



Northern California
Aerobatic Club

CHAPTER 38

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THE ACRONAUT

Volume 8 - Number 2



Layne Lisser's Eagle in its new home at Salinas

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In soloing—as in other activities—it is far easier to start something than it is to finish it.

— Amelia Earhart, *'20 Hours: 40 minutes,'* 1928

2007 Membership Dues

Renew today!

Use the form on the last page or go to the website (www.iac38.org) and you can link to Paypal (use the 'About IAC 38' tab), to renew or start your membership for 2007. \$25/year, or \$30/year for a family. Please provide all requested info/updates on the form.

Prez's Post

Darren Pleasance



Greetings Chapter 38ers,

I hope you're all getting some some good flying in with this run of nice weather we're having. My plane is down for its annual now so unfortunately I'm missing out



Paso: June 7-9th

For those of you who missed last month's chapter meeting, we had a terrific turn out and a great discussion led by Peter Jensen on how to use the free OLAN Aresti software for drawing up

OLAN software available at:

www.aerobatics.org/il/olan/welcome.php

sequences. The program was surprisingly easy to use and had a ton of features that were particularly appealing, including a judges call out feature, that would actually call out each figure in your sequence. It's the kind of tool that's not only great for checking the accuracy of your sequence and helping you to learn how to call figures, but it could also be used as a tool during critique sessions for tracking the scores of someone as they fly. Overall, an amazing tool, and free no less...

We also talked about the upcoming flying season with several notable opportunities to have some fun as a group, including a fly-out to the Southwest Airshow Network (SWAN) in March, the Calaveras County Annual Airport Day on April 28th, our own Paso Robles contest on June 7-9, and of course several critique sessions to make sure everyone's as ready as they can be for the coming season.

Speaking of Paso Robles, our very own Tom Myers has graciously agreed to be our Contest Director this year. As most of you know, Tom has always played a substantial role in our contest each year and this year will be no exception. In addition to all the normal duties that Tom takes on related to getting the waiver and setting up the box, he'll also be helping to coordinate all the other activities, including the running of the contest. However, despite all the Tom will be leading, we will still need substantial help from our membership to pull off a great contest. In particular, we'll need help in at least the following areas:

- 1) Sponsorships
- 2) Program
- 3) T-shirts
- 4) Food/banquet

Terry Lauck, our CD last year, did a terrific job of keeping track of all the contacts he used in each of these areas so we're about as well prepared this year as we can be. As such, none of these areas requires starting from scratch and would be an enormous help to the Chapter.

Given all the activity underway, I hope you're each able to find a way to contribute and get involved. Our Chapter meeting this month (Feb. 11th, 4:00 at Attitude Aviation) will focus on this year's "Knowns". We'll start with Sportsman and work through as many categories as we have time to, using the experience of the group to provide tips and tricks for how to fly the sequence as effectively as possible.

Hope to see you all there.

Blue Skies!

Darren

Why I Love Aerobatics

Sal Webber

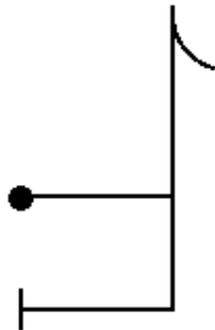
I love the smell of Av-gas.

I love the feeling of being attached to the airplane. When I'm ready to go into the box for a practice session I grab a few more clicks on my belt ratchet..."ouch that hurt!...ok,

I'm tight enough, let's check to see if anything is loose"...roll to inverted...I can't help but smile every time I do that safety check. I love it! It means I'm about to put this machine through its paces for the folks on the ground and I'm about to do something that I've wanted to do ever since I saw my first Blue Angels air show. I love how I feel after I've just flown a clean sequence. I love how I feel after I've just flown an ugly sequence. I love talking new people into trying a contest out. I love pulling into so many maneuvers that the sweat starts to run into your eyes and you have to carefully wipe it away...so you can see the runway to land.

I love landing at a contest on the practice day. There are 30-40 aerobatic airplanes on the ramp all looking like they are ready to leap into the air if only their owners would loosen the chains from their feet.

I love the people I've met. Like on my way to my first contest to Paso I met Dave Watson who has turned out to be the best pilot I've ever seen fly a Decathlon. He has taught me basically everything I know about flying the Decathlon to a competition standard. There's Andrew Connolly, who is just a blast to hang out with at contests and practice sessions. Darren Pleasance, who does most of his formation flying inverted. Peter Jensen, who always has a hilarious story to tell. Ben Freeloove, who introduced me to Scotch and gave me a tip on flying a perfect immelman in a Super D that really worked for the contest...and then I forgot the technique so I'm flying them bad again. Howard Kirker, just one of the nicest guys you'll ever meet...and one of the best pilots I've seen fly. Allyson Parker-Lauck who flies with no ego, so humble, and yet fierce...I was once coming into the box for practice and called down on the critiquing frequency and Allyson answered back "hey Sal, everyone else has stepped away for the moment so I guess all you've got for critiquing is me". Let's see, Allyson made the Unlimited World's team last year and I'm just a low hour Sportsman pilot...I'll take any advice you've got to give regarding my flying Allyson. Todd Whitmer, who keeps as high a standard with his critiquing as he does with his own world class level flying... "Hey Todd, did you see my reverse wedge?" He said "Yep, you nailed it...now, for the other nine figures..." Marilyn Dash, who has a great appreciation for the history of our sport and a twisted sense of humor that keeps contests fun even when you're nervous about your next flight. Dean Hickman Smith, Martin Price, and Kevin Cordes, who I have found to have almost the exact same passion for this sport as I do. It's been great to have friends to talk through sequences and contest experiences with. I could go on and on... there are just so many great people!!



Speaking of friends, I love that first beer at the end of a long day at a contest. I love the bar at the Paso contest. The late night parties at Delano (Who knew that Tom Meyers had so many jokes?)

These winter months are a time to reflect on the past year for me. I'm thankful for my experience gained over the last year. I'm also thankful that aerobatics is now a consistent part of my life. I'm looking forward to a great year of competitions and laughs with friends over pinched loops, 70 degree verticals, and the short afters that inevitably follow frazzled contest nerves.

See you at the next critique session, club meeting or contest!

- Sal



That Bomb at Your Feet

Dave Watson

An interesting thing happened on my way home from Borrego Springs last fall. After my Free flight at that contest, I took a glance at the air pressure gauge in my air start system on my Yak 55 and noticed it was unusually high indicating that my pop-off valve was plugged or malfunctioning. Although removal and cleaning of this valve is routine, it isn't the easiest thing to do in the middle of the desert without a solvent tank. Not wanting to miss my last flight for this minor problem, I simply loosened a fitting in the system to create a controlled leak to alleviate the problem. After my Unknown, I took another peak at the gauge and it was in the normal range, so I closed the valve to the tank and thought nothing of it, assuming I was Ok for the trip home later that day.

For those of you unfamiliar with the Russian M14P, it uses an air start system that is charged by a powerful positive displacement compressor which continuously produces high pressure air that fills a tank located on the firewall (or in some Sukhoi is located right behind the pilot). When the pressure reaches its working pressure of 50 atmospheres (that's right 750 psi) a pressure relieve valve opens and vents out the excess. In 2002, a Yak 52 in the UK was destroyed by the explosion of the air tank, fortunately during taxi and the pilot was uninjured.

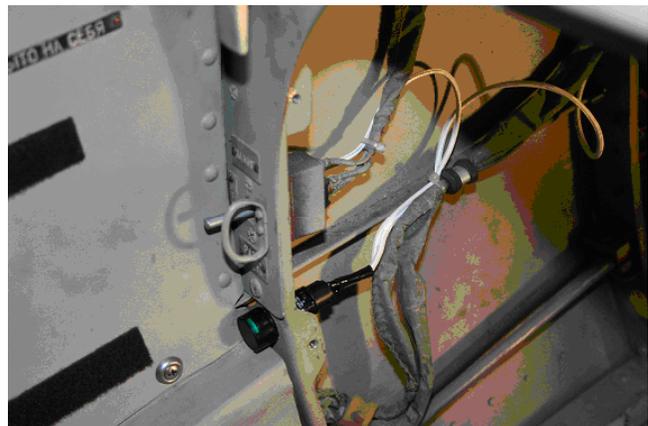
The Yak 55 was designed without some of the safety features of other Russian aircraft. For example, most Sukhoi's have a pressure gauge in the cockpit and the pilot has a lever that links to and opens a manual relief valve when operational pressure is achieved. My Yak 55 was imported without a full system and my previous partner and the importer had cobbled together a working system that did not have any in-cockpit gauge or relief valve (as is the way with all stock Yak 55s). He flew the plane for several years like this and in fact looked at me with disgust when I added a gauge forward of the firewall (near the tank) so I could monitor the pressure between flights.

So now back in present day in Borrego Springs the contest is over, I opened the valve (pressure normal), jumped in and quickly started it before the leak ran the pressure down, and flew her home. Upon landing, the gauge I installed was pegged at max 1500 psi and my leak was screaming, apparently my leak was Ok for a 15 minute competition flight but



not for a three hour cross country.

I spent the following weekend chasing several leaks. As I found and fixed one, another was found, and round and round I went. Finally, I discovered that a rigid aluminum tube (rather than the leaky fittings previously discovered) was split down the side and realized how lucky I was. Back when I heard about that Yak 52 incident and added that stupid gauge, I had also removed the air tank and had it tumbled clean (like



a SCUBA tank) and my buddy Hans and I static pressurized it to 1300 psi with hydraulic fluid. Who knows if the rust pits that were in it previously would have progressed and it may have failed at 1500 instead of this air line? Had that happened, it probably would have failed catastrophically. So I decided I'd better start over and re-plumb the entire plane before this flying bomb goes off at my feet.

It turns out re-plumbing was easier than chasing leaks in that half-metric, half-national standard debacle of a system that I had. The 8 mm aluminum tubing is very close

in size to 5/16 high pressure aluminum tubing which is readily available. To adapt the few Russian fittings that I chose to keep (the fuselage fitting at the auxiliary fill port and the fitting on the air tank), I simply had to ream out the flare support adaptor (in the nut assembly) a few thousandths of an inch.

So out came every fitting and tube and all were replaced with new. While I was at it, I really wanted to add some in-cockpit safety (like the SU29) but there was no easy way to fit a gauge or valve up in the cockpit or on the instrument panel. My solution was to add an air pressure switch to one of the firewall manifolds that actuates a panel light at 750 psi, which I installed near the shower of sparks actuation switch (shown on the previous page).

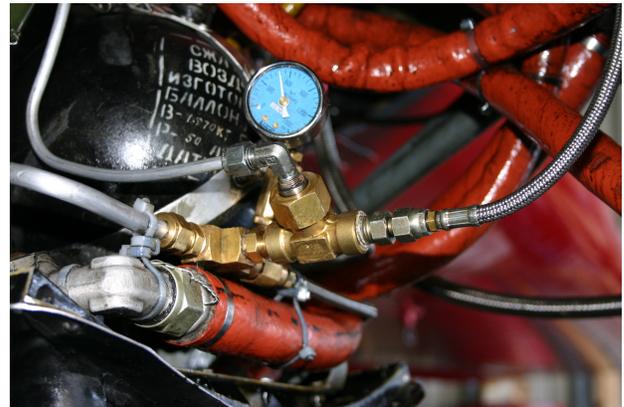
Additionally, I added a high pressure solenoid to the system that opens and vents the excess air pressure when actuated. I mounted this valve on the backside of the firewall to keep it clean and it dumps the excess air at the bottom of the oil cooler (below).



I chose to use the abandoned fuel-oil dilution switch (which is the lower half of the shower of sparks actuator) to actuate the bypass solenoid. So with the addition of a panel light and a few wires in the cockpit, I now have an idiot light that illuminates when the system reaches operating pressure and I manually actuate the oil-dilution switch which then dumps the excess air overboard (optionally, the pressure switch could automatically open the solenoid – I chose not to do this).

I plumbed the input to the bypass solenoid by a novel process too. First, I disabled the problematic Russian check valve that is integral to the compressor output port. Then I added a Hoke in-line sintered-metal filter and then an in-line check valve to the compressor hose that feed the main system manifold. It turns out by design, this filter housing does not use the top surface of the cylindrical sintered filter, it seals against an annular O-ring. I modified the Hoke filter and housing by drilling and tapping the top of the housing and adding another port (so now it looks like a “t” fitting). I drilled an 1/8” di-

ameter hole thru the top of the stainless steel sintered filter that allows incoming air to communicate with my new fitting without passing through the filter (below).



This fitting feeds the bypass solenoid. The result is that when the bypass is actuated, the unfiltered air is dumped overboard, and the more distal check valve maintains the pressure within the rest of the system. When the bypass is closed, the air entering the tank and system is filtered. Since this is a minority of the air passing thru the filter, I expect the filter will last a while.

While re-plumbing the plane, I found the source of the high pressure problem. It was not the pop-off valve sticking close (they usually fail by not seating properly and causing too low of pressure). I found that an in-line check valve that I had added a few years had failed and the captive ball that seats against the back side of a seat had fallen out of the valve. This 1/8” diameter SS ball progressed down stream and occluded the inlet to the fitting on the line that feeds the pop-off valve. Upon inspection of my spare check valve, this ball is held in place with a plastic (Delrin) clip which must have failed. The new check valves I have installed have stainless steel retainer clips.

I only have about ten hours of flight time since I modified the system, but I am very happy with it and feel much safer knowing that I now have two safety relief systems (the original pop-off valve and my bypass valve). Many of these Russian birds are getting older and I strongly encourage you to at least remove your tank and inspect it. It is very hard to see in there and shining light in through the open holes does not help much. For my routine inspections, I have simply modified a flashlight bulb by soldering wires to the two terminals. I drop this in the holes and can efficiently inspect the entire inner surface of the tank. If you take the hour so it takes to do this, you may be really surprised what you find.

I am not an IA or A&P so this article is for information purposes only. If you chose to modify your system please do so with proper design precautions, inspections and sign-offs. Fly safely.
- Dave

Tracy Airport News

By **Jake Armstrong**
 Record Staff Writer
 January 04, 2007 6:00 AM

TRACY - The City Council on Tuesday night unanimously signed off on a host of measures to draw more business to Tracy Municipal Airport and approved exclusive negotiations with a real estate investment firm to explore the sale of New Jerusalem Airport.

The City Council agreed to plunge about \$500,000 into Tracy Municipal Airport to pay for septic system upgrades, new restrooms, a concession area, hangar lighting, a full-time airport coordinator, improvements to the main entrance and creation of a transportation commission. The city will also seek a roughly \$2.1 million state loan to add 44 hangars.

Four years into the 25-year term of the state loan for hangars, the airport could generate about \$87,000 in profit because of higher fuel sales from additional aircraft the airport could serve, according to city staff.

The city for 10 years has attempted to sell New Jerusalem Airport, only to be stymied by deed restrictions requiring the property to be used as an airport. With Tuesday's action, the city will enter into negotiations with Richland Planned Communities to further explore the sale of New Jerusalem Airport with the Federal Aviation Administration.

The improvements at Tracy Municipal Airport come after months of hand-wringing over what actions to take after an aviation consultant identified a list of steps that could bring greater benefits to the airport, the city and its residents. Many of those recommendations were part of the council's action Tuesday.

Vice Mayor Suzanne Tucker said improvements at Tracy Municipal Airport seemed tied to the sale of New Jerusalem Airport, and the improvements the council approved would be a step toward bringing more money into the Tracy airport.

"I think the council finally came to consensus that the enterprise fund doesn't have a very positive cash flow right now," Tucker said.

Tracy Municipal Airport, which is owned by the city but operates outside the general fund, owes the city about \$1.1 million from a loan for improvements taken out a few years ago and is paying of the debt at a rate of about \$20,000 a year. The Tracy Airport Commission has asked that the

council forgive the debt, but council members have declined to do so.

"The council's just not really ready to forgive that debt," Tucker said.

WingNuts

Darrin Silver



From the Editor

Che Barnes



Many thank to those who sent in contributions. The goal of this newsletter is to present a picture of what our members are up to. Don't let the high quality of these contributions intimidate you—any picture or a short paragraph telling what you are up to is a perfect contribution. Don't be shy.

The general routine that I am following is to have input in by the 1st of the month. E-mail text and attached pictures are the best format. I try to get the newsletter out in the first part of the month, work schedule permitting.

Next month will be my 12th newsletter, marking one year as your editor. I have also excepted a job transfer to Sacramento. This deal includes a two and a half month training course in Tampa, Florida this spring.

I am writing about this transition because I am looking to

(Continued on page 7)

reduce the hours that I spend putting this newsletter together. It is rewarding work, but it does take time.

I would like to present a solution to Darren rather than a problem and would like some direct feedback from members. Are there any members who can help out? If there are two or three editors taking turns, it would be a much smaller lift. Also, a larger cadre of editors will help with obtaining photos of club events.

The newsletter is put together using Microsoft Publisher, then printed to a PDF. I had zero experience with it when I started and was able to pick it up pretty easily.

If you are interested in helping out please let me know. Ways to help are to co-edit (if you don't have the software we'll work on that detail later), take responsibility for a section (ie new member section), or solicit for and compile photos. My e-mail is chebarnes@yahoo.com. Drop me a line with your phone number and I can give you more details.

There are almost 100 members and not all are able to attend club functions—keeping the newsletter healthy will help to keep IAC Chapter 38 one of the best clubs around.

- Che

New Members

Che Barnes

Rich Tregeagle

Rich is from Sandy, UT a suburb of Salt Lake City. He's lived there all his life. He's been married to his lovely wife Jeanette for 16 years. He has worked in mechanical engineering for the last 25 years and is employed by a local school district as a Project Coordinator and Building Inspector. He grew up in his dad's C-182, flew skydivers for a few years and wanted a Pitts from the time he was 12.

So, he has arrived. He bought a Decathlon and started into aerobatics, sold the Decathlon a year and a half later, then got the Pitts he always wanted. A new (to him) S-2B. To get ten hours dual for the insurance he headed down to the illustrious King City and met the gang. "That pretty much destroyed any desire that might have lingered to fly straight and level," he says, "I blame it on Ben".

Rich does not have a chapter close to his hometown so has not flown any competitions. We'll have to convince him to point his S-2B's nose out west.

Rich writes, "If anyone is looking for the snow report/skiing conditions, drop me a line. If you need to know where the good pubs are in the land of Zion I can help with that also."

OK, an S2B ride and some good skiing—Utah sounds like a great place. Welcome aboard, Rich!



Robin R2160

flight time in a Robin R2160. He recently finished the aerobatic proficiency training course with the Tutima Academy of Aviation Safety in King City, Ca. (Hmmm— there seems to be see a trend here.)

Conrad has joined IAC38 to get a better understanding of aerobatic competitions, to connect with locals who share a passion for aerobatics, and to continue his aerobatic training and education. He hopes to compete in at least one sportsman's class competition by the end 2007.

Conrad Byer

Conrad works as an electrical engineer in San Jose and I lives and flies out of Palo Alto. He received his private pilot training and has logged most of his

James Graeb

James is an attorney who works out on Oyster Point in South San Francisco. (This happens to be right below the Hunter' Point Arrival for helicopter into SFO.)



Grob 115C

Flying is in James' blood, he is grandson of a World War I fighter pilot and the son of a World War II fighter pilot. He flew his first airplane at the age of 13. His flying was on and off until he discovered Attitude Aviation and their excellent equipment. He states, "I

was doing loops, rolls, barrel rolls and cubans before I had a cross-country student sign off." He is currently a multi-engine, instrument pilot, and is working on his commercial and CFI ratings. James started flying in the Grob 115C, moved on to the Super Decathlon, and has now fallen in love with the Pitts. He hopes to compete this summer.

Jessy Panzer

Jessy is of Discover Bay and plans to be flying a Pitts S-1S

IAC Chapter 38 Season Event Calendar

FEBRUARY 2007

11th **Next Chapter Meeting: 2007 Knowns**
4PM, Attitude Aviation
Livermore Airport

17 - 18th **Judge's School**
West Valley Flying Club at Hayward
KHWD www.wvfc.org
21015 Skywest Drive, Hayward, CA.
 Contact Marilyn Dash
 (marilyndash@comcast.net)
 for additional info or if you are flying in and
 need logistics help. Latest report is that the
 class is full.

MARCH 2007

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APRIL 2007

Flying the Maneuvers: High performance aircraft.

MAY 2007

Flying the Maneuvers: How to get the most out of 180 HP.

JUNE 2007

7-9th Paso Robles Aerobatic Contest



Photos of Ashley Gambetta going through the 10 hour APT course in King City with Ben Freelove. She is preparing to compete this year in Sportsman Category. She plans to compete in Layne Lisser's black and gold Eagle (N229LL) shown on the front. Lane plans to stay in the Sportsman as well, at least for the start of the season.

I've never seen an airplane yet that can read the type ratings on your pilot's license.

— Chuck Boedecker

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State: _____ Zip: _____

Home Phone: _____

Work Phone: _____

E-mail 1: _____

E-mail 2: _____

IAC #: _____

EAA #: _____

Certificate #: _____

EAA Expiration Date: _____

Judge: Regional National

Competition: None Basic Sportsman Intermediate Advanced Unlimited

Aircraft: _____

N #: _____

Referred By: _____

Dues: Single Membership (\$25/year) Family Membership (\$30/year)

Send with check, made payable to "International Aerobatic Club Chapter 38", to:
Howard Kirker, IAC38 Treasurer - 2279 Ocaso Camino - Fremont, CA 94539



Che Barnes
Editor, IAC 38
2233 Leavenworth St.
San Francisco, CA 94133



Chapter Meeting:
11 February 2007
Attitude Aviation, 4 PM
Livermore Airport

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