

Gleim Airline Transport Pilot FAA Knowledge Test Prep

2020 Edition, 1st Printing

Updates

February 2020

NOTE: Sections with changes are indicated by a vertical bar in the left margin. Text that should be deleted is displayed with a line through it. New text is shown with blue underlined font.

If you are tested on any content not represented in our materials or this update, please share this information with Gleim so we can continue to provide the most complete test preparation experience possible. You can submit feedback at www.GleimAviation.com/questions. Thank you in advance for your help!

Study Unit 5 – Aerodynamics and Airplanes

Page 186, Subunit 5.13, Item 3.c. and 3.d.: New material was added to increase students' knowledge base.

3. An aircraft loaded too far rearward will not dampen out the vertical displacement and may alternately climb and dive, with each oscillation becoming steeper. This instability could become dangerous by making the aircraft unmanageable under certain conditions.
 - a. The recovery from a stall in any aircraft becomes progressively more difficult as its CG moves aft.
 - b. This is particularly important in spin recovery, as there is a point in rearward loading of any aircraft at which a “flat” spin develops. A flat spin is one in which centrifugal force, acting through a CG located well to the rear, pulls the tail of the aircraft out away from the axis of the spin, making it impossible to get the nose down and recover.
 - c. An aircraft loaded to the rear limit of its permissible CG range has reduced longitudinal static stability, so it handles differently in turns and stall maneuvers and has different landing characteristics than when it is loaded near the forward limit.
 - d. Tail-heavy loading produces very light control forces, which makes it easy for the pilot to inadvertently overstress the aircraft.

Page 201, Subunit 5.21, Item 14.: This edit corrects the percentage.

14. The Mach number, which produces a sharp change in drag coefficient, is the force divergence Mach number and exceeds the critical Mach number by 5% to ~~400~~10%. There are three advantages of wing sweep. They are an increase in
 - a. The critical Mach number,
 - b. The force divergence Mach number, and
 - c. The Mach number at which drag rise will peak.

Page 229, Subunit 5.13, Question 125: These edits change the question stem, the correct answer, the explanations, and the FAA source.

125. An airplane loaded with the Center of Gravity (CG) ~~aft~~rear of the ~~rear~~aft CG limit could

- A. make it easier to recover from stalls and spins.
- B. make it more difficult to flare for landing.
- C. increase the likelihood of inadvertent overstress.

Answer (~~B~~C) is correct. (FAA-H-8083-25B Chap ~~5~~10)

DISCUSSION: ~~The increased instability from an aft CG makes the aircraft more difficult to flare for landing. Tail-heavy loading produces very light control forces, which makes it easy for the pilot to inadvertently overstress the aircraft.~~

Answer (A) is incorrect. As the CG of the aircraft moves aft, the aircraft becomes progressively more unstable, making the recovery from a stall or spin more difficult. Answer (~~C~~B) is incorrect. ~~The major factor in overstressing is excess weight either exceeding the overall weight limit of the aircraft or exceeding the weight limit for a certain area, such as a baggage compartment. A forward CG, not an aft CG, would make the aircraft more difficult to flare for landing.~~

Study Unit 7 – Air Traffic Control

Page 311, Introduction: This edit updates the link.

Authors' Note: As of August 27, 2019, the FAA will require all flight plans to be filed in the ICAO format on FAA Form 7233-4 Rev. 7/2015. The FAA has announced its intention to include the ICAO flight plan in the knowledge test. In addition to the material in this Study Unit, we recommend you review their guidance at ~~www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/fs/res_links/media/ICAO_Flight_Plan_Filing.pdf~~www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/fs/wd/media/ICAO_Flight_Plan_Filing.pdf.