



# Aviation Investigation Final Report

<b>Location:</b>	TELLURIDE, Colorado	<b>Accident Number:</b>	DEN00FA182
<b>Date &amp; Time:</b>	September 30, 2000, 14:05 Local	<b>Registration:</b>	N26KP
<b>Aircraft:</b>	Sukhoi SU-26MX	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

The pilot was to perform aerobatics at an air show at a high altitude airport (density altitude 12,441 feet). He was cleared to takeoff and exit the airport traffic area (he was not cleared to perform any aerobatic maneuvers). The pilot flew down the runway at 75 to 100 feet. At midfield, he pulled his airplane up to vertical, and at 500 feet agl, the airplane began to tumble. The airplane entered a spin and impacted terrain. Examination of the airplane revealed no evidence of preimpact anomalies.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to maintain aircraft control while maneuvering, and the subsequent inadvertent stall/spin to the ground. A contributing factor was the high density altitude weather condition.

## Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: MANEUVERING

### Findings

1. AEROBATICS - INTENTIONAL - PILOT IN COMMAND
2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (C) STALL/SPIN - INADVERTENT - PILOT IN COMMAND
4. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE

-----

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

Findings

5. TERRAIN CONDITION - OPEN FIELD

## Factual Information

### HISTORY OF FLIGHT

On September 30, 2000, at approximately 1405 mountain daylight time, a Sukhoi SU-26MX, N26KP, was destroyed during impact with terrain following a loss of control while maneuvering at the Telluride Regional Airport, Telluride, Colorado. The commercial pilot, the sole occupant in the airplane, was fatally injured. The pilot was operating the airplane under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the local aerobatic flight that was originating at the time of the accident. The pilot had not filed a flight plan.

According to the Telluride airport manager, the airplane was scheduled to perform aerobatics, in a local air show, after a flight of T-28s completed several fly-bys. He said that the pilot started his engine "early," and was requesting clearance for departure before the T-28s had finished. The pilot said that he needed to get airborne because his engine was getting hot. The airport manager said that a United Express flight was also requesting a departure. The airport manager instructed the T-28s to land, and he then gave the airplane clearance to takeoff. The airport manager said that the airplane was instructed to fly to a holding area, clear of the airport traffic area. He was then planning to clear the United Express flight for departure.

The airport manager said that the airplane flew level down the runway at 75 to 100 feet, and was generating show smoke. He said that at approximately mid field, the airplane "popped up to near vertical." At approximately 500 feet, the airplane began to tumble, and then to spin until it impacted the terrain.

### PERSONNEL INFORMATION

The pilot received his initial flight training in the military, and served on active duty for 8 years. According to his FAA medical application, dated August 28, 2000, he had accumulated approximately 2,000 hours of flight experience.

Several of the pilot's friends said that the pilot had purchased the airplane with the intention of performing aerobatics on the national air show circuit. They further stated that he had spent a great deal of time modifying the airplane to facilitate achieving that goal.

### AIRCRAFT INFORMATION

The airplane was a single engine, propeller-driven aircraft, which was manufactured in 1990 by Sukhoi Aircraft Company, in Russia. It was a single seat aerobatic (plus 12 G's; minus 10 G's) airplane that was powered by a Vendenyev M-14 supercharged, nine cylinder, round-

reciprocating, fuel injected engine. The original engine was 360 horsepower, but it had been modified with new pistons (its compression ratio had been changed from 6:1 to 10:1) to produce 525 horsepower. The last annual inspection was performed in Grand Junction, Colorado, on September 18, 2000. The mechanic who performed the last inspection said that at the time of the inspection, the airplane had approximately 520 hours of flight time.

The pilot had a newly certified Zvezda SKS (Russian) ejection seat installed in the aircraft in July 2000. A representative from the Sukhoi Design Bureau said that the seat's ejection sequence would complete in 0.7 seconds. He further stated that ejection seat operated safely within the following capabilities: ground ejection required an aircraft speed of 54 knots; horizontal ejection required an aircraft altitude of 56 feet; vertical down ejection required an aircraft speed of 215 knots, and an altitude of 122 feet.

#### METEOROLOGICAL INFORMATION

At 1453, the weather at Montrose Regional Airport, Montrose, Colorado (MTJ elevation 5,759 feet), 350 degrees 32 nautical miles from the accident site, was as follows: wind 350 degrees at 4 knots; visibility 10 statute miles; clear of clouds; temperature 77 degrees Fahrenheit, dew point 45 degrees Fahrenheit; altimeter setting 30.13 inches.

The density altitude at the accident site was computed to be 12,441 feet.

#### WRECKAGE AND IMPACT INFORMATION

The accident site was on a high mountain plateau (elevation 8,966 feet; N37 degrees, 57.27'; W107 degrees, 54.65'). The airplane was located approximately 50 feet north of the runway, and was longitudinally oriented approximately north. The final moments of flight were recorded on a video camera, and a Federal Aviation Administration (FAA) inspector was a witness to the event. The National Transportation Safety Board investigator in charge did not travel to the accident site.

All of the airplane's structural components were accounted for at the accident site. The postimpact fire destroyed the cockpit, instrument panel, and fuselage. One witness reported hearing the engine "running strong" until impact. No preimpact engine or airframe anomalies, which might have affected the airplane's performance, were identified.

A delegation of Russians from Sukhoi, Zvezda, and the Interstate Aviation Committee arrived in Colorado on December 11, 2000. They examined the entire airplane and identified no anomalies. They gave special attention to the recently installed ejection seat system. They determined that the ejection seat safety key had been inserted in its safety lock and turned to the arm position. They further determined that the seat had not been activated and that all the seat's sequencing mechanisms were in their armed positions. The telescoping pilot extraction pole had been deployed during the postimpact fire.

## MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by the Division of Forensic Pathology, Montrose Memorial Hospital, Montrose, Colorado, for the San Miguel County coroner, on October 2, 2000.

The FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma, performed toxicology tests on the pilot. According to CAMI's report (#200000286001), the pilot's blood was tested for carbon monoxide, cyanide, ethanol, and drugs, with negative results.

## ADDITIONAL DATA

The airplane, including all components and logbooks, was released to the owner's insurance representative on August 20, 2001.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	52, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Unknown	<b>Last FAA Medical Exam:</b>	August 28, 2000
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2000 hours (Total, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Sukhoi	<b>Registration:</b>	N26KP
<b>Model/Series:</b>	SU-26MX SU-26MX	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	03-08
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	September 18, 2000 Annual	<b>Certified Max Gross Wt.:</b>	1844 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	520 Hrs	<b>Engine Manufacturer:</b>	Vendenev
<b>ELT:</b>		<b>Engine Model/Series:</b>	M-14
<b>Registered Owner:</b>	KENT E. PFLEIDER	<b>Rated Power:</b>	525 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	MTJ ,4858 ft msl	<b>Distance from Accident Site:</b>	32 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	350°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	77°C / 45°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(TEX )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	
<b>Departure Time:</b>	14:05 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	TELLURIDE REGIONAL APT TEX	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	9078 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	27	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>	6870 ft / 100 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	37.939163,-107.899375(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Struhsaker, James
<b>Additional Participating Persons:</b>	JAY MOONEY; SALT LAKE CITY , UT
<b>Original Publish Date:</b>	November 1, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=51110">https://data.ntsb.gov/Docket?ProjectID=51110</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).