

Federal Aviation Agency

Cancelled AC 00-2M



AC NO: 61-40

CERTIFICATION:
PILOTS AND FLIGHT
INSTRUCTORS

EFFECTIVE :
9/14/67

SUBJECT : PERFORMANCE OF STALLS ON PILOT FLIGHT TESTS

1. **PURPOSE.** This circular advises flight test applicants and flight instructors of changes in the performance of stalls on flight tests for the issuance of pilot certificates and ratings, and recommends that training procedures be modified accordingly.
2. **BACKGROUND.** The number of serious stall and spin accidents during pilot training in high performance small airplanes is increasing. Since the institution of the procedures still in common use for flight instruction in stall recoveries, the stalling speeds and horsepower of airplanes generally used for flight instruction have more than doubled. Flight test requirements have been progressively modified with advances in airplane design, but are still inappropriate for the latest high performance types. Accordingly, FAA inspectors and pilot examiners have been directed to apply immediately the following procedures on stall demonstrations in small (12,500-pound and under) airplanes. Outstanding Flight Test Guides will be changed to incorporate them at their next revision.
3. **STALL DEMONSTRATIONS.** Beginning immediately, the following factors will be emphasized in the demonstrations of stalls on pilot flight tests in small airplanes. **THEIR OBSERVANCE IS RECOMMENDED FOR ALL PILOT FLIGHT TRAINING, ESPECIALLY IN HIGH-PERFORMANCE AIRPLANES.**
 - a. **Power Stalls** will be entered with approximately 65 percent power, instead of maximum authorized climb power as has been the practice in older airplanes. The lower power loading of modern airplanes makes inadvertent attempts to fly at pitch angles which would result in a stall at full throttle most unlikely. The use of approximately 65 percent power in modern airplanes approximates the performance characteristic of the use of full power in small airplanes of the forties.
 - b. **Takeoff and Departure Stalls** will be entered at liftoff speed, with the gear extended and flaps in takeoff configuration. In spite of Flight Test Guide instructions to the contrary, many flight test applicants continue to attempt these stalls from

cruising speed in clean configuration. The objective is to simulate the flight situation which exists immediately after takeoff.

- c. Single-Engine Stalls will not be demonstrated on multiengine flight tests. Such stalls have never been required by the Regulations for pilot flight tests, and should not be practiced in high-performance airplanes by other than qualified engineering test pilots.
- d. Engine-Out Minimum Control Speed demonstrations should be conducted in strict accordance with the warning on page 19 of the Multiengine Flight Test Guide. No such demonstration should be attempted when the density altitude and temperature are such that the engine-out minimum control speed is known or discovered to be close to the stalling speed. Loss of directional or lateral control just as a stall occurs is hazardous. Such loss of control when the airspeed is five knots or more above stalling, however, need not be serious.
- e. Stall Recoveries from all types of stalls will be initiated as soon as evidence of a stall is detected. Such evidence may be uncontrollable pitching, buffeting, rapid decay of control effectiveness, or a rapid descent in climb attitude with the elevator control in the full aft position.
- f. The Recovery Altitude used for stall demonstrations on flight tests will be sufficient to recover from an inadvertent spin in the airplane concerned, but in no case lower than 1,500 feet above the surface. This is especially important in clean, high-speed airplanes.
- g. Stall Warning Devices will not be deactivated for flight tests in airplanes for which they are required equipment, as indicated in the Flight Test Guides.


Director
acting Flight Standards Service