



National Transportation Safety Board Aviation Accident Final Report

Location:	Van Nuys, CA	Accident Number:	LAX05FA193
Date & Time:	06/01/2005, 2306 PDT	Registration:	N6574U
Aircraft:	Mooney M20C	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airplane departed from controlled flight during a missed approach and collided with hilly terrain. The non-instrument rated private pilot departed, at night, to an airport located about 40 miles to the north. While en route, the pilot contacted the terminal radar approach control (TRACON) specialist on duty and was subsequently advised that weather conditions were IFR at the pilot's intended destination airport. The pilot responded by saying he was going to try to find a VFR route. A review of archived radar data revealed that the accident airplane flew to various locations around the accident airport at altitudes above the underlying overcast cloud layer. The pilot then contacted the TRACON specialist and requested the ILS runway 16R approach at the accident airport. A review of air-to-ground communications tapes, transcripts, and archived radar data, revealed that the accident pilot was unable to intercept the glide slope and localizer for the ILS approach to runway 16R, or to maintain an assigned altitude or heading. Examination of the radar data for the pilot's attempted ILS approach showed that the airplane crossed the final approach course, 161 degrees, from the west between the initial approach fix and the outer marker. The airplane's track overshot the final approach course to the east and then corrected back so that it was on course at the outer marker. The track then deviated to the east again and corrected back to the final approach course, which was then followed by a 90-degree turn away from the final approach course to the west. The track proceeded westerly for 27 seconds, climbing from 2,100 to 2,500 feet and then down to 2,400 feet. The track turned south for 32 seconds, climbing from 2,400 feet to 3,000 feet. The last leg of the track proceeded northwesterly for the final 12 seconds, and the altitude descended from 3,000 feet to 2,600 feet, to 2,400 feet, to the accident elevation at 1,253 feet. Impact forces destroyed the airplane. According to the airplane's owner, the attitude gyro indicated a 10-degree left angle of bank when the airplane was in level flight. No preaccident mechanical anomalies were discovered during the investigation. At the time of the accident the reported weather was 1,400 feet overcast, with tops estimated at 3,000 feet. The weather forecast products available at the time of the pilot's departure predicted marginal VFR to IFR conditions at the destination, with ceilings occasionally below 1,000 feet and visibilities below 3 miles.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's decision to attempt flight into instrument meteorological conditions, which resulted in the pilot's loss of aircraft control due to spatial disorientation. Factors in the accident were haze and low ceilings, the night lighting condition, an undetermined attitude gyro problem, and the pilot's lack of qualification/experience for flight in instrument conditions.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MISSED APPROACH (IFR)

Findings

1. (F) LIGHT CONDITION - DARK NIGHT
2. (F) WEATHER CONDITION - LOW CEILING
3. (F) FLIGHT/NAV INSTRUMENTS, ATTITUDE INDICATOR - ERRATIC
4. (F) PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
5. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - PERFORMED - PILOT IN COMMAND
6. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
7. (C) SPATIAL DISORIENTATION - PILOT IN COMMAND
8. (F) LACK OF CERTIFICATION - PILOT IN COMMAND

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

Findings

9. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On June 1, 2005, at 2306 Pacific daylight time, a Mooney M20C, N6574U, collided with terrain while executing the ILS RWY 16 localizer instrument approach at Van Nuys Airport, Van Nuys, California. The private pilot operated the airplane under the provisions of 14 CFR Part 91. The pilot, the sole occupant, was fatally injured; the airplane was destroyed. Instrument meteorological conditions prevailed, and no flight plan was filed. The personal flight originated at Orange County Airport, California, at 2145, and was en route to the Whiteman Airport, Los Angeles, California.

Airport surveillance radar from Long Beach and Burbank recorded the airplane's flight path for a majority of the flight. The radar record picks the airplane up at 2145:24, with a transponder code of 0222, off Orange Country Airport at 100 feet mean sea level (msl). The track proceeds north at 1,400 feet msl, and at 2151:43, the transponder code is changed to 1200. The track continues its northerly course at 4,300 feet to La Harbra Heights, and then turns northwest towards Pasadena. At 2209:54, the track stops over Placerita Canyon State Park. The track is reacquired over Santa Clarita at 2218:54, at an altitude of 2,500 feet msl. The track proceeds southeast in a loop climbing to 3,500 feet over the I-5 freeway and Highway 14 intersection, and then backtracking northwest over Santa Clarita, where the track stops at 2226:52, 2,800 feet msl. The track is reacquired at 2227:38, at 3,200 feet over Santa Clarita. From this point the track proceeds southwest over Simi Valley at 4,900 feet, then northwest up to Filmore at 5,000 feet msl, west over Santa Paula, reverses course to proceed east along Hwy 126 to Santa Clarita at 4,500 feet where the track stops at 2257:04, and 3,200 feet msl. The last segment of the track is acquired at 2257:27, at 4,500 feet, and proceeds east, then turns directly south towards the San Fernando Pass and Van Nuys Airport along the final approach course of the VNY ILS RWY16 published approach. At 2304:22, about 5 miles north of the Van Nuys Airport, the track turns abruptly west and ends at the accident location 1 minute 14 seconds later.

Southern California TRACON controllers were in contact with the pilot during the majority of the flight. Upon initial contact the pilot and controller discussed the weather conditions, and the controller advised that conditions everywhere were IFR (instrument flight rules). The pilot proceeded north saying he intended to try to find a VFR (visual flight rules) route, and if he could not he would return and land. At 2256:19, the pilot contacted SoCal Approach at 5,000 feet over Santa Clarita and requested an ILS (instrument landing system) approach to Van Nuys runway 16R. At 2256:53, the controller instructed the pilot to proceed to the final approach course and squawk 5213. At 2258:04, the controller established radar contact 1 mile east of Magic Mountain, told the pilot to maintain VFR, and to expect IFR once he's on the localizer. The controller gave the pilot a heading of 130 to intercept the localizer, and said he was cleared IFR once he was established on the localizer, and cleared for the ILS approach in to Van Nuys. At 2300:23, the controller advised the pilot that he was left (east) of centerline. The pilot responded that he was correcting. At 2301:38, the controller advised the pilot to change frequencies and make his landing announcement on the tower frequency of 119.3. The pilot acknowledged. At 2304:42, the pilot announced on the SoCal Approach frequency that he had some problems and he was climbing out. The controller gave instructions to proceed southbound, climb, and maintain 5,000 feet. The controller made two radio calls before the pilot responded, and the pilot said only that he was climbing to 5,000 feet. That was the last

communication with the pilot. The pilot never specified what the problem was.

The owner of the airplane told the National Transportation Safety Board investigator that he had spoken to the pilot just before he left San Jose on the morning of June 1st. The pilot planned to leave San Jose Airport and fly to Orange County Airport, meet a friend for dinner, then fly to Whiteman Airport, where he normally operates. They discussed the weather, and the owner advised the pilot to monitor the weather closely. Whiteman Airport is about 4 miles northeast of Van Nuys Airport.

PERSONNEL INFORMATION

A review of Federal Aviation Administration (FAA) airman records revealed that the pilot held a private pilot certificate with a single engine land rating dated October 30, 2004. The pilot did not hold an instrument rating.

The pilot held a third-class medical certificate that was issued on May 28, 2005. It had the restriction that the pilot must wear corrective lenses.

Examination of a copy of the pilot logbook revealed that he had 205.6 hours of flight time as of his last entry dated January 30, 2005. The total amount of simulated instrument time was 11.5 hours and no actual instrument time was recorded. The last entry that recorded an instrument flight was on May 2, 2004. The pilot's latest biannual flight review was dated November 1, 2003.

AIRCRAFT INFORMATION

The airplane was a 1963 Mooney M20C, serial number 2431, which operated a Lycoming O-360-A1D engine. A review of the airplane's logbook revealed a total airframe time of 5,419.0 hours as of December 13, 2004. The last annual inspection was dated August 14, 2004, at 5,296.26 hours total time. The engine, serial number L-5776-36, had a total time of 1,786.4 hours since maintenance overhaul (SMOH) as of the last oil change on December 13, 2004.

The owner reported to the Safety Board investigator that the pilot had the attitude gyro overhauled. An invoice from Global Tech documents that the attitude gyro was overhauled on April 15, 2005. The attitude gyro, manufactured by RC Allen, is an electrically powered unit. There was no entry in the airframe logbook of the attitude gyro being removed and replaced but the owner said he thought the pilot had installed it himself. The airplane owner also said that the pilot had mentioned to him that the overhauled attitude gyro was not performing correctly. Numerous digital pictures of the instrument panel recovered from the pilot's camera, and provided to the Safety Board by the airplane's owner, show the airplane in level flight, and the attitude gyro indicates a 10-degree left angle of bank. The file date on the digital pictures was May 19, 2005.

METEOROLOGICAL INFORMATION

Synoptic Situation

A Surface Analysis chart prepared by the National Weather Service (NWS) National Centers for Environmental Prediction (NCEP) for 2300 on June 1 showed weak onshore flow and high relative humidity along the central California coast.

Surface Weather Observations

Surface weather observations for Van Nuys and surrounding airports, in part, follow:

Van Nuys Airport (KVNY), Van Nuys, California

field elevation 802 feet msl, located approximately 157 degrees at 5 nautical miles from the accident location, augmented Automated Surface Observation System (ASOS), destination airport

Time-2251; type-METAR; wind 150 degrees at 6 knots; visibility 6 miles; present weather-haze; sky condition overcast 1,400 feet; temperature 16 degrees Celsius; dew point 13 degrees Celsius; altimeter setting 29.82 inHg; remarks none

Time-2351; type-METAR; wind 150 degrees at 6 knots; visibility 6 miles; present weather mist; sky condition overcast 1,200 feet; temperature 16 degrees Celsius; dew point 13 degrees Celsius; altimeter setting 29.83 inHg; remarks none

Whiteman Airport (KWHP), Los Angeles, California

Field elevation 1,003 feet msl, located approximately 107 degrees at 6 nautical miles from the accident location, manual

Time-1950; type-METAR; wind calm; visibility 6 miles; present weather haze; sky condition sky clear; temperature 21 degrees Celsius; dew point not available; altimeter setting 29.78 inHg; remarks - last observation

Santa Monica Airport (KSMO), Santa Monica, California

Field elevation 175 feet msl, located approximately 167 degrees at 16 nautical miles from the accident location, augmented ASOS

Time-2251; type-METAR; wind calm; visibility 8 miles; present weather none; sky condition overcast 1,800 feet; temperature 17 degrees Celsius; dew point 13 degrees Celsius; altimeter setting 29.83 inHg; remarks none

Time-2351; type-METAR; wind calm; visibility 8 miles; present weather none; sky condition overcast 1,600 feet; temperature 17 degrees Celsius; dew point 13 degrees Celsius; altimeter setting 29.83 inHg; remarks none

John Wayne-Orange County Airport (KSNA), Santa Ana, California

Field elevation 56 feet msl, located approximately 138 degrees at 49 nautical miles from the accident location, augmented ASOS, departure airport

Time-2253; type-METAR; wind 180 degrees at 8 knots; visibility 10 miles; present weather none; sky condition overcast 1,700 feet; temperature 17 degrees Celsius; dew point 12 degrees Celsius; altimeter setting 29.84 inHg; remarks none

Time-2353; type-METAR; wind 120 degrees at 3 knots; visibility 10 miles; present weather none; sky condition overcast 1,700 feet; temperature 17 degrees Celsius; dew point 12 degrees Celsius; altimeter setting 29.83 inHg; remarks none

Aviation Area Forecasts (FAs)

The FA for the Pacific Coast (FA6) Area issued by the Aviation Weather Center (AWC) at Kansas City, Missouri, and valid during the period beginning 1945, in part, follows:

Southern California costal areas will have broken clouds 1,000 to 2,000 feet msl with tops at 4,000 feet. The outlook is marginal VFR (MVFR, ceilings between 1,000 and 3,000 feet, and visibility between 3 to 5 miles) with broken ceilings. Southern California inland areas will be

clear of clouds until 2300 local time when conditions will become overcast at 1,000 feet with tops at 3,000 feet, occasional visibility of 3 statute miles in mist. The outlook is MVFR. Southern coastal waters were forecast as overcast 1,000 feet with tops between 3,000 and 4,000, and visibility 3 statute miles in mist. The outlook was IFR due to ceilings and mist.

In-Flight Advisories (AIRMETS)

Texts of In-Flight Advisories (AIRMET SIERRA) for FA6 issued by the AWC at 1845, and valid at the accident time follow:

SIERRA (IFR and Mountain Obscuration)

Occasional ceiling below 1,000 feet visibility below 3 statute miles in mist. Conditions mainly over coastal waters spreading inland from 2200 through 2400, and continuing to 0700 the next morning.

Terminal Aerodrome Forecasts (TAFs)

The TAF for Van Nuys (KVNY) valid during the period beginning at 2300 follows:

From 2230 to 2306 at Van Nuys Airport conditions forecast to be winds from 140 degrees at 8 knots; visibility of 6 statute miles in haze; and ceiling broken at 1,500 feet.

AIDS TO NAVIGATION

Radar

Examination of the radar data for the Van Nuys ILS RWY 16 approach shows that the airplane crossed the final approach course, 161 degrees, from the west between the initial approach fix (UMBER) and the outer marker. The airplane's track overshoots the final approach course to the east and then corrects back so that it is on course at the outer marker. The track then deviates to the east again and corrects back to the final approach course, which is then followed by a 90-degree turn away from the final approach course to the west. The track proceeds westerly for 27 seconds climbing from 2,100 to 2,500 feet and then down to 2,400 feet. The track turns south for 32 seconds climbing from 2,400 feet to 3,000 feet. The last leg of the track proceeds northwesterly for the final 12 seconds and the altitude descends from 3,000 feet to 2,600 feet, to 2,400 feet, to the accident elevation at 1,253 feet.

The complete radar files and track plots are contained in the official docket of this investigation.

COMMUNICATIONS

The complete Air Traffic Control transcripts of communications with N6574U were provided by the FAA and are contained in the official docket of this investigation.

WRECKAGE AND IMPACT INFORMATION

The wreckage was located on the south slope of a shallow ravine that ran roughly east-west; and the coordinates were 34 degrees 17.97 minutes north latitude and 118 degrees 31.814 minutes west longitude, at an elevation of 1,253 feet above msl. The ravine's hillside was sloped about 30 degrees, was covered in sagebrush and long grass, and the earth had a loose sandy like composition. The wreckage was in a compact area that immediately surrounded the dimensions of the airplane. The tail and wings were the only visible evidence of the airplane above ground level. The wreckage was oriented on a bearing of 170 degrees magnetic and the

tail protruded out of the ground about 90 degrees to the ravine slope. The wings protruded outward against the ravine slope on each side of the tail. The right wing flap had separated from the wing structure and laid a few feet behind the wing. Both ailerons, both elevators, and the rudder were present on their respective flying surfaces. The entire cockpit cabin and empennage was collapsed longitudinally into the hillside. The wreckage was removed from the accident site and transported to Aircraft Recovery Services (ARS), Pearblossom, California, for further examination. After extracting the wreckage from the hillside, it was observed that the engine had created a 4-foot-deep crater with the crater axis estimated to be 45 degrees to the horizon. The earth beneath the right wing root produced a slight fuel like odor. The earth beneath the left wing root produced a strong fuel like odor.

Technical representatives from Textron-Lycoming and the FAA examined the airplane wreckage on June 3rd, at ARS, under the supervision of the Safety Board investigator-in-charge.

The engine firewall was completely deformed around the aft end of the engine. The instrument panel was completely destroyed and collapsed into the firewall. All the cockpit instrumentation had been displaced from their positions on the instrument panel and crushed into the firewall. The throttle handle was observed extended about 1 inch and the handle rod bent. The mixture and propeller controls were full forward and their handles bent. The cable from the throttle was traced to the fractured ball off the carburetor throttle control arm, the mixture cable was traced to the fractured arm of the mixture lever, and the propeller condition cable was traced to the severed end of the propeller governor push rod. The underside engine cowling and cockpit floor decking had deformed around the nose wheel structure. The rudder control torque tube was present attached to cockpit floor decking; the attaching control rods all exhibited separations at the control rod ends consistent with overload forces. The right-hand control yolk was present and connected to the control arm; the corresponding control push/pull rods were separated at their rod ends in a fashion consistent with overload forces. The pilot and copilot seats were attached to their respective seat tracks. The artificial horizon attitude gyro was disassembled. Rotational scoring was observed on the inner gyro housing and on the gyro itself. The fuel selector was removed and observed to be selected to the left fuel tank. Low-pressure air was passed through the valve and observed to exit the left fuel line port out of the valve. No air was observed exiting the right port-orifice of the valve.

The left wing exhibited leading edge crushing along its full length. The landing gear was in the retracted position. The flap was separated from the trailing edge rails but was present in its full length. The aileron was present on its hinges minus the outboard balance weight. The upper wing aluminum skins pulled through the leading edge and wing rib rivet lines. The lower wing surface had accordion like folds along its entire length. The upper wing spar-cap fracture surface at the wing root exhibited a bright gray matte surface with 45-degree shear lips. The aileron control tubes were traced continuously from the wing root to the aileron bell crank. The aileron bell crank was present with the push rod separated at the rod ends.

The aft fuselage, empennage, and tail exhibited severe compressive buckling back to the leading edges of the tail surfaces. The vertical and horizontal stabilizers all exhibited leading edge crushing. The elevator control balance weights were present at their appropriate location. The rudder balance weight was located in the wreckage area, separated from the rudder. The control push rod for the rudder was attached to its bell crank and was buckled back from the aft fuselage bulkhead. The elevator bell crank was present with push rod remnants in its

fittings. The elevator trim push rods were buckled and separated from the bell crank at the rod ends.

The right wing exhibited leading edge crushing along its entire length and the landing gear was in the retracted position. The flap was separated from its rails but present in its full length. The upper wing spar-cap exhibited a bright matte gray fracture surface with 45-degree shear lips at the wing root location. The upper wing skins were buckled outward and pulled through the leading edge and wing rib rivet lines. The aileron was present on its hinges and the balance weight was located in the wreckage area. The underside aluminum wing skins exhibited multiple buckle lines along the length of the wing in an accordion like fashion. The aileron bell crank was present with the control rods separated at their rod ends. The aileron control rods were traced continuously from the wing root area to the aileron bell crank.

The firewall structure was removed from the aft end of the engine. The exhaust manifold exhibited ductile bending in many of the sections. The magnetos were removed from the accessory drive. The left magneto was turned by hand and produced spark on all four posts. The right magneto was turned by hand and produced spark on three of the four posts. The spark plugs were observed to be grayish in color and corresponded to normal wear per the Champion Aviation Check-A-Plug chart, and exhibited no mechanical damage. The valve covers were removed, and the valves and valve springs were observed intact. The cylinder jugs and pistons were removed from the engine case. The cylinder liners were smooth and all the pistons exhibited grayish slate like deposits on their faces. The crankshaft was displaced aft about 1/2 inch. The number 1 crank through had aft deflection of the forward cheek. The oil pan had been fractured into many undistinguishable pieces. The oil suction screen was recovered and observed to be clear of debris. The carburetor was not present on the engine at the examination; only a section of the carburetor bowl was identified. The vacuum pump drive coupling was intact and the rotor was fractured circumfrally at two locations.

The two propeller blades were observed separated from the hub at their bases. Blade "A" exhibited leading edge polishing, chordwise scratches, and was bent aft about 10 degrees at midspan. Blade "B" exhibited leading edge polishing, chordwise scratches, was bent forward at midspan about 30 degrees, and had a slight s-bend along the last 2 inches of the tip.

MEDICAL AND PATHOLOGICAL INFORMATION

The Los Angeles County Coroner completed the autopsy of the pilot on June 7, 2005. The FAA Bioaeronautical Sciences Research Laboratory, Oklahoma City, Oklahoma, performed toxicological analysis from samples obtained during the autopsy. The specimens were documented as putrefied by the laboratory. The results of the analysis were positive for ethanol detected in muscle (>>56 mg/dL), ethanol detected in the liver (>>76 mg/dL), and n-butanol detected in muscle (>>4 mg/dL). The results for the tested drugs in the liver specimen were negative.

TESTS AND RESEARCH

Airplane Services at Orange County Airport

While the airplane was at Orange County Airport on June 1, 2005, Signature Flight Support provided fueling services to the airplane. The pilot requested a top-off of 100LL, and at 1915, 24.1 gallons of fuel was purchased.

Engine Data

This airplane had an EDM 800 cockpit displayed engine monitoring system manufactured by J.P. Instruments (JPI) that recorded engine data. The EDM 800 instrument was recovered from the wreckage and engine data was extracted from the instrument at the JPI facility in Huntington Beach, California. The data appeared uncorrupted and contained the data files for the last 8 flights. The data fields obtained for each flight were; exhaust temperature out of each cylinder (F), cylinder head temperature (F), oil pressure (psi), DIF (difference between the hottest and coolest EGT), outside air temperature (F), carburetor temperature (F), battery volts (v), fuel flow (gph), engine rpm, manifold pressure (in/hg), and horsepower. Engine data from all 8 flights were examined and no anomalies were noted. The full flight and the last 10 minutes of the last flight data file were examined in detail. Plots containing the fuel flow, horsepower, engine rpm, and manifold pressure were generated. The entire last flight data plot starts at 2118:30, and lasts for 1 hour 42 minutes, ending at 2300:06. The engine rpm is recorded as being steady around 2,680 rpm for the 14 minutes prior to 2256:42, at which point the rpm drops to 1,794 at 2257:54. The engine rpm then increases to about 2,700 rpm by 2259:06, and stays at that level until the end of the data set. The lower rpm engine parameters are consistent with the reduced power profile required for a landing approach, and the higher rpm engine parameters are consistent with an engine at high power. The data also illustrates the fuel flow, horsepower, and manifold pressure mirroring the engine rpm response curve.

Data plots from the EDM 800 data download are contained in the official docket of this investigation.

ADDITIONAL INFORMATION

Flight in to Instrument Meteorological Conditions (IMC)

The Airplane Flying Handbook (FAA-H-8083-3A) states the following:

"A VFR pilot is in IMC conditions anytime he or she is unable to maintain airplane attitude control by reference to the natural horizon, regardless of the circumstances or the prevailing weather conditions. Additionally, the VFR pilot is, in effect, in IMC anytime he or she is inadvertently, or intentionally for an indeterminate period of time, unable to navigate or establish geographical position by visual reference to landmarks on the surface. These situations must be accepted by the pilot involved as a genuine emergency, requiring appropriate action.

The pilot must understand that unless he or she is trained, qualified, and current in the control of an airplane solely by reference to flight instruments, he or she will be unable to do so for any length of time. Many hours of VFR flying using the attitude indicator as a reference for airplane control may lull a pilot into a false sense of security based on an overestimation of his or her personal ability to control the airplane solely by instrument reference. In VFR conditions, even though the pilot thinks he or she is controlling the airplane by instrument reference, the pilot also receives an overview of the natural horizon and may subconsciously rely on it more than the cockpit attitude indicator. If the natural horizon were to suddenly disappear, the untrained instrument pilot would be subject to vertigo, spatial disorientation, and inevitable control loss."

Wreckage Release

The wreckage was release by the Safety Board on July 27, 2005.

Pilot Information

Certificate:	Private	Age:	39, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3	Last FAA Medical Exam:	05/01/2004
Occupational Pilot:		Last Flight Review or Equivalent:	11/01/2003
Flight Time:	206 hours (Total, all aircraft), 191 hours (Total, this make and model), 155 hours (Pilot In Command, all aircraft), 0 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	Registration:	N6574U
Model/Series:	M20C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	2431
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	08/01/2004, Annual	Certified Max Gross Wt.:	2575 lbs
Time Since Last Inspection:	173 Hours	Engines:	1 Reciprocating
Airframe Total Time:	5246 Hours as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-360-A1D
Registered Owner:	Frederick M. Espian	Rated Power:	180 hp
Operator:	Yian Chang	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night
Observation Facility, Elevation:	KVNY, 770 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	2322 PDT	Direction from Accident Site:	215°
Lowest Cloud Condition:		Visibility	6 Miles
Lowest Ceiling:	Overcast / 1200 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.82 inches Hg	Temperature/Dew Point:	16° C / 13° C
Precipitation and Obscuration:	Haze		
Departure Point:	Santa Ana, CA (KSNA)	Type of Flight Plan Filed:	None
Destination:	Van Nuys, CA (KVNY)	Type of Clearance:	IFR
Departure Time:	2145 PDT	Type of Airspace:	

Airport Information

Airport:	Van Nuys (KVNY)	Runway Surface Type:	Asphalt
Airport Elevation:	770 ft	Runway Surface Condition:	Dry
Runway Used:	16	IFR Approach:	ILS
Runway Length/Width:	4011 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	24.285000, -118.530278

Administrative Information

Investigator In Charge (IIC):	Van S McKenny	Report Date:	12/28/2006
Additional Participating Persons:	Homayon Jandaghi; Federal Aviation Administration; Van Nuys, CA Mark Platt; Textron-Lycoming; Van Nuys, CA		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).