



National Transportation Safety Board Aviation Accident Final Report

Location:	Santa Ana, CA	Accident Number:	SEA08LA014
Date & Time:	10/29/2007, 1358 PDT	Registration:	N800CC
Aircraft:	Raytheon Corporate Jets Hawker 800XP	Aircraft Damage:	Substantial
Defining Event:		Injuries:	8 None
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The pilot reported that during the first takeoff attempt, he noted that the engine was not spooling up normally and he aborted the takeoff, utilizing minimal braking to exit the runway. The airplane was taxied back for takeoff and 3 minutes later, the flight was cleared for takeoff again. During the takeoff roll, the pilot noted a warning light and again aborted the takeoff when the airplane was traveling at 20 to 30 knots, with minimal braking again used to exit the runway. The airplane taxied back once again and was cleared for takeoff 9 minutes later. During the takeoff roll for the third attempt, the pilot stated that at about 85 knots, he felt a rumble and heard a "pop" as the airplane started to drift to the left. The pilot called for an abort and was able to keep the airplane on the runway, eventually traveling into the overrun area at the end of the runway. The tower notified the flight crew that there was smoke and fire coming from the left main gear. Inspection of the landing gear found that the left main landing gear tires overheated and blew during the third takeoff attempt. The hydraulic line on the left main landing gear was severed when the tire blew and hydraulic fluid leaked out onto the hot brake surface and ignited. All of the wheels fusible plugs were blown. The Raytheon Aircraft Airplane Flight Manual states a required waiting period from completion of taxi-in following a rejected takeoff from a speed of 90 knots indicated airspeed or less, to before start of taxi-out for takeoff. After a single rejected takeoff, a waiting period of 25 minutes is required. After two or more successive rejected takeoffs, a waiting period of 45 minutes is required.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the pilot-in-command to follow procedures stipulated in the airplane flight manual regarding brake cooling time periods. Factors contributing to the accident were the intentional aborted takeoffs which resulted in the hot brakes, and the subsequent landing gear tire bursting.

Findings

Occurrence #1: FIRE

Phase of Operation: TAKEOFF - ABORTED

Findings

1. (F) LANDING GEAR,NORMAL BRAKE SYSTEM - OVERTEMPERATURE
2. (F) ABORTED TAKEOFF - INTENTIONAL - PILOT IN COMMAND
3. (F) LANDING GEAR,TIRE - BURST
4. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND

Factual Information

On October 29, 2007, at 1358 Pacific daylight time, a Raytheon Corporate Jets Hawker 800XP, N800CC, was substantially damaged by a fire originating from the left main landing gear after the takeoff was aborted at the John Wayne-Orange County Airport (SNA), Santa Ana, California. The aircraft is owned by CIT Leasing Corp. and was operated by Charter Communications Holding Company as a 14 CFR Part 91 business flight, which was originating at the time. Visual meteorological conditions prevailed and an instrument flight rules flight plan was filed. The two airline transport pilots and six passengers were not injured. The flight was destined for Denver, Colorado.

The pilot reported that when he advanced the throttles for takeoff, he felt that the engines were not spooling up like normal and he brought the throttles back slightly. The pilot chose not to continue the takeoff and he pulled the power back to idle. The pilot reported minimal braking action was used and they exited the runway at intersection "J". The pilots went back through the before takeoff check list before returning for another takeoff.

The flight was again cleared for takeoff. The pilot reported that the engines spooled up normally, however when the APR (automatic performance reserve) was armed, the pilot noted that it went directly to "APR on." The pilot immediately pulled the power to idle, and the takeoff was again aborted. The pilot stated that he believed that they were traveling at 20 to 30 knots with minimal braking again used to exit the runway at intersection "H".

The airplane was taxied back to the runway and after several other aircraft, the flight was again cleared to takeoff. The pilot advanced the throttles and at about 85 knots, the pilot felt a rumble and heard a "pop" as the airplane started to drift to the left. The pilot called for an abort and he was able to keep the airplane on the runway eventually traveling into the overrun area at the end of the runway. The tower notified the flight that there was smoke and fire. The pilot ordered an emergency evacuation and all occupants exited the airplane without injury.

SNA tower transcript indicated that at 1346 the flight was cleared for takeoff on runway 19R. One minute later, the pilot advised the controller that they were aborting the takeoff. The controller instructed the pilot to turn left and exit at taxiway "H". The pilot acknowledged.

The airplane taxied back to the runway and was cleared for takeoff at 1349. At 1350, the pilot advised the tower that they were aborting again. The controller instructed the pilot to turn left and exit at "E". The pilot acknowledged.

At 1351, the pilot advised ground control that they needed to taxi back again and stated "they had resolved their issue."

At 1355, the flight was cleared for takeoff. At 1358, the controller asked the pilot if they needed assistance and the pilot advised that they were aborting. The controller then informed the pilot that it appeared that the left main was on fire.

Inspection of the landing gear found that the left main landing gear brakes overheated and the tires blew during the third takeoff attempt. The hydraulic line on the left main landing gear was severed when the tire blew and hydraulic fluid leaked out onto the hot brake surface and ignited. All of the wheels fusible plugs were blown.

The Raytheon Aircraft Airplane Flight Manual (AFM) states "After the airplane has made a normal landing or a stop from a rejected takeoff, a waiting period should be established to

make sure the brakes are both sufficiently cool and in a serviceable condition for further rejected takeoff (critical case)."

The AFM further states, "Required period from completion of taxi-in following a rejected takeoff from a speed of 90 knots indicated airspeed (KIAS) or less, to before start of taxi-out for takeoff.

After a single rejected takeoff.....25 minutes

After two or more successive rejected takeoffs.....45 minutes."

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	59, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2	Last Medical Exam:	05/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	05/01/2007
Flight Time:	14036 hours (Total, all aircraft), 2619 hours (Total, this make and model), 7263 hours (Pilot In Command, all aircraft), 73 hours (Last 90 days, all aircraft), 46 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Co-Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	58, Male
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):		Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 1	Last Medical Exam:	06/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	04/01/2007
Flight Time:	14907 hours (Total, all aircraft), 102 hours (Total, this make and model), 99 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Raytheon Corporate Jets	Registration:	N800CC
Model/Series:	Hawker 800XP	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	258266
Landing Gear Type:	Retractable - Tricycle	Seats:	10
Date/Type of Last Inspection:	05/01/2007, Continuous Airworthiness	Certified Max Gross Wt.:	25500 lbs
Time Since Last Inspection:	54 Hours	Engines:	2 Turbo Fan
Airframe Total Time:	4417 Hours	Engine Manufacturer:	Garrett
ELT:	Installed, not activated	Engine Model/Series:	TFE 731-5BR-1
Registered Owner:	CIT Leasing Corp	Rated Power:	4750 lbs
Operator:	Charter Communications Holding Co	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SNA, 56 ft msl	Observation Time:	1353 PDT
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 6000 ft agl	Temperature/Dew Point:	26° C / 11° C
Lowest Ceiling:	Broken / 18000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	12 knots, 190°	Visibility (RVR):	
Altimeter Setting:	30.04 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Santa Ana, CA (SNA)	Type of Flight Plan Filed:	IFR
Destination:	Denver, CO (APA)	Type of Clearance:	IFR
Departure Time:	PDT	Type of Airspace:	

Airport Information

Airport:	John Wayne Airport (SNA)	Runway Surface Type:	Asphalt
Airport Elevation:	56 ft	Runway Surface Condition:	Dry
Runway Used:	19R	IFR Approach:	None
Runway Length/Width:	5701 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	6 None	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	8 None	Latitude, Longitude:	33.675556, -117.868056

Administrative Information

Investigator In Charge (IIC): Debra J Eckrote **Adopted Date:** 01/31/2008

Additional Participating Persons: Michael Pickering; FAA/FSDO; Long Beach, 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/>.

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