Diamond DA40NG Checkout Quiz

AURORA FLIGHT TRAINING
AN AMERICAN FLIGHT SCHOOL

Fuel System:

1. Who must supervise all fueling operations?

2. Where are the grounding points used when refueling located?

3. Number of fuel tank vents:

4. How many fuel tanks are in the airplane, where are they located, and what is their capacity? What will the fuel indicators read when all the fuel tanks are full?

5. From which tank does the engine normally get fuel? Which tank is the main tank and which tank is the auxiliary tank?

6. What are the 2 ways fuel can be moved from the right to the left tank?

7. What is the max fuel level in left tank after a fuel transfer?

8. What is the max fuel difference/imbalance between L&R tanks?

9. What becomes less efficient when the fuel temperature is > 60°C? How can you cool the fuel in the main tank?

10. What position should the fuel selector be in for normal operations?

11. When would you move the fuel selector out of the normal position? What happens in the other two positions?

12. How many fuel pumps does this airplane have? For each, describe its purpose, when it is used, and how is it controlled.

Electrical System:

13. How many alternators are in the plane and what do they do?

14. What is the voltage & amp ratings of each one?

15. How many batteries are in the plane and what do they do?

16. Explain the approximate timeline of how an alternator failure would eventually result in an engine failure?

17. What actions should be taken in the event of the main alternator failure?

18. Describe the operation of the red essential bus switch.

19. What is an ECU? What happens to the engine if both ECUs lose power?

20. Which ECU does the ECU backup battery power?

21. What does the voter switch do? When would you use it?

22. When would you use the red guarded emergency switch? What does it power and for how long?

23. What operations are not allowed with an empty main battery? (describe)

24. When can't you use an external power supply to start the plane with an empty main battery? (describe)

Engine:

25. Maximum HP (DIN-hp):

26. Max takeoff power ≤ 5 min (% pwr/rpm):

27. Max continuous power (% pwr/rpm):

28. Plan cruise power (% pwr):

29. For preflight, where do you look to see if gearbox oils is sufficient?

30. Before starting the engine, what engine indicator must be off?

31. Before doing the runup, which three temperatures must be in the green?

32. What is the maximum % pwr allowed until then?

33. When might you need to use alternate induction air? Where is the handle located?

34. Coolant temperatures above 105°C can lead to?

35. What actions should you take in flight if the COOL LVL annunciator comes on?

36. What is the normal engine shutdown procedure?

37. What do you need to wait for after engine shutdown before turning off the electrical master key switch?

Pitot Static System:

38. Where is the alternate static port located? What must be closed when it is used?

General:

39. Why must the rear door be unlocked prior to flight?

40. What is the difference between canopy positions 1 and 2?

41. What indications are there that the doors may be open?

42. You've taken off with the canopy in position 2, what should you do?

43. If the rear door becomes partially open inflight, what should you do?

44. After an off-field landing, the airplane is inverted. How can you exit the plane?

45. Why is chocking the main wheels more important the chocking the nose wheel?

46. What is the lowest OAT when the RACC may be operated?

47. What directions of movement are used to clean the windshield? Why is this important?

G1000 NXI & GFC700:

48. What is the fastest way to tune to the emergency frequency on COM1?

49. What is the minimum altitude for engaging the autopilot after takeoff?

50. What is the minimum altitude for using the autopilot in a descent? During an instrument approach?

51. Name all the ways you can disconnect or disable the autopilot:

52. Which G1000 functions do you lose when the ESS switch is on?

Best Practices:

- Always watch EVERY refueling from start to end!
- Check that JET-A is available at your destination.
- Never turn the prop by hand!
- Never turn off the guarded engine master in flight.
- Check cabin light switches after flight.
- Don't step on the seats.
- **Don't place items on glare shield when canopy is** open; they will get crushed & cause damage
- Use your checklists!

Aurora Flight Training DA40NG Specific Policies:

- **ONCE AGAIN, DO NOT PLACE ITEMS ON THE DA40 GLARE SHEILD AT ANY TIME. MEMBERS WILL BE HELD FINANCIALLY RESPONSIBLE FOR DAMAGE TO THE CANOPY AND/OR GLARE SHEILD.**
- If the plane is in the hangar, parked behind the Piper Meridian, Atlantic is required to move the meridian and the DA40NG. Members are ***PROHIBITED*** from moving the DA40NG in this scenario.
- If the plane is in the hangar, parked in front of the Piper Meridian:
  - Pulling N181DA out: two (2) persons, one of which is a CFI, Chad, or Nic
  - Putting N181DA back in: three (3) persons, one of which is a CFI, Chad, or Nic
- The plane must go back in its hangar, unless it is scheduled to stay parked on the ramp **LESS THAN ONE HOUR**. Anything more than an hour requires approval from Aurora Flight Training management.
- After parking the plane in its hangar, the canopy and leading edges must be cleaned with the approved cleaner.

Pilot Name _____ Pilot Signature _____

Corrected and reviewed by:
CFI Name _____ CFI Signature _____

Date _____