

DA 40 AIRCRAFT WRITTEN TEST

Student Name:

Flight Instructor:

Date:

Aircraft Basic Familiarization & Limitations

1) Aircraft Dimensions:

- Wingspan-
- Length -
- Height -

2) List the following speeds for the DA40-

- | | |
|--|-------------------|
| V_{SO} | $V_{T/O}$ |
| V_S | V_{LND} |
| V_R | V_{NO} |
| V_X | V_{NE} |
| V_Y | Normal Pattern: |
| V_G |/...../..... |
| $V_A < \underline{\hspace{1cm}} \text{ lbs}$ | Flaps up Pattern |
| $V_A > \underline{\hspace{1cm}} \text{ lbs}$ |/...../..... |

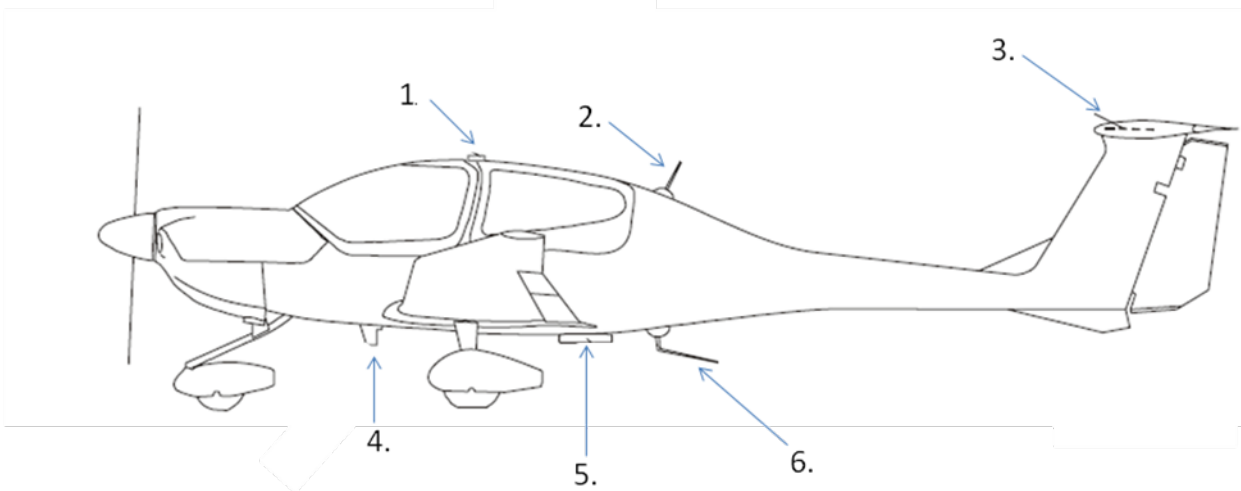
- 3) What is the engine make and model?
- 4) What is the maximum horsepower rating of the engine?
- 5) What type of engine induction system does the aircraft have?
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- 6) What type of propeller is installed on the aircraft?
- 7) What is the maximum oil quantity?
- 8) What is the minimum oil quantity?
- 9) What is the minimum oil pressure?
- 10) Can mineral oil be used in the engine?
- 11) What is the maximum engine oil temperature?

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- 12) Does the aircraft have a maximum ramp weight?
- 13) What is the maximum takeoff weight?
- 14) Does the aircraft have a maximum landing weight?
- 15) Does the aircraft have a maximum zero fuel weight?
- 16) What are the load (g) for this aircraft?
- 17) What are the approved fuel grades (s)?
- 18) What is the maximum usable fuel quantity?
- 19) What is the max permissible fuel imbalance?
- 20) What is the maximum indicated fuel quantity?
- 21) Where are the fuel drains located?
- 22) Does the fuel calculation system automatically update fuel quantity from the
indicating system?
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- 23) What is the maximum demonstrated crosswind component?
- 24) What is the basic construction of the airframe?
- 25) How are the wing flaps controlled and actuated?
- 26) How many control axes have trim?
- 27) How are the trim(s) actuated?
- 28) How is the parking brake actuated?
- 29) How is heating and defrosting provided for the aircraft?
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- 30) Describe the electrical system.....
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- 31) How many electrical buses are in the aircraft?
- 32) When is the emergency switch used, and what does it power?
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- 33) When is the essential buss switch used?
- 34) What items are powered by the essential buss?
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- 35) What type of stall warning system is installed?
- 36) Label the following antennas on the DA40:
- | | |
|---------|---------|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

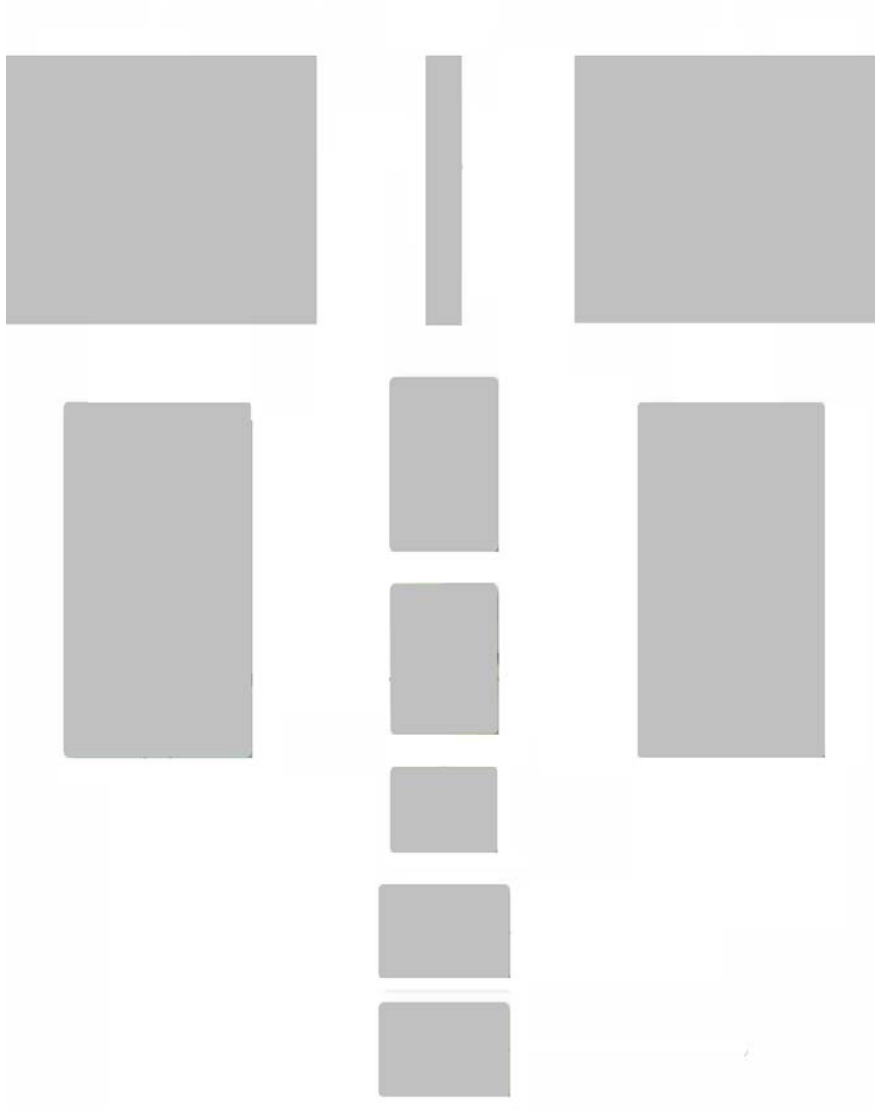


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G1000

37) Complete the basic G1000 system architecture diagram including flow paths.

G1000 Basic Diagram



38) If the MFD fails will COMM 2 still be usable?

39) If the OAT fails what will be affected?

40) Are the volumes for COMM 1 and COMM 2 connected? For NAV 1 and NAV 2?
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- 41) The distance shown in the black Bearing (BRG) boxes shows slant range DME distance? True or False?

Emergency and Abnormal Procedures

- 1) What is the procedure for a rejected takeoff?

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- 2) What is the best glide speed?

- 3) What procedure do you follow if you have an engine failure after takeoff?

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- 4) What procedure do you follow if you have an engine fire in flight?

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- 5) What procedure do you follow if you have an electrical fire in flight?

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- 6) What are the indications and the procedure for induction system icing in this aircraft?

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- 7) What is the procedure for an alternator warning light illumination?

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- 8) What is the procedure for a propeller overspeed?

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9) What is the procedure for an emergency descent?

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