



2019-2020 NTSB

MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS



Improve the Safety of Part 135 Aircraft Flight Operations

What is the problem?

Regardless of the purpose of the flight or the type of aircraft, all flights should be safe—right now they may not be. That’s because the Federal Aviation Administration (FAA) doesn’t require air medical service, air taxi, charter, or on-demand flights to meet the same safety requirements as commercial airlines. Even without requirements, many such operators could be taking more initiative to ensure the highest level of safety for their aircraft and passengers.

Most of the organizations that conduct Part 135 operations do not have—and are not required to have—a safety management system (SMS), flight data monitoring (FDM), or controlled flight into terrain (CFIT)-avoidance training program. These programs enable operators to take a strategic approach to safety management, requiring that safety-focused policies, practices, and procedures be implemented to keep aircrews and passengers safe. SMS and FDM programs also yield data that can be used to improve safety practices to better prevent accidents. We don’t know how many operators have SMS or FDM programs because the FAA doesn’t require operators to implement and report on them.

CFIT-avoidance training programs are required for Part 135 helicopter operations, but not for Part 135 fixed-wing operations. We have investigated several fatal CFIT accidents involving flights operated under visual flight rules at low altitudes where terrain awareness and warning system (TAWS) alerts were inhibited due to the lack of effective TAWS protections and nuisance-alert mitigations.

Despite the availability of SMS, FDM, and CFIT-avoidance programs,



On November 10, 2015, an Execufly flight plane departed controlled flight while on a nonprecision localizer approach to runway 25 at Akron Fulton International Airport and impacted a four-unit apartment building in Akron, Ohio. Nine people died.

preventable crashes involving Part 135 aircraft are occurring all too frequently, like the November 10, 2015, fatal accident in Akron, Ohio, involving a British Aerospace HS 125-700A. Our investigation identified a lack of compliance with standard operating procedures that could have been mitigated with an SMS.

Our investigation of the October 2, 2016, crash of a turbine-powered Cessna 208B Grand Caravan airplane into steep, mountainous terrain northwest of Togiak, Alaska, identified safety issues related to a lack of SMS, FDM, and adequate CFIT training and technology use. In this accident, which killed two pilots and the passenger, we discovered the need for improvements in the operator’s CFIT-avoidance training, and the need for SMS and FDM programs (and supporting devices) for Part 135 operators, among other issues.

Related reports:

AAR-18/02: Collision with Terrain Hageland Aviation Services, Inc. dba Ravn Connect Flight 3153 Cessna 208B, N208SD; Togiak, Alaska; October 2, 2016; Accident ID ANC17MA001

AAR-16/03: Crash During Nonprecision Instrument Approach to Landing Execufly Flight 1526 British Aerospace HS 125-700A, N237WR; Akron, Ohio; November 10, 2015; Accident ID CEN16MA036

AAR-06/04: Runway Overrun and Collision, Platinum Jet Management, LLC, Bombardier Challenger CL-600-1A11, N370V; Teterboro, New Jersey; February 2, 2005; Accident ID DCA05MA031

For detailed investigation reports, visit www.nts.gov

3.9 million

Combined total flight hours for on-demand and scheduled Part 135 aircraft in 2016

17%

General aviation fatalities from CFIT accidents

53

Potential lives saved if operator involved in crash had SMS or FDM, based off NTSB investigations between 2000 and 2015

Continued on next page

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What can be done?

We know that SMS, FDM, and CFIT programs can improve safety and prevent crashes. We currently have 21 open safety recommendations addressing the safety gap in Part 135 operations. Operators must be proactive about safety; they should not wait for regulations or an accident to move them to action. Some operators have already incorporated SMS, FDM, and CFIT programs and are seeing tremendous safety returns.

To increase use of SMS, FDM, and CFIT programs in Part 135 aircraft, the following actions should be taken:

Operators/Industry

- › Install an SMS and FDM, appropriately scaled to the size of your operation, to detect and correct unsafe deviations from company procedures before an accident occurs.
 - *An SMS is an effective way to establish and reinforce a positive safety culture and identify deviations from standard operating procedures so that they can be corrected.*
 - *Collect data through an FDM over the entirety of the operation; this is the only means an operator has to consistently and proactively monitor its line operations. FDM should be a nonpunitive system.*
- › Use analysis tools provided by associations and the FAA's InfoShare to identify safety trends.
- › Incorporate a CFIT-avoidance training program that addresses current TAWS technologies relevant to your operational environment.



On February 2, 2005, a Bombardier Challenger ran off the departure end of runway 6 at Teterboro Airport in New Jersey, through an airport perimeter fence, across a six-lane highway (where it struck a vehicle), and impacted a building. Four people were seriously injured.

Regulators

- › Require all Part 135 operators to install flight data recording devices capable of supporting an FDM program and to establish SMS programs.
- › Work with Part 135 operators to improve voluntarily implemented training programs aimed at reducing the risk of CFIT accidents involving continuing flight under visual flight rules into instrument meteorological conditions, paying special attention to human factors issues.

MWL
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Critical changes needed to reduce transportation accidents, injuries, and fatalities

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The NTSB **MOST WANTED LIST** highlights safety issues identified from the NTSB's accident investigations to increase awareness about the issues and promote recommended safety solutions.

For more information visit www.nts.gov/mostwanted or contact SafetyAdvocacy@ntsb.gov

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the federal government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

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