

14 CFR § 6

TOM HOFFMANN

Flying by the Rules

A Guide to Understanding Federal Aviation Regulations



Photo by Tom Hoffmann

With football playoff mania in full swing this time of year, it's not uncommon to hear the collective yelps and yammers emanating from households nationwide. (Admittedly, they could just as easily be from those receiving their post-holiday credit card statements!) As fans will tell you, football can be an exciting sport to watch, but it does have its share of physical risks. That's why NFL players are held to rigorous standards to help provide a fair and safe environment. Even as the game evolves, recent rule changes — such as better protection for defenseless players and banning most helmet-to-helmet contact — are evidence of an ongoing effort to manage risk, while preserving player safety and fan enjoyment of the game.

The situation is similar in aviation. Airmen face infinite scenarios, many of which involve risk, and all of which demand a keen sense of awareness. And while the “aviation rulebook” doesn't lay out instructions for every situation, it does provide a comprehensive and important foundation for safe operations. That's why understanding and respecting the rules of the game are critical in making the aviation system safe for everyone. But, that also doesn't mean memorizing every rule. Knowing what parts cover what subjects and where to look for answers can give you a tremendous head start in being able to “fly by the rules.”

A Tall Order

Despite the seemingly overwhelming nature of federal regulations, known formally as the Code of Federal Regulations, or CFR, there is order in the architecture of the rules. With a little effort and the right tools, you'll be able to glide through the regs and perhaps even wow your fellow airmen with your knowledge. Granted, this knowledge may not make you the life of a Super Bowl party, but it could prove especially helpful when in the company of an inquisitive check pilot.

Starting from the top, Title 14 of the CFR covers the topics of aeronautics and space. Incidentally, 14 CFR is one of 50 titles that represent broad areas subject to fed-

61.23(a)1

eral regulation, everything from food and drugs to national defense.

The first chapter of 14 CFR pertains to the FAA, and it encompasses a series of lettered subchapters and parts numbered 1 through 199. With a few exceptions, parts are further broken out into subparts that help identify a particular subject, e.g., part 91, subpart B covers flight rules. Drilling down further, you'll see the use of numbers and lower-case letters to organize and identify paragraphs related to the parent topic. Using the previous example with part 91, you'll see that section 91.103 (Preflight action) paragraphs (a) and (b) contain the information a pilot in command must be familiar with before a flight.

Part and Parcel

Following is a list of parts of particular interest to typical general aviation (GA) pilots and mechanics.

- Part 1** Definitions and abbreviations
- Part 21** Certification procedures for products and parts
- Part 39** Airworthiness Directives
- Part 43** Maintenance, preventive maintenance, rebuilding, and alteration
- Part 61** Certification: Pilots, flight instructors, and ground instructors
- Part 65** Certification: Airmen other than flight crewmembers, e.g., mechanics
- Part 91** General operating and flight rules
- Part 141** Pilot schools
- Part 145** Repair stations
- Part 147** Aviation maintenance technician (AMT) schools

Becoming familiar with these parts will provide a good starting point for answering many of your questions. From there, glancing through a part's table of contents, or its subpart and section titles, should get you on your way. For example, maybe you want to know what the requirements are for a commercial certificate or how many hours of cross-country time are required for an instrument rating. In both cases, part 61 is where you want to start your search. You can reference the part's table of contents to find the exact section you need.

Stuck on a particular acronym? Check out the glossary in part 1. Not sure what constitutes a major

repair or alteration or what maintenance tasks a pilot can perform on his or her aircraft? Part 43 has your answers. Or, maybe you want to double check fuel requirements in case conditions for an upcoming flight become IFR. Turn to part 91; you'll see exactly what you need under section 91.167.

Crosscheck and Verify

Some tasks may require you to cross-reference several sections of the same part, or even search more than one part for a complete answer. For example, obtaining a special airworthiness certificate for a light-sport category aircraft may require you to reference part 21 for eligibility requirements, part 91 for operating limitations, and also part 1, which contains the definition of light-sport aircraft. In these cases, it might be worthwhile to recruit the help of resources like the *Pilot's Handbook of Aeronautical Knowledge*, *Airplane Flying Handbook*, Advisory Circulars, or other products in which regulations are summarized for particular scenarios.

Mnemonics are also useful when it comes to recalling some of the more comprehensive regulations. On determining airworthiness, the term "AVIATE" can help you remember your aircraft's required maintenance and inspection items. (See the article "Airworthy or Not?" in the May/June 2009 *FAA*



Photo by James Williams

Did You Know...

To allow room for future additions, only odd numbers are used to number paragraphs in 14 CFR. An even-numbered paragraph lets you know it was inserted after its original issuance.

Aviation News for more).

Another great tool for learning your way around the regs is using the online electronic Code of Federal Regulations (e-CFR) at <http://ecfr.gpoaccess.gov/>. To find aviation regulations, choose Title 14 from the drop down menu on the home page. In addition to ensuring you are referencing the most recent information, the e-CFR also provides some advanced search capabilities. With a simple search, you can look for a term within a specific region of a selected title. Or, get even more specific with a Boolean search where you combine terms using words such as AND, OR, and NOT, to limit, widen or define your search. Wildcard searches will also work if you're unsure of a term's exact spelling. They're the ones where you use an asterisk* for the missing word or character.

Other Documents

Besides the aviation-related parts of the CFR, pilots should also be familiar with the National Transportation Safety Board's (NTSB) set of rules, requirements, and definitions as outlined in 49 CFR part 830, or NTSB 830. Here you find what defines an aircraft accident and incident and what actions are required concerning these events. It's worth noting that if you are involved in an accident or a serious incident as defined in part 830, or if an aircraft is overdue and believed to have been in an accident, you must imme-

diately notify the nearest NTSB office. A recent change to this regulation now defines a loss of 50 percent of an aircraft's electronic cockpit displays as a serious incident requiring NTSB notification.

Although found under the transportation section of the CFR (Title 49), NTSB 830 is typically included with commercially published copies of the regulations and can be found on many aviation websites.

Keep it in Perspective

Whether you're new to flying or plan to pursue an additional rating or certificate, one of the most effective ways of learning and understanding new regulations is to simply get out and fly.

"Hand-in-hand with a proper knowledge of regulations has to be flight experience," says FAA Aviation Safety Inspector Joseph Morra. "You can't have all theory and no practice and expect to absorb the meaning of all the rules."

This is particularly the case with many student pilots who at first might feel put off by a long list of complex rules. A good flight instructor should plan to integrate as many practical applications of rules as possible during a flight to reinforce their relevance and importance to safety.

Getting Involved

One of the more reliable aspects of aviation is that it is subject to change. As a result, the rules that regulate aviation must also be able to accommodate change. But with change comes a unique opportunity for an airman's voice to be heard. When a new regulation or a change to an existing one is considered, the FAA issues a Notice of Proposed Rulemaking (NPRM), which allows the public a timeframe in which to provide feedback directly to the FAA.

Although the process can sometimes take several years before a rule change is implemented, the FAA carefully reviews all comments and provides responses to them in the final rule. A good way to stay up to speed on rule changes is by checking the Federal Register online (www.federalregister.gov). Here you can sign up to receive notifications when a new aviation rule is proposed. Comments can be made by referencing the proposed rule on www.regulations.gov, or by following the directions provided in the NPRM. Airmen should also be aware of 14 CFR part 11, which explains how someone can petition the FAA to issue, repeal, or change a rule.

Just like a football team needs order and a regulatory framework to be fair and successful, so,



Photo by James Williams

FAA Subchapter Topic Listing for 14 CFR

- A: Parts 1-3, Definitions
- B: Parts 11-17, Procedural Rules
- C: Parts 21-49, Aircraft
- D: Parts 60-67, Airmen
- E: Parts 71-77, Airspace
- F: Parts 91-105, Air Traffic and General Operating Rules
- G: Parts 119-139, Air Carriers and Operators for Compensation/Hire: Certification and Operations
- H: Parts 140-147, Schools and Other Certificated Agencies
- I: Parts 150-169, Airports
- J: Parts 170-171, Navigational Facilities
- K: Parts 183-193, Administrative Regulations
- L-M: Reserved
- N: Parts 198-199, War Risk Insurance

Figure 1 – FAA Subchapters found in Chapter 1 of Title 14 Code of Federal Regulations

too, does aviation. Many pilots might begrudge the number of regulations that must be learned and followed, but it's important to remember that they exist for a reason: to support safety by prescribing standards in the ever-changing and increasingly complex aviation industry. Some might argue rules take the fun out of aviation. But at the end of the day, keeping everyone safe and able to fly another day is what matters most. ✈️

Tom Hoffmann is associate editor of FAA Safety Briefing. He is a commercial pilot and holds an A&P certificate.

Learn More

Electronic Code of Federal Regulations, select Title 14 Aeronautics and Space

<http://ecfr.gpoaccess.gov/>

FAA Petition for Rulemaking

http://www.faa.gov/regulations_policies/rulemaking/petition/#rulemaking

AOPA Safety Advisor: Federal Aviation Regulations

<http://www.aopa.org/asf/publications/SA28.pdf>

Subscribe Today!

FAA Safety Briefing is available as an annual subscription from the Government Printing Office. There are three ways to sign up today!

- By Internet at:
<http://bookstore.gpo.gov/actions/GetPublication.do?stocknumber=750-002-00000-5>
- By contacting GPO
toll free at:
1-866-512-1800
- Sign up for e-mail updates at:
www.faa.gov/news/safety_briefing/

