

- Since the WSC aircraft is designed without the weight and drag of a tail, the performance is significantly increased. The aircraft can take off and land in short fields, has good climb rates, can handle a large payload, has a good glide ratio, and is fuel efficient. The WSC LSA typically can carry 600 pounds of people, fuel, and baggage.

Besides having large and small wings for different speeds, the WSC aircraft wings can have wires for bracing, struts, or a combination of both. Throughout this handbook, both are used in diagrams and pictures. WSC aircraft are typically on wheels, but there are models that can land and take off on water and snow. [Figure 1-15]



Figure 1-15. WSC aircraft with struts similar to those on an airplane (top) and WSC aircraft operating on water (bottom).

Weight-Shift Control LSA Requirements

A WSC LSA must meet the following requirements:

1. A maximum takeoff weight of not more than—
 - 1,320 pounds (600 kilograms) for aircraft not intended for operation on water; or

- 1,430 pounds (650 kilograms) for an aircraft intended for operation on water
2. A maximum airspeed in level flight with maximum continuous power (V_H) of not more than 120 knots calibrated (computed) air speed (CAS) under standard atmospheric conditions at sea level.
 3. A maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices (V_{SI}) of not more than 45 knots CAS at the aircraft's maximum certificated takeoff weight and most critical center of gravity.
 4. A maximum seating capacity of no more than two persons, including the pilot.
 5. A single reciprocating engine.
 6. A fixed or ground-adjustable propeller.
 7. Fixed landing gear, except for an aircraft intended for operation on water.
 8. Fixed or retractable landing gear, or a hull, for an aircraft intended for operation on water.

Flight Operations and Pilot Certificates

The FAA is empowered by the United States Congress to promote aviation safety by prescribing safety standards for civil aviation programs and pilots. Title 14 of the Code of Federal Regulations (14 CFR), formerly referred to as Federal Aviation Regulations (FAR), is one of the primary means of conveying these safety standards. [Figure 1-16] 14 CFR part 61 specifies the requirements to earn a pilot certificate and obtain additional WSC privileges if already a pilot. 14 CFR part 91 is General Operating and Flight Rules for pilots. The Aeronautical Information Manual (AIM) provides basic flight information and operation procedures for pilots to operate in the National Airspace System (NAS).



Figure 1-16. Federal Aviation Regulations (FAR) and Aeronautical Information Manual (AIM).