



EAA CHAPTER 515
 Fort Collins/Loveland
 Colorado
 www.eaa515.org

NEWS

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Doug Dempsey: What Pilots Need To Know About Engines

By Ron Grob

Given short notice, Doug Dempsey graciously agreed to speak to Chapter 515 again at the May meeting. He learned a lot about engines while working for Ford Motor Company. In about an hour, Doug presented his “weekend ground school” about what pilots need to know about their air-cooled aircraft engines.

No attempt is being made here to adequately cover the material in Doug’s talk, but a few important points follow. Exhaust temperatures may reach 1600 degrees F., but the base of the cylinder is only at about 200 degrees F. Cylinders are purposely made larger at the base so that they may approach cylindricity when hot. A temperature of 600 degrees is enough to soften rings, and oil breaks down around 350 degrees. It is very important to control temperatures if the engine is to make it to TBO. If the oil temperature is lower than 180 degrees, acid and moisture in the oil can be a problem, and if it is over about 210 degrees, the oil temperature in the cylinder may get too high. Synthetic oils protect against high temperatures, but they

do not handle leaded fuel well. If air temperature is below 40 degrees, a multi-viscosity oil should be used. Doug uses Phillips 20W-50.

Great fuel cost savings are available using proper leaning techniques. Maximum power is obtained when leaning to 125 degrees rich of peak EGT. If only one temperature probe is used, it must be installed in the cylinder that reaches peak temperature first. All of the other cylinders run richer. When operating at 75% or less power, one can lean severely to get best economy, but temperature gaging must be accurate in order to avoid damage.

When hot starting fuel injected engines, it is necessary to purge the fuel lines which are located on top of the engine, because they become vapor locked. The procedure is to pull mixture to full lean, crack the throttle, and run a pump for a few seconds after fuel pressure stabilizes. Too much fuel can end up bending a rod.

Thanks Doug for another great presentation.

EAA Chapter 515 Presents

When: Tuesday, June 8 2004, 7:30 PM

Where: Dan Olsen’s hangar #8T at FNL
 (just east of the blue Virga T-hangars)



Program: Dan Olsen will give a talk on composite construction, including a hands-on opportunity for all who are interested. Dan will also have his beautiful recently completed Lancair 320 on display. Whether or not you ever plan to build a composite aircraft, this will be good information to have as most metal aircraft have at least some fiberglass components.

Chapter 515 May Minutes

By Ron Grob

The meeting was called to order at 7:30 PM on May 4, 2004, at Hair Dynamics in Ft. Collins. President Hugh Beckham opened the meeting by asking if there were any guests in attendance. The guests who identified themselves were Steve Sample, a possible Sonex builder, Bill Cherry, who came for a second time, Bill Shield from Greeley, and Jake Grieson, who belongs to the Ultralight Society.

It was announced that Ivon Klohe, a long-time member of Chapter 515, probably will be released from the hospital in Cheyenne around June 1. He has regained about 20 pounds and is doing much better.

Hugh Beckham asked if anyone knew what our Chapter's legal address is. No-one knew.

There will be no On-The-Spot this month.

It was decided that in the future, the President has the authority to determine if ads from non-members may be included in the newsletter, as long as the items might be of general interest.

Someone with a master key broke into 17 hangars at Fort Collins Downtown airport. Someone used a pick axe every 2 feet on a Piper Arrow in a hangar

at Fort Collins-Loveland airport. The plane was in a four-way partnership and the hangar lock was not damaged.

A motion was made, seconded, and passed to allow the President, at his discretion, to expend a nominal amount of money without chapter approval.

The Chapter 515 scales need to be calibrated.

A motion was made, seconded, and passed to give an honorarium of a \$25 gift certificate for either Carrabbas or Outback Steak House to each guest speaker.

A Treasurer's report was given by Ernie Stevens.

Jon Johannsen has successfully flown around the world 3 times in his homebuilt Van's Aircraft RV-4. He holds 52 world records. His latest venture was flying solo over both poles, and the costs were so high that he is financially virtually wiped out. After AirVenture 2004, Jon is available to speak to us, but he needs some help. A motion was made, seconded, and passed to offer to pay Jon \$500 to be our speaker at a meeting to be held in early August, shortly after AirVenture. Details will follow later.

There was an error in the last minutes concerning mountain AWOS's. There will be a new AWOS at Mt. Werner. The one

at Corona Pass is being moved to Eldora Ski Area.

After a short break, member Doug Dempsey gave another excellent talk on the proper operation of aircraft engines. See the lead article for more details.

The meeting was adjourned at 9:30 p.m.

Put it in the Newsletter! stories • announcements • ads

Send text and/or pictures to:

Ron Grob (editor)

rong@rongrob.com

office 667-5320, fax 667-5322
PO Box 1417, Lvld 80539-1417

Chapter 515

TOOLCHEST

Here is a list of tools and equipment either owned by the chapter or available for use by members.

CONTACT: Walt Ellwood, 635-3436, wellwo@aol.com

Engine hoist

Flat bed trailer (call Jeff Dinius)

Instrument panel hole cutter

Nico press, with gauges

(bolt cutter style)

Scales (Bill Arnold, Dave Klink)

Stoves

Torque wrench

Tools that members may loan out

Lycoming Engine Overhaul Stand

(Mel Callen, 587-4824)--may work

with a Continental

Cable Fitting Swaging Tool

(Hugh McTeague, 586-5910)

Greeley Flight Restrictions*Submitted by Sue Wolber*

The Greeley-Weld County airport manager recently re-issued an announcement of flight restrictions over the Air National Guard facility located at the southwestern corner of the airport (not the radar dome on the west side of the airport property). To avoid this facility, all downwind traffic using runway 34 must remain west of it on downwind and not turn base until south of Highway 263 (8th Street; it goes along the south side of the airport). If you stay at least a half mile away from runway 34 on downwind, you'll be okay. When runway 27 opens, traffic must avoid left turns until beyond the threshold of runway 09 (a no-brainer, since the AIM requires us to do so, anyway). You can see the announcement on the airport's web site <<http://www.gxy.net/>>.

If aircraft continue to fly over the ANG facility, the Air Force may pursue the creation of restricted airspace over it! Hopefully, they are bluffing. Regardless, let's play by the rules when flying into and out of GXY by avoiding the ANG facility.

2004 Chapter 515 Activities

June 8: Dan Olsen talks about his Lancair 320 in his hangar at FNL. Dan will demonstrate composite building techniques.

June 19-20 Kearney, Nebraska Aviation Extravaganza at Kearney Municipal Airport (EAR). See flyer available at June meeting.

June 26-27 Rocky Mountain Fly-In at Front Range Airport! There will be a temporary control tower in operation. Details at www.rmfi.org Caution: There is a new 2000 ft. agl tower near the east side of the outer ring of the DIA Class B airspace. Avoid the tower--always make one landing for every takeoff.

July 24: Kelly Airpark Annual Pancake Fly-In. This is open to all members of Chapter 515. See flyer available at June meeting.

July 27- Aug. 2: AirVenture 2004

Early August: Jon Johannson to speak about his flight to the South Pole. Details later.

For Sale

Navaid AP-1 Autopilot, with Servo S-2 and with Porcine Smart Coupler II. These units have never been installed or used in any way except to open the packages and look at them. The going price for this combo is \$1450. I'll let them go for \$1250. A \$200 savings to the buyer. See www.navaid-devices.com for details on the autopilot and www.porcine.com for the Smart Coupler II.

Nolan Frederick nvincent@idcomm.com 303-494-9510
Chapter 43 member

340 Martin Dr. Boulder 80305

EAA Chapter 515 Board of Directors Meeting

By Larry Larkin, Jr.

April 30, 2004, 7:24 p.m.

In Attendance: Hugh Beckham, Ernie Stevens, Larry Larkin, Dean Hall, and Steve McClintock

Dean told the Board that Jon Johansen is going to come to Oshkosh this year and will be coming for a visit afterward. Dean suggested that even though the chapter does not normally have an August meeting, we could have Jon speak at an August meeting. The Board decided to bring a proposal to the membership at the May meeting to have Jon speak to the club and possibly give Jon an honorarium.

A proposal was brought before the Board to offer the person who does the monthly program at the meeting a \$25.00 gift certificate to Carraba's or Outback Steakhouse. The Board decided unanimously in favor of the proposal.

A proposal was also brought before the Board to allow the chapter President to spend a nominal amount of money at his/her discretion for chapter expenses without having to go to the Board each time. The Board unanimously approved the proposal.

The Board meeting adjourned at approximately 8:30 p.m.

EAA Chapter 515 Newsletter

c/o Britt Crowell(publisher)

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<http://www.eaa515.org>

June 2004

EAA Chapter 515 Newsletter

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Receive Your Newsletter Sooner

(and save Chapter 515 some money)

If you have email, please consider having your monthly newsletter emailed to you. This saves considerable labor and postage and makes more money available from dues to pay for chapter activities. If you are willing to help us all by doing so, please call Ernie Stevens, Chapter 515 Treasurer, 663-0829, or contact Britt Crowell, 484-4995, or britt@fortcollins.com.

REMINDERS

PLEASE PARK IN FRONT, WEST OF BUILDING for all future meetings at Hair Dynamics. Our gracious host, Dale Matuska, conducts business meeting nights and the parking area north of the building is needed for customers. Thank you.

As of January 1, 2004, in order to be a member of Chapter 515, you must also be a member of the national EAA: P. O. Box 3086, Oshkosh, WI 54903-3086, www.eaa.org, membership services at 800/843-3612.

Chapter 515 2004 dues (\$18) are now past due. Our treasurer is Ernie Stevens, 3656 Catalpa Court, Loveland, 663-0829.

Rocky Mountain Regional Fly In

We received the following email from Cheryle Sullivan regarding the 2004 Rocky Mountain Regional Fly-In to be held at **FRONT RANGE AIRPORT**:

“Hi Folks of Chapter 515, Fort Collins,

The 2004 RMRFI is fast approaching and I wanted to get information to your chapter about volunteer opportunities/benefits.

If anyone is interested in helping this year, they should check out the web site, www.rmrfi.org for volunteer opportunities, and a link for special hotel rates for volunteers at the Courtyard Marriot near by. If anyone has any questions they can contact me via the web link for more volunteer information.

Thanks for your support in the past, and I hope to see some of you again this year.”

Cheryle Sullivan
Volunteer Coordinator
2004 Rocky Mountain Regional Fly-In
cheryles@rmrfi.org

Later, Cheryle emailed the information below. This is your chance to help out.

Volunteer Opportunities 26th Annual Rocky Mountain Regional Fly In Saturday June 26, Sunday June 27

Admission Gate

1. Sell tickets to the event
2. Shifts-Saturday, Sunday 0630-1630
3. Numbers needed- up to 8 per shift, must be 18 years old

Aircraft Greeters

1. Meet incoming aircraft at parking site to register them, give info about fly-in
2. Shifts-Saturday 0600-1200, Sunday 0600-1000
3. Numbers needed- 6-8 people/shift Saturday and Sunday

Aircraft Judging

1. Judge the registered aircraft that are entered for the different EAA categories. Previous knowledge helpful, training available.
2. Shifts-Saturday AM, approx start 0700 until done
3. Numbers needed-12-15

Aircraft Parking

1. Help park arriving aircraft according to aircraft type. Maintain safety around aircraft and prevent any damage to parked aircraft.
2. Shifts-4 hour shifts, Saturday 0600-1630, Sunday 0600-1630
3. Numbers needed-16-18 people/shift Sat., 12 people/shift Sun., must be 18 years of age or older

Finance

1. Help Finance Director count and bundle funds collected at the event

2. Shifts- Saturday, Sunday, 1030-1230, 1430-1630
3. Numbers needed-2 per shift, must be 18 years old

Snow Fence Set-Up

1. Crew meets the Saturday before the event, 6/19 at the airport to set up the snow fence between the parking area and the event area
2. Shifts-anytime available on planned work day. Numbers needed-as many as possible

General Set up

1. Friday, June 25 work crews set up airport for fly-in
2. Also someone to help put up RMRFI signs around town Friday, take down signs on Sunday, preferably with a pick-up truck
3. Numbers needed- as many as possible

Ground Transportation

1. Airport shuttle, pick up supplies, run errands
2. Shifts-1 person needed Friday afternoon, early evening, coverage needed Saturday, Sunday all day
4. Numbers needed- 1/shift, must be 18

Security

1. Provide for a safe/secure event. Must be 18 years old.
2. Shifts-4 hours, 6:30 a.m. – 6 p.m. Saturday and Sunday
3. Numbers needed- 12 per shift.

Operation Hunger

1. Staff to make sandwiches, package snacks for volunteer workers Saturday and Sunday, June 26-27.
2. Shifts-approx. 0700-0900
3. Numbers needed- 6 per day
4. Water/Food delivery- deliver water/food over set route to volunteers
 - a. Numbers needed- 2/cart, driver must be 18
 - b. shifts- Saturday 1100-1500, 1200-1600
Sunday 0700-1100, 1100-1500, 0800-1200, 1200-1600

Pop Carts

1. Drive/Ride a golf cart over an assigned area to sell pop and water.
2. Shifts-2-4 hours, 2 people/cart.
3. Numbers needed- 4 per shift. Golf cart driver must be at least age 18.

Tear Down

1. Remove tie-down cables; take down awnings, announcer stand, and general clean up of airport.
2. Shift-Sunday after airshow winds down until done
3. Numbers needed-as many as possible

Young Eagles

1. Young Eagles Rally. Need pilots to fly kids
2. Shifts-0700-1200 Sunday
3. Number needed- pilots: as many as possible; ground crew: the same

Volunteer Coordination

1. Help coordinate/register volunteers, staff volunteer table during event, check in/out golf carts/radios, pre-event coordination of volunteer lists, help with pre and post-event database update
2. Shifts- some work pre/post event, Saturday/Sunday 0600-1100, 1100-1600
3. Numbers needed-3/shift