

Code of Federal Regulations

Oct 1, 2008

Title 14 Chapter 1 Federal Aviation Regulations
Parts 1, 61, 91 and Title 49 Part 830 (NTSB)

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Part 1: Definitions and Abbreviations

1.1 DEFINITIONS:

Night means the time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time.

(**NOTE:** This is for logging night time. Also see §61.57 for night currency requirements.)

1.2 Abbreviations and Symbols:

Not required here. If desired see
http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/cfr_2003/pdf/14cfr1.2.pdf

PAR Part 61: Pilot Certification

61.3 REQUIREMENTS FOR CERTIFICATES:

To act as a pilot in command you must have a current pilot certificate in your possession and photo identification. A valid medical certificate is also required.

61.5 AIRCRAFT CATEGORIES AND CLASSES:

For certification of pilots, category refers to a kind of aircraft. i.e. balloon,, airplane, helicopter. Your category is AIRPLANE: There are 4 classes of AIRPLANES:

- (1) Single-engine land
- (2) Multi-engine land
- (3) Single-engine sea
- (4) Multi-engine sea

61.15 ALCHOL AND DRUGS:

Eight hours between bottle and throttle for pilot and required crew. Less than .04% blood alcohol.

(Also see 91.17

http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/cfr_2003/pdf/14cfr91.17.pdf)

61.16 ALCHOL AND DRUGS:

Eight hours between bottle and throttle for pilot and required crew. Less than .04% blood alcohol.

61.23 MEDICAL CERTIFICATES-DURATION

The minimum medical certificate required by a student or private pilot is a THIRD CLASS medical certificate. THIRD CLASS medical certificate expires at the end of the 24th calendar month after it was issued if under 40 years of age when issued, otherwise 60 calendar months.

SECOND CLASS—12 calendar months

FIRST CLASS—12 calendar months if under 40 years of age when issued, otherwise 6 calendar months.

61.31 High Performance and Complex

High Performance—More than 200 horsepower

Complex—Retractable gear, variable pitch prop, flaps.

You must have received instruction and have log entry.

61.51 LOGGING FLIGHT TIME

You must log the flight time required for a higher certificate or rating, and to show recent flight experience.

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61.57 BIENNIAL FLIGHT REVIEW & RECENT FLIGHT EXPERIENCE:

Every 24 calendar months you must pass and log a flight review given by a flight instructor or FAA inspector.

You may not carry passengers unless you have logged 3 takeoffs and landings (touch & gob's in tricycle gear) within the past 90 days in the same category and class.

NIGHT EXPERIENCE:

To carry passengers at night (1 hour after official sunset until 1 hour before official sunrise) you must have logged 3 takeoffs and landings TO A FULL STOP during night time in the same category and class.

61.60 CHANGE OF ADDRESS:

You must notify the FAA of any permanent change of address within 30 days of your move.

61.69 Glider Towing:

Need 100 hours of pilot time logged in category, class, type or need 200 hours total pilot time
Need three actual or simulated glider tows, or made three flights as PIC of a towed glider.

61.109: FLIGHT TIME REQUIRED FOR PRIVATE PILOT CHECKRIDE:

40 Hours total time including:

20 Hours Dual Instruction with

- 3 hrs dual cross-country
- 3 hrs night dual (one greater than 100 nautical miles and 10 night landings)
- 3 hours on instruments
- 3 hrs check ride preparation

10 Hours Solo Flight Time with

- 10 hrs in airplanes
- 5 hrs solo cross-country;
- one cross-country at least 150 nautical miles with full stop landings at minimum of three points with one leg at least 50 nautical miles.

3 takeoffs and landings at towered airport

61.113: PRIVATE PILOT PRIVILEGES AND LIMITATIONS:

- Unlimited solo privileges
- Can carry passengers and cargo for pleasure or business but not for hire
- Can fly incidental to employment
- May not pay less than the pro rata share of the operating expenses of flight with passengers (fuel, oil, airport, rental)
- Passengers may pay entire flight if donated to a charity that sponsors the flight

61.118 PRIVATE PILOT CERTIFICATE LIMITATIONS:

You may not carry passengers or cargo for compensation or hire. However, you may:

- (1) Fly in connection with your business if the flight is only incidental to your business.
- (2) Share expenses of the flight with your passengers.
- (3) Demonstrate an airplane to a customer if you are an aircraft salesman and have at least 200 hours total time.

FAR Part 91: GENERAL OPERATION & FLIGHT RULES

91.3 PILOT RESPONSIBILITY:

The pilot in command is responsible for all phases of the operation of his aircraft.

In an emergency you may deviate from FARs but must, if so requested, submit a written report to the Administrator.

91.7 AIRPLANE AIRWORTHINESS

The pilot is responsible for the airworthiness of his airplane. You may not fly unless your plane is in a condition for safe flight.

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91.9 OPERATING LIMITATIONS:

You must comply with the operating limitations for your airplane, which must be available in the cockpit in the form for placard, instrument markings, listings, or an Approved Airplane Flight Manual.

91.17 LIQUOR AND DRUGS:

No flying within 8 hours after drinking liquor or consuming drugs for pilot and required crew, and less than .04% blood alcohol.

(Also see 61.15 and 61.16)

91.83 CLOSING VFR FLIGHT PLANS:

If you file a flight plan, you must cancel or close it with the nearest FSS or ATC facility.

91.103 PREFLIGHT ACTION.

Before each flight you MUST familiarize yourself with ALL available information concerning your flight. For flight NOT in vicinity of an airport, your info must include ALL of the following:

- 1) Runway Lengths
- 2) Aircraft Performance
- 3) Weather reports and forecasts
- 4) Fuel requirements (30 minutes reserve in day; 45 minutes reserve at night)
- 5) Alternate plans of action in case you cannot complete the flight as planned
- 6) Known traffic delays

91.105 SAFETY BELTS:

- 1) Required flight crew members must remain in seats with **seatbelts secured** (unless performing duties or physiological needs).
- 2) **Shoulder harnesses** (if installed) must be used **during takeoffs and landings**.

91.107 SAFETY BELTS:

- 1) You may not takeoff or land unless you've notified each person to fasten his safety belt. Each person on board is required to fasten his belt after being notified by the pilot.

91.113 RIGHT-OF-WAY RULES:

- 1) Each pilot is responsible for seeing an other aircraft.
- 2) An aircraft in DISTRESS has the right-of-way over all other traffic.
- 3) The least maneuverable category of aircraft has the right-of-way.
- 4) The aircraft on the right has the right-of-way if both are of the same category (i.e. two airplanes converging but not head-on).
- 5) Approaching head-on - Each pilot deviates to the right.
- 6) The aircraft being overtaken has the right-of-way. The faster aircraft must pass on the right.
- 7) An aircraft on final approach has the right-of-way.
- 8) An aircraft towing or refueling has the right-of-way over all engine-driven traffic.

91.117 SPEED LIMITS:

Maximum speed below 10,000 MSL is 250 knots. In an Class B airspace max. speed is 250 knots. In an Class C & D and under class B airspace max. speed 200 knots

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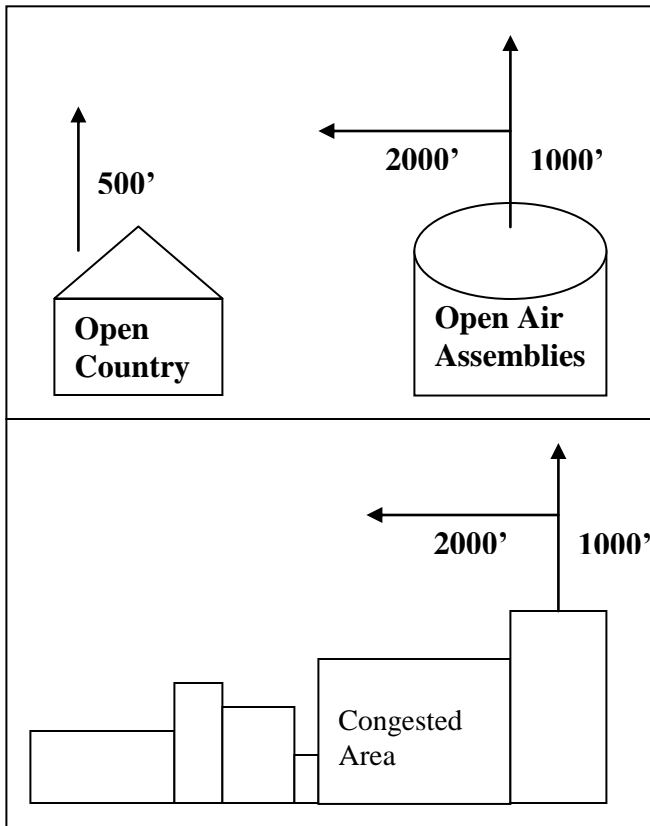
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91.119 MINIMUM SAFE FLIGHT ALTITUDES:

You must always fly high enough to be able to make a safe emergency landing (without undue hazards to persons or property on the surface) if your engine should fail.

- Over congested areas, fly at least 1,000' above highest obstacle within a 2,000' horizontal radius.
- Over uncongested areas, fly at least 500' above the surface.
- Over open water or sparsely populated areas, fly at least 500' away from any person, vehicle, vessel or structure.
- **Takeoff and landings**—no minimum altitude applies



91.115 Right of Way

One must maintain vigilance to **see and avoid** other aircraft.

In general, a less maneuverable aircraft has right-of-way.

- Aircraft in distress has right of way over all others.
- Aircraft of different categories (the least maneuverable has right-of-way):
 - A balloon has right-of-way.
 - Glider has right-of-way over airship, airplane, rotorcraft, weight-shift control, powered parachute.
 - Airship has right-of-way over airplane, rotorcraft, weight-shift control, powered parachute
- Aircraft Towing or refueling has right of way over all other engine driven aircraft.
- Aircraft of same category converge at same altitude (except head-on), aircraft on right has right-of-way.
- Aircraft approaching head on (or nearly so) must alter course to right, regardless of category.
- Aircraft being overtaken has right-of-way. Overtaking aircraft shall alter course to the right and remain well clear.
- When approaching an airport for landing, the lower aircraft has right-of-way, but shall not take advantage of this to get in front of or overtake another aircraft.
- When taxiing on water, the aircraft is a boat and follows boat rules. If motorboat and aircraft on water, the one right-of-way.

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91.125 ATC Light Signals

Color and Type of Signal	On the Ground	In Flight
STEADY GREEN	Cleared for takeoff	Cleared to land
FLASHING GREEN	Cleared to taxi	Return for landing (to be followed by steady green at proper time.)
STEADY RED	Stop	Give way to another aircraft and continue circling.
FLASHING RED	Taxi clear of landing area (runway) in use.	Airport unsafe DO NOT LAND
FLASHING WHITE.	Return to starting point on airport	
ALTERNATING RED 4 GREEN	GENERAL WARNING: Exercise Extreme Caution	

ATC LIGHT SIGNALS

91.121 ALTIMETER SETTINGS.

In flight you must set your altimeter to the current reported setting of a station along your route and within 100 nautical miles.

91.123 COMPLIANCE WITH A TC CLEARANCES.

You must comply with ATC clearances unless you obtain an amended clearance.

* If you deviate from a clearance in an emergency, you must notify ATC as soon as possible.

You must receive a clearance to taxi, take-off, or land at a tower-controlled airport.

In an emergency, if you are given priority by ATC, you must submit a written report of your

emergency' within 48 hours to the ATC facility chief. IF SO REQUESTED

91.126 OPERATING AT TOWER-

91.129 CONTROLLED AIRPORTS:

91.130 When operating to, from or on an airport

91.131 with an operating tower you must maintain radio communications with that tower.

91.126 OPERATING AT NON-TOWER AIRPORTS

At an uncontrolled field, make all turns to the left unless the markings indicate right turn.

Upon departure, you must comply with the traffic pattern for that airport.

91.131 CLASS B AIRSPACE:

For operation in a Class B you must have:

- 1) An ATC clearance
- 2) A private pilot license to land or takeoff at the primary airport. (Students may fly through the Class B but may not land at the primary airport.)
- 3) 2-way radio communications
- 4) A transponder with encoding altimeter

91.155 VFR WEATHER MINIMUMS:

- Controlled Airspace (below 10,000 feet MSL)
 - 3 miles visibility
 - 500 below, 1000 above, 2000 horizontal
- Controlled Airspace (above 10,000 feet MSL)
 - 5 miles visibility
 - 1000 below, 1000 above, 1 mile horizontal
- Uncontrolled Airspace (below 10,000 feet MSL)
 - See Airspace Overview Class G, in back of document.

91.157 SPECIAL VFR WEATHER MINIMUMS:

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When the weather in a Class C, D, E airspace is less than 1,000' ceiling and/or 3 miles visibility, you must obtain a Special VFR (SVFR) clearance and remain clear of clouds with 1 mile visibility when in the control zone.

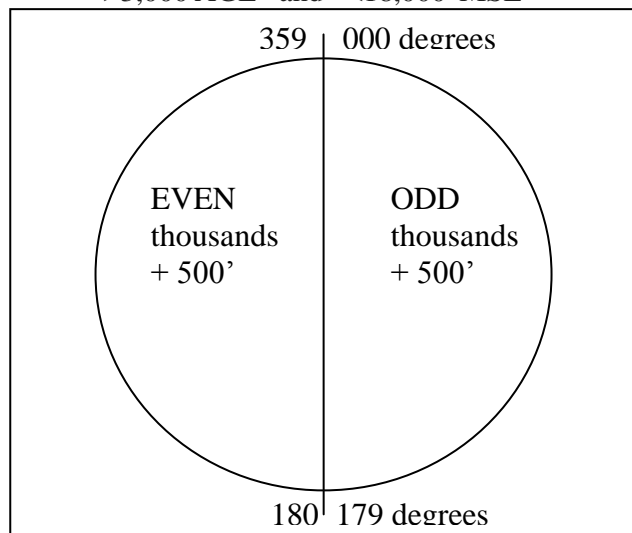
91.159 VFR CRUISING ALTITUDES:

When flying at more than 3,000 AGL, your cruising altitude must be based on MAGNETIC COURSE as shown below:

000 – 179 = Odd thousands plus 500'

180 – 359 = Even thousands plus 500'

>3,000' AGL and <18,000' MSL



91.169 MAINTENANCE INSPECTION REQUIRED:

All aircraft must have an annual inspection performed every 12 calendar months.

100 hour inspections are required only for aircraft carrying persons for hire or aircraft used for dual flight instruction.

91.203 REQUIRED DOCUMENTS:

Each of the following must be aboard the airplane:

- A Airworthiness Certificate-DISPLAYED
- R Registration (shows owner, etc.)
- R Radio license (**no longer required in USA**)
- O Operating Limitations
- W Weight and Balance Data

91.205 VFR FLIGHT EQUIPMENT REQUIRED.

The following are required in your airplane for VFR flight during the daytime -

- 1) Airspeed indicator
- 2) Altimeter
- 3) Magnetic Compass
- 4) Tachometer
- 5) Oil pressure & Oil temperature gauge
- 6) Fuel gauge for each tank
- 7) Safety belts for each occupant
- 8) Emergency locator transmitter
- 9) Landing gear position indicator (if gear is retractable)

For NIGHT VFR flight add to the above -

- 1) Position Lights
- 2) Red or white rotating beacon or strobe
- 3) Generator or alternator to power electrical items
- 4) Spare set of fuses or 3 fuses of each kind required.

91.209 POSITION LIGHTS.

Aircraft position lights must be illuminated from official sunset until official sunrise.

NOTE: Night time may not be logged until 1 hour after sunset to 1 hour before sunrise.

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91.211 OXYGEN REQUIREMENTS:

Oxygen is required for flight -

- 1) Above 12,500 MSL to 14,000 MSL only after first 30 minutes.
- 2) Above 14,000 MSL to 15,000 MSL for pilot only (required crew) for entire time.
- 3) Above 15,000 MSL each occupant must be provided with oxygen & the pilot must use it.

91.215 TRANSPONDER REQUIREMENT:

A transponder with an encoding altimeter is required:

- 1) At and above 10,000 MSL in controlled airspace (excluding the airspace at and below 2,500 MSL)
- 2) In a Class B, Class C Airspace and above/below within lateral limits
- 3) Within 30 nautical miles of certain major airports (Appendix D, Section 1, part 91)

No SVFR at night by non-instrument rated pilots

91.303 ACROBATIC FLIGHT.

Acrobatic Flight is prohibited:

- 1) Over congested areas
- 2) Over open air assemblies of people
- 3) In a control zone
- 4) Within a Federal Airway
- 5) Below 1,500 AGL
- 6) When visibility is Less than 3 miles

91.307 PARACHUTES:

Parachutes must be worn by all occupants when practicing acrobatics, except if a flight instructor is demonstrating spins to his student.

91.407 TEST FLIGHTS AFTER MAJOR REPAIRS.

After an aircraft has been repaired or substantially altered it must be test-flown by at least a private pilot before passengers can be carried in that aircraft.

NATIONAL TRANSPORTATION SAFETY BOARD

NTSB PART 830 covers aircraft accident reporting requirements, http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title49/49tab_02.tpl.

You must immediately notify NTSB of any accident and certain incidents:

- 1) Aircraft accident—substantial damage to aircraft, passenger death or serious injury.
- 2) Inability of flight crew member to perform duties due to injury or illness.
- 3) In-flight fire.
- 4) Overview aircraft believed to be in accident.
- 5) Flight control system malfunction or failure.

Notify = immediately (via most expeditious means available; must preserve wreckage, mail, cargo).

Report: accident=10 days, missing A/C=7 days, incident=upon request.

TRANSPONDER CODES

7700	Emergency
7600	Loss of Communications
7500	Hijack
1200	VFR

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Explanation. The FAA issues advisory circulars to inform the aviation public in a systematic way of non-regulatory material of interest. Unless incorporated into a regulation by reference, the contents of an advisory circular are not binding on the public. Advisory circulars are issued in a numbered-subject system corresponding to the subject areas in the recodified Federal Aviation Regulations.

The Circular Number System.

- a. General. The advisory circular numbers relate to the subchapter titles and correspond to the Parts, and when appropriate, the specific sections of the Federal Aviation Regulations. Circulars of a general nature bear a number corresponding to the number of the general subject (subchapter) in the FAR's. b. Subject numbers. The general subject matter areas and related numbers are as follows:

Subject Number and Subject Matter

00 General	120 Air Carrier and Commercial Operators
10 Procedural	140 • Schools and Other Certified Agencies
20 Aircraft	150 Airports
60 Airman	170 Air Navigational Facilities
70 Airspace	180 Administrative
90 Air Traffic Control & General Operations	210 Flight Information



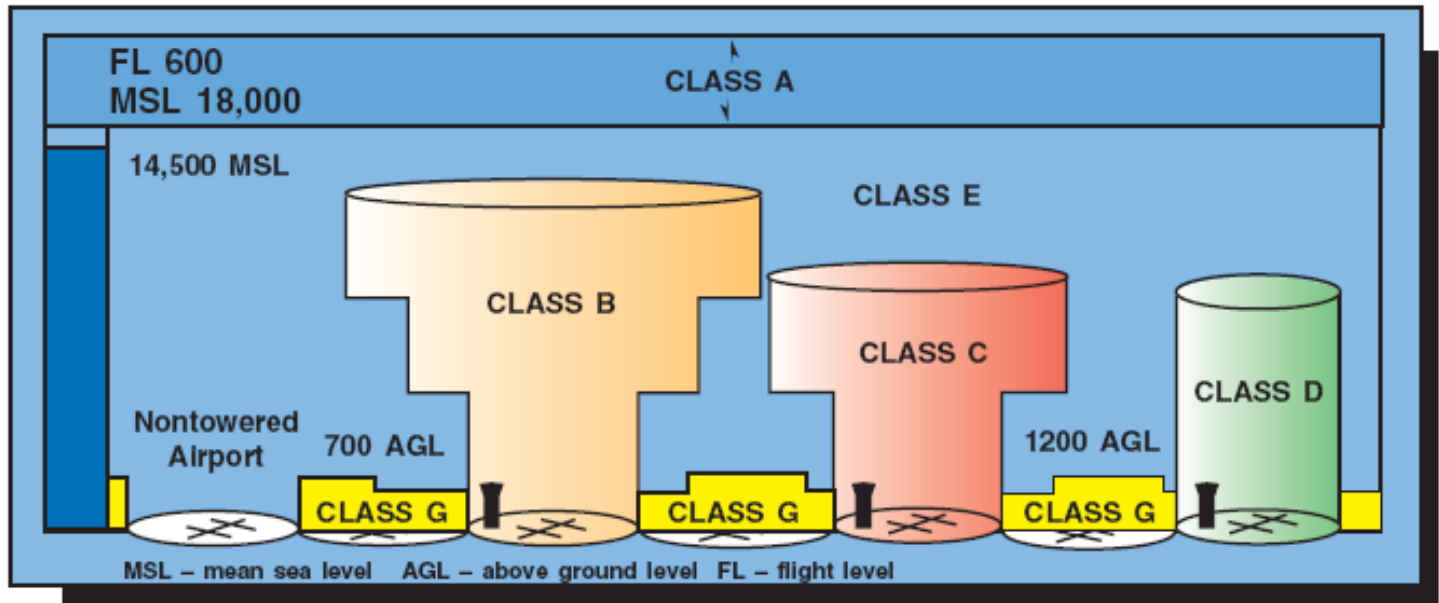


Figure 13-1. Airspace profile.

Class G is uncontrolled airspace; all other is controlled.

Class E is all controlled airspace that's not **A, B, C, D**

Class E starts at 1200 feet above the ground unless otherwise indicated.

Class Airspace	Entry Requirements	Equipment	Minimum Pilot Certificate
A	ATC Clearance	IFR Equipped	Instrument Rating
B	ATC Clearance	Two-Way Radio, Transponder with Altitude Reporting Capability	Private—Except a student or recreational pilot may operate at other than the primary airport if seeking private pilot certification and if regulatory requirements are met.
C	Two-Way Radio Communications Prior to Entry	Two-Way Radio, Transponder with Altitude Reporting Capability	No Specific Requirement
D	Two-Way Radio Communications Prior to Entry	Two-Way Radio	No Specific Requirement
E	None for VFR	No Specific Requirement	No Specific Requirement
G	None	No Specific Requirement	No Specific Requirement

BASIC VFR WEATHER MINIMUMS			891.155
Airspace	Flight Visibility	Distance from Clouds	
Class A	Not Applicable	Not Applicable	
Class B	3 statute miles	Clear of Clouds	
Class C	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal	
Class D	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal	
Class E Less than 10,000 feet MSL	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal	
At or above 10,000 feet MSL	5 statute miles	1,000 feet below 1,000 feet above 1 statute mile horizontal	
Class G 1,200 feet or less above the surface (regardless of MSL altitude). Day, except as provided in section 91.155(b).	1 statute mile	Clear of Clouds	
Night, except as provided in section 91.155(b).	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal	
More than 1,200 feet above the surface but less than 10,000 feet MSL. Day	1 statute mile	500 feet below 1,000 feet above 2,000 feet horizontal	
Night	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal	
More than 1,200 feet above the surface and at or above 10,000 feet MSL.	5 statute miles	1,000 feet below 1,000 feet above 1 statute mile horizontal	

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