

# Accidents vs. Incidents

## How to know the difference and what to do about it

By Lori N. Edwards

**M**ost of us know that accidents must be reported to the National Transportation Safety Board (NTSB), although we may be a little fuzzy on the process. We may even remember that certain incidents are reportable as well. This general knowledge may be enough to help us remember to spot the issue when we first hear of an aircraft incident, but when confronted with an issue on an aircraft you have touched your analysis should never stop there.

As a maintenance professional you are likely to be one of the first persons notified of an incident. Depending on the type of incident, you may be the most qualified person involved to determine whether or not NTSB reporting is required. Furthermore, a misclassification of an incident as an accident during the reporting process could have the effect of wiping out the otherwise available Federal Aviation Administration (FAA) sanction protection typically provided under many voluntary disclosure programs.

### Reporting requirements

The NTSB reporting requirements can be found in 49 CFR Part 830, and involve a two-step process, including immediate notification "by the most expeditious means available," followed up by a written report on Board Form 6120.1/2. This notification process is required in the following circumstances:

- (a) *An aircraft accident or any of the following listed incidents occur:*
  - (1) *Flight control system malfunction or failure;*
  - (2) *Inability of any required flight crewmember to perform normal flight duties as a result of injury or illness;*
  - (3) *Failure of structural components of a turbine engine excluding compressor and turbine blades and vanes;*

- (4) *In-flight fire; or*
- (5) *Aircraft collide in flight.*
- (6) *Damage to property, other than the aircraft, estimated to exceed \$25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less.*
- (7) *For large multi-engine aircraft (more than 12,500 pounds maximum takeoff weight):*
  - (i) *In-flight failure of electrical systems which requires the sustained use of an emergency bus powered by a backup source such as a battery, auxiliary power unit, or air driven generator to retain flight control or essential instruments;*
  - (ii) *In-flight failure of hydraulic systems that results in sustained reliance on the sole remaining hydraulic or mechanical system for movement of flight control surfaces;*
  - (iii) *Sustained loss of the power or thrust produced by two or more engines; and*
  - (iv) *An evacuation of an aircraft in which an emergency egress system is utilized.*
- (b) *An aircraft is overdue and is believed to have been involved in an accident.*

In many cases the situation may appear to fall under both the definition of an aircraft accident and one of the incidents required to be reported. However, before picking up the phone and making the report, it is critical to confirm which category applies.

Often incidents and accidents come as a result of, or may be related to, possible regulatory violations. The aviation safety reporting programs created by the FAA (such as the Aviation Safety Reporting Program administered by NASA) provide protection for pilots, controllers, and mechanics against civil penalties and suspensions (but not findings of violation) in enforcement actions where the certificate holder reports the incident. However, these programs specifically exclude coverage and protection for violations relating to accidents. In addition to being ineligible for the

civil penalty and suspension protection, if a NASA report is filed with information concerning an accident, the report is "referred promptly" to both the NTSB and the FAA.

### Accident or incident?

To figure out whether or not a situation qualifies as an "aircraft accident" we must look to the definitions in Part 830. The NTSB defines an "aircraft accident" to mean "an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage." The first portion of this definition is especially important to note for maintenance and ramp personnel. The initial threshold for classification as an aircraft accident is that the aircraft is being operated "with the intention of flight."

Incidents which occur while the aircraft is operated for the sole purpose of moving it around the ramp, moving it from its hangar to the maintenance hangar, or other ground only operations fall outside of the definition of aircraft accident, regardless of the extent of damage or personal injury. However, be careful here. Incidents which occur during taxi preceding or following a flight may qualify as aircraft accidents. That extra taxi time between the normal ramp space and the maintenance hangar after the passengers have disembarked may still be part of an operation relating to flight if any of the crew members remain on board.

If an incident occurs during an aircraft operation where there was the intention of flight, then the next threshold is whether or not the incident involved death, serious injury, or substantial damage. If any of these circumstances are present, then the situation is an "aircraft accident." The NTSB defines "substantial damage" as "damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component."

### Fine lines

The regulation also provides a list of specific items which are not considered to

be substantial damage, including "engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips." One of the catches here is the term "wingtips." Winglets have replaced wingtips on many aircraft, however the jury may still be out on whether or not a winglet is a wingtip, or a part of the wing, for NTSB reporting purposes.

While a maintenance professional may be in a good position to determine whether or not an aircraft has sustained "substantial damage," determining whether or not there has been a "serious injury" may be more difficult. With the various patient privacy laws in place these days, obtaining information about an injured passenger or crew member could be a daunting task.

The application of these regulations to an incident is extremely fact driven, and in certain instances it can be questionable which, if any, category is applicable. It is also important to note that the NTSB recently released a Notice of Proposed Rulemaking in which the Board proposes to make several changes to Section 830.5, including a revision to the description of the types of turbine engine failures listed as reportable incidents, and the addition of several new types of reportable incidents, which include failures/flickering of electronic primary displays, Airborne Collision and Avoidance System (ACAS) resolution advisories, damage to helicopter rotor blades, and runway incursions.

In the event of an accident/incident be sure to carefully review the most recent version of Part 830, and when in doubt, seek counsel. **AMT**

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