



National Transportation Safety Board Aviation Accident Data Summary

Location:	Fallon, NV	Accident Number:	DCA12PA049
Date & Time:	03/06/2012, 0914 PST	Registration:	N404AX
Aircraft:	ISRAEL AIRCRAFT INDUSTRIES F21-C2	Injuries:	1 Fatal
Flight Conducted Under:	Public Aircraft		

Analysis

On March 6, 2012 at 0914 Pacific Standard Time, an Israeli Aircraft Industries (IAI) Kfir F-21-C2 single-seat turbojet fighter type aircraft, registration N404AX, operated by ATAC (Airborne Tactical Advantage Company) under contract to Naval Air Systems Command (NAVAIR) crashed while attempting an emergency landing at Naval Air Station Fallon, Fallon, Nevada. The pilot reported emergency fuel status prior to the accident. The sole occupant pilot aboard was killed and the airplane was destroyed by impact forces and postcrash fire. The weather at the time of the accident was high winds, snow, and visibility of one-half mile.

The investigation revealed no evidence of any failure or anomaly of the airplane's powerplants, structures, or systems (including the fuel system). There was no evidence of pilot fatigue or physiological issues.

Prior to the accident flight, the pilot participated in a mission briefing which included weather forecast conditions for the day. Although the forecast was calling for snow and low visibility later in the day, there were no forecast conditions below the required minima for the time period of the mission. As the accident pilot prepared for takeoff, he noted conditions were lower than forecast for that time and twice contacted the base weather observer for an update. While it is unknown if any of the mission pilots received updated weather, no other mission pilots cancelled due to weather. Therefore, the pilot was aware that conditions were deteriorating faster than forecast and took appropriate action to obtain updated information. None of the forecast weather was below required minima that would have required him to cancel the flight.

As the mission airplanes began returning to NFL following the termination of the exercise due to the weather, the ATC approach controller rapidly became saturated sequencing and separating the airplanes. At the same time, the PAR controller incorrectly set up the precision approach radar as the accident airplane was being vectored to the approach course, which resulted in the accident airplane being vectored off the precision approach. Additionally, the approach controller was saturated and did not efficiently sequence and vector the other returning airplanes, resulting in the accident airplane flying an extended pattern more than 20 miles longer than usual. On the second PAR approach attempt, the accident pilot initiated and executed a missed approach for unspecified reasons, but all ATC directions appeared to be appropriate. After the pilot requested to divert to RNO due to low fuel, the approach controller did not relay that the RNO weather was below minimums, which likely resulted in unnecessary fuel burn from the diversion. Therefore, ATC handling of the accident airplane was deficient, and resulted in 30 miles or more of excess flying distance.

Although the reason that the accident pilot abandoned the second approach is not known, the relatively strong winds and low ceilings required would have required a significant amount of attention by the pilot. Review of ATAC training records indicated that the pilot may not have had sufficient currency or proficiency under instrument conditions in the Kfir. Additionally, since most of the pilots experience was in the F/A-18, his lack of instrument experience in the Kfir may not have taken into account the airplanes less sophisticated instrumentation and limited fuel endurance compared to the F/A-18 in his decision making before and during the exercise.

During the pilot's final attempt to land at NFL it was clear he was aware of his critical fuel status. Review of radar data shows that the accident airplane was roughly aligned for an emergency straight-in approach to runway 7, however, ATC did not relay this option. The pilot elected to make a low altitude approach, first to runway 31L, then when he became misaligned to that runway, transition to a low altitude modified right downwind approach to runway 13R. The airplane then appeared to turn towards taxiway A at about the time the engine flamed out and subsequently impacted the bunker. Examination of the ejection seat concluded that the firing mechanism had not been activated. Although the pilot was aware of his critical fuel state, he elected to attempt a low altitude hazardous maneuver instead of proceeding toward the nearby dry lake bed and ejecting. It is possible that the pilot did not eject because he was concerned about the effects of the high surface winds on a deployed parachute.

The pilot's decision making in this accident is a possible indicator of a mindset to complete the assigned mission. On May 18, 2012 another ATAC fighter crashed, fatally injuring the pilot. In that accident the pilot was also likely pressing to complete the mission, leading eventually to the accident. ATAC did not have a crew resource management or safety-risk management program in place for its pilots at the time of these accidents; therefore, it is likely that the pilot's training did not support good aeronautical decision-making concepts. Following a recommendation in a Navy audit in June, 2012, Crew Resource Management training was established. Additionally, since the flight was operating under Public Aircraft Operations the Navy was responsible for oversight of the company. The Navy contract, while setting some requirements for FAA certifications, did not specify to what FAA standards the airplane, pilots, or training were required to conform (such as instrument currency or pilot proficiency). Thus, the oversight environment did not include controls or standards that would be expected in other U.S. commercial aviation operations.

Flight Events

Approach-IFR final approach - Air traffic event
Approach-IFR missed approach - Air traffic event
Approach-circling (IFR) - Fuel exhaustion
Landing - Off-field or emergency landing

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: fuel exhaustion following missed approaches due to deficient ATC handling under weather conditions which were significantly lower than forecast. The second missed approach may have been initiated due to limited pilot instrument proficiency.

Contributing to the severity of the accident was the pilot's decision to attempt an emergency landing in low visibility instead of ejecting when fuel exhaustion was imminent.

Also contributing to the accident was an organizational and oversight environment which did not require airman, aircraft, or risk management controls or standards expected of a commercial civil aviation operation.

Findings

Personnel issues-Task performance-Use of equip/info-Use of equip/system-ATC personnel - C
Personnel issues-Experience/knowledge-Experience/qualifications-Recent instrument experience-

Pilot - C

Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - F

Environmental issues-Conditions/weather/phenomena-Ceiling/visibility/precip-Low visibility-

Ability to respond/compensate - C

Organizational issues-Support/oversight/monitoring-Safety programs-Availability of safety program-

Operator - F

Organizational issues-Support/oversight/monitoring-Safety programs-Availability of safety program-

Other government - F

Pilot Information

Certificate:	Airline Transport	Age:	51
Airplane Rating(s):	Multi-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	4679 hours (Total, all aircraft), 79 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	ISRAEL AIRCRAFT INDUSTRIES	Registration:	N404AX
Model/Series:	F21-C2	Engines:	1 Turbo Jet
Operator:	AIRBORNE TACTICAL ADVANTAGE CO LLC	Engine Manufacturer:	GE/Israeli Aircraft Industries
Operating Certificate(s) Held:	None	Engine Model/Series:	J79-J1E-QD
Flight Conducted Under:	Public Aircraft		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KNFL, 3900 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	Broken / 1500 ft agl	Wind Speed/Gusts, Direction:	22 knots / 33 knots, 350°
Temperature:	-1 °C	Visibility	0 Miles
Precipitation and Obscuration:	Light - Snow		
Departure Point:	Fallon, NV (NFL)	Destination:	Fallon, NV (NFL)

Airport Information

Airport:	Van Voorhees Field NAS Fallon (NFL)	Runway Surface Type:	Concrete
Runway Used:	13	Runway Surface Condition:	Wet
Runway Length/Width:	14000 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	39.417778, -118.698611		

Administrative Information

Investigator In Charge (IIC):	William R English	Adopted Date:	06/09/2014
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=83057		

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