



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Scottsdale, Arizona	Accident Number:	WPR20LA109
Date & Time:	March 14, 2020, 16:00 Local	Registration:	N100AG
Aircraft:	Raytheon HAWKER 800XP	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Executive/Corporate		

Analysis

The pilot stated that, upon landing, the airplane touched down on the runway centerline with light and variable wind conditions. The pilot recalled that the touchdown felt normal but that, during the landing roll, the airplane began to veer to the right. The pilot added full left rudder, but the airplane continued to veer off the runway surface and encountered large rocks located between the runway and taxiway.

A postaccident operational check of the nosewheel steering system revealed no mechanical malfunctions or anomalies that would have precluded normal operation. The left nosewheel tire was not adequately inflated and was worn to the point at which the cord was exposed; the right nosewheel tire was within tolerances. Also, one-third of the rim was absent on the left nosewheel tire outer wheel half.

The available evidence precluded a determination of whether the imbalance between the nosewheel tires contributed to the control problem on the runway. It could also not be determined if the left nosewheel tire damage occurred before the touchdown or as a result of the accident sequence.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's inability to maintain directional control during landing for undetermined reasons, which resulted in a runway excursion.

Findings

Not determined	(general) - Unknown/Not determined
Aircraft	Directional control - Not attained/maintained

Factual Information

On March 14, 2020, about 1600 mountain standard time, a Raytheon Aircraft Company Hawker 800XP, N100AG, was substantially damaged when it was involved in an accident at Scottsdale Airport, Scottsdale, Arizona. The pilot and copilot were not injured. The airplane was being operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight.

The pilot stated that the flight departed from Roger, Arkansas, about 1315 central standard time (1215 mountain standard time). After an uneventful flight, the airplane touched down on the runway 21 centerline with light and variable wind conditions. The pilot recalled that the touchdown felt normal but that, during the landing roll, the airplane began to veer to the right. The pilot added full left rudder, but the airplane continued to veer off the runway surface and encountered large rocks located between the runway and taxiway. The airplane collided with runway lights and a sign, puncturing the left wing; both engines sustained foreign object damage from the rocks.

The pilot thought that the loss of control was a result of the nosewheel steering system not being aligned correctly. A postaccident operational check of the steering system revealed no mechanical malfunctions or anomalies that would have precluded normal operation. The left-side nosewheel tire was not adequately inflated and was worn to the point at which the cord was exposed; the right-side tire was within tolerances. Also, one-third of the rim was absent on the nosewheel left-side outer wheel half. On the basis of the available evidence, a determination could not be made regarding whether the damage occurred before the touchdown or as a result of the accident sequence.

History of Flight

Landing-flare/touchdown	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion

Pilot Information

Certificate:	Airline transport	Age:	61,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	October 4, 2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	November 21, 2019
Flight Time:	(Estimated) 9150 hours (Total, all aircraft), 650 hours (Total, this make and model), 6786 hours (Pilot In Command, all aircraft), 52 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft)		

Co-pilot Information

Certificate:	Airline transport; Commercial	Age:	55,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	February 12, 2020
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	September 14, 2019
Flight Time:	10556 hours (Total, all aircraft), 52 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Raytheon	Registration:	N100AG
Model/Series:	HAWKER 800XP 850XP	Aircraft Category:	Airplane
Year of Manufacture:	2005	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	258747
Landing Gear Type:	Retractable - Tricycle	Seats:	9
Date/Type of Last Inspection:	Continuous airworthiness	Certified Max Gross Wt.:	28000 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	4823 Hrs at time of accident	Engine Manufacturer:	honeywell
ELT:	Installed, not activated	Engine Model/Series:	tfe731-5br-1h
Registered Owner:		Rated Power:	4660 Lbs thrust
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SDL	Distance from Accident Site:	0 Nautical Miles
Observation Time:	22:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 6000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	None / None
Wind Direction:		Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	21°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Rogers, AR (ROG)	Type of Flight Plan Filed:	IFR
Destination:	Scottsdale, AZ (SDL)	Type of Clearance:	IFR
Departure Time:	13:15 Local	Type of Airspace:	Class D

Airport Information

Airport:	Scottsdale SDL	Runway Surface Type:	Asphalt
Airport Elevation:	1510 ft msl	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	Visual
Runway Length/Width:	8249 ft / 100 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	33.622776,-111.910552(est)

Administrative Information

Investigator In Charge (IIC):	Keliher, Zoe		
Additional Participating Persons:	Raymond Adams; Federal Aviation Administration; Scottsdale, AZ		
Original Publish Date:	June 21, 2022	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=101077		

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](#).