at the Lockheed Souvenir shop, then back to billeting for a brief rest before dinner.

The Picadilly Cafeteria was selected for the evening. The group enjoyed anything and everything their hearts desired.

On returning to billeting, a "fireworks" display began. Marietta was hit by tremendous thunderstorms. The rain and lightning caused a great deal of damage and caused the electricity to be out over two hours. Candles were brought out and the cadets and seniors gathered in various groups to visit while Mother Nature was taking her course.

Saturday morning saw damage to the city and a dead battery for the bus. A two hour delay getting to breakfast at Shoney's caused them little inconvenience. Upon completion of this long awaited meal, our bus was finally homeward bound. On the arrival back at Wing Headquarters the group breathed a sigh of relief that the trip was now only memories, memories, memories...



**SOUTH CAROLINA
AERONAUTICS COMMISSION**
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CAP cadets enjoy model workshop



S.C. Wing CAP cadets work enthusiastically on rocket models in preparation for the annual fall rocket competition. The Rocket and Model Airplane Workshop was held at Wing Headquarters in Columbia recently. During the workshop cadets viewed a film on the life of Dr. Robert Goddard and were given instruction by senior members on model building techniques. Seniors also explained the categories and requirements for rocket competition and gave helpful hints in competing.

The event was attended by cadets from throughout South Carolina. Those attending were Cadets Ryan Agostinelli, James Beach, Boyd Bearden, Jerry Beckley, Charlotte Evans, Mary Gallagher, Theresa Gallagher, Benjamin Glover, Lee Haines, Catherine Heatley, Glenn Luzier, James Nix, Rowland Price, Carol Ribeiro, Tina Roberts, Ann Ruggiero, Tim Sailors, Chris Sawyer, Deborah Scott, Russell Willis, Michael Whatley and John Wright.