

M-494.6

AC 105-2A

DATE 4/11/79

ADVISORY CIRCULAR



DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Washington, D.C.

Subject: SPORT PARACHUTE JUMPING

1. PURPOSE. This advisory circular (AC) provides suggestions to improve sport parachuting safety, information to assist parachutists in complying with Federal Aviation Regulations (FAR) Part 105, and a list of aircraft which may be operated with one cabin door removed, including the procedures for obtaining Federal Aviation Administration (FAA) authorization for door removal.

2. CANCELLATION. AC 105-2, Sport Parachute Jumping, dated 9/6/68, is canceled.

3. GENERAL. Sport parachute jumping activities are increasing. While parachutists are not certified airmen, it is recommended that training be conducted as outlined in the United States Parachute Association (USPA) training doctrine or training programs from other similar organizations. Accident statistics have shown that a high percentage of fatal parachute accidents involve student jumpers. During 1976, for example, approximately 42 percent of all parachuting fatalities involved persons who were in training and between their first and 24th jump. These figures indicate that parachutists are exposed to their greatest danger during the process of learning. This AC is designed to assist beginning parachutists and, at the same time, provide helpful information to all other personnel that are involved in sport parachute jumping. In the revision process of this AC, the FAA solicited and received full cooperation and assistance from the USPA and the military services.

4. SAFETY SUGGESTIONS.

a. Medical. All would-be parachutists are urged to complete a general physical examination prior to their first jump. The physician should be informed of the purpose of the examination.

b. Initial Training. Prospective parachutists are encouraged to complete a controlled program of instruction prior to attempting a parachute jump. The initial program should cover at least the following areas:

Initiated by: AFS-820

(1) Familiarization with Parachutes.

- (i) Types to be used.
- (ii) Main components of the sport parachute.
- (iii) Function of the sport parachute system.
- (iv) Fitting the harness.
- (v) Proper maintenance and care of parachutes.
- (vi) Canopy control.
- (vii) Auxiliary parachute.

(2) Familiarization with the jump aircraft (the best training aid is the jump aircraft).

- (i) Types used.
- (ii) Entering procedures.
- (iii) Seating procedures.
- (iv) Pre-jump preparation (fitting and attachment of static line, jumpmaster instructions, etc.).
- (v) Rigging for the jump (buddy system, procedures, etc.).
- (vi) Exiting from the aircraft.

(3) Normal Operating Procedures.

- (i) Verbal count of six seconds after exit to give main parachute time to open.
- (ii) Check of main chute deploying on count of six or immediately after opening.
- (iii) Drill on a suspended harness (correcting for malfunctions, dummy ripcord pull of auxiliary chute, etc.).

(4) Emergency Procedures.

- (i) Aircraft in-flight emergencies.
- (ii) Equipment malfunctions.

(iii) Familiarization with the types of reserve chutes (including compatibility with the various types of main chutes).

(iv) Auxiliary chute deployment procedures.

(5) Parachute Landing Falls (preferably from a jump platform).

(i) Types of landing falls.

(ii) Points of body contact.

(iii) Recovery from drags.

(iv) Special landings (tree, high tension wire, water, etc.).

(6) Familiarization with Parachuting Accessories and Instruments.

(i) Altimeters.

(ii) Automatic openers.

(iii) Flotation equipment.

(iv) Personal equipment (boots, goggles, helmets, coveralls, etc.).

(7) Familiarization with Federal Aviation Regulations and Advisory Circulars on Sport Parachuting.

(i) FAR Part 65, Certification: Airmen Other Than Flight Crewmembers.

(ii) FAR Part 91, General Operating and Flight Rules.

(iii) FAR Part 105, Parachute Jumping.

(iv) FAR Part 149, Parachute Lofts.

(v) Technical Standard Order (TSO) C23b, Parachutes.

(vi) AC 65-5A, Parachute Rigger-Senior/Master-Certification Guide.

(vii) AC 149-2H, Listing of Federal Aviation Administration Certification Parachute Lofts.

NOTE: See paragraph 5 for more detailed information.

c. Initial Jumps. Upon completion of a pre-jump instruction program, the following minimum static line jump training is recommended prior to attempting a free-fall jump (if a person has not engaged in parachute jumping activity during the preceding 90 days, static line jumps should be made prior to attempting any free-fall jumps):

(1) At least five static line jumps should be performed from an altitude of at least 2,800 feet above the surface. Low altitude jumps should not be attempted by students.

(2) In order to simulate free-fall type jumps, at least three successive static line jumps should be made during which a dummy ripcord pull is completed prior to opening of the main parachute canopy. These jumps should be accomplished without loss of stability or body control during the fall. (These demonstrations may be accomplished during the five jumps suggested in par. (1) above, or it may be necessary to exceed that number.)

(3) Detailed equipment checks should be made by the jumper prior to each jump. The static line should be checked visually for hookup, and manually by two or three sharp tugs to determine security to the aircraft attaching point. The attachment in the aircraft and the static line attachment should be specifically designed and installed for the purpose intended.

(i) If automatic opening devices are used, a pre-jump check should be made for proper setting, arming, and operational reliability. Devices that depend upon battery power should include periodic check of battery output under a loaded condition. (See par. 4d(2).)

(ii) An experienced parachutist, who acts as the jumpmaster, should make a final inspection of all equipment prior to each jump.

(iii) Complex parachute rigs that require precise action on the part of the jumper should not be used during initial training.

d. Safety Devices and Equipment.

(1) Deployment assist device. Section 105.43(b) of the FAR prohibits any person from making a parachute jump using a static line attached to the aircraft and the main parachute unless an assist device is used to aid the pilot chute in performing its function or, if no pilot chute is used, to aid in the direct deployment of the main parachute canopy.

(2) Automatic opening devices. Although student jumpers seem to feel more at ease if their auxiliary parachutes are equipped with an automatic opening device, recent service experience indicates that such devices may not be completely reliable. Parachute jumpers who elect to use automatic opening devices on the auxiliary parachute should ensure that such devices have been approved by the parachute manufacturer or FAA. The installation of an automatic opening device to a TSO or Military Specification (MIL) -

approved parachute constitutes a major alteration to that parachute. One type of automatic opener utilizes an aneroid type activator which is quite sensitive and could be damaged by a hard fall, or by tossing the parachute into a bin or on a table. Some automatic openers are operated by a timing spring which must be set prior to jumping. These devices are also subject to damage. A parachutist who uses any type of automatic opener should be aware of the reliability aspects of such devices and become very familiar with the device. A complete check of the device and its components should be made prior to each jump to ensure proper functioning. If such devices are used, care must be exercised in setting the minimum opening altitude so as to ensure sufficient time for complete deployment of the auxiliary chute. The jumper should always be prepared to manually pull the ripcord of the auxiliary chute no matter what type of automatic opener is used.

(3) Safety equipment. The area in which jumps are made will indicate the type of safety equipment which should be carried. Each year there are fatalities which resulted from accidental water entries. These deaths were attributed to absence of flotation gear, inability to swim, use of incorrect procedures, and/or extremely cold water. No one should jump without some type of flotation gear except in the few areas where there are absolutely no water-filled ditches or bodies of water in which the jumper could possibly land. Personal gear such as boots, helmets, etc., should be kept in good condition.

(4) Oxygen equipment. Jumpers should use oxygen equipment when the jump aircraft is at altitudes above 10,000 feet MSL (mean sea level) for more than 30 minutes. Oxygen equipment should be used continuously above 15,000 feet MSL. Above 25,000 feet MSL pressure demand oxygen systems should be used.

e. Parachute Packing. Section 105.43(a) permits a parachutist to pack his/her own main chute. Auxiliary parachutes, however, should be packed by a certificated parachute rigger with an appropriate type rating. No alteration or modification can be made to either the main or auxiliary parachute unless it is done by an appropriately certificated parachute rigger or a parachute loft. Even though a jumper can pack his/her own chute, he/she should not attempt to do so until he/she has been thoroughly checked out by a certificated parachute rigger or USPA-certificated instructor.

f. Weather. Strong or gusty winds can be dangerous, especially to student jumpers. Student parachutists should not attempt to make jumps when wind velocities or gusts are such as to impose the risk of injury. In addition, parachutists should ensure there is adequate visibility. (See par. 5c.)

g. Advanced Parachuting. The safety suggestions presented in this circular are intended primarily for the student parachutist. Individual experience and judgment dictate what additional training should be obtained prior

to undertaking more advanced parachute activities. Use of high-performance or sophisticated parachute equipment should not be attempted without proper checkout and training. Free-fall acrobatics should be worked up to gradually. High-altitude jumps should not be made without first becoming familiar with the problems and hazards created by low temperatures, lack of oxygen, the various types of oxygen equipment, and under no circumstances attempted without an adequate supply of aviators' breathing oxygen (medical and welding oxygen is unsuitable and could be dangerous).

5. INFORMATION ON REGULATIONS AND ASSOCIATED OPERATING PRACTICES.

a. Federal Aviation Regulations (FAR). The Parts of the FAR which are of interest to parachutists are described below. They may be purchased from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402. Ordering instructions, FAR prices, and stock numbers are contained in AC 00-44, Status of FARs.

(1) Part 65 - Certification: Airmen Other than Flight Crewmembers. Subpart F concerns parachute riggers, their eligibility requirements, privileges, and performance standards.

(2) Part 105 - Parachute Jumping. This Part is especially important to parachutists and to pilots who carry them, since it contains the rules on intentional parachute jumping.

(3) Part 91 - General Operating and Flight Rules. Section 91.15 parachutes and parachuting.

(4) Technical Standard Order (TSO) C23b sets forth the minimum performance and safety requirements for parachutes. TSO C23b is contained in Part 37 of the Federal Aviation Regulations, Section 37.133.

(5) AC 00-44 and this advisory circular may be obtained at no cost by writing the U.S. Department of Transportation, Publications Section, M-443.1, Washington, D.C. 20590.

(6) United States Parachute Association has developed basic safety standards. These are standards for training, checking equipment, and conducting sport parachuting. While not officially approved by the FAA, these standards have been widely used for guidance by individuals and parachute clubs. Copies may be obtained at no cost from the United States Parachute Association, 806 15th Street, N.W., Washington, D.C. 20005.

(7) This circular is based on FAR requirements in effect on the date the circular is published. The FAR may be amended at any time. Parachutists should keep up with changes in the FAR and always comply with current requirements.

b. Parachute Rules. By FAR Part 1 definition, a parachute is a device used or intended to be used to retard the fall of a body or object through the air. For the purposes of this circular, a parachute is an assembly consisting of a harness, canopy, suspension lines, container, ripcord, pilot parachute (if required) and, in some cases, a deployment sleeve or bag. There are, of course, some lesser parts associated with these main components, such as connector links, "D" rings, and pack opening bands. The term "pack" (such as backpack or chestpack), when used in this circular, refers to the parachute assembly, LESS THE HARNESS. This distinction is essential for a clear understanding.

(1) Parachute equipment. FAR 105.43 prescribes that in intentional jumping, the parachutists should wear a single harness dual parachute pack having at least one main parachute and one "approved" auxiliary parachute. The main pack need not be an "approved" pack, but the auxiliary (emergency) pack, the harness, and the auxiliary accessories such as an automatic opening device should always be of an approved type. The following are examples of "approved" parachutes as explained in FAR 105.43(d):

(i) Parachutes manufactured under a type certificate (an early method of approval).

(ii) Parachutes manufactured under TSO C23. These TSO's (TSO C23b is the most recent) prescribe the minimum performance and quality-control standards for a parachute carried for emergency use. These standards are met before the manufacturer labels his/her parachute or components as complying with the TSO.

(iii) Military parachutes (other than high altitude, high speed, or ejection kinds) are identified by an NAF, AAF, or AN drawing number, an AAF order number, or any other military designation or specification number. These parachutes are often referred to as demilitarized or military surplus parachutes.

(iv) Automatic opening devices may be approved as a part of a new production TSO parachute or they may be approved in accordance with procedures described under paragraph (3), Parachute alterations.

(2) Parachute packing. The FARs require the auxiliary parachute to be packed by a certificated parachute rigger or by a certificated and appropriately rated parachute loft. A main parachute may be packed by persons authorized to pack auxiliary parachutes or by the person making the jump; however, the jumper should be thoroughly checked out before attempting to pack his/her parachute. Packing of the main canopy should follow the manufacturer's recommendation.

(3) Parachute alterations. Parachute alterations are changes to original configuration such as the removal of a gore, installation of a light webbing or fitting, addition of a deployment sleeve or bag, changing standard

canopy attachment fittings to quick release fitting, dyeing of a canopy, alteration of harness, such as changing the ripcord from the left-hand pull to right-hand pull, or the installation of an automatic opening device on an auxiliary parachute. Parachute alterations may be performed only by:

- (i) A certificated and appropriately rated master parachute rigger.
- (ii) A certificated parachute loft with an appropriate rating.
- (iii) Parachute manufacturer.
- (iv) Each person listed who alters the auxiliary parachute or the harness of a dual parachute pack used for intentional jumping should do so in accordance with approved manuals and specifications. The method of altering a main parachute does not have to be specifically approved. A person seeking approval to alter an auxiliary parachute should proceed as follows:

(A) The person authorized to alter a parachute (as listed above) should contact the GADO inspector to discuss the proposed modification. The modifier should be prepared to show the inspector the nature of the modification by the use of a sample assembly, a sketch or drawing, and to discuss the nature of the tests that will be needed to demonstrate that the modified parachute meets all requirements.

(B) The inspector will study the proposal with the applicant and a plan of action will be agreed upon.

(C) The applicant will then prepare an application in a letter form, addressed to the local General Aviation District Office (GADO). All pertinent data should be attached. The data should include:

- (1) A clear description of the alteration;
- (2) Drawings, sketches, or photographs, if necessary;
- (3) Information such as thread size, stitch pattern, material used, and location of altered components;
- (4) Some means of identifying the altered parachute (model and serial number).
- (5) When satisfied, the GADO inspector will indicate approval by date stamping, signing, and placing the GADO identification stamp on the letter of application.

(4) Removal of pilot parachute. A certificated senior or master parachute rigger may remove the pilot chute from an auxiliary parachute.

When this is done, the parachute should be plainly marked "Pilot chute not installed. This parachute may be used for intentional jumping only."

(5) Extra equipment. It is not considered to be an alteration when an instrument panel, knife sheath, or other equipment is secured to the pack by passing the pack opening bands through panels or sheath slots.

(6) Assembly of major parachute components. The assembly or mating of approved parachute components from different manufacturers may be made by a certificated and appropriately rated parachute rigger or parachute loft without further authorization by the manufacturer or the FAA. Each component of the resulting assembly should function properly and may not interfere with the operation of the other components. For example, a TSO pack may be assembled with a demilitarized harness, or vice versa, as long as the assembled components comply with the safety standards of the original design. Any question about the strength or operation of the assembly should be resolved by actual tests by the rigger or loft to make certain the parachute is safe for emergency use. The user of a single harness dual parachute pack may perform simple assembly and disassembly operations necessary for transportation, handling, or storage between periods of use if the parachute is designed to facilitate such assembly and disassembly without the use of complex operations.

(7) Repairs. Parachute repairs can be classed as major repairs or minor repairs. A major repair, as defined in FAR Part 1, is a repair "that, if improperly done, might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness." Other repairs are minor repairs. Major parachute repairs may be made by a master parachute rigger, a parachute loft, or a manufacturer. Examples of major repairs are: replacement of a canopy panel, suspension line, or connector link. Minor parachute repairs may be made by a senior parachute rigger in addition to those authorized to make major repairs. Examples of minor repairs are: replacement of a ripcord pocket, darning, or sewing a small patch on a canopy.

(8) Plating of fittings. Plating or replating of load-carrying parachute fittings may cause hydrogen embrittlement and subsequent failure under stress unless the plating is done properly. Chrome or cadmium plated harness adjustment hardware may also have a smoother finish than the original and may permit slippage. The parachutist should be aware of these possible hazards.

c. Pilot Responsibilities. The pilot in command of a jump aircraft is solely responsible for certain requirements and jointly responsible for others. The following is a partial list of these requirements:

(1) Pilot certification and experience requirements. The pilot is held solely responsible for meeting the certification, proficiency, and experience requirements of Part 61.

(2) Operation requirements. The pilot is responsible for the operation requirement of Part 91 to include the special operating limitations and placards issued for door removal.

(3) Weight and balance procedures. Of paramount importance is the need for the pilot in command to know when his/her aircraft is properly loaded. There can be situations when improper location of jumpers could place the aircraft out of center of gravity (CG) limits. All pilots of aircraft used for sport parachute jumping should give consideration to standard equipment which has been removed (seats and door) and the new empty-weight CG computation. Additional station position information should be provided to the pilot for future weight and balance computations. If this information is not provided, the pilot would experience considerable difficulty in determining actual loaded CG. As a minimum, all aircraft used for sport parachute jumping should contain sufficient information to enable a pilot to compute the aircraft loaded weight and balance.

(4) Jump target zone. It is a good practice for the pilot to make sure that the jump target zone is plainly visible from the aircraft prior to releasing parachutists.

(5) Altitude reporting. Report all altitude to air traffic control in feet above mean sea level (MSL).

(6) Flight visibility and clearance from clouds. The pilot and jumper are jointly responsible for complying with the flight visibility and cloud clearance requirements of Section 105.29. (See App. 1, p.2.)

d. Radio Equipment Requirements. Section 105.14 prescribes the two-way radio communications equipment requirements for aircraft used for parachute jumps in or into controlled airspace unless otherwise authorized by air traffic control. Radio communications should be established with the FAA air traffic control facility or FAA Flight Service Station at least 5 minutes before jumping activity is to begin for the purpose of receiving information on known air traffic in the vicinity of the jump area. Jumping activity cannot begin until this information is received. Additionally, a continuous watch should be maintained on the appropriate frequency until jumping activity is ended. When jumping activities are completed or discontinued, air traffic control should be so informed as soon as possible.

e. Authorization/Notification Requirements. Whether or not written or oral authorization is required for a parachute jump depends upon the type of airspace involved, and the area where the parachutist intends to land. The same criteria determines the type of pre-jump notification requirements. These requirements are explained in detail on page 11. Appendix 1 is an easy reference table parachutists can use to determine what authorization or notification requirements are needed for various types of jumps.

(1) Jumps over or into congested areas or open air assembly of persons. Section 105.15 requires written authorization for these jumps (except for emergencies and certain Armed Forces' operations). Advance application, of at least 4 days, is made by submitting, in triplicate, FAA Form 7711-2, Application for Certificate of Waiver or Authorization, to the FAA General Aviation District Office responsible for the area where the jump is to take place. This rule concerns jumps over or into congested areas or open air assembly of persons. The determination of whether the FAA will authorize the jump will depend on the circumstances of each case. The FAA will not authorize a jump that is hazardous to the public interest. One of the main considerations in granting authorization will be the skill of the parachutist making the jump. The FAA office may stipulate that only a well-qualified jumper may participate in the activity. A demonstration of landing accuracy may be asked for, depending on factors such as the size of the landing area, individual parachutist record, license held, etc. The key to determine if an authorization is or is not necessary is the word "INTO." The following examples may help to clarify the intent of this section and assist in determining when an authorization is necessary:

(i) A jump at a town just east of a large lake. The jumper wishes to exit the aircraft over the lake and drift eastward to land in an open area. NO AUTHORIZATION IS REQUIRED.

(ii) At the same town, the jumpers wish to change the landing site to a school playground in the eastern part of town. The playground is several acres in size, completely fenced in, but surrounded by residential dwellings. Even though the landing target can be placed 500 to 600 feet from the fence, the jump is into a congested area and AUTHORIZATION IS REQUIRED.

(iii) An exhibition jump is planned during the county fair. The fairgrounds are on the north edge of town with clear, open land on three sides. The jumpers plan to exit their aircraft on one side of the fairground and land on the opposite side. This is a drift-over jump and an AUTHORIZATION IS NOT REQUIRED.

(iv) At the same fairgrounds, the target is to be placed in the middle of a race track, enclosed by a wire mesh fence and located near the center of the fairgrounds. The target is more than 500 feet from the fence. This would be a jump INTO an open assembly of persons and AUTHORIZATION IS REQUIRED.

(v) Jumps made into large areas, even though near or within a populated area, or near an assembly of persons, do not require written FAA authorization. This provision applies to open areas large enough to enable the parachutist to EXIT the aircraft over the area and REMAIN within the area during descent and landing. Since at no time a jumper would be over anyone on the surface, a jump of this nature would not impose a public hazard. However, parachutists should be careful to completely clear the area of assembly of persons.

(2) Jumps over or onto airports. Section 105.17 requires prior approval of the airport management for jumps made over or onto an airport. However, this does not prevent a parachutist from drifting over an airport without prior approval if the chute is fully deployed and properly functioning and he/she is at least 2,000 feet above the AIRPORT TRAFFIC PATTERN and avoids creating a hazard to air traffic or to persons and property on the surface.

(3) Jumps in or into control zones. Section 105.19 requires an authorization for jumps in or into a control zone with a functioning U.S. operated control tower. Requests for these authorizations do not require a specified lead time, but reasonable notice is desirable so that control tower personnel can adjust the jumps to expected traffic conditions. The authorization and instructions that are issued by the tower for the jumps are based on Visual Flight Rules (VFR) and known air traffic, and do not relieve the parachutists, or the pilot in command of the jump aircraft, from compliance with all air traffic and general operating rules. When jumps in or into control zones involve jumping over or onto an airport, Section 105.17 should also be complied with as explained in paragraph (2) above.

(4) Jumps in or into positive control areas. Section 105.21 prescribes the authorization requirements for parachute jumps in or into positive control areas.

(5) Jumps in or into other airspace. Section 105.23 prescribes the advance notification requirements for parachute jumps in controlled and uncontrolled airspace other than those previously covered in paragraphs (1) through (4). The FAA air traffic control facility or Flight Service Station nearest to the proposed jump site should be notified at least one hour before the jump is to be made, but not more than 24 hours before the jump is to be completed. ATC may accept written notification of a scheduled series of jumps to be made over a stated period of time not to exceed 12 calendar months.

6. AIRCRAFT OPERATING AND AIRWORTHINESS REQUIREMENTS.

a. Procedure. Owners or operators using aircraft listed in Appendix 2 of this AC, and interested in obtaining authorization with operating limitations for operation of such aircraft for parachuting, or other special operations, should forward a written request to the FAA General Aviation District Office having jurisdiction over the area in which such operations are to be conducted. The request should contain the following information:

- (1) Name and address of the registered owner of the aircraft.
- (2) Make, model, serial and registration number of the aircraft.
- (3) Place where the aircraft is normally based.
- (4) Reason the aircraft is to be operated with a door removed.

b. List of Eligible Aircraft. Appendix 2 identifies the aircraft which can be operated with one cabin door removed. Other aircraft may be approved for this type of operation if the applicant shows approval by the FAA or the manufacturer.

c. Installation and Removal of Equipment. Removal and installation of equipment will be handled in accordance with the applicable sections of FAR 43. The original conversion to the jump configuration should be performed by an appropriately certificated person and recorded in the aircraft records. The equipment list and weight and balance data should be revised to show both the jump configuration and the normal configuration. Subsequent conversions may be made by the pilot if the work falls within the scope of preventive maintenance (see FAR Part 43, Appendix A(c)).

d. Office of Management and Budget (OMB 04-R0140). The reporting and/or recordkeeping requirements contained in this paragraph (paragraph 6) have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.



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Flight Standards Service

TABLE OF LOCATION OF JUMP/AUTHORIZATION/NOTIFICATION

Location of Jump	Kind of Authorization or Approval Required	When to Apply or Notify	Where to Obtain or Give Notice	FAR Reference
Over or into congested areas or open air assembly of persons.	Certificate of authorization	Apply at least 4 days before the jump	FAA General Aviation or Flight Standards District Office	105.15
Over or onto an airport with or without a U.S. operated control tower.	Prior Approval	Apply before jump	Airport Management	105.17
In or into control zone with a U.S. operated control tower.	Authorization <u>1/</u>	Apply before jump	Control Tower <u>2/</u>	105.19
In or into positive control area <u>3/</u> .	Authorization <u>1/</u>	Apply before jump	Nearest ATC facility or FSS <u>2/</u>	105.21
In or into other controlled airspace.	None	Notify before jump	Nearest ATC facility or FSS at least 1 hour before but not more than 24 hours before jumping is to be completed <u>2/</u>	105.23
In or into uncontrolled airspace.	None	Notify before jump	Same as above except <u>2/</u> does not apply	105.23
Over or within restricted or prohibited.	Authorization <u>1/</u>	Apply before jump	The agency in charge of the area	105.27

- 1/ Verbal authorization normally issued.
- 2/ Communication required with nearest FAA ATC or FSS 5 minutes before jump.
- 3/ Positive control area begins at 18,000 feet and extends upward to 60,000 feet.

NOTE: This table does not apply to jumps by the Armed Forces over or within restricted areas that are under the control of an Armed Force or during military operations in uncontrolled airspace.

Information Required for Notification. (FAR 105.25)

1. Date and time jumping will begin.
2. Size of the jump zone in nautical miles (radius around target).
3. Location of jump zone related to the nearest VOR radial or nearest airport, town, or city.
4. Altitudes above the surface at which jumping will take place.
5. Time and duration of the intended jumping.
6. Name, address, and telephone number of the person requesting the authorization or giving notice.
7. Identification of the aircraft to be used.
8. Radio frequencies, if any, available in the aircraft.

NOTE: Although not specifically required by all authorization and notification sections of FAR 105, the FAA recommends that proposed jump areas be coordinated with the nearest ATC facility for advisory information concerning other airspace operations.

Clearance-From-Clouds Requirements and Visibility Minimum. (FAR 105.29)

More than 1,200 feet above the surface and at or above 10,000 feet MSL: 1,000 feet under, 1,000 feet over, 1 mile horizontally from clouds. Flight visibility 5 miles.

Elsewhere: 500 feet under, 1,000 feet over, 2,000 feet horizontally from clouds.
Flight visibility 3 miles.

NOTE: NO PERSON MAY MAKE A PARACHUTE JUMP INTO OR THROUGH A CLOUD.

"Controlled Airspace" means airspace, designated as continental control area, control area, control zone, terminal control area or transition area, within which some or all aircraft may be subject to air traffic control. (FAR 1.1)

Parachute Equipment and Packing Requirements for Intentional Jumping. (FAR 105.43)

The parachutist should wear a single harness dual parachute pack, having at least one main parachute and one approved auxiliary parachute. The main parachute should have been packed by a certificated parachute rigger, or by the person making the jump, within 120 days before its use. The auxiliary parachute should have been packed by a certificated and appropriately rated parachute rigger within 120 days when constructed of synthetic fiber, and 60 days when constructed of natural fiber material such as silk.

OFFICE OF MANAGEMENT AND BUDGET (OMB 04-R0147). The reporting and/or recordkeeping requirements contained in Appendix 1 have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

AIRCRAFT THAT MAY BE OPERATED WITH ONE CABIN DOOR REMOVED

Aeronca 05B	Fairchild 24 Series (R/H door)
Aeronca 15AC	Helio H 250
Beech AT-11, 18 Series, C-45 and TC-45 Series	Helio H 295
	Helio H 391
Centaur 101	Helio H 395
Cessna 120 Series	Howard DGA-15 Series
Cessna 140 Series	Larson (Luscombe) 8 Series (R/H door - maximum airspeed 100 MPH)
Cessna 150 Series	
Cessna 170 Series	Lockheed Model 12A
Cessna 172 Series	Lockheed 402-2 (R/H rear door)
Cessna 175 Series	Macchi AL 60 (R/H rear door)
Cessna 180 Series	Noorduyn UC-64 Series (rear door)
Cessna 182 Series	Piper PA-12
Cessna 185 Series	Piper PA-18 Series
Cessna 190	Piper PA-20 Series
Cessna 206 Series (with Cessna Accessory Kit AK 206-1 installed)	Piper PA-22 Series
Cessna 210 Series	Piper PA-28-140-160-180-235
Cessna (Ector) 305A	Stinson V-77
Champion (Aeronca) 7 Series	Stinson Jr. SR-4
Curtiss Wright (Travel Air) S-6000B	Stinson SR-7B (R/H door)
	Taylorcraft BC 12-D
Douglas DC-3 (Maximum airspeed cabin passenger door removed 170 knots)	Temco (Luscombe) 11A (R/H door)
	Universal (Stinson) 108 Series

NOTE: Some of the above aircraft may require installation of deflectors to reduce vibration while being operated with a door removed.

In addition, the following aircraft have been approved by Supplemental Type Certificate (STC). For information regarding the holder of a specific STC, contact the local GADO or EMDO.

Beech D17S	STC SA 603 SO
Cessna 177	STC SA 466 SO
Cessna 195B	STC SA 1966 SW
Cessna 337A	STC SA 190 SO
De Havilland DHC-6-300	STC SA 132 RM
Lockheed 18-56	STC SA 892 SO
Maule M4, M-4-210	STC SA 258 CE
Piper PA 23-108	STC SA 245 SO
Stinson SR 8B	STC SA 320 SO

For information regarding field approval of other aircraft, contact the local GADO OR EMDO.

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