

Brandywine Flight School

Flight Instruction

Diamond Star DA40-180 Rental Pilot Quiz

Pilot _____ Date _____

General:

1. Is this aircraft certificated for: IFR operations? YES NO Spins? YES NO
2. Are aerobatics permitted in this aircraft? YES NO
3. What is the primary type of material used in the aircraft construction? _____
4. Are flaps required for take-off? YES NO
5. Is the seat position adjustable? YES NO
6. How are the rudder pedals adjusted? _____
7. Where is the list of installed equipment located? _____
8. What Chapter of the POH has the list of "Minimum operational equipment"? _____

Fuel System:

1. How many fuel tanks are there? _____
2. What is the total usable fuel capacity? _____
3. What is the correct fuel grade? _____ Color? _____
4. Where are the drains located? _____
5. When should a fuel sample be examined? _____

Oil System:

1. What is the minimum oil level? _____ Max level? _____ Normal Level? _____
2. What is the recommended oil? _____ Where does AV-ED list this information? _____

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Weight and Balance:

1. What is the maximum take-off weight? _____ lbs.
2. What is the maximum landing weight? _____ lbs.
3. How much fuel must be used, to be at maximum landing weight, if take-off was at maximum ? _____ gals.
4. What is the standard empty weight of the aircraft to be flown ? _____
5. What is the basic empty weight of the aircraft to be flown ? _____
6. What is the weight of full fuel ? _____
7. What is the aircraft useful load ? _____
8. What is the aircraft payload ? _____
9. Determine if the aircraft is within the weight and balance limitations given the following conditions:

Full fuel, front passengers = 360 lbs., rear passengers = 170 lbs., baggage = 70 lbs.

YES NO

Airspeeds: Use indicated airspeeds

1. Stall speed in the landing configuration (V_{so})? _____
2. Never exceed speed (V_{ne})? _____
3. Max structural cruising speed (V_{no})? _____
4. Maneuvering speed (V_a) at max gross weight? _____ Does V_a increase/decrease as gross weight decreases?
5. Max flap extended speeds (V_{fe})? Flaps T/O position _____
Flaps LDG position _____
6. Normal rotation speed _____
7. Short field take-off climb speed _____
8. At what altitude should the flaps be retracted after departure? _____
9. Best rate of climb speed (V_y) at sea level? _____
10. Demonstrated crosswind component? _____

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11. Normal final approach airspeed? _____ Aircraft configuration? _____
12. Short field final approach airspeed? _____ Aircraft configuration? _____
13. Best glide speed? _____

Starting

1. Describe the procedures for starting this aircraft.

2. Describe Vapor lock symptoms and the remedy (SP) (Taxing)

Emergency procedures:

1. How would you detect an alternator failure, and what action would you take?

2. What actions would you take if you experienced an engine failure during flight?

3. What actions would you take if you noticed high oil temperature?

4. What actions would you take if you noticed low oil pressure while in flight?

5. Describe the “go around” procedure.

Aircraft Performance:

1. What is the power setting, fuel consumption and true airspeed for cruising at 75% power at 5,000 feet with standard temperature (lean to Best Power)?

RPM _____ MP _____ TAS _____ Fuel Consumption _____ GPH

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2. What are the takeoff distances to clear a 50' obstacle when using maximum performance procedures with the aircraft at gross weight into a 8 knot headwind under the following conditions:

Sea level, standard temperature? _____ feet

Pressure altitude = 4,000', Temperature = 90 deg F? _____ feet

Reviewed by: _____

Date: _____