PILOT MAKERS ADVANCED FLIGHT ACADEMY

NEWSLETTER

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FLYING INTO A NEW YEAR

As we welcome the 2024 Season, we're thrilled about your awaited adventures. Welcome to our expanding fleet of Piper Archer II aircraft, and a special shoutout to our latest addition, N39688! With seven aircraft in tow, we're dedicated to guiding aspiring aviators on a journey of skill and discovery. Get ready to elevate your aviation experience with us! The rapid growth of our specialized Upset Recovery and Spins programs highlights our dedication to safety and innovation, setting the stage for a year filled with soaring achievements. Stay informed and anticipate exciting announcements as we embark on this journey together!

As winter embraces us, it's crucial to adhere to specific procedures for deicing and removing snow from our aircraft. A major point to remember: Please don't use ice scrapers, as they can cause severe scratches on the aircraft's surface. When you remove snow or deicing, please ensure you have comprehensive knowledge of the proper techniques. Here at Pilot Makers, don't hesitate to contact your instructor or our Director of Maintenance for expert guidance and assistance. Safe flying in the winter skies!

AEROBATIC MOMENT

EXCITING NEWS!

This month's Sport Aerobatic Magazine features our instructor, Jeff Granger, sharing captivating insights into his journey with our Super Decathlon.

As an IAC member and dedicated CFI at Pilot Makers, Jeff sheds light on the unique characteristics of the Super Decathlon, transitioning from his primary focus on training with the Extra 300L. The article underscores the enduring appeal, affordability, and comfort of our Super Decathlon.

Jeff explores the aircraft's advantages, positioning it as the perfect choice for early aerobatics and offering a comfortable platform for URPT and SPIN training.



He reflects on the fascinating learning curve of the Super Decathlon, illustrating his commitment to delivering top-notch aerobatic training centered around this remarkable aircraft.

This edition of Sport Aerobatics shines the spotlight on four Super Decathlons and their owners, each sharing amazing insights and experiences with this truly exceptional aircraft. Visit the EAA/IAC website to discover how to get your hands on this magazine. Stay tuned for more captivating stories and insights as our Super Decathlon continues to soar in the world of aerobatics.



COLD STARTING CARBURETED AIRPLANES IN WINTER: CHALLENGES AND BEST PRACTICES

As Utah winter conditions impose themselves on the taxiways of Provo airport, the process of properly starting and warming carbureted airplanes becomes a critical aspect of flight operations. I have noticed more airplanes cranking and cranking but have yet to start, particularly in the mornings.

Carbureted engines are still prevalent in modern aviation. Cold starting these aircraft in winter conditions requires careful consideration of factors such as fuel atomization, air-fuel mixture, and engine temperature.



Miscalculating one of the 3 could lead to an engine not starting or

not running properly. Cold temperatures can affect the proper atomization of fuel to air in the carburetor and cylinders, leading to incomplete combustion and rough engine start-ups. The higher density of cold air affects the air-fuel mixture, demanding a larger amount of fuel to atomize for proper engine management. Too much fuel can cause a flooded engine, and insufficient fuel will cause the motor not to catch and fire up. That is why it is common practice in carbureted aircraft to pump the throttle to introduce more fuel and air when turning the engine over.

Cold weather causes oil viscosity to increase, placing additional strain on the engine during startup. The cold oil does not have enough lubricity to lubricate an engine running at high rpm's. This is why allowing an engine to idle till proper engine temperature and sufficient oil pressure is obtained is crucial to avoid engine damage. Utilizing preheat systems, such as engine block heaters or heated air induction systems helps raise the engine and oil temperature, which leads to a smoother start. Fuel additives, specifically those designed for cold weather, can enhance fuel atomization and prevent fuel system icing. This is more commonly utilized for jet or diesel-powered aircraft.

We should all conduct preflight inspections, ensuring that carburetor heat systems are functional and verifying proper fuel mixture. Everyone should be following the manufacturer recommendations for choking and priming procedures to achieve optimal air fuel mixture, or talk to your local A&P mechanic to get a more thorough breakdown of cold starting and winter operations outside of what a checklist or POH can provide. Successfully cold-starting carbureted airplanes in winter demands a combination of proper preflight preparations, the application of established procedures, and an understanding of the challenges posed by cold temperatures a carbureted engine goes through. But most importantly, starting the engine finally gets that heater going!

Note from our director of maintenance: Prime 3 times work throttle back-and-forth as you are cranking. Crank no more than 40sec stop. Let the starter set for a minute do procedure again. After three try starter most be cooled down for 5 minutes after 5 minutes you can start again.