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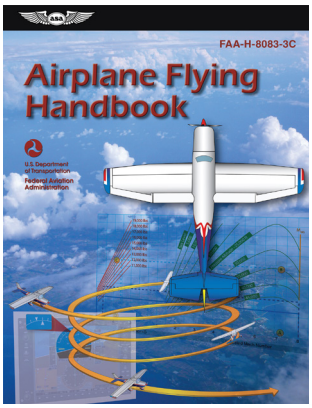
UPDATE

Airplane Flying Handbook



The following addendum, dated October 2025, revises FAA-H-8083-3C, *Airplane Flying Handbook*, published by the FAA in 2021.

FAA
Flight Standards Service
General Aviation & Commercial Division
Training & Certification Group
Testing Standards Section

FAA-H-8083-3C, Airplane Flying Handbook—Addendum

Due to the Modernization of Special Airworthiness Certification (MOSAIC) Rule, which was published on July 18, 2025, and is effective October 22, 2025, the FAA created this addendum to the Airplane Flying Handbook, FAA-H-8083-3C. Until the revision of FAA-H-8083-3 is published, this addendum is considered part of the current edition of the handbook and should be used as a reference.

Note: Light-sport aircraft, as it pertains to the aircraft, has not changed (refer to 14 CFR part 21). The definition of light-sport aircraft in 14 CFR part 1, section 1.1, General Definitions has been removed. The aircraft that a sport pilot may operate must now meet the performance limits and design requirements contained in 14 CFR part 61, section 61.316, "What are the performance limits and design requirements for the aircraft that a sport pilot may operate?" With the rule change effective October 16, 2025, light-sport aircraft will still exist; however, the aircraft that a sport pilot may operate are no longer limited to the previous definition of light-sport aircraft contained in 14 CFR part 1, section 1.1, General Definitions.

***Chapter 17, Transition to Light Sport Airplanes** will be removed with some sections moved to applicable areas of the handbook, as follows.*

*In **Chapter 1: Introduction to Flight Training**, the first paragraph after the first bulleted list in the Role of the FAA section on page 1-4, will be revised as follows:*

While 14 CFR part 91, section 91.205 outlines the minimum equipment required for flight, the Airplane Flight Manual/Pilot's Operating Handbook (AFM/POH) lists the equipment required for the airplane to be airworthy. The equipment list found in the AFM/POH is developed during the airplane certification process. This list identifies those items that are required for airworthiness, optional equipment installed in addition to the required equipment, and any supplemental items or appliances. Since aircraft can vary significantly in performance, equipment, systems, and construction, pilots should seek a flight instructor with experience in the make and model of airplane and familiarize themselves with the airplane's POH for detailed and specific information prior to flight.

*In **Chapter 1: Introduction to Flight Training**, the following subsection will be added to the Continuing Education section on page 1-16:*

Pilot Certificate Privileges & Limitations

Pilots holding a higher-level certificate with the appropriate category and class ratings may exercise the privileges of a lower-grade certificate as long as the pilot holds either a valid medical certificate, a valid U.S. driver's license, or complies with BasicMed, as appropriate for the privileges the pilot is intending to exercise. However, when exercising sport pilot privileges, if the pilot's most recent medical certificate was denied, revoked, suspended, or withdrawn, a U.S. driver's license is not sufficient. The pilot would then need to reapply for and be issued a valid FAA medical certificate to operate an aircraft.

*In **Chapter 2: Ground Operations**, the following subsection will be added to the Preflight Assessment of the Aircraft section on page 2-4:*

Light-sport Category Aircraft Maintenance

Light-sport category airplanes should be treated with the same level of care as any standard airworthiness certificated airplane; however, there are some differences in who may inspect or maintain these aircraft. Light-sport category aircraft may be maintained and inspected by:

1. A repairman (light-sport category aircraft) with a Maintenance rating; or
2. An FAA-certificated Mechanic with Airframe and Powerplant (A&P) ratings; or
3. An appropriately rated repair station; or
4. The holder of a sport pilot certificate may perform preventive maintenance on a light-sport category aircraft owned or operated by that pilot.

Light-sport category aircraft must have a condition inspection performed annually, in accordance with inspection procedures developed by the aircraft manufacturer. Additionally, between required inspections, maintenance must be performed to repair any discrepancies found on the aircraft. Maintenance on light-sport category aircraft must be performed in accordance with 14 CFR part 43. The aircraft maintenance manual includes the specific information for repair and maintenance on inspections, repair, and authorization for repairs and maintenance.

Aircraft owners are responsible to ensure that maintenance and inspection record entries are made and maintained for the aircraft.

Major repairs and major alterations may be performed on the aircraft if the repair or alteration is authorized by the manufacturer. A major repair or major alteration may only be performed in accordance with maintenance and inspection procedures developed by the aircraft manufacturer. If a major repair or major alteration is performed on a product produced under an FAA approval (e.g., engine, propeller) that is installed on a light-sport category aircraft, the repair or alteration may only be approved by an FAA-certificated mechanic with an Inspection Authorization (IA), using FAA-approved data, and recorded on FAA Form 337.

Manufacturers of light-sport category aircraft may issue safety directives informing owners of safety-of-flight issues for the aircraft. Compliance with manufacturer-issued safety directives is not mandatory, but highly recommended. Compliance with airworthiness directives that are applicable to the aircraft, or any product or part installed on the aircraft, is mandatory.

Light-sport category aircraft owners should comply with:

- Safety directives (alerts, bulletins, and notifications) issued by the light-sport category aircraft manufacturer
- Safety alerts (immediate action)
- Service bulletins (recommending future action)
- Safety notifications (informational)

*In **Chapter 2: Ground Operations**, the following paragraph will be added to the Preflight Assessment of the Aircraft, Engine, and Propeller section on page 2-12:*

Many light sport category certificated airplanes are equipped with water-cooled engines. These airplanes may be tightly cowled, which reduces drag. A liquid-cooled engine minimizes the need for cylinder cooling inlets, which further reduces drag and improves performance. Preflighting this system requires that the radiator, coolant hoses, and expansion tank are checked for condition, freedom from leaks, and coolant level requirements.

*In **Chapter 4: Energy Management: Mastering Altitude and Airspeed Control**, the following subsection will be added to the Mitigating Risks from Mismanagement of Energy section on page 4-17:*

High-Drag Low-Mass Airplanes

Lightweight airplanes with an open flight deck, easy build characteristics, low cost, and simplicity of operation and maintenance tend to be less aerodynamic and incur more drag. When combined with their low mass and inertia, these airplanes tend to decelerate rapidly when power is reduced. When attempting a crosswind landing in a high-drag low-mass airplane, a rapid reduction in airspeed prior to touchdown may result in a loss of rudder and/or aileron control, which may cause the airplane to drift from the desired ground track. To avoid loss of control, a pilot needs to maintain the appropriate airspeed during the approach. When power is reduced, it may be necessary to lower the nose of the airplane to a fairly low pitch attitude in order to maintain airspeed.

If the pilot makes a power-off approach to landing, the approach angle will be high, and the landing flare will need to be close to the ground with minimum float. This is because the airplane will lose airspeed quickly in the landing flare and will not float like a more efficiently designed airplane. Too low of an airspeed during the landing flare may lead to insufficient energy to arrest the descent and may result in a hard landing. Maintaining power during the approach will result in a reduced angle of attack and will extend the landing flare, allowing more time to make adjustments to the airplane during the landing. Rapid power reductions will require an equally rapid reduction in pitch attitude to maintain airspeed.

In the event of an engine failure in a high-mass, low-drag airplane, the pilot should quickly transition to the required nose-down flight attitude in order to maintain the appropriate glide speed. For example, if the airplane has a power-off glide angle of 30 degrees below the horizon, the pilot should position the airplane to a nose-down 30-degree attitude as quickly as possible. The higher the pitch attitude is when the engine failure occurs, the quicker the aircraft will lose airspeed and the more likely the aircraft is to stall. Should a stall occur, the pilot should decrease the airplane's pitch attitude rapidly in order to increase airspeed to allow for a recovery. Stalls that occur at low altitudes are especially dangerous because the closer to the ground the stall occurs, the less time there is to recover. Therefore, when performing a climb at a low altitude, excessive pitch attitude should be avoided.

*In **Chapter 6: Takeoffs and Departure Climbs**, the following paragraph will be added to the end of the Prior to Takeoff section on page 6-1:*

Elevator trim on many airplanes is electrically actuated with no mechanical trim adjustment available. Depending on the airplane, trim position indication may be displayed on the EFIS, an LED display, or with a mechanical indicator. It is important to ensure that the trim position is correctly set prior to takeoff. Because trim positioning/indicating systems vary widely in airplanes, pilots should fully understand not only how to position the trim, but also how to respond to a trim-run-away condition. Part of the preflight inspection should include actuating the trim switch in both nose-up and nose-down directions, verifying that the trim disconnect (if equipped) is properly functioning, and then properly setting the trim to the takeoff position.

*In **Chapter 6: Takeoffs and Departure Climbs**, the following paragraph will be added to the end of the Crosswind Takeoff: Takeoff Roll section on page 6-7:*

Managing weather risks is important for all pilots, but becomes more significant as the weight of an airplane decreases. Smaller, lighter-weight airplanes are more affected by strong winds (especially direct crosswinds), turbulence, terrain influences, and other hazardous conditions. Pilots should carefully consider any hazardous weather and effectively use an appropriate set of personal minimums to mitigate flight risk. Some aircraft have a maximum recommended wind velocity regardless of wind direction. While this is not a limitation, it would be prudent to heed any factory recommendations.