



King Air 350 Training Syllabus

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I. Ground School Objective

The pilot will be presented a comprehensive review of the normal operating procedures and systems operation. Also, the pilot will be presented with the correct procedures for handling abnormal system operation and emergency procedures.

Note: The term “required knowledge” refers to the pilot demonstrating the ability, in the opinion of the instructor, to pass an FAA oral exam on the subject material.

A. Aircraft Overview

The pilot will review general aircraft information to include:

- General specifications
- Airframe structural components
- Aircraft towing
- Doors and emergency exits
- Cockpit lighting and layout

The pilot will demonstrate the required knowledge through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

B. Operating Limitations

The pilot will review all operating limitations. All limitations that require memorization will be emphasized. The instructor will demonstrate the role limitations play in regard to safe aircraft operation.

The pilot will demonstrate the required knowledge through discussion, oral questioning, and written tests. The operating limitations will be reviewed throughout the recurrent course, and will be reevaluated at the end of training.

C. Systems Overview

1. Flight Controls

The pilot will review all components and operation of the flight control systems. This includes:

- Trim system
- Ailerons
- Elevator
- Rudder
- Flaps
- Autopilot

The pilot will demonstrate the required knowledge of the flight control system through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

2. Fuel

The pilot will review all components and normal operation of the fuel system. This includes:

- Main fuel tanks
- Auxiliary fuel tanks
- Primary boost pumps
- Standby boost pumps
- Cross feed operations
- Float valves
- Fuel tank quantities

The pilot will demonstrate the required knowledge of the fuel system through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

3. Electrical

The pilot will review all components and normal operation of the electrical system. This includes:

- Electrical power sources
- Battery
- Redundancy
- Starter/Generators
- Use of external power
- Electrical busses
 - (Triple Fed, Center, Generator)
- AC Systems
- Indicators and monitoring

The pilot will demonstrate the required knowledge of the electrical system through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

4. Engines

The pilot will review all components and normal operation of the engine systems. This includes:

- Components (intake, compressions, combustion, exhaust)
- Bleed air system
- Starting
- Accessories
- Oil system
- Thermostatic diverter valve
- Oil cooler bypass valve
- Chip detector

The pilot will demonstrate the required knowledge of the engine systems through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

5. Environmental

The pilot will review all components and normal operation of the environmental system. This includes:

- Pressurization Controller
- Pneumatic air source
- Instrument air
- Vacuum system
- Environmental air source
- Flow control
- Flapper valve
- Heat exchanger
- Cabin heat control
- Muffler
- Air conditioning system
- Cabin ventilation
- Mixing plenum

The pilot will demonstrate the required knowledge of the environmental system through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

6. Ice and Rain Protection

The pilot will review all components and normal operation of the ice and rain protection systems. This includes:

- Pitot heat
- Pneumatic deice boots
- Engine anti-ice
- Propeller deice
- Windshield heat
- Windshield wipers
- Stall warning vane heat

The pilot will demonstrate the required knowledge of the ice and rain protection systems through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

7. Landing Gear

The pilot will review all components and normal operation of the landing gear system. This includes:

- Electric landing gear
- Hydraulic landing gear
- Squat switches
- Safety switch
- Steering
- Brakes
- Landing gear doors

The pilot will demonstrate the required knowledge of the landing gear system through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

8. Oxygen

The pilot will review all components and normal operation of the oxygen system. This includes:

- Primary supply line
- Passenger supply line
- Automatic operation
- Manual operation
- Shut-off valve

The pilot will demonstrate the required knowledge of the oxygen through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

9. System Abnormal Procedures

The pilot will review the abnormal procedures as outlined in the emergency procedures section of the AFM. The pilot will demonstrate an additional understanding of the systems through their operation in emergency situations. The pilot will be evaluated through discussion and oral questioning. Any areas that require additional study will be reemphasized prior to continuing the course.

D. Weight and Balance

The pilot will review the procedures required to assure the aircraft is properly loaded and remains within all structural limitations through all phases of flight. This includes:

- Takeoff weight
- Landing weight
- Weight and balance computations

The pilot will demonstrate the required knowledge by performing an aircraft loading problem. The pilot will be expected to keep the aircraft loading within the aircraft limitations. Any questions that arise concerning the pilots' performance will be resolved prior to continuing the course.

E. Aircraft Performance

The pilot will review the procedures required to assure that the aircraft meets all performance requirements prior to flight. This includes:

- Maximum takeoff weight
- Minimum takeoff power
- Take-off distance
- Accelerate-stop distance
- Accelerate-go distance
- Minimum climb one engine inoperative
- Net gradient of climb
- Climb performance
- Time, fuel, and distance to climb
- Cruise performance
- Time, fuel, and distance to descend
- Landing performance

The pilot will demonstrate the required knowledge by preparing an aircraft performance problem. The pilot will demonstrate that the aircraft meets all structural, performance, and legal limitations prior to flight. Any questions that arise concerning the pilots' performance will be resolved prior to continuing the course.

II. Aircraft Training / Simulator

The completion standards for the aircraft training portion are identical to those found in the Airline Transport Pilot and Type Rating Practical Test Standards published by the F.A.A. The pilot must demonstrate proficiency by completing the following tasks in the aircraft.

A. Preflight Procedures

- Preflight Inspection
- Checklist usage
- Proper operation of systems
- Noting discrepancies
- Powerplant starting
- Taxiing
- Pretakeoff checks

B. Takeoff and Departure

- Normal and crosswind takeoff
- Instrument takeoff
- Powerplant failure during takeoff
- Rejected takeoff
- Departure procedures

C. Inflight Maneuvers

- Steep turns
- Approaches to stalls
- Powerplant failure
- Recovery from unusual attitudes

D. Instrument Procedures

- Arrival procedures
- Holding
- Precision instrument approaches
- Non-precision instrument approaches
- Circling approach
- Missed approach

E. Landings and Approaches to Landings

- Normal and crosswind approaches and landings
- Single engine approach
- Landing from a circling approach
- Rejected landing
- Nonstandard flap approach

F. Normal and Abnormal Procedures

The pilot should demonstrate adequate knowledge of the normal and abnormal procedures of the aircraft systems. Proper CRM should be used to accomplish all checklists and procedures during the entire flight.

G. Emergency Procedures

The pilot must demonstrate adequate knowledge of emergency procedures and accomplish all procedures in accordance with the aircraft flight manual.

H. Postflight

- After landing procedures
- Parking and securing
- Postflight inspection