

AUX TANK

NEWSLETTER FOR THE SAN FERNANDO VALLEY CHAPTER OF THE
NINETY-NINES INTERNATIONAL ORGANIZATION OF WOMEN PILOTS

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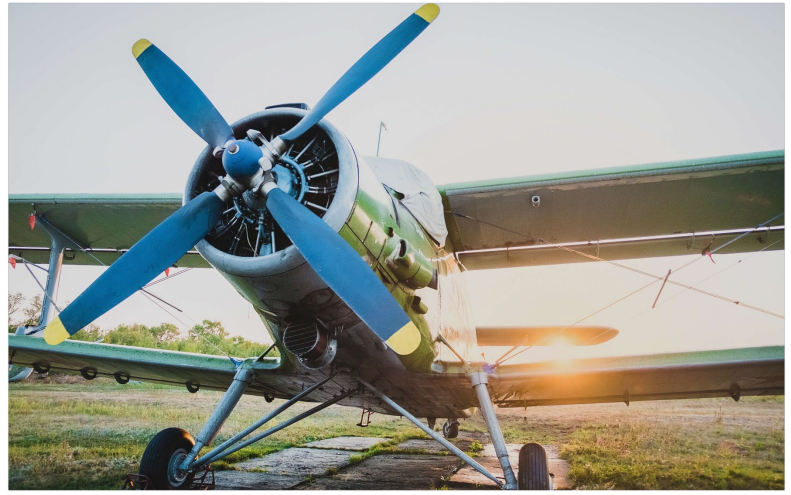
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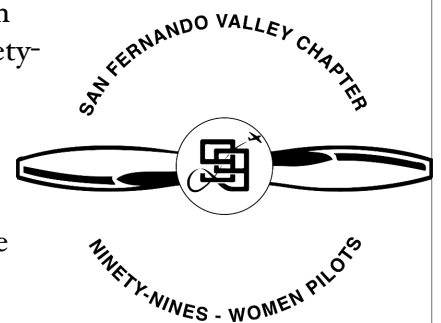


March 2021

Our Mission

The Ninety-Nines® International Organization of Women Pilots® promotes the advancement of aviation through education, scholarships, and mutual support while honoring our unique history and sharing our passion for flight.

Established in 1929 by 99 women pilots, the members of The Ninety-Nines, Inc.® International Organization of Women Pilots® are now represented in every area of aviation today. And to quote Amelia, fly “for the fun of it!”





NOTAMs

- **New to our Chapter?** Need to update any personal information? Here's who you need to contact:

- SFV99s Website and Local Directory - [Pam Distaso](#)
- Google Groups Email Subscription - [Maureen Kenney](#)
- [International 99s Directory](#)

- **Donations Always Welcome:** Did you know you can always donate to our Chapter? [Click here to make a donation to the SFV 99s](#). Also make sure to designate The San Fernando Valley Chapter of The Ninety-Nines, Inc. when shopping on [Amazon](#).

FROM THE CHAIRWOMAN

Happy March, Marvelous Members!

This month marks one year since the world changed and I'm sure it evokes many emotions for all of us. We've witnessed historic highs and lows the last year, but none have inspired me more than our Chapter members thriving amidst these challenges. Here are just some highlights since March 2020:

- We welcomed over seven new members!
- Over 10 of you have passed (multiple) check rides, written exams and earned new ratings since March 2020!
- Annelie Hubinette received the Amelia Earhart Medal!
- We successfully hosted 13 Zoom Chapter Meetings (including our Summer BoD transfer last July) - yay!



I want to congratulate and thank each and every one of our 71 members for staying with us the last year and staying positive. Better days and blue skies are ahead!

With gratitude,

Kimberly Chan, Chapter Chairwoman

Happy Birthday to:

Ceci Stratford

March 2nd

Kathy Smither

March 11th

Jan Archibald

March 21st

Shokoufeh Mirzaei

March 24th

Sylvia Sanderson

March 24th

Maureen Kenney

March 30th

Upcoming Events

Saturday, April 10th: Spring SW Section Meeting ([Click here to register](#))

Wednesday, April 14th @ 7:00pm: Monthly Virtual Zoom Chapter Meeting

Friday, April 30th @ 7:00pm: Virtual VNY Aviation Day ([Click here to RSVP](#))



“Prop-er” Safety Facts

Think a propeller is just a big fan in front of the pilot? Well, you may be right. If it stops unexpectedly, the pilot starts to sweat a LOT!

Happy Anniversary to:

Michele Albiez
March 1974

Linda Hernandez
March 2001

Marilyn Perna
March 2003

Charlotte Kaber
March 2012

Jenna Lohneis
March 2016

Echo Liu
March 2020

All kidding aside for the moment, here are a few interesting facts about propellers:

Most propellers are made of aluminum, though I’m sure you’ve seen wooden props on “antique” aircraft and Piper Cubs. It’s lightweight, which is why they use it for airplane parts, but it isn’t a very hard metal, so it’s

prone to nicks and pits.

Of course, some ultralights, antiques and older Piper Cubs use wood props (usually with metal strips on the leading edges). There

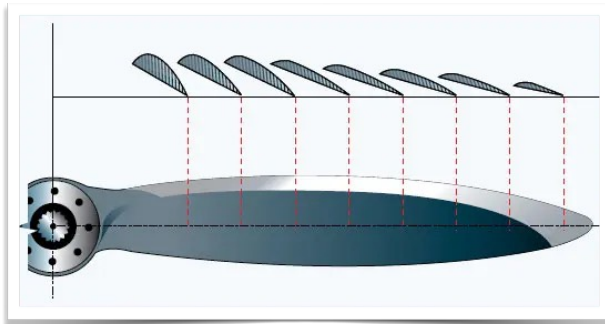
are also some exotic or composite (fiberglass, Kevlar, carbon/graphite)

props (especially helicopter rotor blades) out there, but even though they are lighter and stronger and less prone to corrosion than aluminum, they’re way too expensive. So, unless you fly an unusual airplane – and maybe even if you do – this article is for you.

Modern propellers (actually, the basic design technology we use hasn’t changed much in about 40 or 50 years) are pretty efficient at converting engine torque to thrust, with a maximum efficiency of about 85%. Props are really airfoils, and the angle of attack changes along the length of the blade - that’s the “twist.” See the diagram below and notice how the shape looks just like the cross section of an aircraft wing! It’s interesting to think about how the engine just makes the crankshaft spin down the longitudinal axis of the airplane, but the propeller is hooked on to that and ends up pushing a lot of air past it, making you and the airplane go forward. (Yeah, OK, so I’m an *engineer*, and I happen to think simple physics is pretty cool!)



The longer the blade and the higher the engine RPM, the faster the blade tip goes. Some aircraft have RPM limitations just for this reason. On takeoff, prop tip speeds can approach the speed of sound. Actually, some even do go supersonic, which creates a LOT of noise. A prime example is the Russian “Bear Bomber,” which not only routinely operates with supersonic blade tips, but has counter-rotating props for each engine. I won’t go into the math and physics of that engineering here, so no need to run screaming into the night!



Airfoil cross-sections of a propeller blade

The centrifugal loads – that’s the force that tries to pull the prop away from the hub – can amount to between 10 and 20 tons (quick arithmetic: 20,000 to 40,000 lbs) PER blade. If there’s even a tiny crack in your prop, you can get an idea of how much force there is pulling on it. Wow! For those who fly a controllable pitch prop, you can

also see why it’s important to make sure that there’s no extra looseness or wobble in the hub assembly. Do you check for that every time you fly? Of course, we all know that it’s VERY seldom that airplanes lose propeller blades – they’ve been well engineered over the last 100+ years. Still, it’s always prudent to check. The unbalanced forces that happen in such a case take over so fast that a pilot can’t react and close the throttle or turn the key to “off” fast enough to prevent the engine from being ripped from its mounting. VERY nasty and potentially very fatal if you’re in the air!

Propeller blades do twist and flex to a certain extent when they are turning – even the fixed pitch ones.

The stresses imposed on the blades will be more concentrated in those spots where there are nicks, pits, etc. If left untreated, the metal can be weakened enough to cause blade failure. Now, this is pretty extreme, and it’s certain you’d never let yourself leave the ground with a visible crack in the prop, but since many of the planes we fly are getting way past 35 years old, it’s important to make sure the props are in good shape and are overhauled as needed/required. If you rent, it’s doubly important to check carefully, as you don’t know who flew it last and where it went! Any nick or gouge over 1/32 of an inch should be “dressed out” by an A&P mechanic. They’ve been taught and tested on just how to do this.



If the “P-Lead” isn’t connected to the magneto, grounding that mag, you will have a “hot” prop. If you aren’t “grounding the mags” (turning the ignition switch momentarily to “OFF”) before shutting down EVERY TIME, you may as well assume that if you move the prop at all, it could start the engine. Think it’ll never happen to you? Well, I have had it personally happen to me at least 4 or 5 times over the years that I’ve been flying my Cardinal. During “grounding,” the key is in the “OFF” position and the engine just keeps running quite happily. Oops! No P-Lead.



Usually, it’s a case of “the mechanic forgot” and is easily remedied when that grounding wire is reconnected. Again, if you rent, and you weren’t the last one to shut the engine down, you’d better assume the prop is “hot,” just to be on the safe side.

Propellers are required by the FAA to have a log book all their own, and they are subject to ADs and SBs (that’s Airworthiness Directives and Service Bulletins) just like the rest of the airplane. These should be known to you and should be complied with at the time mandated/recommended. A reputable shop will make sure they’re complied with, but it’s always wise to know about them yourself, because in the end, it’s your responsibility (legally and for safety) to make sure they’re complied with before you go flying.

Ever wonder why most props are painted instead of polished or buffed? Simple: to stop oxidation and corrosion. If left to the air, the aluminum will begin to corrode. There are some “purists” who have lots of time and will keep their props all buffed out, but that’s not the majority of us. If the paint on your prop is wearing thin or is chipped, it would be a good idea to repaint. Note that the reason for painting the back of the prop flat black is that it cuts down on glare and the possibility of “flicker vertigo” (I really must do a safety article on that one of these days).

One last note: It’s a really good idea to have a “dynamic” balancing done on a propeller. The static balancing done at an overhaul shop is good, but once the prop is mounted to the engine, there are other things that can



contribute to imbalance and it's nice to have it "tuned up," so to speak. The less stress a prop has, the longer it will last and the safer you'll fly. It's amazing how much the overall vibration can be reduced, and everything in the airplane, from pilot to instruments, benefits from a smoother ride.

I hope you learned something new about propellers?!

Atta Girls:

**Geny Haase passed her
IFR Written Exam!**

**Shantal Bustamante was
awarded the WTS-LA &
SCAG Community
College
Scholarship!**

**Shokoufeh Mirzaei is
engaged!**

Fly Safely!

Claudia Ferguson

Aviation Safety Counselor

San Fernando Valley 99s

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Welcome to our New Member!

Our newest member is Esther Clark. She is a Registered Nurse, specializing in emergency medicine and surgery. She's a family woman who has a 4 yr old girl, 3 dogs, a cat, and recently, baby chickens :) She is passionate about helping others, travel, education and aviation. Several years ago she decided to pursue her dream of being a pilot and earned her PPC in 2019. She is also enrolled in her last aviation class at Glendale Community College to complete her certificate in Pilot training. Her goals include becoming a Commercial Pilot and combining this with nursing to continue to serve her community. She is excited to be joining the prestigious 99s and looks forward to meeting us in the near future!



Nina Yates

In Memoriam
Shirley Rose Thom Obituary

Shirley Rose (DeLongfield) Thom, age 89, passed away in Claremont, California, on Monday, February 15, 2021. She is survived by her daughter, Linda (Thom) Johnston, her son, Gerald Thom, granddaughter Sandra, grandsons Kenneth, James and Stephen; and 8 great grandchildren, Michael, Daniel, Jared, Jody, William, Lily, Ella and John. Shirley resided in Los Angeles, San Diego and Reno, Nevada for her entire life. Her husband of over 60 years, Eugene Thom, passed away in 2016.



Shirley's devoted, heartfelt love was for her family, and her second passion was aviation. Shirley was a pilot for over 60 years, and many of her friends were women pilots and members of the 99s (International Organization of Women Pilots). Her earliest heroine was Amelia Earhart.

She began her lifelong habit of volunteering with the PTA at her children's school, and as a Girl Scout Leader. Her volunteerism continued to the 99s, where she served in many capacities, including Chapter Chairman of the San Fernando Valley 99s. She also worked on, and chaired, many charitable air races, and began several scholarship programs, including

Girl Scouts. She raced numerous times against other women in the All-Women's Transcontinental (Powder Puff Derby), Palms to Pines, Pacific and Baja Air Races, often with her daughter, Linda. "I have made lifetime friends with women in the flying world."

All of these activities defined her life and happiness. Hers was a great life, lived with both hands.

Jeanne Fenimore

Flying With the Floofs

Sarah Weiss

Here's some photos of Megan Volpe and I adventuring around in my 172.

We took our pups and went from LA to Austin TX, Denver, over the Rockies and back home. We stopped in Payson, AZ and camped the first night, where we had our own private air show. A black hawk was doing some low approaches at the airport for an hour (I guess no one wants to camp when it's 34* outside). The next day we trekked to Georgetown airport, north Austin, a very cute little town! We stayed 2 nights - rode bikes around town and enjoyed some great hospitality from the town. We then left for Boulder CO where we stayed the weekend, also an awesome airport with great aviation enthusiasts. Coming home, we flew over the Rockies with very little turbulence. This has been on my bucket list since getting my pilot certificate! Check! ;) Megan and I are looking forward to planning a fly-in again this summer to Payson, AZ after having such a great time there!

