

**AIRCRAFT ACCIDENT INVESTIGATION
SHEPPARD AIR FORCE BASE, TEXAS
T-38C, S/N 70-1580, 14 MAY 2009**

EXECUTIVE SUMMARY

On 14 May 2009, at 1403 Central Standard Time, the Mishap Aircraft (MA), a T-38C Talon, serial number 70-1580, was destroyed when it departed Runway 33 Center (33C) during takeoff roll at Sheppard Air Force Base (AFB), Texas. The Mishap Crew (MC), consisting of the Mishap Instructor Pilot (MIP) and Mishap Student Pilot (MSP), egressed safely, sustaining only minor injuries. The MA, MIP and MSP were assigned to the 80th Flying Training Wing at Sheppard AFB. The MIP and MSP were scheduled for a two-ship formation low-level sortie in fulfillment of Undergraduate Pilot Training syllabus requirements. During the takeoff roll, the MC lost control of the MA and it veered left, departed the runway and crashed on the grass infield west of runway 33C. This caused incidental damage to the grass infield, but no damage to private property or structures. The MA was destroyed with damage to the MA's fuselage, wings, landing gear and other surfaces. The total cost of this mishap was \$6,324,972.86.

The MA was number two in a two-ship formation maximum afterburner takeoff on Runway 33C. Lining up on the right half of the runway, the MSP made a delayed left turn and overcorrected back to the right. He stopped the MA three degrees right of runway heading with its nosewheel canted several additional degrees to the right. Immediately after brake release, the MA veered right. Attempting to maintain directional control during takeoff roll, the MSP made multiple brake and rudder inputs causing left and right yaw oscillations of the MA. As the MA oscillated right a third time, approximately 900 feet down the runway nearing the right edge, the MIP determined a critical situation was developing and made the decision to abort the takeoff.

When the MIP initiated the takeoff abort and brought the MA's throttles out of afterburner, the MSP was still inputting full left rudder, full left brake, and had the nosewheel steering (NWS) switch engaged. As a result, the NWS system commanded a left turn of up to 55 degrees and the MA abruptly yawed left, skidded out of control and departed the runway. After departing the runway at 80 knots, the MA's landing gear collapsed, the right wing and horizontal stabilizer dug into the ground causing the MA to become airborne and roll right 360 degrees. The MA came to rest on the infield 42 feet west of Runway 33C, approximately 1750 feet from the approach end.

The Accident Investigation Board (AIB) President found by clear and convincing evidence that the cause of this mishap was the MSP engaging the NWS switch prior to, and during the MIP's takeoff abort. The AIB President found sufficient evidence to conclude the following factors substantially contributed to the mishap: the MSP over-controlled the MA on the takeoff roll, channelized his attention on maintaining directional control, negatively transferred learned habit information from a prior airframe into the mishap event, and there was a lack of positive transfer of aircraft control between the MC. The AIB President found no evidence that supervision, training, maintenance, or aircraft condition contributed to this accident.

<p>Under 10 U.S.C. 2254(d) any opinion of the accident investigators as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.</p>
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