Skydiving and Parachute Operations - P-8740-57

Introduction

These days, the sky has become a very busy place, and pilots are not the only ones who use it. Skydiving is growing in popularity at a remarkable pace. Safety and awareness of skydiving operations is necessary since all users of the National Airspace System have the responsibility to know and understand each other's operation.

To assist in this improved understanding, the FAA and the US Parachute Association have collaborated to create this pamphlet and a video entitled *Skydiving and Parachute Operations.* Pilots are encouraged to review the information in both the pamphlet and the video.

This pamphlet describes:

- Skydiving origins and growth
- Skydiving procedures
- Pilot safety concerns
- Pilot and skydiver responsibilities
- Key references

Skydiving Origins and Growth

Present day skydiving began with the life-saving necessity known as parachuting. From the late 1940s to the 1960s, a few hundred adventuresome souls acquired WWII military surplus parachuting equipment. Once airborne, the goal was to get out of the airplane and make it to the ground in one piece. The idea quickly caught on, and clubs began forming at airports around the country.

In the late 1960s and 1970s, parachutists began to use larger aircraft and jump from higher altitudes. It wasn't long before parachutists were arranging themselves in a multitude of aerial formations with remarkable ease and dexterity. Soon, these energetic men and women were being called Skydivers engaged in Sport Parachuting -- or, as it is currently known -- Skydiving.

The sport of skydiving spread worldwide. American skydivers alone make nearly 3,000,000 jumps per year either on or next to over 300 general aviation airports. With this growth, you can begin to see the need for education and communication.

Skydiving Procedures

There are certain regulations and related information regarding skydiving and aircraft operations that need to be adhered to. The purpose of this is to ensure that operations are performed at the optimum safety level.

Regulations and Related Information

These regulations and related information can be found in the following documents:

- 14 CFR Part 105 - Parachute Jumping

- Advisory Circular 105-2C - Sport Parachute Jumping *(http://www.airweb.faa.gov/Regulatory_and. . .5870370C862569DE005BD7AA?OpenDocument)*
- Advisory Circular 90-66A - Recommended Standard Traffic Patterns and Practices for Aeronautical Operations at Airports without Operating Control Towers *(http://www.airweb.faa.gov/Regulatory_and. . .9457E4AB862569D800780551?OpenDocument)*
- Skydiver's Information Manual (published by the US Parachute Association)
- *Aeronautical Information Manual* *(http://www.faa.gov/ATpubs/AIM/index.htm)*

Skydiver Qualifications

Skydivers become qualified to jump after graduating from an extensive course of instruction developed by the US Parachute Association. Throughout the course, they are under direct instructor supervision. Instruction covers many aspects, including indoctrination on how aircraft use airports. Skydivers gain a healthy respect for aircraft and pilots.

Drop Zone

A *drop zone* is a designated landing area clear of obstacles, and is usually marked with a brightly colored wind sock. Drop zone operators, jump pilots, airport management, and aviation officials meet and agree upon key safety concerns and practical issues of sharing airports and the surrounding airspace. Some drop zones located beneath complex airspace have a letter of agreement with the appropriate FAA air traffic control facility to address site-specific issues and concerns.

Each day before the jumping begins, the drop zone operator contacts the Flight Service Station for the latest weather forecast and winds aloft forecast. The jump pilot files a notification with Air Traffic Control at least one hour prior to the first drop. Skydiving operations with continuous activity may file a permanent notification. These areas are often, but not always, depicted on aeronautical charts with a parachute symbol and are listed in the Airport/Facility Directory. The actual location of parachute symbols on the chart does not represent the precise location of drop zones. The symbol on the chart may be in the only free spot that is clear of other markings. Another reasons to make sure you look for these symbols is because the FSS will not normally identify these permanent notifications during a preflight briefing, unless specifically requested to do so.

Takeoff and Climb

During jump operations, the jump pilot follows procedures covered by the general operating and flight rules of Part 91 of 14 CFR. The jump pilot is also required to follow 14 CFR Part 105, which includes special provisions unique to parachute operations.

Prior to takeoff, the skydivers load up and secure themselves with seat belts. The pilot assures that the aircraft's weight and balance parameters are not exceeded.

A typical climb pattern has the jump aircraft quickly leaving the airport traffic pattern and climbing to the jump altitude, which generally ranges from 10,000 AGL to 15,000 AGL. The location of the aircraft climb and descent areas is determined by several factors, including:

- Winds aloft

- Proximity to airways
- Population density
- Air traffic control

Specific procedures may vary by airport.

Jump Run

The jump run typically takes place over the designated landing area and usually into the wind. A few minutes prior to the drop, the jump pilot contacts ATC, advising of jump altitude and exit time. ATC then advises of any aircraft or unsafe conditions in the area. Before the drop, the jump pilot may make a blind call on UNICOM as an additional alert to aircraft in the vicinity of the drop zone.

Exit

From typical jump altitudes of 10,000 AGL to 15,000 AGL, it takes just over one minute to freefall to parachute opening altitudes of 4,000 AGL to 2,000 AGL. The jump pilot ensures that all jumpers have exited, and then advises ATC that jumpers are away.

Descent

Even with a minimum parachute opening altitude of 2,000 AGL, skydivers are well above the normal aircraft traffic pattern altitude. Under a parachute, the rate of descent slows to about 1,000 feet per minute. Skydiver landing patterns at airports are generally contained well within aircraft traffic patterns. Except in rare cases, skydivers open their parachutes upwind of the intended landing area, and then land into the wind to minimize speed and to maximize flare.

Skydiving ends when the jump pilot verifies that all skydivers are down, and advises ATC that all have landed. The jump pilot then makes a quick descent to the airport - continually scanning for other air traffic. Specific procedures vary by airport.

Pilot Safety Concerns and Responsibilities

To learn more about parachuting procedures, pilots can turn to the documents listed in a previous chapter. Additionally, pilots should check:

- NOTAMs
- Airport/Facility Directory
- Sectional Charts

Pilots and skydivers need to be alert and follow the rules. It is the responsibility of everyone to watch for, and avoid, each other. Because skydivers freefall at a speed of 120 mph or more, they are extremely difficult to spot from other aircraft. Unless you are flying into, or out of, and airport where skydiving is taking place, it is best to avoid overflying such an airport by at least 2 miles. Maintain a listening watch on UNICOM.

As pilots, we can appreciate the energy and dedication that has taken skydiving from a survival skill to a world class sport. As interest and participation in skydiving continues to grow, so does our individual responsibility to follow procedures and do everything possible to maintain our mutual safety.

About This Series

The purpose of this series of Federal Aviation Administration (FAA) Aviation Safety Program publications is to provide the aviation community with safety information that is informative, handy, and easy to review. Many of the publications in this series summarize material published in various FAA advisory circulars, handbooks, other publications, and various audiovisual products developed by the FAA and used in its Aviation Safety Program.

Some of the ideas an materials in this series were developed by the aviation industry. The FAA acknowledges the support of the aviation industry and its various trade and membership groups in the production of this series.

Comments regarding these publications should be directed to the National Aviation Safety Program Manager, Federal Aviation Administration, Flight Standards Service.

For more information on skydiving and parachute operations or details on the US Parachute Association, please call 1-800-371-USPA or visit online at http://www.uspa.org.