Thomas P. Turner's
Mastery of Flight®

www.thomaspturner.com

FLYING LESSONS for November 27, 2025

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In most cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference in your success as the scenario unfolds. So apply these *FLYING LESSONS* to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command and are ultimately responsible for the decisions you make.**

FLYING LESSONS is an independent product of MASTERY FLIGHT TRAINING, INC.

Pursue ***Mastery of Flight®***

This week's LESSONS

Lots of great discussion resulted from last week's *LESSONS*…beginning with, but going beyond, just multiengine operations to teach *LESSONS* to us all. Let's go to the Debrief.

See https://thomaspturner.com/flying-lessons-weekly/flying-lessons-for-november-20-2025/

Questions? Comments? Supportable opinions? Let us know at mastery.flight.training@cox.net.

Debrief

Readers write about recent *LESSONS*:

Reader Kynan Sturgess writes about last week's *LESSONS*:

> Thanks so much for this week's *FLYING LESSON*. I am still a baby pilot, only having my certificate for the last 5 years and just under 1,000 hours. Recently, I felt the compulsion to get my multiengine certificate with the thought of purchasing a light twin. With so many schools around offering 3-day courses, how hard could it be? It didn't go well for me. After not passing the check ride, I was able to reflect on the whole process and concluded that **unless I was committed enough to just purchase a light twin and train far more than most courses were set up for that I had no business flying a light twin**. Even though I fly 200 to 250 hours a year and stay current and proficient, there would be even **more requirements for recurrent training** that most likely my work and life schedule wouldn't allow for. I could easily go back and finish the checkride as there were just a couple of deficiencies, but I have no plans to do so. For now, I'm sticking to singles. ***Sometimes we just need to recognize our limitations***.

Flying lore is filled with stories of pilots who soloed with very little instructional time. In my first attempt at learning to fly (before running out of money at eight hours total time) I was

disappointed and a little surprised when I passed seven hours and my instructor hadn't signed me off for solo. I've heard as low as 3.5 hours, and seven to 10 seemed to be the norm (at least among those I'd read about); I didn't know enough to know better.

Such a low-time student may well be marginally prepared to take off, fly a pattern and land the traditional three times. But how ready is that student for an engine failure, or a collision threat, or some other abnormal condition or emergency?

Later, when I was an instructor myself, the U.S. FAA amended Part 61 of the regulations to require a student pilot to "[demonstrate] satisfactory proficiency and safety" on a list of **15** tasks and maneuvers (14 CFR 61.87d). The student doesn't have to perform each to checkride completion standards, but the student must receive and log instruction in the entire list and show that they can show ***to the instructor's satisfaction*** that he or she can perform each task or maneuver safely. Completing the full task list and earning that assurance of safety almost certainly requires more time than seemed to be the norm in days gone by. The substitution of complex avionics and slick, fast airframes for the simple trainers of old adds further to the average time to first solo, now estimated as 15 to 20 hours on average.

Why do I believe this is relevant in response to reader Kynan's comments about multiengine training?

To earn a multiengine rating you must pass a Practical Test. There is no minimum amount for instruction or flying time required. Coincidentally, Appendix 1 (page 72) to the Private Pilot – Airplane Airman Certificate Standards (ACS) identifies 15 Tasks a candidate must complete to earn the Multiengine rating to an existing pilot certificate. Unlike first solo there is no knowledge test ("written" exam) required for the multiengine rating. Now, I don't diminish the achievement for passing the Practical Test. Pilots must perform to precise standards to earn the rating. But given the safety limitations built into multiengine training and the inability to replicate the worst-case scenario of high-power engine failure at low airspeeds close to the ground, **isn't meeting the minimum standards of the ACS somewhat analogous to "proficiently and safely" flying a first solo?** ***Is there more you must do to truly be safe*** and ready to correctly respond to engine failure in a worst-case scenario?

Task	Pre-solo (14 CFR 61.87d)	Multiengine Add-On (PVT ACS)
1	Proper flight preparation procedures, including preflight planning and preparation, powerplant operation, and aircraft systems;	Performance and limitations; operation of systems and checklists;
2	Taxiing or surface operations, including runups;	Preflight assessment;
3	Takeoffs and landings, including normal and crosswind;	Flight deck management;
4	Straight and level flight, and turns in both directions;	Engine starting, taxiing;
5	Climbs and climbing turns;	Before Takeoff check;
6	Airport traffic patterns, including entry and departure procedures;	Normal takeoff and climb;
7	Collision avoidance, windshear avoidance, and wake turbulence avoidance;	Normal approach and landing;
8	Descents, with and without turns, using high and low drag configurations;	Short field takeoff and maximum performance climb;
9	Flight at various airspeeds from cruise to slow flight;	Short field approach and landing;
10	Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall, and recovery from a full stall;	Steep turns;
11	Emergency procedures and equipment malfunctions;	Engine failure during takeoff below V_{MC};
12	Ground reference maneuvers;	Engine failure after liftoff;
13	Approaches to a landing area with simulated engine malfunctions;	Approach and landing with one engine inoperative;

14	Slips to a landing; and	Maneuvering with one engine inoperative; and
15	Go-arounds.	V_{MC} demonstration.*

****One engine inoperative solely by reference to instruments (simulated) in straight-and-level flight and turns*** and ***Instrument approach and landing with an inoperative engine (simulated)*** are also required for an Instrument rated pilot to include instrument privileges on a multiengine rating.

There's no shame in needing more time than others to be ready for a Practical Test. There's great honor in recognizing your need more practice before taking the exam. Unlike my presolo expectations, **you know enough to know better**. If you decide that means modifying your goal, then that's a good, data-driven result for you. Thanks for sharing your risk management decision, Kynan.

See:
https://thomaspturner.com/flying-lessons-weekly/flying-lessons-for-november-20-2025/
https://www.ecfr.gov/current/title-14/chapter-I/subchapter-D/part-61#61.87
https://www.faa.gov/training_testing/testing/acs/private_airplane_acs_6.pdf

Reader, author and well-known advanced single-pilot airplane instructor Brian Sagi adds:

> Thank you again for an excellent *FLYING LESSON*.
>
> **I don't like the term "the drill"** for the One Engine Inoperative (OEI) Procedure. The reason is that **pilots often compartmentalize "the drill" as a mere "show"** performed during a multiengine checkride, **rather than regarding it as an imperative** procedure that must be followed during an engine failure in order to ensure a safe outcome for the flight. I have anecdotal evidence to support this.
>
> As part of my CFI work, I instruct at a local flying club that operates several Beech Duchess light twins. On multiple occasions, I have conducted checkout flights for pilots who recently obtained their multiengine rating. These newly minted multiengine pilots desire to rent the club's twins to fly on their own. More than once I have observed such pilots, **when presented with a simulated engine failure** in the air, **enter a state of confusion and panic**. ***These are the same people who successfully performed "the drill" for their FAA DPE just a week or two before*** their flight with me.
>
> **Now if these pilots who recently passed an FAA checkride fail in "the drill," how would a pilot who earned their multiengine rating years ago (and maybe also completed their FAA-required bi-annual Flight Reviews in a single engine aircraft -- a totally permissible way to renew flying privileges for all categories and classes for which they are certificated) supposed to [fare]?**
>
> My strong suspicion is that **pilots compartmentalize the OEI Procedure as a "drill" or a "show," rather than recognizing it as the life-saving procedure it truly is**. This may be due to several factors:
>
> 1. In multiengine training in light twins, we (rightfully) prioritize safety. We do not present (simulated) engine failures below 500 feet. We do not allow the airplane to get close to a single-engine stall. We perform V_{MC} demonstrations at altitude, where thrust asymmetry is not as pronounced as it is at sea level.
> 2. We typically train in docile twins (Duchess, Seneca, etc.), equipped with relatively meek 180 HP engines. These aircraft have much less thrust asymmetry than a Baron, twin Cessna, or other "go-anywhere" piston twins that pilots normally fly.
>
> As a result of the above, presenting an engine failure during training becomes somewhat of a "non-event." The trainee anticipates the engine failure simulation, and it becomes a routine task. Unfortunately, **the real world is not so forgiving**, and may present engine failures at inopportune times, such as at low altitude or in IMC.

> I believe that, especially for multiengine aircraft, **combining simulator training with in-aircraft training can help**. In the simulator we can present engine failures at low altitude and/or low airspeed. We can also allow pilots to fail and lose control of the airplane in a V_{MC} roll, flat spin or other fashion. **This significantly enhances the realism of OEI training** and underscore the importance of executing the OEI Procedure in a methodical, organized, and expeditious manner. Unfortunately, doing this in an actual airplane is not safe and presents risks that outweigh the benefits. (As an aside, I also fly the OV-10 Bronco – a twin-turboprop warbird. Unlike most light twins, the Bronco is capable of aerobatic flight and this allows students to experience a true OEI loss of control while maintaining a margin of safety.)
>
> Seeing how control is lost as airspeed declines is an eye-opening experience for most people! I don't think those who experience this (in a simulator or in the rare aerobatic, propeller driven twin) will continue to view OEI Procedures as just a "drill."

I agree: there is often a disconnect between what we train and evaluate and the scenarios that often result in real-world accidents. My experience mirrors yours in that there is also often a lack of understanding—not **teaching the *why***—that results in many checkride maneuvers being presented as what I call "checkride circus tricks": learning a maneuver in order to demonstrate the ability to fly that maneuver, instead of learning a maneuver with an understanding not only of how to fly it for the Practical Test, but when and how the *LESSONS* of each maneuver apply to normal, abnormal and emergency operations long after the checkride is complete.

"The Drill" (I was taught that term when I earned my multiengine rating in 1990, and it appears to go back to World War II U.S. military instruction) is a succinct method of remembering the "bold print" or memorized immediate action items required upon detecting loss of thrust. It **is a memory technique for executing the checklist**. I believe the failure you describe with post-rating multiengine checkouts is not in "the drill" itself, but how it is taught and evaluated. That's meant as a critique of much civilian flight training as a whole, not the instructors and evaluators associated with that particular flying club alone.

Further, many times the pilot completes "the drill" successfully but then crashes after much of what's taught and evaluated is complete. I address this for the multiengine crowd in an old article titled "Identify, Verify, Feather…Now What?" Thank you, Brian.

See https://studentpilot.com/2001/08/20/identify-verify-feather-now-what/

For all of us, not just the twin crowd, think about:

- **How *and* why** we perform actions on normal, abnormal and emergency checklists.
- **What happens next** after each checklist is complete. Finishing one checklist often triggers the beginning of another, such as Engine Failure in Flight can create a need for the Maximum Glide checklist, or the Emergency Descent checklist—triggering an **entering argument** as I discussed last week.
- Checklists and procedures, meeting presolo requirements and Practical Test standards, are not the end goal. They are merely **the *beginning* of wisdom**.

More to say? Let us learn from you, at **mastery.flight.training@cox.net**

Share safer skies. Forward *FLYING LESSONS* to a friend.

Thomas P. Turner's Mastery of Flight
www.thomaspturner.com

Please help cover the ongoing costs of providing *FLYING LESSONS* through this secure PayPal donations link.

Or send a check made out to **Mastery Flight Training, Inc.** at 247 Tiffany Street, Rose Hill, Kansas USA 67133. Thank you, generous supporters.

Thank you to our regular monthly financial contributors:

Steven Bernstein, Montclair, NJ. Robert Carhart, Jr., Odentown, MD. Greg Cohen, Gaithersburg, MD. John Collins, Martinsburg, WV. Dan Drew. Rob Finfrock, Rio Rancho, NM. Norman Gallagher. Bill Griffith, Indianapolis, IN. Steven Hefner, Corinth, MS; Ellen Herr, Ft Myers, FL. Erik Hoel, Redlands, CA. Ron Horton. David Karalunas, Anchorage, AK. Steve Kelly, Appleton, WI. Karl Kleiderer. Greg Long, Johnston, IA. Rick Lugash, Los Angeles, CA. Richard McCraw, Hinesburg, VT. David Ovad, Resiertown, MD. Steven Oxholm, Portsmouth, NH. Brian Schiff, Keller, TX. Paul Sergeant, Allen, TX. Paul Uhlig, Wichita, KS. Richard Whitney, Warrenton, VA. Jim Preston, Alexandria, VA. Johannes Ascherl, Munich, Germany. Bruce Dickerson, Asheville, NC. Edmund Braly, Norman, OK. Steven Hefner. Lorne Sheren, New Vernon, NJ. "The Proficient Pilot," Keller, TX. Kynan Sturgiss, Hereford, TX. Bluegrass Rental Properties, LLC, London, KY. John Foster. Joseph Victor, Bellevue, WA. Chris Palmer, Irvine, CA. Barry Warner, Yakima, WA. Todd LeClair, Cadiz, KY. Jim Hopp, San Carlos, CA. Adrian Chapman, West Chester, PA. Ed Stack, Prospect Heights, IL.

Thanks also to these donors in 2025:

N. Wendell Todd. David Peterson. Jay Apt. SABRIS Aviation/Dave Dewhirst. Gilbert Buettner. David Larsen, Peter Baron, Glen Yeldezian, Charles Waldrop, Ian O'Connell, Mark Sletten, Lucius Fleuchaus. Thomas Jaszewski. Lauren McGavran. Bruce Jacobsen, Leroy Atkins, Coyle Schwab, Michael Morrow, Lew Gage, Panatech Computer (Henry Fiorentini), Andy Urban, Stu Spindel, Dave Buetow, Ken Vernmar, Dave Wacker, Bill Farrell, David Miller, Daniel Norris, Robert Sparks, Bill Cannon, David Yost, Don Bowles. Ed Shapiro, Mark Kolesar, William Weber, Anonymous Oshkosh donor, Robert Lough, Martin Sacks, Denny Southard, Timothy Schryer, John Owen, Wayne Mudge, Dale Bleakney, Rod Partlo, Kevin O'Halloran, Joseph Montineri, David Kenny, Boyd Spitler

NEW THIS WEEK: George Stromeyer, Greg Hill, Phil Parham

Two 2025 donations: John Teipen, Denny Southard, Wayne Colburn

Three 2025 donations: John Whitehead

Happy Thanksgiving to my U.S. readers, and safe and enjoyable flights to readers around the world.

Pursue *Mastery of Flight*®

Thomas P. Turner, M.S. Aviation Safety
Flight Instructor Hall of Fame Inductee
2021 Jack Eggspuehler Service Award winner
2010 National FAA Safety Team Representative of the Year
2008 FAA Central Region CFI of the Year