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Pilot Counsel: The glass cockpit—a new NTSB requirement

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The National Transportation Safety Board has just amended its rules to expand the number of aviation “incidents” that require notification to the NTSB. For the first time, the rules address the burgeoning “glass cockpit” displays and their offshoots. Any significant “display blanking” on an aircraft’s electronic cockpit display is now a reportable incident. The rules took effect on March 8, 2010, and it will be interesting to see how they are interpreted and applied.

To put the new rules in perspective, the NTSB has had for some time notification and reporting requirements for “aircraft accidents, incidents, and overdue aircraft.” The board’s rationale for these notification requirements is to allow the NTSB to identify safety issues, to conduct investigations where warranted, to identify corrective actions, and to propose safety recommendations. The incidents that historically have been cited in NTSB Rule 830.5 include such events as flight control system malfunction or failure, crewmember incapacitation, certain turbine engine structural failures, in-flight fire, a midair collision, extensive property damage to other than the aircraft involved, and certain incidents involving large aircraft.

This new rulemaking adds five more to this list: propeller blade release (excluding by ground contact), evasive maneuvers in response to an ACAS (airborne collision avoidance system) resolution advisory while operating IFR, substantial helicopter tail or main rotor blade damage (including ground damage), uncontained turbine engine failures, and air carrier runway/taxiway incursions. Explaining these newly added incidents is for another time.

For now we are alerting pilots and aircraft owners to the part of the new rules that require notification regarding an aircraft’s electronic cockpit displays.

To paraphrase the requirement, if more than one-half of the display becomes completely blank and shows no data or information, the event becomes reportable—or, more accurately, “notifiable”—whether the aircraft is airborne or on the ground at the time of the failure. As we gain experience with the requirement we may find questions of interpretation, so it is well to look at the specific regulatory language of NTSB’s amended Rule 830.5(a)(9).

As we will see, the main thrust of the rule is aimed at higher-end aircraft, but it does catch a large number of general aviation aircraft. Immediate notification is required of: “A complete loss of information, excluding flickering, from more than 50 percent of an aircraft’s cockpit displays known as: (i) Electronic Flight Instrument System (EFIS) displays; (ii) Engine Indication and Crew Alerting System (EICAS) displays; (iii) Electronic Centralized Aircraft Monitor (ECAM) displays; or (iv) other displays of this type, which generally include a primary flight display (PFD), primary navigation display (PND), and other integrated displays.”

We can anticipate the question whether the requirement still applies if the aircraft also has mechanical instruments. The answer is yes, the requirement still applies, even though a mechanical display of the information is still available.

It is important to note that in NTSB parlance there is a technical difference between “notification” and subsequent “reporting” (even if I have sometimes here used the words “report” and “reportable” in the nontechnical and hopefully not confusing sense). Here is the difference. “Notification” must be immediate, and by the most expeditious means available, to the nearest NTSB office. A more expansive follow-up “report” of a cockpit-display failure, however, is only required if requested by an authorized representative of the board.

There are fewer than a dozen NTSB offices, and the immediate notification may be by telephone to any one of them: Anchorage (907-271-5001); Atlanta (404-562-1666); Chicago (630-377-8177); Denver (303-373-3500); Arlington, Texas (817-652-7800); Gardena (Los Angeles), California (310-380-5660);

Miami (305-597-4600); Seattle (206-870-2200); and Ashburn, Virginia (571-223-3930)—or the headquarters in Washington, D.C. (202-314-6000). The offices are listed on the [NTSB Web site](#). It is also important to note that Section 830.10 requires the operator of an aircraft involved in a “notifiable” incident to preserve all pertinent records and wreckage (if applicable) until the NTSB takes custody or until the NTSB releases the wreckage and records. It will be interesting to see how this requirement is applied.

These types of incidents now reportable to the NTSB may already be required to be reported to the FAA. What comes to mind is FAR 91.187, which requires a report to air traffic control “as soon as practical” of any malfunctions of navigational, approach, or communications equipment occurring in IFR flight. Nevertheless, even if there is an overlap in these requirements, the NTSB wants to receive its own immediate notification of any reportable electronic cockpit display blanking.

I can’t help but wonder if we don’t already have too many marginally relevant (to air safety) rules to bedevil our flying. In any event, pilots and aircraft owners need to be kept advised of their legal obligations.