



# NTSB ***SAFETY ALERT***

National Transportation Safety Board



## Preventing Rote Callouts



### ***Confirm Cockpit Indications Before Making Callouts***

#### ***The problem***

- Recent National Transportation Safety Board investigations have identified several instances in which pilots made callouts without first verifying the cockpit indication that corresponded with the callout.
- In these cases, the pilots acted out of habit and made callouts based on what they expected to see regarding the cockpit indication but did not take the time to verify it.
- Examples of accident investigations include the following:
  - A Boeing 757 overran the end of the runway while landing in Jackson Hole, Wyoming. The captain called out “deployed” even though the speedbrakes were not deployed and “two in reverse” even though neither reverser was fully deployed. Both the speedbrakes and the thrust reversers had mechanical defects, and the captain did not manually deploy the speedbrakes when they failed to deploy automatically because, based on his rote callout, he did not recognize that they did not deploy.<sup>1</sup>
  - A Hawker 800 crashed after a late go-around attempt in Owatonna, Minnesota. After touchdown, the copilot called out “we’re dumped,” but the flaps were not all the way in the lift dump position and the airplane did not slow down as expected, leading the pilot to attempt to go around.<sup>2</sup>

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<sup>1</sup> *Runway Overrun, American Airlines Flight 2253, Boeing 757-200, N668AA, Jackson Hole, Wyoming, December 29, 2010, Aircraft Accident Report NTSB/AAR-12/01 (Washington, DC: National Transportation Safety Board, 2012).*

<sup>2</sup> *Crash During Attempted Go-Around After Landing, East Coast Jets Flight 81, Hawker Beechcraft Corporation 125-800A, N818MV, Owatonna, Minnesota, July 31, 2008, Aircraft Accident Report NTSB/AAR-11/01 (Washington, DC: National Transportation Safety Board, 2011).*

- An MD-82 crashed after taking off with the flaps retracted in Madrid, Spain. The first officer called out the proper flap setting (not the indicated setting), but the flaps were not properly set for takeoff.<sup>3</sup>
- A Boeing 737 crashed after a loss of control after takeoff in Douala, Cameroon. The captain called out “command,” thinking he had engaged the autopilot, but the autopilot did not engage and the airplane continued to roll.<sup>4</sup>
- The rote callouts made in these accidents prevented or delayed the pilots’ proper response during a critical phase of flight or caused the pilots to think that an action had been taken when it had not.
- All pilots can be vulnerable to making errant callouts if they become complacent, which allows habits and expectations to influence their responses. Taking explicit steps to direct attention, methodically verify the status of a checklist item, and make callouts using standard phraseology can reduce your chances of making errors similar to those cited above.

### **What can *pilots* do?**

- Do not become complacent and respond out of habit when running a checklist. For every callout, there should be a corresponding indication or setting. Train yourself to direct your attention on the indicator or display long enough to be sure of what the indicator is telling you every time. Physically touching a control or pointing to an indicator can be a useful technique.
- Adopt a methodical pace when reading or responding to checklist items so that you can ensure that you see and verify each cockpit indication.
- Cross check related indications to see if the aircraft’s performance is changing. For example, a callout of “flaps fifteen” may be accompanied by a characteristic change in pitch attitude and airspeed, so know what to expect on the other instruments, not just the flap position indicator.
- Be attentive to an indicator’s color and do not anticipate a color change before it occurs. For example, a thrust reverse indicator is often amber when reversers are in transit but green when reversers are fully deployed.
- Make a point of giving and receiving a proper response to checklist callouts. Improper or nonstandard phraseology, nods, mumbles, and nonverbal signals are unacceptable.

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<sup>3</sup> *Accident Involving a McDonnell Douglas DC-9-82 (MD-82) Aircraft, Registration EC-HFP Operated by Spanair, at Madrid-Barajas Airport, on 20 August 2008*, Report A-032/2008 (Madrid, Spain: Comisión de Investigación de Accidentes e Incidentes de Aviación Civil, 2011).

<sup>4</sup> *Technical Investigation into the Accident of the B737-800 Registration 5Y-KYA Operated by Kenya Airways that Occurred on the 5th of May 2007 in Douala* (Yaoundé, Cameroon: Cameroon Civil Aviation Authority, 2010).

- Operational distractions, such as radio calls, can interrupt or drown out a callout. Stay focused and assertive and repeat the callout if needed. Prevent nonoperational distractions, such as cockpit conversations, by implementing a “sterile cockpit” where callouts are expected.
- Set an example. If you make your callouts crisp and catch any missed indications, your fellow pilot will likely follow suit.
- Awareness is a large part of the solution. Add callout awareness to your preflight briefings and be ready to verbalize each and every discrepancy.

### ***Need more information?***

- Federal Aviation Administration Advisory Circular 120-71A, “Standard Operating Procedures for Flight Deck Crewmembers.”