

designs or require that you modify the design before airworthiness certification. However, we may deny airworthiness certification if when we inspect your aircraft, we find it does not meet the requirements for the certification you request or is not in a condition for safe operation. If we deny your certification request, we will send you a letter stating why we denied it. We will put a copy of the letter in your aircraft record in the FAA Aircraft Registry office. Reference § 21.193(c) and Order 8130.2 for more information.

**13. PHASE I FLIGHT TESTING.**

**a. Flight Tests.** Section 91.319(b) requires you to show your aircraft is controllable at all its normal speeds during all the maneuvers you might expect to execute. You must also show it has no hazardous operating characteristics or design features.

**b. Number of Flight Test Hours.** The number of hours depends on your aircraft’s characteristics. See the following table for specific requirements. The FAA inspector may decide you need additional hours of flight testing beyond those shown in the table to comply with § 91.319(b).

Aircraft Characteristics	Required Flight Testing
Type-certificated engine/propeller combination	25 hours
Non-type-certificated engine/propeller combination	40 hours
Gliders, balloons, dirigibles, and ultralight vehicles eligible for FAA certification	10 hours, including five takeoffs and landings

**c. Location.** You may suggest the location of a flight test area to the FAA inspector. If the inspector approves your suggestion, they will specify it in your operating limitations. Usually, the flight test area should be within a 25-statute-mile radius from your aircraft’s base of operation. Under § 91.305, the flight test must be over open water or sparsely populated areas with light air traffic so it does not pose a hazard to persons or property on the ground. You can ask us to help you pick a suitable area to ensure adequate airspace for flight testing.

**d. Procedures.** See AC 90-89 for recommended flight testing procedures. We *strongly* recommend builders get a copy of this AC and follow its guidance. Also, the EAA will help its members in developing flight testing programs.

**e. Restrictions.**

**(1) Carrying Passengers.** You may not carry passengers while you are restricted to the flight test area or during any portion of your Phase I flight test program. We suggest you use a tape or video recorder for recording readings and other similar tasks. If you need an additional crewmember for a particular flight test, specify that in your application program letter for the airworthiness certificate. We will list this need in your operating limitations.

**(2) Flight Instruction.** You may not receive flight instruction during your flight test.