



Northern California
Aerobatic Club

CHAPTER 38

THE ACRONAUT

Volume 9 - Number 7



Picture by Evan.

Quote of the month: "Hey Chapter 38, Great contest
190+ flights. Wow. You guys rock. Thank you." - Jim & Ingrid McNamara

◆CHAPTER OFFICERS

Darren Pleasance, President
650.212.1806 H
415.318.5145 W
president@iac38.org

Sal Webber Vice-President
vicepres@iac38.org

Don Gutridge, Secretary
secretary@iac38.org

Howard Kirker, Treasurer
510.651.6514 H
treasurer@iac38.org

◆DIRECTORS

Dave Watson

Marilyn Dash
marilyndash@comcast.net

Andrew Connolly
connola2@airproducts.com

Gordon Sorensen
916.548.2079 H
916.645.6242 W
twotterdriver@hotmail.com

Peter Jensen
pittss2b@hotmail.com

Che Barnes
chebarnes@yahoo.com

◆DIRECTORS EMERITUS

Dr. Richard Rihn
510.938.4236 H
rihnairco@aol.com

Jeanette Goodman
209.478.5462

Tom Myers
650.328.2141 H
650.605.2343 W
tom.myers@stanfordalumni.org

◆WEBMASTER

Brett Goldsmith
brett.e.goldsmith@gmail.com

◆YOUNG EAGLES
Need a Volunteer

◆NEWSLETTER EDITOR

Che Barnes
editor@iac38.org

In This Issue

President's Post	2
Paso Results`	3
What is an aerobatic engine?	4

Chapter Membership Dues

Just a reminder that your Chapter 38 dues for 2008 are NOW PAYABLE.

To simplify bookkeeping, we levy Chapter dues on a calendar year basis (Jan 1 – Dec 31).

Use the form on the last page of the Newsletter, or go to the Website and you can link to PayPal. Please provide/update all the requested information.

Just \$25/year, or \$30 for a family, to renew (or join) – and continue to enjoy the many benefits of Chapter membership (including practice box usage).

President's Post

Darren Pleasance



Congratulations!!!

We had what I think is a record Paso Robles contest turnout last month with 66 pilots and over 30 Sportsman competitors despite record fuel prices. The weather was close to perfect and all competitors got three flights in so truly well done for our contest volunteers.

I'd like to make a special acknowledgment of a few people in particular who made our contest truly amazing this year:

1) **Tom Myers** - For several years in a row now, Tom has graciously volunteered to be the Contest Director and has handled most of the details of the contest, including getting the waiver, coordinating with the City, ordering the trophies,

co-



ordinating the banquet and Friday night event, setting up and taking down the box, and helping to make sure the contest runs smoothly throughout. Needless to say, the contest would not have happened without Tom's leadership and countless hours of time spent making sure we all have a good time and put on a great event for our aerobatic colleagues on the West Coast. Many thanks, Tom!!!

2) **Dave Watson and Family:** Once again, Dave, Ryan, and Lori showed up in force to make our contest great. Dave played the Chief Judge for most flights, Ryan was score-keeper extraordinaire with scores posted within minutes of a category's last fight, and Lori managed the registration process flawlessly once again. The Watson clan continues to set the bar for contributions to the Chapter and living the age-old adage "the family that puts on a contest together, stays together". Thanks Dave, Ryan, and Lori!!!

I'd also like to acknowledge **Cory Lovell** and **Howard Kirker** for jumping in at the last minute to get us the contest sponsors and t-shirts that kept our contest in the black.



Of course, where there's a Paso Contest, there's also a Post Paso Party (PPP) and we have the next one coming up in just two short weeks. As dictated by tradition, we'll be hosting our annual **PPP on Sunday, July 13th at 4:00 p.m. at Attitude Aviation**. We'll be BBQing burgers and dogs and having an ol' fashion good time at the end of what I'm sure will be a busy flying day. The Chapter will provide burgers, dogs and sodas. Bring your favorite side dishes and any alcohol you'd like to drink and

join us for a great time and a celebration of a contest well-run.

If any of you know someone who might be interested in joining the Chapter, bring them to the Post Paso Party and give them a chance to get to know us and make a few friends in a fun setting.

In other news, Air Venture is also coming up at Oshkosh just a month away. It's always a great event and I'm likely to be back there myself for the final two days of the show. If anyone else is going, let me know so we can connect out there.

Well, that's it for this month.

I hope to see everyone at our PPP on July 13th.

Blue skies!

- Darren

Paso Results

Primary							Gold	Silver	Bronze
Rank	Contestant	Chpt	Aircraft	Reg No.	Known	Free	Unknown	Total	%
1	Kathleen Howell		Extra 300	N300XA	496.80	502.90	522.60	1,522.30	80.55%
2	James Smet	36	American Champion 8KCAB	N161SA	495.30	500.40	521.30	1,517.00	80.26%
3	Kevin Cordes	38	American Champion 8KCAB	N59AC	497.50	514.30	497.80	1,509.60	79.87%
4	Tomoyoshi Sakomoto		American Champion 8KCAB	N452S	220.70	80.90	456.80	758.40	40.13%

Sportsman							Gold	Silver	Bronze
Rank	Contestant	Chpt	Aircraft	Reg No.	Known	Free	Unknown	Total	%
1	Stephen De La Cruz	26	Pitts S1T	N723MS	1,241.40	1,237.40	1,238.20	3,717.00	89.78%
2	Chris Olmsted	49	Pitts S1E	N83TX	1,226.50	1,194.90	1,214.00	3,635.40	87.81%
3	Mike Eggen	38	Bellanca 8KCAB	444PF	1,215.40	1,171.50	1,244.70	3,631.60	87.72%
4	Steve Packer	38	Staudacher S600-F	N27KJ	1,175.80	1,207.00	1,211.10	3,593.90	86.81%
5	Brian Stout	35	Eagle II	N796L	1,210.20	1,168.70	1,190.80	3,569.70	86.22%
6	Martin Price	38	Super Decathlon 8KCAB	N59AC	1,157.20	1,172.50	1,199.20	3,528.90	85.24%
7	Dan Franscioni	26	Giles 202	N3525	1,127.00	1,187.80	1,196.60	3,511.40	84.82%
8	Andrew Connolly	38	Pitts S2S	N8061J	1,137.50	1,164.60	1,192.40	3,494.50	84.41%
9	Casey Erickson	36	Pitts S1S	N101HR	1,140.20	1,172.90	1,179.10	3,492.20	84.35%
10	Ben Hochman	38	Pitts S2S	N136PS	1,155.00	1,158.70	1,165.60	3,479.30	84.04%
11	John Howell		Extra 300	N300XA	1,120.50	1,199.60	1,143.00	3,463.10	83.65%
12	Layne Lisser	38	Christen Eagle II	N229LL	1,146.90	1,165.40	1,139.40	3,451.70	83.37%
13	David Stoik	38	Pitts S1S	N138SC	1,140.10	1,129.10	1,117.90	3,387.10	81.81%
14	Andrew Slatkin	49	Bellanca 8KCAB	N5503H	1,111.80	1,097.10	1,161.60	3,370.50	81.41%
15	Rimas Viselga	38	American Champion 8KCAB	N452S	1,097.40	1,117.00	1,140.60	3,355.00	81.04%
16	Michael Walker	49	Extra 300L	N771TA	1,093.80	1,082.60	1,156.00	3,332.40	80.49%
17	Daniel Hansen	38	Pitts S2B	N42TW	978.80	1,141.20	1,204.40	3,324.40	80.30%
18	Dean Hickman-Smith	38	Pitts S2B	N77TW	1,046.90	1,116.40	1,158.30	3,321.60	80.23%
19	Barrett Hines	49	American Champion 8KCAB	N723CL	1,124.80	1,112.80	1,083.70	3,321.30	80.22%
20	Edward Doerr		American Champion 8KCAB	N452S	1,104.80	993.30	1,125.80	3,223.90	77.87%
21	Terry Middaugh	67	Boeing PT-17	N5010V	1,124.40	948.80	1,139.60	3,212.80	77.60%
22	Mitchell Robinson	38	Citabria 7GCAA	N96385	1,058.10	1,047.50	1,103.30	3,208.90	77.51%
23	Hank Landman	69	Pitts S1S	N907MG	1,014.00	995.50	1,172.30	3,181.80	76.86%
24	Tomohiro Yamazaki		Super Decathlon 8KCAB	N4525	1,044.70	1,073.40	1,034.20	3,152.30	76.14%
25	Conrad Nordquist	36	Christen Eagle II	N22XS	952.20	935.90	1,021.80	2,909.90	70.29%
26	Ronald Velkes	49	Super Decathlon	N5503H	918.40	887.20	931.00	2,736.60	66.10%
27	Margo Chase	49	Extra 300	N319PH	131.10	1,076.10	1,204.20	2,411.40	58.25%
28	Scott Malherbe	49	Bellanca Super Decathlon	N5503H	1,117.00	987.10	250.40	2,354.50	56.87%
29	Timothy Brill	118	Bellanca 8KCAB	N5053H	1,086.10	1,087.00	0.00	2,173.10	52.49%
30	Perry Barlow	49	American Champion Super Decathlon	N5053H	0.00	1,054.40	1,060.80	2,115.20	51.09%
31	Matthew Brill	118	American Champion 8KCAB	N5053H	1,060.40	995.90	0.00	2,056.30	49.67%

Intermediate								Gold	Silver	Bronze
Rank	Contestant	Chpt	Aircraft	Reg No.	Known	Free	Unknown	Total	%	
1	Michael Montgomery	49	Extra 300L	N7XT	1,735.60	1,680.00	1,520.10	4,935.70	84.52%	
2	Tom Applegate		Paulz	N331ST	1,676.50	1,709.60	1,502.20	4,888.30	83.70%	
3	Jason Wondolleck	49	Staudacher	N4SH	1,632.80	1,682.90	1,526.20	4,841.90	82.91%	
4	Ron Rapp	36	Pitts S-2B	N1191	1,630.70	1,684.10	1,503.60	4,818.40	82.51%	
5	James McNamara	49	Pitts S2C	N177PS	1,603.60	1,652.20	1,435.50	4,691.30	80.33%	
6	Thomas Franscioni	38	Giles 202	N352S	1,676.40	1,662.00	1,318.60	4,657.00	79.74%	
7	Bruce McGinnis	49	Pitts S-2C	N531EB	1,612.90	1,640.20	1,390.30	4,643.40	79.51%	
8	Norman Manary	36	Acro One	N101JR	1,658.40	1,529.90	1,445.60	4,633.90	79.35%	
9	Steve Madorsky	49	Extra 300L	N7XT	1,587.70	1,660.40	1,173.50	4,421.60	75.71%	
10	Yuichi Takagi	38	Pitts S2S	N8061J	1,174.10	1,583.20	1,474.90	4,232.20	72.47%	
11	Justin Stout	38	Pitts S-1	N1766	1,522.30	1,575.30	1,046.00	4,143.60	70.95%	
12	Judy Phelps	49	Pitts S2B	N80AS	1,452.30	1,415.70	1,154.60	4,022.60	68.88%	

Advanced								Gold	Silver	Bronze
Rank	Contestant	Chpt	Aircraft	Reg No.	Known	Free	Unknown	Total	%	
1	Benjamin Freelove	38	Extra 300	N771TA	2,166.80	2,637.50	2,268.60	7,072.90	82.72%	
2	Reinaldo Beyer	36	Extra 300L	N779R	2,132.40	2,649.70	2,273.90	7,056.00	82.53%	
3	Randy Owens	36	Extra 300L	N30EX	2,022.10	2,643.30	2,226.00	6,891.40	80.60%	
4	Malcolm Pond	36	Zivko Edge 540	N540SA	2,006.30	2,651.40	2,184.10	6,841.80	80.02%	
5	Douglas Sowder	67	Extra 300L	N25AP	2,033.90	2,651.70	2,067.80	6,753.40	78.99%	
6	Rory Moore	36	Pitts S-2C	N86PS	2,149.50	2,306.70	2,222.10	6,678.30	78.11%	
7	Dave Watson	38	Yakovlev Yak-55	N38YK	1,968.80	2,527.70	1,992.70	6,489.20	75.90%	
8	Martin Kennedy	36	Staudacher S600	N993DD	2,014.40	2,488.70	1,925.70	6,428.80	75.19%	
9	Victoria Benzing	38	Extra 300	N54VB	2,042.80	2,279.70	2,054.70	6,377.20	74.59%	
10	Norbert Werle		Giles 202	N352S	1,851.10	2,327.30	2,198.00	6,376.40	74.58%	
11	Howard Kirker	38	Lazer	N230HB	2,043.10	2,475.60	1,826.60	6,345.30	74.21%	
12	Eric Chasanoff	38	Pitts S2B	N140M	1,971.60	2,479.50	1,708.80	6,159.90	72.05%	
13	Cory Lovell	38	Sukhoi SU-26M	N226sU	2,083.80	2,199.70	1,845.40	6,128.90	71.68%	
14	Tom Myers	38	Stephens Akro Akro	N100SE	1,994.90	2,344.70	1,461.50	5,801.10	67.85%	
15	Patrick Dugan	49	Extra 300	N319PH	1,732.80	2,122.60	1,918.90	5,774.30	67.54%	

Unlimited								Gold	Silver	Bronze
Rank	Contestant	Chpt	Aircraft	Reg No.	Known	Free	Unknown	Total	%	
1	Vicki Cruse	49	Zivko Edge 540	N111CD	2,979.80	3,837.40	3,484.80	10,302.00	84.72%	
2	Norman DeWitt	38	Edge 540	N9ND	2,955.20	3,833.50	3,355.80	10,144.50	83.43%	
3	Todd Whitmer	38	Edge 540T	N540TW	2,879.30	3,112.30	3,343.90	9,335.50	76.77%	
4	Doug Jardine	36	Sukhoi 26MX	N360MJ	2,877.60	2,760.10	0.00	5,637.70	46.36%	

New Members

by Che Barnes



Michael Lloyd, San Francisco, CA.

Michael runs the San Francisco office of Duff & Phelps, which is a financial consulting and investment banking firm. He is an ex-Air Force pilot, has a lot of Yak 50/52 time - mostly dog-fighting and formation, and own a Glasair III that he raced at Reno in 2006. He reports that he has been experiencing G separation anxiety since the Yak 50 was sold. He has taken prompt action for the cure, and is expecting delivery of a Panzl S-330 being finished up now. Michael plans to compete in the Panzl and has joined Chapter 38 as a first step. "I'm looking forward to meeting and flying with everybody," he says. Likewise and welcome aboard!

John Apgar, Fremont, CA.

John has been into acrobatics for the last 2 years or so and has been flying a Super Decathlon out of Amelia Reid. He is now transitioning to an Extra out of West Valley/HWD. He says that he has been meaning to join the chapter since I visiting Attitude Aviation some six months ago. "I really love acrobatics and would like to meet more pilots that love it too," John says. John is married with 4 kids and is president of a mid-size product development company in Fremont that provides product development services for the semiconductor and solar energy industries. Welcome to IAC 38!



ABOVE RIGHT: Special thanks to Evan, who provided pics from the Paso contest!

BELOW: Ben Freelove preparing for the advanced sequence.



What is an Aerobatic Engine?

Excerpt from the Lycoming Flyer

www.lycoming.textron.com/support/tips-advice/key-reprints



A Flyer reader wrote to express interest in a Lycoming IO-360 engine. He went on to say that the engine would be used in an aircraft capable of unlimited aerobatics. A statement like this indicates a need for explanation of the differences between the standard Lycoming engine and the aerobatic Lycoming engine. Aerobatic flight with a non-aerobatic engine could result in engine stoppage from either fuel or oil starvation.

It should first be explained that unlimited aerobatic flight implies that the aircraft may be flown in any altitude with no limitations. Although an aircraft may have excellent aerobatic capability, every aircraft and engine does have limitations which must not be exceeded.

Any engine which employs a float-type carburetor for fuel metering is immediately eliminated from use in a fully aerobatic aircraft. Inverted flight for more than a few seconds would cause the carburetor to stop metering fuel and the engine to stop running. While carbureted engines are used in some aircraft with limited aerobatic capability, only positive G maneuvers and very brief periods of inverted flight are possible.

To operate correctly, an engine must have fuel which is properly metered in proportion to the air entering the engine induction system. The fuel injector measures air flow and meters fuel to the inlet ports of each cylinder. Unlike the carburetor, a fuel injector is not affected by unusual aircraft attitudes. Therefore, all Lycoming engines that are designed for aerobatic flight are equipped with a fuel injector.

Delivery of metered fuel to the combustion chamber is not the only challenge addressed in designing an aerobatic aircraft engine. It is also necessary to provide lubricating oil to many points in an operating engine regardless of the aircraft attitude. Two different methods have been used to provide oil for aerobatic engines manufactured by Lycoming.

The flat, opposed cylinder aerobatic engines first offered by Lycoming were designated AIO-320 or AIO-360. These engines were the dry sump type with appropriate oil inlet and outlet connections as well as two crankcase breather connections. Necessary lines and an external oil tank with a revolving pickup capable of reaching oil in almost any aircraft attitude were then supplied by the aircraft manufacturer. This type of installation provided aerobatic capability, but it was complicated enough to be very expensive. A simpler, more universally usable system was needed.

Most Lycoming engines are termed “wet sump” engines because oil is stored internally in a sump at the bottom of the crankcase. When the engine is inverted, the oil will be in the top of the crank case rather than in the oil sump. To maintain a continuous flow of oil during inverted flight, an oil pickup line must be provided near the top of the engine as well as in the oil sump. Lycoming aerobatic engines carrying an AEIO designation use inverted oil system hardware to adapt oil pickup lines at the top and bottom of the wet sump engine.

This inverted oil system comprises two major components: the oil valve and the oil separator. Several other items of hardware adapt the system to the Lycoming engine so that oil is available to the oil pump in either the upright or inverted position. These hardware items include a standpipe in the sump which acts as the engine breather during inverted flight, a special adapter or plug at the oil sump suction screen, and other hoses and fittings.

In addition to the inverted oil system, Lycoming makes other engine modifications to adapt standard engine models to aerobatic use. Some models of the AEIO-540 engine have a baffle added in the oil sump to eliminate oil loss through the oil separator. Also the flow of oil to the oil pickup in the accessory case is limited in the inverted position. To improve this oil flow, holes are machined in the upper rear wall of the crankcase.

With these changes completed, the engine is capable of inverted flight in addition to normal upright flight. Because the oil pickup points are at the top and bottom of the engine, knife-edge flight or flight at very high up or down pitch angles have some limitations; these limitations do not prevent engines from being used in aircraft which perform all the maneuvers required for international aerobatic competition. Engines built with the inverted oil system and incorporating the other modifications discussed earlier are certified by the FAA as aerobatic engines.

Aerobatic engines subjected to the exceedingly stressful maneuvers developed in recent years are also limited by possible damage to the crankshaft flange. Lycoming Service Bulletin No. 465 requires periodic inspections of all crankshafts installed in aircraft that are used for aerobatics.

The meanings of the letters and numbers in the Lycoming engine designation are fully explained elsewhere in this publication, but the AE part of the AEIO indicates “aerobatic engine.” Lycoming is currently producing AEIO-320, AEIO-360, AEIO-540 and AEIO-580 aerobatic engines which range from 150 to 320 horsepower. One of these models should be installed in a general aviation aircraft which is designed for aerobatic flight.

IAC Chapter 38 Membership Application/Renewal Form

Name: _____

Spouse: _____

Address: _____

City: _____

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

Next Meeting (Party)

Sunday, July 13th, 2008

4 PM

Attitude Aviation

Livermore Airport, CA.



Che Barnes
Co-Editor, IAC 38
23800 State Hwy 16
Capay, CA. 95607



Aragon Aviation, Inc.

- Aerobatic Courses/Spin Training/Tailwheel Endorsements
- Instructor Cecilia Aragon has 5,000+ hours, 2,000+ as CFI
- Former member of U.S. Aerobatic Team

Tailwheel & Aerobatic Flight Training

Beautiful 1996 180 hp Super Decathlon
Available at the Tracy and Livermore Airports
<http://dcai.com/flight> (510) 527-4466

