



Redstone Arsenal Flying Activity Monthly Newsletter

Redstone Arsenal
Flying Activity

ISSUE 8-2006
August

HIGH ALTITUDE CHAMBER TRAINING

Have you ever wanted to know what it's like to try to breathe the air, from high on Mt Everest? Or have you ever wondered what it actually feels like to be flying high enough to be in a hypoxic condition, like we pilot-types all studied about in our textbooks? We've all read about the multiple symptoms that can occur when our bodies are deprived of enough oxygen, either because of high altitudes or various physiological reasons. But unless one has actually BEEN in a hypoxic situation, it's impossible to know exactly how each person's body would react. You can experience these symptoms in a safe, controlled environment in the Altitude Chamber at Columbus Air Force Base in Columbus, MS. A group from RAFA recently took part in a frequently-offered Flight Physiology class at Columbus AFB, the third time a group from RAFA has done this. The course involved 5 hours of classroom instruction, followed by a "ride" in an actual altitude chamber.

In the classroom portion, we were given plenty of handouts, brochures, etc., describing the physiology of hypoxia in detail. The class format was very informal and interactive, and the various speakers were interesting and informative. We were allowed to ask questions throughout the class, which allowed a lot of feedback from the instructors. There were also numerous video clips shown on the subject. One very interesting video clip illustrated what happens in a person's body at extremely high altitudes. At these altitudes, the nitrogen that is normally dissolved in the bloodstream begins precipitating out as tiny bubbles. It circulates to the lungs to be expelled. The video clip was an actual ultrasound showing the heart of a person at high altitude. The chambers of the heart that receive blood from the body and deliver it to the lungs showed numerous little bubbles of nitrogen being pumped to the lungs. As the person moved his/her legs, we were shocked by the incredible amount of bubbles! Fortunately, the subject's body was able to rid itself of all the excess nitrogen. There were other video clips shown of pilots in high-G conditions (either in a centrifuge or in an actual aircraft), demonstrating techniques used to help them remain conscious under those grueling conditions.

After the classroom session, I had a much more thorough understanding of the physiology of hypoxia. One of the instructors was also a trained nutritionist and gave input on proper nutrition and its importance to pilots.

After lunch, it was time for the altitude chamber portion of the training. Each of the students was fitted with a helmet and oxygen mask, like fighter pilots wear. We all took a seat inside the altitude chamber, which had 9 seated on each side, facing each other. Time was taken to insure that the masks sealed on our faces. We were taught how to breathe the oxygen under the different conditions we would encounter during the altitude "trip". Of course, anyone who felt uncomfortable with this portion of the exercise could opt out before we started. Two of the staff stayed with us inside the chamber, remaining on oxygen for the entire time, in case anyone needed help. We were all in contact with each other and the staff outside the chamber by intercom. We began by breathing pure oxygen (for 30 minutes) while the instructor taught the last portion of the class. This was done to eliminate the nitrogen from our bloodstream so we would not have problems at high altitude.

We were taken to 5000 feet in altitude for a few minutes, and then back down, so that we could ensure we would not have any obvious problems, such as a blocked sinuses, etc. Then we were taken fairly quickly to 18,000 feet, which simulated decompression conditions that would occur if the aircraft in which (CONT on Page 3)

Business Manager's Corner

Tim Thompson

Check Your Bags: Please ensure you put the aircraft keys back in the box after checking in and that the flyaway book is back on the shelf. There have been many times we have had to call pilots at work or at home because they put the keys in their pockets or the flyaway book in their flight bag. This puts a hindrance on the next person scheduled to fly and at times that person will not be able to fly if the office is closed and a spare key is not accessible.

Tach and Hobbs Time: Incorrect tach or hobbs time are being entered into the system. Please double check the numbers before and after your flight. Entering the wrong numbers can ground an aircraft do to incorrect tach time, and bill your flight incorrectly. If you find an error in the numbers please note it on the flight plan.

Block Time: To try and help decrease the pain of price increases, we will be offering Block-Time effective 1 August 2006. I am defining "block-time" as; you pay in advance a certain dollar amount that may be applied only to flight time. The minimum amount of block-time is \$500 paid in advance. The activity will credit 10% to the amount. Easy math - Pay us \$500 in advance and have a credit of \$550. So sign up today

Flight Instructor Changes:

I would like all to welcome our newest flight instructor Bill Hanks. Bill had instructed here a few years back and as with most instructors can't stay away for long. Welcome back Bill.

Rob Lindstrom has been appointed as an Assistant Chief Instructor. He will perform these duties in addition to be the Flying Activity Safety Officer.

FAA Flight Review: The Flying Activity Manager sent out an email requesting for everyone to give us their FAA Flight Review date. This information is critical encourage all to try and take care of this as soon as possible. We will activate this field in the database 31 September 2006. At that time if we do not have this info the computer will not allow you to fly if you are a private pilot or better rating.

Student Pilot Written Test : In the event that your flight instructor may have forgotten to inform you, effective 5 Sept 2006 there will be an additional requirement for student pilots. A student pilot will need to have the aircraft written test graded along with the pre-solo test as a requirement before he will be allowed to fly solo.

Advisory Council Members

| | | |
|---------------------|--------------------|---------------------------------|
| President | Col. Walt Lorcheim | walt.lorcheim@us.army.mil |
| Chief Instructor | Max Gurgew | mgurgew@aerodyneinc.com |
| Asst. Chief Inst. | Bob Scheppler | rscheppler@msn.com |
| Safety Officer | Rob Lindstrom | dilinrx@msic.dia.mil |
| Maintenance Officer | Ted Stokes | ted.stokes@us.army.mil |
| Secretary | Leonard Clark | Leonard.Clark@mml.army.mil |
| Military Reserve | John Anglin | janglin@hiwaay.net |
| Ret. Military | Ed Myszka | emyszka@hiwaay.net |
| DOD Civilian | Lew Spencer | lewis.spencer@redstone.army.mil |
| NASA | John Blevins | john.a.blevins@nasa.gov |
| At Large | Lionel Barthelemy | 11009@comcast.net |



we were flying developed a significant leak. After being at that altitude for several minutes and ensuring everyone was doing fine, we were taken on up to 25,000 feet (while still on oxygen). Each of us was given a plastic worksheet and a grease pencil, to be used while experiencing hypoxic conditions. Everyone on one side of the chamber removed their masks and began working the various exercises on the worksheet, while breathing ambient air. The exercises allowed us to better sense how each of us reacted to hypoxia. The other half of the group could observe the effects of hypoxia as it set in. Each person reacted differently. Some started reacting fairly soon while it took others much longer. When a person started to feel the effects, and felt they'd progressed enough, they could put their masks back on and breathe oxygen.

I was impressed at just how subtle some of the effects of hypoxia really are at their onset. Some of the group started reacting to the effects more than they realized,. This emphasized the danger of flying in a hypoxic environment without knowing how to recognize the early symptoms before it's too late to rationally correct the situation.

After all participants were back on oxygen for a few minutes, the lights were turned off and we were taken back down to 18,000 feet. After our eyes had adjusted to the dim environment, we removed our masks and began looking at the reverse side of the worksheet, which had multiple colors, as well as back letters around the periphery. As we concentrated on the center of the sheet, the colors gradually faded as the effects of hypoxia began to set in. This only took a few minutes. Many related that the black letters on the periphery also faded out, and the yellow colors were all that seemed to remain. After a few more minutes, we put our masks back on and started breathing pure oxygen again. Within just a few breaths, the colors on my worksheet almost instantly "reappeared". It was surprising the effect that hypoxia had on my color perception, and how rapidly it happened.

We were then taken back to ambient air pressure, removed our equipment, and met for a short debriefing.

Considering that this course only cost each of us \$50, it is one of the best-kept secrets around. I was able to safely experience firsthand exactly what it's like to be in hypoxic conditions and can now recognize it, if it ever happens. As enjoyable as the training was, it was as much fun just hanging out with the folks that went.

Final note: For more information about this and other training courses, and to view aviation survival tips, visit the Civil Aerospace Medical Web site— www.cami.jccbi.gov/AAM-400/index.html. The Civil Aviation Medical Institute Airman Education Programs obtains a current list of training dates available from each base and makes them available to those interested in the training. You can access these dates by calling (405) 954-4837.

Written by Flying Activity member

Maintenance Manager's Corner



Derek Romine
A&P Mechanic

Mechanics On-Call: Our maintenance personnel are now on call for the weekends. If you should have any problems with the aircraft such as fouled plugs, landing or beacon lights and so on please call Telton Tolbert or Derek Romine and inform them of the problems so they can come out to repair the aircraft so it can be fixed for the next pilot. The phone numbers are in the fly away books and they are posted in the flight planning area.

Questions on Maintenance: If you have any questions concerning maintenance please contact the maintenance hanger. They will more than happy to provide the status of any aircraft that you are interested in. The maintenance personnel have the most up to date information that you may require. The maintenance hanger number is 880-3735. We look forward to hearing from you.



CFI's Corner: THE DREADED ANNUAL

As a licensed pilot at RAFA you know you need to fly with an instructor once a year. You probably also know that the FAA wants you to have a flight review every two years. Then there's the Wings thing. How do all these fit together? Let's start by reviewing the various regulations.

FAR 61.56 (c): *Except as provided in paragraphs (d), (e), and (g) of this section, no person may act as pilot in command of an aircraft unless, since the beginning of the 24th calendar month before the month in which that pilot acts as pilot in command, that person has—*

(1) Accomplished a flight review given in an aircraft for which that pilot is rated by an authorized instructor and

(2) Received a logbook endorsement from an authorized instructor who gave the review certifying that the person has satisfactorily completed the review.

RAFA SOP paragraph 4.4.1: *THE ANNUAL FLIGHT REVIEW (AFR) is considered to be the "baseline evaluation" in RAFA aircraft for new members or inter-activity members from other military flying activities. The AFR is used to confirm all administrative information, patron eligibility, as well as flying proficiency.*

It goes on to detail further requirements and instructs us that the CFI can endorse the members logbook to reflect a completed FAA Flight Review.

AR 215-1 Appendix M, Subparagraph M-6(d) reads: *d. Satisfactorily completes a flight check conducted by a local flight instructor in the type of aircraft to be flown.*

FAR 61.56(e) *A person who has, within the period specified in paragraph (c) of this section, satisfactorily accomplished one or more phases of an FAA-sponsored pilot proficiency award program need not accomplish the flight review required by this section.*

Regulatory guidance is depicted above, but what does it mean. Fortunately it isn't all that complicated.

Activity pilots must complete a RAFA flight review annually. The reviewing CFI can endorse your logbook for the FAA Flight Review at the same time. Both reviews carry the same provisions which fulfill FAA, RAFA SOP, and AR 215-1 requirements. Simple. But there is another option. The Wings program as detailed in AC 61-91H. Most of you have heard Max and Rob (without the dimple) talk about the wings program. If you complete a wings program, it'll substitute for your Annual/Biannual Flight Review. For your convenience you can begin the wings portion 90 days prior to the due date of your flight review. If you fly with your favorite CFI on a regular basis, this can be accomplished during normal training, something you already do. The only catch is you do have to attend a qualifying FAA safety seminar and get the form signed. But you may also accomplish the safety seminar requirement online with AOPA-http://www.AOPA.org/asf/online_courses, then fly three hours with you CFI and accomplish an hour of hood time, an hour of upper air work, and an hour of pattern work. Do it in two 1½ hour flights, split the hood time, and you're done. Now you have something on your CFI - - even if he does the Wings thing, he's still required to fly with Max!

To help you keep track, Jim Covington has turned on the display of your next scheduled FAA flight review, as announced elsewhere in this newsletter.

-Dan Malcolm, CFI, CFII

NEW FEATURE

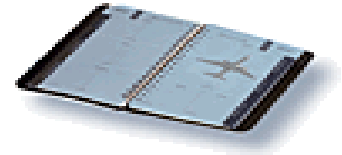
Last year we flew our airplanes about 3000 hours. A good part of that was local training, but at an average of 100 kts., that's 300,000 miles; almost twelve times around the world! Through these travels the pilots (and passengers) have acquired a wealth of information about interesting places. Why don't we share it with our fellow members? If you've flown somewhere you think someone else might enjoy, give us a brief summary of your experiences, even your pictures if you have them, and we'll print it in our news letter for everyone to enjoy. We could probably write a book of our travels and experiences..... Hmmmm?

(Contact Bob Scheppler, rscheppler@msn.com)



UPCOMING EVENTS

Flying Activity Cookouts: Just a reminder that each Saturday between 11:00 AM and 1:00 PM the Redstone Flying Activity cooks hamburgers and hotdogs for anyone wishing to partake.



Sales and Purchases: Reminder that there is a volunteer in the office between 9:00 AM and 2:00 PM on Saturdays. If you have a need to purchase equipment.

Flight Accomplishments

New First Solos

Dan Melton 07-20-06

CFI: Ed Myszka

Lisa Thompson 6-26-06

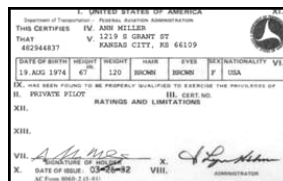
New Private Pilots

Wes Brown 06-30-06

CFI: Ted Stokes/Bob Scheppler

Rick Rodriguez 06-27-06

CFI: Craig Cruzen



Leonard Fisher 07-30-06

CFI: Ed Myszka

CONGRATULATIONS

Question of the Month Winner

June Question:

Congratulations - Good Job !

Analda Anglin

Unfortunately Capt. Joe has been forced to put his plane in storage, at least for now, due to lack of response. We want to thank all of you that did participate.



Off the line & Pointed at the pump



← Fueling Techniques →



On the line & Parallel to the pump
Chocked & Grounded

I N C O R R E C T

P E R F E C T

New Aircraft Rental Rates!!! *Effective 1 August 2006*

N736ZX: \$114.00

N29RM : \$97.50

N4884T: \$97.50

N9791F: \$84.00

N5697E: \$79.00

N35553 : \$79.00

N2108E: \$79.00

All Cessna 152's: \$65.50

These rates have been established to offset increases in fuel costs, and approved by the Flying Activity Advisory Council. The Flying Activity Business Manager has been provided these rates for implementation. These rate increases are tied to the cost of fuel and are subject to change if fuel costs subside.

Cross country fuel reimbursement rate is \$3.40



Redstone Arsenal Flying Activity

MISSION STATEMENT

To provide our members with affordable, high quality flight instruction, and a diverse fleet of rental aircraft which meet their local and cross-country flying needs, maintained to the highest safety standards in the industry.

Our goal is to be the premier flight training facility in northern Alabama, and through professionalism, safety and customer satisfaction remain a model for military flying clubs throughout the world.

**Redstone Arsenal
Flying Activity** 



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Items of Interest Corner

Survey of Local Fuel Prices

(Source: AirNav 07/23/06)

| | |
|--------------------------------|------|
| Madison County Executive (MDQ) | 4.45 |
| Muscle Shoals (MSL) | 4.35 |
| Winchester (BGF) | 3.90 |
| Huntsville (HSV) | 4.70 |
| Decatur (DCU) | 3.95 |
| Moontown (3M5) | 3.91 |
| Tullahoma (THA) | 4.47 |
| Courtland (9A4) | 3.53 |
| Fayetteville (FYM) | 4.07 |

Average price 4.15

LOST – PLEASE HELP-

Black tri-fold kneeboard, with clock, legal pad, and Caution Warning panel from an AH-64 helicopter, from the Gulf War. Contact Steve Sanders or Tim Thompson.

CONGRATULATIONS !!

Telton Tolbert

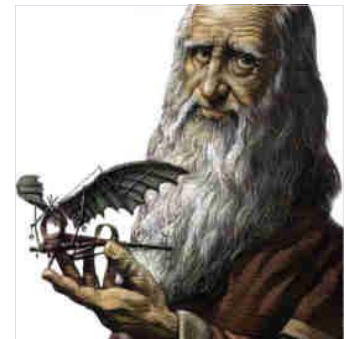
After many years of hard work and a final week of intensive



training Telton Tolbert has been awarded an Inspector Authorization on his A&P certificate. This is an advanced rating for Telton and a welcomed addition to our maintenance staff. This will allow Telton to do in-house annual inspections. Again congratulations Telton!!

Contact Phone Numbers!!!

Everyone **PLEASE** take a look at your contact phone numbers and email addresses in our computer system and **UPDATE THEM IF NEEDED.** Use an "H", "W", or "C" to id your phone numbers.



UPCOMING EVENTS

**Safety Meeting
Sept. 21**

**Next Open House
7 Oct 06**

**AOPA Safety Foundation Meeting
13 Oct 06
Location TBA**

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