

Aviation Investigation Factual Report

Location:	Fort Worth, Texas	Accident Number:	DFW05LA010
Date & Time:	October 25, 2004, 18:30 Local	Registration:	N376AE
Aircraft:	Saab-Scania AB (Saab) SF-340B	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 31 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Factual Information

On October 25, 2004, approximately 1830 central daylight time, an employee, who was operating a Lektro electric pushback vehicle, was seriously injured when he was struck by a turning propeller blade from a Saab SF-340B twin-engine airplane, N376AE, operated by American Eagle Airlines, Inc., of Fort Worth, Texas. The 4 crewmembers and 29 passengers aboard the airplane were not injured, and the airplane and pushback vehicle were not damaged. The scheduled passenger flight was operating as Eagle Flight 3259 under 14 Code of Federal Regulations Part 121, and was preparing to depart the Dallas-Fort Worth International Airport (DFW), with the Robert Gray Army Airfield (GRK) near Killeen, Texas, as its intended destination.

According to a written report submitted by the airline's safety department, two employees began to perform a pushback procedure to the airplane in preparation for departure. A ground employee was operating a Lektro electric pushback vehicle, and a second ground employee was acting as a wing-walker on the left side of the airplane.

As the pushback procedure began, the vehicle began to move to a jack-knife position toward the right wing. The number two engine was running, and the propeller was turning in the "feathered" position. At this time, the Captain and First Officer signaled to ground personnel to halt the pushback. According to witnesses, the employee operating the pushback vehicle appeared to be in "a state of shock." The vehicle continued to turn about the nose of the airplane until the second employee, who was acting as a wing-walker, ran to the vehicle and stopped the pushback movement. The original operator exited the vehicle on its left side toward the right wing. The pushback vehicle was now positioned nearly 90-degrees to the longitudinal axis of the airplane and about 10 to 11 feet from the turning propeller.

According to witnesses, the original operator of the vehicle still appeared to be in "a state of shock," as he began walking backwards toward the spinning propeller. Following a few steps back, the employee was struck by the propeller "at least twice," before falling to the ground. The flight crew immediately shut down the engine and called for emergency personnel.

According to the Push-out/Towing Procedures of the American Eagle Station Operating Manual, one wing-walker and one vehicle operator are required for a pushback procedure. The manual states, "normal procedures call for the push-out vehicle operator to communicate with the Captain through use of company supplied ground-to-cockpit headsets. In rare instances when the headsets are inoperative or the ramp has been advised of lightning in the area, hand signals will be used for communication between ground personnel and the Captain.

In these cases, when hand signals are to be used, an additional ground agent will be required. The agent will communicate hand signals to the cockpit, as the push-out vehicle operator cannot safely operate the push-out vehicle and maintain constant visual contact with the Captain during the push-out process."

The operator of the push-out vehicle and the wing-walker were not wearing ground-to-cockpit headsets at the time of the accident, because the headsets were not working properly.

The injured employee was hired by the airline as a "Fleet Service Clerk" on April 5, 2004. The employee completed training for ground procedures for the Saab 340 airplane on May 2, 2004, and he completed training on the Lektro electric pushback unit on October 23, 2004.

Ground personnel reported that this was the first time that the injured employee had operated the pushback vehicle alone.

Certificate:	Airline transport; Commercial	Age:	57,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medicalw/ waivers/lim	Last FAA Medical Exam:	November 1, 2004
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 19, 2004
Flight Time:	14404 hours (Total, all aircraft), 8640 hours (Total, this make and model), 4525 hours (Pilot In Command, all aircraft), 185 hours (Last 90 days, all aircraft), 84 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Pilot Information

Co-pilot Information

Certificate:	Commercial; Flight instructor	Age:	31,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medicalno waivers/lim.	Last FAA Medical Exam:	September 7, 2004
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	September 7, 2004
Flight Time:	3361 hours (Total, all aircraft), 187 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Saab-Scania AB (Saab)	Registration:	N376AE
Model/Series:	SF-340B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	340B-376
Landing Gear Type:	Retractable - Tricycle	Seats:	37
Date/Type of Last Inspection:	AAIP	Certified Max Gross Wt.:	29000 lbs
Time Since Last Inspection:		Engines:	2 Turbo prop
Airframe Total Time:		Engine Manufacturer:	General Electric
ELT:	Installed, not activated	Engine Model/Series:	CT79B
Registered Owner:	Wells Fargo Bank Northwest	Rated Power:	1750 Horsepower
Operator:	American Eagle Airlines, Inc.	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	American Eagle Airplines, Inc.	Operator Designator Code:	SIMA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DFW,607 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	17:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 2200 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 13000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.92 inches Hg	Temperature/Dew Point:	22°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipita	tion	
Departure Point:	Dallas, TX (DFW)	Type of Flight Plan Filed:	IFR
Destination:	Killeen, TX (GRK)	Type of Clearance:	Unknown
Departure Time:	18:40 Local	Type of Airspace:	Unknown

Airport Information

Airport:	DFW International Airport DFW	Runway Surface Type:	
Airport Elevation:	607 ft msl	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	None
Passenger Injuries:	29 None	Aircraft Fire:	None
Ground Injuries:	1 Serious	Aircraft Explosion:	None
Total Injuries:	1 Serious, 31 None	Latitude, Longitude:	32.896667,-97.03778

Administrative Information

McGill, C Frank
Richard Andrews; Federal Aviation Administration; DFW Airport, TX John Morris; American Eagle Airlines, Inc.; DFW Airport, TX
November 29, 2004
<u>Class</u>
https://data.ntsb.gov/Docket?ProjectID=60430

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.