

Checklist©

A fundamental clue to piloting excellence is demonstrated by the use of a checklist. Just how a checklist is made and used will vary with every pilot according to the aircraft and the situation. That said I will make some suggestions as to how a student might go about developing his own checklist. A checklist should be like an old pair of shoes, easy to put on, fits every bump and comfortable to use. Your list must be legible, accessible and subject to change. Use different colored inks or papers. Once finalized make it resistant to damage. Accessibility and visibility are essential.

For the "club/rental" aircraft, each pilot should have his own list. Such a list should be designed to protect the user/renter from the misfeasance, malfeasance, or nonfeasance of the prior user. It should check such things as Hobbes time, new damage, and maintenance notes. Operational changes in your configuration should trigger checklist use. When to use fuel pump, when to raise/lower gear, reduce/set power, add/remove flaps, etc. Stress workload periods should use a "critical item" checklist. Regardless of piloting experience, the written checklist is for every pilot with a penchant for survival.

I begin developing a checklist by using a tape recorder. The preflight is walked and talked through along with why we do what we do. The student will then use the tape to make a first draft. Usually this is too long and wordy. We are making a what-to-do list; not a how-to-do list. Using the first draft as a guide we do another preflight to help develop a shorthand wording of what we do and the sequence that is used. We will develop this list for efficiency of time and movement. A second draft is made by the student, double spaced. The next preflight is done with both the second draft and the POH checklist. Any item in the POH that has been omitted is inserted at appropriate places. The FAA does not consider a checklist a checklist until it includes all items in the POH. More is all right, but never less.

A third draft is made and used for several flights. It will usually take two more revisions and some changes before finalized. Differences in aircraft of the same manufacture can be included in another color of ink as for C-150, C-152 and C-172. The final phase is to design the lists for compact use. I have found that a 4x6 or 6x8 card with one cut to the center can be multi-folded so as to give eight different faces for checklists. Use arrows to direct you to the next face in sequence.

Every tie-down and use situation will require slightly different procedures. Frequently left out will be such things as checking the time logs, squawk sheets, putting the key on the floor, tires and counter weights. A new checklist may be required just by changing airports. Generic checklists fit only the guy that made them. You should have one custom fitted to the way you do things while adapting to changing conditions.

While there are many way to arrange checklists, I have found one way to avoid the problem of not changing to the appropriate checklist is to make only two such cards. Everything is written in different colors of ink for major sections of the lists.

I. On the ground until takeoff

Preflight. Some students wear it as a necklace with a paper clip and shoe string and refer to at about five stops it as they walk around.

Prestart, start, taxi, runup, pretakeoff checklists are separated from preflight, on the same side but folded under.

II. Backside of the card after landing

Post-landing cleanup, taxi, shutdown, cockpit, and tie-down. In red ink: ground emergency

III. Second card In the air

Pretakeoff, takeoff, posttakeoff, climb, cruise. In red air emergency list.

IV. Backside of card leaving cruise descent, prelanding, landing,

V. Cross Country

This checklist may best be kept on a lapboard. It has a list of checkpoint items such as time, ETA/ATA, next adjusted ETA, Fuel time left/required, Compass Course, Next radio and VOR, etc.

VI. Night flight

Night flight requires a specific equipment and operations checklist. Use an additional series that includes checking lights, cockpit flashlights, interior lights, shutdown lights, etc.

Once you have the checklist made, you must come to a decision as to how you will use it. The stress of distraction is the most common cause of checklist 'failure'. Like gear-up landings, failure to use the checklist is divided between those who have failed and those who are going to. Common checklist errors are completely failing to use, failing to complete, and failing to verify. The 'by memory' pilot, the pilot who is overly reliant on the checklist and the fatigued pilot are those most likely to make mistakes related to checklist use. Never breach piloting etiquette by interfering with a person using a checklist.

Sometimes the sequence is made easier to remember by making a mnemonic (A list of the first letters of words or just words arranged so as to make a word or sentence) to use as a memory aide. Some mnemonics apply to complex aircraft or instrument flight rules (IFR). You can make your own student pilot mnemonics to meet your requirements.

A cockpit checklist would be easier to use and confirm if a sequence or direction pattern is followed. A finger method I recommend is to use a numerical flow pattern to check all switches, controls and instrument. Touch each item with a numbered finger to ensure indication, operation, and position is as required. Use the checklist to confirm that every critical item has been checked. This do-verify or touch-verify method is most common in small planes. Get the list completed during low workload periods.

Planned checklist use is often called by names such as 'cockpit resource management, or standard operating procedures SOP's. This means that the pilot does the same thing with his checklist at the same stage for every flight. Preflight, taxi, runup, pretakeoff, takeoff, climb, departure, level, checkpoint, position reports, descent, arrival, prelanding, landing, postlanding, shutdown all have a set routine of preparation, anticipation, performance, and completion.