

Private Jets, Inc

King Air 200 Systems Test

1. With the Battery as the only source of power and the battery switch in the OFF position, the following bus(es) receive power:
 - a. battery bus, hot battery bus
 - b. avionics bus, hot battery bus
 - c. hot battery bus only
 - d. avionics bus, battery bus, hot battery bus

2. Which of the following statements is *correct*?
 - a. With external power connected and the battery switch OFF, all DC buses will be powered from the external power unit, but the voltmeter will indicate battery voltage.
 - b. The battery switch must be in the ON position before the voltmeter will indicate the voltage of the generator bus with generators ON
 - c. With external power connected and the battery switch OFF, all DC buses will be powered from the external power unit except the battery itself.
 - d. The battery will continue to charge with the generators on the line regardless of the battery switch position.

3. Regarding ignition during the start sequence:
 - a. It occurs immediately when the start and ignition switch is selected
 - b. It is initiated automatically by the speed sensing switch at 8-12% N2
 - c. It occurs when the condition lever is brought to low idle
 - d. It is terminated by the fuel control step modulator when it senses ITT above 300°C

4. Which statement concerning the fuel system is *incorrect*?
 - a. The Standby Fuel Boost Pump switches do not have to be ON for engine start.
 - b. With the Standby Fuel Boost Pump switches in the OFF position, the respective boost pump will automatically be activated whenever the respective starter switch is selected or crossfeed from that tank is selected.
 - c. It is normal for one Standby boost pump to operate during crossfeed operation
 - d. The Standby Fuel Boost Pumps are used for engine driven boost pump failure, and engine crossfeed during single engine operation.

- 5** If the High Pressure Engine Driven Pump fails,
- The engine will flame out
 - The engine driven boost pump will fail also, but the Standby boost pump will be selected ON by the pilot and it will sustain the engine
 - Only the transfer ejector pumps will be inoperative, the engine will continue to run
 - Nothing will happen, because the Engine Driven Boost Pump will provide enough fuel pressure to keep the engine running.
- 6** What conditions require the engine to be shut down immediately (emergency shutdown)
- unscheduled torque increase (runaway torque)
 - ENG FIRE light illuminated, with no other indications of fire
 - DUCT OVERTEMP light illuminated
 - All of the above
- 7** The main engine indication of power produced by the PT6A engine is obtained by
- Torque indicator
 - Propeller RPM
 - N2 RPM
 - Fuel Flow
- 8** If avionics bus fails in flight, the pilot should:
- cycle the avionics master switch rapidly to try to reconnect the bus
 - Pull the associated circuit breaker to connect the avionics bus
 - switch to the other inverter, because the fault may be the changeover circuit
 - do nothing, the avionics bus will automatically reconnect
- 9** The maximum allowable oil consumption for the PT6A-41 engine is
- 1qt. every 10 hours
 - 1qt. every 4 hours (measured over a 10 hour period)
 - .5gal. every 4 hours (measured over a 10 hour period)
 - No specified figure is published since oil is changed periodically.
- 10** Regarding the flaps:
- it only takes an asymmetry of one of the four flaps to stop flap motor operation.
 - flaps can be selected to any position between approach and full down.
 - flaps can be used in the approach position for takeoff if conditions dictate.
 - to bring flaps from full down to the approach setting, i.e. during a landing stall, the selector must be brought to the up position until flaps reach the desired setting, then selected to approach.
 - All of the above.

- 11** Regarding the wheel brakes for your aircraft:
- The pilot's side will override the copilot's side.
 - The parking brake can only be set with the pilot's brake pedals.
 - Anti-skid protection is available at all times.
 - They require hydraulic pressure from the engine driven pumps to be operative.
- 12** The landing gear handle is prevented from movement on the ground by
- Mechanical detents
 - Hydraulic pressure
 - Locking solenoid
 - Manual lock
- 13** Which statement is *correct* regarding the landing gear
- The emergency gear system is inoperative with a loss of DC electrical power because the gear motor will be locked out.
 - The emergency gear system must be continually pumped even after all three green lights are illuminated
 - The landing gear is held in the up position by mechanical uplocks
 - The landing gear relay circuit breaker near the gear handle controls the power to the landing gear handle and, if pulled, the gear cannot be extended or retracted normally.
- 14** the N1 governor fails on one engine, the following will result:
- Engine power going to idle
 - Engine power going to full power as set by overspeed limiters
 - No change will occur
 - Engine flameout
- 15** The propeller reverse system
- May be used only when the propeller levers are in the full forward position.
 - should not be selected with the engines not running because damage to the mechanical linkage could occur
 - May be left in FULL REVERSE until the aircraft is brought to a complete stop
 - Both A and C
- 16** The Main Cabin door
- Must not be opened if the cabin is pressurized on the ground
 - Can be opened in flight
 - Does not have any weight restrictions
 - All of the above

- 17 While cruising at FL 250, the aircraft vacuum system fails, the cabin altitude
- Immediately goes to 13,500 feet
 - Remains at approximately 10,000 feet (as set by the limiters)
 - Rapidly approaches 25,000 feet
 - Decreases to a value as determined by the maximum differential pressure
- 18 When the CABIN ALT light illuminates the pilot should
- Conduct an emergency descent immediately
 - Check cabin climb rate and refer to the checklist
 - The bleed air system failed due to an overheat; select OFF with the environmental selector and call for the checklist
 - ignore the light, it is advisory only that the cabin altitude is within limits
- 19 The following action should be taken when the DUCT OVERHEAT light illuminates
- Turn off both bleed air switches
 - Turn off engine ice protection
 - Place the temperature selector rheostat to a colder temperature
 - Select OFF position with the environmental selector to increase air flow through the heat exchanger
- 20 Which statement is *correct* regarding the AUTO FEATHER system?
- It will activate if a power lever is brought to idle
 - the power lever on the failed engine must be above 90% and the system must be armed for it to be operative
 - Illumination of the green annunciator lights means a loss of power to the system
 - If an engine fails and auto feather activates, it must be selected OFF immediately so a restart can be conducted.
- 21 Regarding the oxygen system
- The system must be ON for flights above 10,000 feet MSL
 - The masks will not automatically deploy if the system is OFF
 - for single pilot operations under 135, the pilot must wear oxygen when operating above FL250
 - All of the above
- 22 Which statement is correct concerning the surface de-ice system
- The Surface De-Ice switch must be held in the AUTO position for 12 seconds to insure that all deice boots receive inflation pressure
 - The Surface De-Ice switch must be cycled to MANUAL to reset the timer circuit after each use
 - The system should not be used below -40°C
 - Illumination of the DUCT OVERTEMP light after the deice switch has been cycled to AUTO indicates a lack of bleed air pressure to the boots

- 23** Turning on the engine ice protection switches in flight, the following indications should be produced
- a. An increase in ITT, drop in torque, and ENG ICE FAIL annunciator lights for at least 5 minutes
 - b. An increase in ITT, drop in torque, and illumination of ICE VANE EXT lights
 - c. Illumination of the ENG ICE FAIL annunciator lights and an increase in amperage
 - d. Drop in Prop RPM and a rise in ITT
- 24** Which of the following is correct
- a. V_{lo} is different for landing gear extending and retracting
 - b. Maneuvering speed (V_a) is the same as turbulent air penetration speed
 - c. Minimum icing speed of 140 knots is not a limitation
 - d. A crosswind component of 25 knots is a limitation
- 25** Regarding ground operations
- a. there is no way to know if the aircraft has been towed beyond towing limits
 - b. The main tanks must be filled first, then aux tanks.
 - c. The propellers may windmill while an aircraft is parked
 - d. Both A and C

KEY

1 C

2 C

3 A

4 B

5 A

6 A

7 A

8 B

9 A

10 E

11 B

12 C

13 D

14 B

15 B

16 A

17 D

18 B

19 C

20 B

21 D

22 C

23 B

24 A

25 B

Hazmat

Alternate

Weather changes enroute

ESTMP

Late pax

No ops at night

Gen fail during ice

Radar fail

Situation #1

Plan a trip using the following information

Planned flight is from SAT to ASE to drop 4 passengers and baggage

Passengers weigh 150, 200, 220, 250. Baggage is 200. One passenger(250) is in an electric wheelchair with a battery and an escort (150). It will fold to fit in baggage compartment.

Some passengers will be hunting and wish to transport firearms.

Passengers are 2 hours late

SAT weather for departure is RVR 3500

Forecast at ASE is scheduled to be 50% chance of 4 miles in snow., Otherwise, clear
Denver is forecast to be clear with chance of snow overnight.

During flight RH GEN fails

Radar fails

ASE calls for 3 miles in snow, then ½ mile after FAF, aircraft in front goes missed

DEN weather is 6000 RVR freezing fog, ATC asks for LAHSO

Upon landing in DEN, what is procedure? MEL, Dispatch,

Inop items fixed, quick turn, contamination exists on AC from approach, while fueling
wheelchair pax wants to remain onboard during fueling. Ops manual, AI/DI procedure.