Area of Operation **II** - Task **J**

14 CFR and Publications

Key References:
- 14 CFR Parts 1, 61, 91 and AIM
- NTSB Part 830
- Pilot's Handbook of Aeronautical Knowledge

Content

1. Introduction

- **What**: Understand the framework of aviation regulations and FAA publications that all pilots must know
- **Why**: Learn what is applicable to you, where to find information and ensure compliance with regulations
- **Regulatory Publications**
  - Federal Aviation Regulations (FAR)
  - NTSB Part 830
  - Airman Certification Standards (ACS)
  - Practical Test Standards (PTS)
- **Non-Regulatory Publications**
  - Aeronautical Information Manual (AIM)
  - Advisory Circulars (AC)
  - FAA Letters of Interpretation
  - FAA Handbooks
- **FAA-Approved Manufacturer Publication**
  - Airplane Flight Manual (AFM)
  - Pilot Operating Handbook (POH)

It is a privilege,
Not a right

2. Federal Aviation Regulations (FAR)

- **CFR – Code of Federal Regulations (CFR)**
  - Contain rules for different aspects of the US law
  - Title 14 of the CFR is related to Aeronautics and Space ➔ FAR = 14 CFR

www.ecfr.gov

- **FAR – Federal Aviation Regulations (FAR)**
  - Part 1: Definitions and abbreviations (e.g. AGL, Vy, etc)
  - Part 61: Certification of Pilots and Flight Instructors
  - Part 91: General Flight Rules (applicable to all pilots/aircraft)
  - Other relevant parts
    - *Part 21: Certification Procedures*
    - *Part 39: Airworthiness Directives*
    - *Part 43: Maintenance*
    - *Part 67: Medical Standards*
    - *Part 141: Pilot Schools*

2. Federal Aviation Regulations (FAR)

Part 61
Certification of Pilots and Flight Instructors

- Subpart A – **General**
- Subpart B – **Aircraft Ratings and Pilot Authorizations**
- Subpart C – **Student Pilots** (61.81 – 95)
- Subpart D – **Recreational Pilots** (61.96 – 101)
- Subpart E – **Private Pilots** (61.102 – 120)
  - ✓ *(61.102) Applicability*
  - ✓ *(61.103) Eligibility Requirements*
  - ✓ *(61.105) Aeronautical Knowledge*
  - ✓ *(61.107) Flight Proficiency*
  - ✓ *(61.109) Aeronautical Experience*
  - ✓ *(61.113) Privileges and Limitations: PIC*

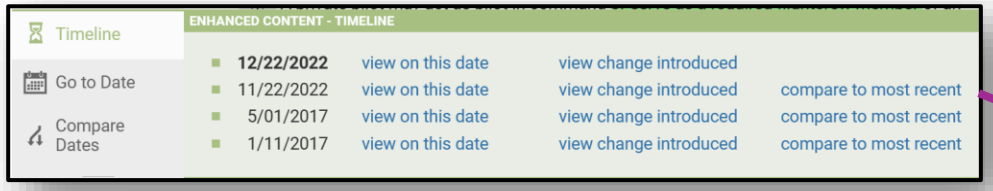
- Subpart F – **Commercial Pilots** (61.121 – 141)
- Subpart G – **Airline Transport Pilots** (61.151 – 171)
- Subpart H – **Flight Instructors (not Sport)** (61.181 – 201)
- Subpart I – **Ground Instructors** (61.211 – 217)
- Subpart J – **Sport Pilots** (61.301 – 327)
- Subpart K – **Flight Instructors (Sport)** (61.401 – 429)

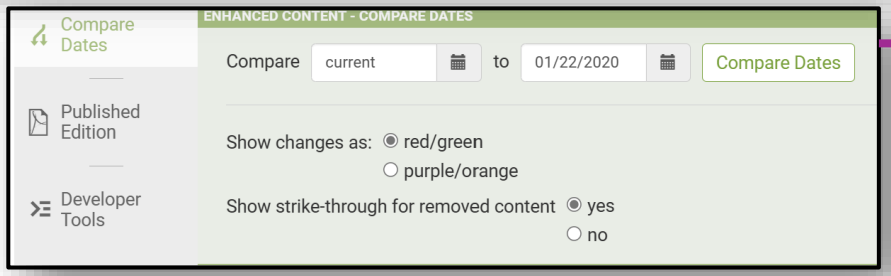
Part 91
General Operating and Flight Rules

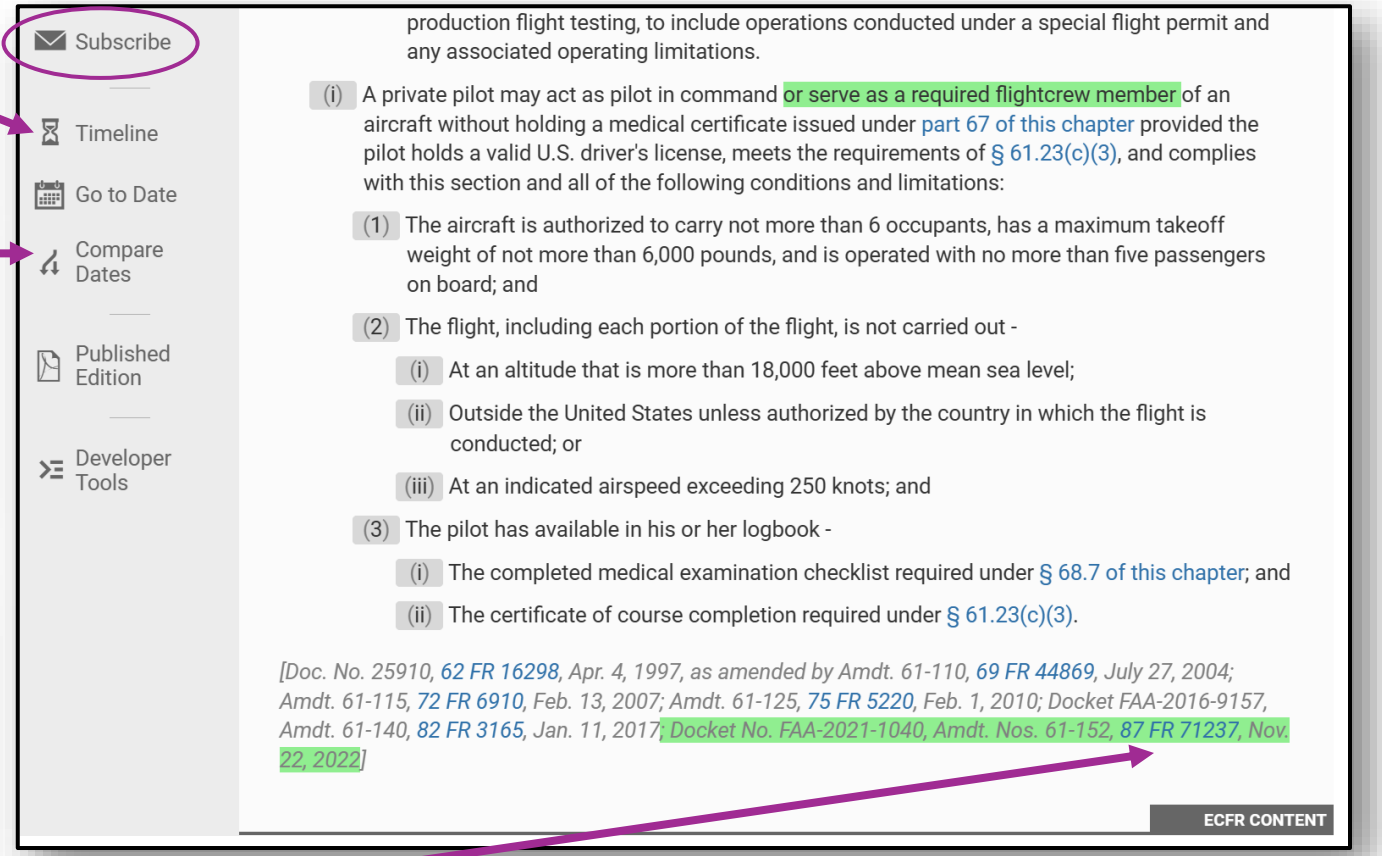
- Subpart A – **General**
- Subpart B – **Flight Rules** (VFR/IFR) (91.101 – 199)
- Subpart C – **Equip, Instrument and Certification** (91.201 – 299)
- Subpart D – **Special Flight Operations** (91.301 – 399)
- Subpart E – **Maintenance and Alterations** (91.401 – 499)
- Subpart F – **Large and Turbine-Powered** (91.501 – 599)
- …

2. Federal Aviation Regulations (FAR)

- **Updates**: You can subscribe to get notified of changes that are important to you on eCFR
  - eCFR is updated daily and changes are reflected within 2 days of a change





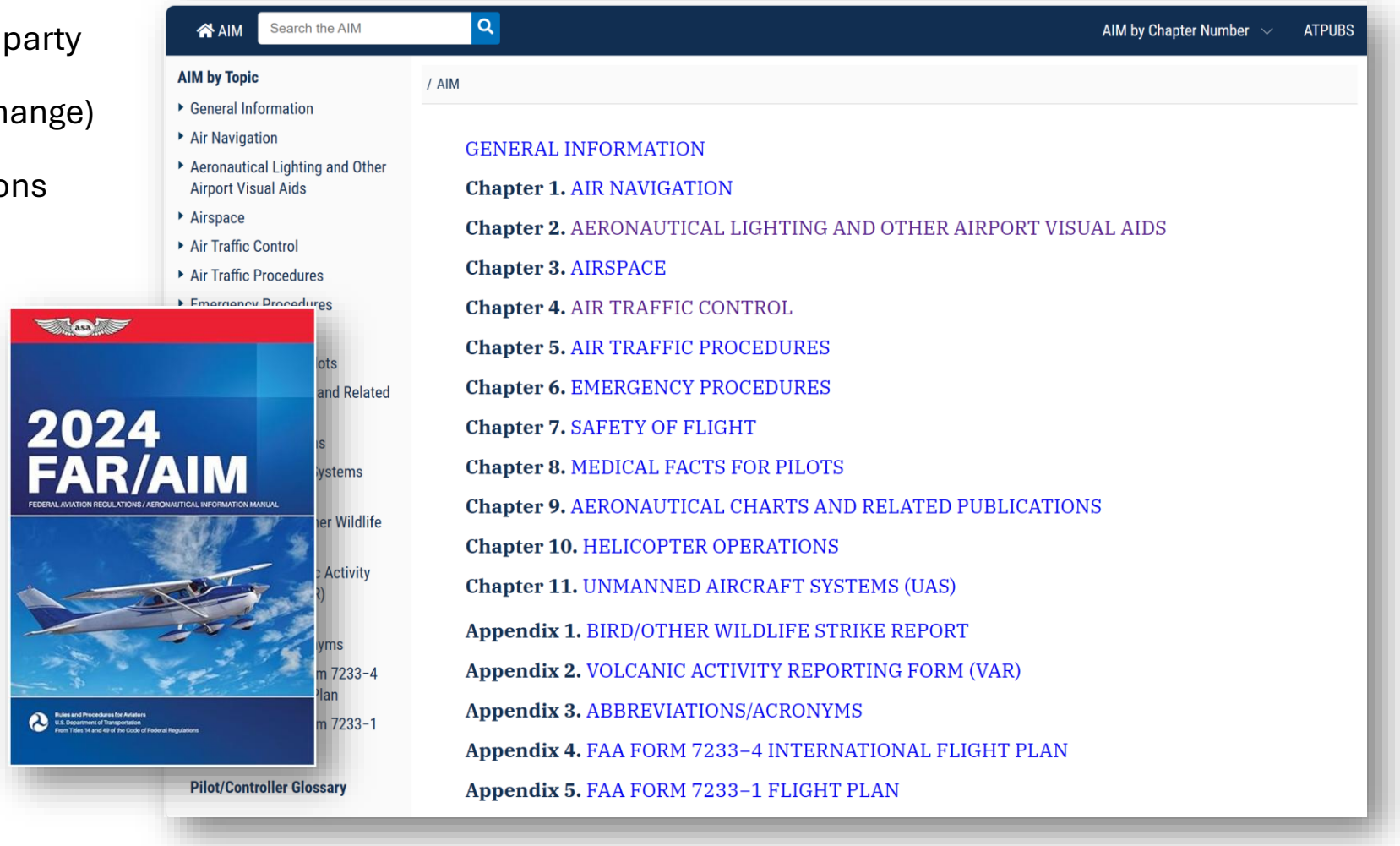


Example: change in Nov 2022 to allow Private Pilots to serve as a required crew member (e.g. safety pilot) w/ Basicmed

3. Aeronautical Information Manual (AIM)

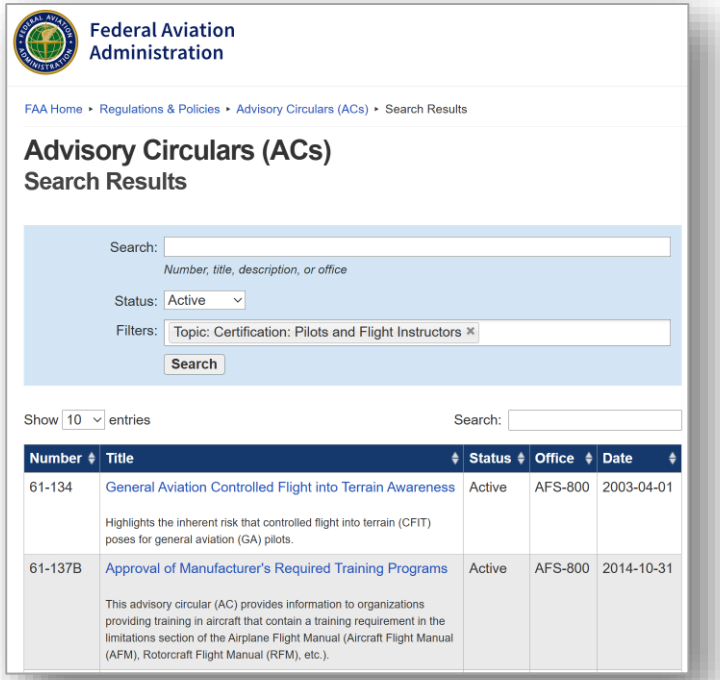
- Official guide by the FAA to basic flight information and ATC procedures
- Available online or purchased from 3rd party
- Issued annually (black bar indicates change)
- Often overlapping with other publications
- Often reinforce regulations

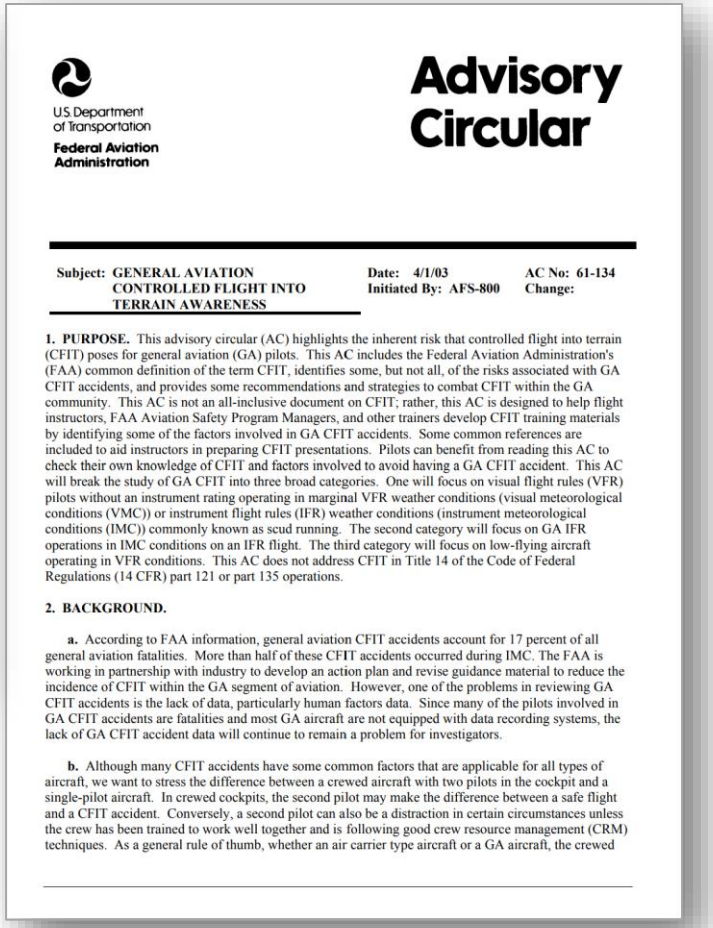
https://www.faa.gov/air_traffic/publications/atpubs/aim_html/



4. Advisory Circular (AC)

- Additional information articles published by the FAA outside of the FAR/AIM
  - ✓ *Unless incorporated into a regulation by reference, the content are not biding on the public*
- **Numbered according to the FAR topic:**
  - 00 – General
  - 20 – Aircraft
  - 60 – Airmen
  - 70 – Airspace
  - 90 – Air Traffic and General Rules
  - 140 – Schools
  - 150 – Airports





- **Search for ACs**
  - https://www.faa.gov/regulations_policies/advisory_circulars/

5. NTSB Part 830

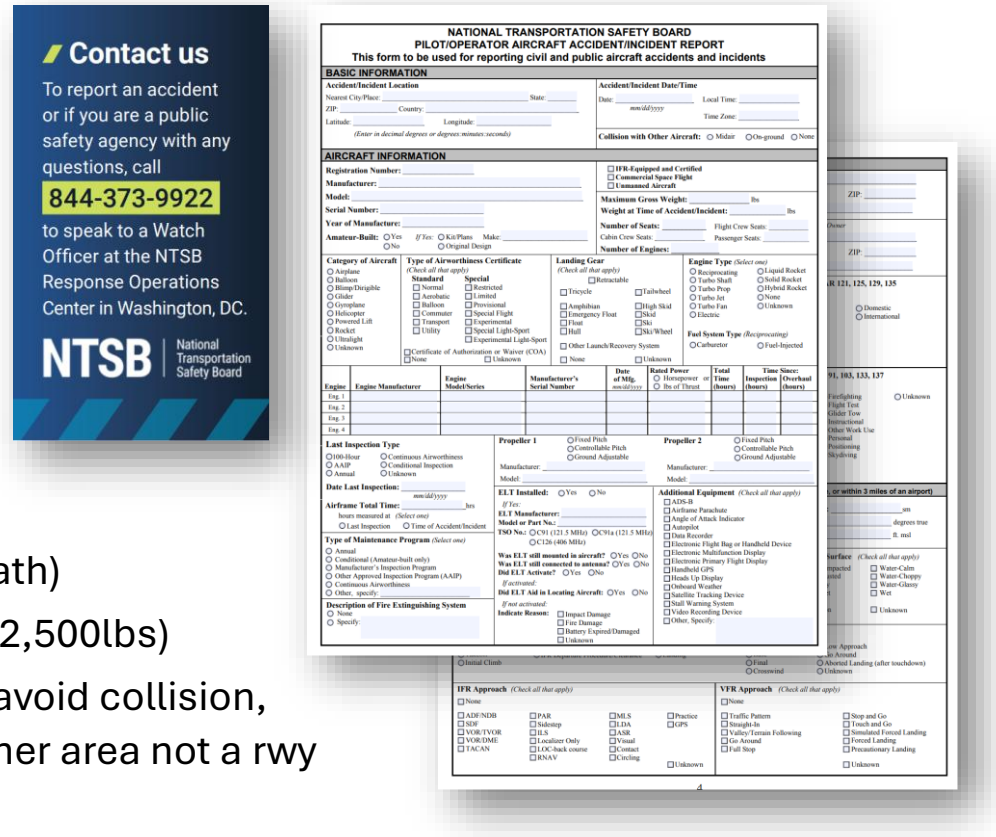
- Covers rules and regulations for reporting and dealing with aircraft accidents and incidents

- **NTSB Definitions** (49 CFR §830.2)
  - Accident: involves death, serious injury or aircraft receives substantial damage
  - Incident: other than accident which affects (or could affect) safety of operations
  - Serious Injury:
    - ✓ *Hospitalization >48h commencing within 7 days*
    - ✓ *Bone fracture (except simple fracture on fingers/toes/nose)*
    - ✓ *Hemorrhages, nerve, muscle or tendon damage*
    - ✓ *Involve any internal organ*
    - ✓ *2nd or 3rd degree burn (or any burn >5% of body)*
  - Substantial Damage:
    - ✓ *Affects structural strength, performance or flight characteristics of the aircraft*

NOT Substantial Damage: Failure or damage to 1 engine, bent fairings/cowling, dented skin, ground damage to prop, landing gear, tires, flaps, wingtips

5. NTSB Part 830

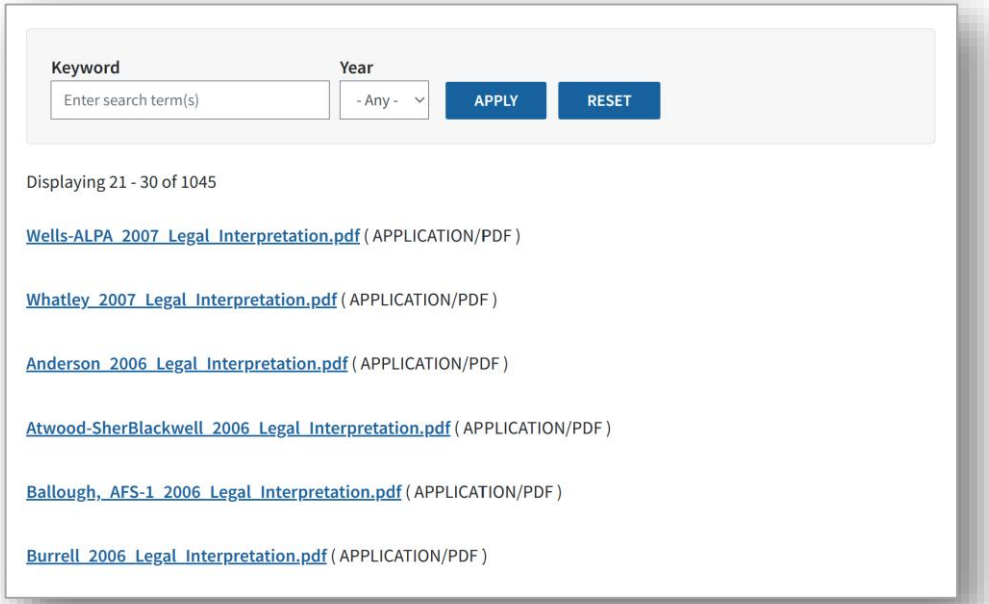
- **Immediate Notification to NTSB** (49 CFR §830.5)
  - Aircraft accident
  - Flight control malfunction/failure
  - Crew member incapacitated
  - In-flight fire
  - Mid-air collision (or ACAS activation during IFR)
  - Damage >$25,000 (not counting aircraft)
  - Propeller blade separation (except if ground strike)
  - Loss >50% of EFIS, EICAS, ECAM, PFD
  - Turbine engine failure (where debris escape other than the exhaust path)
  - Major system or multiple engine failure, or emergency evacuation (>12,500lbs)
  - Air Carrier only: Runway incursion that requires immediate action to avoid collision, or lands/departs on a taxiway, incorrect runway or other area not a rwy
  - Aircraft is overdue and believed to be involved in an accident

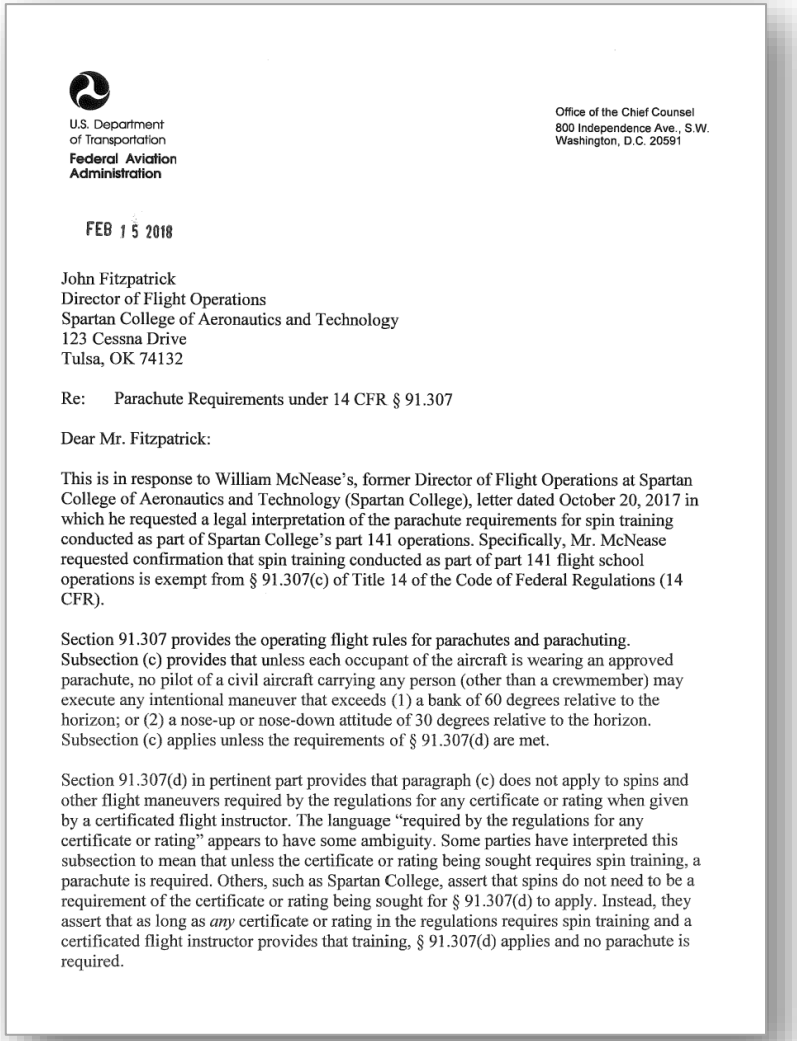


- ✓ ***File w/ NTSB within 10 days of accident (or 7 days if aircraft missing) (§831.15)***
- ✓ ***Preserve wreckage, mail and cargo except if there is public risk (§830.10)***
- ✓ *NOTE: Report of an Incident shall be done only if requested by NTSB*

6. Letter of Interpretation

- **FAA's official position** concerning the meaning of a statute, regulation, or other legal requirement
- Issues by the Office of the Chief Counsel
  - ✓ *Not a regulation itself, but that's how the FAA understands it*
- Searchable in the FAA website





U.S. Department of Transportation
Federal Aviation Administration

Office of the Chief Counsel
800 Independence Ave., S.W.
Washington, D.C. 20591

FEB 15 2018

John Fitzpatrick
Director of Flight Operations
Spartan College of Aeronautics and Technology
123 Cessna Drive
Tulsa, OK 74132

Re: Parachute Requirements under 14 CFR § 91.307

Dear Mr. Fitzpatrick:

This is in response to William McNease's, former Director of Flight Operations at Spartan College of Aeronautics and Technology (Spartan College), letter dated October 20, 2017 in which he requested a legal interpretation of the parachute requirements for spin training conducted as part of Spartan College's part 141 operations. Specifically, Mr. McNease requested confirmation that spin training conducted as part of part 141 flight school operations is exempt from § 91.307(c) of Title 14 of the Code of Federal Regulations (14 CFR).

Section 91.307 provides the operating flight rules for parachutes and parachuting. Subsection (c) provides that unless each occupant of the aircraft is wearing an approved parachute, no pilot of a civil aircraft carrying any person (other than a crewmember) may execute any intentional maneuver that exceeds (1) a bank of 60 degrees relative to the horizon; or (2) a nose-up or nose-down attitude of 30 degrees relative to the horizon. Subsection (c) applies unless the requirements of § 91.307(d) are met.

Section 91.307(d) in pertinent part provides that paragraph (c) does not apply to spins and other flight maneuvers required by the regulations for any certificate or rating when given by a certificated flight instructor. The language "required by the regulations for any certificate or rating" appears to have some ambiguity. Some parties have interpreted this subsection to mean that unless the certificate or rating being sought requires spin training, a parachute is required. Others, such as Spartan College, assert that spins do not need to be a requirement of the certificate or rating being sought for § 91.307(d) to apply. Instead, they assert that as long as *any* certificate or rating in the regulations requires spin training and a certificated flight instructor provides that training, § 91.307(d) applies and no parachute is required.

7. Certification Standards (ACS/PTS)

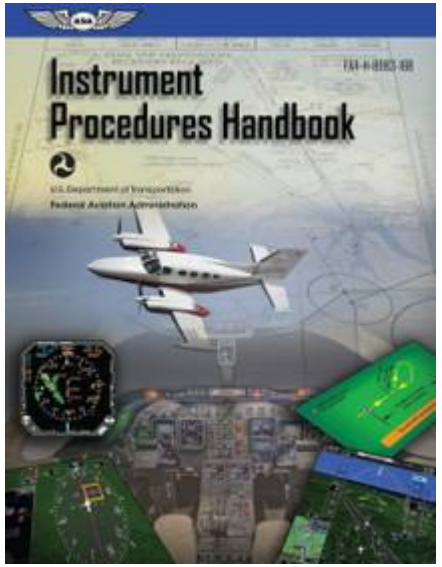
- Set the standards a pilot must perform (and knowledge to demonstrate) in order to achieve a pilot certificate
- **Airman Certification Standards (ACS)** is gradually replacing the **Practical Test Standards (PTS)**
- The ACS integrates the elements of knowledge, risk management, and skill listed in FAR Part 61 for each airman certificate or rating
- Download PDF in the FAA Website or printed through 3rd party

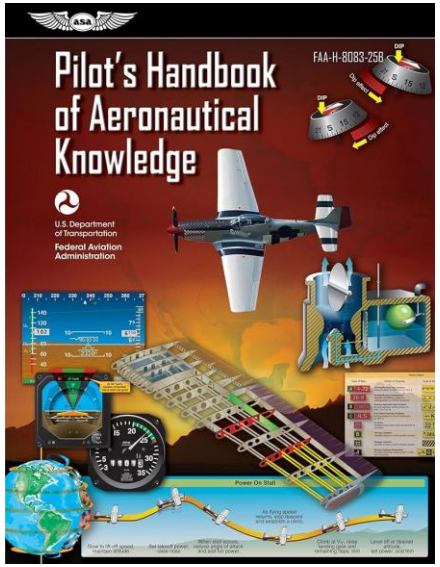
V. Performance and Ground Reference Maneuvers

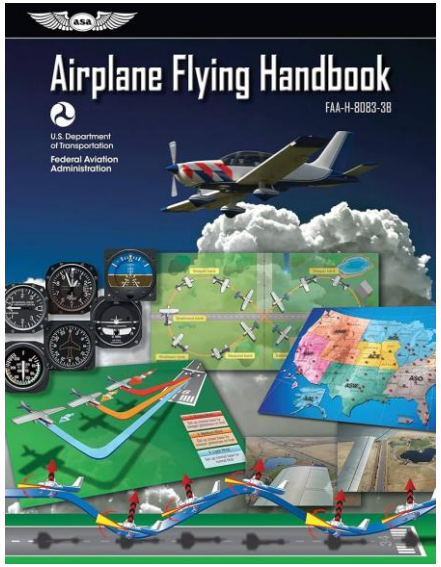
Task	***A. Steep Turns***
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns. ***Note:*** *See Appendix 7: Aircraft, Equipment, and Operational Requirements & Limitations.*
Knowledge	The applicant demonstrates understanding of:
PA.V.A.K1	Purpose of steep turns.
PA.V.A.K2	Aerodynamics associated with steep turns, to include:
PA.V.A.K2a	a. Coordinated and uncoordinated flight
PA.V.A.K2b	b. Overbanking tendencies
PA.V.A.K2c	c. Maneuvering speed, including the impact of weight changes
PA.V.A.K2d	d. Load factor and accelerated stalls
PA.V.A.K2e	e. Rate and radius of turn
Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.V.A.R1	Failure to divide attention between airplane control and orientation.
PA.V.A.R2	Collision hazards, to include aircraft and terrain.
PA.V.A.R3	Low altitude maneuvering including stall, spin, or CFIT.
PA.V.A.R4	Distractions, improper task management, loss of situational awareness, or disorientation.
PA.V.A.R5	Failure to maintain coordinated flight.
Skills	The applicant demonstrates the ability to:
PA.V.A.S1	Clear the area.
PA.V.A.S2	Establish the manufacturer's recommended airspeed; or if one is not available, an airspeed not to exceed V_A.
PA.V.A.S3	Roll into a coordinated 360° steep turn with approximately a 45° bank.
PA.V.A.S4	Perform the Task in the opposite direction, as specified by evaluator.
PA.V.A.S5	Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank ±5°, and roll out on the entry heading ±10°.

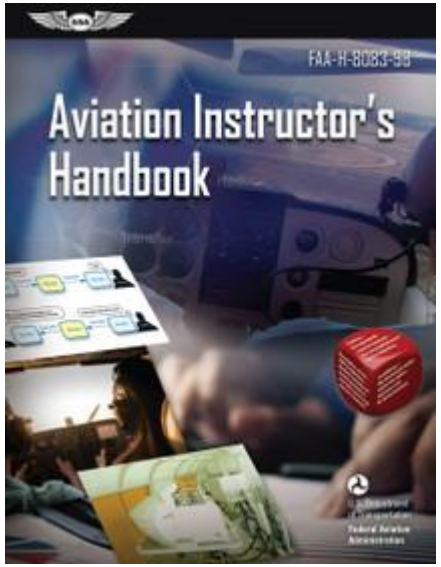
8. FAA Handbooks

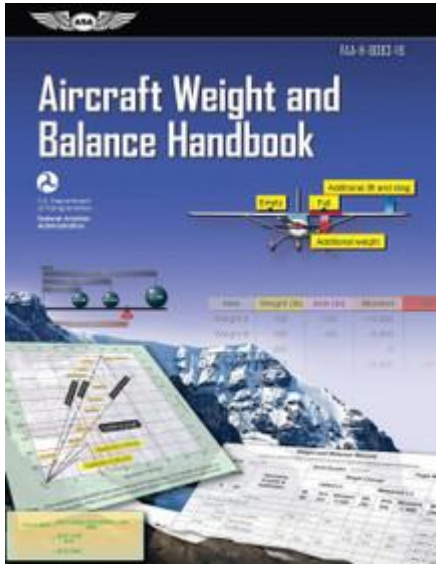
- Contain the technical knowledge required for pilots
- Free to download on the FAA's website
- Printed version available through 3rd Party vendors
- Updated frequently

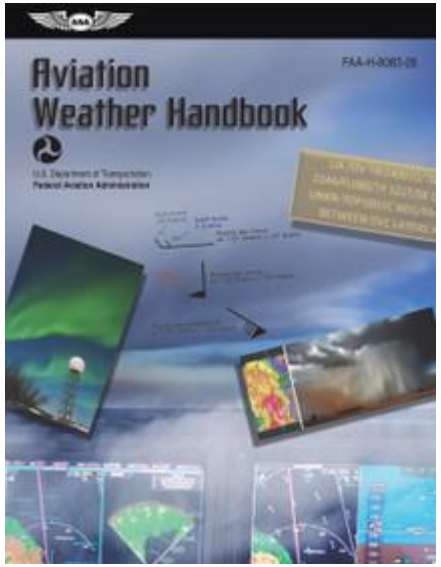








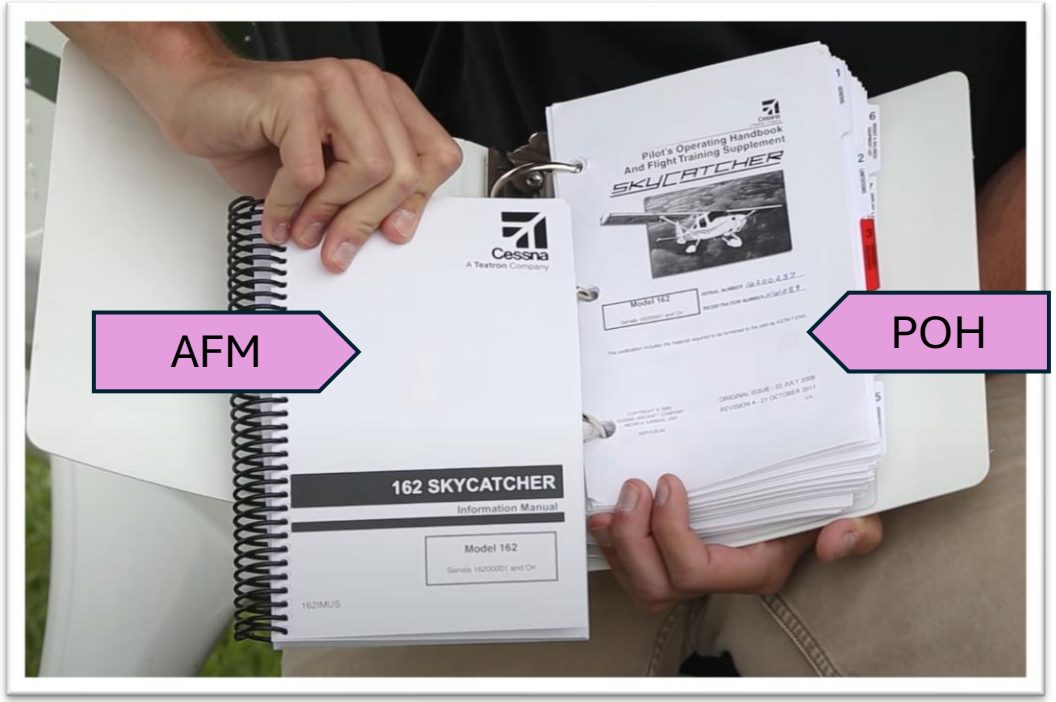




9. POH / AFM

- Describe the aircraft's limitations, performance, information and procedures (safely operate the aircraft)
- **Pilot Operating Handbook (POH)** – required document to be in the aircraft at all times
- **Airplane Flight Manual (AFM)** – Same as the POH, but a generic copy used for study (not a legal document)
  - ✓ *AFMs can mostly be found online*

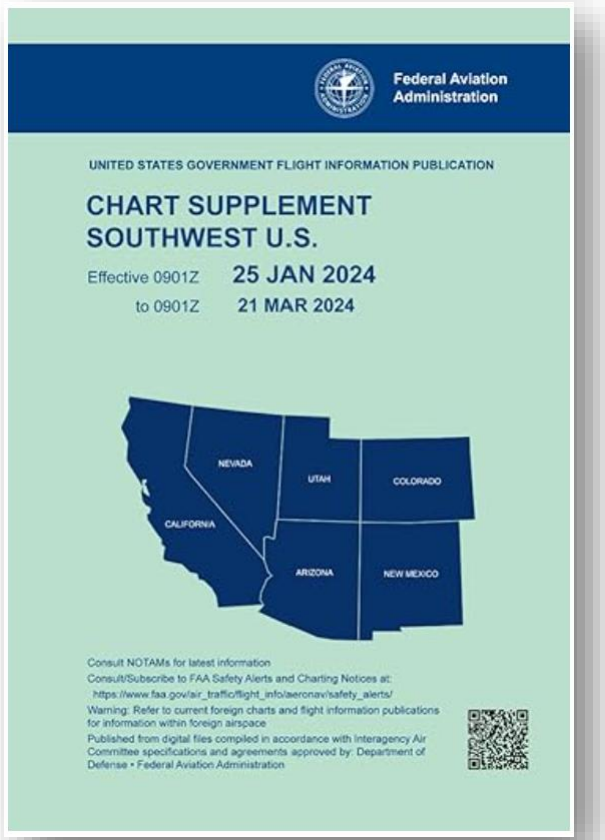
- Standardized Sections
  - Section 1 – General
  - Section 2 – Limitations
  - Section 3 – Emergency Procedures
  - Section 4 – Normal Procedures
  - Section 5 – Performance
  - Section 6 – W&B and Equipment List
  - Section 7 – Airplane and Systems Description
  - Section 8 – Handling, Service and Maintenance
  - Section 9 – Supplements



10. Other FAA Publications

- **Chart Supplement**
  - Information about airports, weather facilities, Preferred IFR routes, VFR waypoints, VOR checkpoints, etc
  - 7 books organized by region (NW, SW, NC, SC, EC, NE, SE)
  - Can be downloaded (or added as "document" in Foreflight)
  - Revised every 56 days

- **NOTAMs (Notice to Air Missions) (AIM 5-1-3 (g))**
  - Information not known sufficiently in advance to publicize by other means
  - NOTAM (D): Domestic. Aeronautical facilities, airports, enroute nav aids, hazards
  - FDC NOTAM: Regulatory. Changes in approach procedures, TFRs, ADS-B/GPS
  - Other NOTAMs: Military NOTAMs, International NOTAMs (ICAO)
  - Search at ➔ https://notams.aim.faa.gov/notamSearch
    - ✓ *Easier to consume via Foreflight or formal Weather Briefing*



Questions?