

UNITED FLYING CLUB  
**CESSNA 172\***  
**FLIGHT MANUAL REVIEW**

Pilot \_\_\_\_\_ Member# \_\_\_\_\_ Total Flight hrs. \_\_\_\_\_

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_  
(instructor)

\*Note there are variations in performance and specifications between different year and model designations. Performance charts will vary based on the production number (serial number) of the specific aircraft. Indicate below the specific aircraft your information is based upon. *References for the following questions are found in the POH / C172 Information Manual.*

Aircraft year \_\_\_\_\_ Model \_\_\_\_\_ s/n \_\_\_\_\_

- 1) What is the engine horsepower rating? \_\_\_\_\_ BHP@ \_\_\_\_\_ rpm
- 2) What is the correct fuel grade? \_\_\_\_\_
- 3) What is the total fuel capacity? \_\_\_\_\_ What is the total usable fuel? \_\_\_\_\_
- 4) What is the total capacity of each tank? \_\_\_\_\_ What is the usable fuel of each tank? \_\_\_\_\_
- 5) What is the oil sump capacity? \_\_\_\_\_ What is the recommended oil viscosity? \_\_\_\_\_
- 6) What is the minimum oil operating level? \_\_\_\_\_
- 7) What is the aircraft's maximum gross weight? \_\_\_\_\_
- 8) What is the basic empty weight? (*use actual aircraft empty weight*) \_\_\_\_\_
- 9) What is the useful load? (*use actual aircraft useful load*) \_\_\_\_\_ With full tanks? \_\_\_\_\_
- 10) List the following speeds \*KIAS\*  
(based on gross weight, forward C.G., and Sea Level conditions where applicable)

V<sub>x</sub> \_\_\_\_\_ V<sub>s</sub> \_\_\_\_\_

V<sub>y</sub> \_\_\_\_\_ V<sub>s</sub> (60 deg. Bank) \_\_\_\_\_

V<sub>ne</sub> \_\_\_\_\_ V<sub>so</sub> \_\_\_\_\_

V<sub>fe</sub> \_\_\_\_\_ V<sub>a</sub> \_\_\_\_\_

Best angle of glide speed: \_\_\_\_\_

Normal approach speed with full flaps: \_\_\_\_\_ Without Flaps \_\_\_\_\_

Maximum demonstrated crosswind component: \_\_\_\_\_

- 11) What happens to  $V_a$  as gross weight is decreased? \_\_\_\_\_
- 12) When should the mixture be leaned in flight? \_\_\_\_\_  
 \_\_\_\_\_
- 13) What are the indications of induction system icing and what action should be taken?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 14) What would indicate an alternator malfunction, and what is the corrective action?  
 \_\_\_\_\_  
 \_\_\_\_\_
- 15) Describe the Balked Landing procedure:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 16) What is the minimum runway length for takeoff under the following conditions:  
 Max. Gross Weight, 9kt headwind, sea level, 68f temperature, 50' obstacle ? \_\_\_\_\_  
 Max. Gross Weight, no wind, 3000' elevation, 86f temp, 50' obstacle? \_\_\_\_\_
- 17) How much fuel will be used for engine start, taxi, takeoff and climb from sea level to 5500'  
 (standard temperature) \_\_\_\_\_
- 18) What is the TAS and fuel consumption, under the following conditions?  
 Mixture Lean; 65% power; 7000' Pressure Altitude; Standard Temperature  
 TAS \_\_\_\_\_ Fuel Consumption \_\_\_\_\_
- 19) What is the landing distance required under the following conditions? \_\_\_\_\_  
 \* 3000' pressure altitude                      \* 50' obstacle                      \* 0 wind  
 \* 86 degrees Fahrenheit                      \* gross weight                      \* Maximum performance technique
- 20) Under the following conditions, the aircraft is within weight and balance limitations?                      T / F  
 \* pilot & front passenger 195 & 180lbs                      \* rear passengers                      165 & 140lbs  
 \* baggage area 1                      20 lbs                      \* full fuel
- 21) Magnetos are checked at \_\_\_\_\_ RPM. Max drop is \_\_\_\_\_ RPM, with difference  
 between the two mags not to exceed \_\_\_\_\_ RPM.

# CESSNA 172S - Review Supplement

## \* NAV II PACKAGE & ADVANCED SYSTEMS \*

References for the following questions are found in the  
Pilots Operating Handbook / 172S Information Manual.

### **FUEL SYSTEM** (sections 4,7)

1) Describe two situations in which the Auxiliary Fuel Pump is used: \_\_\_\_\_  
\_\_\_\_\_

2) Operation with the fuel selector valve in either the Left or Right tank position is reserved for what flight operation(s)? \_\_\_\_\_

3) Prolonged uncoordinated flight (slips or skids) when fuel tanks are \_\_\_\_ full or less can uncover the fuel tank outlets.

4) In hot weather, within the first \_\_\_\_\_ after engine shut down, the fuel manifold is still adequately primed for engine start without additional priming.

### **ELECTRIC SYSTEM** (sections 4,7)

5) What is the electrical system voltage? \_\_\_\_\_ battery voltage? \_\_\_\_\_

6) List 3 conditions during ground operations when the Avionics Master switch should be "OFF" to prevent damage to the avionics: \_\_\_\_\_  
\_\_\_\_\_

7 List 2 conditions which will cause the ammeter to indicate a battery discharge rate?  
\_\_\_\_\_  
\_\_\_\_\_

8) The starter should not be engaged for more than \_\_\_\_\_ seconds at a time, followed by a \_\_\_\_\_ cooling down period.

### **ELT & FIRE EXTINGUISHER** (sections 4,7)

9) ELT testing should only be conducted within the first 5 minutes of each hour, and for no more than \_\_\_\_\_ tone transmissions.

10) Prior to flight, the Halon fire extinguisher should be checked that it is secured, the lock pin is securely in place, and the charge indicator is approx. \_\_\_\_\_ psi.

11 After successfully extinguishing an inflight cabin fire, what should be done to reduce gases produced by thermal decomposition? \_\_\_\_\_

### **ANNUNCIATOR PANEL** (section 7)

12) List two specific conditions which will cause the "LOW FUEL" annunciator light to illuminate?  
\_\_\_\_\_  
\_\_\_\_\_

13) The low voltage warning light, "VOLTS", will illuminate anytime the voltage falls below \_\_\_\_\_ volts, and may illuminate during low RPM conditions such as low RPM taxi.

14) The low vacuum warning light, "VAC", will illuminate and indicate which of the Left or Right vacuum pumps is at fault if vacuum output from either pump falls below \_\_\_\_\_ Hg.

**KMA 28 AUDIO PANEL** (section 9, S20)

15) In the event of a failure of the audio panel, as evidenced by the inability to transmit in Com 1 or 2, what action will allow the pilot's mic/headset to connect directly to COM 1? \_\_\_\_\_

16) With the KMA 28 audio panel in the OFF or EMG position, installed system alerts (autopilot disconnect tones) can still be heard. T / F

17) Use of the Entertainment audio input is prohibited during take off and landings. T / F

**KA 155A NAV/COMM** (section 9, S1)

18) The "Stuck Mic" feature will cause the transmitter to stop transmitting and the active Comm frequency to flash if the mic is keyed continuously for greater than \_\_\_\_\_

19) If frequency readout fails, blind tuning can be accomplished by pressing and holding the frequency transfer button while powering on. The COMM will "wake up" on \_\_\_ mhz, and the NAV on \_\_\_ mhz.

**KAP 140 AUTOPILOT** (section 9, S15)

20) Name 8 conditions which will cause the Autopilot to disengage: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21) What does "P" illumination on the A/P annunciator indicate? \_\_\_\_\_

22) Turning on the AP will engage the local Roll Mode (wings leveler) and capture the vertical speed present at the time of engagement. T / F

23) During what conditions will the "Altitude Alert" annunciator illuminate? \_\_\_\_\_  
\_\_\_\_\_

24) What is the maximum flap extension speed with the autopilot engaged? \_\_\_\_\_

25) A pilot must be seated at the left pilot position during autopilot operation. T / F

26) Except for approach operations, below what altitude AGL must the autopilot be disengaged for all other phases of flight? \_\_\_\_\_

27) When using the autopilot, what two operating conditions and what autopilot mode can result in an airplane stall? \_\_\_\_\_  
\_\_\_\_\_

**KLN 94 GPS** (section 9, S20)

28) What does the "NAV" annunciator illuminated on the GPS Annunciator/Switch indicate? \_\_\_\_\_  
\_\_\_\_\_

29) The KLN 94 GPS Pilot's Guide, must be available to the flight crew whenever \_\_\_\_\_ navigation is used.

30) A current database is required by regulation for non-precision approaches and is required to be updated at what interval? \_\_\_\_\_