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President’s Column

May 20-22. The CLA’s 40th Gathering of Luscombes at Columbia fast approaches. Your Gathering. Are You Ready? Are your Luscombes Ready? The dates are set. The ground work is being finalized. Volunteers and ideas are blending together. T-shirt art work representing last year’s Grand Champion and our 40th event is Stunning. Awards are next on the list. Judges are sharpening their focus. CLA member, Tim Robbins, has graciously volunteered to cater a special anniversary Friday dinner, Saturday lunch, and the Saturday awards dinner at this year’s event. No small task so be sure and thank him for his efforts. Trying to foster the relationship of our CLA with the very gracious Community for the past 40 years, and to show our support to the Columbia airport and local residents, we have welcomed the American Legion of Sonora to cater a wonderful Saturday breakfast. They are excited to serve us and this is a fundraising effort they do a couple of times a month for others within the community. Please come join us early for Saturday breakfast and show them your support. They are going to advertise the Gathering locally so polish up on your Luscombes history. There may be a few more locals to share that with. Barry Perkins wants to judge the short takeoff event he spearheaded last year. Lee Borchers 8E using less runway than the SuperCub was a neat sight to see. Can you get the flour bomb in the barrel? I may be standing in it unless Joe Priblio beats me to it.

I want to be sure to remind everyone who attends to remember this one most important fact. This Gathering, like all past Gatherings, is an entirely volunteer event. We are a 501c3. Any donations, such as The Whatever Fund, are a charitable donation. This is a completely volunteer and nonprofit flyin. A volunteer and nonprofit CLA. The funds received are used solely for the Gathering. We do this for you, we do this for us, and the number one reason...we do this for the Luscombes!!! We welcome those who have them, we welcome those who want them, and we welcome those who admire them. Come and enjoy.

If you want to do something that will offer us the greatest help of all, please pre-register to attend. Shelly and Lisa have spent months trying to streamline paperwork and the website should be up and running to make it much easier. That is the only way we can ensure we have enough food for everyone who plans to attend. The website will have an entirely new look very soon so plan to check it out and pre-register. Luscombecla.org

May 20-22. See you there :) Scott O’Brien

Editor’s Logbook

Leaping Leprechauns and El Nino Showers! March/April 2016 is springing into action with good luck for lots of great flying weather in spite of El Nino!

THANKS! To all of you Luscombe enthusiasts who have taken time to submit articles and for sale items to be published in your Courant. We can help keep each other informed and our Lusky’s safely in the air by submitting valuable information to be shared.

It’s time to start making plans for our famous annual family fly-in at Columbia! This is a landmark year marking 40 years of gathering together at the beautiful grass strip, known to us as “O22”! 38.3 degrees N/120.41 degrees W, elevation 2,120, UNICOM 122.975. Runway 11-29. Sound familiar?? If you don’t plan on camping under the wing don’t forget to make hotel reservations ASAP as the limited hotels fill up fast.

Look for Columbia Registration inserts in this issue.

Have fun, be safe and keep flying!!!

Hope you had a Happy St Patty’s Day and a Blessed Easter!

See you in Columbia for our...

“40 Year Celebration!”

High wings and tailwheels!

Barbara Kirmsse
PDF Version of Courant
Visit your new, user friendly site by opening the link below to view the past and current issues of the CLA Courant Newsletters in full living color. These and all future issues will be available at: http://www.luscombecla.org/newsletter Note that it is case sensitive.

About the Cover Photo
Throwback Thursday – June 10, 1995, Tatitna Airstrip (8KA) near the Rohn Roadhouse, Alaska. This photograph shows me (Jim Zazas) taking-off in my 65 hp, 1946 Luscombe 8A from this challenging, 1200-foot gravel airstrip located about 130 statute miles northwest of Anchorage, Alaska. Though shown on the sectional charts as “Emergency Only,” the Tatitna Airstrip is visited by many aerial travelers throughout the year. This airstrip becomes very busy during the annual Iditarod Sled Dog Race from Anchorage to Nome in March with pilots flying supplies, people and fresh dogs into this short airstrip. The small cadre of experienced pilots that support the Iditarod Sled Dog Race call themselves the “Iditarod Air Force.” Photograph by Donna M. Bushman

Upcoming Events
Columbia 2016, 40th!
“40 Year Celebration!”

Sun n Fun 2016

Board Member Elections!
It’s Board Member Election time once again. We are looking for an enthusiastic member to join the board. Please let us know if you are interested.

Membership Annual Dues Notice!
All membership dues will now renew in May each year, as mentioned in the last Courant issue. We encourage everyone to renew this month. We have included a renewal form for your convenience or you may renew online at www.luscombecla.org. If your current renewal date is coming up in the next few months please pay the full $25, if you have a number of months remaining feel free to pay a discounted rate of $12.50. Your assistance with this transition is greatly appreciated. Please contact me directly with any questions you may have.

lisakienholz@yahoo.com
Lisa Kienholz
Membership Chair
Lessons From Geese

1. As each bird flaps its wings, it creates an uplift for others flying behind him. There is 71% more flying range in V-formation than flying alone. Lesson: people who share a common direction and sense of common purpose can get thee quicker.

2. Whenever a goose gets out of formation it quickly feels the drag and tries to get back into position. Lesson: It’s harder to do something alone than together.

3. When the lead goose gets tired, it rotates back into the formation and another goose flies at the head. Lesson: Shared leadership and interdependence gives us each a chance to lead as well as opportunities to rest.

4. The geese in formation honk from behind to encourage those up front to keep up their speed. Lesson: We need to make sure our honking is encouraging and not discouraging.

5. When a goose gets sick or wounded and falls, two geese fall out and stay with it until it revives or dies. Then they will catch up or join another flock. Lesson: Stand by your colleagues in difficult times as well as good.

Good advice for old geezers!

Thanks Joe Pribilo...

Lycoming Constant Speed Propeller

A Lycoming Luscombe with Constant Speed Propeller

November 2014 the FAA issued STC SA02508LA for the installation of a MT Propeller, MTV-11-C/188/7f hydraulic constant speed propeller on Luscombe 8E and 8F aircraft with the Lycoming O-320 engine. The seven year effort was received with joy and relief.

The subject aircraft will be at this year’s 2016 Gathering of Luscombes in Columbia in May. This culminates a personal dream I’ve had since I first got a one hour flight in a Lycoming powered Luscombe in 1957 in exchange for polishing it. First I hoped to someday own an O-320 powered Luscombe and later when I had more experience I knew it would take a constant speed propeller to utilize that power.

I thank all involved in my realizing my dream, Don & Donna Warner, Stu Rhodes and especially Brandon Wills and Garry Smith.

Ed Warnock
**8E & 8F Wing Bending Stress**

Luscombe 8E, and F Wing Bending Stress
By Jack Norris

Simple Enough to Understand, Intriguing, Interesting -- Everyone should Understand the Loading of a Strut Braced Wing, so you can Intelligently INSPECT YOUR WING!

Ludwig Prandtl, at Gottengen University in Northwest Germany really started formal Aerodynamics when he taught us Wings Have Elliptical Loading, falling to Zero at the tip, into a tip Vortex, rotating from the high pressure bottom to the low pressure top! Notice the outer incremental loading sections shown on the top drawing add up, build up the Bending Stress maximizing at the Strut Attach point, (shown upside down) on the curved plot of stress - then tapers, straight to zero at the root!

Luscombe 8E, F, 1400# Gross Weight

Notice that stress falls off linearly to zero at the wing root, upside down, bending the outer wing up, the inner down, easy, logical!

But now, the Inner LIFT of the Wing is tending to BOW it UP, from the Lift There, shown to scale opposite to the natural counterclockwise stresses we just described.

Now, here's the Nifty, Interesting, Interplay! The two opposing bending moments in fact balance out, and you can see the bending stress actually goes through ZERO inboard at about 60% to the strut, and peaks at roughly 30% out toward the Strut attach. The inner bending moment max stresses are LOW, only 27.9% of max!

(Please see top and bottom drawings below)
Now, I did that all Professionally, with about 4 pages of numbers and calculations - on the first pass, conservatively. CG, cp, I used 67.45% of the bending on the Larger Forward Spar, the rest on the rear spar!

At a 4 ½ g Limit Flight Load, (not bending), x 1½ for Ultimate 6³⁄₄ g load, (not breaking), that used up the allowable strength of the pre-WW II 17-7 Aluminum Alloy, as I recall, the stronger 24ST post war alloy having some extra strength, OK for light aerobatics!

Now, that would be considered a good, correct, conservative, first pass analysis. But if it was a modern, leading edge project, we would do a refined, more sophisticated, stress analysis, account for the lift carrying across the cabin top, lowering the wing load and stress - but then knocking that down, because of the root cutouts, account for very leaky Ailerons, and way too much washout on metal wings forcing more lift inward, a significantly easier lift, stress distribution!!

You can chase your tail on much of this, finding you have yourself depending on some guesses, unless you do some sophisticated, costly wind tunnel testing! With Big Problems, extra sophistication -- that explains how an F 35 fighter program ultimately costs, years, and BILLIONS of $!

Now back to Good Basic Practical Insights!!!

My numbers checked, showed the strut had to pull down 553# at the strut attach, plus 147# at the wing root, equal to 700#, half the Gross Weight of 1400# for an 8E, check! Of course that's correct, half the load on half the wing! The strut is pulling in, down, and forward. In and forward loads the Hat section and roof behind the windshield, a compression load, trying to buckle the hat section, which is stiffened significantly, as it is attached to the top skin of the cabin - OK!

It pulls forward and down, attached ahead of the door into the fitting that attaches the strut and landing gear too, to -- The big structural box below your knees, that takes landing gear loads also. sound for 2/3 of a Century. The up and back loads require some stiffness in the fuselage, and wing, to take the crooked loads, but since this is a basic explanation, I'm purposely skipping fuselage complexity, which works out OK. Realize there is a vertical load from the strut in the forward door post, designed for that!

Do notice that the strut angled from its attach point between the wing spars, forward to in front of the door is pulling the wing forward --- transferring almost all of that inward force to the forward hat section, almost none on the rear hat! Pros would see that's trying to shear, crinkle the wing skins in doing that. But the Wing Skin, with rib stiffeners easily takes that. Forget that if it seems hard. Stay easy!

Forget doing aerobatics after 2/3 Century! I found I only get 2.2 G flying in normal turbulence, vastly less than 6 ¾ G design, 3 G, once hitting a Wave out of the Pass at Palm Springs, rare!

Early on in the Industry, early Aluminum alloys yielded, or bent, at about 2/3 of the stress they broke at. Of course no one wants airplanes that got bent in normal flight! So the Industry Professionals set up a system where you take the actual max design 4.5 g Limit Loads, multiply those by 1 ½, and design to the big 6³⁄₄ g ultimate load using the higher ultimate strength allowables where the structure should yield, that is bend, or stretch – but not break!

Yes, I had a hot pilot friend who overloaded, bent his Ohio Air National Guard P 51 one day, was highly embarrassed, and was quite purposely less hot after that, one scrap P51!
Now, I wanted you to understand, see the interesting loading, and stresses on any strut supported wing, Cessna, T Crafts, too. Understand too that Limit Loads won't bend, but Design loads will likely bend! Give yourself safer extra margin. I just fly normally, shallow banks, 2.2 low g, low stress, margin!

But Now, some key insights on Corrosion! Intergranular Corrosion on Luscombes.

If your Luscombe has not lived in a rainy environment where landing gear axle areas can rot out and need inspection, corrosion is most often a non-problem on Luscombes!

Intergranular Corrosion is terrible, ugly, turns to powder, but happens EARLY, typically so ugly you can easily see it, find it! Basically Luscombe Alloys are Copper based Alloys, where copper is added to the Aluminum, as an Alloy to strengthen it! The Alloy is heated sufficiently to get the Copper into solution, then Quenched very quickly in Water, to hold the Copper in Solution, as a stronger alloy!

For long spar materials you need big vertical tank water baths, for QUICK Quenches. That happened poorly for some early spars and hat sections and some bad cases were found. But, since that happens in just a few years, that was a problem for decades ago. In case no one ever looked, I wrote AMOC 97-1 to AD 96-24-17, teaching the correct way to inspect a metal Luscombe Wing! Prop up the wing, drop the strut, look in to the big hole, etc, able to see everything very well, and right at the crucial strut attach point, the real major stress area!

Over the years I've seen cases where there were small corrosion areas on low stress areas of the spars that never were a strength problem, and as taught above, never will be!

Look in a Cessna 140 wing and see a simple sheet metal “C section” Spar - reinforced greatly at the strut attach area! Cheap, poor, NO, a smarter, lighter, less expensive post WWII design, 8 years smarter! And they avoided intergranular corrosion, a BIG +, sheet metal routinely production quenched!

The Big Structural BOX and the Big Fittings that hold the Landing Gear and Wing Struts. The big fittings are there to take the Major Landing Gear, and Wing Strut Loads, feed them into the Box!

In the Big Airplane Business, Castings are rarely used, the loads huge, only forgings used, but on light planes, castings are often perfectly OK, presuming that good quality castings are used. Our Luscombe fittings are probably not forgings, but look like perfectly good quality castings - Never had one in hand. I've never heard of a problem with them. Typically, they'd be designed with generous margin, here typically able to simultaneously handle both Wing Strut and Landing Gear Loads, but of course, those tend to happen separately, no high G wing loads at slow landing, and no landing gear loads when max wing loads occur.

Here's the key insight to grasp here! Those Fittings are Intended to take the major landing gear and wing strut loads and spread, feed them, spread them into the sheet metal box with lots of rivets, over the box size.

Over the years there have been some cracks in the outer parts of the sheet metal box, often going into one of the rivet holes, or strut or landing gear holes, maybe because the fit wasn't right, the sheet trying to take load it wasn't intended to take, no problem, because it's the fitting that is taking the load, the crack often stops in an outer hole.

You want to be sure that the fitting is able to feed the big loads into the box safely, no big cracks inboard that could release the fittings from the box. Drilling Stop Holes is usually a proper move to stop a crack from growing.
The Box has extra strength, and we have 2/3 Century of long proven safe service. Overlapping parts, the box is difficult to inspect. **To get us smarter, I have a good man looking into it for us.** Check yours, **best at night**, with the **best of light and the best of seeing, better**. Make sure you have no sign of beginning distress, any real movement, or separation of the fittings from the box! We can discuss it at Columbia, this all to set that up, get all aboard, informed! **Come, to Columbia and get smarter!!!**

Who is this guy Jack Norris?

Am I qualified to advise you here? Well probably, about as well as anyone you’re apt to find, a life most could only dream about!

A kid fascinated with airplanes, flight, I was building models as early as my dexterity permitted. But those first dime kits, like my first, a green **Porterfield Flyabout**, hardly flew, about across the living room, to crash! Wildly, Robert Cummings, the movie actor flew and owned a green Flyabout, Spinach, which got mildly famous around LA and was finally later owned by two of my friends!

I got fully involved with competition models, won the Senior age National Championship two of the three years I was there to compete, postwar, 1946, and 48! I mention that because it was the critically formative element of my youth! I became a truly knowledgeable airplane designer as an 18 to 20 year old before engineering college! Think that’s an exaggeration? A model with more thrust than weight can be a far bigger dynamic design problem than a docile jet, and I designed out the graveyard spiral on models that consistently beat everyone!!!

My Douglas B26 Ohio Air Guard squadron got activated when I had 4 years of a 5 year Marvelous Bachelor – Master’s Program in Mechanical and Aero Engineering at Ohio State. A 5 year, 3 quarter system, 15 sets of subjects, I got twice the usual 4 x 2 = 8, a magnificently broad and deep education!

Called into the USAF at Wright Field for the Korean War, the uniquely knowledgeable young guy, I fell into the wild job of leading the Aircraft Lab Team on the Engineering USAF Acceptance Inspection of the F 100, 102, secret 103, 104, B 57, 66 and the unknown turboprop B47D, and a lot more.

Joining the World’s first, biggest and best Landing gear company, in a very unique way, helping manufacturing, I got very expert in everything, design, stress analysis, manufacturing mistakes, and problems, I was given the job of setting up the Field Service Department for the Jet Age and was the guy that everyone came to for the answers, the Airlines, the USAF, Navy, FAA, I had to be everyone’s final answer expert, on all the huge, multy-million $ Jets!

We bought a fantastic Controls Company and I was sent to help them grow, soon challenged to win the design and manufacture of Boeing's Primary Flight Controls. The numbers are fantastic! Would you believe ~3 ½ Billion passengers have safely flown my Boeing Jet Flight Controls!

Next, I went to the West Coast to start a new Division, targeted the key control valves for the maneuvering Rockets on the Mercury, Gemini, and Apollo, 107 of my products in the Central Hall of the Smithsonian! When Apollo 13 Blew up I had 76 of my products in complete control of the very dangerous Hypergolic Fuel, Oxidizer and 5000 psi Helium Pressurization valves, the guy most at risk of causing the explosion! I was positive about our valves, and fortunately mine were fine. It was Beech Aircraft's oxygen tank that blew! You just can’t be the guy that kills a plane load of Boeing passengers or Blows up the USA's 13 shot to the Moon! **It's a critical life/death pro-business!**
Apollo 13 getting back was the greatest adventure in the History of Man, and I got to be right in the middle of it.

Our Aero Club gave Jim Lovell the Howard Hughes Trophy in February, and I got to talk it all over with him, personally, pretty nifty.

Lots more, two books too, Propellers, Voyager, I got to set the Leading Edge 17 times, set a standard way to earthquake isolate the miles of piping in Nuclear Plants, showed the Navy how to stop the 47 GPM leakage on their advanced nuclear sub propeller shaft seals. Why say all this? My answers here guide you correctly! Look, Understand what you're looking at! Look Good, fly sensibly, skip hi g Aerobatics, and your Luscombe can be safe, even after 2/3 of a Century, a great old bird, I’ve owned mine 66 years this Christmas, cost $1225!

A Helpful Addendum about Al Corrosion

Al is the Aluminum chemical element symbol. Regular Aluminum Oxidation Corrosion of Al Surfaces is normally NOT a Problem!!!

Quite simply, normal oxidation of Aluminum surfaces is tightly attached, actually becomes a protector of the base material. You'll find this in all the textbooks, and it's true. After many years it can look unsightly, but still protects! Anodize is just an optimized oxygen coating!

Of course its proper to keep looking, inspecting your plane's structure to make sure that nothing unusual is happening, but repeated inspections for surface corrosion is a misdirected effort, so look knowledgeably!

This is very important because it's so seldom properly understood by pilots, who too easily misunderstand blanket FAA directions.

“Go Look” Safety Tip...

While we're at it, here's a favorite “go Look” check of mine!!! That last little bulkhead in the tail of a Luscombe fuselage, easily seen, is only .045” Aluminum sheet, bent a lot!!! It holds on the rear of the stabilizer and fin, the rudder, and elevators, without any question the most important few ounces of Aluminum on the plane. It's seldom a problem, but has been a problem a few rare, unique times! Doing the preflight walk around inspection you're supposed to do, THAT'S A KEY THING YOU CAN AND SHOULD LOOK AT, BECAUSE YOUR LIFE DOES DEPEND ON IT!!! Grasp All, be SAFE!
There are only three essential ingredients to making good landings and those are practice, practice and more practice. In that order. It does help, however, if that practice is done with a few tips tucked in your back pocket to make it more productive. So, here are a few tips. There will be a quiz at the end, so pay attention.

**Have a plan**
Don’t let the approach just happen. Have it well scripted in advance.

**Visualize your path**
Look ahead of the airplane and imagine your flight path as a narrow, rectangular funnel with the runway at the end.

**Be precise**
Don’t approximate anything.

**Coordinate**
Keeping the ball in the middle in all phases of the approach will give maximum efficiency.

**Keep downwind consistent**
Put your airplane in the same place on downwind every time, regardless of traffic.

**Make power reductions same place and same way**
Have an exact method for making power reductions and don’t vary from that method.

**Do flap extensions in the same place**
Be consistent, drop notches of flaps in the same place on every landing, e.g. 1st notch on downwind abeam, 2nd on base, last notch on final.

**Establish and hold POH approach speed**
The POH gives an exact speed for approach. Use it. Anything above or below it is wasting altitude and energy and can cause heartburn in the flare.

**Be smooth**
Make love to the airplane and caress it into position, don’t wrestle with it.

**Be firm when needed**
Turbulence or gusty crosswinds require being immediate with your control inputs but do so in a firm, but smooth fashion.

**Fixate on touchdown point**
Visually fixate on the point on the runway where you want to touch down.

**Use number movement to control glide slope.**
If the numbers are moving towards you (down the windshield), you’ll go over them. If they are moving away (up the windshield), you’ll land short of them. Works every time.

**Accept nothing but the centerline**
Get in the habit of splitting the centerline with your nosewheel (or tailwheel). It’ll help develop precision.

**Don’t over-think crosswinds**
Intellectualizing crosswinds ahead of time doesn’t help. See what the airplane is doing (drifting, skidding, etc.) and correct it.

**Don’t trim to neutral**
Don’t trim all the pressure out. Leave just a little in so any turbulence has less of a tendency to pitch the nose up and disturb your approach speed.
Nail a given nose attitude
The nose attitude is the primary speed control. Nail it in one position to establish a datum.

Don’t chase the airspeed
Moderate to severe turbulence can cause airspeed fluctuations. Don’t chase them. Hold the nose attitude and average out the fluctuations.

Complete checklist while on downwind
Do all of your office administration work early, not while you’re actually flying the approach.

Have ground control already on back-up frequency
So you don’t have to process more information as the landing roll is ending, already have the ground control frequency waiting for you.

Visualize point to be level
Have a specific point, about five feet over the runway, picked out where you will have the airplane level.

Have go-round point selected
Designate a segment of the runway (first quarter?) as the touchdown area and, if you aren’t down in it, go around.

Don’t wait too late to go around
Going around is the sign of good judgment, not a character flaw.

Use forward slip to fine tune touchdown
Don’t be afraid to use a gentle, short-duration slip to burn off 10 feet or so to put you where you want to be.

During flare, fixate on edges of runway
While in the flare, the edges of the runway a distance in front of the airplane give better height perspective than the centerline does.

Hold it off for minimum-speed touchdown
Try to get rid of all of the speed and touchdown on the mains and hold the nose gear off for a few seconds. Minimum speed touchdowns mean fewer problems on roll out.

Be sensitive to sound
The wind noise of an airplane indicates a speed change before anything else does. Be aware of it.

Educate your Butt
If your butt is sliding across the seat, the ball isn’t centered, and the airplane is being inefficient. Listen to what your butt is telling you.

Warn your passengers to minimize moving around
The last thing you need during flare is a back seat passenger deciding to reach over the back of his seat or leaning forward for something. They usually won’t, but warn them anyway.

Set up power approaches for steady power reduction
The ideal power approach has the power being steadily reduced through the entire approach as the speed is reduced and glide slope maintained.

Make power changes small
The best power changes are small and made smoothly.

Correct mistakes immediately
Whether it’s speed, position or whatever, if it isn’t right, fix it right that instant. Don’t let needed corrections pile up.

Don’t get in a position where big power changes are needed
It’s part of the concept of planning ahead: don’t put the airplane where lots of power will be needed to correct the position.

Plan ahead
This is a biggie: constantly compare where the airplane will go if you don’t change anything to where you want it to go. If the two don’t match, make them match.

Get your head into landing mode
If on a cross country, before entering the pattern, stretch your arms and legs, flex your feet and your hands. Get your body and brain awake and ready to land.

Don’t over-do speed increase for gusts
Don’t blindly add speed to cover a high gust spread. Too much speed promotes ballooning, which increases gust problems.
Don’t fly downwind too fast.
If a high performance airplane, get it slowed down to pattern speed early, otherwise downwind will be unnecessarily long and difficult to manage.

Set-up retract configuration early
Get a retract set up in gear-down, landing configuration on the entry leg into downwind so you don’t have so much going on that you might forget. This also helps control speed.

Hold it off
In the final part of the flare, the yoke comes back, only if the airplane is trying to settle. If the airplane isn’t trying to settle, any backpressure will cause a balloon.

Decide on landing type needed ahead of time
While still on downwind decide whether it’ll be short, soft or normal landing

Correct for P-factor
Power off, most airplanes will slide the nose right, ball left. A little left rudder may be needed throughout the approach.

Fine tune downwind
Make some landings from downwinds that are different distances from the runway and decide which is best

Make as many power-off approaches as practical
Power-off approaches teach references necessary for emergency landings and promote judgment.

Use length of pattern, not width to control traffic spacing
Extend downwind before turning base to compensate for traffic.

Use flaps to help control glide slope
Configuration changes don’t require power to control glide slope. Stay a little high and let the flaps bring you down.

Don’t fight the airplane
If turbulence is beating you up, fighting the airplane with exaggerated control movements will make it worse.

Coordinate in turbulence
If you’re wracking the ailerons back and forth in turbulence, your feet have to be right there with them to keep the nose in position.

Don’t be forced to correct your corrections
When making a correction, creep up on the right number or position. If you make the change too aggressively, you may over shoot the position and then have to correct your correction.

Control speed with trends
Don’t jerk the nose up and down to control speed—you may overdo it. Just start a trend in the right direction by changing control pressure.

Think of ailerons as drift killers
If the airplane is drifting sideways, lean a little aileron into it but don’t think “cross control,” unless it’s needed.

Think of rudder as centerline control
Use the rudder to keep the tail right behind the nose, independent of what you’re doing with the ailerons.

(To be continued in the following issues!)

Interchangeable Propellers
Luscombe (Vintage) aircraft Owners..... REGARDING McCauley fixed pitch metal propellers

There appears to be some confusion among mechanics and the FAA with regard to the propellers applicable on older airplanes. Normally there is a type Certificate holder maintaining and requesting updates to the Aircraft TC Data, and the FAA records these changes which are then published and readily available 2-3 years after they are 'filed' or requested. UNFORTUNATELY, with many of the older airplanes that are not economically viable for production, changes and supplementary FAA approvals are often not recorded by TC holders as required by their responsibility to the FAA, and the tribal
knowledge of various approvals and changes in service letters, or minor changes to the type design are then NOT readily available for dissemination. The McCauley metal prop situation is one of these problem areas.

The 1A90 (CF or CM tips), were designed for up to 85 HP, and the hub is slightly less beefy than the 1B90 Hub. The 1B90 hub propellers used the same blades, but a beefier hub and transition area to accommodate its use on engines of up to 115HP. The 1B90 is produced with only the CM tips (square profile), but they apparently can be profiled to the elliptical tip using McCauley service manual guidance. (I am told this by prop shops, but have never verified that claim)

For its own financial reasons (a lack of demand), the McCauley corporation ceased the production of 1A90 propellers for nearly a decade around 2001, and as a result, vintage airplane owners found that locating a replacement prop for our 65 HP and 85 HP engines became a real challenge.1

During this same time, to satisfy a demand for propellers, McCauley tested and evaluated the 1B90 for installation on the Continental 65 / 75 / 85 /90 /O200 engines, and determined full interchangeability between the 1A90 and 1B90 propellers on those engines. See note 6, Propeller TC P-842,

Note 6 states:

"Interchangeable blades. Models 1A90 series and 1B90CM, or 1C90-ALM and 1C90-CLM are sufficiently similar aerodynamically and vibration wise to permit interchangeability in the same diameter and static RPM without a test flight."

McCauley also added test results at Note 9 of P-842, which described various engine and propeller combinations, complete with Propeller model notes, relative engine size/horsepower notes, as well as the maximum and minimum propeller diameters which are acceptable pursuant to their tests.

Different FAA ASI personnel and engineers may give different guidance on these propeller substitutions, despite the clarity of part 43, Appendix A, which is notably absent any reference to propeller substitution. Since there is little weight change, and no vibration or aerodynamic change related to the propeller substitution (as noted by the McCauley data), most will advise it is a minor alteration to the aircraft that requires only a log book entry, and documentation referencing the propeller TC notes. Other IAs, FAA Inspectors, and mechanics have determined by their opinion and other means, that the propeller substitution is a major alteration. The regulatory basis for this determination has thus far been elusive to define by part 1 and part 43 of the regulations.

The most common argument opposing a propeller hub style substitution is that the approval is missing from the Aircraft type design sheets. However, there are numerous engineering changes, orders, improvements, ADs, and design changes that apply to old vintage planes which never become a part of these FAA type design records- and which may never be incorporated into the TC. One would presume (incorrectly), that if the design or accessory changes are not added and published by the FAA with type design data, those changes may not be implemented, or they lack FAA approval.

Irrespective of major, minor or FAA approved change, the installation of a 1B90 propeller in place of the 1A90 propeller is very safe, and in all of the installations I have seen, proved to be very effective.

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1 McCauley began building these 1A90 props again in 2012, but demand is low, and the prices are higher than the 1B90 propellers by some $500 due to the Volume / Supply / Demand.
For Sale/Trade

Luscombe Project For Sale:
Lots of parts included. $2,500 takes all. Call Al Fisher for more information. (425) 985-0303

For Sale

LUSCOMBE PARTS,
1 Pair nose cowl grills, $50
1 Pair landing light mounting brackets, $20
Wind driven generator mount, $5
1 Pair 16” curved control sticks, $10
“V” type VOR whip antenna, $10
Garmin panel mount “150” GPS (working when removed for update), $95
Garmin external mount GPS antenna (Model: GA56-DO-178B), $30

(619) 562 5311 or (619) 449 1855

CONVERT to HYDRAULIC DISC BRAKES
For Sale
New 600 x 6 wheels with new wheel cylinders
Part #199-105. Asking price $1,500
Call Bill for more information (626)-688-9400

Float Gear Just Reduced in Price!!!
Float Gear for 1400 to Model 8 (sic). Includes flying wires. $850 or best offer. Norm Mathon, Ont. (705)966-3349

Pre-War, Trim Tab Assembly For Sale
Luscombe pre-war, trim tab, under dash, assembly
Call Allen Daigle: (377)-457-5053

1947 Luscombe Paperwork with Placards
Selling paperwork and log book from day one up until wings removed for storage.
Call Allen Daigle: (377)-457-5053

Wanted

One pair of Good Year hub caps that fit a Luscombe (look like soup bowl)
Call Allen Daigle: (337)-457-5053 (may leave message)

If any member wants to place an ad to buy or sell planes, parts, seats, services, you name it.....this is the place to advertise for free! Just call or email your editor, Barbara Kirmsse, bkirmsse@charter.net or (909)-987-6509.

Membership Checklist

Have you updated your membership records with an email address? In order to save the CLA money (that is, to avoid a dues increase), these reminders are no longer being sent via traditional mail.

The mailing label on the back of this issue has the expiration date for your membership. Please look at it, and be proactive if your email address is not on file or your label information has changed!

IMPORTANT!
Please read the new Membership Annual Dues procedure in this issue!

Classified Ad Policy

Space permitting, we'll run any number of aircraft-related For Sale/Wanted ads at no charge for CLA members. However access to available space is on a first-come, first-served basis, with highest priority given to the most recently received Luscombe-related ads. Once you place an ad, we will usually run it for two issues, unless you contact us to either cancel the ad or renew it. Please realize though that other subject matter may take precedence over the For Sale/Wanted ads, and the amount of space allocated for them may vary from one issue to the next.
CLA Membership

The Continental Luscombe Association (CLA), is an all-volunteer organization, for Luscombe owners and admirers. We welcome you whether or not you own an airplane (Luscombe or otherwise), and ask only that you share our enthusiasm for these wonderful machines. Member benefits include a newsletter (issued bi-monthly), the opportunity to exchange information and enjoy camaraderie through local chapters and fly-ins.

Memberships run from May through April, all memberships renew in May. We welcome new memberships at any time, dues are prorated to expire in April. We encourage you to notify us of any changes to your personal or aircraft information.

Annual Dues are: $25 US, $28 Canadian, and $35 Foreign (It's the postage, not the exchange rate). Dues must be paid in US Funds. Access the membership form online at www.luscombecla.org and pay via PayPal OR mail the application/renewal form & check (made out to CLA) to: Lisa Kienholz – 4124 Lyceum, Los Angeles, CA 90066. For questions, email Lisa (310) at lisakienholz@yahoo.com.

Editorial Policy

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The CLA Courant is a grass-roots newsletter that serves our membership. We welcome articles – especially from our members – if written with our membership in mind.

The Courant encourages submissions of articles (1,000 words or less), announcements, obituaries (400 words or less), and brief letters to the editor (300 words or less) related to the interests of our members. Material submitted for consideration to the Editor should be submitted via email, and we prefer digital photos. The Courant reserves the right to reject articles, announcements, letters, advertisements, and other items that are not consonant with the goals and purposes of the organization. Copy may be condensed or rejected because of length or style.

All articles must be signed by the individual’s real name, and the CLA disclaims responsibility for any statements made by contributors.

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