

PRIVATE PILOT

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

C. TASK: ENGINE STARTING

OBJECTIVE

To determine that the applicant:

1. Exhibits knowledge of the elements related to recommended engine starting procedures. This shall include the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
2. Positions the airplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

ELEMENTS

1. Use the manufacturer's recommended preflight inspection checklist.
2. Ensure the tail of the airplane is not pointed toward something that would be affected by propeller blast.
3. When ready to start the engine, look in all directions to be sure nothing is or will be in the vicinity of the propeller.
4. Ensure the anticollision light is on prior to engine start (as an indication of airplane operation).
5. Prior to engine start, open the window, call "CLEAR," and listen for a response.
6. When activating the starter, place the other hand on the throttle (allowing prompt response).
7. Set a low engine RPM setting immediately after start (usually 1000 RPM).
8. As soon as engine RPM is set, ensure the oil pressure is in the green (if not, the engine should be shut down immediately to avoid serious damage).
9. Check the ammeter for a very high current draw indicating the starter has failed to disengage (if such an indication is found, the engine should be immediately shut down).
10. Avoid continuous starter operation for periods longer than 30 seconds without a cool down period of at least 30 seconds to a minute.

COMMON ERRORS

- a. Failure to properly use the appropriate checklist.
- b. Failure to use safety precautions related to starting.
- c. Improper adjustment of engine controls during start.
- d. Failure to assure proper clearance of the propeller.

REFERENCES

1. AC 91-13, Cold Weather Operation of Aircraft.
2. AC 91-55, Reduction of electrical System Failures Following Aircraft Engine Starting.
3. FAA-H-8083-3A, Airplane Flying Handbook, Chapter 2.
4. AC 61-23 / FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge.
5. POH / AFM, Pilot Operating Handbook / FAA-Approved Airplane Flight Manual.