



WCFC C-172 Skyhawk Quiz

Review before : 2023-01-05

Quiz ID : 2038

Instructor :	Date :
Pilot :	Score :

Instructor : Please note the final score (subtract 3.0 points from 100 for each wrong answer) on the checkout form and file the quiz in the Pilot Records folder.

1 : The rated power of the engine as installed in a Cessna 172 SP is

- A : 172 HP
- B : 14.2 lbs/hp
- C : 200 BHP
- D : 180 BHP

2 : The C172SP engine should not be operated on fewer than how many quarts of oil?

- A : 4 quarts
- B : 5 quarts
- C : 6 quarts minimum, 8 quarts maximum
- D : 7.5 pounds minimum, 10 pounds max

3 : The presentation labeled #14 indicates what information?



- A : airspeed
- B : selected vertical speed
- C : vertical speed bug
- D : true airspeed
- E : Ground speed

4 : The recommended procedure for starting the C172SP engine when it remains warm is:

- A : Throttle open 1/4 inch; mixture full rich; start
- B : Auxiliary fuel pump on; throttle open ¼ inch; mixture full rich momentarily then to idle cutoff, start; advance mixture after start
- C : Auxiliary fuel pump on; mixture full rich momentarily then idle cutoff; auxiliary fuel pump off; throttle open 1/4 inch; start; advance mixture after start
- D : Auxiliary fuel pump off; throttle open 1/4 inch; mixture idle cutoff; start; advance mixture after start

5 : The correct type of fuel for the C172SP is

- A : Aviation 80, 100LL, or 100/130 fuel
- B : Automotive high test
- C : Aviation 100LL or 100/130 fuel (100LL preferred)
- D : Aviation 100LL (light blue) or 100 fuel only

6 : Which of the following is true about the C172SP electrical system?

- A : 28 volt direct current electrical system power by a 60 amp alternator and a 24 volt battery located on the firewall
- B : 24 volt direct current electrical system powered by a 60 amp alternator and a 24 volt battery
- C : A 12-volt system with a 60 amp alternator and a 12 volt negative-ground battery located in the engine compartment
- D : It is a 24-volt system with a 24 amp alternator and a battery located under the rear passenger seat similar to the Piper Warrior.

7 : The fuel-injection system can become susceptible to fuel vapor formation during ground operations

- A : When the ambient air temperature is above 80F
- B : When the temperature is above 70F with high humidity
- C : When the engine is operated above 1800 rpm
- D : When the auxiliary fuel pump is left on during ground operations

8 : In the event of a complete engine failure in flight, what is the best glide speed for the C172SP?

- A : 105 KIAS
- B : 95 KIAS
- C : 98 KIAS
- D : 68 KIAS

9 : Vfe, the maximum flap extension speed in the C172SP is:

- A : 110 KIAS
- B : 163 KIAS
- C : 129 KIAS
- D : 105 KIAS

10 : What is the C172SP speed that corresponds to the following definition and what is its symbol?

- "The speed that should not be exceeded at any time in any operation"

A : 160 KIAS Vne

B : 129 KIAS Vno

C : 163 KIAS Vne

D : 105 KIAS Va

11 : Given the following loadings, are the Normal category weight and balance limitations met for a WCFC Cessna 172 SP N614SP? (Assume BEW=1659.4, Arm=39.277, Moment=65177)

- Front seats: 145 lb pilot and 45 lb child passenger
- Rear seats: one 200 and one 190 lb passenger
- Fuel: fueled to tabs
- Baggage area 1 (forward of baggage door latch): 50 lbs
- Baggage area 2 (aft of baggage door latch): 50 lbs

A : No, the airplane is over the maximum ramp weight

B : Yes. Both the weight and the CG are within limits

C : No. The weight is within the maximum ramp weight but the CG is too far aft

D : No. The weight is within limits, but the CG is too far forward

12 : If the "low voltage" warning light illuminates in flight, what actions should be taken to attempt to restore charging function?

A : None. The annunciator is advisory in nature. Report it to maintenance (squawk it) after the flight

B : Alternator off / electrical equipment off / terminate the flight immediately

C : Avionics master off / alternator (field) circuit breaker in / master off / master on / low voltage annunciator check off / Avionics master on

D : Alternator field circuit breaker off / Magnetos off / monitor ammeter for discharge condition

- 13 : Above what speed should we not make rapid control movements when operating in the utility category?
- A : 98 CAS
 - B : 103 KIAS
 - C : Vne
 - D : 98 KIAS
- 14 : In the event of an engine failure in flight, with the best glide speed established, the prop windmilling, and no wind, what height above terrain would be required for the C172 to glide 12 miles?
- A : 5000 feet
 - B : 7000 feet
 - C : 8000 feet
 - D : 12000 feet
- 15 : The total usable quantity of fuel when both left and right tanks are fueled to the bottom of the filler indicator tabs is:
- A : 53 U.S. gallons
 - B : 35 U.S. gallons
 - C : 48 U.S. gallons
 - D : 44 U.S. gallons
- 16 : In hours and minutes, what would be the longest VFR cross country flight leg a WCFC member may plan in a WCFC C172 while complying with WCFC SOP IV-3? Assume a cruise altitude of 6,000 feet, 65% power, standard temperature, and maximum usable fuel to begin. Assume the maximum takeoff weight in the Normal Category. Assume the leaning procedure specified in the performance chart. Round to the nearest minute as necessary.
- A : 5 hours and 53 minutes
 - B : 4 hours and 53 minutes
 - C : 3 hours and 45 minutes
 - D : 4.5 hours

- 17 : If over-priming has flooded the engine, the recommended starting procedure is as follows:
- A : Turn off the auxiliary fuel pump, place mixture to idle cutoff position, open throttle $\frac{1}{2}$ travel to fully open and crank the engine
 - B : Turn off the auxiliary fuel pump, place mixture to full rich until a stable fuel flow is indicated
 - C : Open throttle $\frac{1}{4}$ inch, set mixture to idle cutoff, and advance mixture only after start
 - D : Open throttle $\frac{1}{4}$ inch, set mixture to full rich, and prime before starting
- 18 : According to the Cessna checklist in the C172SP AFM/POH the auxiliary boost pump should be ON for:
- A : Priming, starting, takeoff and landing
 - B : Priming, takeoff and landing
 - C : Priming and starting
 - D : Priming only
- 19 : Stall speed, power-off, without flaps for the C172SP is
- A : 53 KIAS
 - B : 53 KCAS
 - C : 48 KCAS
 - D : 40 KIAS
- 20 : If over-priming has flooded the engine, the recommended starting procedure is as follows:
- A : Turn off the auxiliary fuel pump, place mixture to idle cutoff position, open throttle $\frac{1}{2}$ travel to fully open and crank the engine
 - B : Turn off the auxiliary fuel pump, place mixture to full rich until a stable fuel flow is indicated
 - C : Open throttle $\frac{1}{4}$ (one quarter) inch, set mixture to idle cutoff, and advance mixture only after start
 - D : Open throttle $\frac{1}{4}$ (one quarter) inch, set mixture to full rich, and prime before starting
- 21 : At 2200 pounds the normal category maneuvering speed published for the C172SP is:
- A : 95 KIAS
 - B : 98 KIAS
 - C : 102 KIAS
 - D : 105 KIAS

22 : The **maximum gross takeoff weight** for the WCFC Cessna C172SP aircraft is: (Note: All of our airplanes are the same.)

A : 2558 pounds

B : 2208 pounds

C : 2550 pounds

D : 2200 pounds

23 : Abrupt use of controls is prohibited above what speed when operated in the normal category?

A : 105 CAS

B : 130 KIAS

C : 105 KIAS

D : Vne

24 : A pilot observing an altimeter that does not respond to changes in altitude should

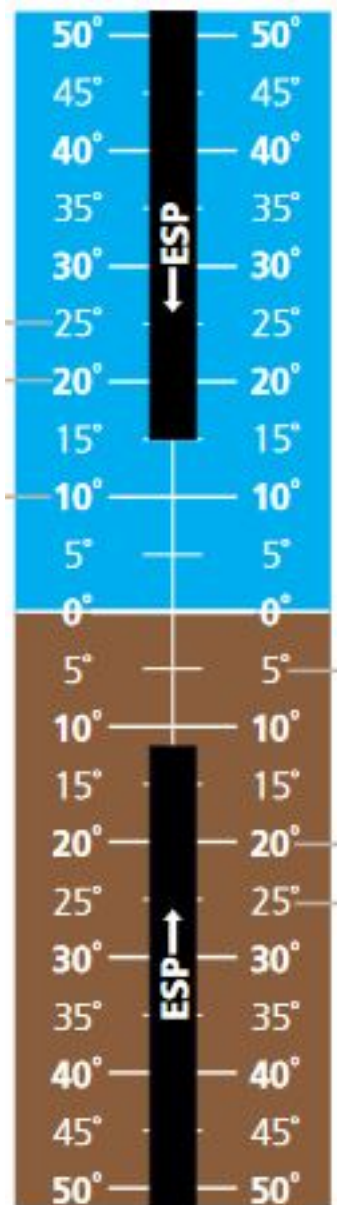
A : Break the case of the vertical speed indicator to admit static air to the system

B : Suspect a pitot tube blockage and turn on the pitot heat

C : Turn on the alternate static source and expect maximum airspeed variation of 4 knots from normal and 30 feet of altitude over the normal range of flight

D : Suspect a broken or leaking static line and squawk it for maintenance

25 : If the configurable pitch limits, up and down, are both set to 20 degrees of pitch, the maximum torque applied by the ESP system will occur at what pitch levels?



- A : when the pilot attempts to override the pitch limits
- B : 20 degrees pitch up and 20 degrees pitch down
- C : 25 degrees pitch up and 25 degrees pitch down
- D : 15 degrees pitch up and 25 degrees down
- E : 15 degrees pitch up and 15 degrees down

- 26 : Please choose the C172SP speed (in KIAS) that corresponds to the following definition:
"The speed that should not be exceeded except in smooth air and then only with caution"
- A : 105 KIAS at 2550 pounds (Va)
 - B : 163 KIAS (Vne)
 - C : 129 KIAS (Vno)
 - D : 105 KIAS at 1900 pounds (Va)
 - E : 105 KCAS at 2550 pounds (Va)

- 27 : When the engine is operating and the master switch is ON, the ammeter, located on the lower left side of the instrument panel, indicates
- A : The voltage supplied to the primary bus by the alternator
 - B : The voltage of the battery
 - C : The battery discharge rate if the alternator is not functioning
 - D : The current supplied by the generator to the primary bus and battery

28 : Please calculate the loaded weight and CG (Center of Gravity) at takeoff for an imaginary C172SP with the following characteristics:

- BEW=1690, Moment (lb. inches/1000)=69.29

The aircraft is loaded as follows:

- Fuel=53 gallons
- Front seat pilot and passenger=360 pounds
- No rear passengers
- Baggage in Area #1 = 60 pounds
- Use the average seating positions and Stations given in the Weight and Balance Section of the POH or Information Manual
- Allow .8 pounds of fuel for start, taxi, and runup

Note: We are calculating the Center of Gravity, not the Moment

- Use the information in Section 6 (Weight and Balance) in the Cessna 172S Information Manual including Figures 6-3, 6-5 and Figure 6-8.

- A : 42.63
- B : 42.65
- C : 103.17
- D : 103.57

29 : We are taking the C172SP to the mountains. We will be landing and departing the private airport at Boone, NC, NC14, located in the northwest corner of the NORTH side of the Charlotte Sectional. Since we are unfamiliar with the airport, we will assume that we may have the proverbial 50-foot obstacles to clear on landing and takeoff. We are at maximum gross weight. Assume a hot summer day with 30-degree Celsius temperature. We will use the recommended short field technique found in the POH for both landing and takeoff and have calm winds and a paved, level runway. What would our landing and takeoff distances be?

- Landing? ____ feet
- Takeoff? ____ feet

30 : At a pressure altitude of 6000 feet under standard temperature conditions, leaned as recommended in the POH, at 65% power, the Cessna 172 SP burns approximately

A : 10.6 gallons per hour

B : 9.0 gallons per hour

C : 10.5 gallons per hour

D : 10.4 gallons per hour