

# ARE YOU REALLY READY TO GO?

*Whether you follow the checklist in your pilot's operating handbook or create one of your own, the routine you establish should make you think.*

by Harry Kraemer

One of my early multi-engine instructors used to refer to the engine-out procedure as a "monkey drill." After about five hours in the aircraft with her and doing this so-called monkey drill over and over, I just had to ask, "Why do you call it a monkey drill?"

"Because I can teach a monkey to do this," she responded. The monkey drill was to firewall everything on the throttle quadrant, identify, verify and feather. "That's the part that a monkey could do," she said. "Now, get the checklist out."

Essentially, the monkey drill was a flow-type checklist, something that could be completed from memory. So we basically were completing a flow-type checklist backed up with a printed checklist.

## Get With The Flow

When used correctly, the flow method will help develop a memory pattern. When the workload is intense, this memory pattern can expedite things in the cockpit until you refer to the printed checklist.

Some pilots prefer to follow the checklist as if it were a to-do list, then follow that with a flow-type check to ensure that all items have been checked and rechecked. Most of us generally follow a flow-type checklist during the walk-around and cockpit prep.

The flow-type check teaches you to think about what you're doing and

why you're doing it. The pilot following a checklist as a to-do list may fall into the trap of just reading and doing — we should be reading, doing and verifying.

The to-do list reader may fall into another trap. Read the following sentence. Ice occurs in the the winter. If you missed the double use of the word "the," you're not alone.

Sometimes we read what we think it should say, or we read something to verify what we think it should say and miss key words. The to-do list often takes the thinking out of this very critical procedure.

Some pilots develop a flow checklist by pointing to every switch and gauge in the cockpit. When this is done thoroughly and followed with the printed checklist, the pilot will be verifying aircraft readiness.

The flow checklist often is used as the aircraft is lined up on the runway for takeoff when the pilot doesn't want to be heads-down in the cockpit reading a checklist. I prefer the flow check just after rotation to clean the aircraft up and establish my initial climb until my climb checklist can be referred to.

## Just Do It

In a two-pilot crew environment, both pilots need to be on the same page, in sync with each other. Both heads need to recognize the readiness issues in the same way. The two-pilot crew may use the challenge/response method of completing a checklist, and it seems to be the most effective.

This is basically a step-by-step checklist. The pilot not flying (PNF) reads the item and waits for the pilot flying (PF) to respond. The PF must do the required action. Next, the PNF verifies that the correct action was completed and moves on to the next item. This keeps both crew members in sequence with each other.

Another method that works well with two-pilot crews is that the PF uses a flow-type check after a challenge/response type check is completed.

The pilot who relies on memory alone instead of consulting a checklist is asking for trouble. A routine scan of knobs and dials eventually skips or reads past obvious anomalies.

An ATC interruption or a passenger request can break an otherwise orderly flow; a chatty right-seater can obscure your picture of the fuel selector just long enough to break an otherwise proper check sequence.

But there always are time-critical situations in which our memory is used to take us through our flow checklist. And it is for these times that most of us have developed little memory aids or mnemonics to get us through.

We may use specific mnemonics like FAT to double-check the position of flaps and trim or FRATS to check flaps, reversers, airbrakes, trims and speeds. We may use FAST for flaps, airbrakes, speeds and trims.

GUMP is the all-familiar mnemonic that most pilots were taught during their transition to the retractable-gear aircraft and reminds the pilot to check the gas, undercarriage, mixture and props.

## New-Age Checks

Electronic checklists are great, especially if they are incorporated in the avionics or multifunction display. An electronic checklist decreases the chance of missing an item after an interruption and allows the pilot to skip an item and come back to it at a later time.

Most electronic lists will not let the pilot advance to the next checklist until all missed and skipped items are completed, therefore making it hard to miss an item completely.

Certain aircraft have items on a checklist that are only to be completed once a day or on the first flight of each day. With the electronic checklist, these items can be marked or tagged so that once they are completed or checked, they will be bypassed for the remainder of the flights for that day.

A drawback to the electronic checklist is that while displayed on the multi-function display, other essential functions or pages on the MFD are not available.

In addition to the panel-mounted electronic checklist, the portable electronic checklist has a few unique features of its own. For starters, it's portable, so it can be taken from the aircraft for setup and to review procedures. Second, the devices usually have their own power supply, so in the event

of a power loss in the aircraft, a checklist still is available.

## Heads-Up Attitude

It's also important to keep your scan going (outside the cockpit) while performing any type of checklist. Whether you are a single pilot or a part of a two-person crew, completing a checklist heads-down is not cool at all.

As usual, discipline is the key. Decide what kind of checklist works for your operation, try it out, back it up with the POH until you nail a procedure that fits your aircraft and the

missions that you fly, and then follow that procedure religiously.

If there are checklist items that you don't understand, say engine or accessory temperatures, for example, get the shop to explain them to you. When you understand why something needs to be checked, your knowledge will help reinforce that check and you will be less likely to forget it.

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