GROB G102 ASTIR CS – QUIZ

This quiz provides useful information to the pilot transitioning to the Grob G102 sailplane. The answers may be found in the G102 Flight Manual (SN 1387), online, by observation of the sailplane or by asking a club CFI.

You'll see that this G102 has the capability to utilize water ballast in the wings slightly improving performance in some areas. For the purposes of this quiz assume that the G102 is NOT utilizing water ballast. Therefore, the Maximum All Up Weight is 836 lbs (380 kp).

Assume that the factory best L/D is 37:1 at 836 lbs.

1. What are the following speeds in kts?
   a. Never exceed (V-ne) _____
   b. Maneuvering (V-a) _____
   c. On aero tow (V-t) _____
   d. Airbrakes _____
   e. Gear extended _____

2. What is the practical definition of V-a?

3. What are the following performance speeds in kts?
   a. Speed to obtain best L/D? _____
   b. Speed to obtain minimum sink? _____
   c. Approach speed in calm conditions? _____
   d. Minimum approach speed with 20 kts headwind? _____
   e. Approximate stall speed range? ____to ____

4. The G102 airspeed indicator uses what units for airspeed measurement? _____

5. What is the empty weight WITH lead ballast weights in the nose? _____

6. What is the empty weight WITHOUT lead ballast weights in the nose? _____

7. What is the minimum pilot weight with lead ballast? _____

8. What is the minimum pilot weight without lead ballast? _____

9. What is the maximum pilot weight with lead ballast? _____

10. What is the maximum pilot weight without lead ballast? _____

11. What can be done if the pilot's weight is less that the minimum pilot weight?

12. Which tow rope should be used? Why?

13. Where is the pitot pressure source?

14. Where is the static pressure source?

15. What are the units and scale used on the variometers?

16. What is the purpose of the black knob on the top right side (as you're seated) of the instrument panel?

17. What is the purpose of the black knob on the top left side (as you're seated) of the instrument panel?

18. Where is the control/handle to eject the canopy?

19. What color is the release handle and where is it? How far back do you pull?

20. Where is the wheel brake handle

21. Where is the spoiler control handle and what color is it? How does the detent work?

22. Where is the landing gear retraction lever and how does it work?

23. If you raise the gear, how many times should you verify it is down and at what locations in the pattern?

24. Is there a gear warning system? If there is, should you rely upon it as your primary source to lower the gear?

25. Where is the trim control lever, and what setting should it be on for takeoff?

26. In still air, how much altitude (feet per nautical mile) is required? (Use a factor of safety of 2)

27. You've found yourself in a 25-knot headwind and would like to return to the airport. What "speed to fly" would you use? _____

28. Using the Effective Glide Ratio formula: (GS/AS) times factory glide ratio.
    How much altitude (feet per nautical mile) is required in the 25-knot headwind?
    (Use a factor of safety of 2)

29. What is the maximum allowable crosswind speed (in knots) at 90 degrees across the runway to safely land the G102 (SN 1387), our ship?

a. _____

b. It's not provided? (So…. what's your plan?)

30. (Duplicate question) If you raise the gear, how many times should you verify it is down and at what locations in the pattern?