National Transportation Safety Board

Washington, DC 20594

Safety Recommendation

Date: October 6, 2016

In reply refer to: A-16-20 through -29
A-09-27 (Reiteration and Classification)
A-07-63 (Classification)
A-07-64 (Classification)

The Honorable Michael P. Huerta
Administrator
Federal Aviation Administration
Washington, DC 20591

On September 13, 2016, the National Transportation Safety Board (NTSB) adopted our report concerning the March 5, 2015, accident in which Delta Air Lines flight 1086, a Boeing MD-88, N909DL, crashed after it departed the left side of runway 13 during landing at LaGuardia Airport, New York, New York.[1] Additional information about this accident and the resulting recommendations may be found in the report of the investigation, which can be accessed at our Aviation Information Resources webpage under report number NTSB/AAR-16/02.

As a result of this investigation, we issued 14 new recommendations, including 2 to Boeing, 1 to US operators of MD-80 series airplanes, 1 to The Port Authority of New York and New Jersey, and the following 10 recommendations to the Federal Aviation Administration:[2]

A-16-20

> Collaborate with Boeing and US operators of MD-80 series airplanes to (1) conduct a study to examine reverse thrust engine pressure ratio (EPR)-related operational data, procedures, and training and (2) identify industry-wide best practices that have been shown to be effective in reliably preventing EPR exceedances to mitigate the risks associated with rudder blanking.

[1] National Transportation Safety Board, *Runway Excursion During Landing, Delta Air Lines Flight 1086, Boeing MD-88, N909DL, New York, New York, March 5, 2015*, NTSB/AAR-16/02 (Washington, DC: National Transportation Safety Board, 2016).

[2] US operators of MD-80 series airplanes are Delta Air Lines, American Airlines, and Allegiant Air.

A-16-21

Encourage US operators of MD-80 series airplanes to (1) implement the best practices identified in Safety Recommendation A-16-20 and (2) participate in an industry-wide monitoring program to verify the continued effectiveness of those solutions over time.

A-16-22

Require operators of MD-80 series airplanes to revise operational procedures to include a callout when reverse thrust power exceeds 1.3 engine pressure ratio during landings on a contaminated runway.

A-16-23

Continue to work with industry to develop the technology to outfit transport-category airplanes with equipment and procedures to routinely calculate, record, and convey the airplane braking ability required and/or available to slow or stop the airplane during the landing roll.

A-16-24

If the systems described in Safety Recommendation A-16-23 are shown to be technically and operationally feasible, work with operators and the system manufacturers to develop procedures that ensure that airplane-based braking ability results can be readily conveyed to, and easily interpreted by, arriving flight crews, airport operators, air traffic control personnel, and others with a safety need for this information.

A-16-25

Require 14 *Code of Federal Regulations* Part 121 operators to provide (1) guidance that instructs flight attendants to remain at their assigned exits and actively monitor exit availability in all non-normal situations in case an evacuation is necessary and (2) flight attendant training programs that include scenarios requiring crew coordination regarding active monitoring of exit availability and evacuating after a significant event that involves a loss of communications.

A-16-26

Develop best practices related to evacuation communication, coordination, and decision-making during emergencies through the establishment of an industry working group and then issue guidance for 14 *Code of Federal Regulations* Part 121 air carriers to use to improve flight and cabin crew performance during evacuations.

A-16-27

> Clarify guidance to all 14 *Code of Federal Regulations* Part 121 air carriers to reinforce the importance of (1) having precise information about the number of passengers aboard an airplane, including lap-held children, and (2) making this information immediately available to emergency responders after an accident to facilitate timely search and rescue operations.

A-16-28

> For airports certificated under 14 *Code of Federal Regulations* Part 139, direct airport certification safety inspectors to ensure, before or during the airports' next scheduled annual inspection, that policies and procedures for friction measurement during winter operations are accurately and adequately described in the airports' *Airport Certification Manual* and Snow and Ice Control Plan.

A-16-29

> Revise Advisory Circular 150/5200-30D, "Airport Field Condition Assessments and Winter Operations Safety," to provide more precise guidance regarding (1) the need to issue notices to airmen (NOTAM) in a timely manner and (2) the specific changes to runway surface conditions that would prompt the issuance of updated NOTAMs.

The NTSB also reiterates Safety Recommendation A-09-27 and classifies it "Open—Unacceptable Response."

> Revise Advisory Circular 120-48, "Communication and Coordination Between Flight Crewmembers and Flight Attendants," to update guidance and training provided to flight and cabin crews regarding communications during emergency and unusual situations to reflect current industry knowledge based on research and lessons learned from relevant accidents and incidents over the last 20 years.

In addition, the NTSB classifies Safety Recommendation A-07-63 "Open—Acceptable Response" and Safety Recommendation A-07-64 "Closed—Acceptable Action/Superseded." Safety Recommendation A-07-64 is superseded by Safety Recommendations A-16-23 and -24.

> Establish a minimum standard for 14 *Code of Federal Regulations* Part 121 and 135 operators to use in correlating an airplane's braking ability to braking action reports and runway contaminant type and depth reports for runway surface conditions worse than bare and dry. (A-07-63)

> Demonstrate the technical and operational feasibility of outfitting transport-category airplanes with equipment and procedures required to routinely calculate, record, and convey the airplane braking ability required and/or available to slow or stop the airplane during the landing roll. If feasible, require operators of

transport-category airplanes to incorporate use of such equipment and related procedures into their operations. (A-07-64)

Chairman HART, Vice Chairman DINH-ZARR, and Members SUMWALT and WEENER concurred in these recommendations.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate receiving a response from you within 90 days, as required by 49 *United States Code* section 1135, detailing the actions you have taken or intend to take to implement them. When replying, please refer to the safety recommendations by number and submit your response electronically to correspondence@ntsb.gov.

[Original Signed]

By: Christopher A. Hart,
Chairman