



Aviation Investigation Final Report

Location:	Phoenix, Arizona	Accident Number:	LAX08CA039
Date & Time:	December 18, 2007, 19:43 Local	Registration:	N5499J
Aircraft:	Cessna 310R	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

Following the nighttime landing during an air taxi cargo flight, the pilot exited the runway and headed toward the designated parking area. The pilot elected not to taxi via the marked taxiway/lead-in lines. After exiting the runway the pilot attempted to cut the corner off the route by heading along a diagonal course across the tarmac toward the parking area. Albeit a shorter route, the course across the non-movement parking area was not marked with taxiway/lead-in lines. En route, the pilot observed a parked airplane but failed to notice container carts on the tarmac, which were also located in the apron area. At 20 miles per hour and seconds before impacting one of the carts, the pilot applied brakes. The airplane skidded about 50 feet before overrunning a cart. The airplane's left main landing gear sheared off, and the left wing was bent as the airplane came to rest.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's selection of a wrong taxi route, inadequate visual lookout, failure to maintain separation from ground obstacles, and excessive taxi speed.

Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: TAXI - FROM LANDING

Findings

1. LIGHT CONDITION - NIGHT
2. (C) WRONG TAXI ROUTE - INITIATED - PILOT IN COMMAND
3. (C) TAXISPEED - EXCESSIVE - PILOT IN COMMAND
4. OBJECT - VEHICLE
5. (C) VISUAL LOOKOUT - INADEQUATE - PILOT IN COMMAND
6. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On December 18, 2007, about 1943 mountain standard time, a Cessna 310R, N5499J, landed on runway 25L at the Phoenix Sky Harbor International Airport, Phoenix, Arizona. Thereafter, while the commercial certificated pilot was taxiing toward the airplane operator's designated cargo loading area on the airport's south cargo apron, the airplane collided with a parked and unattended container cart. The airplane's left main landing gear was sheared off, the bottom of the wing was lacerated, and the wing's spar was deformed. The airplane was substantially damaged. Aero Charter & Transport, Inc., Albuquerque, New Mexico, operated the airplane during the air taxi cargo flight that was performed under 14 Code of Federal Regulations Part 135. Visual meteorological conditions prevailed during the nighttime flight, and a company flight plan was filed. The pilot was the sole occupant in the airplane, and he was not injured. The flight originated from Kingman, Arizona, about 1835.

The National Transportation Safety Board investigator interviewed the accident pilot, airport police and operations personnel, and the operator's Director of Operations (DO) along with other company employees. In pertinent part, the pilot did not indicate experiencing any mechanical malfunction with the airplane, which included its steering system, brakes, or lights. The pilot stated that while proceeding on taxiway Hotel he observed a turboprop airplane, and once past that airplane (and after exiting the taxiway) he commenced a southbound turn into the south cargo ramp. Seconds thereafter, he observed a cart on the tarmac. The pilot stated he tried to avoid contact with the cart by applying full right rudder and brake. The pilot estimated his speed between 15 and 20 miles per hour.

The police officer stated that he observed about 50 feet of tire tread skid marks leading up to the accident airplane's main landing gear wheels. The officer documented the accident location and skid marks, and photographs were taken by airport operations personnel.

The accident site and location of the impacted cart on the tarmac south of the object free area (OFA) was ascertained to be about 65 feet south of the OFA's boundary marking (demarcation) line that separates movement from non-movement areas. It was also about 134 feet east of the north-south oriented taxi lane, which is located on the west side of the cargo apron.

Phoenix airport management evaluated the factual evidence obtained during the accident investigation and opined that the accident carts were located in an authorized area of the tarmac, and their location was in conformance with existing airport policy.

The airport operations officer stated that the pilot had not followed the marked taxiway lines between taxiway Hotel (where the airplane exited runway 25L) and the lead-in line to the south apron. He stated it appeared that after the pilot crossed taxiway Hotel he cut diagonally (in a southwesterly direction) toward the cargo area. While proceeding on this route the airplane

was not following any of the painted taxi lines. The route that the pilot took was somewhat shorter than the route which followed the painted lines. The accident cart was one of several that had been parked in a line on the tarmac. The carts bore reflective markers on their sides.

The DO reported that the pilot was familiar with the nighttime cargo operation, and the prescribed taxi route from the runway to the designated parking area where cargo was to be loaded and unloaded from the airplane. The pilot had taxied over this area numerous times during the preceding 3 months. The pilot had apparently cut the corner off the prescribed route and had not followed the marked taxiway lines.

As a result of the accident the DO issued a change to the company's "General Operations Manual." The GOM was revised to include the following requirements for pilots in the handling of airplanes: "During taxi all company aircraft must be operated on the yellow taxi line and taxi speed not to exceed fast walking speed."

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	22, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Glider; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2	Last FAA Medical Exam:	July 1, 2007
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	2262 hours (Total, all aircraft), 224 hours (Total, this make and model), 269 hours (Last 90 days, all aircraft), 180 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N5499J
Model/Series:	310R	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	310R0297
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:		Certified Max Gross Wt.:	5200 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:		Engine Model/Series:	IO-520-M1
Registered Owner:	D + A Investments, LLC.	Rated Power:	
Operator:	Aero Charter & Transport, Inc.	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	N3BA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kingman, AZ (IGM)	Type of Flight Plan Filed:	Company VFR
Destination:	Phoenix, AZ (PHX)	Type of Clearance:	VFR
Departure Time:	18:35 Local	Type of Airspace:	

Airport Information

Airport:	Phoenix Sky Harbor Intl. PHX	Runway Surface Type:	Concrete
Airport Elevation:	1135 ft msl	Runway Surface Condition:	Dry
Runway Used:	25L	IFR Approach:	Visual
Runway Length/Width:	7800 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Johnny C Portillo; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	February 28, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=67276

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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](#).