

Log 2302A



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: July 23, 1991

In reply refer to: A-91-67 and -68

Mr. Robert Braun
Airport Director
Detroit Metropolitan/Wayne County Airport
Mezzanine, L.C. Smith Terminal
Detroit, Michigan 48242

On December 3, 1990, at 1345 eastern standard time, Northwest Airlines flight 1482, a McDonnell Douglas DC-9, and Northwest Airlines flight 299, a Boeing 727 (B-727), collided near the intersection of runways 09/27 and 03C/21C at Detroit Metropolitan/Wayne County Airport (DTW), Detroit, Michigan. The DC-9 was to be a regularly scheduled passenger flight to Pittsburgh, Pennsylvania, and the B-727 was to be a regularly scheduled passenger flight to Memphis, Tennessee. Both airplanes were operating under Federal Aviation Regulations Part 121 and instrument meteorological conditions prevailed at the time at DTW. The B-727 was on its takeoff roll on runway 3C at the time of the collision, and the DC-9 had taxied onto the runway just prior to the accident. The B-727 was substantially damaged, and the DC-9 was destroyed during the collision and subsequent fire. Of the 40 passengers and 4 crewmembers aboard the DC-9, 7 passengers and 1 flight attendant received fatal injuries. None of the 146 passengers and 8 crewmembers on the B-727 were injured.¹

Concerning taxiway marking, the investigation revealed several areas of faded or nearly invisible taxi lines on the airfield, especially near the area where the DC-9 was taxiing. Reflective paint was not used for taxiway centerline or hold line markings, and its use was not required. The Inner taxiway centerline from gate C18 eastbound past the fire station was visible. However, about 200 feet of the centerline as it curved through the Oscar 6 area varied in conspicuity between "very faded" to "not visible" under day visual flight rules' conditions, according to investigators who observed the taxiway. The taxiway centerline that led from the Inner taxiway to taxiway Oscar 6 toward runway 9/27 was visible. The Inner taxiway centerline between Oscar 6 and Oscar 4 varied in conspicuity from "faded" to "visible." On the Outer taxiway, the painted taxiway centerline was observed to vary in

¹For more detailed information, read Aircraft Accident Report, "Northwest Airlines, Inc., Flights 1482 and 299, Runway Incursion and Collision, Detroit Metropolitan/Wayne County Airport, Michigan, December 3, 1990" (NTSB/AAR-91-05)

visibility from "faded" to "visible" between Oscar 4 and Oscar 6. About 50 feet of the centerline on the Outer taxiway near Oscar 5 was unpainted because of recent pavement surface maintenance.

An airport management official stated during the public hearing that taxiway centerlines are painted twice a year and that because of weather, the lines were to be repainted in the spring of 1991. The Safety Board believes that the repainting of the faded taxiway centerlines should be performed as soon as they are noted during daily airport inspections instead of during a set schedule for overall airport restriping.

Concerning runway lighting, the absence of runway edge lights on runway 3C/21C in the Oscar 4/runway intersection area probably contributed to the flightcrew's actions. If the lights had been imbedded in the pavement at intervals of 200 feet, as recommended by Advisory Circular 150/5340-24, the DC-9 pilots would probably have noticed them before the runway incursion and stopped taxiing. The Safety Board notes that the single runway edge light that the captain eventually observed prompted him to taxi to the left of the runway centerline during the incursion.

Therefore, as a result of the investigation of this accident, the Safety Board recommends that the Detroit Metropolitan/Wayne County Airport:

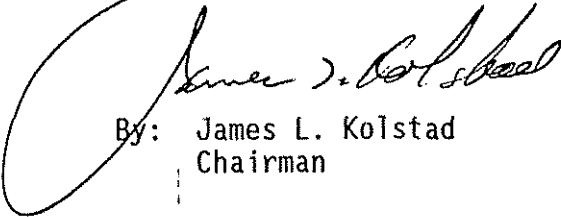
Install semiflush runway edge lights in accordance with Advisory Circular 150/5340-24. (Class II, Priority Action) (A-91-67)

Implement a program to provide for the prompt repainting of faded taxiway and runway markings when they are seen during daily airport inspections, rather than waiting for a set schedule for overall airport restriping. (Class II, Priority Action) (A-91-68)

Also, the Safety Board issued Safety Recommendations A-91-54 through A-91-66 to the Federal Aviation Administration; and A-91-69 to Northwest Airlines, Inc.

The National Transportation Safety Board is an independent federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter. Please refer to Safety Recommendations A-91-67 and -68 in your reply.

KOLSTAD, Chairman, COUGHLIN, Vice Chairman, BURNETT, LAUBER and HART, Members, concurred in these recommendations.


By: James L. Kolstad
Chairman