

PRIVATE PILOT

I. AREA OF OPERATION: PREFLIGHT PREPARATION

B. TASK: AIRWORTHINESS REQUIREMENTS

OBJECTIVE

To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by:

1. Explaining:
 - a. Required instruments and equipment for day / night VFR.
 - b. Procedures and limitations for determining airworthiness with and without an MEL.
 - c. Requirements and procedures for obtaining a special flight permit.
2. Locating and explaining:
 - a. Airworthiness directives.
 - b. Compliance records.
 - c. Maintenance / inspection requirements.
 - d. Appropriate record keeping.

ELEMENTS

1. Required equipment for day VFR: G.O.O.S.E.A.C.A.T.:
 - a. Gas (fuel) gauge.
 - b. Oil temperature gauge.
 - c. Oil pressure gauge.
 - d. Seat belt and shoulder harness.
 - e. ELT - Emergency locator transmitter.
 - f. ASI - Airspeed indicator.
 - g. Compass.
 - h. Altimeter.
 - i. Tachometer (engine RPM gauge).
2. Additional required equipment for night VFR: P.A.L.E.S.:
 - a. Position lights (right or starboard = green, left or port = red, aft or stern = white).
 - b. Anti-collision light (flashing red or white beacon).
 - c. Landing light (for compensation or hire only).
 - d. Electrical source (i.e. battery).
 - e. Spare fuses, or circuit breakers.
3. Determining airworthiness without a Minimum Equipment List (MEL):
 - a. All aircraft instruments and equipment operative prior to departure, unless...
 - b. Deferral provision of 14 CFR Part 91, Section 91.213(d).
 - c. PIC determines if inoperative equipment is required by type design, CFR's or AD's.
 - d. If deferral is made, item is deactivated and placarded INOPERATIVE, or removed.
4. Determining airworthiness with a Minimum Equipment List (MEL):
 - a. All aircraft instruments and equipment operative prior to departure, unless...
 - b. An FAA-Approved Minimum Equipment List (MEL) exists for a specific N-number.
 - c. MEL must be in the airplane when operating.
 - d. Inoperative equipment not required must be noted in aircraft records if deferred.
 - e. If deferral is made, item is deactivated and placarded INOPERATIVE, or removed.
5. Special flight permits (SFP's):
 - a. Without an approved airworthiness certificate, contact FSDO for application form.
 - b. Requires an FAA inspector to inspect or assign inspection to an A&P mechanic.
 - c. Inspection to be documented in aircraft records.
6. Airworthiness Directives (AD's):
 - a. Defines FAA-required corrective action for aircraft, engines, propellers, or appliances.
 - b. Two categories: Emergency (prior to flight) and less urgent (specified period of time).

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7. Compliance records for AD's:
 - a. It is the aircraft's owner or operator's responsibility to ensure compliance with AD's.
 - b. 14 CFR Part 91, Section 91.417 requires the owner or operator to maintain a record of the status of each AD, including:
 - i. Method of compliance.
 - ii. AD number and revision date, if recurring.
 - iii. Time and date when due again.
 - iv. Signature.
 - v. Kind of certificate.
 - vi. Certificate number of the repair station or mechanic who performed the work.
8. Maintenance / inspection requirements:
 - a. Annual inspection.
 - b. 100-hour inspection (aircraft under 12,500 lbs used to carry passengers for hire).
 - c. Altimeter inspection every 24 months.
 - d. Transponder inspection every 24 months.
 - e. ELT inspection / battery charge or replacement after 1 hour of use or ½ of useful life.
 - f. Preflight inspection by the pilot in command (PIC).
9. Appropriate record keeping:
 - a. A current Airworthiness Certificate and Aircraft Registration must be in the aircraft.
 - b. Maintain compliance with all applicable AD's.
 - c. Assure maintenance is properly recorded.
 - d. Keep abreast of current regulations concerning operation and maintenance.
 - e. Notify the FAA Civil Aviation Registry immediately of any change of permanent mailing address, or of the sale or export of the aircraft, or of the loss of eligibility to register an aircraft.
 - f. Have a current FCC radio station license if required outside the U.S.

REFERENCES

1. 14 CFR Part 91, General Operating and Flight Rules.
2. AC 61-23 / FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge, Chapter 7.
3. POH / AFM, Pilot Operating Handbook / FAA-Approved Airplane Flight Manual.